# STEEL PRICES, UNIT COSTS, PROFITS, AND FOREIGN COMPETITION

## HEARINGS

BEFORE THE

## JOINT ECONOMIC COMMITTEE

## CONGRESS OF THE UNITED STATES

EIGHTY-EIGHTH CONGRESS

FIRST SESSION

PURSUANT TO

**Sec. 5(a) of Public Law 304**

**(79th Congress)**

APRIL 23–29, AND MAY 2, 1963

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(Created pursuant to sec. 5(a) of Public Law 304, 79th Cong.)

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# STEEL PRICES, UNIT COSTS, PROFITS, AND FOREIGN COMPETITION

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**TUESDAY, APRIL 23, 1963**

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
*Washington, D.C.*

The joint committee met at 10 a.m., pursuant to call, in room 1202, Senate Office Building, Senator Paul H. Douglas (chairman of the joint committee) presiding.

Present: Senators Douglas, Proxmire, Javits, Miller, and Jordan; Representatives Bolling, Patman, Boggs, Reuss, and Curtis.

Also present: James W. Knowles, executive director.

Chairman DOUGLAS. The committee will be in order.

I wish to make a very brief preliminary statement and then Senator Javits will make a brief statement.

This committee, without a dissenting vote, has decided to hold a series of hearings on the selective increase in the price of steel.

Our aim is to conduct a fair and impartial inquiry into this increase, so that both legislators and the general public may be better informed about the real facts. For we still believe that in a democracy an informed public opinion is, and should be, an important factor in arriving at proper and durable decisions in the field of economic as well as political choice.

We are seeking to throw light upon the tangled subject about which coherent and integrated information is often lacking. We shall center our attention for the first 2 days on the cost of production and their relative movements. So we shall consider today the labor or employment costs per unit of output or per ton of steel in recent years, and whether this has been rising or falling—and by how much.

Tomorrow we shall move on to the cost of raw materials and the relative amount of capital used per unit of output. In the background of all these discussions lies, of course, the relative degree to which the plant and capital equipment in the steel industry is actually utilized and the degree to which it lies idle, because this will affect not only capital costs per unit of output, but labor costs per unit of output.

I hope that the witnesses have come prepared with charts upon this and other points, and that as labor costs per unit of output are described, we may also see the degree of plant utilization at the same time.

From costs, we shall go on to prices and from there to profits. Here, again, in the background, although not in the foreground, lies the question of the immediate and the longrun elasticity of demand for steel or the degree to which increases or decreases in the unit price of steel cause decreases or increases in the quantities demanded, the degree to which this happens, and the consequent effect on gross revenues and profits. Finally, we shall consider the question of foreign competition.

We are trying to shed light on these questions, rather than to create heat. We are not putting anyone on trial. We have, therefore, asked impartial governmental witnesses who have been working on these and associated problems to present and to synthesize the evidence which has been collected over the years.

It will be appropriate for committee members to ask questions of the witnesses during the presentation of the papers, but it is hoped that these will be compact, clarifying, and to the point, and that they will not take the form of lengthy dissertations.

At the conclusion of the statement of the witnesses, the members of the committee will ask questions of the witnesses, alternating between members of the majority and minority in order of seniority on the committee. Each member will be limited to 10 minutes, including the replies.

On the second round of questions, if there is a second round of questions, the questions and answers will appear at the end of the questioning by that member on the first round instead of being separated. When members of the committee have finished their questioning, representatives of the Iron & Steel Institute and the United Steelworkers will be invited to ask such questions and make such comments as they may care to offer. We have invited these organizations to send representatives to these hearings, not to put them on the spot, but to give them the chance to state their side of the case simultaneously with the testimony of the witnesses.

I have always believed that one of the weaknesses of congressional investigations is that often testimony of witnesses adverse to third parties is immediately reported and appear on the front pages of the newspapers, while the reply or the attempted refutation only follows days later, and appears, if at all, deeply buried on the inside page. We are trying to remove this weakness and to protect the parties at interest.

I must admit, also, that there is a certain degree of self-protection in our adoption of this rule. Oftentimes congressional committees are criticized for permitting a one-sided presentation of the facts without giving the parties a chance to reply. Sometimes this criticism is justified; sometimes it is not justified. We wish to protect ourselves against any such criticism, and the representatives of the Iron & Steel Institute, at each session, and of the United Steelworkers at each session, will be invited to offer such comments as they may care to make, and to offer such questioning.

There is a phrase in the marriage ceremony of certain religious groups before the marriage is solemnized, "If there is anyone who objects, speak up now or forever hold your peace." If we give to the representatives of industry and the employees the chance at the time to make refutations, I do not believe they are morally entitled to make subsequent criticisms of the procedure of this committee or the testimony of the witnesses.

Now I am very glad to call on Senator Javits, or perhaps Congressman Curtis.

Representative CURTIS. Yes. Thank you, Mr. Chairman.

Let me say I am very pleased with the ground rules you have set forth, and that I, too, urge the interested parties at any stage to make it clear whether they agree, disagree, or think supplemental views are needed.

I do have a formal statement I would like to read. It is quite brief.

At the outset of these hearings, I wish to make it perfectly clear that my purpose shall be neither to condone nor condemn the price increases which certain steel companies announced recently.

A much broader issue is involved than price increases or decreases in a particular industry by particular companies on particular products.

In a sense, the free-market system itself is being challenged and put under examination, as it should be. The question at issue is whether the public interest is served when the Government, using techniques of exhortation and sometimes threat, attempts to exercise a form of quasi-price control. I must point out that price control presupposes wage control. Let no labor leader misjudge this factor. It is particularly alarming when this control of prices is exercised in selective, discriminatory situations, without legislative authority, sanctions, or standards established by Congress representing the people.

It is my own view that price increases in the steel industry and in other industries—unless and until they are declared by Congress to be in a regulated public utility status—should and would be either justified or proved to be unjustified and unsustainable by the reaction of the marketplace itself. Aside from competition among domestic firms, firms within the steel industry are compelled under our private enterprise system to set and adjust prices with regard to competition from foreign steel producers as well as from other metals, glass, plastics, prestretched concrete, and other steel substitutes.

These hearings can, and I sincerely hope will, provide a highly useful function in dispelling some of the uncertainty and uneasiness over the role of Government in price admistration which has exerted a dampening influence on economic activity and business confidence ever since the dramatic events of last April. It is my hope that they will contribute not only to a better understanding of the facts in the recurrent dispute over steel prices, but also to a greater appreciation of the dynamics of our competitive enterprise system.

Thank you.

Chairman Douglas. Mr. Javits.

Senator Javits. Mr. Chairman, I, too, would like to associate myself with Congressman Curtis and with the Chair in approving the ground rules and I welcome this opportunity to express my thinking on these hearings.

The distinguished chairman of this committee, Senator Douglas, has stated that the forthcoming hearings will be conducted by this committee in an impartial and factual way. The committee would attempt to lay the groundwork of fact and detail in order that opinions, results, and recommendations would reflect an informed view of the problem. I fully support this approach to these hearings. I firmly believe that the function of Government, of the President, and of the Congress is to inform the public of the issues confronting it.

Ours is a consumers' economy—the consumer is "king" and our job is to enable the consumer to make an informed judgment on steel prices.

It would be most unfortunate if these hearings would depart from their basic purpose of educating and informing the public concerning urgent problems confronting the economy, in this case the steel industry's pricing problems, and this forum be utilized as an instrument to make the steel companies conform to our ideas of what steel prices should be. This is a very real danger, in my view, a danger this committee should constantly keep in mind.

I shall certainly be vigilant, and I know Congressman Curtis and my other Republican colleagues, and my colleagues on the majority side as well, will also be vigilant in this regard.

The people, Congress, and the executive branch are entitled to know the basic facts to decide whether the recent steel price increases are economically justifiable or not, or whether these price increases run counter to the national interest. I believe these hearings have an extremely important role to play in this respect. The steel companies' recent moves pose very complex problems, and will undoubtedly cause wide repercussions in all sectors of the economy. A total of 19 companies have announced selective price increases since Wheeling Steel announced its move on April 9. Several companies rescinded their increase on one or more items yesterday. As one of the steel companies indicated, if the entire steel industry follows the United States Steel Co's pattern—which now appears to be rather certain—prices will have been boosted $4.95 per ton, or 3.42 percent on the products affected. This would mean price boosts on 29 percent of the industry's 1962 sales volume and 41 percent of its tonnage shipments, and an overall steel price increase averaging 1 percent.

Let us remember that the attempted price increases which involved all steel products about a year ago, and which started all the controversy about coercion averaged close to 3 percent.

Steel companies—and this is fundamental to private enterprise and to American freedom—are entitled to a fair profit. That is the only way in which you get more modern machinery, experimentation, a fair compensation to labor, and so on. If, after efficient operation, some adjustment in prices is needed, the country will understand that. But there are some grave dangers involved here as well. One of these dangers is that the steel price increase will be a signal for inflation and that those who are heavy users of steel, such as the automobile makers, appliance manufacturers, and so on, might utilize this rather small price boost as justification to increase their prices in even greater proportion than the steel companies. It is also likely that this increase may result in widespread demands for wage increases, whether or not they are related to productivity, profits, or the general price level. I understand that discussions are presently underway between the steelworkers and steel industry representatives and the automobile workers and two automakers concerning future contract negotiations. Contracts between the unions and the companies involved will expire early next year—May 31, 1964, for steel; and August 3, 1964, for automobiles. I am all for labor getting everything it ought to have as a major element of our economy, and I have been and am proud to be a staunch advocate of labor on that shore. But clearly, both they and the industry must realize that the public is involved as well. I sincerely hope that both unions will keep the public's interest very much before them as the talks progress.

The impact of this steel price increase is also related to the cost of our national defense, and our competitive position on world markets. Not only steel is involved here, but all products made of steel. Indirectly, our balance-of-payments position and liberal trade policy are affected as well.

In conclusion, I reiterate my sincere hope that these hearings will begin and continue to remain factual, impartial, and bipartisan.

Chairman DOUGLAS. Thank you, sir.

Two members of the minority having made statements subsequent to the statement by the chairman, I am going to ask if members of the majority would like to make statements. I am going to ask the vice chairman, Mr. Bolling.

Representative BOLLING. No, thank you.

Representative PATMAN. No, thank you, Mr. Chairman.

Representative REUSS. Mr. Chairman, just briefly, I, too, want to commend the chairman for calling these important hearings into the strategic question of price increases in steel and their tremendous repercussions both on the domestic economy and our balance of payments.

This problem has plagued the Joint Economic Committee for a number of years. It will be recalled that in the fifties there were repeated wage and price increases in steel without much being done about it by either the executive or legislative branches. This led to the introduction of a bill sponsored, among others, by myself, on the House side, and by the Senator from Pennsylvania, Mr. Clark, on the Senate side, which would have required inquiry by the executive branch into price or wage increases in strategic industries which could have a detrimental effect on the national economy.

The present administration, the Kennedy administration, has, I think, made some progress toward a national policy on wage-price increases in strategic industries. The Council of Economic Advisers has, in the last 2 years, laid down some very constructive and helpful guidelines in general. I, myself, regret that the Council of Economic Advisers, or some other body in the executive branch, or perhaps an ad hoc board, is not available to attempt to let the searchlight of public opinion play upon the steel situation today by some sort of public inquiry into whether and how these guidelines should apply to the present price increase.

It may well be that the inquiries of this committee, the Joint Economic Committee of the Congress, can supply that lack, although here, again, the lack of subpena power by this committee may prevent our acquiring information on cost, profits, wages, and related matters which it would be very helpful to know.

On one thing I am very clear, Mr. Chairman, and that is this: That there is a great opportunity today for steel companies, for aluminum companies, for companies in thhe plastics industry and related industries, to be real, national heroes by conducting some old-fashioned American competitive practices and by lowering their prices and compel the people who have raised their prices to review their decisions and perhaps follow suit and lower their prices. That, to my mind, would be thehealthiest kind of solution and any industry representatives who might want the applause of this committee could certainly get it by that kind of action, and perhaps during the pendency of these hearings.

Thank you, Mr. Chairman.

Chairman DOUGLAS. Are there any others who wish to make a statement? Senator Miller?

Senator MILLER. Thank you, Mr. Chairman.

Mr. Chairman, I believe that under the ground rules outlined by our distinguished chairman, some helpful information may be forthcoming from these hearings. These hearings appropriately might be held following other significant developments in our economy, price increases in automobiles, for example, price decreases in livestock, which is currently a serious problem in the livestock industry, price increases in food and clothing.

Because it is a basic industry, there is an awareness that steel price increases or decreases can have an important bumping effect on our overall wage and price structure. As a result, there is a tendency to oversimplification by saying that steel price increases are inflation. This overlooks the fact that the price increases literally may be forced due to increased costs of production arising out of inflation. In other words, steel price increases, or increases in the price structure of other commodities, could well be the outcroppings of inflation that already exist rather than inflation itself.

We all know that we have continued to be in a cycle of inflation. During 1961 and 1962, while we were going $14 billion deeper into debt, the purchasing power of our money declined about $14 billion. The purchasing power of the dollar today is at a new low of around 45 cents, as against 100 cents in 1939. This is bound to be felt in the wage and retail price structure.

I, for one, hope that these hearings will develop the relationship between the continued decline in the value of our money and the wage and price structure, and I look forward to helpful results from these hearings.

Thank you, Mr. Chairman.

Chairman DOUGLAS. Are there any others? Senator Jordan?

Senator JORDAN. No, thank you, Mr. Chairman.

Chairman DOUGLAS. We are very happy to have with us today Mr. Philip Arnow, Associate Commissioner for Program Planning and Publications, who will make a preliminary statement.

Mr. Arnow?

## STATEMENT OF PHILIP ARNOW, ASSOCIATE COMMISSIONER FOR PROGRAM PLANNING AND PUBLICATIONS, BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR

Mr. ARNOW. Mr. Chairman and members of the Joint Economic Committee, the Department of Labor is glad to be of aid to the committee and to supply it with information on steel labor costs and prices which it has requested.

I might say on behalf of all of us who are technicians in this field that we particularly appreciate the ground rules that the committee has established for the conduct of these hearings.

The Bureau of Labor Statistics of the Department gathers regularly a number of kinds of data—among them employment, prices, wages, productivity, or output per man-hours—as part of its comprehensive program of gathering and reporting many kinds of data for the Nation. In the summer of 1959, during the steel strike of that year, we pulled together a collection of data available from our own program and from other sources and compiled a text, table, and chart presentation entitled "Background Statistics Bearing on the Steel Dispute," which was issued to the public. I have here copies of this material for the committee's information.

I do not intend to describe the document or to discuss it, but merely want to make it available to the committee.

Chairman DOUGLAS. Would you like to have this printed in the record?

Mr. ARNOW. Not necessarily, Mr. Chairman, unless the committee desires. I thought it would be useful for the members of the committee to have, however.

Representative CURTIS. Mr. Chairman, I suggest that it go in the record, because I think it would be valuable.

Chairman DOUGLAS. Without objection, it is so ordered. Is it a big volume of material?

Mr. ARNOW. It is a pamphlet of 30-odd pages.

(The document referred to follows:)

*Background*

# STATISTICS BEARING ON THE STEEL DISPUTE

. . . including

Supplementary Tables

Bulletin No. S–1
October 1959
UNITED STATES DEPARTMENT OF LABOR
James P. Mitchell, Secretary



98133 O—63——2

## Foreword

This report was issued by the U.S. Department of Labor in August 1959. No attempt has been made to revise or bring up to date the text, charts, or tables. Explanations and clarifications have been added in a few instances in the form of editor's notes.

## Preface

The background facts in this booklet relate to some of the economic questions which surround the steel strike: wages, productivity, prices and profits. For the most part, these facts consist of official Government statistics. Recognized industry sources have been drawn upon, however, for certain supplementary information which, while not subject to full official verification, is believed to contribute to an understanding of the subjects treated. Other information is in process of assembly, and may be issued at a later date.

There are no conclusions drawn in this booklet. The responsibility for a settlement of the strike rests upon management and labor in the industry. Management and labor already know these facts, and many more which they regard as relevant to the outcome of the dispute. This presentation may serve to indicate the area which exists for a settlement in which the public's interest is taken fully into account.

—JAMES P. MITCHELL
*Secretary of Labor*

## Contents

# Background Statistics Bearing on the Steel Dispute

## 1. The Industry[1]

The facts in this report relate generally to the basic steel industry—the blast furnaces, steel works and rolling mills whose main business is making and finishing steel. Mining and shipping, although in many cases owned or controlled by the companies which produce steel, are classified as separate industries. The firms whose main business is fabricating steel are also considered outside the basic steel industry. A small proportion of the workers engaged in the strike are employed in such related industries, outside basic steel.

There are more than 250 producers that make and finish steel. Of these, 80 are producers of steel ingots, with 146 steelmaking plants in 29 States. Steel companies differ in the number of operations they perform. Many, known as integrated companies, produce pig iron, make steel, and form steel products by rolling and finishing. These companies produce the great bulk of the steel and employ most of the workers in the industry. Other companies, known as semi-integrated companies, produce various types of steel from purchased pig iron and scrap. A third group rolls and finishes purchased steel, and a fourth produces only pig iron to be sold to semi-integrated companies and foundries.

Some iron and steel plant products, such as rails, pipe, wire, and nails, can be used directly without further manufacturing. However, the bulk of the products shipped from steel plants, such as sheets, bars, plates, and strips, are further fabricated in plants of other industries into hundreds of different products.

The basic steel industry is mainly concentrated in the North and East, although steelmaking capacity has recently increased greatly in the Far West. Pennsylvania accounts for one-fourth of the total capacity and Ohio for one-fifth; in both cases, their relative importance is somewhat less than it was in 1947. The Pittsburgh-Youngstown area is the leading steel center. Other large plants are in Buffalo, N.Y.; Johnstown, Bethlehem, and Morrisville, Pa.; Sparrows Point, Md.; the Chicago area; Cleveland, Ohio; and Birmingham, Ala. About a third of the industry's labor force works in Pennsylvania. The distribution of total employment in December 1957, which was a fairly representative month in a high-activity year, is shown on the map.

## 2. Some Economic Characteristics

Our country's industrial power, the basis for its high standard of living and its military strength, is closely related to our great steel production capacity. Almost a third of the world's steel ingot output is produced in this country. Many of our important industries depend on current supplies of steel.

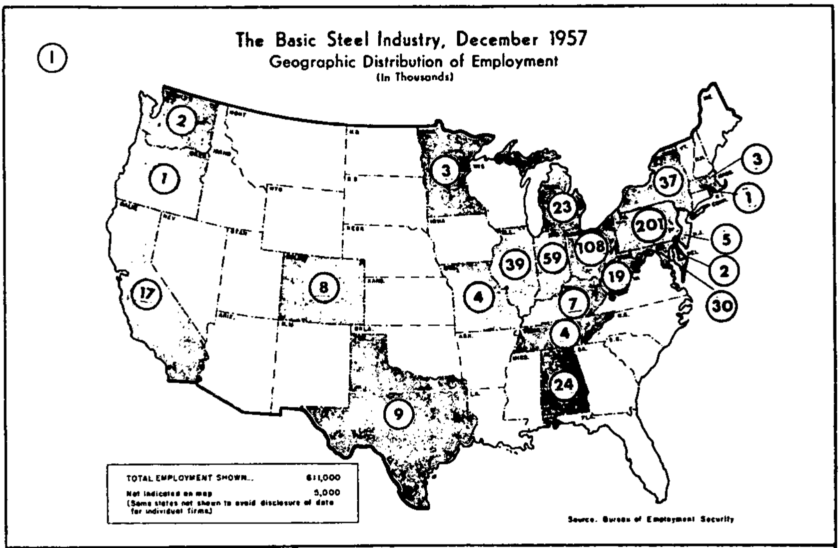
Steelmaking capacity has risen much more rapidly than has our population. There are now available 1,680 pounds of capacity per person as compared with 1,240 pounds in 1940 and 1,380 pounds in 1947. Output, however, has fluctuated widely with changes in general business conditions.

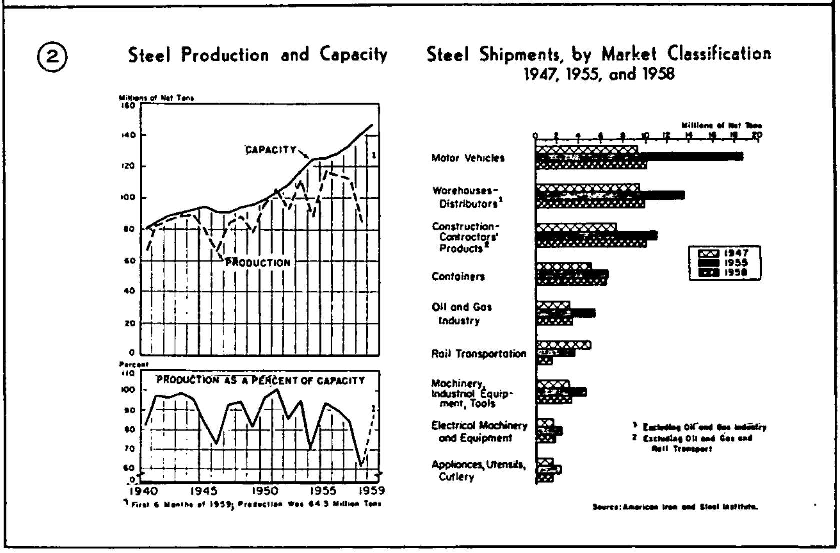
Plants in the steel industry are typically large. More than two-thirds of all the employees are in plants with over 2,500 wage and salary workers. The four largest companies employ more than half of the industry's workers.

Capital investment per production worker has more than doubled in recent years, from about $9,000 in 1947 to about $20,000 in 1957; for manufacturing as a whole, the percentage rise was probably somewhat smaller. The level of investment per worker is notably higher in the petroleum, chemicals, and tobacco industries, but is lower in most other manufacturing industries.

The largest customers of steel are the automotive, construction and building material, machinery, containers, and oil and gas industries. Railroads, once a major consumer, have taken relatively small quantities of steel in recent years.

[1] EDITOR'S NOTE.—The accompanying charts may be associated with their corresponding sections of the report by comparing the encircled numbers on the upper left of the charts with the corresponding number in the text heads.


1
The Basic Steel Industry, December 1957
Geographic Distribution of Employment
(In Thousands)
2
1
17
8
9
3
23
39
59
108
4
19
7
4
24
37
201
3
1
5
2
30
TOTAL EMPLOYMENT SHOWN
Not indicated on map 5,000
(Some states not shown to avoid disclosure of data for individual firms)
Source: Bureau of Employment Security


2
Steel Production and Capacity
Millions of Net Tons
160
140
120
100
80
60
40
20
0
CAPACITY
PRODUCTION
Percent
110
100
90
80
70
60
0
PRODUCTION AS A PERCENT OF CAPACITY
1940
1945
1950
1955
1959
1 First 6 Months of 1959; Production Was 64.5 Million Tons
Steel Shipments, by Market Classification
1947, 1955, and 1958
Millions of Net Tons
0
2
4
6
8
10
12
14
16
18
20
Motor Vehicles
Warehouses-Distributors 1
Construction-Contractors' Products 2
Containers
Oil and Gas Industry
Rail Transportation
Machinery, Industrial Equipment, Tools
Electrical Machinery and Equipment
Appliances, Utensils, Cutlery
1947
1955
1958
1 Excluding Oil and Gas Industry
2 Excluding Oil and Gas and Rail Transport
Source: American Iron and Steel Institute.

**3. Employment**

Total employment in the basic steel industry has risen only slightly during the postwar years. The number of production workers has fluctuated considerably, with little net change. The number of administrative, professional, and clerical workers, on the other hand, has risen substantially.

In the first half of 1959, output averaged 50 percent more than in the first half of 1947, but production-worker employment increased less than 1 percent, or only 2,000, while their man-hours rose nearly 5 percent. The administrative-professional-clerical group increased nearly 50 percent, or 34,000.

A special tabulation of total employment in mid-1956 and autum 1958 shows that practically all of the recession drop of 100,000 took place among production workers. Unemployment rates in the primary metals industries (mainly steel) rose from about 3 percent in 1957 to 13 percent in 1958, but have recently dropped back to about 3 percent.

The average age of production workers in 1957, according to the American Iron and Steel Institute, was 42 years; 32 percent were 34 years old or less, 28 percent were between 35 and 44, 22 percent were between 45 and 54, and 18 percent were 55 and over. The average male worker in steel was a year and a half older than his counterpart in manufacturing as a whole, according to the census of 1950.

Over half the production workers in 1957 had more than 10 years of service with the same company. In 1957, a very good year, 88 percent of the production workers were paid for 45 or more weeks (including vacations), but in the recession year of 1958, there were only 71 percent who were paid for that many weeks, according to the American Iron and Steel Institute. The number of dependents claimed by steel workers in 1958 averaged 2.1.

Workers employed by most of the plants in the industry (with 92 percent of total ingot capacity) are organized by the United Steelworkers of America. Almost all of the rest of the industry is organized by other unions, most of them independent.

**4. The Trend of Steel Wages**

Gross hourly earnings in steel rose $1.43, or by 85 percent, from January 1950 to May 1959.

Basic wage rates in steel (excluding the effects of premium pay for overtime, etc., and also changes in incentive earnings and in skill levels, but including cost-of-living allowances) increased:

$1.08 an hour, or 66 percent, for all wage workers combined as a group.
$ .90, or 73 percent, for steel common labor.
$1.25, or 64 percent, for toolmakers.
$1.56, or 60 percent, for rollers (grade 32).

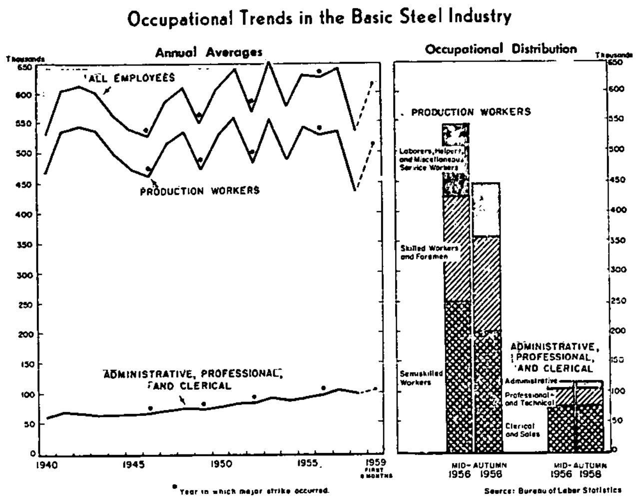
In this same period, real hourly earnings (i.e., gross earnings corrected for changes in purchasing power) rose by 50 percent.

Real net spendable earnings for a worker with three dependents (gross earnings corrected for changes in purchasing power and in withholding and social security taxes) rose by 44 percent.

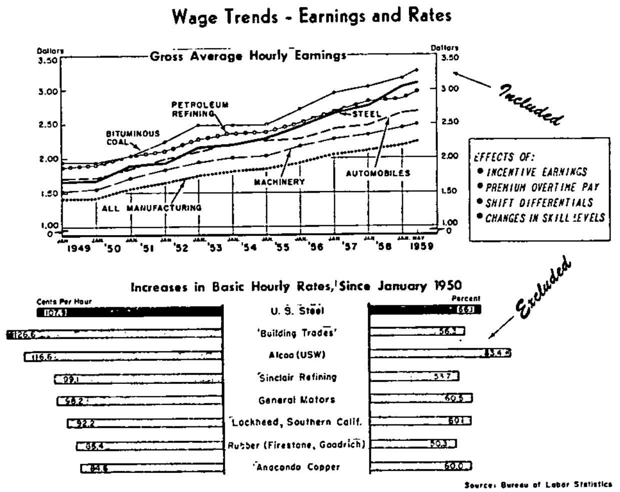
From January 1950 to the summer of 1959, steel wages as a whole rose by greater percentages and by greater absolute amounts than wages in most of the economy, no matter what measure of wage trend is used.[2]

[2] EDITOR'S NOTE.—In computing the percentage increases shown in the lower right-hand section of chart 4, the increase in cents per hour has been compared with estimated straight-time earnings in the industry, which includes incentive earnings and shift differentials where such payments are found.

3


Occupational Trends in the Basic Steel Industry
Annual Averages
Thousands
ALL EMPLOYEES
PRODUCTION WORKERS
ADMINISTRATIVE, PROFESSIONAL, AND CLERICAL
1940
1945
1950
1955
1959 FIRST 6 MONTHS
• Year in which major strike occurred.
Occupational Distribution
PRODUCTION WORKERS
Laborers, Helpers, and Miscellaneous Service Workers
Skilled Workers and Foremen
Semiskilled Workers
ADMINISTRATIVE, PROFESSIONAL, AND CLERICAL
Administrative
Professional and Technical
Clerical and Sales
MID-AUTUMN 1956 1958
MID-AUTUMN 1956 1958
Source: Bureau of Labor Statistics

4


Wage Trends - Earnings and Rates
Gross Average Hourly Earnings
Dollars
PETROLEUM REFINING
BITUMINOUS COAL
STEEL
MACHINERY
AUTOMOBILES
ALL MANUFACTURING
1949 '50 '51 '52 '53 '54 '55 '56 '57 '58 1959
Included
EFFECTS OF:
• INCENTIVE EARNINGS
• PREMIUM OVERTIME PAY
• SHIFT DIFFERENTIALS
• CHANGES IN SKILL LEVELS
Increases in Basic Hourly Rates, Since January 1950
Cents Per Hour
Percent
U. S. Steel
Building Trades
Alcoa (USW)
Sinclair Refining
General Motors
Lockheed, Southern Calif.
Rubber (Firestone, Goodrich)
Anaconda Copper
Excluded
Source: Bureau of Labor Statistics

### 5. The Level of Steel Wages

Wage levels can be compared in terms of *earnings* or *rates*. The wage rate is the basic payment per hour, day, or week that is guaranteed in the employment contract. It relates to a particular job or occupation. Earnings include, in addition to the basic rate, incentive payments, premiums for overtime or work on late shifts, bonuses, etc. Average earnings for an entire industry are influenced by the proportion of workers at various skill levels. These proportions vary widely among industries. Basic steel employs a relatively large proportion of workers in skilled occupations.

Measured in terms of average hourly earnings, steel wages are higher than those in most other industries. The May 1959 average of $3.10 in the steel industry compared with $2.23 in manufacturing as a whole, and $2.68 in automobiles.[3]

Wage rates, job for job, compare more nearly with those in other high-wage industries, such as automobile production and petroleum refining. For example, the hourly rate for common labor in the steel industry is $2.13. Rates for unskilled labor paid by a number of major employers for whom information is available range from $2.00[4] to $2.47. Similar comparisons for maintenance machinists and toolmakers are presented in the table on page 6. Such comparisons must be interpreted with caution because of possible differences in job content and working conditions, even for the same job title.

Many steel workers (about 60 percent of the total) receive incentive pay, which is less commonly found in most other high-wage industries. Incentives may add 10 percent, 15 percent, 20 percent or more to basic rates. They are commonly associated with greater worker effort and increased production. In basic steel, first quarter 1958 and 1959 data indicate that incentive earnings add on the average from 6 to 8 cents to the hourly rate in labor grade 2 in which common labor is classified; 28 to 34 cents in labor grade 16 which includes maintenance machinists; and 33 to 44 cents in labor grade 18 which includes toolmakers. However, information is not available to indicate whether the rates for these specific occupations are increased by incentive earnings in the same degree as the labor grade as a whole.

### 6. Annual Earnings

Annual earnings of wage employees (the category of the American Iron and Steel Institute which corresponds most closely with the Bureau of Labor Statistics category "production workers") in the basic steel industry averaged about $5,350 in 1957. With reduced production levels and employment, this average fell to about $4,840 in 1958. Roughly the same proportion earned $6,000 or more in both years; 30 percent in 1957 and 28 percent in 1958. However, while fewer than 9 percent earned less than $3,600 in 1957, 22 percent earned less than this amount in 1958.

This summary and the chart are based on information covering wage employees with seniority, both at the beginning and at the end of the year. About 425,000 are included for each year. The data are provided by the American Iron and Steel Institute.[5]

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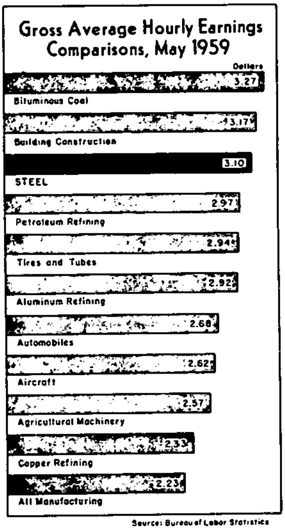
[3] EDITOR'S NOTE.—Since the preparation of the chart on Gross Average Hourly Earnings Comparisons, May 1959, final earnings figures have been published; for the petroleum refining and copper refining industries, these figures, $2.93 and $2.32, respectively, represent 1-cent changes from the preliminary figures shown on the chart.

[4] EDITOR'S NOTE.—Since the preparation of this text and the accompanying table on p. 6, information has become available indicating that the current unskilled labor rate for Commonwealth Edison is $2.12, which would mean adjusting the lower end of the range shown in the text to $2.08.

[5] EDITOR'S NOTE.—These data exclude unemployment compensation and supplemental unemployment benefit payments, as well as certain fringe benefits such as pensions and insurance.

5




## Current Job-by-Job Hourly Wage Rates

### Unskilled Labor

| | |
|---|---|
| U. S. Steel | $2.13* |
| General Motors | 2.24 |
| Bethlehem Shipbuilding | 2.13 |
| Anaconda Copper | 2.098 |
| Meatpacking (most Armour, Swift plants). | 2.08 |
| Sinclair refining (range among refineries) | 2.22-2.47 |
| Commonwealth Edison | 2.00 |
| Pacific Gas and Electric | 2.12 |

### Maintenance Machinists

| | |
|---|---|
| U. S. Steel | 3.068* |
| Lockheed (range for job) | 2.80-3.07 |
| Sinclair refining (range among refineries) | 2.76-3.17 |
| Manufacturing rates—major metal-working centers (7) studied by BLS, 1958-59 (city averages) | 2.73-3.07 |

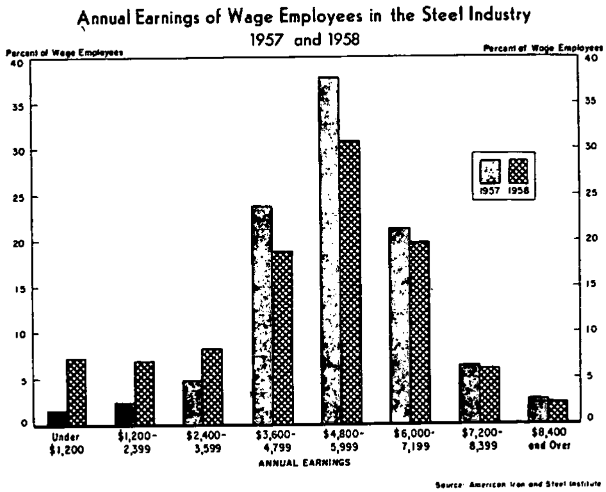
### Toolmakers

| | |
|---|---|
| U. S. Steel | 3.202* |
| Automobiles | 3.267 |
| Lockheed (range for job) | 2.88-3.15 |
| Manufacturing rates—major metal-working centers (7) studied by BLS, 1958-59 (city averages) | 2.95-3.17 |

*These rates exclude incentive payments; see text. Cost-of-living allowances are included.

SOURCE: Bureau of Labor Statistics. Some rates are estimated by adjusting earlier wage studies in line with subsequent general wage changes.

6



### 7. Fringe Benefits

Both in absolute amount and as a proportion of total employment expenditures for wage employees, fringe benefits in basic steel—as in industry generally—have grown substantially in the past two decades.

In 1940, the cost of fringe benefits in basic steel totaled 7 cents an hour, or 8 percent of straight-time hourly earnings for wage employees.

In 1957, they totaled 63 cents an hour, or 25 percent of straight-time hourly earnings for basic steel wage employees.

Fringes in steel consist of premium pay for overtime[6] and shift differentials, paid vacations, paid holidays, jury duty pay, severance pay, supplemental unemployment benefits, and employer contributions for insurance, pensions, social security and other legally required payments.

In 1957, employer expenditure on fringes in steel, as reported by the American Iron and Steel Institute, was higher in amount but less in proportion to straight-time average hourly earnings than in manufacturing generally, as reported by the U.S. Chamber of Commerce:

| | *Cents per hour* | *Percent of straight-time average hourly earnings* |
|---|---|---|
| Steel | 63 | 25 |
| All manufacturing | 56 | 29 |
| Chemicals | 65 | 35 |
| Machinery, electrical | 53 | 29 |
| Machinery (excluding electrical) | 62 | 29 |
| Petroleum refining | 90 | 36 |
| Transportation equipment | 66 | 30 |

During the second half of 1958, expenditures on fringe benefits in basic steel amounted to 73 cents an hour, or 26 percent of straight-time average hourly earnings. Data for 1958 are not available for other manufacturing industries.

### 8. The Pattern of Recent Wage Settlements

Wage settlements in the first half of 1959 have not generally involved "leaders" in heavy industry. Settlements in some heavy industries remain to be negotiated. Others are covered by long-term agreements reached in earlier years but providing increases due in 1959.

In all, about 2.5 million workers are due to receive increases in 1959 that were *negotiated earlier;* most of these increases amount to 6 to 8 cents an hour. Automobile workers, for example, received an increase estimated by the Bureau of Labor Statistics to average 6.3 cents an hour at the beginning of August. Most aircraft workers received 3-percent increases (averaging an estimated 7.5 cents) in the spring. Many of these long-term agreements also include cost-of-living escalator clauses.

All major wage *settlements during the first half of 1959*, except a very few (accounting for 4 percent of the workers), increased wages; half of the workers received increases of 8 cents or more. About 7 out of 10 settlements also liberalized one or more fringe benefits.

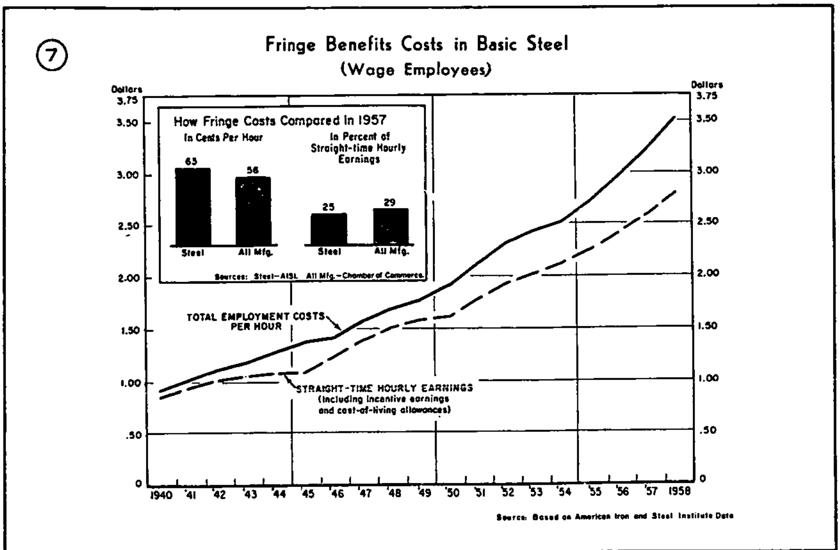
In percentage terms, many recent settlements have provided for wage-rate increases of 3 percent or more. Increases of 4 or 4.5 percent have not been unusual. Among the wage settlements arrived at thus far in 1959 have been: petroleum refining, 5 percent (13.5 cents); pulp and paper, 3–3.5 percent (7 cents); gas and electric utilities, 4–5.5 percent (mostly averaging 10–13 cents); cement, almost 4.5 percent (10 cents); chemicals, 3–4 percent (about 8 cents); northern textiles, mostly 7 percent (10 cents); and anthracite mining, about 5.4 percent (14.3 cents). Some 1959 settlements—notably anthracite mining, petroleum refining, and textiles—affected industries whose rates of pay were not changed in 1958.

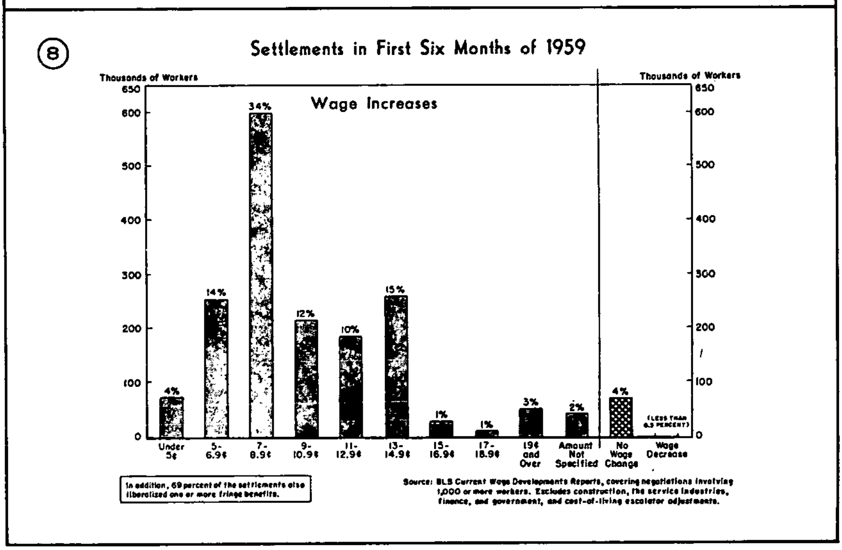
In construction, not covered by the above summary, increases in the union scales that were revised in the first half of 1959 averaged about 4 percent (14.3 cents).

Wage-rate increases under the 1956 basic steel contracts, including cost-of-living adjustments, have totaled about 45.7 cents or 20.3 percent. Since the beginning of 1956, increases in six other major collective bargaining situations, for which data are at hand, up to the present time, are as follows:

| | *Cents* | *Percent* |
|---|---|---|
| Alcoa (USW) | 51.6 | 25.1 |
| Anaconda | 23.6 | 11.7 |
| General Motors | 44.5 | 20.6 |
| Lockheed | 46.1 | 23.1 |
| Rubber (Firestone and Goodrich) | 28.7 | 12.5 |
| Sinclair Refining | 44.2 | 18.5 |

[6] EDITOR'S NOTE.—Includes all premium pay for overtime, including Sunday and holiday work.


7
Fringe Benefits Costs in Basic Steel
(Wage Employees)
Dollars
How Fringe Costs Compared in 1957
In Cents Per Hour
In Percent of Straight-time Hourly Earnings
65
56
25
29
Steel
All Mfg.
Sources: Steel—AISI. All Mfg.—Chamber of Commerce.
TOTAL EMPLOYMENT COSTS PER HOUR
STRAIGHT-TIME HOURLY EARNINGS (Including incentive earnings and cost-of-living allowances)
Source: Based on American Iron and Steel Institute Data


8
Settlements in First Six Months of 1959
Thousands of Workers
Wage Increases
34%
14%
12%
10%
15%
4%
1%
3%
2%
Under 5¢
5-6.9¢
7-8.9¢
9-10.9¢
11-12.9¢
13-14.9¢
15-16.9¢
17-18.9¢
19¢ and Over
Amount Not Specified
No Wage Change
Wage Decrease
(LESS THAN 0.5 PERCENT)
In addition, 69 percent of the settlements also liberalized one or more fringe benefits.
Source: BLS Current Wage Developments Reports, covering negotiations involving 1,000 or more workers. Excludes construction, the service industries, finance, and government, and cost-of-living escalator adjustments.

**9. Output per Man-Hour**[7]

The number of employees and of man-hours required to produce a ton of steel has been decreasing. Stated another way, the amount of steel produced per man-hour has risen. The gain in output per man-hour stems from a variety of causes: more and better equipment, improved management, improved worker performance, etc. The upward trend of output per man-hour tends to hold down employment costs. Employment costs, of course, are not the only costs of operation: materials and capital are other major costs.

Changes in output per man-hour may be measured in different ways. In the case of steel, all of the usual measures have shown an uptrend. The gains have been irregular—small gains or decreases in recession years, larger gains in such recovery periods as 1950, 1955, and the first half of 1959.

Output per *wage-employee* man-hour in steel, based on AISI reports, increased by about 74 percent from 1940 to the latest 12-month period, fiscal year 1959 (July 1958 to June 1959). The level attained in the latter part of this period (first half 1959) is, of course, higher than the average for the fiscal year, because of the higher rate of capacity utilization during the first half of 1959.

Output per *all-employee* man-hour increased by 58 percent from 1940 to the fiscal year 1959, or somewhat less than output per wage-employee man-hour. This reflects the fact that administrative, professional, and clerical employees have been increasing in relative importance. Although work in such activities as research and development may not affect technology or output per man-hour immediately, it does have a significant effect over the long run.

During the decade 1947–57, prior to the recent recession and recovery periods, output per wage-employee man-hour in steel increased by an average of 3.0 percent per year; output per all-employee man-hour in steel by 2.6 percent.

For the same postwar decade, the average annual increase in output per man-hour for the economy as a whole was 3.7 percent, the rate for the nonfarm economy was 3.0 percent, and that for manufacturing alone about 3.1 percent.

**10. Employment Cost per Unit of Output**

Employment costs per unit of steel output have increased because money wages plus supplements per man-hour have risen more than output per man-hour. Employment costs include basic wages, incentive premiums, overtime, holiday, vacation, and sick pay, contributions by employers for social security and private insurance, private health, welfare, and pension funds, and supplementary unemployment benefit funds.

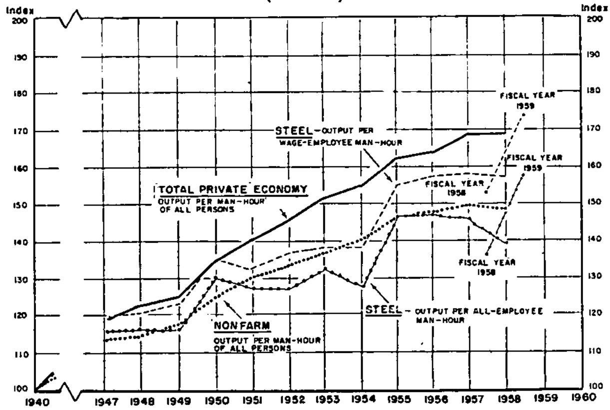
Employment costs for wage employees per unit of output increased about 125 percent from 1940 to 1957. After a sharp rise in the recession year 1958, they fell again in the early months of 1959 so that the average for the fiscal year ending June 1959 was somewhat above the 1957 level.

Employment costs per unit for all employees have increased more than for wage employees alone because of the increase in the relative importance of administrative, professional, and clerical personnel. Total employment costs per unit of output, for all employees, rose by 142 percent from 1940 to 1957, mounted sharply in 1958, and declined in the early months of 1959 to an average for the fiscal year ending June 1959 somewhat above the 1957 level. Employment cost per unit of output was lower in the first half of 1959 than for the fiscal year as a whole because of increase in output per man-hour in the first half of 1959. In the first half of 1959, employment costs per unit of output were somewhat below the 1957 level.

[7] EDITOR'S NOTE.—The data in this section, section 10, and section 14 relating to steel are based on "hours worked" throughout. The data in the last paragraph of this section for the economy as a whole and for the nonfarm economy are also based on "hours worked"; the data for manufacturing are based on "hours paid."

(9)

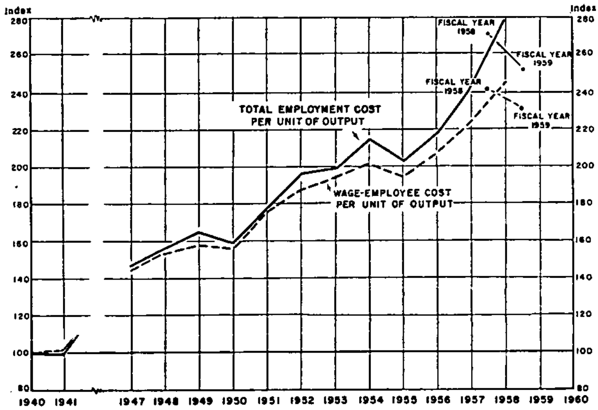
## Output Per Man-Hour
(1940:100)




Source: Bureau of Labor Statistics; U.S. Department of Commerce; American Iron and Steel Institute

(10)

## Employment Cost Per Unit of Steel Output
(1940:100)




Source: Bureau of Labor Statistics; U.S. Department of Commerce; American Iron and Steel Institute

### 11. Employment Costs vs. Other Costs

Total employment costs of steel companies as a percentage of total revenues (including revenues from nonsteel operations) have been lower in most postwar years than in 1940. Before the war, they represented about 37 percent of total revenues; during most years of the postwar period, they ranged from 33 to 35 percent. Only in the recession year of 1958, with the sharp drop in utilization of capacity, did the ratio increase substantially, to 38.2. With recovery in output and capacity utilization, the percentage declined in early 1959 to a level substantially below the 1940 average or the average for the postwar period.

Materials costs accounted for 44 percent of total revenues in 1940, but the percentage has been higher in most postwar years with a range of about 44 to 47 percent. The lowest percentages were attained in the recession years 1954 (43 percent) and 1958 (42 percent); the percentage of material costs usually declines during recessions while that for employment costs increases.

Depreciation, depletion and amortization represented 5.4 percent of total revenues in 1940. During the postwar years, except for 1954 and 1958, they were lower.

Profits before taxes, as a percent of total revenues, have been substantially higher, on the average, during the postwar years than in 1940. Federal taxes, however, have taken a considerably larger share of steel revenues in recent years than in 1940. As a result, profits after taxes, as a percentage of total revenues, have shown considerable stability in the postwar period, but have been generally lower than the 8 percent for 1940. The percentage for the recession year 1958 was 6.3 percent; first-half 1959 figures, based on published company reports, indicate a return to peak postwar levels.

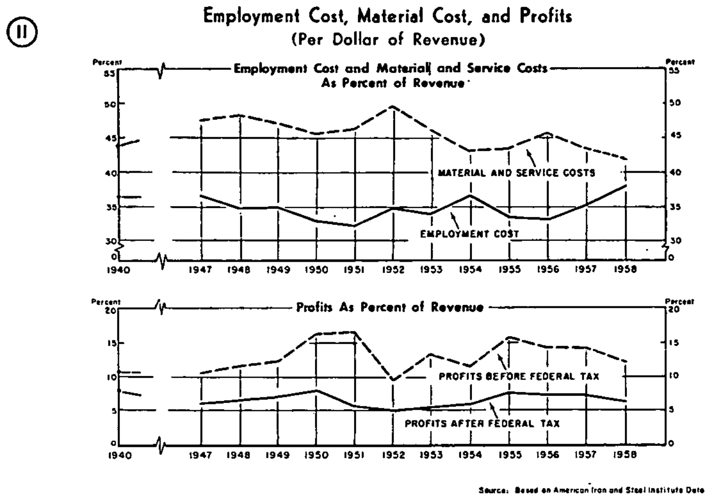
### 12. The Trend of Basic Steel Prices

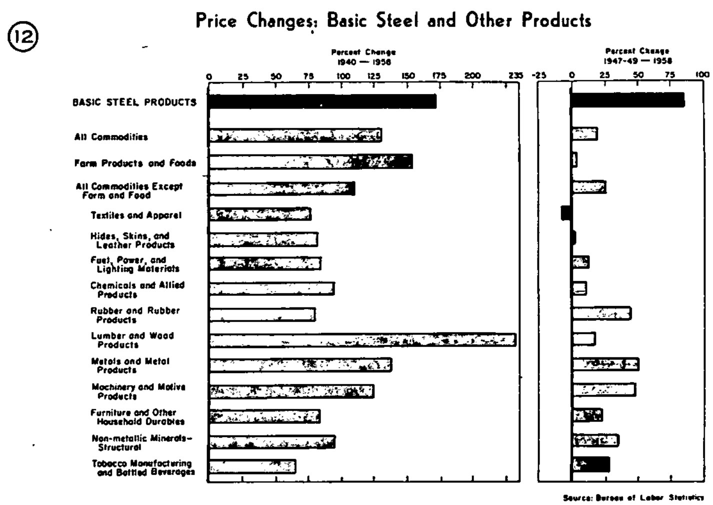
Prices of basic steel products are at peak levels. During the first half of 1959, they averaged 178 percent above 1940. Following a period of virtual stability during the war, steel prices have mounted each year, including years of economic recession.

Steel prices have risen higher and faster than wholesale prices in general, and much more than retail prices. Comparing the first half of 1959 with the 1940 average, the prices of all commodities at wholesale advanced by 134 percent. In the same period, the consumer price index rose 107 percent, in contrast with the 178 percent rise for steel.

Between 1940 and 1958, the increase in prices of basic steel products exceeded that shown by any other major group in the wholesale price index, with the exception of lumber and wood products.

Since 1947–49, the steel price rise has been substantially greater than for any of these groups.


11
Employment Cost, Material Cost, and Profits
(Per Dollar of Revenue)
Employment Cost and Material and Service Costs As Percent of Revenue
MATERIAL AND SERVICE COSTS
EMPLOYMENT COST
Profits As Percent of Revenue
PROFITS BEFORE FEDERAL TAX
PROFITS AFTER FEDERAL TAX
Percent
1940 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958
Source: Based on American Iron and Steel Institute Data


12
Price Changes: Basic Steel and Other Products
Percent Change 1940 — 1958
Percent Change 1947-49 — 1958
BASIC STEEL PRODUCTS
All Commodities
Farm Products and Foods
All Commodities Except Farm and Food
Textiles and Apparel
Hides, Skins, and Leather Products
Fuel, Power, and Lighting Materials
Chemicals and Allied Products
Rubber and Rubber Products
Lumber and Wood Products
Metals and Metal Products
Machinery and Motive Products
Furniture and Other Household Durables
Non-metallic Minerals-Structural
Tobacco Manufacturing and Bottled Beverages
Source: Bureau of Labor Statistics



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## 13. Price Trends in Steel-Consuming Industries

From 1940 to 1952, price movements in the major steel-consuming industries generally conformed with the upward trend in basic steel prices, but in recent years, steel prices have risen at a more rapid rate. The machinery and motive products group, which includes farm, construction and industrial machinery, oilfield and mining machinery, automotive products, electrical equipment, etc., showed an average price increase of 83.5 percent between 1940 and 1952, as against an increase of 88.6 percent in basic steel prices. Since 1952, machinery and motive products have increased 25 percent whereas steel prices have increased by 48 percent.

Wholesale price data for important consumer durables, except passenger cars, are not available back to 1940. From 1947–49, the increase in steel prices has considerably exceeded the gains shown in prices of the consumer products using steel. One group, household refrigerators, has declined in price over the period, reflecting the effects of intensive competition and rapid technological improvements, especially since 1954. For some of the consumer products, to be sure, steel accounts for a relatively small part of total cost.

Since 1940, increases in basic steel prices have been considerably steeper than the rise in retail prices of consumer durables. For the period 1947–49 to June 1959, the special consumer price index group for all durable goods except automobiles shows an increase of only 3.3 percent. Some items, such as refrigerators and washing machines, declined in price during the period.

The retail price reductions for major appliances mainly reflect sharp competition among discount houses and other retailers, and the decline of "fair trade" pricing. In recent years, these influences more than offset any effects of steel price gains on the entire appliance group.

## 14. Basic Steel Prices and Employment Costs

The increase in average prices of steel products since 1940 has exceeded the rise in employment cost per ton of steel produced. This is true whether employment cost for wage employees alone is considered, or whether employment cost of all employees is taken into account.

Basic steel prices rose by 178 percent from 1940 to fiscal year 1959 (July 1958 to June 1959). Employment cost per unit of output (including both wage payments and fringe benefits) for wage employees increased by 131 percent during the same period. Employment cost per unit of output for all employees generally conformed with the movement of steel prices from 1940 to 1954, thereafter rose more slowly than steel prices until 1958. During the recession year 1958, reflecting the decline in level of operations, this employment cost forged ahead of steel prices, but it dropped again in 1959 with the rise in level of production. The overall increase in employment cost per unit of product for all employees from 1940 to fiscal year 1959 was 153 percent.

In terms of dollars, the employment costs of producing a ton of steel and the average realized price per ton have been as follows:[1]

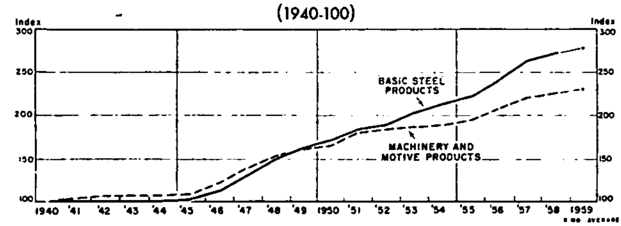
| | *Employment cost* *All employees* | *Wage employees* | *Average realized price per ton* | *Percent capacity utilized* |
|---|---|---|---|---|
| 1951 | $40 | $32 | $125 | $101 |
| 1952 | 45 | 35 | 129 | 86 |
| 1953 | 45 | 36 | 135 | 95 |
| 1954 | 50 | 38 | 139 | 71 |
| 1955 | 46 | 36 | 142 | 93 |
| 1956 | 50 | 38 | 155 | 90 |
| 1957 | 55 | 42 | 165 | 85 |
| 1958 | 65 | 47 | 171 | 61 |
| Fiscal 1959 | 58 | 44 | 173 | 78 |

Employment cost per *man-hour*, in contrast to employment cost per *unit of output*, has risen faster since 1940 than have basic steel prices. The difference between these two measures of employment cost represents the effect of continued reductions in the number of man-hours needed to produce a ton of steel. The increases in employment cost per man-hour between 1940 and fiscal 1959 were about the same for all employees, and for wage employees alone, about 300 percent.

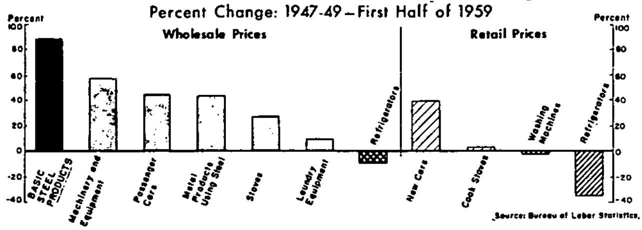
[1] EDITOR'S NOTE.—These data, which are not available in their entirety for years prior to 1951, are in absolute terms and are computed on a different basis than the indexes in the accompanying chart, which are based on 1940=100. The "average realized price per ton" for the period 1951–57 is derived from Census data; estimates for 1958 and 1959 were computed with the use of the BLS wholesale price indexes for basic steel-mill products. The "basic steel prices" of the chart are the BLS wholesale price indexes for basic steel-mill products throughout.

13

## Prices of Basic Steel Products and Machinery and Motive Products, 1940-59
(1940-100)

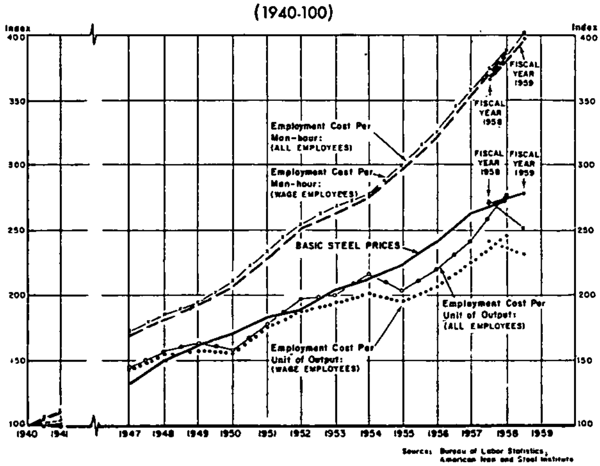



## Increases in Basic Steel Prices and Prices of Products Using Steel
Percent Change: 1947-49 – First Half of 1959




14

## Basic Steel Prices and Employment Costs Per Man-hour and Per Unit of Output
(1940-100)



### 15. Foreign Trade in Steel

U.S. *exports* of steel products reached a postwar peak of $1 billion in 1957 and then declined. Exports in May 1959 were at an annual rate of about $525 million. In terms of quantity, exports reached a peak of more than 5 million tons in 1957, but then dropped very sharply and in May 1959 were at an annual rate of about 2 million tons.

*Imports* of steel products started increasing in 1955 and in May 1959 were at a rate of $550 million per year. In the second quarter of 1959, imports of steel products exceeded exports for the first time in postwar history. The tonnage of imports exceeded the tonnage of exports somewhat earlier; in April and May 1959, the tonnage of imports was more than twice as large as that of exports.

U.S. exports of steel have not been large in relation to U.S. production—in the peak year of 1957, exports amounted to slightly over 5 percent of production. Several European countries export a considerably larger portion of their output, ranging from over 33 percent of production in the Benelux countries down to 8 or 9 percent in Germany and the United Kingdom. A large portion of this trade is, of course, intra-European.

During the prewar period (1935–39), U.S. exports of steel averaged over 1,900,000 tons per year and imports about 350,000 tons. In 1955–56, exports were 3,750,000 tons per year, or about twice the prewar level; imports were 1,450,000 tons, or four times their prewar level.

Industry sources suggest that the recent increase in imports and decrease in exports of basic steel reflect, to an appreciable degree, preparations for the steel strike—the imports, it is stated, were for industry stockpiles, while materials for export were not available. It is not yet known how much of the import trade will be temporary in nature and how much will continue after the strike.

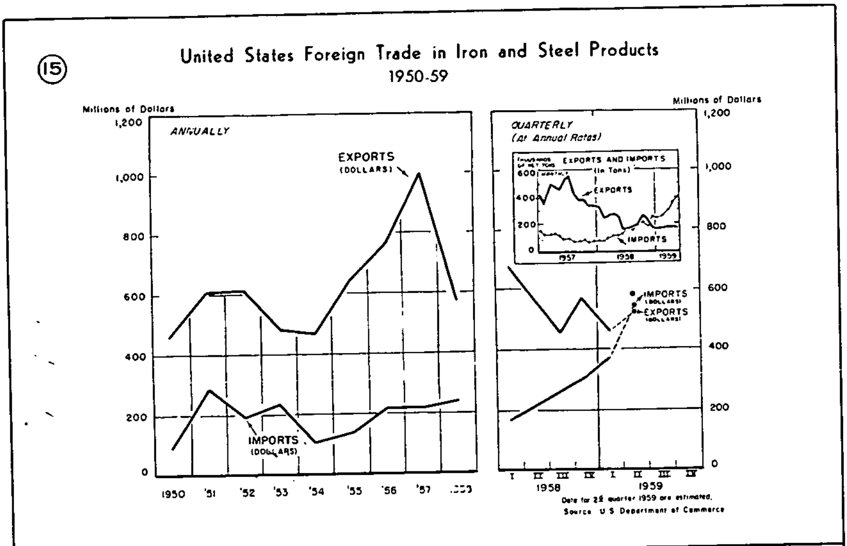
### 16. Foreign Steel Prices

While United States steel prices have continued to rise throughout the postwar period, European and Japanese steel prices have tended to fluctuate from year to year, and have declined significantly since 1957, as shown by the chart. This chart compares the trend of U.S. steel prices as a whole with the trend of individual steel items in other countries for which prices are reported by the United Nations. U.S. prices of the specific commodities shown conformed with the general trend of U.S. steel prices as a whole.

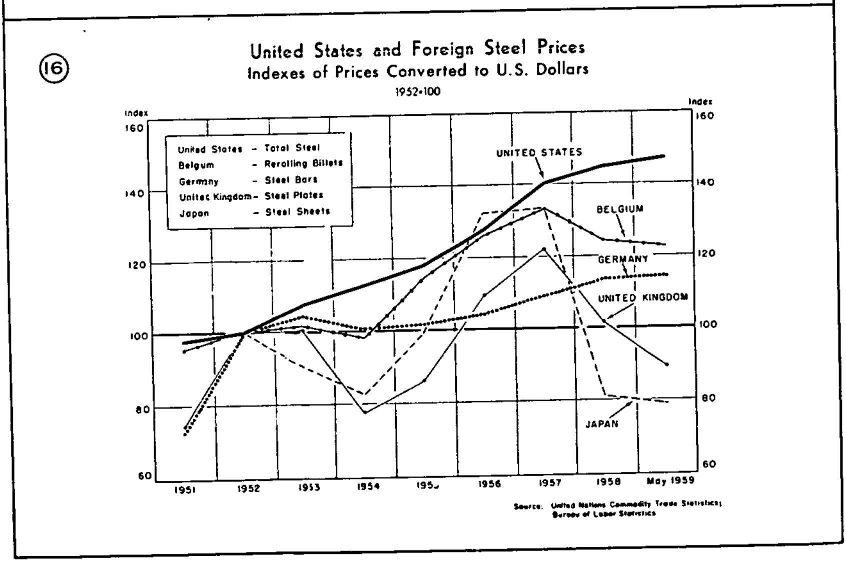
The flexibility of foreign steel prices has been the subject of comment in the business press in this country. According to these sources, when foreign steel was attempting to gain acceptance in the United States (late 1958 and early 1959), quoted prices were $40–$50 a ton below U.S. prices. However, once the steel strike began, foreign prices immediately rose to the former U.S. level. Whether the increases were put into effect by foreign mills or by U.S. importers and agents is not known.

Because of a lack of adequate data, it is not possible to obtain meaningful figures on total costs or on labor costs per ton of steel product which can be used for comparisons between the United States and other steel-producing countries. Even if data on labor cost were available, they would not, of course, reflect differences in total cost. One important reason for this is that in the United States the majority of the steel industry is highly integrated—from the mining of coal and ore through to production of the final product—while this is much less the case abroad. Another reason is that in Europe and Japan, a large proportion of basic raw materials must be imported or transported at high cost.

Between 1952 and 1957, labor expenditures per hour (including supplemental or fringe payments) in the United States and United Kingdom steel industry advanced about 39 percent compared with increases of about 45 percent in Germany, France, the Saar, and Japan, 60 percent in the Netherlands, and about 30 percent in Italy, Luxembourg, and Belgium. Hourly expenditures in the U.S. steel industry in 1957 were, of course, still three to four times higher than those in European countries and seven times Japanese hourly expenditures. These differences are partially or wholly offset by the higher material costs mentioned above and by lower per-worker output in Europe and Japan.



(15)
United States Foreign Trade in Iron and Steel Products
1950-59
Millions of Dollars
ANNUALLY
EXPORTS (DOLLARS)
IMPORTS (DOLLARS)
QUARTERLY (At Annual Rates)
EXPORTS AND IMPORTS (In Tons)
EXPORTS
IMPORTS
IMPORTS (DOLLARS)
EXPORTS (DOLLARS)
1958
1959
Source: U.S. Department of Commerce

(16)
United States and Foreign Steel Prices
Indexes of Prices Converted to U.S. Dollars
1952=100
Index
United States - Total Steel
Belgium - Rerolling Billets
Germany - Steel Bars
United Kingdom - Steel Plates
Japan - Steel Sheets
UNITED STATES
BELGIUM
GERMANY
UNITED KINGDOM
JAPAN
1951
1952
1953
1954
1956
1957
1958
May 1959
Source: United Nations Commodity Trade Statistics; Bureau of Labor Statistics

**17. Net Profits in Relation to Sales and to Stockholders' Equity**

Two ratios are commonly used in comparing profits from industry to industry: profits in relation to sales, and profits as a return on net worth or stockholders' equity. The difference between net worth (frequently used by private business) and stockholders' equity (as used in Federal Trade Commission and Securities and Exchange Commission reports) is relatively small, involving the treatment of certain types of special reserve funds.

During the postwar period, steel industry profits (after taxes) per dollar of sales have been higher than the comparable ratio for all manufacturing. The difference has widened during recent years, starting in 1955. The ratio for the steel industry declined from the peak levels of 1950 and 1955, but the increase in profits in the early months of 1959 (estimated from published earnings reports) brought the 6-month ratio back near the earlier levels.

In comparing steel industry profits as a percent of sales with the same ratio for all manufacturing, account should be taken of the relatively high capital requirements in steel production. Profits in relation to sales must generally be higher in industries with high capital requirements in order to yield a given return on investment. Available published data indicate that capital investment per dollar of revenue is about one-quarter higher in steel than in manufacturing as a whole.

Net profits as a rate of return on stockholders' equity in the steel industry have been lower than those in all manufacturing during most of the postwar years. Supplementary data, not shown in the chart, suggest that the steel profit ratio was also lower than that for all manufacturing in 1940. The steel profits ratio exceeded the ratio for all manufacturing in 1955, 1956, and 1957, then fell to a low point in 1958. The increase in profits in the first half of 1959 brought the ratio back to or above earlier peak levels. The rate of return in steel in the first half of 1959 was above that for all manufacturing.

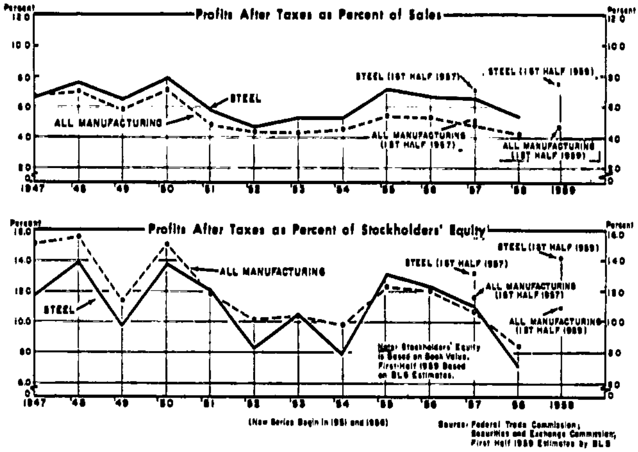
The profit comparisons made above have been influenced somewhat by changing methods of depreciation allowances, such as accelerated amortization, which have resulted in increased deductions for depreciation. On the other hand, the companies have used book value depreciation, which may be below replacement cost of depreciated capital.

**18. Steel Profits Compared With the Profits of Leading Industrial Firms**

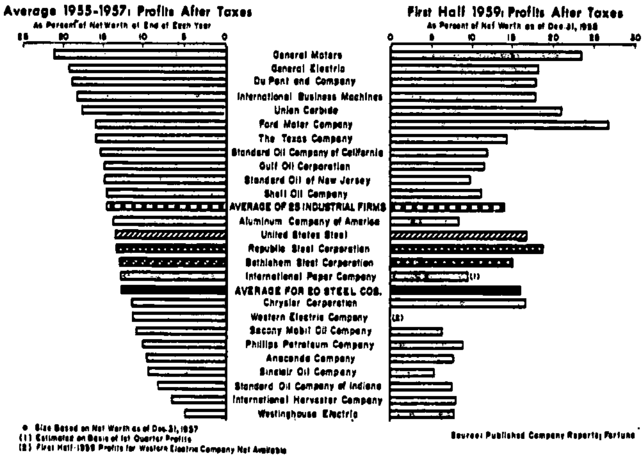
In the 3 years 1955, 1956, and 1957 combined, the 20 largest steel companies had a rate of return on net worth of 12.8 percent, compared to 14.7 percent for the 25 largest industrial firms in the Nation.

In the first half of 1959, the steel companies increased their rate of return, both in relation to their 1955–57 average and in relation to the rate of return for the group of the largest industrial firms. The average for the steel companies was 16.1 percent in the first half of 1959 compared to 14.1 percent for the composite of the largest industrial companies.

(17) Net Profits in Relation to Sales and to Stockholders' Equity




(18) Steel Profits Compared With Profits of the 25 Leading Industrial Firms*
(Profits After Taxes as a Percent of Net Worth)



# Supplementary Tables

**Table 1a. Geographic Distribution of Employment in the Basic Steel Industry, December 1957** [1]

| State | Employment | State | Employment |
|---|---|---|---|
| United States | 611,463 | Minnesota | 3,101 |
| | | Mississippi | ([2]) |
| Alabama | 23,717 | Missouri | 4,286 |
| Alaska | ([2]) | Montana | ([2]) |
| California | 16,598 | Nebraska | ([2]) |
| Colorado | 7,960 | New Jersey | 4,965 |
| Connecticut | ([2]) | New York | 36,899 |
| Delaware | 2,169 | Ohio | 108,440 |
| District of Columbia | ([2]) | Oklahoma | ([2]) |
| Florida | ([2]) | Oregon | 657 |
| Georgia | ([2]) | Pennsylvania | 201,390 |
| Illinois | 38,540 | Rhode Island | 618 |
| Indiana | 59,295 | South Carolina | ([2]) |
| Iowa | ([2]) | Tennessee | 3,962 |
| Kansas | ([2]) | Texas | 8,729 |
| Kentucky | 5,775 | Utah | ([2]) |
| Louisiana | ([2]) | Vermont | ([2]) |
| Maryland | 30,344 | Virginia | ([2]) |
| Massachusetts | 2,675 | Washington | 2,142 |
| Michigan | 23,195 | West Virginia | 19,124 |

[1] Employment of workers covered by State unemployment insurance laws in blast furnaces, steelworks, and rolling mills.
[2] Not shown to avoid disclosure of data for individual firm.

SOURCE: Bureau of Employment Security.

**Table 1b. Distribution of Steelmaking Capacity by State, 1940, 1947, and 1959**

[As of the beginning of the year]

| State | Capacity (thousands of net tons) | | | Percent of capacity | | | Number of plants | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1940 | 1947 | 1959 | 1940 | 1947 | 1959 | 1940 | 1947 | 1959 |
| United States | 80,951 | 90,902 | 147,634 | 100.0 | 100.0 | 100.0 | 129 | 132 | 146 |
| Alabama | 2,891 | 3,620 | 5,421 | 3.6 | 4.0 | 3.7 | 5 | 5 | 6 |
| Arizona | ------- | ------- | 60 | ------- | ------- | ([1]) | ------- | ------- | 1 |
| California | 864 | 1,849 | 4,683 | 1.1 | 2.0 | 3.2 | 6 | 8 | 9 |
| Colorado | 1,105 | 1,269 | 1,800 | 1.4 | 1.4 | 1.2 | 1 | 1 | 1 |
| Connecticut | 162 | 188 | 84 | .2 | .2 | .1 | 1 | 1 | 1 |
| Delaware | 423 | 460 | 507 | .5 | .5 | .3 | 1 | 1 | 1 |
| Florida | ------- | ------- | 43 | ------- | ------- | ([1]) | ------- | ------- | 1 |
| Georgia | 153 | 154 | 400 | .2 | .2 | .3 | 1 | 1 | 1 |
| Illinois | 6,782 | 8,209 | 12,390 | 8.4 | 9.0 | 8.4 | 9 | 9 | 10 |
| Indiana | 10,079 | 11,094 | 18,441 | 12.5 | 12.2 | 12.5 | 6 | 7 | 6 |
| Kentucky | 1,240 | 1,208 | 1,813 | 1.5 | 1.3 | 1.2 | 2 | 2 | 3 |
| Maryland | 3,580 | 4,165 | 8,382 | 4.4 | 4.6 | 5.7 | 2 | 2 | 3 |
| Massachusetts | 213 | 250 | ------- | .3 | .3 | ------- | 1 | 1 | ------- |
| Michigan | 3,111 | 3,120 | 7,942 | 3.8 | 3.4 | 5.4 | 3 | 3 | 5 |
| Minnesota | 336 | 610 | 973 | .4 | .5 | .7 | 1 | 1 | 1 |
| Mississippi | ------- | ------- | 45 | ------- | ------- | ([1]) | ------- | ------- | 1 |
| Missouri | 570 | 426 | 708 | .7 | .5 | .5 | 2 | 1 | 1 |
| New Jersey | 229 | 258 | 243 | .3 | .3 | .2 | 2 | 2 | 2 |
| New York | 4,013 | 4,297 | 7,425 | 5.0 | 4.7 | 5.0 | 9 | 8 | 9 |
| Ohio | 17,172 | 18,587 | 28,862 | 21.2 | 20.4 | 19.6 | 21 | 20 | 20 |
| Oklahoma | 56 | 54 | 120 | .1 | .1 | .1 | 1 | 1 | 1 |
| Oregon | ------- | 60 | 150 | ------- | .1 | .1 | ------- | 1 | 1 |
| Pennsylvania | 25,692 | 26,624 | 38,481 | 31.7 | 29.3 | 26.1 | 46 | 46 | 46 |
| Rhode Island | 67 | 60 | 93 | .1 | .1 | .1 | 1 | 1 | 1 |
| Tennessee | ------- | 38 | 38 | ------- | ([1]) | ([1]) | ------- | 1 | 1 |
| Texas | 3 | 484 | 2,381 | ([1]) | .5 | 1.6 | 2 | 2 | 6 |
| Utah | ------- | 1,283 | 2,300 | ------- | 1.4 | 1.6 | ------- | 1 | 1 |
| Virginia | 2 | 4 | 40 | ([1]) | ([1]) | ([1]) | 1 | 1 | 2 |
| Washington | 174 | 347 | 401 | .2 | .4 | .3 | 2 | 3 | 3 |
| West Virginia | 2,033 | 2,186 | 3,410 | 2.5 | 2.4 | 2.3 | 3 | 2 | 2 |

[1] Less than 0.5 percent.

SOURCE: American Iron and Steel Institute, Annual Statistical Reports, 1939, 1946, and 1958

**Table 2a. Steel Capacity, Production, and Capacity Utilization, United States, 1940–59**

| Year | Capacity [1] | Production | Production as a percent of capacity |
|---|---|---|---|
| | Millions of net tons | | |
| 1940 | 81.6 | 67.0 | 82.1 |
| 1941 | 85.2 | 82.8 | 97.3 |
| 1942 | 88.9 | 86.0 | 96.8 |
| 1943 | 90.6 | 88.8 | 98.1 |
| 1944 | 93.9 | 89.6 | 95.5 |
| 1945 | 95.5 | 79.7 | 83.5 |
| 1946 [2] | 91.9 | 66.6 | 72.5 |
| 1947 | 91.2 | 84.9 | 93.0 |
| 1948 | 94.2 | 88.6 | 94.1 |
| 1949 [2] | 96.1 | 78.0 | 81.1 |
| 1950 | 100.0 | 96.8 | 96.9 |
| 1951 | 104.2 | 105.2 | 100.9 |
| 1952 [2] | 108.6 | 93.2 | 85.8 |
| 1953 | 117.5 | 111.6 | 94.9 |
| 1954 | 124.3 | 88.3 | 71.0 |
| 1955 | 125.8 | 117.0 | 93.0 |
| 1956 [2] | 128.4 | 115.2 | 89.8 |
| 1957 | 133.5 | 112.7 | 84.5 |
| 1958 | 140.7 | 85.3 | 60.6 |
| 1959 | 147.6 | | |
| First 6 months of 1959 | | 64.3 | 87.1 |

[1] As of January 1, except for the years 1941–44 and 1950, which are an average of data as of January 1 and July 1. [2] Years of major steel strikes.

SOURCE: American Iron and Steel Institute, Annual Statistical Report, 1959.

**Table 2b. Steel Shipments by Market Classification, 1947, 1955, and 1958**

[Millions of net tons]

| Market classification | 1947 | 1955 [1] | 1958 |
|---|---|---|---|
| Motor vehicles and equipment | 9.3 | 18.7 | 10.1 |
| Warehouses and distributors [2] | 9.5 | 13.6 | 9.9 |
| Construction and contractors products [3] | 7.4 | 11.1 | 10.0 |
| Containers | 5.1 | 6.7 | 6.6 |
| Oil and gas industry | 3.2 | 5.4 | 3.4 |
| Rail transportation | 5.0 | 3.6 | 1.5 |
| Machinery, industrial equipment, and tools | 3.0 | 4.7 | 3.2 |
| Electrical machinery and equipment | 1.6 | 2.3 | 1.8 |
| Appliances, utensils, and cutlery | 1.6 | 2.2 | 1.6 |

[1] Peak output year.
[2] Excluding oil and gas industry.
[3] Excluding oil and gas and rail transportation industries.

SOURCE: American Iron and Steel Institute, Annual Statistical Report, 1958.

**Table 3a. Employment and Average Weekly Hours of Work in the Basic Steel Industry, 1940–59**

| Year | Employment (in thousands) | | | Average weekly hours, production workers |
|---|---|---|---|---|
| | All employees | Production workers | Administrative, professional, and clerical workers | |
| 1940 | 531.3 | 468.6 | 62.7 | 37.0 |
| 1941 | 608.4 | 538.9 | 69.5 | 39.7 |
| 1942 | 615.0 | 547.4 | 67.6 | 41.1 |
| 1943 | 604.3 | 539.1 | 65.2 | 45.3 |
| 1944 | 565.8 | 500.3 | 65.5 | 47.4 |
| 1945 | 539.1 | 474.2 | 64.9 | 45.0 |
| 1946 [1] | 530.6 | 463.5 | 67.1 | 37.1 |
| 1947 | 589.0 | 517.6 | 71.4 | 39.0 |
| 1948 | 612.0 | 536.8 | 75.2 | 39.5 |
| 1949 [1] | 550.4 | 476.7 | 73.7 | 38.3 |
| 1950 | 611.0 | 532.9 | 78.1 | 39.9 |
| 1951 | 643.5 | 560.2 | 83.3 | 40.9 |
| 1952 [1] | 570.7 | 486.5 | 84.2 | 40.0 |
| 1953 | 653.3 | 559.6 | 93.7 | 40.5 |
| 1954 | 580.8 | 492.5 | 88.3 | 37.9 |
| 1955 | 635.3 | 544.6 | 90.7 | 40.5 |
| 1956 [1] | 630.2 | 532.6 | 97.6 | 40.5 |
| 1957 | 642.7 | 537.0 | 105.7 | 39.1 |
| 1958 | 536.7 | 436.8 | 99.8 | 37.5 |
| 1959 (first 6 months) | 617.9 | 513.9 | 104.1 | 40.6 |

[1] Year in which major strike occurred.

SOURCE: Bureau of Labor Statistics.

## Table 3b. Occupational Distribution of Wage and Salary Workers in the Basic Steel Industry, Mid-1956 and Autumn 1958

| Occupational category | Mid-1956 | Autumn 1958 |
|---|---|---|
| Total employment | 660,000 | 560,000 |
| Production workers | 545,000 | 445,000 |
| Semiskilled workers | 250,000 | 200,000 |
| Skilled workers and foremen | 175,000 | 155,000 |
| Laborers, helpers, and miscellaneous service workers | 120,000 | 90,000 |
| Administrative, professional, and clerical workers | 115,000 | 115,000 |
| Clerical and sales workers | 75,000 | 75,000 |
| Professional and technical workers | 30,000 | 30,000 |
| Administrative workers | 10,000 | 10,000 |

SOURCE: Bureau of Labor Statistics.

## Table 4a. Gross Average Hourly Earnings [1] of Production Workers in Selected Industries, 1949–59

| Date | Basic steel | Bituminous coal mining | Petroleum refining | Automobiles (motor vehicles and equipment) | Machinery (except electrical) | All manufacturing |
|---|---|---|---|---|---|---|
| January 1949 | $1.656 | $1.947 | $1.856 | $1.702 | $1.524 | $1.405 |
| January 1950 | 1.675 | 1.933 | 1.902 | 1.715 | 1.547 | 1.418 |
| January 1951 | 1.89 | 2.04 | 2.04 | 1.84 | 1.71 | 1.55 |
| January 1952 | 1.91 | 2.24 | 2.11 | 1.98 | 1.82 | 1.64 |
| January 1953 | 2.15 | 2.48 | 2.27 | 2.10 | 1.93 | 1.74 |
| January 1954 | 2.18 | 2.48 | 2.36 | 2.19 | 2.00 | 1.80 |
| January 1955 | 2.27 | 2.48 | 2.37 | 2.25 | 2.03 | 1.84 |
| January 1956 | 2.47 | 2.70 | 2.51 | 2.28 | 2.17 | 1.93 |
| January 1957 | 2.66 | 2.95 | 2.68 | 2.43 | 2.27 | 2.05 |
| January 1958 | 2.76 | 3.04 | 2.82 | 2.48 | 2.34 | 2.11 |
| January 1959 | 3.04 | 3.16 | 2.86 | 2.66 | 2.44 | 2.19 |
| May 1959 | 3.10 | 3.27 | 2.98 | 2.68 | 2.50 | 2.23 |

[1] Include incentive earnings, premium pay for overtime, holiday work, and shift differentials, and effects of changes in skill levels, but exclude expenditures on vacations, pensions, insurance and other fringes.

SOURCE: Bureau of Labor Statistics.

## Table 4b. Increases in Basic Hourly Wage Rates [1] Since January 1950, Selected Major Collective Bargaining Situations

| Situation | Increase from January 1950 to mid-August 1959: Cents per hour | Percent [2] |
|---|---|---|
| U.S. Steel Corp | 107.9 | 66.1 |
| Building trades | 126.6 | 56.3 |
| Aluminum Company of America (United Steelworker agreements) | 116.6 | 83.4 |
| Sinclair Oil Companies | 99.1 | 53.7 |
| General Motors Corp | 98.2 | 60.5 |
| Lockheed Aircraft Corp. (Southern California plants) | 92.2 | 60.1 |
| Rubber tires and tubes (Firestone Tire and Rubber and B. F. Goodrich Cos.) | 86.4 | 50.3 |
| The Anaconda Co | 84.6 | 60.0 |

[1] Include general increases in rates, cost-of-living adjustments, and estimated effects of adjustments of geographic and other wage inequities; exclude effects of incentive earnings, premium overtime pay, shift differentials, and changes in skill level as well as other fringe benefits. Data include increases effective through the first half of August 1959.

[2] Percentage increases estimated by dividing cents-per-hour increases by estimated straight-time average hourly earnings for January 1950 in the industry in which the company is classified.

SOURCE: Wage chronology series and annual studies of union scales in the building trades, Bureau of Labor Statistics.

**Table 5a. Gross Average Hourly Earnings [1] of Production Workers in Selected Industries, May 1959**

| Industry | Gross average hourly earnings [1] |
|---|---|
| Bituminous coal mining | $3.27 |
| Building construction | 3.17 |
| Basic steel | 3.10 |
| Petroleum refining | [2] 2.98 |
| Tires and tubes | 2.94 |
| Aluminum refining | 2.92 |
| Automobiles (motor vehicles and equipment) | 2.68 |
| Aircraft | 2.62 |
| Agricultural machinery (including tractors) | 2.57 |
| Copper refining | [2] 2.32 |
| All manufacturing | 2.23 |

[1] Include incentive earnings, premium pay for overtime, holiday work and shift differentials, but exclude expenditures on vacations, pensions, insurance, and other fringes.
[2] Final figure, differing by 1 cent from preliminary figure shown in chart.

SOURCE: Bureau of Labor Statistics.

**Table 5b. Current Job-by-Job Hourly Wage Rates [1]**

| Item | Current hourly wage rates | Explanation |
|---|---|---|
| UNSKILLED LABOR | | |
| U.S. Steel Corp | $2.13 | Rate for labor grade 2—unassigned labor. No provision for automatic increase in pay. |
| General Motors Corp | 2.24 | Rate paid within 90 days after hiring. |
| Bethlehem Steel Co., Shipbuilding Division. | 2.13 | Single rate for laborers, excluding premium rates paid for hazardous or other specialized types of work. |
| The Anaconda Co | 2.096 | Daily rate for regular laborers divided by 8. |
| Meatpacking | 2.08 | Rate paid male common labor at most plants of Armour and Swift Rates in other plants range from $1.93 to $2.22. |
| Sinclair Oil Companies | 2.22–2.47 | Range of rates paid laborers after 120 days at refineries with lowest and highest rates. |
| Commonwealth Edison Co | 2.12 | *Correction:* Labor rate paid after 3 months. Rate in 1957 brought up to date by general wage increases in 1958 and 1959. |
| Pacific Gas and Electric Co | 2.12 | Laborers in operation, maintenance, and construction department. |
| MAINTENANCE MACHINISTS | | |
| U.S. Steel Corp | 3.068 | Hourly rate for machinists. Machine shop (labor grade 16). |
| Lockheed Aircraft Corp | 2.80–3.07 | Minimum and maximum rate for general machinists (labor grade 1). |
| Sinclair Oil Companies | 2.76–3.17 | Range of rates among refineries for machinists. Rate as of February 1956 brought up to date by applying general wage increases effective in 1957 and January 1959. |
| Manufacturing rates in major metalworking centers. | 2.78–3.07 | Straight-time average hourly earnings for maintenance machinists in all manufacturing industries in 7 major metalworking centers studied by the BLS: Buffalo, Baltimore, Chicago, Detroit, Los Angeles, Milwaukee, and Seattle. Data refer to periods from August 1958 to April 1959. |
| TOOLMAKERS | | |
| U.S. Steel Corp | 3.202 | Hourly rate for toolmakers, machine shop, grade 18. |
| Automobiles | 3.267 | Straight-time average hourly earnings for tool and die makers reported in the BLS occupational survey of the motor vehicle industry as of July 1957, brought up to date by subsequent general wage increases. |
| Lockheed Aircraft Corp | 2.88–3.15 | Minimum and maximum rates for tool and die makers. |
| Manufacturing rates in major metalworking centers. | 2.95–3.15 | Straight-time average hourly earnings for tool and die makers in all manufacturing industries in 7 major metalworking centers studied by the BLS: Buffalo, Baltimore, Chicago, Detroit, Los Angeles, Milwaukee, and Seattle. Data refer to periods from August 1958 to April 1959. |

[1] Rates include cost-of-living allowances but, except for the manufacturing rates in metalworking centers, exclude incentive payments. Many steelworkers receive incentive pay, which is less common in most other high-wage industries. For straight-time average hourly earnings including incentive earnings, by labor grades in basic steel, see table 5c. However, information is not available to indicate whether the rates for the specific occupations presented in this table are increased by incentive earnings in the same degree as the labor grade as a whole.

SOURCE: Wage chronology series, union agreements, and occupational wage surveys, Bureau of Labor Statistics.

**Table 5c. Standard Hourly Rates and Straight-Time Average Hourly Earnings by Job Class in Basic Steel, First Quarter 1958 and First Quarter 1959**

| Job class | First quarter 1958 | | | First quarter 1959 | | |
|---|---|---|---|---|---|---|
| | Standard hourly rate | Standard hourly rate plus cost-of-living allowance | Straight-time average hourly earnings (standard hourly rate plus cost-of-living allowance and incentive earnings) | Standard hourly rate | Standard hourly rate plus cost-of-living allowance | Straight-time average hourly earnings (standard hourly rate plus cost-of-living allowance and incentive earnings) |
| 1–2 | $1.890 | $2.01 | $2.07 | $1.960 | $2.13 | $2.21 |
| 3 | 1.955 | 2.08 | 2.27 | 2.027 | 2.20 | 2.44 |
| 4 | 2.020 | 2.14 | 2.36 | 2.094 | 2.26 | 2.55 |
| 5 | 2.085 | 2.21 | 2.45 | 2.161 | 2.33 | 2.64 |
| 6 | 2.150 | 2.27 | 2.53 | 2.228 | 2.40 | 2.71 |
| 7 | 2.215 | 2.34 | 2.63 | 2.295 | 2.47 | 2.82 |
| 8 | 2.280 | 2.40 | 2.66 | 2.362 | 2.53 | 2.84 |
| 9 | 2.345 | 2.47 | 2.76 | 2.429 | 2.60 | 2.95 |
| 10 | 2.410 | 2.53 | 2.82 | 2.496 | 2.67 | 3.03 |
| 11 | 2.475 | 2.60 | 2.91 | 2.563 | 2.73 | 3.11 |
| 12 | 2.540 | 2.66 | 2.89 | 2.630 | 2.80 | 3.11 |
| 13 | 2.605 | 2.73 | 2.99 | 2.697 | 2.87 | 3.22 |
| 14 | 2.670 | 2.79 | 3.03 | 2.764 | 2.94 | 3.23 |
| 15 | 2.735 | 2.86 | 3.21 | 2.831 | 3.00 | 3.45 |
| 16 | 2.800 | 2.92 | 3.20 | 2.898 | 3.07 | 3.41 |
| 17 | 2.865 | 2.99 | 3.39 | 2.965 | 3.14 | 3.72 |
| 18 | 2.930 | 3.05 | 3.38 | 3.032 | 3.20 | 3.64 |
| 19 | 2.995 | 3.12 | 3.74 | 3.099 | 3.27 | 4.01 |
| 20 | 3.060 | 3.18 | 3.74 | 3.166 | 3.34 | 4.08 |
| 21 | 3.125 | 3.25 | 3.84 | 3.233 | 3.40 | 4.19 |
| 22 | 3.190 | 3.31 | 3.91 | 3.300 | 3.47 | 4.22 |
| 23 | 3.255 | 3.38 | 4.14 | 3.367 | 3.54 | 4.45 |
| 24 | 3.320 | 3.44 | 4.53 | 3.434 | 3.60 | 4.88 |
| 25 | 3.385 | 3.51 | 4.71 | 3.501 | 3.67 | 4.93 |
| 26 | 3.450 | 3.57 | 4.47 | 3.568 | 3.74 | 4.86 |
| 27 | 3.515 | 3.64 | 4.90 | 3.635 | 3.81 | 5.21 |
| 28 | 3.580 | 3.70 | 5.16 | 3.702 | 3.87 | 5.45 |
| 29 | 3.645 | 3.77 | 5.03 | 3.769 | 3.94 | 5.34 |
| 30 | 3.710 | 3.83 | 4.49 | 3.836 | 4.01 | 4.83 |
| 31 | 3.775 | 3.90 | 5.51 | 3.903 | 4.07 | 5.48 |
| 32 | 3.840 | 3.96 | 5.73 | 3.970 | 4.14 | 5.24 |
| All wage employees | 2.307 | 2.427 | 2.682 | 2.389 | 2.559 | 2.878 |

NOTE: Information for 1958 based on 28 companies, accounting for 77.6 percent of wage employees in the industry, and for 1959, 33 companies, accounting for 78 percent of wage employees.

SOURCE: Based on data from the American Iron and Steel Institute.

**Table 6a. Annual Earnings of Wage Employees [1] in the Steel Industry, 1957 and 1958**

| Annual earnings | Percent of wage employees in— | |
|---|---|---|
| | 1957 | 1958 |
| Under $1,200 | 1.4 | 7.3 |
| $1,200–$2,399 | 2.3 | 6.9 |
| $2,400–$3,599 | 4.9 | 8.1 |
| $3,600–$4,799 | 23.7 | 18.8 |
| $4,800–$5,999 | 37.9 | 30.9 |
| $6,000–$7,199 | 21.1 | 19.8 |
| $7,200–$8,399 | 6.3 | 6.0 |
| $8,400 and over | 2.5 | 2.2 |
| All wage employees covered | 100.0 | 100.0 |
| Number of wage employees | 427,435 | 423,883 |

[1] Data include employees who had seniority both at the beginning and end of the year.

NOTE: Because of rounding, sums of individual items may not equal totals.

SOURCE: American Iron and Steel Institute.

**Table 6b. Annual Earnings of Wage Employees in the Steel Industry Classified by Number of Weeks Worked, 1957**

[Hours are in thousands]

| Annual gross earnings range | | Total | Number of weeks for which pay was received [1] | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 26 or less | 27-28 | 29-30 | 31-32 | 33-34 | 35-36 | 37-38 | 39-40 | 41-42 | 43-44 | 45-46 | 47-48 | 49-50 | 51-52 | 53-54 |
| $599 and under | Employees | 2,410 | 2,407 | ...... | 1 | 2 | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| | Hours | 259 | 259 | ...... | (2) | (2) | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... | ...... |
| $600-$1,199 | Employees | 3,365 | 3,303 | 9 | 10 | 3 | 2 | 2 | 2 | 7 | 4 | 4 | 6 | 3 | 1 | 9 | ...... |
| | Hours | 1,265 | 1,222 | 3 | 4 | 1 | 1 | 2 | 1 | 3 | 5 | 5 | 8 | 1 | 2 | 7 | ...... |
| $1,200-$1,799 | Employees | 4,731 | 4,383 | 124 | 61 | 37 | 16 | 9 | 10 | 19 | 15 | 10 | 11 | 7 | 10 | 19 | ...... |
| | Hours | 2,953 | 2,689 | 91 | 44 | 26 | 12 | 7 | 8 | 13 | 13 | 12 | 13 | 4 | 7 | 13 | ...... |
| $1,800-$2,399 | Employees | 5,004 | 2,500 | 738 | 634 | 437 | 224 | 129 | 87 | 57 | 38 | 31 | 22 | 19 | 24 | 64 | ...... |
| | Hours | 4,336 | 1,967 | 669 | 596 | 423 | 221 | 124 | 84 | 54 | 37 | 32 | 22 | 19 | 22 | 66 | ...... |
| $2,400-$2,999 | Employees | 7,357 | 805 | 506 | 718 | 881 | 1,020 | 955 | 834 | 522 | 348 | 237 | 147 | 104 | 100 | 171 | 9 |
| | Hours | 8,278 | 714 | 485 | 753 | 971 | 1,175 | 1,137 | 1,025 | 637 | 429 | 292 | 183 | 130 | 123 | 210 | 13 |
| $3,000-$3,599 | Employees | 13,507 | 211 | 151 | 280 | 424 | 717 | 988 | 1,565 | 1,757 | 1,676 | 1,594 | 1,118 | 992 | 870 | 1,141 | 23 |
| | Hours | 18,891 | 221 | 154 | 309 | 490 | 877 | 1,272 | 2,104 | 2,432 | 2,419 | 2,345 | 1,672 | 1,504 | 1,317 | 1,738 | 37 |
| $3,600-$4,199 | Employees | 34,584 | 120 | 44 | 95 | 165 | 288 | 444 | 874 | 1,313 | 1,811 | 2,477 | 2,904 | 3,688 | 6,134 | 13,470 | 757 |
| | Hours | 58,710 | 146 | 49 | 113 | 200 | 376 | 587 | 1,213 | 1,900 | 2,759 | 3,897 | 4,730 | 6,237 | 10,687 | 24,379 | 1,436 |
| $4,200-$4,799 | Employees | 66,521 | 83 | 15 | 30 | 70 | 164 | 214 | 402 | 653 | 1,074 | 1,826 | 2,633 | 4,124 | 10,440 | 41,793 | 3,000 |
| | Hours | 122,685 | 94 | 18 | 38 | 95 | 230 | 293 | 573 | 964 | 1,663 | 2,968 | 4,457 | 7,259 | 18,979 | 79,141 | 5,914 |
| $4,800-$5,399 | Employees | 85,036 | 104 | 15 | 16 | 46 | 91 | 70 | 186 | 318 | 596 | 1,044 | 1,954 | 3,199 | 10,149 | 62,917 | 4,329 |
| | Hours | 162,958 | 112 | 18 | 19 | 68 | 145 | 96 | 271 | 483 | 955 | 1,723 | 3,384 | 5,739 | 18,748 | 122,489 | 8,710 |
| $5,400-$5,999 | Employees | 77,116 | 46 | 4 | 8 | 32 | 77 | 36 | 85 | 122 | 268 | 661 | 1,240 | 2,405 | 8,005 | 60,485 | 3,642 |
| | Hours | 151,006 | 60 | 5 | 10 | 49 | 125 | 52 | 123 | 188 | 436 | 1,112 | 2,178 | 4,415 | 15,196 | 119,637 | 7,419 |
| $6,000-$6,599 | Employees | 55,578 | 31 | 2 | 6 | 11 | 45 | 24 | 67 | 81 | 119 | 373 | 790 | 1,730 | 5,385 | 44,465 | 2,449 |
| | Hours | 110,540 | 39 | 3 | 8 | 17 | 74 | 35 | 100 | 126 | 195 | 631 | 1,411 | 3,224 | 10,430 | 89,190 | 5,057 |
| $6,600-$7,199 | Employees | 34,484 | 28 | 2 | 2 | 9 | 25 | 12 | 40 | 43 | 67 | 159 | 383 | 940 | 3,234 | 28,030 | 1,510 |
| | Hours | 69,758 | 42 | 2 | 3 | 14 | 41 | 17 | 61 | 69 | 110 | 274 | 695 | 1,784 | 6,361 | 57,121 | 3,162 |
| $7,200-$7,799 | Employees | 17,976 | 7 | ...... | 1 | 5 | 9 | 9 | 17 | 21 | 51 | 86 | 210 | 449 | 1,750 | 14,487 | 874 |
| | Hours | 36,844 | 6 | ...... | 1 | 7 | 14 | 14 | 27 | 33 | 83 | 149 | 381 | 845 | 3,471 | 29,935 | 1,879 |
| $7,800-$8,399 | Employees | 9,001 | 3 | ...... | ...... | 1 | 5 | 1 | 7 | 10 | 20 | 66 | 149 | 247 | 951 | 7,102 | 439 |
| | Hours | 18,507 | 3 | ...... | ...... | 1 | 10 | 2 | 11 | 15 | 34 | 116 | 271 | 464 | 1,888 | 14,727 | 965 |
| $8,400-$8,999 | Employees | 5,117 | ...... | ...... | ...... | ...... | 1 | 2 | 2 | 3 | 14 | 37 | 95 | 151 | 533 | 3,983 | 296 |
| | Hours | 10,555 | ...... | ...... | ...... | ...... | 2 | 3 | 3 | 5 | 25 | 63 | 173 | 286 | 1,069 | 8,277 | 649 |
| $9,000 and over | Employees | 5,648 | 1 | ...... | ...... | 2 | ...... | 2 | 1 | 9 | 17 | 45 | 91 | 195 | 610 | 4,413 | 262 |
| | Hours | 11,640 | 1 | ...... | ...... | 3 | ...... | 3 | 2 | 15 | 29 | 80 | 168 | 371 | 1,215 | 9,168 | 584 |
| Total number of employees | | 427,435 | 14,032 | 1,610 | 1,862 | 2,125 | 2,684 | 2,897 | 4,179 | 4,935 | 6,120 | 8,650 | 11,753 | 18,253 | 48,196 | 282,549 | 17,590 |
| Aggregate hours worked | | 789,186 | 7,574 | 1,496 | 1,900 | 2,365 | 3,301 | 3,645 | 5,604 | 6,938 | 9,194 | 13,701 | 19,746 | 32,284 | 89,515 | 556,099 | 35,825 |
| Aggregate earnings (millions of dollars) | | $2,287 | $20 | $4 | $5 | $6 | $9 | $10 | $15 | $19 | $25 | $38 | $57 | $92 | $259 | $1,627 | $101 |
| Average hourly earnings | | $2.897 | $2.702 | $2.619 | $2.609 | $2.655 | $2.699 | $2.660 | $2.708 | $2.711 | $2.725 | $2.796 | $2.865 | $2.864 | $2.889 | $2.925 | $2.816 |
| Average annual earnings | | $5,350 | $1,458 | $2,433 | $2,661 | $2,955 | $3,319 | $3,347 | $3,631 | $3,811 | $4,094 | $4,428 | $4,813 | $5,066 | $5,365 | $5,757 | $5,734 |

[1] Includes weeks of vacation pay.
[2] Less than 500 hours.

SOURCE: American Iron and Steel Institute.

NOTE: Data for 40 companies, accounting for 84.1 percent of wage employees in the industry. Because of rounding, sums of individual items do not necessarily equal totals.

**Table 6c. Annual Earnings of Wage Employees in the Steel Industry Classified by Number of Weeks Worked, 1958**

[Hours are in thousands]

| Annual gross earnings range | | Total | Number of weeks for which pay was received [1] | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 26 or less | 27-28 | 29-30 | 31-32 | 33-34 | 35-36 | 37-38 | 39-40 | 41-42 | 43-44 | 45-46 | 47-48 | 49-50 | 51-52 | 53-54 |
| $599 and under | Employees | 15,747 | 15,742 | ..... | 1 | 1 | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... |
| | Hours | 1,291 | 1,289 | ..... | [2] | [2] | ..... | [2] | ..... | [2] | ..... | ..... | ..... | ..... | [2] | ..... | ..... |
| $600-$1,199 | Employees | 15,073 | 15,027 | 6 | 8 | 7 | 2 | 3 | 4 | 2 | ..... | 3 | 1 | 4 | 1 | 5 | ..... |
| | Hours | 4,405 | 4,385 | 2 | 2 | 3 | 1 | 1 | 2 | [2] | ..... | 1 | [2] | 2 | [2] | 5 | ..... |
| $1,200-$1,799 | Employees | 14,438 | 14,080 | 150 | 121 | 48 | 26 | 14 | 9 | 9 | 3 | 3 | 5 | 1 | 6 | 24 | ..... |
| | Hours | 7,475 | 7,200 | 90 | 72 | 28 | 19 | 9 | 4 | 5 | 2 | 2 | 4 | 1 | 4 | 37 | ..... |
| $1,800-$2,399 | Employees | 14,848 | 10,909 | 1,618 | 1,001 | 549 | 382 | 146 | 66 | 52 | 33 | 35 | 26 | 26 | 50 | 59 | ..... |
| | Hours | 10,985 | 7,700 | 1,307 | 837 | 462 | 289 | 119 | 57 | 43 | 28 | 29 | 22 | 21 | 49 | 71 | ..... |
| $2,400-$2,999 | Employees | 15,850 | 4,527 | 2,261 | 2,359 | 1,974 | 1,517 | 1,027 | 601 | 493 | 290 | 192 | 182 | 118 | 109 | 136 | 4 |
| | Hours | 15,212 | 3,798 | 2,124 | 2,307 | 2,007 | 1,572 | 1,081 | 708 | 527 | 309 | 204 | 190 | 119 | 110 | 156 | 5 |
| $3,000-$3,599 | Employees | 18,700 | 1,067 | 875 | 1,380 | 1,729 | 2,090 | 2,159 | 1,859 | 1,796 | 1,435 | 1,134 | 822 | 738 | 585 | 855 | 30 |
| | Hours | 22,103 | 973 | 874 | 1,467 | 1,921 | 2,422 | 2,641 | 2,305 | 2,284 | 1,854 | 1,407 | 1,035 | 937 | 755 | 1,163 | 44 |
| $3,600-$4,199 | Employees | 28,703 | 192 | 282 | 413 | 813 | 1,244 | 1,478 | 1,877 | 2,142 | 2,439 | 2,093 | 2,687 | 2,502 | 2,836 | 6,618 | 539 |
| | Hours | 41,885 | 175 | 244 | 455 | 942 | 1,495 | 1,879 | 2,480 | 2,955 | 3,481 | 3,958 | 4,022 | 3,685 | 4,386 | 10,634 | 893 |
| $4,200-$4,799 | Employees | 51,068 | 153 | 59 | 124 | 235 | 584 | 749 | 890 | 1,420 | 1,946 | 2,580 | 3,485 | 4,532 | 6,795 | 25,050 | 2,448 |
| | Hours | 85,517 | 152 | 60 | 139 | 284 | 720 | 961 | 1,215 | 2,035 | 2,887 | 4,016 | 5,558 | 7,430 | 11,545 | 44,040 | 4,454 |
| $4,800-$5,399 | Employees | 65,830 | 48 | 26 | 32 | 58 | 218 | 284 | 416 | 758 | 1,220 | 1,839 | 2,720 | 4,043 | 8,787 | 39,939 | 5,438 |
| | Hours | 116,893 | 48 | 29 | 35 | 66 | 276 | 381 | 581 | 1,168 | 1,873 | 2,894 | 4,459 | 6,847 | 15,472 | 72,806 | 10,258 |
| $5,400-$5,999 | Employees | 65,166 | 29 | 10 | 19 | 30 | 82 | 116 | 178 | 414 | 681 | 1,148 | 1,786 | 3,048 | 7,854 | 43,065 | 6,731 |
| | Hours | 119,910 | 29 | 11 | 23 | 38 | 106 | 156 | 244 | 632 | 1,023 | 1,863 | 2,996 | 5,333 | 14,237 | 80,240 | 12,959 |
| $6,000-$6,599 | Employees | 52,328 | 33 | 6 | 9 | 16 | 43 | 40 | 100 | 211 | 329 | 665 | 1,055 | 1,852 | 5,643 | 35,810 | 6,516 |
| | Hours | 96,504 | 40 | 7 | 14 | 21 | 56 | 55 | 141 | 348 | 528 | 1,113 | 1,808 | 3,290 | 10,440 | 67,903 | 12,744 |
| $6,600-$7,199 | Employees | 31,512 | 12 | 3 | 2 | 2 | 40 | 25 | 31 | 142 | 144 | 284 | 641 | 983 | 3,108 | 22,053 | 4,042 |
| | Hours | 60,207 | 4 | 3 | 2 | 3 | 53 | 34 | 45 | 246 | 230 | 477 | 1,111 | 1,766 | 5,834 | 42,344 | 8,054 |
| $7,200-$7,799 | Employees | 16,973 | 3 | 4 | 1 | 1 | 25 | 11 | 23 | 64 | 72 | 188 | 445 | 739 | 1,908 | 11,600 | 1,889 |
| | Hours | 32,681 | 3 | 6 | 1 | 1 | 34 | 15 | 33 | 114 | 116 | 317 | 793 | 1,358 | 3,623 | 22,462 | 3,806 |
| $7,800-$8,399 | Employees | 8,460 | 1 | ..... | 1 | ..... | 15 | 5 | 10 | 42 | 37 | 81 | 177 | 363 | 1,041 | 5,865 | 831 |
| | Hours | 16,370 | 1 | ..... | 1 | ..... | 20 | 7 | 15 | 73 | 60 | 136 | 308 | 669 | 1,977 | 11,434 | 1,670 |
| $8,400-$8,999 | Employees | 4,211 | ..... | ..... | 2 | ..... | 3 | 5 | 7 | 26 | 28 | 66 | 134 | 173 | 423 | 2,938 | 396 |
| | Hours | 8,091 | ..... | ..... | 2 | ..... | 4 | 7 | 10 | 49 | 46 | 113 | 233 | 311 | 812 | 5,706 | 799 |
| $9,000 and over | Employees | 5,012 | 2 | ..... | 5 | 1 | 2 | 3 | 15 | 46 | 40 | 78 | 140 | 199 | 555 | 3,458 | 468 |
| | Hours | 9,002 | 1 | ..... | 6 | 1 | 3 | 4 | 22 | 82 | 67 | 134 | 250 | 363 | 1,039 | 6,693 | 936 |
| Total number of employees | | 423,853 | 61,767 | 5,250 | 5,484 | 5,462 | 6,173 | 6,094 | 6,134 | 7,048 | 8,672 | 10,990 | 14,306 | 19,390 | 39,682 | 197,478 | 29,332 |
| Aggregate hours worked | | 651,190 | 25,799 | 4,757 | 5,365 | 5,777 | 7,018 | 7,369 | 7,858 | 10,579 | 12,503 | 16,723 | 22,808 | 32,334 | 70,283 | 365,395 | 56,622 |
| Aggregate earnings (millions of dollars) | | $2,051 | $79 | $14 | $16 | $17 | $22 | $22 | $24 | $32 | $38 | $52 | $72 | $102 | $222 | $1,103 | $177 |
| Average hourly earnings | | $3.151 | $3.075 | $2.956 | $2.966 | $2.961 | $3.075 | $3.015 | $3.089 | $3.054 | $3.071 | $3.107 | $3.149 | $3.145 | $3.164 | $3.152 | $3.129 |
| Average annual earnings | | $4,840 | $1,285 | $2,078 | $2,892 | $3,132 | $3,496 | $3,646 | $3,881 | $4,224 | $4,428 | $4,726 | $5,020 | $5,244 | $5,587 | $5,585 | $6,040 |

[1] Includes weeks of vacation
[2] Less than 500 hours.

SOURCE: American Iron and Steel Institute.

NOTE: Data for 44 companies, accounting for 88 percent of wage employees in the industry. Because of rounding, sums of individual items do not necessarily equal totals.

**Table 7a. Total Employment Costs per Hour [1] and Straight-Time Hourly Earnings of Wage Employees in Basic Steel, 1940–58**

| Year | Total employment costs per hour | Straight-time hourly earnings (including incentive earnings and cost-of-living allowances) |
|---|---|---|
| 1940 | $0.905 | $0.836 |
| 1941 | 1.012 | .928 |
| 1942 | 1.113 | 1.013 |
| 1943 | 1.190 | 1.044 |
| 1944 | 1.278 | 1.064 |
| 1945 | 1.307 | 1.073 |
| 1946 | 1.404 | 1.228 |
| 1947 | 1.563 | 1.393 |
| 1948 | 1.679 | 1.502 |
| 1949 | 1.753 | 1.574 |
| 1950 | 1.908 | 1.603 |
| 1951 | 2.114 | 1.769 |
| 1952 | 2.315 | 1.924 |
| 1953 | 2.440 | 2.023 |
| 1954 | 2.512 | 2.107 |
| 1955 | 2.722 | 2.246 |
| 1956 | 2.954 | 2.407 |
| 1957 | 3.216 | 2.582 |
| 1958 | 3.513 | 2.787 |

[1] Include—in addition to straight-time hourly earnings—premium pay for overtime and nightwork and for fringes (for example, paid vacations, paid holidays, jury-duty pay, severance pay, supplemental unemployment benefits, and employer contributions for insurance, pensions, social security, and other legally required payments).

SOURCE: Based on American Iron and Steel Institute data.

**Table 7b. How Fringe Costs [1] Compared in 1957**

| Industry | Fringe costs: Cents per hour | Fringe costs: Percent of straight-time hourly earnings |
|---|---|---|
| Steel [2] | 63 | 25 |
| All manufacturing | 56 | 29 |
| Chemicals | 65 | 35 |
| Machinery, electrical | 53 | 29 |
| Machinery (excluding electrical) | 62 | 29 |
| Petroleum refining | 90 | 36 |
| Transportation equipment | 66 | 30 |

[1] Include premium pay for overtime and shift differentials, paid vacations, paid holidays, jury duty pay, severance pay, supplemental unemployment benefits, and employer contributions for insurance, pensions, social security, and other legally required payments.

[2] In the second half of 1958, fringe benefits in steel amounted to 73 cents an hour—26 percent of straight-time average hourly earnings. Comparable data for 1958 are not available for other manufacturing industries.

NOTE: Steel data cover wage employees; other manufacturing data cover hourly rated employees and salaried employees paid on a similar basis (i.e., those whose pay varies depending on whether they work overtime or less than full time).

SOURCE: Steel data, the American Iron and Steel Institute; other manufacturing data, the U.S. Chamber of Commerce.

**Table 8a. Wage Settlements in First Six Months of 1959**

| Type of wage action | Workers covered by wage actions [1] | |
|---|---|---|
| | Approximate number [2] | Percent [2] |
| All actions | 1,768,000 | 100 |
| Wage increases | 1,698,000 | 96 |
| Under 5 cents | 71,000 | 4 |
| 5 and under 7 cents | 251,000 | 14 |
| 7 and under 9 cents | 599,000 | 34 |
| 9 and under 11 cents | 212,000 | 12 |
| 11 and under 13 cents | 183,000 | 10 |
| 13 and under 15 cents | 257,000 | 15 |
| 15 and under 17 cents | 25,000 | 1 |
| 17 and under 19 cents | 10,000 | 1 |
| 19 cents and over | 50,000 | 3 |
| Not specified or not computed [3] | 41,000 | 2 |
| No wage change | 69,000 | 4 |
| Wage decreases | 1,000 | (4) |

[1] 69 percent of these settlements also liberalized 1 or more fringe benefits.
[2] Because of rounding, sums of individual items may not equal totals.
[3] Insufficient information to compute cents-per-hour increases.
[4] Less than 0.5 percent.

NOTE: The above tabulation relates to 526 collective bargaining settlements involving 1,000 or more workers concluded during the 6-month period. It includes all wage changes negotiated during the January–June period that are scheduled to go into effect during the contract year, i.e., the 12-month period following the effective date of the agreement. In summarizing percentage increases, it has been necessary to estimate their value in terms of cents on the basis of available information on wage levels in the industry.

This tabulation *excludes:* Settlements involving fewer than 1,000 workers; settlements in construction, the service trades, finance, and government; instances in which contracts were not reopened; and wage increases and changes in supplementary practices going into effect during the period but negotiated earlier (for example, deferred wage increases and cost-of-living adjustments).

SOURCE: Bureau of Labor Statistics.

**Table 8b. Increases in Basic Hourly Wage Rates [1] Since January 1956, Selected Major Collective Bargaining Situation**

| Situation | Increase from January 1956 to mid-August 1959 | |
|---|---|---|
| | Cents per hour | Percent [2] |
| U.S. Steel Corp | 45.7 | 20.3 |
| Aluminum Company of America (United Steelworker agreements) | 51.6 | 25.1 |
| The Anaconda Co | 23.6 | 11.7 |
| General Motors Corp | 44.5 | 20.6 |
| Lockheed Aircraft Corp. (Southern California plants) | 46.1 | 23.1 |
| Rubber tires and tubes (Firestone Tire and Rubber and B. F. Goodrich Cos.) | 28.7 | 12.5 |
| Sinclair Oil Companies | 44.2 | 18.5 |

[1] Include general increases in rates, cost-of-living adjustments, and estimated effects of adjustments of geographic and other wage inequities; exclude effects of incentive earnings, premium overtime pay, shift differentials, and changes in skill level as well as other fringe benefits. Data include increases effective through the first half of August 1959.
[2] Percentage increases estimated by dividing cents-per-hour increases by estimated straight-time average hourly earnings for January 1956 in the industry in which the company is classified.

SOURCE: Wage chronology series, Bureau of Labor Statistics.



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## Table 9a. Output per Man-Hour

[Indexes 1940=100]

| Year | Total private economy | Private nonfarm | Steel | |
|---|---|---|---|---|
| | All persons | All persons | Wage employees | All employees |
| Calendar year: | | | | |
| 1947 | 119.1 | 113.4 | 119.7 | 115.4 |
| 1948 | 122.6 | 114.5 | 120.6 | 116.2 |
| 1949 | 124.9 | 118.0 | 123.3 | 116.1 |
| 1950 | 134.8 | 125.0 | 135.2 | 130.2 |
| 1951 | 140.8 | 130.0 | 132.6 | 127.6 |
| 1952 | 145.4 | 133.1 | 136.3 | 127.1 |
| 1953 | 151.5 | 137.1 | 138.9 | 132.2 |
| 1954 | 155.3 | 140.3 | 138.5 | 127.5 |
| 1955 | 162.7 | 146.9 | 154.8 | 146.3 |
| 1956 | 164.1 | 147.1 | 157.8 | 147.0 |
| 1957 | 168.5 | 149.8 | 158.3 | 146.0 |
| 1958 | 168.9 | 148.6 | 157.9 | 139.2 |
| Fiscal year ending— | | | | |
| June 1958 | | | 153.1 | 136.8 |
| June 1959 | | | 173.8 | 158.0 |

SOURCE: Bureau of Labor Statistics estimates based on data of the U.S. Department of Commerce and American Iron and Steel Institute.

## Table 10a. Employment Cost per Unit of Steel Output

[Indexes 1940=100]

| Year | Wage employees | All employees | |
|---|---|---|---|
| | | Assumption A [1] | Assumption B [2] |
| Calendar year: | | | |
| 1940 | 100.0 | 100.0 | 100.0 |
| 1941 | 102.0 | 99.5 | 99.5 |
| 1947 | 144.3 | 146.6 | 146.8 |
| 1948 | 153.9 | 156.2 | 157.4 |
| 1949 | 157.2 | 164.8 | 167.3 |
| 1950 | 155.9 | 158.5 | 160.8 |
| 1951 | 176.2 | 179.0 | 180.9 |
| 1952 | 187.6 | 197.2 | 200.0 |
| 1953 | 194.1 | 199.8 | 203.5 |
| 1954 | 200.4 | 215.7 | 221.3 |
| 1955 | 194.2 | 203.2 | 207.7 |
| 1956 | 206.7 | 219.2 | 223.6 |
| 1957 | 224.6 | 241.6 | 246.0 |
| 1958 | 245.7 | 278.6 | 278.6 |
| Fiscal year ending— | | | |
| June 1958 | 242.0 | 270.1 | 272.7 |
| June 1959 | 231.4 | 252.7 | 254.7 |

[1] *Assumption A*—Supplementary contributions per man-hour for all employees in steel operations same as for wage employees in steel operations. Assumption A used in chart.

[2] *Assumption B*—Supplementary contributions per man-hour for all employees in steel operations same as for all employees covering all operations of steel companies.

SOURCE: Bureau of Labor Statistics estimates based on data of the U.S. Department of Commerce and American Iron and Steel Institute.

## Table 11a. Employment Cost, Material Cost, and Profits per Dollar of Steel Revenue

[Percent]

| Year | Employment cost | Material and service cost | Profits | |
|---|---|---|---|---|
| | | | Before Federal tax | After Federal tax |
| 1940 | 36.6 | 43.7 | 10.7 | 8.0 |
| 1947 | 36.8 | 47.7 | 10.4 | 6.1 |
| 1948 | 34.9 | 48.4 | 11.5 | 6.7 |
| 1949 | 35.0 | 47.3 | 12.2 | 7.1 |
| 1950 | 33.1 | 45.7 | 16.2 | 8.0 |
| 1951 | 32.3 | 46.3 | 16.6 | 5.8 |
| 1952 | 34.9 | 49.8 | 9.4 | 5.0 |
| 1953 | 34.0 | 46.3 | 13.2 | 5.6 |
| 1954 | 36.7 | 43.2 | 11.6 | 6.0 |
| 1955 | 33.5 | 43.7 | 15.7 | 7.8 |
| 1956 | 33.3 | 45.8 | 14.1 | 7.3 |
| 1957 | 35.5 | 43.3 | 14.2 | 7.3 |
| 1958 | 38.2 | 41.7 | 12.1 | 6.3 |

SOURCE: Bureau of Labor Statistics estimates based on data of the American Iron and Steel Institute.

## Table 12a. Trend of Basic Steel Prices and General Wholesale and Retail Prices

[Indexes 1940=100]

| Year | Basic steel prices | Wholesale Price Index | | Consumer Price Index | |
|---|---|---|---|---|---|
| | | All commodities | All commodities except farm and food | All items | All items except food |
| 1940 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1941 | 100.4 | 111.2 | 107.2 | 105.0 | 102.9 |
| 1942 | 100.6 | 125.6 | 115.0 | 116.4 | 110.1 |
| 1943 | 100.7 | 131.1 | 116.7 | 123.5 | 113.1 |
| 1944 | 100.7 | 132.3 | 118.5 | 125.5 | 117.4 |
| 1945 | 103.1 | 134.6 | 120.0 | 128.4 | 120.2 |
| 1946 | 112.1 | 154.0 | 131.8 | 139.2 | 125.4 |
| 1947 | 131.4 | 188.6 | 160.4 | 159.4 | 137.0 |
| 1948 | 150.0 | 204.3 | 174.1 | 171.6 | 146.8 |
| 1949 | 162.6 | 194.1 | 170.5 | 169.9 | 148.4 |
| 1950 | 171.2 | 201.8 | 176.8 | 171.6 | 150.1 |
| 1951 | 184.6 | 224.7 | 195.1 | 185.3 | 159.7 |
| 1952 | 188.6 | 218.4 | 190.6 | 189.5 | 163.5 |
| 1953 | 203.6 | 215.5 | 191.9 | 191.0 | 166.7 |
| 1954 | 212.7 | 215.9 | 192.8 | 191.7 | 167.7 |
| 1955 | 222.9 | 216.6 | 197.0 | 191.2 | 168.2 |
| 1956 | 241.4 | 223.7 | 205.7 | 194.0 | 171.2 |
| 1957 | 264.6 | 230.1 | 211.4 | 200.7 | 176.9 |
| 1958 | 273.8 | 233.3 | 212.1 | 206.2 | 180.8 |
| 1959 (6 months' average) | 278.4 | 234.2 | 215.5 | 206.8 | 183.0 |

SOURCE: Bureau of Labor Statistics.

## Table 12b. Wholesale Price Changes: Basic Steel and Other Products

| Major commodity groups | Percent change— | |
|---|---|---|
| | From 1940 to 1958 | From 1947–49 to 1958 |
| Basic steel products | 173.8 | 85.1 |
| All commodities | 133.3 | 19.2 |
| Farm products and processed foods | 152.7 | 3.1 |
| All commodities except farm and foods | 112.1 | 26.0 |
| Textiles and apparel | 78.4 | −6.5 |
| Hides, skins, leather, and leather products | 83.6 | .6 |
| Fuel, power, and lighting materials | 85.7 | 12.7 |
| Chemicals and allied products | 95.1 | 10.4 |
| Rubber and rubber products | 80.8 | 45.0 |
| Lumber and wood products | 234.4 | 17.7 |
| Pulp, paper, and allied products | (1) | 31.0 |
| Metals and metal products | 139.5 | 50.4 |
| Machinery and motive products | 126.3 | 49.8 |
| Furniture and other household durables | 84.4 | 23.2 |
| Nonmetallic minerals—structural | 95.1 | 36.0 |
| Tobacco manufacturing and bottled beverages | 65.8 | 28.2 |
| Miscellaneous products | (1) | −5.8 |

1 Not separately available back to 1940.

SOURCE: Bureau of Labor Statistics.

**Table 13a. Wholesale Prices of Basic Steel Products and Machinery and Motive Products**

[Indexes 1940=100]

| Year | Basic steel products | Machinery and motive products |
|---|---|---|
| 1940 | 100.0 | 100.0 |
| 1941 | 100.4 | 103.6 |
| 1942 | 100.6 | 107.6 |
| 1943 | 100.7 | 107.3 |
| 1944 | 100.7 | 107.3 |
| 1945 | 103.1 | 108.2 |
| 1946 | 112.1 | 121.3 |
| 1947 | 131.4 | 139.7 |
| 1948 | 150.0 | 152.4 |
| 1949 | 162.6 | 161.0 |
| 1950 | 171.2 | 164.0 |
| 1951 | 184.6 | 179.8 |
| 1952 | 188.6 | 183.5 |
| 1953 | 203.6 | 185.8 |
| 1954 | 212.7 | 188.2 |
| 1955 | 222.9 | 194.0 |
| 1956 | 241.4 | 208.2 |
| 1957 | 264.6 | 220.7 |
| 1958 | 273.8 | 226.3 |
| 1959 (6 months' average) | 278.4 | 229.9 |
| Percent increase— | | |
| From 1940 to 1952 | 88.6 | 83.5 |
| From 1952 to 1959 | 47.6 | 25.3 |

SOURCE: Bureau of Labor Statistics.

**Table 13b. Changes in Basic Steel Prices and Prices of Products Using Steel**

| Commodity | Percent change from 1947-49 to first half of 1959 |
|---|---|
| Basic steel | 88.2 |
| End-products using steel: | |
| Wholesale prices | |
| Machinery and equipment | 57.3 |
| Metal products using steel [1] | 43.5 |
| Passenger cars | 44.5 |
| Stoves | 26.8 |
| Laundry equipment | 10.0 |
| Refrigerators | −9.2 |
| Retail prices | |
| New cars | 39.5 |
| Cook stoves | 3.3 |
| Washing machines | −3.0 |
| Refrigerators | −35.2 |

[1] Includes metal containers, hardware, heating equipment, and fabricated structural and nonstructural metal products.

SOURCE: Bureau of Labor Statistics.

**Table 13c. Wholesale Price Trends of Major Products Using Steel [1]**

[Indexes 1947–49=100]

| Year | Basic steel products | Machinery and equipment | Metal products using steel [2] | Passenger cars | Stoves | Laundry equipment | Refrigerators |
|---|---|---|---|---|---|---|---|
| 1947 | 88.8 | 93.2 | 90.6 | 90.4 | 95.7 | 99.0 | 96.3 |
| 1948 | 101.4 | 101.0 | 102.5 | 100.7 | 101.5 | 101.3 | 103.3 |
| 1949 | 109.9 | 105.8 | 106.9 | 108.9 | 102.8 | 99.7 | 100.5 |
| 1950 | 115.7 | 109.4 | 110.5 | 108.3 | 103.7 | 99.2 | 102.3 |
| 1951 | 124.8 | 122.3 | 121.6 | 113.0 | 112.8 | 107.7 | 105.0 |
| 1952 | 127.5 | 122.5 | 120.7 | 121.3 | 111.0 | 107.9 | 104.5 |
| 1953 | 137.6 | 125.2 | 122.7 | 120.7 | 112.8 | 106.7 | 105.6 |
| 1954 | 143.8 | 127.5 | 124.3 | 121.7 | 117.3 | 105.9 | 106.4 |
| 1955 | 150.7 | 131.4 | 127.9 | 125.4 | 117.1 | 104.3 | 101.5 |
| 1956 | 163.2 | 142.1 | 136.1 | 131.8 | 120.3 | 106.4 | 98.0 |
| 1957 | 178.9 | 151.9 | 142.4 | 137.2 | 124.2 | 109.9 | 92.4 |
| 1958 | 185.1 | 155.2 | 143.6 | 141.0 | 125.9 | 109.8 | 90.6 |
| 1959 (6 months' average) | 188.2 | 157.3 | 143.5 | 144.5 | 126.8 | 110.0 | 90.8 |

[1] Wholesale price indexes for most of these breakdowns are not available prior to 1947.
[2] Includes metal containers, hardware, heating equipment, and fabricated structural and nonstructural metal products.

SOURCE: Bureau of Labor Statistics.

## Table 13d. Retail Price Trends of Major Products Using Steel

[Indexes 1940=100]

| Year | Basic steel products | Major durables using steel: New cars | Cook stoves | Washing machines | Electric refrigerators | All durables except cars [1] |
|---|---|---|---|---|---|---|
| 1940 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1941 | 100.4 | 107.5 | 108.1 | 107.8 | 100.5 | 106.9 |
| 1942 | 100.6 | (2) | 124.8 | (2) | (2) | 119.6 |
| 1943 | 100.7 | (2) | 127.5 | (2) | (2) | 124.2 |
| 1944 | 100.7 | (2) | 137.2 | (2) | (2) | 135.9 |
| 1945 | 103.1 | (2) | 145.3 | (2) | (2) | 146.3 |
| 1946 | 112.1 | (2) | 151.6 | (2) | (2) | 154.6 |
| 1947 | 131.4 | 159.7 | 178.7 | 180.7 | 153.4 | 171.0 |
| 1948 | 150.0 | 174.6 | 189.4 | 194.5 | 169.5 | 182.0 |
| 1949 | 162.6 | 191.1 | 182.4 | 191.9 | 164.3 | 177.0 |
| 1950 | 171.2 | 192.6 | 176.9 | 189.6 | 160.7 | 179.2 |
| 1951 | 184.6 | 201.8 | 196.9 | 202.5 | 169.2 | 196.3 |
| 1952 | 188.6 | 219.1 | 194.9 | 203.2 | 162.8 | 191.3 |
| 1953 | 203.6 | 221.2 | 195.6 | 200.2 | 156.7 | 189.0 |
| 1954 | 212.7 | 217.7 | 192.7 | 195.5 | 145.9 | 183.9 |
| 1955 | 222.9 | 210.0 | 188.1 | 190.0 | 137.2 | 179.0 |
| 1956 | 241.4 | 215.8 | 187.0 | 185.6 | 118.3 | 178.3 |
| 1957 | 264.6 | 227.1 | 190.5 | 187.9 | 108.9 | 181.4 |
| 1958 | 273.8 | 234.5 | 189.0 | 185.8 | 105.2 | 182.7 |
| 1959 (6 months' average) | 278.4 | 244.3 | 189.5 | 183.4 | 105.2 | 182.3 |

[1] Includes durables, whether or not they consume steel.
[2] Not available during the war period.

SOURCE: Bureau of Labor Statistics.

## Table 14a. Basic Steel Prices and Employment Costs per Unit of Steel Output and per Man-Hour Worked

[Indexes 1940=100]

| Year | Prices of steel mill products | Employment cost per unit of steel output: Wage employees | All employees: Assumption A [1] | All employees: Assumption B [2] | Employment cost per man-hour worked: Wage employees | All employees: Assumption A [1] | All employees: Assumption B [2] |
|---|---|---|---|---|---|---|---|
| Calendar year: | | | | | | | |
| 1940 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1941 | 100.4 | 102.0 | 99.5 | 99.5 | 111.8 | 110.3 | 110.3 |
| 1947 | 131.4 | 144.3 | 146.6 | 146.8 | 172.7 | 169.1 | 169.1 |
| 1948 | 150.0 | 153.9 | 156.2 | 157.4 | 185.5 | 181.6 | 183.5 |
| 1949 | 162.6 | 157.2 | 164.8 | 167.3 | 193.7 | 191.2 | 194.8 |
| 1950 | 171.2 | 155.9 | 158.5 | 160.8 | 210.8 | 206.4 | 209.3 |
| 1951 | 184.6 | 176.2 | 179.0 | 180.9 | 233.6 | 228.4 | 230.9 |
| 1952 | 188.6 | 187.6 | 197.2 | 200.0 | 255.8 | 250.7 | 254.6 |
| 1953 | 203.6 | 194.1 | 199.8 | 203.5 | 269.6 | 264.2 | 269.1 |
| 1954 | 212.7 | 200.4 | 215.7 | 221.3 | 277.6 | 275.1 | 282.5 |
| 1955 | 222.9 | 194.2 | 203.2 | 207.7 | 300.8 | 297.3 | 304.1 |
| 1956 | 241.4 | 206.7 | 219.2 | 223.6 | 326.4 | 322.3 | 328.9 |
| 1957 | 264.6 | 224.6 | 241.6 | 246.0 | 355.4 | 352.7 | 359.8 |
| 1958 | 273.8 | 245.7 | 278.6 | 278.6 | 388.2 | 387.7 | 387.6 |
| Fiscal year ending— | | | | | | | |
| June 1958 | 270.9 | 242.0 | 270.1 | 272.7 | 370.5 | 269.0 | 373.2 |
| June 1959 | 277.7 | 231.4 | 252.7 | 254.7 | 402.3 | 399.0 | 403.1 |

[1] *Assumption A*—Supplementary contributions per man-hour for all employees in steel operations same as for wage employees in steel operations. Assumption A used in chart.
[2] *Assumption B*—Supplementary contributions per man-hour for all employees in steel operations same as for all employees covering all operations of steel companies.

SOURCE: Bureau of Labor Statistics estimates based on data from U.S. Department of Commerce and American Iron and Steel Institute.

## Table 14b. Employment Cost per Ton of Steel Shipped and Percent Utilization of Capacity

| Year | Employment cost per ton | | | Percent utilization of capacity |
|---|---|---|---|---|
| | Wage employees | All employees | | |
| | | Assumption A [1] | Assumption B [2] | |
| Calendar year: | | | | |
| 1940 | $17.78 | $21.81 | $21.81 | 82.1 |
| 1941 | 17.82 | 21.34 | 21.34 | 97.3 |
| 1947 | 25.69 | 32.00 | 32.05 | 93.0 |
| 1948 | 27.56 | 34.30 | 34.57 | 94.1 |
| 1949 | 28.09 | 36.11 | 36.69 | 81.1 |
| 1950 | 28.44 | 35.47 | 35.98 | 96.9 |
| 1951 | 31.93 | 39.77 | 40.21 | 100.9 |
| 1952 | 34.78 | 44.84 | 45.48 | 85.8 |
| 1953 | 35.87 | 45.27 | 46.14 | 94.9 |
| 1954 | 37.71 | 49.76 | 51.06 | 71.0 |
| 1955 | 35.93 | 46.09 | 47.13 | 93.0 |
| 1956 | 38.36 | 49.89 | 50.92 | 89.9 |
| 1957 | 41.80 | 55.16 | 56.17 | 84.5 |
| 1958 | 46.68 | 64.94 | 64.92 | 60.6 |
| Fiscal year ending— | | | | |
| June 1958 | 45.25 | 61.96 | 62.55 | 65.6 |
| June 1959 | 43.64 | 58.45 | 58.93 | 77.5 |

[1] *Assumption A*—Supplementary contributions per man-hour for all employees in steel operations same as for wage employees in steel operations.
[2] *Assumption B*—Supplementary contributions per man-hour for all employees in steel operations same as for all employees covering all operations of steel companies.

SOURCE: Bureau of Labor Statistics estimates based on data of the American Iron and Steel Institute.

## Table 15a. United States Foreign Trade in Iron and Steel Products,[1] 1950–59

[Millions of dollars]

| Year | Exports | Imports |
|---|---|---|
| 1950 | $466 | $87 |
| 1951 | 602 | 280 |
| 1952 | 609 | 189 |
| 1953 | 484 | 225 |
| 1954 | 464 | 103 |
| 1955 | 639 | 130 |
| 1956 | 762 | 212 |
| 1957 | 993 | 212 |
| 1958 | 563 | 231 |
| 1958: [2] | | |
| January–March | 676 | 164 |
| April–June | 564 | 208 |
| July–September | 452 | 252 |
| October–December | 564 | 300 |
| 1959: [2] | | |
| January–March | 460 | 368 |
| April–June [3] | 520 | 550 |

[1] Excludes ore, pig iron, ferroalloys, and scrap.
[2] Quarterly data at annual rates.
[3] June data estimated.

SOURCE: U.S. Department of Commerce.

## Table 15b. United States Foreign Trade in Iron and Steel Products, 1957–59

[Net tons]

| Year and month | Imports | Exports | Year and month | Imports | Exports |
|---|---|---|---|---|---|
| 1957 | 1,164,666 | 5,177,159 | 1958: January | 70,833 | 326,845 |
| 1958 | 1,702,819 | 2,688,481 | February | 68,085 | 241,879 |
| 1959 (first 5 months) | 1,501,792 | 850,747 | March | 92,196 | 263,817 |
| | | | April | 114,024 | 266,943 |
| 1957: January | 145,369 | 412,302 | May | 118,004 | 244,622 |
| February | 121,005 | 353,084 | June | 126,408 | 163,309 |
| March | 122,238 | 508,963 | July | 171,170 | 169,345 |
| April | 129,224 | 491,275 | August | 156,666 | 171,120 |
| May | 109,353 | 464,643 | September | 179,555 | 180,685 |
| June | 88,880 | 522,430 | October | 200,509 | 251,410 |
| July | 88,816 | 558,027 | November | 174,611 | 238,998 |
| August | 68,288 | 435,269 | December | 230,599 | 169,508 |
| September | 68,748 | 380,446 | | | |
| October | 86,145 | 384,008 | 1959: January | 229,369 | 161,375 |
| November | 63,144 | 336,843 | February | 240,769 | 167,586 |
| December | 73,456 | 329,869 | March | 287,417 | 177,901 |
| | | | April | 359,450 | 178,029 |
| | | | May | 384,787 | 165,856 |

SOURCE: American Iron and Steel Institute.

## Table 16a. United States and Foreign Steel Prices

[Indexes of prices converted to U.S. dollars, 1952=100]

| Year | United States[1] | Belgium[2] | France[3] | Germany[4] | Japan[5] | United Kingdom[6] |
|---|---|---|---|---|---|---|
| 1951 | 97.9 | 95.5 | 81.4 | 72.7 | ............ | 74.6 |
| 1952 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1953 | 107.9 | 101.5 | 103.7 | 104.2 | 90.9 | 100.3 |
| 1954 | 112.8 | 98.5 | 102.0 | 100.5 | 82.5 | 77.9 |
| 1955 | 118.2 | 114.3 | 102.3 | 101.5 | 99.3 | 86.1 |
| 1956 | 128.0 | 125.9 | 110.9 | 104.2 | 132.2 | 109.6 |
| 1957 | 140.3 | 133.3 | 110.0 | 109.2 | 133.6 | 121.9 |
| 1958 | 145.2 | 124.5 | 109.0 | 113.8 | 81.1 | 101.7 |
| 1959 (May) | 147.5 | 122.6 | 105.4 | 114.1 | 79.0 | 89.5 |

[1] Wholesale Price Index for steel mill products.
[2] Bessemer billets, domestic/export price.
[3] Heavy sections, domestic/export price.
[4] Bessemer bars, domestic/export price.
[5] Mild steel plates, 3/16" x 4' x 8', export price.
[6] Plates 5/16" and over, export price.

SOURCE: United States, Bureau of Labor Statistics; other countries, United Nations Commodity Trade Statistics.

## Table 16b. Wholesale Prices of Selected Steel Products, United States

[Indexes 1952=100]

| Year | Billets, rerolling, carbon steel | Plates, carbon steel | Bars, hot-rolled, carbon steel | Bars, reinforcing, carbon steel | Sheets, hot-rolled carbon steel |
|---|---|---|---|---|---|
| 1951 | 97.8 | 98.0 | 97.4 | 97.3 | 98.2 |
| 1952 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1953 | 112.3 | 107.7 | 110.9 | 111.3 | 107.1 |
| 1954 | 121.4 | 113.1 | 117.8 | 121.3 | 111.7 |
| 1955 | 126.8 | 117.9 | 123.4 | 125.5 | 116.0 |
| 1956 | 134.3 | 130.4 | 135.4 | 133.9 | 120.8 |
| 1957 | 150.2 | 147.0 | 148.7 | 145.3 | 140.7 |
| 1958 | 155.5 | 152.7 | 155.6 | 150.6 | 145.0 |
| 1959 (May) | 157.9 | 155.6 | 159.1 | 153.9 | 147.3 |

SOURCE: Bureau of Labor Statistics.

## Table 16c. Labor Expenditures per Hour in the Iron and Steel Industry

[Indexes based on local currencies, 1952=100]

| Year | United States | Belgium | France | Italy | Japan [1] | Luxembourg | Netherlands | Saar | United Kingdom [1] | West Germany |
|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1953 | 105.4 | 98.0 | 102.2 | 101.4 | 108.7 | 97.0 | 108.1 | 99.7 | 104.9 | 104.9 |
| 1954 | 108.5 | 100.8 | 104.2 | 107.5 | 117.8 | 96.3 | 117.2 | 99.8 | 110.8 | 108.0 |
| 1955 | 117.6 | 107.8 | 117.7 | 111.2 | 123.8 | 103.7 | 136.4 | 114.5 | 120.6 | 119.1 |
| 1956 | 127.6 | 119.3 | 133.8 | 125.5 | 140.3 | 116.9 | 147.0 | 131.5 | 133.2 | 129.9 |
| 1957 | 138.9 | 131.3 | 144.7 | 128.0 | 147.4 | 130.7 | 160.6 | 146.9 | 140.7 | 144.1 |

[1] Direct cash payments excluding supplemental expenditures.

SOURCE: United States, American Iron and Steel Institute; Japan, Japanese Ministry of Labor; other foreign countries, studies of European Coal and Steel Community and the International Labor Office.

## Table 17a. Profits as Percent of Sales and Stockholders' Equity, Steel Industry and All Manufacturing, 1947–59

| Year | Profits after taxes as percent of sales | | Profits after taxes as percent of stockholders' equity [1] | |
|---|---|---|---|---|
| | Steel | All manufacturing | Steel | All manufacturing |
| 1947 | 6.6 | 6.7 | 11.7 | 15.1 |
| 1948 | 7.6 | 7.0 | 13.9 | 15.5 |
| 1949 | 6.5 | 5.8 | 9.8 | 11.4 |
| 1950 | 7.9 | 7.1 | 13.8 | 15.0 |
| 1951 [2] | 5.8 | 4.8 | 12.1 | 11.8 |
| 1952 | 4.7 | 4.3 | 8.3 | 10.2 |
| 1953 | 5.3 | 4.3 | 10.5 | 10.4 |
| 1954 | 5.3 | 4.5 | 7.9 | 9.8 |
| 1955 | 7.2 | 5.4 | 13.1 | 12.3 |
| 1956 [3] | 6.7 | 5.3 | 12.3 | 12.0 |
| 1957 | 6.6 | 4.8 | 11.1 | 10.7 |
| 1958 | 5.4 | 4.2 | 7.1 | 8.4 |
| 1957 (first half) | 7.1 | 5.1 | 13.2 | 11.6 |
| 1959 (first half) [4] | 7.6 | 4.9 | 14.2 | 10.9 |

[1] Stockholders' equity is based on book value at year end and for 1957 and 1959, at end of first half of year.
[2] New series.
[3] New sample.
[4] Bureau of Labor Statistics estimate.

SOURCE: Federal Trade Commission and Securities and Exchange Commission.

**Table 18a. Steel Profits Compared With Profits of the 25 Largest [1] Industrial Firms**

| Firm | Profits after taxes as percent of net worth at end of each year | |
|---|---|---|
| | Average 1955-57 | First half 1959 [2] |
| General Motors Corp | 21.2 | 23.5 |
| General Electric Co | 19.3 | 18.2 |
| Du Pont & Co | 18.8 | 17.9 |
| International Business Machines | 18.3 | 17.8 |
| Union Carbide Corp | 17.7 | 21.0 |
| Ford Motor Co | 16.1 | 26.7 |
| The Texas Co | 16.1 | 14.3 |
| Standard Oil Co. of Calif | 15.5 | 11.9 |
| Gulf Oil Corp | 15.1 | 11.6 |
| Standard Oil Co. of N.J | 15.0 | 9.8 |
| Shell Oil Co | 14.8 | 11.2 |
| **Average of 25 largest firms** | 14.7 | 14.1 |
| Aluminum Company of America | 13.8 | 8.4 |
| United States Steel Corp | 13.6 | 16.9 |
| Republic Steel Corp | 13.4 | 18.8 |
| Bethlehem Steel Corp | 13.1 | 15.1 |
| International Paper Co | 13.0 | [3] 9.5 |
| **Average of 20 steel companies** | 12.8 | 16.1 |
| Chrysler Corp | 11.6 | 16.8 |
| Western Electric Co | 11.4 | (4) |
| Socony Mobil Oil Co | 10.8 | 6.3 |
| Phillips Petroleum Co | 10.2 | 9.0 |
| Anaconda Co | 9.6 | 7.8 |
| Sinclair Oil Co | 9.4 | 5.4 |
| Standard Oil Co. of Ind | 8.2 | 7.6 |
| International Harvester Co | 6.6 | 8.0 |
| Westinghouse Electric Co | 4.9 | 7.8 |

[1] Size based on net worth as of December 31, 1957.
[2] Based on net worth as of December 31, 1958.
[3] Estimate based on first quarter profits.
[4] Not available.

SOURCE: Published company reports and Fortune.

Mr. ARNOW. Following the 1959 strike, the Department sponsored a study of collective bargaining in the basic steel industry which included an analysis of the available data on wages and earnings, costs, prices, and foreign competition.

I have here copies of the report which resulted from this study which was prepared under the direction of E. Robert Livernash, of the graduate school of business administration of Harvard University, and was issued in 1961. This, Mr. Chairman, is a rather longer document that was printed by the Government Printing Office in 1961. It goes to something over 300 pages. I don't know whether you would want this in the record.

Chairman DOUGLAS. I would suggest this be filed with the committee, but not printed in the record of these hearings.

Representative CURTIS. May I ask, Are there copies generally available so that the public could get them?

Mr. ARNOW. I don't know about the current supply at the Superintendent of Documents, Mr. Curtis. I know our supplies at the Department are rather limited.

Representative CURTIS. I certainly think at least the union people and the steel companies should have copies.

Mr. ARNOW. We will be glad to do that, although I am sure they already have copies and have had since 1961.

Representative CURTIS. I suspect they do, too.

Mr. ARNOW. In April 1962 a number of the tables in the 1959 compilation that I have just introduced were brought up to date and a number were added by the Department of Commerce. These were issued by the Departments of Labor and Commerce jointly in response to requests for the data. I have copies of this document for the committee. This is a brief compilation of tables.

Chairman DOUGLAS. I would suggest that those be printed in the record, without objection.

(The tables referred to follow:)

STATISTICAL MATERIALS RELATING TO THE STEEL INDUSTRY, COMPILED BY DEPARTMENT OF COMMERCE AND DEPARTMENT OF LABOR, APRIL 30, 1962

Table No.

1. Steel capacity, production, and capacity utilization, United States, 1940–61.
2. Employment and average weekly hours of work in the basic steel industry, 1940–61.
3. Total employment costs per hour and straight-time hourly earnings of wage employees in basic steel, 1940–61.
4. Output per man-hour.
5. Employment cost, material cost, depreciation, and other costs, and profits per dollar of steel revenue.

6. Trend of basic steel prices and general wholesale and retail prices.
7. Wholesale price changes: Basic steel and other products.
8. Basic steel prices and employment costs per unit of steel output and per man-hour worked.
9. Employment cost per ton of steel shipped and percent utilization of capacity.
10. U.S. iron and steel mill products.—Exports, imports, trade balance, 1954–61.
11. U.S. and foreign steel prices.
12. Labor expenditures (wages and supplementary benefits) per hour for production workers in the iron and steel industry.
13. Profits after taxes and percent utilization of capacity, steel industry and all manufacturing, 1947–61.
14. Selected financial ratios and percent utilization of capacity, primary iron and steel, 1947–61.
15. Sales and net income after taxes, eight major steel companies, 1951–61.
16. Relationship of net income after taxes to sales and of cash earnings to sales, eight major steel companies, 1951–61.
17. Common stock equity and rate of return on equity, eight major steel companies, 1951–61.
18. Dividend and market price per share, eight major steel companies, 1951–61.

TABLE 1.—*Steel capacity, production, and capacity utilization, United States, 1940–61*

[Millions of net tons]

| Year | Capacity [1] | Production | Percent utilization of capacity |
|---|---|---|---|
| 1940 | 81.6 | 67.0 | 82.1 |
| 1941 | 85.2 | 82.8 | 97.3 |
| 1942 | 88.9 | 86.0 | 96.8 |
| 1943 | 90.6 | 88.8 | 98.1 |
| 1944 | 93.9 | 89.6 | 95.5 |
| 1945 | 95.5 | 79.7 | 83.5 |
| 1946 [2] | 91.9 | 66.6 | 72.5 |
| 1947 | 91.2 | 84.9 | 93.0 |
| 1948 | 94.2 | 88.6 | 94.1 |
| 1949 [2] | 96.1 | 78.0 | 81.1 |
| 1950 | 100.0 | 96.8 | 96.9 |
| 1951 | 104.2 | 105.2 | 100.9 |
| 1952 [2] | 108.6 | 93.2 | 85.8 |
| 1953 | 117.5 | 111.6 | 94.9 |
| 1954 | 124.3 | 88.3 | 71.0 |
| 1955 | 125.8 | 117.0 | 93.0 |
| 1956 [2] | 128.4 | 115.2 | 89.8 |
| 1957 | 133.5 | 112.7 | 84.5 |
| 1958 | 140.7 | 85.3 | 60.6 |
| 1959 [2] | 147.6 | 93.4 | 63.3 |
| 1960 | 148.6 | 99.3 | 66.8 |
| 1961 | (3) | 98.3 | [3] 64.6 |

[1] As of Jan. 1, except for the years 1941–44 and 1950, which are an average of data as of Jan. 1 and July 1.
[2] Years of major steel strikes.
[3] Official figures on steel capacity are no longer being issued. If a 2-percent rise in capacity were assumed, the total would be 151.6 million tons, and the rate of production would be 64.6 percent of capacity.

Source: American Iron & Steel Institute.

TABLE 2.—*Employment and average weekly hours of work in the basic steel industry, 1940–61* [1]

| Year | Employment (in thousands) | | | Average weekly hours, production workers |
|---|---|---|---|---|
| | All employees | Production workers | Administrative, professional, sales, and clerical workers | |
| 1940 | 590.5 | 519.6 | 70.9 | 37.1 |
| 1941 | 675.8 | 597.3 | 78.5 | 39.7 |
| 1942 | 684.5 | 607.9 | 76.6 | 41.1 |
| 1943 | 672.4 | 598.6 | 73.8 | 45.3 |
| 1944 | 629.8 | 555.6 | 74.2 | 47.4 |
| 1945 | 600.7 | 527.3 | 73.4 | 45.1 |
| 1946 [2] | 593.1 | 516.8 | 76.3 | 37.5 |
| 1947 | 655.8 | 575.0 | 80.8 | 39.0 |
| 1948 | 678.6 | 593.9 | 84.7 | 39.5 |
| 1949 [2] | 610.1 | 526.8 | 83.3 | 38.2 |
| 1950 | 674.4 | 586.8 | 87.6 | 39.9 |
| 1951 | 714.4 | 620.2 | 94.2 | 40.9 |
| 1952 [2] | 638.0 | 541.5 | 96.5 | 40.0 |
| 1953 | 726.1 | 620.4 | 105.7 | 40.5 |
| 1954 | 645.5 | 546.1 | 99.4 | 37.8 |
| 1955 | 706.9 | 604.5 | 102.4 | 40.5 |
| 1956 [2] | 706.6 | 595.4 | 111.2 | 40.5 |
| 1957 | 719.9 | 600.1 | 119.8 | 39.1 |
| 1958 | 601.1 | 486.5 | 114.6 | 37.5 |
| 1959 [2] | 587.5 | 471.0 | 116.5 | 40.1 |
| 1960 | 652.5 | 529.3 | 123.2 | 38.2 |
| 1961 | 600.0 | 482.0 | 118.0 | 38.8 |

[1] Revised on basis of the 1957 Standard Industrial Classification.
[2] Year in which major strike occurred.

Source: Bureau of Labor Statistics.

TABLE 3.—*Total employment costs per hour* [1] *and straight-time hourly earnings* [2] *of wage employees in basic steel, 1940–61*

| Period | Total employment costs per hour [1] | Straight-time hourly earnings [2] | Period | Total employment costs per hour [1] | Straight-time hourly earnings [2] |
|---|---|---|---|---|---|
| 1940 | $0.905 | $0.836 | 1957 | $3.216 | $2.582 |
| 1941 | 1.012 | 0.928 | 1st half | 3.142 | 2.524 |
| 1942 | 1.113 | 1.013 | 2d half | 3.300 | 2.647 |
| 1943 | 1.190 | 1.044 | 1958 | 3.513 | 2.787 |
| 1944 | 1.278 | 1.064 | 1st half | 3.419 | 2.699 |
| 1945 | 1.307 | 1.073 | 2d half | 3.598 | 2.865 |
| 1946 | 1.404 | 1.228 | 1959 [3] | 3.798 | 2.896 |
| 1947 | 1.563 | 1.393 | 1st half | [4] 3.704 | 2.906 |
| 1948 | 1.679 | 1.503 | 2d half [3] | [4] 3.988 | 2.878 |
| 1949 | 1.753 | 1.574 | 1960 | 3.820 | 2.916 |
| 1950 | 1.908 | 1.603 | 1st half | 3.838 | 2.922 |
| 1951 | 2.114 | 1.769 | 2d half | 3.794 | 2.909 |
| 1952 | 2.315 | 1.924 | 1961 [5] | 3.97 | 3.017 |
| 1953 | 2.440 | 2.023 | 1st half | 3.94 | 2.994 |
| 1954 | 2.512 | 2.107 | 2d half | 4.02 | 3.055 |
| 1955 | 2.722 | 2.246 | | | |
| 1956 | 2.954 | 2.407 | | | |

[1] Include—in addition to straight-time hourly earnings—premium pay for overtime and nightwork and for fringes (for example, paid vacations, paid holidays, jury duty pay, severance pay, supplemental unemployment benefits, and employer contributions for insurance, pensions, social security, and other legally required payments).
[2] Including incentive earnings and cost-of-living allowances.
[3] The effect of the strike from July 15 to Nov. 7, 1959, is reflected in the figures for the second half and whole year.
[4] Information for other half years assumes the same payment for pensions, insurance, SUB, and social security for both halves of the year. For 1959, information on expenditures for these benefits was reported separately for each half of the year.
[5] Based on data for months prior to December and on preliminary estimates of expenditures for pensions, insurance, supplemental unemployment benefits and social security.

Source: Based on data of the American Iron & Steel Institute.

TABLE 4.—*Output per man-hour*

[Indexes 1940=100]

| Year | Total private economy, all persons | Private nonfarm all persons | Steel: Wage employees | Steel: All employees |
|---|---|---|---|---|
| 1947 | 119.1 | 113.4 | 120.5 | 118.0 |
| 1948 | 122.6 | 114.5 | 121.7 | 119.2 |
| 1949 | 124.9 | 118.0 | 125.4 | 120.2 |
| 1950 | 134.8 | 125.0 | 137.0 | 134.4 |
| 1951 | 140.8 | 130.0 | 137.8 | 135.0 |
| 1952 | 145.4 | 133.1 | 142.0 | 134.8 |
| 1953 | 151.5 | 137.1 | 145.0 | 140.8 |
| 1954 | 155.3 | 140.3 | 144.9 | 136.3 |
| 1955 | 162.7 | 146.9 | 161.9 | 156.1 |
| 1956 | 163.3 | 146.5 | 164.8 | 156.6 |
| 1957 | 168.7 | 150.1 | 165.2 | 155.3 |
| 1958 | 171.1 | 151.4 | 164.8 | 148.1 |
| 1599 | 178.4 | 157.7 | 184.8 | 165.4 |
| 1960 | 181.3 | 159.7 | 175.8 | 158.5 |
| 1961 [1] | 186.2 | 162.8 | 187.0 | 166.8 |

[1] Preliminary.

NOTE.—Some of the figures represent revisions of data previously published due primarily to adjustments to employment levels indicated by the Census of Manufactures.

Source: Bureau of Labor Statistics estimates based on data of the U.S. Department of Commerce and American Iron & Steel Institute.

TABLE 5.—*Employment cost, material cost, depreciation and other costs, and profits per dollar of steel revenue*

[Percent]

| Year | Employment cost | Material and service cost | Depreciation cost [1] | All other costs [2] | Profits: Before Federal tax | Profits: After Federal tax |
|---|---|---|---|---|---|---|
| 1940 | 35.9 | 44.4 | 5.4 | 3.5 | 10.7 | 8.0 |
| 1947 | 36.8 | 47.7 | 3.6 | 1.6 | 10.4 | 6.1 |
| 1948 | 34.9 | 48.4 | 3.7 | 1.5 | 11.4 | 6.7 |
| 1949 | 35.0 | 47.3 | 3.7 | 1.8 | 12.2 | 7.1 |
| 1950 | 33.0 | 45.7 | 3.4 | 1.7 | 16.2 | 8.0 |
| 1951 | 32.3 | 46.3 | 3.2 | 1.6 | 16.6 | 5.8 |
| 1952 | 34.9 | 49.7 | 4.1 | 1.8 | 9.4 | 5.0 |
| 1953 | 34.0 | 46.3 | 4.7 | 1.9 | 13.2 | 5.6 |
| 1954 | 36.7 | 43.2 | 6.3 | 2.1 | 11.6 | 6.0 |
| 1955 | 33.5 | 43.6 | 5.2 | 1.9 | 15.7 | 7.8 |
| 1956 | 33.3 | 45.8 | 4.9 | 1.8 | 14.1 | 7.3 |
| 1957 | 35.4 | 43.3 | 4.9 | 2.2 | 14.2 | 7.3 |
| 1958 | 38.2 | 41.8 | 5.4 | 2.5 | 12.1 | 6.3 |
| 1959 | 36.1 | 45.2 | 4.7 | 2.5 | 11.5 | 5.8 |
| 1960 | 38.9 | 42.3 | 4.9 | 2.8 | 11.1 | 5.7 |
| 1961 | 40.1 | 41.8 | 5.4 | 2.9 | 9.7 | 5.2 |

[1] Includes depletion and amortization.
[2] Includes interest charges and State and local taxes.

Source: Bureau of Labor Statistics based on data of the American Iron & Steel Institute.

TABLE 6.—*Trend of basic steel prices and general wholesale and retail prices*

[Indexes, 1940=100]

| Year | Basic steel prices | Wholesale Price Index | | Consumer Price Index | |
|---|---|---|---|---|---|
| | | All commodities | All commodities except farm and food | All items | All items except food |
| 1940 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1941 | 100.4 | 111.2 | 107.2 | 105.0 | 102.9 |
| 1942 | 100.6 | 125.6 | 115.0 | 116.4 | 110.1 |
| 1943 | 100.7 | 131.1 | 116.7 | 123.5 | 113.1 |
| 1944 | 100.7 | 132.3 | 118.5 | 125.5 | 117.4 |
| 1945 | 103.1 | 134.6 | 120.0 | 128.4 | 120.2 |
| 1946 | 112.1 | 154.0 | 131.8 | 139.2 | 125.4 |
| 1947 | 131.4 | 188.6 | 160.4 | 159.4 | 137.0 |
| 1948 | 150.0 | 204.3 | 174.1 | 171.6 | 146.8 |
| 1949 | 162.6 | 194.1 | 170.5 | 169.9 | 148.4 |
| 1950 | 171.2 | 201.8 | 176.8 | 171.6 | 150.1 |
| 1951 | 184.6 | 224.7 | 195.1 | 185.3 | 159.7 |
| 1952 | 188.6 | 218.4 | 190.6 | 189.5 | 163.5 |
| 1953 | 203.6 | 215.5 | 191.9 | 191.0 | 166.7 |
| 1954 | 212.7 | 215.9 | 192.8 | 191.7 | 167.7 |
| 1955 | 222.9 | 216.6 | 197.0 | 191.2 | 168.2 |
| 1956 | 241.4 | 223.7 | 205.7 | 194.0 | 171.2 |
| 1957 | 264.6 | 230.1 | 211.4 | 200.7 | 176.9 |
| 1958 | 273.8 | 233.3 | 212.1 | 206.2 | 180.8 |
| 1959 | 278.4 | 233.9 | 215.8 | 208.0 | 184.3 |
| 1960 | 278.0 | 234.1 | 216.0 | 211.2 | 187.3 |
| 1961 | 276.9 | 233.1 | 215.0 | 213.4 | 189.3 |

Source: Bureau of Labor Statistics.

TABLE 7.—*Wholesale price changes: Basic steel and other products*

| Major commodity groups | Percent change | |
|---|---|---|
| | From 1940 to 1961 | From 1947–49 to 1961 |
| Basic steel products | 176.9 | 87.2 |
| All commodities | 133.1 | 19.1 |
| Farm products and processed foods | 141.4 | −1.5 |
| All commodities except farm and foods | 115.0 | 27.7 |
| Textiles and apparel | 80.2 | −5.6 |
| Hides, skins, leather, and leather products | 103.1 | 11.3 |
| Fuel, power, and lighting materials | 89.5 | 15.0 |
| Chemicals and allied products | 92.6 | 9.0 |
| Rubber and rubber products | 73.7 | 39.3 |
| Lumber and wood products | 229.8 | 16.1 |
| Pulp, paper, and allied products | (1) | 29.4 |
| Metals and metal products | 143.5 | 52.9 |
| Machinery and motive products | 131.3 | 53.1 |
| Furniture and other household durables | 83.1 | 22.3 |
| Nonmetallic minerals—structural | 98.7 | 38.5 |
| Tobacco manufacturing and bottled beverages | 71.5 | 32.6 |
| Miscellaneous products | (1) | −3.6 |

[1] Not separately available back to 1940.

Source: Bureau of Labor Statistics.

TABLE 8.—*Basic steel prices and employment costs per unit of steel output and per man-hour worked*

[Indexes 1940=100]

| Year | Prices of steel mill products | Employment cost per unit of steel output | | | Employment cost per man-hour worked | | |
|---|---|---|---|---|---|---|---|
| | | Wage employees | All employees | | Wage employees | All employees | |
| | | | Assumption A[1] | Assumption B[2] | | Assumption A[1] | Assumption B[2] |
| 1940 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1941 | 100.4 | 101.8 | 99.2 | 99.0 | 111.8 | 110.3 | 110.2 |
| 1947 | 131.4 | 143.3 | 143.8 | 143.8 | 172.7 | 169.2 | 169.2 |
| 1948 | 150.0 | 152.4 | 161.9 | 158.2 | 185.4 | 183.0 | 182.6 |
| 1949 | 162.6 | 154.3 | 159.1 | 161.4 | 193.6 | 191.3 | 194.0 |
| 1950 | 171.2 | 158.7 | 158.6 | 155.6 | 210.5 | 206.8 | 209.0 |
| 1951 | 184.6 | 169.4 | 169.2 | 170.7 | 233.5 | 228.5 | 230.6 |
| 1952 | 188.6 | 180.2 | 186.0 | 188.3 | 255.7 | 250.9 | 254.0 |
| 1953 | 203.6 | 185.7 | 187.5 | 190.8 | 269.8 | 264.0 | 268.6 |
| 1954 | 212.7 | 191.4 | 202.1 | 207.0 | 277.3 | 275.5 | 282.2 |
| 1955 | 222.9 | 185.8 | 190.6 | 194.5 | 300.7 | 297.5 | 303.5 |
| 1956 | 241.4 | 197.9 | 205.8 | 209.7 | 326.2 | 322.4 | 328.4 |
| 1957 | 264.6 | 215.1 | 227.1 | 230.9 | 355.4 | 352.6 | 358.5 |
| 1958 | 273.8 | 235.5 | 261.8 | 261.2 | 388.2 | 387.9 | 387.0 |
| 1959 | 278.4 | 227.0 | 251.9 | 254.9 | 419.3 | 416.6 | 421.6 |
| 1960 | 278.0 | 240.1 | 263.3 | 264.7 | 422.1 | 417.4 | 419.5 |
| 1961 | 276.9 | 235.5 | 261.5 | 262.7 | 440.3 | 436.4 | 438.4 |

[1] Assumption A—Supplementary contributions per man-hour for all employees in steel operations same as for wage employees in steel operations.
[2] Assumption B—Supplementary contributions per man-hour for all employees in steel operations same as for all employees covering all operations of steel companies.

NOTE.—Some of the figures represent revisions of data previously published due primarily to adjustments to employment levels indicated by the Census of Manufactures.

Source: Bureau of Labor Statistics estimates based on data from U.S. Department of Commerce and American Iron & Steel Institute.

TABLE 9.—*Employment cost per ton of steel shipped and percent utilization of capacity*

| Year | Employment cost per ton | | | Percent utilization of capacity |
|---|---|---|---|---|
| | Wage employees | All employees | | |
| | | Assumption A[1] | Assumption B[2] | |
| 1940 | $16.64 | $20.16 | $20.16 | 82.1 |
| 1941 | 16.67 | 19.66 | 19.66 | 97.3 |
| 1947 | 23.58 | 28.91 | 28.96 | 93.0 |
| 1948 | 25.56 | 30.91 | 31.16 | 94.1 |
| 1949 | 25.85 | 32.27 | 32.79 | 81.1 |
| 1950 | 26.22 | 31.72 | 32.18 | 96.9 |
| 1951 | 28.74 | 34.74 | 35.12 | 100.9 |
| 1952 | 31.27 | 39.07 | 39.63 | 85.8 |
| 1953 | 32.14 | 39.29 | 40.04 | 94.9 |
| 1954 | 33.70 | 43.06 | 44.19 | 71.0 |
| 1955 | 32.18 | 39.96 | 40.85 | 93.0 |
| 1956 | 34.36 | 43.25 | 44.15 | 89.8 |
| 1957 | 37.44 | 47.83 | 48.71 | 84.5 |
| 1958 | 41.82 | 56.30 | 56.28 | 60.6 |
| 1959 | 39.45 | 53.01 | 53.73 | 63.3 |
| 1960 | 41.49 | 55.09 | 55.47 | 66.8 |
| 1961 [3] | 42.28 | 56.83 | 57.21 | [4] 64.6 |

[1] Assumption A—Supplementary contributions per man-hour for all employees in steel operations same as for wage employees in steel operations.
[2] Assumption B—Supplementary contributions per man-hour for all employees in steel operations same as for all employees covering all operations of steel companies.
[3] Preliminary.
[4] Official figures on steel capacity are no longer being issued. If a 2-percent rise in capacity were assumed, the total would be 151.6 million tons, and the rate of production would be 64.6 percent of capacity.

NOTE.—Some of the figures represent revisions of data previously published due primarily to adjustments to employment levels indicated by the Census of Manufactures.

Source: Bureau of Labor Statistics estimates based on data of the U.S. Department of Commerce and the American Iron & Steel Institute.

TABLE 10.—*U.S. iron and steel mill products*[1]*—Exports, imports, trade balance, 1954–61*

| Year | Exports | | Imports | | Trade balance | |
|---|---|---|---|---|---|---|
| | Value | Tons | Value | Tons | Value | Tons |
| | *Millions* | *Thousands* | *Millions* | *Thousands* | *Millions* | *Thousands* |
| 1954 | $464 | 2,859 | $103 | 887 | $361 | 1,972 |
| 1955 | 639 | 4,193 | 130 | 1,082 | 509 | 3,111 |
| 1956 | 762 | 4,371 | 212 | 1,492 | 550 | 2,879 |
| 1957 | 993 | 5,454 | 212 | 1,306 | 781 | 4,148 |
| 1958 | 563 | 2,904 | 230 | 1,837 | 333 | 1,067 |
| 1959 | 372 | 1,773 | 578 | 4,627 | −206 | −2,854 |
| 1960 | 611 | 3,067 | 506 | 3,570 | 105 | −503 |
| 1961 | 429 | 2,069 | 422 | 3,309 | 7 | −1,240 |

[1] Includes castings and forgings; excludes ore, pig iron, ferro alloys, and scrap.

Source: U.S. Department of Dommerce world trade information service.

TABLE 11.—*U.S. and foreign steel prices*

[Indexes of prices converted to U.S. dollars, 1952=100]

| Year | United States [1] | Belgium [2] | France [3] | Germany [4] | Japan [5] | United Kingdom [6] |
|---|---|---|---|---|---|---|
| 1951 | 97.9 | 95.5 | 81.4 | 72.7 | ---------- | 74.6 |
| 1952 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1953 | 107.9 | 100.8 | 103.7 | 104.2 | 90.9 | 99.6 |
| 1954 | 112.8 | 98.0 | 102.0 | 100.5 | 82.5 | 77.4 |
| 1955 | 118.2 | 114.2 | 102.3 | 101.8 | 99.3 | 86.1 |
| 1956 | 128.0 | 125.9 | 110.9 | 104.4 | 132.2 | 109.5 |
| 1957 | 140.3 | 133.2 | 98.6 | 109.4 | 133.6 | 121.9 |
| 1958 | 145.2 | 123.5 | 93.0 | 113.8 | 81.1 | 101.1 |
| 1959 | 147.6 | 121.8 | 104.6 | 113.8 | 83.2 | 88.8 |
| 1960 | 147.4 | 126.5 | 111.1 | 113.8 | 86.7 | 88.0 |
| 1961 (January to October average) | [7] 146.8 | 126.8 | 113.3 | 118.3 | 84.6 | 87.8 |

[1] Wholesale price index for steel mill products.
[2] Bessemer billets, domestic/export price, free on board, border.
[3] Heavy sections, domestic/export price, i.p.n. (80 to 260 mm.).
[4] Bessemer bars, domestic/export price.
[5] Mild steel plates, ⅛ inch by 4 feet by 8 feet, export price, free on board.
[6] Plates $^{3}/_{16}$ inch and over, export price, free on board.
[7] Annual data.

Source: United States, Bureau of Labor Statistics; other countries, United Nations Monthly Bulletin of Statistics.

TABLE 12.—*Labor expenditures (wages and supplementary benefits) per hour for production workers in the iron and steel industry*

[Indexes based on local currencies, 1952=100]

| Year | United States | Belgium | France | Italy | Japan [1] | Luxembourg | Netherlands | Saar | United Kingdom [2] | West Germany |
|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1953 | 105.4 | 98.0 | 102.0 | 102.2 | 110.6 | 97.2 | 108.5 | 99.9 | 110.5 | 104.8 |
| 1954 | 108.5 | 100.8 | 104.8 | 106.9 | 119.0 | 96.5 | 119.9 | 100.1 | 117.8 | 108.2 |
| 1955 | 117.6 | 107.8 | 118.3 | 109.2 | 124.9 | 104.1 | 140.8 | 115.1 | 130.7 | 119.2 |
| 1956 | 127.6 | 119.5 | 134.1 | 123.3 | 143.2 | 117.3 | 155.2 | 131.9 | 140.0 | 130.1 |
| 1957 | 138.9 | 131.5 | 145.0 | 125.9 | 151.9 | 130.9 | 170.1 | 147.3 | 149.8 | 144.9 |
| 1958 | 151.7 | 132.8 | 168.0 | 134.7 | 158.0 | 134.6 | 178.6 | 177.8 | 148.4 | 152.1 |
| 1959 | 164.1 | 136.8 | 179.6 | 141.1 | 165.9 | 134.1 | 180.1 | 204.2 | 165.2 | 160.3 |
| 1960 | 165.0 | 143.1 | 193.9 | 150.2 | 178.2 | 136.5 | 195.5 | 234.5 | 178.8 | 177.1 |

[1] Monthly labor expenditures.
[2] Weekly labor expenditures.

Source: United States, American Iron & Steel Institute; Japan, wages, Japanese Ministry of Labor, supplementary benefits, 1952–54 estimated, 1955–60 Japan I. & S. Federation; U.K. Ministry of Labor; other foreign countries, studies of European Coal and Steel Community and the International Labor Office, 1960 data estimated, 1959 data for Saar partly estimated.

TABLE 13.—*Profits after taxes and percent utilization of capacity, steel industry and all manufacturing, 1947–61*

| Period | Profits after taxes as percent of stockholders equity [1]: Steel | Profits after taxes as percent of stockholders equity [1]: All manufacturing | Percent utilization of capacity: Steel | Percent utilization of capacity: All manufacturing |
|---|---|---|---|---|
| Year: | | | | |
| 1947 | 11.7 | 15.1 | 93.0 | 87 |
| 1948 | 13.9 | 15.5 | 94.1 | 85 |
| 1949 | 9.8 | 11.4 | 81.1 | 76 |
| 1950 | 13.8 | 15.0 | 96.9 | 86 |
| 1951 | 12.1 | 11.8 | 100.9 | 89 |
| 1952 | 8.3 | 10.2 | 85.8 | 88 |
| 1953 | 10.5 | 10.4 | 94.9 | 92 |
| 1954 | 7.9 | 9.8 | 71.0 | 82 |
| 1955 | 13.1 | 12.3 | 93.0 | 90 |
| 1956 | 12.3 | 12.0 | 89.8 | 89 |
| 1957 | 11.1 | 10.7 | 84.5 | 86 |
| 1958 | 7.1 | 8.4 | 60.6 | 76 |
| 1959 | 8.0 | 10.2 | 63.3 | 85 |
| 1960 | 7.3 | 9.1 | 66.8 | 84 |
| 1961 | 6.1 | 8.7 | [2] 64.6 | 83 |
| | Unadjusted | | | Seasonally adjusted |
| Quarter: | | | | |
| 1960—January–March | 12.1 | 9.8 | 93.6 | 87 |
| April–June | 8.0 | 9.9 | 70.0 | 85 |
| July–September | 4.0 | 8.7 | 52.8 | 84 |
| October–December | 4.6 | 8.4 | 50.8 | 80 |
| 1961—January–March | 3.2 | 6.8 | [2] 52.0 | 78 |
| April–June | 7.0 | 9.2 | [2] 66.4 | 82 |
| July–September | 6.4 | 8.8 | [2] 68.0 | 85 |
| October–December | 8.0 | 10.5 | [2] 72.4 | 86 |

[1] Stockholders' equity is based on book value at year end.

[2] Official figures on steel capacity are no longer being issued. If a 2-percent rise in capacity were assumed, the total would be 151,600,000 tons, and the rate of production would be 64.6 percent of capacity.

Source: Federal Trade Commission and Securities and Exchange Commission; American Iron and Steel Institute; Board of Governors of the Federal Reserve System.

TABLE 14.—*Selected financial ratios and percent utilization of capacity, primary iron and steel, 1947–61*

| Year | Percent utilization of capacity | Selected items as percent of sales: Profits before taxes | Profits after taxes | Depreciation | Depreciation plus profits after taxes | Profits after taxes as percent of stockholders' equity | Dividends as percent of net profits after taxes |
|---|---|---|---|---|---|---|---|
| 1947 | 93.0 | 10.9 | 6.6 | (1) | (1) | 11.7 | 36.2 |
| 1948 | 94.1 | 12.4 | 7.6 | (1) | (1) | 13.9 | 32.5 |
| 1949 | 81.1 | 11.1 | 6.5 | 3.3 | 9.8 | 9.8 | 44.1 |
| 1950 | 96.9 | 15.5 | 7.9 | 3.0 | 10.8 | 13.8 | 39.9 |
| 1951 | 100.9 | 15.9 | 5.7 | 2.8 | 8.5 | 12.1 | 42.3 |
| 1952 | 85.8 | 9.7 | 4.7 | 3.5 | 8.2 | 8.3 | 55.7 |
| 1953 | 94.9 | 12.6 | 5.3 | 4.0 | 9.3 | 10.5 | 42.1 |
| 1954 | 71.0 | 10.5 | 5.3 | 5.6 | 11.0 | 7.9 | 54.5 |
| 1955 | 93.0 | 14.5 | 7.2 | 4.6 | 11.8 | 13.1 | 38.4 |
| 1956 | 89.8 | 13.2 | 6.7 | 4.2 | 10.9 | 12.3 | 42.6 |
| 1957 | 84.5 | 13.0 | 6.6 | 4.3 | 10.9 | 11.1 | 48.5 |
| 1958 | 60.6 | 10.7 | 5.4 | 4.9 | 10.3 | 7.1 | 68.8 |
| 1959 [2] | 63.3 | 10.8 | 5.4 | 4.2 | 9.6 | 8.0 | 61.3 |
| 1960 | 66.8 | 10.1 | 5.1 | 4.4 | 9.5 | 7.3 | 68.6 |
| 1961 | [3] 64.6 | 9.1 | 4.6 | 4.9 | 9.5 | 6.1 | 78.1 |

[1] Data not available.

[2] Data 1959–61 based on 1957 Standard Industrial Classification. Data for prior years not strictly comparable since based on 1945 Standard Industrial Classification System.

[3] Official figures on steel capacity are no longer being issued. If a 2-percent rise in capacity were assumed, the total would be 151.6 million tons, and the rate of production would be 64.6 percent of capacity.

Source: American Iron and Steel Institute; Federal Trade Commission, and Securities and Exchange Commission.

TABLE 15.—*Sales and net income after taxes for eight major steel companies, 1951–61*

[Millions of dollars]

| Company | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sales | | | | | | | | | | |
| Armco Steel Corp. [1] | 757 | 731 | 825 | 763 | 950 | 1,045 | 1,074 | 867 | 1,022 | 938 | 888 |
| Bethlehem Steel Corp. | 1,793 | 1,692 | 2,082 | 1,657 | 2,097 | 2,327 | 2,604 | 2,006 | 2,056 | 2,178 | 2,034 |
| Inland Steel Co. | 519 | 458 | 576 | 533 | 660 | 727 | 764 | 656 | 705 | 747 | 725 |
| Jones & Laughlin Steel Corp. | 564 | 495 | 624 | 493 | 697 | 743 | 838 | 654 | 766 | 779 | 737 |
| National Steel Corp. | 618 | 549 | 634 | 484 | 622 | 664 | 641 | 540 | 737 | 697 | 648 |
| Republic Steel Corp. | 1,053 | 918 | 1,137 | 846 | 1,189 | 1,244 | 1,227 | 910 | 1,077 | 1,054 | 966 |
| United States Steel Corp. | 3,510 | 3,132 | 3,853 | 3,241 | 4,080 | 4,199 | 4,378 | 3,439 | 3,598 | 3,649 | 3,302 |
| Youngstown Sheet & Tube Co. | 484 | 434 | 548 | 428 | 617 | 676 | 680 | 500 | 608 | 574 | 546 |
| | Net income after taxes | | | | | | | | | | |
| Armco Steel Corp. | 46 | 40 | 43 | 50 | 75 | 80 | [1] 68 | 58 | 77 | 70 | 58 |
| Bethlehem Steel Corp. | 107 | 91 | 134 | 133 | 180 | 161 | 191 | 138 | 117 | 121 | 122 |
| Inland Steel Co. | 34 | 24 | 34 | 41 | 52 | 53 | 59 | 48 | [2] 45 | 47 | 55 |
| Jones & Laughlin Steel Corp. | 31 | [3] 16 | 31 | 25 | 50 | 45 | 45 | 23 | 29 | 33 | 32 |
| National Steel Corp. | 45 | 38 | 50 | 30 | 48 | 53 | 46 | 36 | 55 | 42 | 33 |
| Republic Steel Corp. | 55 | 44 | 57 | 53 | 86 | 90 | 85 | 62 | 54 | 53 | 57 |
| United States Steel Corp. | 184 | 144 | 222 | 195 | 370 | 348 | 419 | 302 | 255 | 304 | 190 |
| Youngstown Sheet & Tube Co. | 31 | [4] 23 | 31 | 20 | 42 | 43 | 43 | 22 | 31 | 26 | 23 |

[1] Pro forma for 1951–57, reflecting acquisition of National Supply Co., April 1958.
[2] Excludes special credit of $3 million.
[3] After tax credit of $9 million. Including net profit of $3 million on sale of plant, net income was $19 million.
[4] After tax credit of $3 million.

Sources: Based on data in company annual reports and 10-K reports filed by companies with SEC.

TABLE 16.—*Relationship of net income after taxes to sales and cash earnings to sales, eight major steel companies, 1951–61*

[Percent]

| Company | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Armco Steel Corp.:[1] | | | | | | | | | | | |
| Net income as percent of sales | 6.1 | 5.5 | 5.2 | 6.6 | 7.9 | 7.7 | 6.4 | 6.6 | 7.5 | 7.5 | 6.5 |
| Cash earnings[2] as percent of sales | 8.3 | 8.2 | 8.9 | 11.2 | 11.8 | 11.2 | 9.9 | 10.6 | 11.2 | 11.8 | 11.4 |
| Operating rate, percent[3] | 100.2 | 88.9 | 99.0 | 90.1 | 102.3 | 102.8 | 90.4 | 70.5 | 80.1 | 73.0 | ------ |
| Bethlehem Steel Corp.:[1] | | | | | | | | | | | |
| Net income as percent of sales | 5.9 | 5.4 | 6.4 | 8.0 | 8.6 | 6.9 | 7.3 | 6.9 | 5.7 | 5.6 | 6.0 |
| Cash earnings[2] aspercent of sales | 8.5 | 8.6 | 10.0 | 13.6 | 13.5 | 11.4 | 11.9 | 13.0 | 10.9 | 10.3 | 11.2 |
| Operating rate, percent[3] | 102.5 | 84.0 | 100.4 | 74.6 | 98.5 | 91.6 | 93.3 | 58.2 | 62.0 | 69.3 | ------ |
| Inland Steel Co.: | | | | | | | | | | | |
| Net income as percent of sales | 6.6 | 5.2 | 5.9 | 7.7 | 8.0 | 7.3 | 7.7 | 7.3 | 6.4 | 6.3 | 7.5 |
| Cash earnings[2] as percent of sales | 8.3 | 7.7 | 8.9 | 11.3 | 11.2 | 10.7 | 11.1 | 11.9 | 11.4 | 11.8 | 13.3 |
| Operating rate, percent[3] | 102.3 | 84.7 | 100.3 | 96.2 | 103.8 | 94.5 | 100.1 | 81.3 | 65.0 | 78.6 | ------ |
| Jones & Laughlin Steel Corp.: | | | | | | | | | | | |
| Net income as percent of sales | 5.5 | 3.3 | 5.0 | 5.1 | 7.2 | 6.1 | 5.4 | 3.5 | 3.9 | 4.3 | 4.4 |
| Cash earnings[2] as percent of sales | 10.1 | 12.0 | 13.6 | 13.8 | 14.0 | 12.2 | 10.8 | 10.6 | 9.7 | 10.0 | 10.9 |
| Operating rate, percent[3] | 103.8 | 85.7 | 94.2 | 74.1 | 100.4 | 97.2 | 91.6 | 66.0 | 61.2 | 71.0 | ------ |
| National Steel Corp.: | | | | | | | | | | | |
| Net income as percent of sales | 7.3 | 6.8 | 7.9 | 6.3 | 7.8 | 7.9 | 7.1 | 6.6 | 7.4 | 6.0 | 5.1 |
| Cash earnings[2] as percent of sales | 10.9 | 10.9 | 12.9 | 14.1 | 14.3 | 14.8 | 14.4 | 14.1 | 12.5 | 12.1 | 11.9 |
| Operating rate, percent[3] | 100.7 | 90.2 | 93.5 | 75.2 | 92.6 | 94.0 | 85.9 | 65.8 | 76.2 | 82.2 | ------ |
| Republic Steel Corp.: | | | | | | | | | | | |
| Net income as percent of sales | 5.2 | 4.8 | 5.0 | 6.2 | 7.3 | 7.3 | 6.9 | 6.8 | 5.0 | 5.0 | 5.9 |
| Cash earnings[2] as percent of sales | 7.6 | 7.7 | 8.5 | 11.2 | 11.4 | 11.1 | 10.6 | 10.4 | 8.2 | 8.5 | 10.2 |
| Operating rate, percent[3] | 102.0 | 84.2 | 93.8 | 67.9 | 94.3 | 91.1 | 76.8 | 52.5 | 58.9 | 60.4 | ------ |
| United States Steel Corp.: | | | | | | | | | | | |
| Net income as percent of sales | 5.3 | 4.6 | 5.8 | 6.0 | 9.1 | 8.3 | 9.6 | 8.8 | 7.1 | 8.3 | 5.8 |
| Cash earnings[2] as percent of sales | 9.8 | 10.1 | 11.9 | 14.1 | 16.1 | 14.9 | 15.9 | 14.7 | 12.4 | 14.0 | 12.1 |
| Operating rate, percent[3] | 101.2 | 85.1 | 98.4 | 73.3 | 90.8 | 85.2 | 85.2 | 59.2 | 58.3 | 65.1 | ------ |
| Youngstown Sheet & Tube Co.: | | | | | | | | | | | |
| Net income as percent of sales | 6.3 | 5.3 | 5.6 | 4.7 | 6.8 | 6.4 | 6.3 | 4.3 | 5.1 | 4.5 | 4.2 |
| Cash earnings[2] as percent of sales | 9.2 | 9.4 | 11.2 | 13.4 | 13.8 | 13.1 | 13.2 | 12.4 | 10.3 | 10.3 | 10.9 |
| Operating rate, percent[3] | 104.8 | 90.1 | 102.9 | 70.1 | 100.9 | 94.0 | 82.3 | 56.3 | 60.8 | 61.9 | ------ |
| Steel industry: Operating rate, percent[3] | 100.9 | 85.8 | 94.9 | 71.0 | 93.0 | 89.8 | 84.5 | 60.6 | 63.3 | 66.8 | [4] 64.6 |

[1] Proforma for 1951–57, reflecting acquisition of National Supply Co., April 1958.
[2] Cash earnings equal net income, plus depreciation, plus other noncash charges.
[3] Production as percent of capacity, January 1 of each year.
[4] Estimate.

Sources: Based on data in company annual reports and 10–K reports filed by companies with SEC.

TABLE 17.—*Common stock equity and rate of return on equity, 8 major steel companies, 1951–61*

| Company | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common stock equity (millions of dollars) | | | | | | | | | | |
| Armco Steel Corp.[1] | 344 | 366 | 390 | 420 | 474 | 526 | 612 | 637 | 670 | 697 | 710 |
| Bethlehem Steel Corp. | 780 | 826 | 915 | 987 | 1,093 | 1,236 | 1,493 | 1,533 | 1,549 | 1,556 | 1,563 |
| Inland Steel Co. | 224 | 233 | 250 | 287 | 332 | 369 | 407 | 433 | 462 | 486 | 518 |
| Jones & Laughlin Steel Corp. | 319 | 326 | 343 | 354 | 391 | 422 | 483 | 486 | 495 | 508 | 520 |
| National Steel Corp. | 327 | 344 | 378 | 388 | 416 | 440 | 461 | 477 | 513 | 535 | 548 |
| Republic Steel Corp. | 393 | 412 | 442 | 538 | 606 | 657 | 697 | 713 | 722 | 728 | 739 |
| United States Steel Corp. | 1,736 | 1,776 | 1,894 | 1,988 | 2,222 | 2,404 | 2,638 | 2,754 | 2,823 | 2,942 | 2,946 |
| Youngstown Sheet & Tube Co. | 294 | 307 | 325 | 333 | 363 | 400 | 436 | 441 | 456 | 465 | 475 |
| | Percent earned on common equity | | | | | | | | | | |
| Armco Steel Corp.[1] | 13.1 | 10.9 | 10.9 | 11.7 | 15.9 | 15.2 | 11.2 | 9.0 | 11.5 | 10.1 | 8.1 |
| Bethlehem Steel Corp. | 12.8 | 10.2 | 13.9 | 12.8 | 15.9 | 12.5 | 12.4 | 8.6 | 7.1 | 7.4 | 7.4 |
| Inland Steel Co. | 15.4 | 10.2 | 13.6 | 14.4 | 15.8 | 14.4 | 14.5 | 11.0 | 9.7 | 9.7 | 10.6 |
| Jones & Laughlin Steel Corp. | 9.3 | [2] 4.6 | 8.6 | 6.7 | 12.4 | 10.3 | 9.1 | 4.5 | 5.7 | 6.2 | 5.9 |
| National Steel Corp. | 13.8 | 10.9 | 13.3 | 7.8 | 11.6 | 11.9 | 9.9 | 7.5 | 10.7 | 7.8 | 6.0 |
| Republic Steel Corp. | 13.5 | 10.3 | 12.5 | 9.8 | 14.2 | 13.8 | 12.2 | 8.7 | 7.5 | 7.3 | 7.7 |
| United States Steel Corp. | 9.2 | 6.7 | 10.4 | 8.6 | 15.5 | 13.4 | 14.9 | 10.0 | 8.1 | 9.5 | 5.6 |
| Youngstown Sheet & Tube Co. | 10.4 | 7.5 | 9.5 | 6.1 | 11.5 | 10.8 | 9.7 | 4.9 | 6.8 | 5.5 | 4.8 |

[1] Pro forma 1951–57, reflecting acquisition of National Supply Co., April 1958.
[2] Including profit on sale of plant and equipment, the percent earned is 5.5.

Sources: Based on data in company annual reports and 10-K reports filed by companies with SEC.

TABLE 18.—*Dividend and market price per share, 8 major steel companies, 1951–61*

| Company | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Common stock dividend per share, in dollars [1] | | | | | | | | | | |
| Armco Steel Corp. | 1.50 | 1.50 | 1.50 | 1.50 | 1.94 | 2.55 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| Bethlehem Steel Corp. | 1.00 | 1.00 | 1.00 | 1.44 | 1.81 | 2.12 | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 |
| Inland Steel Co. | 1.17 | 1.00 | 1.17 | 1.25 | 1.42 | 1.42 | 1.50 | 1.50 | 1.53 | 1.60 | 1.60 |
| Jones & Laughlin Steel Corp. | 1.80 | 1.80 | 1.95 | 2.00 | 2.25 | [2] 2.50 | [2] 2.50 | 2.50 | 2.50 | 2.50 | 2.50 |
| National Steel Corp. | 3.00 | 3.00 | 3.25 | 3.00 | 3.25 | 4.00 | 4.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| Republic Steel Corp. | 2.00 | 2.00 | 2.25 | 2.25 | 2.50 | 2.63 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| United States Steel Corp. | 1.50 | 1.50 | 1.50 | 1.50 | 2.15 | 2.60 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| Youngstown Sheet & Tube Co. | 3.00 | 3.00 | 3.75 | 3.75 | 3.75 | 4.50 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| | Market price (approximate) per share of common stock, in dollars [3] | | | | | | | | | | |
| Armco Steel Corp. | 22.00 | 19.50 | 18.50 | 27.00 | 44.00 | 58.50 | 53.00 | 53.50 | 72.50 | 67.50 | 73.00 |
| Bethlehem Steel Corp. | 13.50 | 13.00 | 15.00 | 20.50 | 33.50 | 42.50 | 41.50 | 45.50 | 54.50 | 47.00 | 44.00 |
| Inland Steel Co. | 18.00 | 15.50 | 14.00 | 20.00 | 26.50 | 29.50 | 28.00 | 36.50 | 49.50 | 44.00 | 44.50 |
| Jones & Laughlin Steel Corp. | 26.50 | 23.00 | 21.50 | 28.50 | 43.00 | 52.50 | 49.50 | 48.00 | 74.50 | 70.00 | 65.50 |
| National Steel Corp. | 49.50 | 48.00 | 46.00 | 56.00 | 68.00 | 71.00 | 65.00 | 62.50 | 86.50 | 83.00 | 89.00 |
| Republic Steel Corp. | 21.50 | 23.00 | 23.00 | 33.50 | 46.50 | 51.50 | 48.50 | 58.00 | 74.00 | 64.00 | 59.00 |
| United States Steel Corp. | 21.50 | 20.00 | 19.50 | 28.50 | 51.00 | 62.50 | 61.00 | 75.00 | 98.50 | 86.00 | 83.00 |
| Youngstown Sheet & Tube Co. | 52.00 | 45.50 | 40.50 | 56.50 | 87.50 | 108.00 | 95.90 | 94.50 | 131.00 | 112.00 | 101.00 |

[1] Adjusted for stock splits.
[2] Plus 3 percent stock dividend.
[3] Midpoint of approximate price range for year, after adjustment for stock splits and stock dividends

Sources: Based on data in company annual reports and 10-K reports filed by companies with SEC.

Mr. ARNOW. In considering how we could best respond to the committee's present request it was our judgment that we could be most helpful if the technician in direct charge of the data concerned were to appear before the committee in connection with each day's testimony. Today's testimony deals with labor costs per unit of output.

Mr. Leon Greenberg, Assistant Commissioner of the Bureau of Labor Statistics, will make the presentation. Mr. Greenberg has been in charge of the Bureau's work in the fields of productivity and technological change for the past decade.

Chairman DOUGLAS. Won't you proceed, Mr. Greenberg? We are very happy to have you.

## STATEMENT OF LEON GREENBERG, ASSISTANT COMMISSIONER FOR PRODUCTIVITY AND TECHNOLOGICAL DEVELOPMENTS, BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR

Mr. GREENBERG. Thank you, Mr. Chairman.

Chairman DOUGLAS. I hope you have a few charts and tables.

Mr. GREENBERG. Yes, Mr. Chairman. The text which has been distributed includes tables and small charts which are copies of the big ones I will be using. Perhaps some of the people here won't be able to see the large charts and they can follow the small ones which they have. Because of the large charts I will be moving around a bit and I hope the members of the committee don't mind. I plan not to read the text, but to refer to it, and I will start with some of the basic material. (See statement, with charts and tables, beginning p. 89.)

The problem of defining employment costs per unit can be rather simple. It is merely the relationship of employment costs to output. Unfortunately we do get into some problems when trying to define the various components—trying to explain, to analyze. So I will begin with a chart which attempts to do this sort of thing. We start with the item we commonly refer to as unit labor costs. As I said a moment ago, this is payments for labor related to production. That is, in the steel industry, payments for labor by the steel industry for the production of that industry.

Chairman DOUGLAS. That includes things like fringe benefits?

Mr. GREENBERG. Yes, sir. I will explain that as I go through the charts.

Senator MILLER. Pardon me, on what page is the chart which corresponds to that?

Mr. GREENBERG. There is a separate set of charts, Mr. Miller. It is chart A. It is possible to look at this relationship in terms of the quantity of labor, that is the man-hours, and the price of labor, that is, the payments for labor. The latter includes payrolls plus fringes—put in another way, average hourly earnings plus fringe costs per hour—as shown on the chart. In dealing with the questions of costs, we must consider all employment, that is, employment costs for all employees. So the payments for labor include the earnings and the compensation not only for the production worker in the steel industry, but also for what we might call nonproduction workers—clerical, administrative, supervisory, professional, executive.

Chairman DOUGLAS. This includes the presidents of the corporations?

Mr. GREENBERG. Yes, sir, it does.

Representative CURTIS. The sales personnel?

Mr. GREENBERG. Yes, sir. Insofar as they are identified with steel establishments. The steel industry is a corporate kind of enterprise and some of the steel companies engage in activities which are not directly related to steel. They may manufacture cement. They may engage in various financial operations. Those employees are not included. So we have, then, the earnings and the fringe benefits, so called, for production workers and for all other employees, and all of the man-hours of those employees are included. We have to relate all of this to production. There are problems of measuring production. In an industry which makes only a single product, this is very simple. We merely add the tons or yards, or whatever it is, of this single product that is being made.

But in an industry like steel, which produces a variety of products, from pig iron, to semifinished products, to finished products, we must add them up in some way. Some of these products, by the way, are simply carbon steel, some are alloy and stainless steel. Since some products cost more per ton to make, we have to find some way of adding them up in a comparable way. We do this by a standard technique, that is, a weight is applied to each product.

Chairman DOUGLAS. What do you use as your weight, relative value added for manufacturing?

Mr. GREENBERG. No, sir, we use something close to that. But in the context of getting a measure of physical productivity, which is what we start with, we use unit man-hour rates. That is, the man-hours required for each ton of the various kinds of product.

Representative CURTIS. Where is your breakoff point in the beginning of the process for items such as raw materials? Where do you break off on the finished product? Referring to your chart of labor, how do you break that off?

Mr. GREENBERG. By and large we follow the standard industrial classification system and the activities of the steel establishments. We do not, for example, include the mining activities. But the steel industry starts with the manufacture of pig iron or sometimes, the manufacture of coke. We carry these through what the steel industry makes, finished steel products, which then are sold to other industries for fabrication. We do not include the fabricating part.

Representative CURTIS. Even though the company might do some of that itself?

Mr. GREENBERG. Some companies do some fabricating, but the statistics do not include the fabricated products nor the man-hours engaged in making fabricated products. We come back now in a somewhat different way to this unit labor cost. Remember, we started with payments for labor divided by production. That was composed of quantity and price. There are different ways of getting at quantity and price. One way is to take employment cost per man-hour divided by output per man-hour. These two elements are important because I will be referring to them quite frequently during the discussion. This is what we have to try to get at in explaining what has happened to unit employment costs. Let me say a word about output per man-hour. I may refer to this quite often as productivity. Productivity is a ratio of output to input. It may cover various kinds of ratios of output per input. Output per unit of material, per unit of labor, per unit of capital, or a combination of these inputs may give a productivity measure. In my discussion here, if I use the word productivity it will relate only to output per man-hour.

Senator MILLER. Might I ask one question at that point?

Mr. GREENBERG. Yes, sir.

Senator MILLER. When you consider man-hours in this output computation, do you take into account only the man-hours on the job? Do you take into account man-hours in terms of vacations, portal to portal pay, lunch time, and time off, or just strictly productivity man-hours.

Mr. GREENBERG. Most of the statistics that I will use in this presentation are obtained from the American Iron and Steel Institute, from their regular publications. This includes the man-hour figures. The man-hour figures as published by the American Iron & Steel Institute are sometimes called hours worked, and exclude vacation time, paid holidays, and other paid leave. They do, however, include man-hours spent at the plant no matter how those man-hours may be spent.

Senator MILLER. May I ask one more question on that point? Later on we will probably be considering the relationship of foreign competition. Can you tell us whether or not in computing the man-hour output in plants they use a similar technique to the iron and steel publications?

Mr. GREENBERG. I regret to say I will not be discussing in my presentation the relationship of costs or productivity in the United States to that in the other countries. But I can answer your question partly. Unfortunately, various countries have different ways of measuring employment and man-hours and because of this it has been very difficult to establish comparable estimates of either labor costs per hour or per unit of output. There are the problems of the definition of the industry, of what the industry produces, of the ways the various products are counted, of the way the man-hours are counted. These may vary from country to country. So there are great problems in making international comparisons, not only for steel but for many other industries.

Representative CURTIS. May I ask one question for clarification? When you said you did not include paid holidays and vacations, you do include that in costs?

Mr. GREENBERG. Yes.

Representative CURTIS. But not in figuring your productivity?

Mr. GREENFIELD. The pay for holidays, sick leave, and so on, is included in the payment for labor figure.The leave man-hours are excluded from the man-hours total, so we have what we might call payments per hour worked. Similarly the output per man-hour is output per hour worked. So the hours are comparable between these two measures.

I will be discussing the trends of unit labor costs and of the components, employment cost per hour and output per man-hour, and the interaction or relationship of these two elements. But before I get to this discussion of trends, I would like to say a few words of caution. Output per man-hour is strongly influenced, at least over short periods of time, by changes in production, changes in the volume of production. When production goes up rapidly, productivity usually goes up rapidily.

Chairman DOUGLAS. You mean productivity per man-hour?

Mr. GREENBERG. Yes, sir. When production falls, output per man-hour may fall or may rise very slowly. On the other hand, employment costs per man-hour are not so closely influenced by changes in production. There are the long-term wage trends which take effect. There are changes in payments which may arise out of certain collective bargaining arrangements. There are changes which may arise out of changes in occupational composition, and other things. So the factors which affect employment costs per man-hour may not be the same as those which affect output per man-hour. This will become important later as I get into the interactions of these two elements.

In addition in discussing trends, we have to realize that what may happen between one year and the next, what may happen over a period of 3 years, that is, what may happen over a short period of time may be different from what happens over a long period of time. This gets us into some problems of analysis. What time period do we choose for analysis? What years do we pick if we pick any? For example, the beginning and ending year which is used for your analysis could give a different kind of trend merely by shifting from one year to the next, to begin or end the analysis. If the line goes up and then drops sharply in one year, you get a big difference in analyzing trend in terms of whether you take the last year or the next to the last year. We try to accommodate this kind of change to a certain extent, at least, by taking an annual average rate in which we use all of the years to get this average annual rate. This minimizes the influence, the extreme influence, of any particular terminal year. Because of this problem of short run versus long run and what years to start with, we have attempted to do an analysis for various time periods. One, going back to the prewar year 1940 and carrying it up to 1962; then for the postwar period, 1947 to 1962; then for parts of that postwar period, 1953 to 1962, the post-Korean period, and 1957–62, as well as 1958 to 1962 to give us some recent trends. With that, if I may, I would like to turn to the first chart on trends.

Chairman DOUGLAS. Before you do that, may I ask you this? You used the term employment costs. This is salaried workers as well as wageworkers. I notice looking through your tables that you also have indexes of wage costs for production workers or so-called blue-collar workers alone, is that true?

Mr. GREENBERG. Yes, sir.

Chairman DOUGLAS. But your chart here does not refer to the production workers and I would be interested in seeing what the next chart shows and whether it is a composite figure including salaried workers or whether it also includes production workers?

Mr. GREENBERG. Perhaps I should say now, Senator Douglas, that most of the analysis will be in terms of employment costs for all workers. I will also present two charts dealing with wage earners or production earners versus all employees.

Chairman DOUGLAS. Without anticipating what you say, it seems to me there is a considerable difference so far as the longrun results are concerned between these two indexes. Am I right on that?

Mr. GREENBERG. We will see that on one of the charts.

Chairman DOUGLAS. Very good.

Mr. GREENBERG. This first chart will be a basic chart to which I will probably refer during the discussion. The other charts are mostly on an annual average basis. This one plots the indexes for each year for the period 1940 to 1962. This chart shows what happens not only over the long period but also the annual fluctuations. The numbers are index numbers.

Chairman DOUGLAS. Would you summarize, Mr. Greenberg, what these lines show so that they may be formally in the record?

Mr. GREENBERG. Yes, sir, I am going to do that. I want to cover each line on the chart. When I get to the other charts I will break them down into components. The line we are basically concerned with is the red line on the chart which deals with employment cost per unit of output. Employment cost covering all employees. It gives a general sweep of an upward movement with some annual fluctuations. It does not go up every year. Sometimes it declines somewhat. The extent to which these things change over time will be covered when I get to another chart. In any case one can see that from 1940 to 1962 the index was at about 260. That means there was an increase of about 160 percent in employment cost per unit of output. Coming back to the two elements, we have employment cost per man-hour, which as we can see moved up almost uninterruptedly from 1940 to 1962, an increase of something like 380 percent over the whole period. The other element, output per man-hour, is the black line. This does not move as smoothly as the green one. We get annual fluctuations. It rose over the whole period of time by some 75 or 80 percent. That means that because output per man-hour went up less than employment costs per man-hour, we had an increase in employment cost per unit of output. The annual periodic relationship between these lines differ and I will get back to that later. I think it is useful also to look at the output line, the purple line. That fluctuates quite widely. The changes in output per man-hour are somewhat related to these fluctuations in output. It is not a one-to-one relationship. Output tends to fluctuate much more widely than does productivity. But there is a fairly close relationship, at least in direction, from year to year.

Chairman DOUGLAS. Before you turn from the chart would you state what had happened since 1958?

Mr. GREENBERG. I beg your pardon, sir?

Chairman DOUGLAS. Before you turn from chart 1, will you state what has been happening since 1958? Thus far you have taken 1940 as the base. I wondered if you would now consider the movement in the last 4 or 5 years?

Mr. GREENBERG. I could do that now. I do have charts which break this down and specifically into the 1958–62 period. Would you rather have me touch on it now?

Chairman DOUGLAS. You suit your own convenience.

Mr. GREENBERG. Let me brush over it now and come back later.

Chairman DOUGLAS. Very well.

Mr. GREENBERG. There are differences. If you look at unit employment costs since 1958 you can see that they are fairly stable. There has been a very slight increase from 1958 to 1962 in unit employment costs.

Chairman DOUGLAS. How much?

Mr. GREENBERG. It is about 1 percent or so. It is quite small. You can hardly read it on this chart. The table shows it. I should have explained that for each chart there is a table. Chart 1 has table 1, and so on.

Chairman DOUGLAS. 261.2 to 264.2, or 3 points, slightly over 1 percent?

Mr. GREENBERG. That is right.

Chairman DOUGLAS. This again is for total employment costs, not for wage costs?

Mr. GREENBERG. That is right, total employment costs per unit. Employment costs per man-hour went up a little bit during this period. Output per man-hour went up at a fairly good rate in the period from 1958 to 1962. I will come back later and show how those interact more closely. You have asked about production workers versus all employees. This chart makes some comparison of these two. May I say, first, that production worker employment relative to total employment in the steel industry has been declining. In 1940, about 88 percent of the workers in the steel industry were production workers. By 1947, this had declined very slightly, but by 1962 it had declined to about 80 percent of total employment. So there has been a fairly substantial shift in the relative importance of production workers to total employees in the steel industry.

Representative CURTIS. Is the word "wage employees" synonymous with production?

Mr. GREENBERG. Approximately synonymous. We have used the ASIA definition. They use wage earners. The Bureau of Labor Statistics uses the term "production workers." There might be some slight differences in definitions, although I believe they are quite close. As we can see from this chart employment costs per unit of output for all employees has gone up more than employment costs per unit of output if we use wage employees only. Over the entire period of time an index of about 260 for all employees, but an index of about 240 and that shows up in table 2.

Chairman DOUGLAS. The figures which you give are 264 for all employees or 236.5 for wage employees, a difference of 28 points, or approximately 11 percent.

Mr. GREENBERG. Yes, sir.

Representative CURTIS. Do the unions represent just the production employees or will they move into the salaried employees, too?

Mr. GREENBERG. I believe some of the salaried employees, particularly in the clerical worker group, are covered by the union. But I don't know what proportion.

Representative CURTIS. Would it be accurate to say that the unions generally represent the wage employees, but tend to represent the others as well. Am I right?

Mr. GREENBERG. Generally speaking that is true. Some of the nonwage employees are covered by the union. I don't know what the proportion is. I don't want to be too precise on that.

Senator MILLER. Could you tell us during this period of time, whether the seeming increase of the total employment cost per unit of output seemed to increase over the wage employee costs, whether this is attributable to a decline, relative decline, in the number of the wage employees, accompanied by an increase in technical requirements on the part of the managerial staff because of technology.

Mr. GREENBERG. First let us go to the next chart which begins to answer your question. This is output per man-hour, which is one of the components of cost. That is chart 3, table 3. Output per man-hour of all employees rose less than output per man-hour of wage employees only. This reflects the relative decline in the proportions of wage employees or production workers, because the output must be obviously the same for each series.

Chairman DOUGLAS. Mr. Greenberg, may I ask a question?

Mr. GREENBERG. Yes, sir.

Chairman DOUGLAS. Doesn't this also indicate that possibly the increasing emphasis on technical and supervisory employees has not really paid out, because if this had paid out you would have found the curve for output per wage employee lower than for output for all employees or the output of all employees would be higher than for wage costs, and the wage per unit would be lower. The purpose of the increase in technical force is lower cost and improved efficiency. If by a greater mix of supervisory and technical employees you raise costs and reduce output per man-hour, doesn't this raise the question whether from the purely business standpoint this was a wise decision?

Mr. GREENBERG. Do you want me to comment on that?

Chairman DOUGLAS. If you wish to. We will not compel you to testify.

Representative CURTIS. I think there are other ingredients that would enter into this. There would be a change in the product you are making which could create the variance. You do include sales workers and it could involve the problem of marketing. I don't know.

Chairman DOUGLAS. I raise the whole question of white-collar workers. Has the increase in white-collar workers paid for the salaries which are given to them, or has this increased cost and reduced output per man-hour, taking the end price as a whole——

Mr. GREENBERG. I don't know whether that question will ever be answerable.

Chairman DOUGLAS. May I ask you: Do you regard this question from the chairman as being a sensible question?

Representative CURTIS. Now you are on a spot.

Mr. GREENBERG. Senator Douglas, you always ask sensible questions.

Representative REUSS. Mr. Chairman, I would like to ask a somewhat similar question in less refined language than that used by the chairman. From where I sit it seems to me that your charts show that in the last 15 years in the steel industry the percentage of wage employees has gone down and the percentage of supervisory employees has gone up. At the same time, the output per wage employee appears to have gone up faster than the output for supervisory employees.

Without being too refined about it, it looks to me as if some explanation is owed the general public on whether the steel industry has not been loading up its overhead with drones, with people who are not bearing their weight.

Can you disabuse me of this awful suspicion?

Mr. GREENBERG. I will try to answer your question somewhat indirectly. The nonwage employee group includes clerical workers, supervisory workers, professional workers, some sales workers, some technicians, administrators, executives, and so on. We don't know the exact composition of this nonwage employee group. Therefore, it would be very difficult to indicate to what extent workers of a certain kind were being added to the payroll.

All we know is that the nonwage employees have been increasing relative to the production workers.

Representative REUSS. Has anybody broken those down? For example, it would be illuminating if we had a breakdown on clerical employees. We could then look at relative improvement in productivity generally between clerical employees and wage employees in your definition.

Mr. GREENBERG. I don't have that kind of information.

Representative REUSS. If we had those results, we could then narrow the compass a bit of our inquiry. Does anybody in the Department of Labor have that?

Mr. GREENBERG. I don't know whether we have that kind of breakdown available over a period of time. If we do, we can furnish this committee the information at a later date.

Chairman DOUGLAS. Mr. Knowles, who is a technical and professional man himself, is just burning with a desire to enter a defense of technical and professional efficiency.

Mr. KNOWLES. I hardly think I want to enter any defense of technical employees but just explain technical point. This data shows what historically actually did happen to productivity or output per man-hour according to whether you include or exclude these nonwage or nonproduction workers in the total calculation.

To find out whether or not they actually contributed to the increase in output per man-hour would require a different kind of analysis. You would then have to be able to attribute changes in productivity to specific parts of the work force and not to the change in the broad groups. You would have to split.

So far as I know, unless the Department of Labor has some trick that I have not heard of, this is one of the problems we have not solved. We cannot attribute the specific change in productivity to a specific part of the labor force. I wish we knew the answer to that one. I would like to know the answer, too.

The problem here is one of attribution to a particular part of the total. Unfortunately, all you can say is that over time the two ways of measuring produce different results.

Representative REUSS. Mr. Chairman, before leaving this point—and I don't want to slow down the works—I think it would be helpful at this point in the proceedings if the committee staff and the Department of Labor could append some material indicating whether there is in existence such a breakdown, and if not, what would be the nature of the task in assembling it.

Representative CURTIS. Mr. Chairman, I would like to join in that request, and also point out some things that would be important to know. I daresay a lot of this will show up in research and development. I don't know how much. Some of it would probably show up in the retraining that must go on constantly. If the public wants to know, a great deal of it will relate to the requirements of Government paperwork in collecting taxes and other impositions placed upon industry which would be interesting to evaluate.

But I think we are getting into an area that must be studied, as the gentleman from Wisconsin points out. I have long wanted to estimate the cost of collecting the Federal income tax that is being placed on the shoulders of our private enterprise. I know it will show up in increased clerical labor.

Let me be sure I am on base. This would be under your definition included in your employees, would it not?

Mr. GREENBERG. Yes, sir; they would be.

(The following was later received for the record:)

A search of available occupational data does not yield any reliable information on the changing occupational composition of "nonwage earners" in the steel industry.

Senator MILLER. Mr. Chairman, before we leave this point which I congratulate my friend from Wisconsin for bringing up, I wonder if it might lend a little assistance in trying to reconcile these lines if your Department might have a chart showing output per dollar of investment in plant, for example? I recognize that this is not strictly labor, but at the same time it seems to me that it ties in with what we are talking about.

Do you know whether or not you would have the statistics available to give us a chart showing the rise or fall of output per dollar of investment in plant?

Chairman DOUGLAS. That is a subject, Senator Miller, that we are going to try to go into on Thursday.

Senator MILLER. Thank you, Mr. Chairman. I believe Congressman Reuss asked that we have a chart or some data put in the record at this point. May I suggest that the information we get on Thursday is interrelated with this? I believe that the two problems are closely allied.

Representative REUSS. I asked, Senator Miller, not necessarily for a chart, but some sort of written answer to my question. I don't know if it will be possible to prepare that by Thursday, but I would like to make the request, Mr. Chairman, that the Department of Labor supply what it can.

Representative BOLLING. Mr. Chairman, I would like to make one comment. It is very clear that the productivity of the Bureau of Labor Statistics has gone up.

Mr. GREENBERG. Thank you. We will try to furnish whatever information is available.

Representative REUSS. Thank you.

Mr. GREENBERG. I think we ought to turn now to a further analysis of these lines, indicating what has happened not only over the long run, but more clearly what has happened since the end of the war, and so on.

That brings us to chart 4. In going over this chart, I want to approach it in two ways, if I may. I want to examine the changeover time, in particular for employment costs per unit and for the other elements, and then I want to retrace that by showing the interaction of the two important factors on unit employment costs.

If we take these lines that we have on chart 1 and compute annual average rates of change, we find that for the long-term period, 1940 to 1962, employment costs per unit of output went up 7.4 percent per year. It went up a little less than that——

Chairman DOUGLAS. You say employment costs?

Mr. GREENBERG. Per unit of output. I beg your pardon. I used the wrong number.

Chairman DOUGLAS. Man-hours.

Mr. GREENBERG. Thank you; 4.9 percent.

Chairman DOUGLAS. 7.4 percent is employment cost per man-hours.

Mr. GREENBERG. You are correct, Mr. Chairman. I made a mistake in reading the chart. In the postwar period employment cost per unit of output went up 4.6 percent. The average rate was less than the rate for the long-term period.

Now let us jump over to the period 1958–62, where we see employment costs per unit of output went up at an average annual rate of 0.6 percent. If you go back to 1957–62, it was 2.1 percent.

Chairman DOUGLAS. In other words, there has been a very marked slowdown in the rate of increase in employment costs per unit of output.

Mr. GREENBERG. There has been, particularly because of what has happened during the last 4 years. It is hard to say that there has been a gradual deceleration.

If you look at this chart here, chart 1, it is hard to tell really that there has been a gradual slowdown. It seems that a good part of this lower rate for the postwar period arises out of the period 1958–62.

Chairman DOUGLAS. If you were to take wage costs, the slowdown would be even more marked.

Mr. GREENBERG. Yes, because that curve has been declining.

Representative CURTIS. One important item is left out here, and that is the impact of World War II and the Korean war. These, I think, would show that here are your great increases. Your takeovers there are a little different. From 1940 to 1962, and 1947 to 1962, which shows a lesser rate, thereby indicate that the period during the war was a much higher rate. Likewise, your takeoff on your third is 1953, which is right after the Korean war, where you had an increase.

I don't know the impact of war on this, but I think it is very important in this kind of industry to separate in our minds a peacetime demand versus wartime. How does this enter into this? Do you just waive it out?

Mr. GREENBERG. We don't have figures covering the war period. That is why there is this break here from 1941 to 1947.

Representative CURTIS. Yet you are trying to relate, as Chairman Douglas is pointing out, the 1957–62 period to a period that includes two wars for your average without separating it out. I don't know that it makes a difference, but I suspect it makes a considerable difference in giving us a picture of what might be occurring here, in what I hope is a peacetime situation.

Mr. GREENBERG. You raise an important point, Mr. Curtis. The averages we get, the trends we get, often depend on the period of time studied and the year selected. This is why we have done as much as we have in terms of 1940 to 1962, 1947 to 1962. One might perhaps go back to 1939 and perhaps back to 1918 if the figures were available. One might start in 1950 and so on.

It is possible to choose almost an infinite variety of beginning and ending dates. We have problems of this kind.

Representative CURTIS. What worries me about this chart is that both are set up so that they don't relate the two war periods. Yet the two big bases are 1940 to 1962 and 1947 to 1962. If you related those to the base, neither one of those, nor all three of your breakdowns, 1953 to 1962, 1957 to 1962, and 1958 to 1962, the smaller units, were war periods.

Mr. GREENBERG. That is right.

Representative CURTIS. Yet you are relating them to bases that have important war periods. That is the thing that bothers me.

Chairman DOUGLAS. Do you want to suggest that they take 1945 to 1950?

Representative CURTIS. Yes. If you could take a couple other periods, for example, 1940 to 1945. I think we ought to see both the Korean war and World War II.

Mr. GREENBERG. We have not computed averages for those periods. They are in the charts. We can compute them and insert them in the testimony later.

Chairman DOUGLAS. At Congressman Curtis' suggestion, would you prepare charts similar to those on the bottom line for 1940 to 1945 inclusive, and 1950 to 1953?

Mr. GREENBERG. I don't know if we can do 1940 to 1945, but we will cover that period as best we can. It depends on the availability of statistics.

(The following was later received for the record:)

The tabulation below compares changes in employment cost per unit, employment cost per hour, and output per man-hour for selected periods spanning the war years. Data for the years 1942 to 1946 are not included because of data problems. Output data for these years are not strictly comparable with those for other years because of the special types of products made in steel plants during the war.

*Employment costs and output per man-hour—Steel and the private nonagricultural economy, for selected periods, 1940–62*

[Average annual rates of change]

| | 1940–62 | 1940–47 [1] | 1950–53 |
|---|---|---|---|
| Employment cost per unit of output: | | | |
| Steel | 4.9 | 5.7 | 7.4 |
| Nonagriculture | 4.0 | 8.5 | 4.8 |
| Employment cost per man-hour: | | | |
| Steel | 7.4 | 7.7 | 8.9 |
| Nonagriculture | 6.5 | 10.4 | 8.1 |
| Output per man-hour: | | | |
| Steel | 2.4 | 1.9 | 1.4 |
| Nonagriculture | 2.5 | 1.7 | 3.1 |

[1] Average based on 1940, 1941, and 1947. Comparable output and employment data for 1942–46 are not available.

Source: Bureau of Labor Statistics; U.S. Department of Commerce; American Iron & Steel Institute.

Senator MILLER. Mr. Chairman, may I ask a question of Mr. Greenberg?

Looking at this chart for 1958 to 1962, would you say that the reason for the very gradual increase of the line representing employment cost per unit of output is due to a decline in the number of employees during that period of time and an increase in the productivity of the equipment and plants involved? I know that while the increase in employment cost per unit of output was very mild during this period, there was a substantial increase in output per man-hour.

I can see that if the number of employees involved is reduced, it might hold down the wage costs, and by the same token, I can see that if the output increased substantially, that this could be due to the fact that the money which otherwise would have gone for the employee wages has now been transferred over into increasingly productive equipment and plant.

Mr. GREENBERG. Again, I would like to retrace a little bit in answering your question and use the chart in doing so. We do find that output per man-hour, 1940–62, and for the 1947–62 period, has about the same average annual rate. Somewhere in the neighborhood of 2.5 percent. For the period 1953–62 it has dropped to 2.1 percent. From 1957–62 it went up to 2.5 percent.

Let us look at 1958–62. Output per man-hour went up 3.3 percent. I want to also point out that employment costs per man-hour have shown a changing rate of increase, 7.4 percent for the long run, something close to that, 7.2 for the postwar period, and moving over to the 1958–62 period, 3.9 percent.

Employment costs per man-hour in the period 1958–62 rose at an average annual rate that was substantially less than for the postwar period as a whole. Output per man-hour rose at a rate that was higher than for the postwar period as a whole. So we have, then, a much lower rate of increase in unit labor costs.

Senator MILLER. May I say I appreciate your mentioning those. I recognize what you have said. My question is, Can we relate that phenomenon which you have just outlined to the fact that during this period of time the number of employees has been reduced? I believe we agreed upon that earlier. At the same time, since the number has been reduced, and since at the same time there was an increase in output, was this not the result of increasing productiveness of equipment and plant that must have gone into use during that period of time?

Mr. GREENBERG. Partly so, only partly so; 1958 was a recession year. There had been a drop in output per man-hour from 1957 to 1958. In coming out of a recession, that is, from a low point of production to a higher point of production, we ordinarily get larger increases in output per man-hour. Perhaps this was a reflection of continuing improvements in the steel industry, of continued investment. But for a year or two, at least a very large part of it was due merely to the increased capacity utilization, without necessarily anv additional investment of any kind.

You see, when we slide back 1 year to the period 1957–62, we find that the average increase in productivity, output per man-hour, from 1957 to 1962 was 2½ percent. Employment cost per hour went up 4.7 percent, and the increase in unit labor cost was 2.1 percent. This difference in 1957–62 versus 1958–62 is due to a large extent because of the recession year of 1958, which affects production, output per man-hour, and unit labor cost.

Senator MILLER. I was wondering whether this chart would look much different if you cut out the recession year 1958 and just showed 1959, 1960, 1961, and 1962, so we would not have the abnormality of substantially increased volume to concern ourselves with.

Mr. GREENBERG. We can go back to chart 1 and follow that. Chart 1 shows output per all employee man-hour. Do you have that?

Senator MILLER. Yes.

Mr. GREENBERG. Output per all employee man-hour on chart 1?

Senator MILLER. Yes.

Mr. GREENBERG. You see the sharp increase in 1958 to 1959 in that line. Then a slight drop in 1960 and a modest increase from 1960 to 1962. If you take the period from 1959 to 1962, there has been a small gain in output per man-hour, a small gain in output during that same period of time, and a small gain in employment cost per man-hour, so if you take the period since 1959, there has been a small increase in employment cost per unit of output.

The net result from 1959 to 1962 in terms of employment cost per unit of output is not much different from the net result of 1958 to 1962 because the productivity and compensation per man-hour figures interact in a slightly different way.

Senator MILLER. Thank you.

Mr. GREENBERG. As a result of the committee's questioning, I have covered many of the points I had planned to make about trends. I would like to move now to the relationship of unit labor cost to capacity utilization.

We have done, I think, a rather interesting analysis of this question. Ordinarily we expect that with higher rates of capacity of utilization for any industry, we would have higher productivity, and, therefore, lower employment costs per unit of output. But when we charted this for the steel industry, we had some difficulties.

Here we have on the left-hand scale employment cost per unit of output. The bottom scale is percent utilization of capacity, going up. If we look at the chart, we find that at capacity utilization rates of 80 and 100 percent, we have various levels of employment costs of unit of output.

It would seem there is not very much relationship between employment costs per unit of output and percent capacity utilization, but we do know that a number of factors are at work. One of them is the long-term trend, for example, employment costs per hour and per unit of output.

We know also, from having looked at some of the other charts, that on a year-to-year basis there is a fairly close correspondence between changes in output and changes in productivity. So we know these things interact in one way or another, and our primary problem is to take out the influence of the long-term trend from this chart. This is what complicates the analysis.

If you look at the chart, we see 1940 and 1941, at the bottom, then 1947, 1948, 1949, and as we move up the chart we get to the more recent years. The evidence of the long-term trend is in here. In 1940, at approximately 80-percent capacity utilization, 1949 at approximately 80 percent, but in 1949 half again as much employment cost per unit of output. We see the influence of a long-term trend.

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How do we take care of this? There are complicated mathematical ways of doing it. We preferred not to do it that way. So we tried to connect adjacent years. Another analyst might decide that he might want to connect these years in a somewhat different way, because there is some subjective judgment involved. I don't think the conclusions would be very much different from what this chart shows.

Now, connecting the adjacent years 1940–41, 1948–49, 1950–52, 1953–54, 1957–58, we get a rather nice picture. As the percent utilization of capacity goes up, employment cost per unit of output goes down. Every line shows this. There are a few years that are not connected. Sometimes it is because the wages in that year may be affected by something that happened in collective bargaining, an agreement providing that there shall be a wage increase. So perhaps there is a sudden spurt in labor costs, and various factors of that kind. As I said, someone else might get a different series of lines. I don't see how they would differ very much from these.

Chairman DOUGLAS. Mr. Greenberg, so we may center our attention on more recent years, if you take 1957 as a base, we had close to 85-percent utilization of capacity, and in the last 5 years, 1958, 1959, 1960, 1961, and 1962, somewhere between 60- and 67-percent utilization.

Mr. GREENBERG. That is right.

Chairman DOUGLAS. At a much higher employment cost per unit of output.

Mr. GREENBERG. Yes, sir.

Chairman DOUGLAS. Which suggests that the increase in employment cost per unit of output in recent years has been caused in large part, if not entirely, by lower degree of plant utilization.

Mr. GREENBERG. If past experience is any guide, then we would have to agree that part of the reason for the high level of employment cost per unit of output is due to lower rate of capacity utilization.

Senator PROXMIRE. If the chairman would yield at that point, if I read that chart right, you have a cluster of 1961, 1962, 1960 right together.

Mr. GREENBERG. Yes, sir.

Senator PROXMIRE. With apparently no increase or substantial increase in the cost per unit of output; is that correct?

Mr. GREENBERG. That is right, in that period of time.

Senator PROXMIRE. In that period of time. You had wage increases during this time. You didn't have much of a change in capacity utilization. It varied as the chairman just indicated between 60 and 70 percent of capacity.

Mr. GREENBERG. That is right.

Senator PROXMIRE. During the most recent period available, recent in terms of 3 or 4 years, you have had a stable cost per unit of output.

Mr. GREENBERG. Yes. That shows up on this chart.

Senator PROXMIRE. This must have been achieved on the basis perhaps part of what Senator Miller mentioned, the greater investment in plant and equipment, and also greater individual efficiency through better organization.

Mr. GREENBERG. Since 1958 there has been a fairly large increase in output per man-hour, but you will recall, as I pointed out, part of this is due to the fact that 1958 was a recession year and we were at a low point of productivity. We had had a drop. If you start with 1959 rather than 1958, there has been a small increase in productivity, a small increase in employment cost per man-hour, a small increase in cost per unit of output.

Chairman DOUGLAS. If I may ask another question, is it fair to suspect or conclude that if we could raise the percentage of plant utilization from 60 to 66 or 67 percent that prevailed during the last 6 years to the present figure of 85 percent, that we could expect a reduction, other things being equal, in employment cost per unit of output; that is, other things being equal?

Mr. GREENBERG. That is the rub, Senator; other things being equal. If other things are equal, then we would expect that an increase in capacity utilization would lead to higher productivity and lower unit employment cost, but we don't know about the other things.

Chairman DOUGLAS. Without anticipating what is coming, it would mean lower capital cost per unit of output and higher profit rates per unit of output.

Mr. GREENBERG. Were you asking me, Senator?

Chairman DOUGLAS. Yes. I don't wish to anticipate later testimony. If you have a higher degree of plant utilization, this should mean a lower capital cost per unit of output and higher profit rates per unit of output.

Mr. GREENBERG. I think those things would follow with the conditions you laid down, other things being equal.

Senator MILLER. Mr. Chairman. On that point, from our previous line of questioning, Mr. Greenberg, I believe you indicated that an increase in the volume of production from the recession year of 1958 would have contributed materially to the increased output per unit of labor. I notice on this chart that the increase in the volume does not appear to be great. Certainly it is not as great as the line between 1960 and 1957. We are talking about an area in here between 1958 and 1960 of about 60 to 70 percent, are we not?

Mr. GREENBERG. Of what ratio?

Senator MILLER. For the year 1958, as I see it, it is about 60 percent of the capacity line and the year 1960 is about 67 percent.

Mr. GREENBERG. That is right.

Senator MILLER. That may or may not be a very significant difference in volume. I am just wondering if you know or have any idea of where a breaking point is on this increase in volume. I can understand how we might have no significant reduction in cost per unit of output in the area between 60 percent and 67 or 68 percent. I can understand how we could have a very substantial difference in the area between 25 and 50 percent. Do you have any information along this line regarding breakoff points in the impact of increased volume upon output per unit cost?

Mr. GREENBERG. I understand your question very well now: If we move from 70 to 80 percent capacity utilization do we get the same cost savings effects as if we moved from 60 to 70 percent or from 50 to 60 percent. I don't know the answer.

Senator MILLER. Thank you. You don't know whether you could get that information, do you?

Mr. GREENBERG. All I can say now is we will try. If we can, we will submit it.

Senator MILLER. Mr. Chairman, I would like to request that if they are able to get some meaningful figures on this point that we have those included in the record.

Chairman DOUGLAS. That will be done.

(The information follows:)

Employment costs per unit are related to rates of operation, but the relationship is not precise or uniform. Over a short period of time, employment costs per unit tend to be closely related to rates of operation; that is, as capacity utilization increases, output per man-hour usually increases and employment costs per unit correspondingly decline. However, employment costs are affected not only by rates of operation and by output per man-hour, but also by changes in wage scales, fringe benefits, and other factors affecting employment costs which may not be related to scale of operation.

Since output per man-hour is more closely related to scale of operation or capacity utilization, it is useful to compare these factors. The effect on unit employment costs can then follow from this analysis, taking into account any changes in employment costs per hour.

It is not sufficient to relate changes in output per man-hour only to rate of capacity utilization; the change in this rate may be equally or more important than the rate itself. The table which follows shows the three factors—rate of capacity utilization, percent change in the rate, and percent change in output per man-hour—based on annual data for the periods 1940–41 and 1947–62.

The table shows the following:

(1) When there is a small decline in the rate of capacity utilization, output per man-hour tends to increase or decrease by a small amount.

(2) When there is a substantial decline in rate of operations, output per man-hour generally declines, but not proportionate to the decline in capacity utilization.

(3) When there is a small increase in capacity utilization, output per man-hour tends to increase by a small amount.

(4) Large increases in rate of capacity utilization have been accompanied by significant increases in output per man-hour. These observations occurred when the rate of capacity utilization was at 70 and 80 percent.

(5) It is not clear to what extent the increases in output per man-hour are more closely associated with the level of change in rate of capacity utilization.

(6) There are significant exceptions to the general relationships noted above, e.g., a decline in output per man-hour occurred with an increase in capacity utilization, and an increase in output per man-hour occurred with a decrease in capacity utilization.

Part of the problem in analyzing these data is that we have relatively few observations. A more thorough evaluation would require the use of less-than-annual data (e.g., quarterly data) and regression analysis.

*Annual changes in output per man-hour related to capacity utilization*

| | Rate of capacity utilization in 1st year (percent change in output per man-hour) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 60 to 64 | 65 to 69 | 70 to 74 | 75 to 79 | 80 to 84 | 85 to 89 | 90 to 94 | 95 to 99 | 100 to 104 |
| Annual percent change in rate of capacity utilization: | | | | | | | | | |
| −20 to −29 | | | | | | −5 | | −3 | |
| −10 to −19 | | | | | | | 1 | | 0 |
| −1 to −9 | | 4<br>5 | | | | | 0<br>−1 | | |
| 1 to 4 | 12 | | | | | | 1 | 0 | |
| 5 to 9 | −4 | | | | | | | | |
| 10 to 14 | | | | | | 4 | | | |
| 15 to 19 | | | | | 11<br>12 | | | | |
| 20 to 24 | | | | | | | | | |
| 25 to 29 | | | | | | | | | |
| 30 to 34 | | | 15 | | | | | | |

NOTE.—Example: Output per man-hour increased 12 percent, when the rate of capacity utilization increased 15 to 19 percent, from a level of capacity utilization of 80 to 84 percent.

Senator PROXMIRE. May I ask this one more question, Mr. Chairman? As I understand it, then, if wage increases are keyed to productivity increases in a particular year you won't have a very satisfactory pattern from almost anybody's standpoint. That is, if you have a greater utilization of capacity, you are going to get a greater productivity, which might, in a sense, you might argue, justify a bigger wage increase. On the other hand, if, through no fault of the workers, you get a drop in utilization, then you might get a reduction in productivity, the workers are working just as hard, but there is no basis, if you stick to productivity, for a wage increase. In fact, you can make an argument for wage reduction if you are basing it strictly on productivity.

What I am trying to get at is whether you might find—I don't want to press you too far, I realize you are giving us facts, not opinions—I wonder if it would be unreasonable to try to work out so-called non-inflationary wage increases keyed to some kind of productivity increase which is corrected for changes in capacity utilization.

Mr. GREENBERG. You have partly answered my question when you said you were not going to press me for an opinion. But let me just make this comment. We often talk in terms of average annual rates of change because there are variations from one year to the next. You can't anticipate what is going to happen next year. I would think that if you gear a system of payments to annual or quarterly fluctuations in output per man-hour, you will have things waving up and down so fast that the waves will cost you money. All I can say is, I have no opinion on whether or not wages should be related to productivity. This is not for me to say.

I would say, if anyone wants to establish relationships, it is better to do it on the basis of an annual average of some kind rather than on specific annual fluctuations.

Senator PROXMIRE. There is just one more question on this same point. If you do have a wage increase which completely and comprehensively reflects the productivity increase, do you deprive capital of any reward for investment? In other words, as Mr. Miller says and as is undoubtedly true, part of the reason for the productivity increase is because capital has made an investment in machinery which can produce more efficiently. If labor receives a productivity increase to reflect their full increase in productivity, do you knock out the full benefit and therefore the full incentive for making this kind of statement?

Mr. GREENBERG. If I may change the words somewhat, Senator, I would say if output per man-hour goes up 10 percent and if output goes up 10 percent, then wages or payments to labor per hour can also increase 10 percent without any reduction to all of the other factors of production.

Senator PROXMIRE. Now without any output increase.

Mr. GREENBERG. Then labor is the only one that gets the increase in this case. I believe that is the way it works out.

Senator PROXMIRE. Thank you.

(The following additional material was submitted by Mr. Greenberg:)

The determination of who shares in productivity gains and by how much, is not simple. It is necessary, for example, to examine (1) the relative shares (of output) going to the different factors of production, and (2) the rate of return to the factors, such as compensation per man-hour or payments per dollar of investment. Gains in labor productivity (i.e. in output per man-hour) may be achieved by new capital investment which may be capital savings or which may reflect increased capital requirements per unit of output.

The following simplified and hypothetical models illustrate two of many possible relationships. In both cases output per man-hour increases 10 percent and the rate of return to labor, as measured by employment costs per man-hour, also increases 10 percent. Other factors—materials, depreciation and profiits—are lumped together in order not to predetermine allocation to each of these factors. In case A, output also increases 10 percent, total payments to each of the two groups of factors rise 10 percent, and the relative shares remain unchanged. In case B, output remains unchanged. Although employment costs per hour rise 10 percent, total labor employed has declined, so total labor payments remain unchanged. The other factor payments are also unchanged and the relative shares remain constant.

Again, in both cases, the return to capital is indeterminate without additional information. If capital per unit of output is higher, the same, or lower in period 2, then the rate of return on capital would be lower, the same, or higher, respectively.

CASE A.—*Output per man-hour and output increase 10 percent*

| | Period 1 | Period 2 | Percent change |
|---|---|---|---|
| Output per man-hour | $10 | $11 | 10 |
| Output | 100 | 110 | 10 |
| Employment costs | 40 | 44 | 10 |
| Other (materials, depreciation, profits, etc.) | 60 | 66 | 10 |
| Man-hours | 10 | 10 | |
| Employment costs per man-hour | 4 | 4.40 | 10 |

NOTE.—Output is expressed in constant prices.

CASE B.—*Output per man-hour increases 10 percent. Output does not change.*

| | Period 1 | Period 2 | Percent change |
|---|---|---|---|
| Output per man-hour | $10 | $11 | 10 |
| Output | 100 | 100 | |
| Employment costs | 40 | 40 | |
| Other (materials, depreciation, profits, etc.) | 60 | 60 | |
| Man-hours | 10 | 9.1 | −9 |
| Employment costs per man-hour | $4 | $4.40 | 10 |

NOTE.—Output is expressed in constant prices.

Representative CURTIS. I am interested in these figures in relation to the pool of trained manpower. I daresay if you reach a certain percentage of capacity utilization, you will use up whatever pool there is of trained manpower and run into some diminishing returns. Would you comment on that? Have any of these increases of productivity reached the point where you have used up the trained manpower? I daresay you did in the Korean war days when there was over 100 percent capacity.

Mr. GREENBERG. The question you raise is a proper one. In theory at least we are taught when you get near the point of a hundred percent capacity utilization, you are beginning to use bottom-of-the-barrel type of equipment and so on. This chart does show, for example, in the Korean period, 1951, 1952, that at 100 percent capacity utilization, we had lower unit employment cost than in 1952 when we had 85 percent. It would be better if I had a chart here on productivity related to capacity utilization because that is a more direct relationship. But I don't have that.

Representative CURTIS. This is not on this point, but have any studies been made of the amount of retraining or on-the-job training that goes on in a particular industry? I know a great deal does go on. Has the Labor Department or the Iron and Steel Institute ever attempted to measure this amount of training, on-the-job training, and retraining?

Mr. GREENBERG. I doubt that studies have been made precisely in this way. The Department may have some information on training. I doubt they have very much on on-the-job training.

Representative CURTIS. This relates to your productivity because in this dynamic economy, particularly in periods of automation, a great deal of a man's time on his job is actually spent retraining. Just as you pull down your assembly line and reset it again—not in steel but in other industries—a good bit of time is spent in this area. I don't know whether any studies have been attempted here.

Mr. GREENBERG. I don't know. I assume in industry after industry, as technology changes, there is an extensive amount of on-the-job training. They have to do this so they can move workers from one job to the next. We don't know.

Representative CURTIS. I also want to comment upon the change in the end product as it might bear on this. First the question would be, has the end product from 1950 to 1962, or any period, changed markedly? Has there been a 30-percent innovation or 20, or whatever? How does this bear on these figures? Have you thought in those terms?

Mr. GREENBERG. If I understand your question about end product, and please stop me if I am wrong on this, we do take account of something like 74 different kinds of products made by the steel industry. If stainless steel has become much more important now than compared with 1950 and plate steel less important, for example, we would take account of this in our system of measurement.

Representative CURTIS. You are getting at the point. Certainly it would include, too, the new techniques that are developed, if they are. First the test would be, is there innovation in production methods that goes along with your changed product to gain its significance? Then, if there is innovation, what has been its impact here?

Mr. GREENBERG. The changes in innovation can, of course, affect the productivity of labor. The output per man-hour may go up as indicated several times, because of changes in methods of production. That is true.

Representative CURTIS. But it can also mean the change occurs because you are no longer producing, say, thick plates, but rather thin plates. Actually, I don't know enough about the steel industry to talk intelligently. The fact is that one process or one product requires a different mix. I don't want to overcomplicate it, but on the other hand I am anxious to have some knowledge of how much innovation exists, or has occurred, say, from 1950 to 1960, or any period. If there has been a great deal of innovation, either in the end product or in the production methods of the same product, we need to know it, because it bears not only on equipment, but also on the skilled manpower.

Mr. GREENBERG. We probably don't take specific account of changes in the specification or the innovation of a particular product. For example, a certain type of steel may be of highly improved quality now as compared with 10 or 15 years ago. It is very difficult for us to take this into account. But if, for example, there is a change—I am trying to find products of the kind you are discussing—to give you an idea of how much detail we use with regard to product, we have separate identification and weighting in our measures for carbon steel, broken down into structural shapes, steel piling, plates, alloy steel, structural shapes and plates, stainless steel plates. That is only for finished shapes and forms. Then we have rails, carbon steel of various kinds, alloy steels of various kinds, and so on. There is a considerable breakdown.

Representative CURTIS. Would you have any overall figure of the amount of change that occurred in a decade in the composite of the end product?

Mr. GREENBERG. No, sir.

Representative CURTIS. Could I ask a general question? Has there been considerable innovation? That is a value question, but I don't really know whether there has been a dramatic change in the techniques and end products in this industry.

Mr. GREENBERG. There have been some changes. As to how dramatic they have been or will be is hard to say. For example, thin steel is being used for cans; very thin steel compared to earlier steels, to compete with other materials used in containers. There are developments in technology of the steel industry; the use of the oxygen process in furnaces and continuous casting of forms which is still somewhat in the experimental stage. These developments could lead to higher productivity; that is, higher productivity in terms of output per unit of capital or output per unit of labor or both. But that is guessing at what might happen in the future. There are some interesting technological developments going on in the steel industry which may have an impact on these things.

Representative CURTIS. I was really thinking of the past. For example has 1950 to 1962 been a period of innovation or has it been rather stable?

Mr. GREENBERG. Partly an answer to that question is to look at this line. There has not been a large increase in output per man-hour in the steel industry from 1950 to 1962. This suggests that innovation in method of production has not been heavy. This does not mean there has not been a capital investment in the steel industry. That is a different question. There is replacement of equipment required as well as purchase of new equipment. That is another matter, I think, which will be gone into on other days of the week.

Representative CURTIS. The steel industry and the steel unions did what I thought was a remarkable job in getting together on nomenclature and job specifications for the various skills in the field. This would suggest to me, and I went over their work in some detail, that there has been considerable innovation in the change in skills. I am talking about the labor force. In fact, this is what led me to ask the question, because I am concerned to see what changes in skills exist in this industry and what impact that has on your charts.

Mr. GREENBERG. To the extent that skill level rises and therefore employers pay more for that skill level that is reflected in employment costs.

Representative CURTIS. Part of this is actually that skills that once were used become obsolete and therefore the need for retraining and demand for new skills enters. That is what I am talking about.

Mr. GREENBERG. Your question is, Is that reflected in the cost?

Representative CURTIS. Is it reflected anywhere in here?

Mr. GREENBERG. I think partly. The time that a man spends in training and the time for which he gets paid, that is, the pay for his training time, is included in these employment cost figures. The extent to which the industry may have to hire people to do training or set up special classes of one kind or another is probably not reflected in these employment cost figures.

Shall I turn to the next section?

Chairman DOUGLAS. Yes, please.

Mr. GREENBERG. The Bureau of Labor Statistics has published not only these figures for steel but also unit employment cost figures for the nonfarm economy. Our previous publication only went back to 1947 but for the benefit of this committee we have extended those figures back to 1940.

Chairman DOUGLAS. Do these deal with material commodities? Are these indexes of production, so-called, or do they include services, and therefore are they in terms of the so-called gross national product?

Mr. GREENBERG. Unfortunately not the total because it presented certain problems. This is for the total nonfarm economy—private nonfarm. It includes not only commodity production but also services, finance, personal services, and so on.

Chairman DOUGLAS. How do you measure the productivity of services?

Mr. GREENBERG. We use the GNP figures, Mr. Chairman.

Chairman DOUGLAS. So, if the salary of a doctor goes up it assumes that the productivity goes up. If the fees of a doctor go up, the productivity goes up?

Mr. GREENBERG. I don't think so because that is supposed to be in constant dollars. So then the increases in wages presumably are deflated.

Chairman DOUGLAS. Very good.

Senator PROXMIRE. You still would agree that this is a far fuzzier picture that you get on services than you get in manufacturing. It is not as clear and precise. The old family doctor like my father who worked 16 hours a day for a relatively low fee, compared with a modern specialist who works 6 or 8 hours and has strict office hours. I feel that my father and other family doctors like that were extraordinarily productive and how can you measure this? The specialist works much less hours and gets higher fees, how do you determine that the productivity of the medical profession has gone up?

Mr. GREENBERG. We don't.

Senator PROXMIRE. So you get the number of people who are working as doctors, nurses, technicians?

Mr. GREENBERG. If I may——

Chairman DOUGLAS. Do you include lawyers in this and/or orators, lecturers, advertising men, politicians, and so forth?

Senator MILLER. Economists?

Chairman DOUGLAS. Economists?

Mr. GREENBERG. We include private economists but not Government economists. We include politicians employed in private industry but not in Government. The figures are based on those published by the Department of Commerce on gross national product. Unfortunately, they have inherent in them the weakness, for purpose of measuring productivity, that they do not reflect, generally speaking, an adequate count or measure of output. We do not really get, in this kind of a measure, an adequate measure of the output of doctors, nurses, or lawyers or to a certain extent of trade and other personal services, in particular, personal service type activities. The productivity of the economy is somewhat understated for that reason. Nevertheless, the only set of numbers that we have available is the gross national product in constant dollars as published by the Department of Commerce. We use that for comparison with what has happened in the steel industry.

This chart 6 accompanied by table 6 presents the information in terms of average annual rates. If we look at the whole period 1940–62, we find that steel had an average annual increase of 4.9 percent in employment cost per unit of output. For the private nonagricultural economy, the average increase was somewhat less, 4 percent. If we deal with the postwar period we find a much larger spread between those two average rates; 4.6 percent a year for steel and 2.4 a year for the private nonfarm economy. A similar picture if we just take the 1953–62 period. A somewhat different picture if we take 1957–62.

We find here that steel unit employment cost went up 2.1 percent a year, and for the nonfarm economy 1.3 percent a year. If we take the period 1958–62 we have the reverse. The private nonfarm economy went up 1.2 percent a year, but steel went up 0.6 percent a year. I think it is useful to now go back the other way and look at the detailed chart which shows figures by year to year.

Representative CURTIS. May I ask one question first? Steel started from a higher base, did it not, than private nonagriculture?

Mr. GREENBERG. High base in terms of unit employment cost.

Representative CURTIS. Yes.

Mr. GREENBERG. Probably. These are index numbers. We start with 100 in 1940 and move them on. In terms of employment cost per unit of output I don't know how to measure this.

Representative CURTIS. You could give us the base, couldn't you?

Mr. GREENBERG. We have to define it in terms of dollars worth of output. If we are trying to compare steel with some other industry or with the rest of the economy we have problems because we can measure output then only in terms of dollars.

Representative CURTIS. That is what I thought. I thought these were dollar costs.

Mr. GREENBERG. Not quite. We are using a measure of employment cost per unit of output in which we take the various commodities and arrive at what we call a physical measure of output. That is another complication here which makes these figures not strictly comparable. The nonagricultural sector output is defined in dollar terms but deflated so we don't get price increases there. It is difficult to make a precise comparison of employment costs per unit of output for steel with the private nonfarm.

Representative CURTIS. I am really confused now. I would have thought that the only thing that you could use for comparison would be dollars. You said you don't?

Mr. GREENBERG. If we were trying to compare the level that is quite true. We would really be in a spot. What I am trying to show is the change over time and the extent to which steel industry compares with the nonfarm sector only in terms of trend, not in terms of level.

Representative CURTIS. I see what you mean. I see the point. It may make no difference at all, but when we deal in percentage increases it does make quite a significant difference as to the basis from which you start.

Mr. GREENBERG. That is right.

Representative CURTIS. I was just thinking that steel probably was a higher base to begin with and maybe also would be, but I don't know that. I was just interested in knowing what the base might be. I can see your difficulty now since you are not actually using dollars. Any information that you can give us on the comparison of base would be helpful.

Mr. GREENBERG. Yes, sir.

(The document to be supplied follows:)

The comparisons which have been made between steel and the private nonagriculture economy have been in terms of the trend of employment costs per unit of output. These trends have been computed by use of index numbers. It is not possible to compare the levels of unit employment costs for the two series because of the different methods of measuring output for steel and for the nonagricultural economy. For example, the output index for steel is based on physical units of steel produced. The output index for the private nonagriculture sector of the economy is based on gross national product in constant dollars, which is roughly equivalent to constant dollar value added. Comparable data for steel and nonagriculture in either physical units or constant dollar value added for the purpose of measuring levels, are not available. But, the trends for the two series can be compared through the construction of index numbers.

Senator MILLER. Mr. Greenberg, might I ask a question on that 58–62 bracket? I notice that output per man-hour of steel was 3.3. The employment cost per man-hour was 3.9 increase.

Mr. GREENBERG. Yes.

Senator MILLER. I would think that the result would be an increase in the cost per unit. Why doesn't it turn out that way?

Mr. GREENBERG. It does, 0.6 percent.

Senator MILLER. That is the difference?

Mr. GREENBERG. Yes.

Senator MILLER. Can you tell us what in your judgment is the reason why there is that increase in employment cost per man-hour for steel which is greater than your nonagriculture? Why should there be a difference during that period of time?

Mr. GREENBERG. The period 1958–62?

Senator MILLER. Yes.

Mr. GREENBERG. For the period 1958–62, the increase in employment cost per unit for steel was 0.6 percent a year. For the private nonfarm economy it was 1.2 percent a year. In other words, steel had a lower increase.

Senator MILLER. I am talking about the employment cost per man-hour, the second figure which indicates 3.9 percent increase for steel as against 3.6 increase for nonagriculture. I am looking at table No. 6.

Mr. GREENBERG. Yes. We come back to these two elements, employment cost per man-hour and output per man-hour, which interact to give us employment cost per unit of output. Output per man-hour in steel went up 3.3, in nonagriculture, 2.4. So the productivity increase in steel was higher than the productivity increase for the nonfarm sector. That is what that says. Employment costs per hour for steel was just a little bit higher than for nonfarm. If you take the higher productivity increase in steel compared with the increase in employment cost per hour it gives you a lower increase in employment cost per unit. The primary effect there is the differential per man-hour movement between steel and the rest of the economy.

Senator MILLER. Then it looks to me, that employment cost per man-hour being higher than the output per man-hour, as though we had employment costs in excess of increased productivity.

Mr. GREENBERG. That is right, for steel.

Senator MILLER. But it went the other way for nonagriculture?

Mr. GREENBERG. No. Employment cost per hour in nonagriculture went up 3.6 percent and the output per man-hour went up 2.4 percent.

Senator MILLER. Can you tell us whether or not the increase over increased productivity which was less in steel than it was in nonagriculture was due to improved techniques, improved machinery, or improved volume?

Mr. GREENBERG. Let us look at this chart and see if this can give us some answers. We don't have all the components that we need. We have these averages repeated but on an annual basis. Output per man-hour in steel, if you look at chart 7—that is not mentioned in the text but everybody does have a copy of chart 7 and table 7—you will see, as I indicated earlier, output per man-hour in steel in 1958 was at a low point. So we have a fairly sharp rise in output per man-hour 1958–62 in the steel industry; we did not have a similar dip in the private nonfarm economy in 1958. There was a slight dip—it doesn't show up too well on the chart—but not as much as for steel. So part of the answer to your question, then, is that as a result of more of a recovery, so to speak, from the recession year 1958 we had a sharper increase in productivity in the steel industry than in the nonfarm economy as a whole. To what extent the difference arises because of innovation and so on, we don't know. I think a big part of the difference is the recovery from the low point in the steel industry. Does that answer your question?

Senator MILLER. Yes, thank you, Mr. Greenberg.

Mr. GREENBERG. This chart (chart 7) I have here unfortunately did not come out as clear as we had hoped. I have been discussing annual average rates of change which we saw in chart 6. I think it is only fair to point out certain changes. If you look at employment cost per unit of output for steel and for the nonfarm economy and go all the way back to 1940, up through 1962, employment cost per unit of output in steel went up more than that for private economy. That is what the figures show. A big part of that, however, occurred in the postwar period.

As you can see from the chart in terms of percent change, the steel industry percent change did not equal that of the nonfarm economy until sometime around 1957. Output per man-hour on the other hand for both steel and the nonfarm economy showed fairly similar patterns over the whole period of time. You see the two lines at the bottom of the chart are fairly close together. If you move up to the two lines at the top of the chart, you have employment costs per man-hour. Employment costs per man-hour in the steel industry went up percentagewise, more than that for the private nonfarm economy, for the whole period. But as you can see in terms of percent change from 1940, 1957 is the point where the percent change was equal. Prior to that the increase in steel covering the whole period was less than for nonfarm.

Representative CURTIS. On these charts I was looking at No. 7, and I notice 1959 is a break on all three—employment cost per man-hour, employment cost per unit of output, and output per man-hour. This was 1959. That was when we had the 6-month steel strike.

Mr. GREENBERG. Yes, sir.

Representative CURTIS. How does a strike of that length affect these charts? How would you evaluate that? You still would have your salaried employees and your overhead expenses but not your productive employees. How does that alter your chart or do you make allowances for it so that you try to eliminate that element?

Mr. GREENBERG. We do not try to make adjustments in terms of depicting change for strikes or other unusual events.

Representative CURTIS. Even one as long as the one in 1959?

Mr. GREENBERG. That is right. Figures reflect the actual man-hours worked by the industry and the output reflects the actual output of industry. The figures therefore can be affected by something like a strike in the following way: If production is concentrated in the first 6 months of the year in anticipation of a strike, then sometimes you achieve certain economies of scale which you don't get over the whole period of time. It could work the other way around, because you are putting in a lot of overtime with both men and machines, you may sacrifice certain economies, and it may cost you more. For one thing, you have to pay overtime to the workers. So I am not quite sure how this worked out in the period 1959. In any case, they are reflected in the 1959 figures.

Representative CURTIS. It looks like something is reflected in 1959. There are breaks in all three of the curves. Whether that is it, I don't know. That is what led me to ask the question.

Mr. GREENBERG. We don't know exactly either.

Representative CURTIS. What would be the impact of the fact that you have your salaried employees and overhead continued as a charge against your production, without any production?

Mr. GREENBERG. They are in there in the man-hours and their pay. So while the employment costs per man-hour might not be affected, because that does not change, the employment costs per unit would be. Lower output, the same employment, therefore, the employment cost per unit of output would go up.

Representative CURTIS. What are the percentages when you get into labor costs? Your productive employees in dollars are what percent of the full labor cost?

Mr. GREENBERG. I am sorry I don't have the figure here in that way. We have it only in terms of relative employment.

Representative CURTIS. I was thinking in dollar volume. Is that a big percentage of the productive employees in relationship to the nonproductive?

Mr. GREENBERG. Right now the wage employees are 80 percent of total employment.

Representative CURTIS. And probably the dollar value would not be altered too much?

Mr. GREENBERG. We can check into this. There are some figures available which would allow us to look at that. But I don't have them handy. If you like I could submit them later.

Representative CURTIS. Yes, I would like to get them.

(The document to be furnished follows:)

In 1962 wage earners accounted for about 80 percent of total employment in the steel industry and about 74 percent of wages and salaries. The gradual decline, with some annual variations, from 1940 to 1962, in the wage earner proportion of total wages and salaries, was about the same as that for employment. There has been very little change since 1959. The ratios and trends for total compensation (wages and salaries plus fringes) followed similar patterns.

Chairman DOUGLAS. Have you finished your formal presentation?

Mr. GREENBERG. Yes, sir; I have.

Senator MILLER. Might I ask a question on this last chart?

Chairman DOUGLAS. If it is a question. I thought once the formal presentation was finished, that we would move from majority to minority in brief comments so, if the Senator from Iowa will permit me, there are just a few comments that I would like to make.

First I want to congratulate you, Mr. Greenberg, and the Labor Department, for the patient work you have done and what seems to be very accurate work in assembling these statistics. I think they are a great contribution to our understanding of the problem. The comments I make are in no sense a criticism of you individually or indeed of your method, but I think they need to be appraised before we can get an accurate judgment of the total situation. The first comment I would like to make is that I think that sharp distinctions should be drawn, particularly for longtime periods, on the cost per unit of output between all employees and of wage employees. If you will turn to table 2, you will find that with 1940 as a base the cost per unit of output in terms of total employees was 264.2. For wage employees, 236.5, or a difference of 27.7 points, or slightly more than 10 percent. In other words, the use of all employment costs per unit output maximizes the increase.

We are not interested in finding blame or allocating blame, but certainly others sometimes do it. I think it can be said that wage earners have no control over the number of clerical and technical employees who are added to the working force and as Congressman Curtis has pointed out, very little direct control over their salaries.

I hope the reporters and the general public will consider wage employee costs per unit of output as well as all employment cost per unit of output. If this is done it will be seen that the increase per wage employees is appreciably less.

The second point I would like to make is that this is also true for the 4 or 5 years from 1958 to 1962. The increase of employment cost of units is 261 to 264.2 or 3 points or a little over 1 percent. The increase in wage cost is 235.5 to 236.5 or about four-tenths of 1 percent. That is the first point I would like to make.

The second point that I think emerges is that while both wage costs and employee costs per unit of output rose rapidly until 1957, or possibly 1958 and indeed rose more rapidly than costs in nonagricultural industry, there has been a marked change since that time, particularly since 1958, a period in which employment costs and wage costs per unit of output rose scarcely at all or at very low rates. So far as employment costs are concerned, and wage costs, there has been comparative stabilization. I think those are the two chief comments that I would like to make on the facts of this testimony. Again I want to congratulate the Department.

Congressman Curtis.

Representative CURTIS. I have no comments.

Chairman DOUGLAS. Senator Miller?

Senator MILLER. I didn't have a comment, Mr. Chairman, but I did want to get back at the last chart and the next to the last chart and possibly tie them in with what Senator Douglas has been saying.

I must say that I am somewhat concerned about just plain statistics indicating that for the period 1958 to 1962 there has been an increase of only 0.6 percent in the unit cost for steel. If this reflects the true wages for individual employees, I wonder, Mr. Greenberg, if the facts are that during this period of time the number of these wage earners has, in fact, decreased?

I understand they have an unemployment problem in the steel industry. While the wage costs per unit of output may have increased only moderately, or almost insignificantly, the fact might remain that those who were fortunate to remain employed were enjoying a more significant increase in their wages, or in their take-home pay, at least, because we have fewer wage earners to split the total wage earnings. We will have an increase in take home per individual, although unfortunately we will have added to the unemployment rolls at the same time. I wonder if that is what happened.

Mr. GREENBERG. Mr. Miller, those wage employees who are no longer employed are not receiving any pay, and there is nothing in those figures for those workers who are unemployed.

Senator MILLER. That is my point. Is it not true that there are fewer workers to receive the total wages and, as a result, those who are fortunate enough to have remained employed are receiving a larger take-home increase than the 0.6 percent figure would tend to have one believe?

Mr. GREENBERG. I don't think that it follows, if I understand your question.

Senator MILLER. Let me give an example that may point this up. I can see a possible analogy to the farm situation. During the last couple of years farm income, total net farm income throughout the United States decreased, but net farm income per farmer has increased.

The Department of Commerce has pointed out that the reason the net farm income for the farmer has increased is because we have lost literally hundreds of thousands of farmers off the farm, so there are fewer farmers to divide the net income.

I am wondering whether or not we might have fewer steelworkers to draw wages during this period of time, and those who are fortunate enough to continue to draw wages might have ended up with a better increase than this 0.6 percent.

Mr. GREENBERG. The 0.6 percent is employment cost per unit of output.

Senator MILLER. I am sorry: I didn't quite phrase that properly. Then the 0.6 percent would tend to have one believe——

Mr. GREENBERG. In table 6 we show the employment cost per man-hour. That indicates in the period from 1958 to 1962 employment cost per man-hour rose 3.6 percent.

You are right, Mr. Miller, that the 0.6 does not indicate what employees received. The 3.6 percent does. At the moment I don't know how the 3.6 percent average was affected.

Senator MILLER. You mean 3.9 percent.

Mr. GREENBERG. I beg your pardon, 3.9 percent. I don't know how it was reflected or how the changing composition of employment affected that average. In other words, it may be possible that the production workers or wage earners received more or less than 3.9 percent increase per year in average hourly pay. We would have to look at that.

Senator MILLER. Do you think you can get some figures for us on that? It seems to me that this is extremely important.

Mr. GREENBERG. I think we can; yes, sir.

Senator MILLER. Mr. Chairman, I wonder if we might have those figures included in our record so that we might see the relationship between these figures in table 6, the unemployment situation among the steelworkers, and the take-home pay of those steelworkers who have been fortunate enough to have stayed at work.

Chairman DOUGLAS. Without objection, that will be done.

(The information to be furnished follows:)

From 1958 to 1962, total employment in the steel industry declined 4.0 percent, and wage earner employment declined 5.5 percent. The decline in total man-hours worked during this period was less—0.9 percent for all employees and 1.9 percent for wage earners. Because the average number of hours worked in 1962 was greater than in 1958, those who retained employment were relatively better off, to the extent that they had a job, worked longer hours, and earned more per hour. During this period, employment costs per hour increased 18.6 percent for all employees and 19.0 percent for wage earners, or at the annual rate of 3.9 and 4.0 percent, respectively. Hours worked declined at the average annual rate of 0.3 percent for all employees and 0.6 percent for wage earners. When the average increase in hourly employment costs are combined with average decline in hours worked, total employment costs increased at the annual rate of 3.5 percent for both all employees and wage earners.

Representative CURTIS. If the gentleman would yield, do you mean to include the number of people employed in the steel industry in 1950, or whatever period, and the number employed in 1962, and that broken down? I think it is a smaller amount, is it not? Hasn't there been some decline in employment?

Mr. GREENBERG. Yes, sir; there has been. In 1962, according to the Bureau of Labor Statistics figures, there were about 480,000 production workers in the steel industry. In 1957 there were 600,000.

Representative CURTIS. A difference of 120,000. That is a sizable decline.

Senator MILLER. That was my understanding. If there is any way of relating those figures to the employment cost per man-hour, I can see it would be difficult. I think it would be very helpful to us if we could have that. If you can't do it, I don't know who can. Granted that the unemployment of steelworkers is a tragedy, I still can see where this unemployment might be offset in part by additional employees needed to operate more highly refined machinery. As a result of which there is more output per man-hour.

As of now, I don't believe what we have received this morning keeps us from groping in trying to tie in these very important facts of life of unemployment and technological consequences of bringing in more productive machinery and the increases, if any, in the wage structures, and also the increase in cost of the white-collar workers who are necessary to program and to operate, or at least to program and in some instances to operate these more refined items of production.

Mr. GREENBERG. May I say there was also a slight decline in the nonproduction worker component from 1957 to 1962.

Senator MILLER. Nothing like the wage earners, was it?

Mr. GREENBERG. No, sir.

Senator MILLER. I have no further questions.

Chairman DOUGLAS. Thank you, very much, Mr. Greenberg.

(Mr. Greenberg's prepared statement follows:)

## UNIT LABOR COSTS IN THE STEEL INDUSTRY

Material submitted by Leon Greenberg, Assistant Commissioner for Productivity and Technological Developments, U.S. Department of Labor

This material is submitted in response to a request from the Joint Economic Committee for information on the trends in unit labor costs in the steel industry and for a description of some of the basic data and concepts underlying these trends. Most of the figures included in this statement have previously been published by the Department of Labor, but many of them have been updated to 1962. In addition, some analysis has been specially prepared to meet the needs of the committee.

### CONCEPTS AND DEFINITIONS

While the development and analysis of measures of unit labor costs are often quite complicated, the basic definition of unit labor costs is quite simple. It is the ratio of an employer's payments for labor to his volume of output.

This ratio can be examined in terms of hourly payments and hourly output; that is, labor costs per man-hour and output per man-hour (chart A).

Within this framework, some definitions are useful:

(1) The term "employment costs" is used to indicate labor costs. These costs include wages and salaries plus what are commonly referred to as fringe benefits.[1]

These employment costs refer to all employees, including production workers at the plant and employees engaged in clerical, professional, administrative, and other tasks of steel establishments.[2]

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[1] They include employer contributions to social security and private welfare and pension plans, as well as payments for vacations, holidays, and other leave.

[2] They exclude the costs of employees who are primarily engaged in work arising from steel corporation activities not ordinarily classified in the steel industry (e.g., mining, construction, fabricated steel products).

Similarly, the man-hour figures include the hours of all employees.

While some figures will be shown for production workers (or wage earners), most of the analysis will deal with costs and hours for all employees.

(2) Output is more complicated. In a single product industry, output is simply the count of items. In a multiproduct industry, such as steel, where a variety of products are made from pig iron to semifinished to finished steel products, both carbon and alloy, it is much more difficult. These products must be combined in some way. The standard technique is to use a system of appropriate weights.[3]

(3) Productivity may refer to different ratios of output related to input or to a combination of inputs. Output per man-hour is the productivity ratio referred to in this statement. It is affected not only by the skill and effort of the work force, but also by equipment, materials, managerial efficiency, level of operations, and other factors.

Referring back to chart A, we see again that the important elements of unit employment costs are employment costs per hour and productivity. Theses two elements will be referred to frequently in explaining the trends of unit labor costs. An increase in hourly labor costs does not necessarily mean that there will be an increase in employment costs per unit of output. Output per man-hour is the offsetting factor.

Thus, if employment costs per hour increase by 5 percent, and if productivity increases 5 percent, then unit labor costs will be unchanged.

How these elements have interacted will be shown in the analysis. However, before presenting these results, several points should be made about trends.

The components of cost may be differently affected by a number of economic forces. For example, when production rises sharply, output per man-hour usually also increases sharply. Likewise, when production drops, gains in output per man-hour are retarded.

In contrast, labor costs per hour are less sensitive to changes in production but are subject to general wage trends and to collective bargaining agreements.

Short-term trends covering a few years may differ from trends covering a longer period of time. But in comparing trends over time, the results may be affected by the initial and terminal years chosen for analysis. This problem can be somewhat reduced by calculating average annual rates of change, in which each year's change is taken into account.[4]

For analysis and comparison of long-term and recent trends, data are presented for the following time periods:

| | |
|---|---|
| Prewar to current | 1940–62. |
| Postwar period | 1947–62. |
| Post-Korea | 1953–62. |
| Recent periods | 1957–62 and 1958–62. |

### TRENDS IN UNIT LABOR COSTS AND RELATED DATA

*Prewar to current (1940–62)*

In the period 1940–62, employment costs per unit of output rose more than 160 percent (chart 1). The trend was not uniform, but was subject to annual and other periodic fluctuations.

During this period, employment costs per man-hour rose more than 350 percent, while output per man-hour increased 74 percent. Thus, since employment costs per hour went up more than productivity, employment costs per unit of output also went up.

Production, during this long-term period, fluctuated widely in some years. Output per man-hour was closely related to the year-to-year changes in production, but the fluctuations were narrower. So, over the long period there was a gradual rise in productivity.

Employment costs per man-hour showed an almost uninterrupted increase during the entire period.

When these changes in output per man-hour and employment costs per man-hour are combined, there is a resulting fluctuation in unit employment costs, generally inversely related to the changes in production.

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[3] Although much of the crude and semifinished products are consumed within the industry, some are produced for sale, so they must be accounted for in the output index. The weights take account of the various stages of fabrication and of the differences between carbon, alloy, and stainless steel.

[4] Technically, by the method of the least squares trend of the logarithms of the index numbers.

As indicated earlier, employment costs are the sum of costs for production workers and all other employees of steel establishments. The relative employment of these two groups in the steel industry has changed over time. This change has been fairly gradual. In 1940, production workers accounted for 88 percent of employment. By 1947, there was very little change in this relationship. But by 1962, production workers had declined to 80 percent of total employment.

The effect of this changing ratio of employment is reflected in a differential movement of unit labor costs for all employees and for production workers only (chart 2). The different employment trends also result in different trends in output per man-hour of wage employees (95 percent) and all employees (74 percent) (chart 3).

*Postwar period (1947–62)*

The analysis for the postwar period is again directed at two points of interest: (1) What has happened over time and (2) what have been the differential effects of hourly costs and hourly output?

The postwar period, as a whole, shows a lower rate of increase in unit labor costs than the long-term period (chart 4). However, this does not mean that there was a gradual deceleration in unit labor costs. Actually, for the period 1947–58, the average annual rate of increase in these unit costs was 5 percent, about the same as the long-term trend.

The lower rate for the postwar period was strongly influenced by the small increase in the last 4 years, 1958–62.

Moving to the elements of unit costs, employment costs per hour rose in almost a straight line from 1940 to 1958, as shown in chart 1. However, the average increase of 3.9 percent in the 4-year period, 1958-62 was substantially lower than the long-term rate of gain.

The trends in output per man-hour are more difficult to identify because of the wide annual fluctuations. The long-term (1940–62) and postwar (1947–62) averages are very close—around 2½ percent. But in the last 4 years the average increase was 3.3 percent.

Now we can see (in the boxes in chart 4) the relative influence of the two elements of cost. For the postwar period as a whole hourly employment costs went up much more than output per man-hour, with a resultant rise of an average of 4.6 percent in unit labor costs.

Moving to the last 4 years, 1958–62, a different pattern occurred. A sharp drop in the annual increase in hourly compensation was accompanied by a higher than average increase in productivity. Consequently, unit labor costs showed very little change.

However, part of the large increase in output per man-hour reflects a recovery from the decline in productivity which occurred in the recession year 1958. If we slide back one year to 1957, then the 1957–62 pattern shows that only about one-half of the rise in hourly employment costs was offset by productivity gains.

*Relationship to capacity utilization*

We have made some interesting comparisons of the relationship between unit employment costs and the degree of capacity utilization for the steel industry. With higher rates of utilization of capacity, it is usually expected that there will be higher rates of productivity and, therefore, lower unit labor costs. However, this relationship was not immediately apparent from a direct comparison of the actual data on the two items (chart 5a). For example, between utilization rates of 80 and 100 percent, indexes of unit employment costs ranged from 100 to 230.

In following the scatter year by year, in sequence, it appeared that the general long-term trend of increase in unit labor costs was influencing this picture. For example, unit employment costs might be half again as high in 1949 as in 1940, even at approximately the same operating rate in both years. Thus the time trend was an additional factor.

By utilizing the information about long-term trends, the scatter between changes in unit costs and utilization can be grouped more clearly. Certain adjacent years are connected to obtain a series of lines (chart 5b). In effect, each line represents a different level of unit labor costs, to take care of the long-term trend. It can be seen that each line slopes downward, but not always at the same rate, indicating that unit labor costs tend to decrease as percent capacity utilization rises.

Some subjective judgment is involved in connecting these points and it may be possible to arrive at a somewhat different series of lines. However, it is not likely that they would lead to different conclusions.

### UNIT EMPLOYMENT COSTS IN OTHER INDUSTRIES

The Bureau of Labor Statistics has published unit employment cost figures for steel and for the total nonfarm economy for the postwar period. In order to have comparable periods of analysis, the figures have been extended back to 1940.

Over the long run, 1940–62, unit employment costs for steel rose at a slightly higher rate, 4.9 percent, than the private nonfarm economy, 4 percent (chart 6). However, the increase for steel in the postwar period was substantially higher, 4.6 percent compared with 2.4 percent for nonfarm. In the last 4 years, 1958–62, both showed lower than average increases; steel had less of an increase than the private nonfarm economy.

Output per man-hour for steel and the nonfarm sector showed quite similar patterns of change for the long-term and postwar periods, except in most recent years.

Hourly employment costs rose 7.4 percent a year for steel compared with 6.5 percent a year for nonfarm, for the total period 1940–62. However, this difference arose primarily from the larger increase in steel in the postwar period. In the last 4 years, the rates of increase for steel and nonfarm were nearly the same—3.9 and 3.6 percent, respectively.

TABLE 1.—*Output, output per man-hour, and employment costs—Steel, 1940–62*

[Indexes, 1940=100]

| Year | Output | Output per all employee man-hour | Employment cost per man-hour | Employment cost per unit of output |
|---|---|---|---|---|
| 1940 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1941 | 130.4 | 111.3 | 110.2 | 99.0 |
| 1947 | 137.4 | 118.0 | 169.2 | 143.3 |
| 1948 | 144.6 | 119.2 | 182.6 | 153.2 |
| 1949 | 127.2 | 120.2 | 194.0 | 161.4 |
| 1950 | 161.1 | 134.4 | 209.0 | 155.6 |
| 1951 | 175.0 | 135.0 | 230.6 | 170.7 |
| 1952 | 154.3 | 134.9 | 254.0 | 188.3 |
| 1953 | 181.3 | 140.8 | 268.6 | 190.8 |
| 1954 | 145.3 | 136.3 | 282.2 | 207.0 |
| 1955 | 191.8 | 156.1 | 303.5 | 194.5 |
| 1956 | 188.9 | 156.6 | 328.4 | 209.7 |
| 1957 | 181.7 | 155.3 | 358.5 | 230.9 |
| 1958 | 139.1 | 148.1 | 387.0 | 261.2 |
| 1959 | 157.6 | 165.4 | 421.6 | 254.9 |
| 1960 | 160.7 | 158.5 | 419.5 | 264.7 |
| 1961 | 156.3 | 166.6 | 439.2 | 263.6 |
| 1962 [1] | 161.7 | 173.7 | 458.9 | 264.2 |

[1] Preliminary.

NOTE.—Some of the figures represent revisions of data previously published.

Source: Bureau of Labor Statistics; U.S. Department of Commerce; American Iron & Steel Institute.

TABLE 2.—*Employment cost per unit of output—Steel, 1940–62*

[Indexes, 1940=100]

| Year | Total employment cost per unit of output | Wage employee cost per unit of output | Year | Total employment cost per unit of output | Wage employee cost per unit of output |
|---|---|---|---|---|---|
| 1940 | 100.0 | 100.0 | 1954 | 207.0 | 191.4 |
| 1941 | 99.0 | 101.8 | 1955 | 194.5 | 185.8 |
| 1947 | 143.3 | 143.3 | 1956 | 209.7 | 197.9 |
| 1948 | 153.2 | 152.4 | 1957 | 230.9 | 215.1 |
| 1949 | 161.4 | 154.3 | 1958 | 261.2 | 235.5 |
| 1950 | 155.6 | 153.7 | 1959 | 254.9 | 227.0 |
| 1951 | 170.7 | 169.4 | 1960 | 264.7 | 240.1 |
| 1952 | 188.3 | 180.2 | 1961 | 263.6 | 235.8 |
| 1953 | 190.8 | 185.7 | 1962 [1] | 264.2 | 236.5 |

[1] Preliminary.

NOTE.—Some of the figures represent revisions of data previously published.

Source: Bureau of Labor Statistics; U.S. Department of Commerce; American Iron & Steel Institute.

TABLE 3.—*Output per man-hour—All employees and wage employees—Steel, 1940–62*

[Indexes, 1940=100]

| Year | All employees | Wage employees | Year | All employees | Wage employees |
|---|---|---|---|---|---|
| 1940 | 100.0 | 100.0 | 1954 | 136.3 | 144.9 |
| 1941 | 111.3 | 109.9 | 1955 | 156.1 | 161.9 |
| 1947 | 118.0 | 120.5 | 1956 | 156.6 | 164.8 |
| 1948 | 119.2 | 121.7 | 1957 | 155.3 | 165.2 |
| 1949 | 120.2 | 125.4 | 1958 | 148.1 | 164.8 |
| 1950 | 134.4 | 137.0 | 1959 | 165.4 | 184.8 |
| 1951 | 135.0 | 137.8 | 1960 | 158.5 | 175.8 |
| 1952 | 134.9 | 142.0 | 1961 | 166.6 | 186.7 |
| 1953 | 140.8 | 145.0 | 1962 | 173.7 | 195.3 |

Source: Bureau of Labor Statistics; U.S. Department of Commerce; American Iron & Steel Institute.

TABLE 4.—*Employment costs and output per man-hour—Steel, 1940–62* [1]

[Average annual rates of change]

| | Employment cost per unit of output | Employment cost per man-hour | Output per man-hour |
|---|---|---|---|
| Average annual rate of change between— | *Percent* | *Percent* | *Percent* |
| 1940–62 | 4.9 | 7.4 | 2.4 |
| 1947–62 | 4.6 | 7.2 | 2.5 |
| 1953–62 | 4.3 | 6.5 | 2.1 |
| 1957–62 | 2.1 | 4.7 | 2.5 |
| 1958–62 | 0.6 | 3.9 | 3.3 |

[1] Based on all employees.

Source: Bureau of Labor Statistics; U.S. Department of Commerce; American Iron & Steel Institute.

TABLE 5.—*Employment cost per unit of output compared with percent of capacity utilization—Steel, 1940–62*

| Year | Employment cost per unit of output (index, 1940=100) | Capacity utilization (percent) | Year | Employment cost per unit of output (index, (1940=100) | Capacity utilization (percent) |
|---|---|---|---|---|---|
| 1940 | 100.0 | 82.1 | 1954 | 207.0 | 71.0 |
| 1941 | 99.0 | 97.3 | 1955 | 194.5 | 93.0 |
| 1947 | 143.3 | 93.0 | 1956 | 209.7 | 89.8 |
| 1948 | 153.2 | 94.1 | 1957 | 230.9 | 84.5 |
| 1949 | 161.4 | 81.1 | 1958 | 261.2 | 60.6 |
| 1950 | 155.6 | 96.9 | 1959 | 254.9 | 63.3 |
| 1951 | 170.7 | 100.9 | 1960 | 264.7 | 66.8 |
| 1952 | 188.3 | 85.8 | 1961 | 263.6 | [1] 65.0 |
| 1953 | 190.8 | 94.9 | 1962 | [2] 264.2 | [1] 64.0 |

[1] Official figures on steel capacity are no longer being issued. Estimates used assume a growth in capacity of approximately 1½ percent for 1961 and for 1962.
[2] Preliminary.

Source: Bureau of Labor Statistics, U.S. Department of Commerce, American Iron & Steel Institute.

TABLE 6.—*Employment costs and output per man-hour—Steel and the private nonagricultural economy, 1940–62*

[Average annual rates of change]

| | 1940–62 | 1947–62 | 1953–62 | 1957–62 | 1958–62 |
|---|---|---|---|---|---|
| Employment cost per unit of output: | | | | | |
| Steel | 4.9 | 4.6 | 4.3 | 2.1 | 0.6 |
| Nonagriculture | 4.0 | 2.4 | 1.9 | 1.3 | 1.2 |
| Employment cost per man-hour: | | | | | |
| Steel | 7.4 | 7.2 | 6.5 | 4.7 | 3.9 |
| Nonagriculture | 6.5 | 5.2 | 4.1 | 3.5 | 3.6 |
| Output per man-hour: | | | | | |
| Steel | 2.4 | 2.5 | 2.1 | 2.5 | 3.3 |
| Nonagriculture | 2.5 | 2.7 | 2.1 | 2.2 | 2.4 |

Source: Bureau of Labor Statistics, U.S. Department of Commerce, American Iron & Steel Institute.

TABLE 7.—*Employment costs and output per man-hour—Steel and the private nonagricultural economy, 1940–62*

[Indexes, 1940=100]

| Year | Employment cost per unit of output | | Employment cost per man-hour | | Output per man-hour | |
|---|---|---|---|---|---|---|
| | Steel | Private nonagricultural economy | Steel | Private nonagricultural economy | Steel | Private nonagricultural economy |
| 1940 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1941 | 99.0 | 107.9 | 110.2 | 111.4 | 111.3 | 103.1 |
| 1947 | 143.3 | 177.2 | 169.2 | 200.7 | 118.0 | 113.2 |
| 1948 | 153.2 | 188.9 | 182.6 | 216.2 | 119.2 | 114.3 |
| 1949 | 161.4 | 186.3 | 194.0 | 219.9 | 120.2 | 117.9 |
| 1950 | 155.6 | 187.5 | 209.0 | 234.3 | 134.4 | 124.8 |
| 1951 | 170.7 | 201.9 | 230.6 | 262.4 | 135.0 | 129.9 |
| 1952 | 188.3 | 210.3 | 254.0 | 280.1 | 134.9 | 133.0 |
| 1953 | 190.8 | 216.3 | 268.6 | 297.0 | 140.8 | 137.3 |
| 1954 | 207.0 | 218.5 | 282.2 | 307.0 | 136.3 | 140.3 |
| 1955 | 194.5 | 217.3 | 303.5 | 319.6 | 156.1 | 146.9 |
| 1956 | 209.7 | 230.5 | 328.4 | 338.4 | 156.6 | 146.8 |
| 1957 | 230.9 | 237.0 | 358.5 | 356.5 | 155.3 | 150.3 |
| 1958 | 261.2 | 240.6 | 387.0 | 364.9 | 148.1 | 151.5 |
| 1959 | 254.9 | 243.3 | 421.6 | 385.6 | 165.4 | 158.3 |
| 1960 | 264.7 | 249.3 | 419.5 | 398.9 | 158.5 | 159.8 |
| 1961 | 263.6 | 250.2 | 439.2 | 407.4 | 166.6 | 162.6 |
| 1962 [1] | 264.2 | 251.4 | 458.9 | 422.9 | 173.7 | 167.9 |

[1] Preliminary.

NOTE.—Some of the figures represent revisions of data previously published.

Source: Bureau of Labor Statistics, U.S. Department of Commerce, American Iron & Steel Institute.

Chart A. ELEMENTS OF UNIT LABOR COST

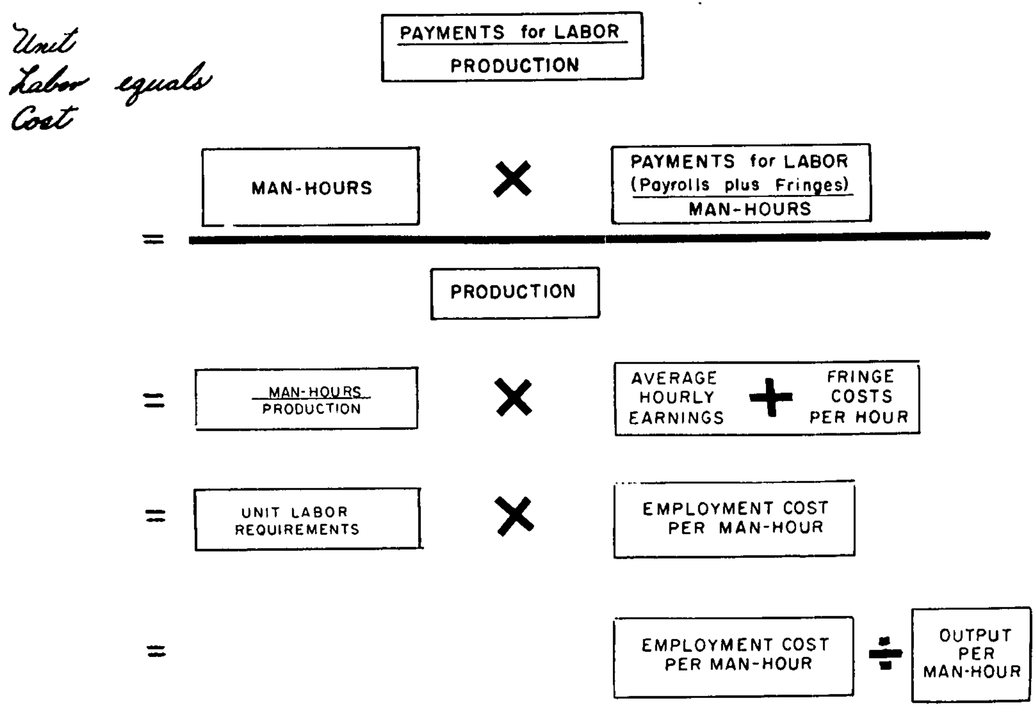
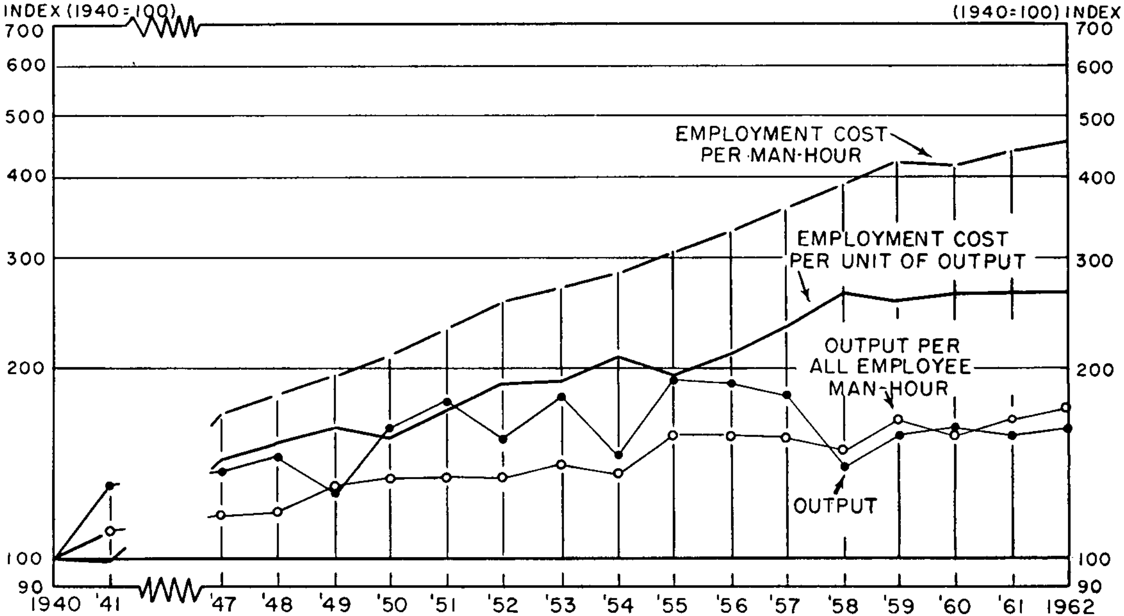
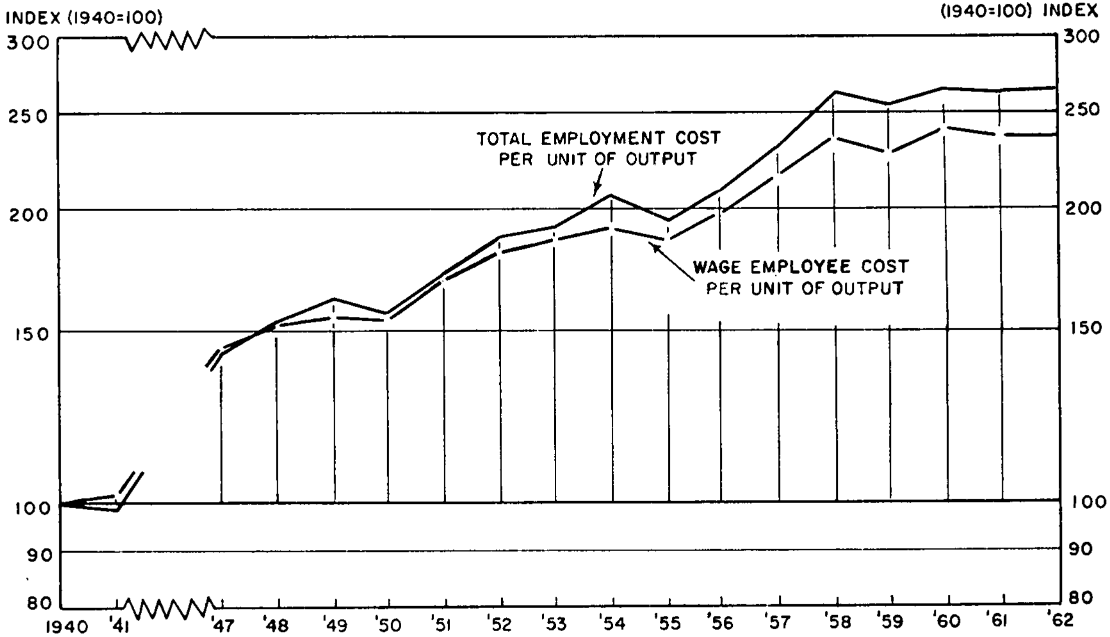


Chart I. OUTPUT, OUTPUT PER MAN-HOUR, AND EMPLOYMENT COSTS
STEEL, 1940-62



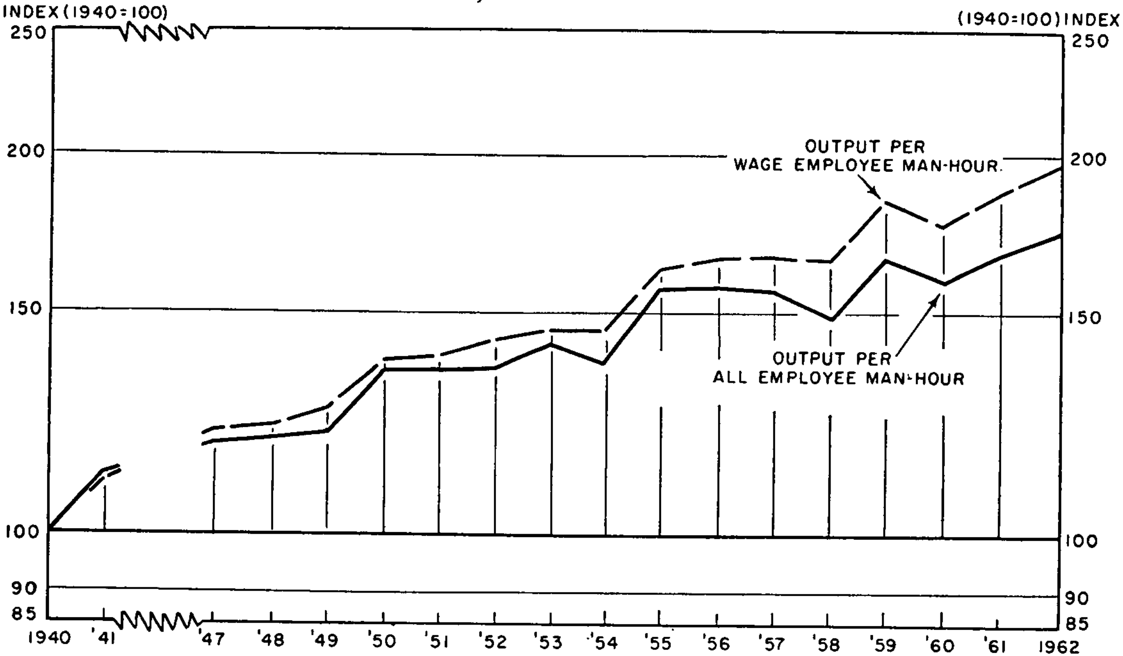

Sources: U. S. Department of Labor, Bureau of Labor Statistics; U. S. Department of Commerce; American Iron and Steel Institute.

Chart 2. *EMPLOYMENT COST PER UNIT OF OUTPUT--STEEL, 1940-62*




Sources: Bureau of Labor Statistics; U.S. Department of Commerce; American Iron and Steel Institute.

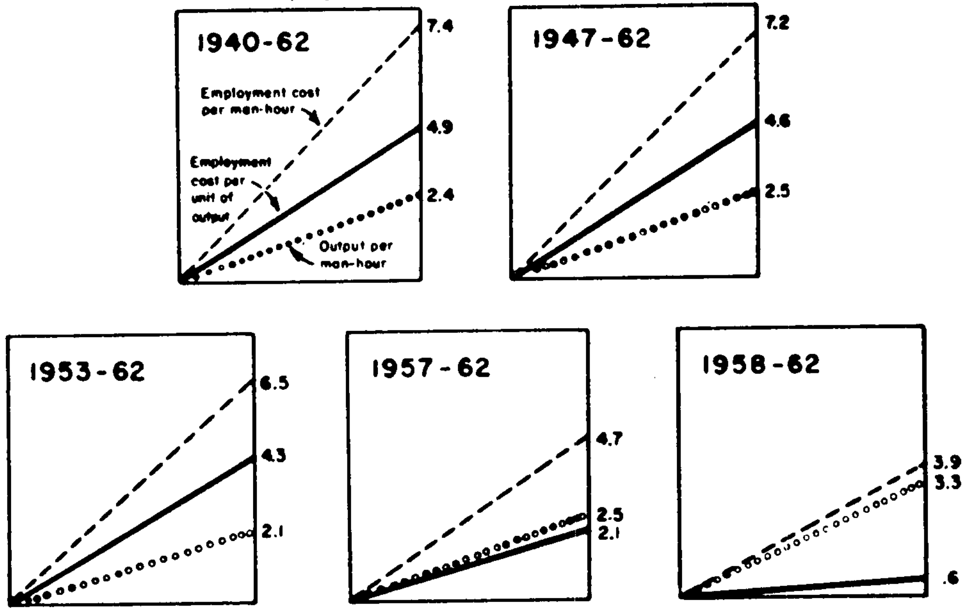
Chart 3. OUTPUT PER MAN-HOUR--ALL EMPLOYEES AND WAGE EMPLOYEES--STEEL, 1940-62




Sources: U. S. Department of Labor, Bureau of Labor Statistics; U. S. Department of Commerce; American Iron and Steel Institute.

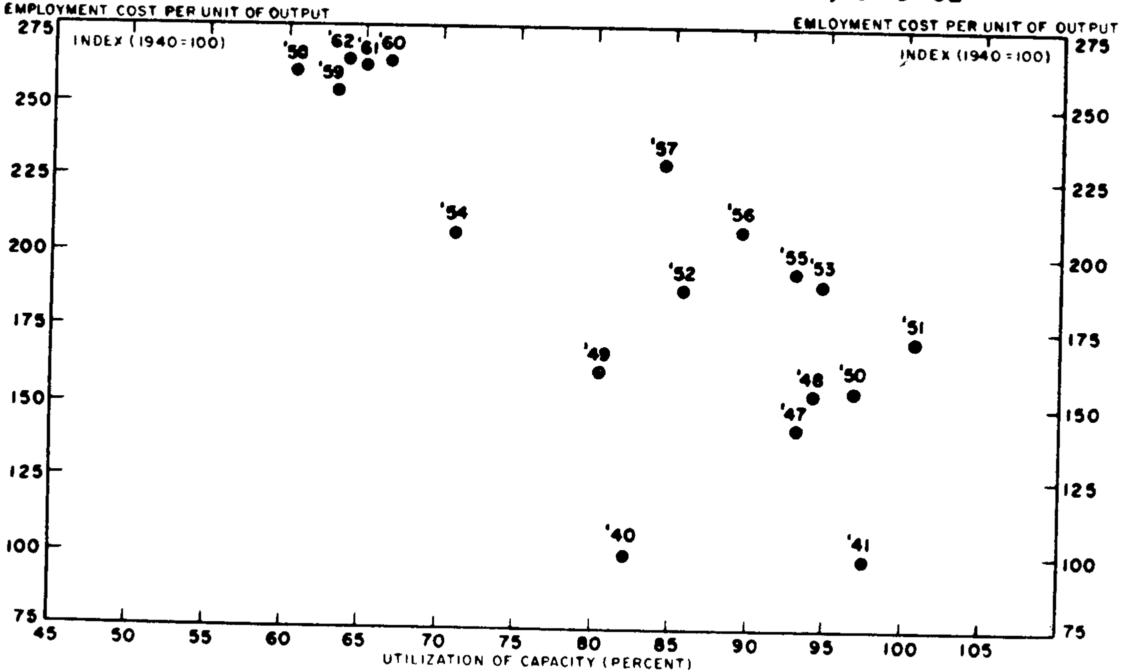
## Chart 4. EMPLOYMENT COSTS AND OUTPUT PER MAN-HOUR--STEEL, 1940-62

(AVERAGE ANNUAL RATES OF CHANGE)




Sources: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Commerce; American Iron and Steel Institute.

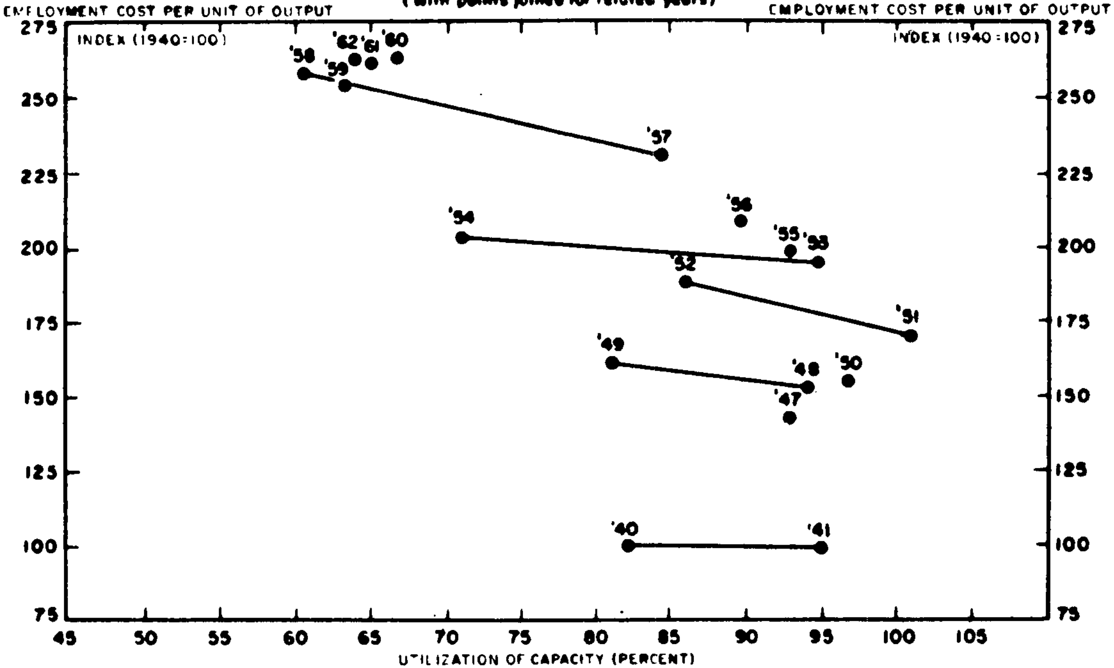
**Chart 5a. EMPLOYMENT COST PER UNIT OF OUTPUT COMPARED WITH PERCENT OF CAPACITY UTILIZATION--STEEL, 1940-62**




Source: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Commerce; American Iron and Steel Institute.

**Chart 5b. EMPLOYMENT COST PER UNIT OF OUTPUT COMPARED WITH PERCENT OF CAPACITY UTILIZATION--STEEL, 1940-62**

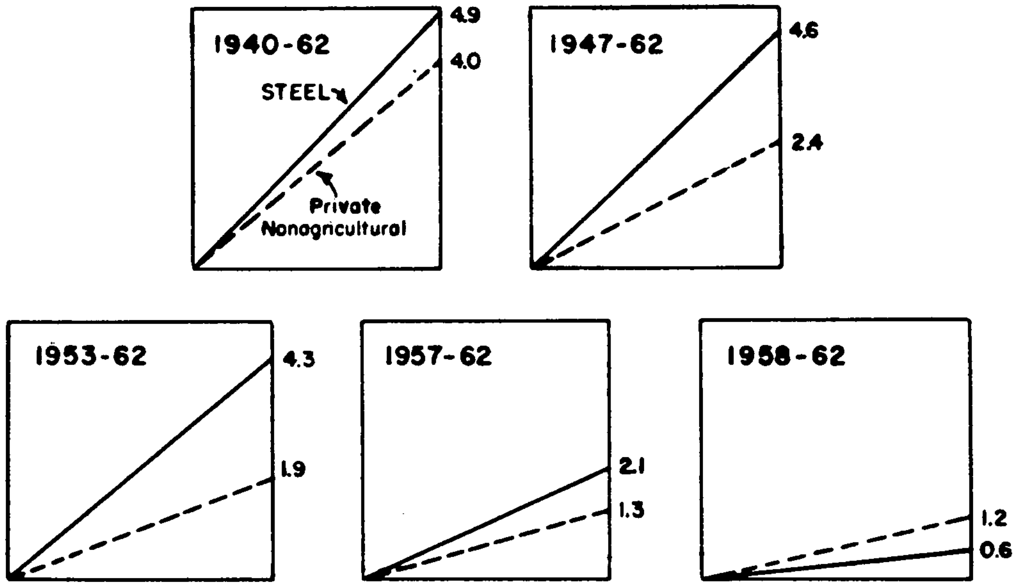
(With points joined for related years)




Source: U. S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Commerce; American Iron and Steel Institute.

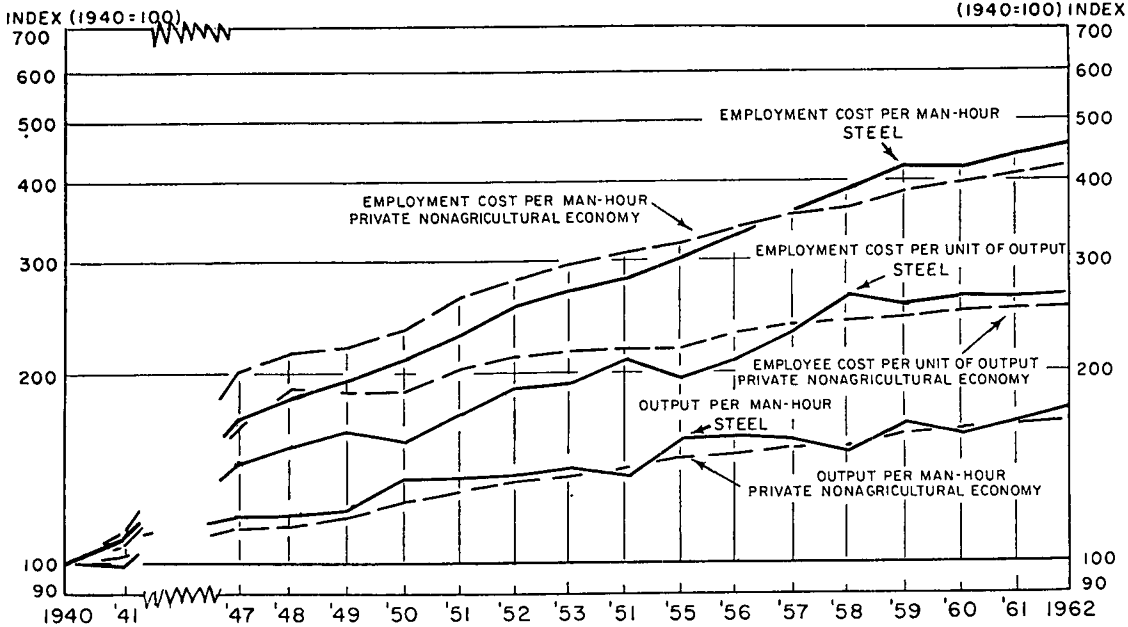
**Chart 6. EMPLOYMENT COST PER UNIT OF OUTPUT--STEEL AND PRIVATE NONAGRICULTURAL ECONOMY, 1940-62**

(AVERAGE ANNUAL RATES OF CHANGE)




Sources: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Commerce; American Iron and Steel Institute.

*Chart 7.* EMPLOYMENT COSTS AND OUTPUT PER MAN-HOUR--STEEL AND PRIVATE NONAGRICULTURAL ECONOMY, 1940-62




Sources: U.S. Department of Labor, Bureau of Labor Statistics; U. S. Department of Commerce; American Iron and Steel Institute.

Chairman DOUGLAS. Now, as I stated at the beginning of the hour, we extend a cordial invitation to representatives of the Iron & Steel Institute and United Steelworkers to make such criticisms and comments as they may wish upon the testimony. I shall first ask if the Iron & Steel Institute has any comment which it wishes to make.

Mr. LEO TEPLOW. (American Iron & Steel Institute). Mr. Chairman, as Mr. Roche told you in a telegram yesterday, our observers will be in no position to make an impromptu general observation for the steel industry at the close of each day's testimony. Therefore, we must reemphasize our position that Messrs. Allen and Teplow will be present as observers only and are not authorized to make any comments on a personal or official basis on testimony presented to your committee. We appreciate the opportunity, however, Senator.

Chairman DOUGLAS. I would suggest that if this is a definitive statement that I should not repeat this invitation at subsequent sessions, lest it seem embarrassing. This will be an answer for all groups. May I gently suggest that I hope that in future criticisms of the evidence which is introduced, it will be understood you were given your day in court to offer these criticisms, and that therefore at least the presumption of accuracy should be given to the data. If at any time you find that there is, in your judgment, a serious misstatement, we hope you will be willing to break your rule and testify.

I am going to ask the United Steelworkers if they wish to offer any any criticism or suggestion.

Mr. MEYER BERNSTEIN (USWA). Mr. Chairman, the United Steelworkers of America request the right to reserve comment for a later date in writing. We should like to examine the basis for the testimony made. We have some question concerning its validity. This cannot be presented orally. It requires a statistical study which we will offer to the committee.

Chairman DOUGLAS. We will be very glad tentatively to accept that, with the understanding that if the Iron & Steel Institute or a representative of the steel companies wishes to file a similar statement, that will be received.

Senator MILLER. Mr. Chairman, might I just suggest I think the request is eminently fair, but it seems that the same policy should apply to other interested parties, both the Steel Institute and the Steelworkers. Might we not adopt that as a policy of the committee that the request just made, as you said, is tentatively accepted and will apply across the board?

Chairman DOUGLAS. I thought that was the ruling I made. I said that similar privilege should be accorded either to the Iron & Steel Institute or to a representative of the steel companies. They may choose to speak for the steel companies if they do not choose to speak through the Iron & Steel Institute.

Senator MILLER. The point I was making is that the representative from the Steelworkers indicated they would like to reserve the privilege of comment and agreement or disagreement. I don't believe that the failure of the Steel Institute to make comment at this time necessarily should be deemed a presumption any more so than with respect to the Steelworkers.

Chairman DOUGLAS. I don't know how I can make my statement any clearer than I did, which was that both sides are equally free to file written statements at the end if they do not care to testify verbally. Now, if I can say that a third time, I will say it, but I thought I had made it clear.

Senator MILLER. My good friend from Illinois did say something about a presumption, and I would hope that the presumption of accuracy would extend across the board.

Chairman DOUGLAS. Yes, indeed; certainly.

(The following was later received for the record:)

UNITED STEELWORKERS OF AMERICA,
*Pittsburgh, Pa., May 9, 1963.*

HON. PAUL H. DOUGLAS,
*Chairman, Joint Economic Committee,*
*U.S. Senate.*

MY DEAR SENATOR DOUGLAS: Following the April 23 statement by Leon Greenberg before the Joint Economic Committee steel hearings, Meyer Bernstein, as representative of the Steelworkers Union, advised the committee that the union would prepare and submit written comments to the committee concerning this testimony on labor costs.

I have been asked by President David J. McDonald to prepare and submit such comments on behalf of the union. They are enclosed. I hope they will prove helpful to the committee.

Sincerely yours,

OTIS BRUBAKER,
*Director, Research Department.*

COMMENTS BY OTIS BRUBAKER, RESEARCH DIRECTOR, UNITED STEELWORKERS OF AMERICA, ON THE APRIL 23, 1963, TESTIMONY OF LEON GREENBERG, ASSISTANT COMMISSIONER FOR PRODUCTIVITY AND TECHNOLOGICAL DEVELOPMENTS, U.S. DEPARTMENT OF LABOR, BEFORE THE STEEL HEARINGS OF THE JOINT ECONOMIC COMMITTEE

At the time of the recent testimony on April 23, 1963, by Leon Greenberg, Assistant Commissioner for Productivity and Technological Developments, U.S. Department of Labor, before the Joint Economic Committee's steel hearings, a representative of the union, the United Steelworkers of America, offered to supply a statement by the union commenting on this testimony. President McDonald has asked that I prepare and submit such comments on behalf of the union. They follow:

### 1. THE GENERAL APPROACH

The union has no basic quarrel with the general approach taken in this Labor Department testimony. The key measure needed for an understanding of labor costs is employment costs per units of output. This means that hourly employment costs must be measured against productivity; i.e., the output of each of those man-hours. In situations in which productivity has increased, as it has steadily in steel on a long-term trend basis, this means that the increases in hourly employment costs must have offset against them the increases in output per man-hour. The product of this comparison is unit labor costs.

Unfortunately, in those situations in which there have been simultaneous increases in hourly or unit labor costs and increases in unit prices, it seems to have been only a short jump to the causal conclusion that it is the cost increase which has caused the price increse. In part, this common conclusion results from the fact that price increases have usually been closely timed to follow hot on the heels of a wage increase or some other increase in labor costs for the purpose of producing just such an opinion. Actually, such a conclusion is wrong—unless proved. It has not been proved. The study of such a problem requires examination of all unit costs, including all other costs (materials, plant and equipment, interest, taxes, other overhead), profit margins, dividends, and capital needs. It further requires full details of price changes, including amounts and timing and the alleged reasons for the increases.

It is unfortunate that Mr. Greenberg could not testify in an integrated fashion on all of these facets of the problem. Particularly should trends in unit labor costs be simultaneously contrasted with unit price change trends and those of other unit costs. We trust that the committee will perform this integration in its report. Without such interpretation, the individual pieces of testimony by separate witnesses are incomplete in themselves and can create serious distortion of the full facts.

It also seems important that comparisons be made of other significant relationships between output per man-hour and wages per man-hour—relationships in addition to the cost aspects. For instance, it is important to know whether "real" hourly wages have kept pace with "real" productivity changes. This matter was not explored in the Greenberg testimony. It is basic to collective bargaining. It is also imperative that the committee know the impact on employment and jobs of increases in productivity. This matter, too, was not even explored.

Apart from this limited agreement on the general approach to unit labor costs, the union has many reservations about the data presented, and outright disagreement with parts of it. In many respects the data are inaccurate and misleading. Moreover, some serious omissions of pertinent data have obscured certain facts, particularly with reference to nonproduction employees. Support of these contentions follows.

### 2. THE OUTPUT PER MAN-HOUR DATA

The Greenberg testimony placed major emphasis on the productivity data for all employees. As both the Labor Department and its spokesman well know, these all-employee data are far less accurate and reliable than those for production workers. The Bureau of Labor Statistics of the U.S. Department of Labor has for many years published productivity data for production workers showing output per man-hour and unit labor requirements. It had never published such data for all employees prior to late 1961. At that time, it attempted to create all-employee indexes retroactive to 1947.

To derive a productivity index, the Bureau needed both output data and employment and man-hours data. For the output series, the Bureau has for years used data collected by the American Iron & Steel Institute (AISI) on steel shipments. These data are adjusted periodically to census benchmarks. They are weighted by relative man-hour weights for each type of product to produce a weighted output figure which will reflect shifts in product mix. These weights are now somewhat old and probably need revision. It is entirely possible that a revision of these weights to reflect the probably higher man-hour content of a ton of thin tinplate, for instance, would yield a higher output series and, therefore, a higher productivity trend level than shown by the present BLS series. But, even if it understates actual current output per man-hour by a significant amount, the output index is still better than anything else available. It has been used in the Greenberg testimony.

The other necessary element of a productivity measure is employment and man-hours. For production workers, the problem was simple. BLS collects employment and man-hours figures as part of its regular employment, hours, and earnings series. But for the other component of the all-employees' group, i.e., the nonproduction workers, BLS collects only employment data. It has never collected, and does not now collect, man-hours data. So eager was the Bureau to create an all-employee productivity index, that it simply made up this missing man-hours series out of whole cloth, and retroactively all the way to 1947. To do so, it took data from community wage surveys, predominantly for nonsteel cities, and derived trends in scheduled man-hours. These were neither trends for steel, nor were they hours paid for, as used for production workers. They were, therefore, inconsistent data. But these guesses eventually became a fabricated man-hours series for nonproduction workers. It was then combined with the actual series for production workers to create an all employee man-hours series, to create a product which was neither fish nor fowl. It was then used to produce an all-employee output per man-hour series. These are not sound statistical procedures. They are not even sound statistics: they are statistical legerdemain—dressed up guesses. They yield a product which appears to have precision, but does not. Any resemblance between these juggled figures and the actual facts is sheer happenstance. It would have been far sounder for the Department of Labor to have used its own only reasonably sound index—that for production workers—for its presentation to the Joint Economic Committee. These series had one virtue—they were mainly based on Government collected and verifiable data.

Not only did the Department create this unsound all-employee index, but in its presentation to the committee, it did not even use this Government-created productivity index. Instead, it presented an even more fanciful figure mishmash. For the committee, the Department of Labor created a different productivity series. For this creation, the BLS productivity series output index was used; but it was combined, not with the BLS man-hours series, but instead with an AISI man-hours series. This series is not even collected on the same form and not always even from the same companies or with the same degree of coverage as the AISI data used in the output series. This means that the data, when used together, are not consistent and the product not a comparable or reliable one. The result is to place the Government's imprimatur on privately collected statistics, the accuracy of which the Government is in no position to verify—and has not verified.

Our own examination of the BLS and AISI employment and derived man-hour series, over the years, shows wide differences which have never been satisfactorily explained. Our efforts to obtain a careful examination of these data to explain the differences have been rebuffed by both the Government and the AISI. The BLS insists its own employment and man-hours figures are carefully collected and checked for accuracy. For it, under these circumstances, to put aside its own data in preference to unverifiable, privately collected data is, in our opinion, wholly inexcusable. It results in a statistical product in which we, and others who also study these matters closely, can have no confidence.

Thus, the Bureau is now using two steel indexes, its normal one which is consistent with those which it publishes for other industries and this second one especially created in an attempt to study steel costs. It is not possible to make direct comparisons of the movements of the two resulting productivity series since they do not both show the same starting and terminal years. The AISI series, as presented, omitted 1939; the BLS series, as last published, for production workers, started with 1939, omitted 1940 and 1941, and did not show figures for 1962. There are no BLS figures for all employees or nonproduction employees prior to 1947 because BLS hesitated to create such.

Despite these differences it is possible, however, to make some fairly long-period comparisons for production employees. For the period 1940–61, this BLS productivity series shows an elapsed increase of nearly 70 percent; the AISI series presented to the committee shows nearly 87 percent for the same period. At a compound annual rate of increase, the one index shows 2.5–2.6 percent per year; the other 3 percent. What could possibly account for such wide differences? These differences call one or the other series into serious question. Use of man-hours paid in the one series and man-hours worked in the other causes some differences, but will not account for the gross differences shown; neither will differences in the employment and hours' survey sample. Some explanation is clearly required.

It should be noted also that the Labor Department neglected to advise the committee that it actually has published a productivity series for steel nonproduction employees—despite the fact that the committee expressed great interest in this whole matter of how changes in nonproduction worker employment in steel have affected productivity and unit labor cost trends. In its October 1962 publication, entitled "Indexes of Output per Man-Hour for Selected Industries," 1939 and 1947–61—annual industry series, the Labor Department published a series of supplementary data tables A showing productivity data for nonproduction employees in several industries. Among them was one for steel. These data were published at the insistence of the Steelworkers Union, supported by other unions, after long discussions in the BLS Labor Advisory Committee. We thought it unwise for the Government to publish an all employee productivity series until it had actually collected man-hours data for nonproduction employees on which to base such a series. We insisted, however, despite these doubts as to validity, that if unsound all employee productivity indexes—including one for steel, were to be published over our protest, the least the Government could do would be to publish both of the components of each such series, i.e., that for producton workers and that for nonproduction workers. We urged that these indexes be shown side by side to give the full contrast in their movements. They were finally published, though in a separate section of the publication where the contrast would not be apparent.

The figures show a long-term, significant decline in productivity for nonproduction employees at the same time that productivity has been increasing sharply for production employees. For some odd reason, the Bureau and Department apparently want to hide these divergent trends. They have, and had, these figures and should have given them to the committee. The figures are here shown in direct contrast with each other. They are simply the already published BLS productivity index data in one table instead of two and with our computations of year-to-year changes.

*Output per man-hour: basic steel 1947–59 [1] blast furnaces and basic steel products 1957–61 [1]*

| | Indexes of output per man-hour (1957-59=100) | | | Percentage changes year to year | | |
|---|---|---|---|---|---|---|
| | All employees | Production workers | Nonproduction employees | All employees | Production workers | Nonproduction ployees |
| 1939 | (2) | 60.0 | (2) | | | |
| 1940 | (2) | 62.1 | (2) | (2) | 3.5 | (2) |
| 1941 | (2) | 65.9 | (2) | (2) | 6.1 | (2) |
| 1947 | 81.4 | 75.8 | 120.2 | | | |
| 1948 | 81.7 | 76.0 | 120.8 | +0.4 | +.3 | +0.5 |
| 1949 | 82.3 | 77.9 | 109.2 | +.7 | +2.5 | −9.6 |
| 1950 | 90.8 | 84.8 | 131.1 | +10.3 | +8.9 | +20.1 |
| 1951 | 91.8 | 85.6 | 134.3 | +1.1 | +.9 | +2.4 |
| 1952 | 93.2 | 89.0 | 117.8 | +1.5 | +4.0 | −12.3 |
| 1953 | 95.0 | 90.0 | 125.2 | +1.9 | +1.1 | +6.3 |
| 1954 | 90.8 | 87.8 | 107.2 | −4.4 | −2.4 | −14.4 |
| 1955 | 103.6 | 98.0 | 137.6 | +14.1 | +11.6 | +28.4 |
| 1956 | 102.9 | 98.8 | 125.9 | −.7 | +.8 | −8.5 |
| 1957 | (100.6) 99.9 | (98.4) 97.5 | (111.6) 111.8 | −2.9 | −1.3 | −11.2 |
| 1958 | (95.1) 94.7 | (96.7) 95.6 | (89.2) 90.5 | −5.2 | −1.9 | −19.1 |
| 1959 | (104.0) 105.3 | (105.3) 107.4 | (98.9) 97.1 | +11.2 | +12.3 | +7.3 |
| 1960 | 99.4 | 100.4 | 95.4 | −5.6 | −6.5 | −1.8 |
| 1961 | 103.4 | 105.1 | 96.7 | +4.0 | +4.7 | +1.4 |
| Elapsed change 1947–61 (percent) | +27.0 | +38.7 | −19.6 | | | |

[1] The series for basic steel is that for blast furnaces, steel works, and rolling mills as defined in the 1945 Standard Industrial Classification (SIC) System. That for blast furnaces and basic steel products is the 3-digit group 331 as defined in the 1957 SIC. Figures for the latter are shown in parentheses where they overlap for the 1957–59 period. While the 2 industry definitions are slightly different and, therefore, do not comprise an entirely comparable continuous series, they are basically the same industry.

[2] Not available.

The figures in this tabulation show that nonproduction productivity changes have seriously depressed any measure of all employee productivity in steel as compared with corresponding production worker output per man-hour. For the 14-year period, 1947–61, production workers increased their output per man-hour by 38.7 percent; nonproduction employees' output per man-hour declined by −19.6 percent; thus, the increase in all employee productivity was depressed to only 27 percent. Put in different terms, the production worker output per man-hour increase for this period was 43.3 percent greater than that for all employees. The year-to-year changes reveal the same trends in all their starkness, both in direction and magnitude, with a few exceptions.

If the committee is interested in this problem, it should ask the Labor Department to submit a separate output per man-hour series for nonproduction employees to parallel those shown in Greenberg's tables 1, 3, 4, 6, and 7 for all employees. And, to show all of the component parts of this picture, these same tables (except for table 3) need to be supplemented by data for production workers. This would give the full picture desired by the committee. BLS can readily construct such tables—within the limitations of the data as already discussed. We honestly have hesitated to do so because we think the AISI data required for use in them, as in the ones already given to the committee, are not reliable enough to warrant publication. Comparison would, however, show trends—even if not of reasonably accurate magnitudes—and perhaps these trends in themselves are worth examining.

It should also be kept in mind in examining the productivity trend data that the measures of productivity increase have been seriously depressed in recent years by the low levels of utilization of plant capacity. This is true even for average productivity trends going back to 1940. It is particularly true of the shorter term comparisons heavily weighted by the years 1958–62, during which capacity utilization has not averaged above 67 percent in any year. As Senator Douglas pointed out in opening the hearings, this underutilization of capacity increases all unit costs, including unit labor costs, above the levels which would otherwise exist. Were it not for this temporary underutilization depressant, average productivity rates would be higher and average unit labor costs lower for any of the periods under review.

### 3. THE EMPLOYMENT COST PER UNIT OF OUTPUT DATA

The employment cost data presented to the committee, like the productivity data, are also suspect. They are based on some juggling of inconsistent AISI data—and guesswork where data are lacking.

Employment cost per unit of output requires a combination of the output per man-hour data discussed in section 2 with employment cost per man-hour data. If the data were consistent, this would pose no serious problems; but they are not. The AISI shipments data used in the productivity series are collected separately from its man-hours, employment, and payroll cost data. These shipments reports do not come from the same companies, even from month to month; neither do the other reports. When the two series of reports are combined, as must be done in this operation, the result levels much to be desired in terms of consistency.

But there are additional data problems. AISI collects, apparently on yet another separate form, data for employment costs "other" than payroll costs. These are such things as pensions, insurance, supplemental unemployment benefits (SUB), and social security tax costs. It is necessary to add these figures, on a per hour basis, to payroll cost per hour to get total employment cost per hour. This would pose no problems for production workers—if the data were consistent—because both figures are published by AISI. For all employees and nonproduction employees, AISI does not publish similar data for these "other" employment costs. To derive an all employee and nonproduction employee figure for total employment costs, it is necessary to make up a figure for nonproduction employees or to assume that these "other" costs are the same per hour for nonproduction employees as for production employees. Apparently BLS chose the latter course. The only thing wrong with such an assumption is that it is in direct contradiction with all that we do know about these comparative costs.

We have attempted to estimate the magnitude of this difference from the one scrap of data available to us. On August 15, 1957, United States Steel gave to the Kefauver Subcommittee on Antitrust and Monopoly some data for second quarter 1957 on the comparative employment costs of its own wage (production) employees (and a small group of salaried employees) represented by the Steelworkers Union, and its "other" employees—the latter mainly its salaried, nonproduction employee group. The difference in employment costs by which the "other" employees exceeded the wage employees was $1.23 per hour, or 36.6 percent. If this percentage relationship held for the industry in 1957—a not unreasonable assumption—it would be possible to estimate the cents-per-hour difference between the published payroll costs and total employment costs for both wage and salaried employees. Such an estimate shows salaried employment costs exceeding published payroll costs in 1957 by 40 cents per hour as contrasted with only 29.9 cents (a published figure) for wage employees. The difference would be significantly greater in 1962. This is an indication of how wrong it is to assume that nonproduction employment costs exceed payroll costs by the same amount per hour as do employment costs for production (wage) employees. Yet this latter assumption apparently was made by the Labor Department and has been incorporated in its employment costs data presented to the committee—with no indication of the highly questionable assumptions which made these data possible.

We would be less than candid with the committee if we did not indicate that we think these data on employment costs for all employees and for nonproduction employees are less than reliable.

In accordance with the suggestion made in section 2, it would seem appropriate that the committee should ask the Labor Department to submit to it tables to show both the production and nonproduction components of its employment cost data for all employees. Since one set of figures has been submitted, all should be. This would mean that a nonproduction series would need to be added in Greenberg's tables 1, 2, 4, 5, 6, and 7 and a series for production workers would need to be added to all of these tables except table 2. Such comparisons would show the trends, within the limitations of the data already discussed, and the respective contributions of the two groups of employees to the resulting figure for all employees. It is clear that these series will show that employment costs for nonproduction employees have risen far faster than those for production workers. This, at least, is fact—and a most significant one.

Incidentally, it does seem to us that the "slide back" to 1957 used in table 4 for both employment costs and productivity is particularly inappropriate. The year 1957 has no real significance as a point of comparison. The contrasting of 1957 and 1962 contrasts a year of high operations (84.5 percent of capacity) with a depressed terminal year (only 64 percent). This gravely distorts short-term comparisons. The comparison which does have some real signfiance is the one keyed to the last major steel price increase (1958).

### 4. EMPLOYMENT COSTS VERSUS PRICE CHANGES PER UNIT OF OUTPUT

It might be helpful to see the relationship between unit changes in steel prices and employment costs—since it is commonly alleged that the first are a direct result of the second. If all of the time periods shown in the Labor Department's table 4 are used, the elapsed changes (and their compound annual equivalents in parentheses) are:

[In percent]

| Period | Steel price changes[1] | | Employment costs per unit[1] | | | |
|---|---|---|---|---|---|---|
| | | | All employees | | Production workers | |
| 1940–62 | +176.2 | (4.7–4.8) | +164.2 | (4.5) | +136.5 | (4.0) |
| 1947–62 | +110.2 | (5.1) | +84.4 | (4.1–4.2) | +65.0 | (3.4) |
| 1953–62 | +35.7 | (3.4–3.5) | +38.5 | (3.7) | +27.4 | (2.7–2.8) |
| 1957–62 | +4.4 | (.8–.9) | +14.4 | (2.7–2.8) | +9.9 | (1.9) |
| 1958–62 | +0.9 | (.2) | +1.1 | (.3) | +0.4 | (.1) |

[1] Steel prices from table 5 of the Arnold Chase presentation, employment costs from table 2 of the Leon Greenberg presentation.

It should be abundantly clear that, on a unit basis, steel price increases have outrun employment costs by a significant margin. This is true with only minor exceptions, no matter which period is selected for examination. The relationship between the two does not appear to be a close one It is closer for all employees than for production workers, but, even for all employees, it is not close. Intriguingly it will prove to be much closer for nonproduction workers. We have not included these data here because we do not have the precise figures for the nonproduction employees.

Any effort to examine the alleged causal relationships between unit employment costs and price increases requires not only a detailed examination of the year-to-year changes but even a more refined check on the timing of these changes—because timing is the real key to causality, if there is any. These year-to-year changes follow. They should be supplemented by similar figures for nonproduction employees.

[In percent]

| Year | Steel price changes | Employment costs per unit | |
|---|---|---|---|
| | | All employees | Production workers |
| 1940 | | | |
| 1941 | +0.4 | −1.0 | +1.8 |
| 1942 | +.2 | (1) | (1) |
| 1943 | +.1 | (1) | (1) |
| 1944 | 0 | (1) | (1) |
| 1945 | +2.4 | (1) | (1) |
| 1946 | +8.7 | (1) | (1) |
| 1947 | +17.2 | | |
| 1940–47 | +31.4 | +43.3 | +43.3 |
| 1948 | +14.2 | +6.9 | +6.4 |
| 1949 | +8.4 | +5.4 | +1.2 |
| 1950 | +5.3 | −3.6 | −.4 |
| 1951 | +7.8 | +9.7 | +10.2 |
| 1952 | +2.2 | +10.3 | +6.4 |
| 1953 | +8.0 | +1.3 | +3.1 |
| 1954 | +4.5 | +8.5 | +3.1 |
| 1955 | +4.8 | −6.0 | −2.9 |
| 1956 | +8.3 | +7.8 | +6.5 |
| 1957 | +9.6 | +10.1 | +8.7 |
| 1958 | +3.5 | +13.1 | +9.5 |
| 1959 | +1.7 | −2.4 | −3.6 |
| 1960 | −.1 | +3.8 | +5.8 |
| 1961 | −.4 | −.4 | −1.8 |
| 1962 | −.3 | +.2 | +.3 |

1 Not available.

It would be difficult to find any serious pattern of causality in the foregoing figures.[1] The magnitudes bear no relationship to each other. And the two measures actually move in opposite directions in a significant number of years.

### 5. UNIT PRODUCTIVITY VERSUS UNIT EMPLOYMENT COST

When the nonproduction and production worker series are supplied for both productivity and employment cost, it will be possible to make comparisons of the changes for any range of years, including all those shown in Greenberg's table 4. And this should be done. This will permit many comparisons of historical interest; but they will still be largely historical figures.

In terms of the current situation of the industry, the changes in the more recent period since the last major price increase in 1958 are much more important. In addition, the comparison of 1958 and 1962 has the advantage of comparing two periods of reasonably comparable operating levels—1958 at about 61 percent of capacity and 1962 estimated at 64 percent of capacity. The data in the Labor Department's statement are missing for nonproduction employees;

1 Some of the year-to-year differences could be accounted for by differences in the time in each year at which prices or employment cost changes became effective. Actually, however, this factor is probably quite insignificant, since in most periods, the timing was quite close.

but they can be estimated. When this is done, the figures of elapsed change (with compound annual rates in parentheses) are:

*Productivty and unit employment cost changes, 1958–62*

[In percent]

| | All employees | | Production workers | | Nonproduction employees | |
|---|---|---|---|---|---|---|
| Output per man-hour | +17.3 | (4.0–4.1) | +18.5 | (4.3–4.4) | +12.5 [1] | (3.0) |
| Employment cost per unit | +1.1 | (.3) | +.4 | (.1) | +4.0 [1] | (1.0) |

[1] Estimated.

These figures show clearly that, in the crucial recent period since the last steel price increase, productivity gains have greatly outdistanced increased labor costs per unit for all segments of the industry's work force. The sharper contrasts, however, are those for production workers. For them, productivity increased 18.5 percent and unit costs rose only 0.4 percent. And these are both unit measures.

6. OUTPUT PER MAN-HOUR VERSUS "REAL" WAGES PER MAN-HOUR

All of the comparisons to date have stressed costs and prices. These are important. But they ignore another equally important factor, which the Labor Department's statement also ignored, namely the human side of the employment cost coin. To round out this picture, it is necessary to compare output per man-hour with "real" wages per man-hour. These are both "real" comparisons. One shows increases in "real" product produced and the other shows what "real" product the remuneration for that work will purchase. The comparisons are possible only for production workers since Bureau of Labor Statistics does not collect earnings data for other workers. Following are the productivity figures shown by Greenberg contrasted with the "real" earnings changes shown by Bureau of Labor Statistics for production workers. Both elapsed and compound annual rates (in parentheses) are shown.

[In percent]

| | Production workers | | | |
|---|---|---|---|---|
| | "Real" output per man-hour | | "Real" wages per hour [1] | |
| 1940–62 | +95.3 | (3.1) | +80.5 | (2.7–2.8) |
| 1947–62 | +62.1 | (3.2–3.3) | +68.7 | (3.5–3.6) |
| 1953–62 | +34.7 | (3.3–3.4) | +34.7 | (3.3–3.4) |
| 1957–62 | +18.2 | (3.4) | +14.1 | (2.6–2.7) |
| 1958–62 | +18.5 | (4.3–4.4) | +9.1 | (2.2) |

[1] Bureau of Labor Statistics average hourly earnings for blast furnaces, steel works, and rolling mills deflated by the changes in the Consumer Price Index (CPI).

Thus a view from the human side of the cost coin shows that the steel production workers—the major group of workers covered by collective bargaining—have not benefited extravagantly at the expense of the steel industry. In most periods, their "real" wages per hour have increased by less than their productivity per hour has risen. This comparison admittedly does not reflect the growth in other employment costs not reflected in gross average hourly earnings, but there is no satisfactory way of deflating these other costs. The ones shown here cover the vast majority of production worker employment costs—more than 80 percent of such costs in 1962, according to the American Iron & Steel Institute.

7. PRODUCTIVITY VERSUS JOBS

One of the problems in this area of productivity which was not explored at all in the Labor Department's statement was the impact of productivity increases on jobs in the industry. The Steelworkers Union has not and does not now oppose changes which will increase productivity. We are well aware that out of increased productivity can come increased living standards. But what is generally lost sight of is the further fact that increased productivity will cost jobs if total output of the industry does not advance in keeping with the growth in productivity. We have seen this happen on a large scale in steel in the last 5 years since 1957. This is a matter of grave concern to the union—since we are as much interested, as a union, in the growth (and preservation) of job opportunity in the industry as we are in increases in wages and benefits for those who still have jobs in the industry.

Productivity is a key measure in an examination of an industry and its problems. It is also a key measure in collective bargaining. It is a key measure in examining price movements. It would be a grave mistake, however, to try to make it the sole measure of the equity of wage adjustments—or of price changes. It is not really an equity measure and cannot serve as such—not even when coupled with changes in capacity utilization, as suggested in one of the questions asked by a member of the committee.

### 8. IN CONCLUSION

The committee will certainly want to probe the figures—all of them—more exhaustively than it has done before it reaches its own conclusions. Such a probe should include the various series for both production and nonproduction employees omitted in the Labor Department's presentation to the committee.

The Steelworkers Union is disturbed by the repeated efforts to try to saddle it with the responsibility for the industry's price decisions and actions. We have no such responsibility. The causes of these decisions lie in a whole panoply of costs, in the profit aspirations of the companies, in the inflation which we have had in the economy. And they are also, in part, traceable to the industry's own decision to expand its nonproduction work force at the same time it was cutting its production work force, and its decision to pay its nonproduction employees far more than it pays its production workers. Its price decisions are not caused, in any major part, by the union's wage decisions. These facts stand out in any serious examination of the trends in costs and prices and profits.

In reviewing cost trends, we hope the committee will focus on recent trends, primarily on those since the last major price change in the industry in 1958. Historical data are interesting, and for other purposes, most useful, but they have little bearing on the 1962 and 1963 decisions of major steel producers to raise their prices.

And lastly, we would urge the committee to look at the human factors, as well as the cost factors, involved in present trends in the industry. For an assessment of those factors, "real" wages and employment trends and employment opportunity rank well ahead even of costs per unit of output.

(The following was later received for the record:)

### REPLY BY LEON GREENBERG TO COMMENTS BY OTIS BRUBAKER

The material submitted by Mr. Brubaker is entitled "Comments on the Testimony of Leon Greenberg Before the Steel Hearings of the Joint Economic Committee." Actually his comments go beyond the scope of my testimony and include his own views on cost relationships, real earnings, unemployment, and a few other items. Questions of income and unemployment are, of course, of interest to workers, unions, and others concerned with the welfare of the worker. However, the Joint Economic Committee requested the Department of Labor to present factual information on employment costs, productivity, and prices. It was within this framework that I presented my testimony and further comment on the other topics would not now be appropriate.

Mr. Brubaker has made a number of comments about the data presented to the committee and has directly, or by inference, questioned the validity of the statistics. Moreover, his method of presentation may raise doubts about the integrity of the BLS in compiling these figures. My reply is directed toward his major critical comments.

*Output per man-hour data*

Mr. Brubaker devotes a part of his statement to a discussion of the regular BLS output per man-hour indexes for the steel industry. He questions the validity of the measure for all employees, stating that it is unsound and based on a "fabricated" man-hours series for nonproduction workers. This discussion deals with a set of numbers which, as Mr. Brubaker himself indicates, were not even a part of my testimony. However, because of his critical comments about the BLS indexes of all employee man-hours, a description of how they were compiled is presented here.

Four elements are included in developing a measure of man-hours for all employees: (1) the employment of production workers; (2) the average weekly hours of production workers; (3) the employment of nonproduction workers. All of these elements are directly published or easily obtainable from published data. It is only the fourth component, the average weekly hours of nonproduction workers, which has to be derived. This component is, in fact, a very small part of the total employee man-hour estimate.

To develop this small component, data were examined from various surveys conducted by the Bureau. For example, BLS surveys on composition of payroll hours were used for information on scheduled hours of nonproduction workers in manufacturing industries. Trends were derived from related wage surveys which had data on scheduled hours for manufacturing industries. The estimates of average weekly hours were multiplied by employment of nonproduction workers to get total man-hours. These were added to the total hours of production workers to obtain total hours for all employees.

The Bureau prepared, just for testing purposes, five additional series based on alternative assumptions about the average weekly hours per nonproduction worker. For example, one series assumed a straight 40-hour week; another assumed a decline from 45 to 38 hours for the period 1947–60. The effect of these different and extreme assumptions on the man-hours index for all employees was trivial; the extreme indexes for 1960 (1947 equals 100) are 125.3 and 128.1.

In any case, this discussion was raised about a man-hour measure which was not used in my testimony. The estimates in my testimony were a different set of man-hours, based on data from the American Iron & Steel Institute and are described in the next section.

*Use of AISI data*

Mr. Brubaker objects to the fact that in my testimony I used productivity and employment cost measures based on AISI statistics of hours and employment costs. My own statement did not explain the reasons for use of AISI data. However, the opening statement to the committee, by Associate Commissioner of Labor Statistics, Philip Arnow, introduced the Department of Labor's publication, "Background Statistics Bearing on the Steel Dispute," often commonly referred to as the "Steel Fact Book." The data in this fact book (updated) formed the basis for the data presented in my testimony.

The alternative measures used in this fact book were originally computed from AISI statistics in order to obtain a comprehensive and consistent framework of information on costs (labor, materials, depreciation) and profits. The AISI also had annual information on supplementary payments (contributions to social security, welfare and pension plans, etc.) for wage earners, and salaries for nonwage earners, data not available from the BLS. The Steelworkers Union is familiar with this fact book and has used its information.[1]

*Information on nonproduction workers*

Mr. Brubaker has questioned the reasons for omitting data on output per nonproduction worker (nonwage earner) in the testimony presented before the Joint Economic Committee. The omission is easily explained.

When the committee requested the Bureau of Labor Statistics to discuss employment costs in the steel industry, it was assumed that the primary concern was with total employment costs. The related data for this analysis would be output per man-hour and costs per man-hour for all employees.

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[1] The Steelworkers Union published a booklet, "Factfinding in the Steel Dispute," September 1959. The foreword includes the following statement about the Mitchell report: "The findings of the Secretary represent a positive contribution. Set forth impartially are the facts on the tremendous productivity record achieved in the industry. * * *"

Another introductory section in the union booklet says: "The data made available to the Government by the industry for use in the report have been used here despite the fact that neither the Government nor the union is in a position to verify or vouch for these steel industry reported 'facts.'" Most of the statistical analysis contained in the union booklet is based on the fact book, the same source, updated, as that used in my testimony.

For various types of economic analysis, it is preferable to use output per man-hour for all employees rather than one for any component part of the total. The Bureau of Labor Statistics has, therefore, tried to develop series on output per all employee man-hour for the various industries for which it publishes productivity estimates. Historically, productivity series were developed on the basis of data for production workers (wage earners) primarily because data for all employees were not readily available. The Bureau has continued to publish output per man-hour indexes for production workers (wage earners) partly to maintain some historical continuity with previous series, partly because wage earners still constitute a large and important group of workers.

The interrelationship of various occupational groups contribute to final output and it is not particularly useful to relate the total output of an industry to small groups of workers. For example, an index of output per man-hour of unskilled workers would probably show an enormous increase in the productivity of that group—simply because of the large decline in the employment of unskilled workers.

As Mr. Brubaker has indicated, the Bureau has published indexes of output per man-hour for nonproduction workers. However, they are not presented as a meaningful, major series but are shown in an appendix to the report[2] in which they are published. They are not as statistically reliable as the measures for production workers or for all employees and do not have the same degree of importance.

My testimony did not specifically refer to productivity or costs for nonwage earner. However, I did point out that production workers (wage earners) have been declining absolutely and in proportion to total employment, and specifically noted the decline from 1947 to 1962. My testimony also showed that output per man-hour of production workers has gone up more than output per man-hour of all employees and that employment costs per unit of output for production workers have gone up less than that for all employees.

*Data on employment cost per unit of output*

Mr. Brubaker raises some questions about the hourly costs for nonwage earners. Because of the error he imputes to this component, Mr. Brubaker thinks that the data on employment costs for all employees are "less than reliable."

As I have indicated earlier, my testimony was based on data (updated) from the Steel Fact Book. The employment cost data have been adjusted for undercoverage in order to be consistent with the man-hour and output series used in the various estimates.

Mr. Brubaker also introduces information to prove that my estimates of "other than payroll" costs for nonwage earners are in error because they are assumed to be the same as for wage earners. The Steel Fact Book shows two series of costs for all employees based on two different assumptions about nonwage earners. However, I did not use the one ascribed to me by Mr. Brubaker; I used the other one.

Chairman Douglas. We meet tomorrow at 10 o'clock in room 318, Old Senate Office Building.

(Whereupon, at 12:30 p.m., the committee recessed, to reconvene at 10 a.m., Wednesday, April 24, 1963, in room 318, Old Senate Office Building.)

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[2] Indexes of Output per Man-Hour for Selected Industries, Bureau of Labor Statistics, U.S. Department of Labor.

# STEEL PRICES, UNIT COSTS, PROFITS, AND FOREIGN COMPETITION

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**WEDNESDAY, APRIL 24, 1963**

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
*Washington, D.C.*

The joint committee met at 10 a.m., pursuant to recess, in room 318, Senate Office Building, Senator Paul H. Douglas (chairman of the joint committee) presiding.

Present: Senators Douglas, Javits, Miller, and Jordan; and Representatives Reuss and Curtis.

Also present: James W. Knowles, executive director.

Chairman DOUGLAS. The committee will be in order.

Yesterday we considered the movement of wage and employment costs per unit of output. This morning, in continuing our study of costs, we will deal with the costs of raw materials which enter into the price of steel, and the presentation this morning is to be made by Mr. Arnold Chase, the Assistant Commissioner for Prices and Living Conditions.

Mr. Chase?

## STATEMENT OF ARNOLD E. CHASE, ASSISTANT COMMISSIONER FOR PRICES AND LIVING CONDITIONS, BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR; ACCOMPANIED BY PHILIP ARNOW, ASSOCIATE COMMISSIONER FOR PROGRAM PLANNING AND PUBLICATIONS, BUREAU OF LABOR STATISTICS

Mr. CHASE. Thank you, Mr. Chairman.

Chairman DOUGLAS. Let the record show Mr. Chase is accompanied by Mr. Arnow, Associate Commissioner of the Bureau of Labor Statistics.

Mr. CHASE. Thank you, Mr. Chairman. In opening the discussion of prices, I should like to present some material on the general trend of prices in order to place the consideration of prices for steel raw materials in perspective.

Chairman DOUGLAS. I may say that your full statement will be printed in the record and this verbal presentation which you give now will be in addition to that.

(Mr. Chase's statement follows:)

SUMMARY OF STATEMENT BY ARNOLD E. CHASE, ASSISTANT COMMISSIONER FOR PRICES AND LIVING CONDITIONS, BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR

Mr. Chairman, I understand that the committee's major purpose this morning is to look into the prices of raw materials that enter into the manufacture of steel. In order to place those prices in perspective, I should like to begin by presenting materials which will show general price trends as measured by the Bureau of Labor Statistics indexes of consumer and wholesale prices over a period of time.

For some time now, we have enjoyed relatively stable prices. Wholesale prices as a whole have changed very little since 1958. In March 1963 they actually were down 0.8 percent from a year ago. The Consumer Price Index has continued to creep upward, however, primarily because of further increases in prices of services. In February 1963 the Consumer Price Index was 1.2 percent above a year ago.

If we look now at chart 1 and table 1, we find clear evidence that consumer prices since 1913 have risen sharply primarily because of war situations. They also took a sharp spurt as a result of the investment boom of 1955–57 and a short-lived jump during the 1959 recovery from the 1958 recession. Since 1960 consumer prices have shown only a gradual upward trend.

Chart 2 and table 2 show how this recent slow but steady advance has been caused by continued price increases for services. Rent also has continued to go up a little almost every month. Note, however, that service prices lagged during World War II and for some time thereafter. They appear now to have almost caught up with commodity prices in their advance over the prewar days. The rate of their increase has slowed down substantially during the past year. Also observe that prices for commodities other than food have been relatively steady since 1959. It is these prices, of course, which are most directly affected by any change in the prices of steel. This relationship will be examined more fully in the session on prices of finished steel products scheduled for April 26.

Turning to wholesale prices, chart 3 and table 3 depict the remarkable stability in the overall level of wholesale prices since 1958. The all-commodities index was 118.6 in March 1963 based on the 1947–49 average which was slightly lower than the 1958 index of 119.2. Prices of farm products and foods have fluctuated somewhat because of factors peculiar to agriculture but prices of industrial commodities on the average have shown a sideways movement for almost 5 years.

Before we leave the general picture of prices, we should take a look at one other significant fact which is brought out in chart 4 and the accompanying table. The lines on this chart show trends of prices at different levels or stages of processing. Note the increasing spread of prices as you go up the processing scale from crude materials to finished products. The divergence is especially large for finished goods over price trends in the first two levels. This indicates that at least in the kind of economy and market situation that we had up to 1958, price increases for crude and intermediate materials appear to have a tendency to be pyramided by the time they reach the finished goods level.

While we do not wish to go into finished steel prices at this point, we might glance at their trend, as compared with the general price measures. We have plotted, on chart 5, price movements for basic steel products from 1940 through 1962 against the Wholesale Price Index and the Consumer Price Index. Observe that steel prices were practically stationary during World War II and that they lagged behind general price increases until 1953. In that year the steel price index passed the Consumer Price Index and 2 years later it also crossed the general Wholesale Price Index. The committee probably will wish to go into these relationships further in the discussion of finished steel prices on April 26.

Turning now to prices of steelmaking materials, we have a series of four charts. Most of the Bureau of Labor Statistics data needed for this analysis are available only back to 1947. However, in chart 6 and the accompanying table, we have plotted price trends for three of the most important materials back to 1940. Note that scrap prices were generally stable through 1945, advanced a little in 1946, then took a very sharp jump in 1947. As a result in 1947 scrap prices were almost double their 1940 level. We shall examine their subsequent trend later, but note at this point that they had dropped back by 1949 to only about 50 percent above their 1940 level. Also note that in 1962 scrap prices again average only a little more than 50 percent higher than in 1940.

Coke prices rose moderately during the war and, in 1947, they were about 50 percent above their 1940 level. Coke prices continued to advance steadily until 1960, when they reached a level three times that of 1940. Iron ore prices remained practically stable until 1946 when they began to rise, reaching a peak in 1957. Since then iron ore prices have declined and, in 1962, they were 2¼ times 1940 levels. In summary, prices of one of the major blast furnace materials (iron ore) currently are up by 125 percent since 1940, and for the other (coke) the increase has been about 200 percent. However scrap prices, after fluctuating widely in the interim, averaged only about 50 percent higher in 1962 than before World War II.

Before we go on with the discussion of these price trends, the committee should be cautioned that the data presented here may not offer a precise measure of prices of all materials which enter into steelmakers' costs. As you probably know, the large integrated steel companies produce most or all of their own iron ore, coke, and pig iron. We estimate that only about 20 percent of all iron ore consumed in this country actually goes through an open market. For coke the proportion entering the open market probably is not in excess of 14 percent and for pig iron only a very small proportion, probably about 6 percent, ever goes through open markets. The Bureau of Labor Statistics price indexes, therefore, reflect prices for only a small segment of total use of these materials in steelmaking. The balance is accounted for in bookkeeping transactions on the books of integrated steel companies. We do not know how closely the prices charged by these companies as representing their raw materials production costs follow the open market prices for these raw materials.

With these qualifications in mind, we may proceed with the detailed analysis of price movements since 1947 as shown on chart 7. Prices of iron ore as represented by the Bureau of Labor Statistics index have risen sharply since 1947. Their advance over this period has amounted to nearly 90 percent compared with only a little more than 20 percent for all industrial crude materials. Iron ore prices reached a peak in 1957 and have receded since then. They showed a significant drop in 1962 according to preliminary figures.

Coke prices have doubled since 1947. This is about five times the increase shown for all industrial crude materials. Prices of pig iron have followed roughly the same pattern as prices of iron ore and coke with almost a 100-percent increase since 1947.

Price trends for some of the other most important steelmaking raw materials are shown on chart 8 and the accompanying table. Scrap prices have fluctuated widely reflecting the varying rate of steel operations which determine scrap demand. The trend of scrap prices has been generally downward since it reached a peak in 1956. For the last 3 years, scrap prices have averaged lower than in 1947, and in 1962 they were about 25 percent lower than in 1947. Scrap prices last year averaged only a little over one-half of their 1956 peak level.

Price trends for selected other important steelmaking, alloying, and coating materials also are shown on chart 8. The largest price increase among these materials is that for nickel which continued to show sharp advances into 1962, but has stabilized recently at a level about 2¼ times that of 1947. Ferromanganese prices also rose sharply to a peak in 1957, more than double the level of 10 years earlier, but since then these prices have tapered off and they showed a rather significant drop last year and are now below their 1952 level.

The history of zinc prices is considerably different from that for nickel and manganese. Zinc prices rose rather substantially from 1947 through 1951, then started down in 1952. They fluctuated, going below the 1947 level in 1958, and currently are only moderately above that level.

In order to summarize the trend of prices for steelmaking raw materials and to compare their trend with that of steel product prices, we have prepared a special index of steel input prices which is shown on chart 9. It has not been possible with the data and time available to refine this index. It should be used, therefore, as a measure of the general order of magnitude of changes in prices of steelmaking materials.

This chart shows that prices of steel raw materials rose more than twice as fast as prices of all industrial crude materials during the period from 1947 through 1957. The increase for steelmaking materials was 60 percent during this period compared with 27 percent for all crude materials. At the same time prices of basic steel products increased even more rapidly, rising to more than twice their level of a decade earlier.

Since 1957 this special index shows a decline of about 10 percent in prices of materials that go into steelmaking, reflecting primarily lower prices of iron and steel scrap. Prices of basic steel products, on the other hand, continued to advance through 1959 and have declined only a little since then. In 1962 this index shows that prices of steelmaking materials were less than 45 percent above the 1947 level, but prices of basic steel products had doubled.

TABLE 1.—*Consumer Price Index—United States: All items, annual average indexes, 1913–62; monthly, 1962–February 1963*

[1957–59=100]

| *Year* | *Index* | *Year* | *Index* | *Year* | *Index* |
|---|---|---|---|---|---|
| 1913 | 34.5 | 1936 | 48.3 | 1959 | 101.5 |
| 1914 | 35.0 | 1937 | 50.0 | 1960 | 103.1 |
| 1915 | 35.4 | 1938 | 49.1 | 1961 | 104.2 |
| 1916 | 38.0 | 1939 | 48.4 | | |
| 1917 | 44.7 | 1940 | 48.8 | 1962— | |
| 1918 | 52.4 | 1941 | 51.3 | January | 104.5 |
| 1919 | 60.3 | 1942 | 56.8 | February | 104.8 |
| 1920 | 69.8 | 1943 | 60.3 | March | 105.0 |
| 1921 | 62.3 | 1944 | 61.3 | April | 105.2 |
| 1922 | 58.4 | 1945 | 62.7 | May | 105.2 |
| 1923 | 59.4 | 1946 | 68.0 | June | 105.3 |
| 1924 | 59.6 | 1947 | 77.8 | July | 105.5 |
| 1925 | 61.1 | 1948 | 83.8 | August | 105.5 |
| 1926 | 61.6 | 1949 | 83.0 | September | 106.1 |
| 1927 | 60.5 | 1950 | 83.8 | October | 106.0 |
| 1928 | 59.7 | 1951 | 90.5 | November | 106.0 |
| 1929 | 59.7 | 1952 | 92.5 | December | 105.8 |
| 1930 | 58.2 | 1953 | 93.2 | | |
| 1931 | 53.0 | 1954 | 93.6 | Average | 105.4 |
| 1932 | 47.6 | 1955 | 93.3 | | |
| 1933 | 45.1 | 1956 | 94.7 | 1963— | |
| 1934 | 46.6 | 1957 | 98.0 | January | 106.0 |
| 1935 | 47.8 | 1958 | 100.7 | February | 106.1 |

Source: Bureau of Labor Statistics.

TABLE 2.—*Consumer Price Index—United States: Special groups, annual average indexes, 1939–62; monthly, 1962–February 1963*

[1939=100]

| Year | All items | All commodities | Food | All commodities, less food | All services, less rent | Rent |
|---|---|---|---|---|---|---|
| 1939 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1940 | 100.8 | 101.0 | 101.5 | 100.7 | 100.1 | 100.3 |
| 1941 | 105.9 | 107.9 | 110.8 | 105.6 | 101.4 | 102.1 |
| 1942 | 117.3 | 123.6 | 130.1 | 117.5 | 105.9 | 104.4 |
| 1943 | 124.6 | 134.5 | 145.0 | 122.4 | 110.6 | 104.3 |
| 1944 | 126.6 | 136.0 | 143.1 | 129.1 | 115.9 | 104.6 |
| 1945 | 129.5 | 140.1 | 146.3 | 134.2 | 118.4 | 105.0 |
| 1946 | 140.4 | 155.2 | 167.7 | 142.6 | 122.7 | 105.5 |
| 1947 | 160.8 | 186.6 | 203.6 | 161.1 | 128.8 | 109.0 |
| 1948 | 173.1 | 200.0 | 221.0 | 173.2 | 136.2 | 116.3 |
| 1949 | 171.4 | 195.0 | 212.3 | 170.9 | 143.1 | 121.2 |
| 1950 | 173.1 | 196.1 | 214.9 | 170.5 | 147.1 | 125.6 |
| 1951 | 186.9 | 213.8 | 239.1 | 183.3 | 155.9 | 130.6 |
| 1952 | 191.1 | 216.5 | 243.3 | 184.8 | 163.4 | 136.1 |
| 1953 | 192.6 | 215.7 | 239.5 | 185.2 | 169.5 | 143.3 |
| 1954 | 193.3 | 213.6 | 239.1 | 182.8 | 173.7 | 148.4 |
| 1955 | 192.8 | 211.2 | 235.5 | 181.0 | 177.0 | 150.5 |
| 1956 | 195.6 | 213.4 | 237.2 | 183.3 | 181.0 | 153.2 |
| 1957 | 202.4 | 220.2 | 245.0 | 189.1 | 188.6 | 156.1 |
| 1958 | 207.9 | 225.4 | 255.4 | 190.9 | 195.6 | 159.0 |
| 1959 | 209.8 | 226.0 | 251.2 | 193.8 | 200.7 | 161.3 |
| 1960 | 212.9 | 227.7 | 254.2 | 194.8 | 206.9 | 163.7 |
| 1961 | 215.2 | 229.3 | 257.0 | 195.3 | 211.2 | 165.8 |
| 1962—January | 215.8 | 229.1 | 256.9 | 195.0 | 213.2 | 166.9 |
| February | 216.4 | 230.0 | 258.4 | 195.3 | 213.6 | 167.0 |
| March | 216.8 | 230.2 | 258.6 | 195.7 | 213.8 | 167.2 |
| April | 217.2 | 230.9 | 259.1 | 196.5 | 214.2 | 167.3 |
| May | 217.2 | 230.6 | 258.6 | 196.1 | 214.8 | 167.5 |
| June | 217.5 | 230.9 | 259.4 | 196.1 | 214.9 | 167.7 |
| July | 217.9 | 230.9 | 260.1 | 195.9 | 215.5 | 167.8 |
| August | 217.9 | 231.1 | 260.1 | 196.1 | 215.7 | 168.0 |
| September | 219.1 | 233.1 | 262.5 | 197.6 | 215.5 | 168.1 |
| October | 218.9 | 232.9 | 261.4 | 198.0 | 215.5 | 168.4 |
| November | 218.9 | 232.7 | 260.9 | 197.8 | 215.7 | 168.6 |
| December | 218.5 | 232.0 | 259.4 | 197.6 | 216.1 | 168.6 |
| Average | 217.7 | 231.2 | 259.6 | 196.5 | 214.9 | 167.8 |
| 1963—January | 218.9 | 232.0 | 262.4 | 196.1 | 216.9 | 168.8 |
| February | 291.1 | 232.4 | 263.1 | 196.3 | 216.9 | 168.9 |

Source: Bureau of Labor Statistics.

TABLE 3.—*Wholesale price index 1926–62 by year, and by month 1962 through March 1963*

[1947–49=100]

| Year | Grouping | | | |
|---|---|---|---|---|
| | All commodities | Farm products | Processed foods | All commodities other than farm and foods |
| 1926 | 65.0 | 56.0 | 58.3 | 71.5 |
| 1927 | 62.1 | 55.0 | 56.6 | 67.2 |
| 1928 | 62.9 | 59.2 | 59.4 | 66.4 |
| 1929 | 61.9 | 58.6 | 58.5 | 65.5 |
| 1930 | 56.1 | 49.4 | 53.3 | 60.9 |
| 1931 | 47.4 | 36.2 | 44.9 | 53.6 |
| 1932 | 42.2 | 27.0 | 36.6 | 50.3 |
| 1933 | 42.9 | 28.7 | 36.3 | 50.9 |
| 1934 | 48.7 | 36.5 | 42.7 | 56.0 |
| 1935 | 52.0 | 44.0 | 52.1 | 55.7 |
| 1936 | 52.5 | 45.2 | 50.1 | 56.9 |
| 1937 | 56.1 | 48.3 | 52.4 | 61.0 |
| 1938 | 51.1 | 38.3 | 45.6 | 58.4 |
| 1939 | 50.1 | 36.5 | 43.3 | 58.2 |
| 1940 | 51.0 | 37.8 | 43.6 | 59.3 |
| 1941 | 56.8 | 45.9 | 50.4 | 63.7 |
| 1942 | 64.2 | 59.2 | 59.1 | 68.3 |
| 1943 | 67.0 | 68.5 | 61.6 | 69.3 |
| 1944 | 67.6 | 69.0 | 60.4 | 70.4 |
| 1945 | 68.8 | 71.7 | 60.9 | 71.3 |
| 1946 | 78.6 | 83.0 | 77.3 | 78.2 |
| 1947 | 96.4 | 100.0 | 98.2 | 95.3 |
| 1948 | 104.4 | 107.3 | 106.1 | 103.4 |
| 1949 | 99.2 | 92.8 | 95.8 | 101.3 |
| 1950 | 103.1 | 97.5 | 99.8 | 105.0 |
| 1951 | 114.8 | 113.4 | 111.4 | 115.9 |
| 1952 | 111.6 | 107.0 | 108.8 | 113.2 |
| 1953 | 110.1 | 97.0 | 104.6 | 114.0 |
| 1954 | 110.3 | 95.7 | 105.3 | 114.5 |
| 1955 | 110.7 | 89.6 | 101.7 | 117.0 |
| 1956 | 114.3 | 88.4 | 101.7 | 122.2 |
| 1957 | 117.6 | 90.9 | 105.6 | 125.6 |
| 1958 | 119.2 | 94.9 | 111.0 | 126.0 |
| 1959 | 119.5 | 89.1 | 107.0 | 128.3 |
| 1960 | 119.6 | 88.8 | 107.8 | 128.3 |
| 1961 | 119.1 | 88.0 | 108.6 | 127.7 |
| 1962 [1] | 119.5 | 89.5 | 109.1 | 127.7 |
| 1962: | | | | |
| January | 119.7 | 89.7 | 110.0 | 127.9 |
| February | 119.6 | 90.0 | 109.8 | 127.7 |
| March | 119.6 | 90.1 | 109.6 | 127.7 |
| April | 119.2 | 88.8 | 108.1 | 127.8 |
| May | 119.0 | 88.1 | 107.4 | 127.8 |
| June | 118.8 | 87.3 | 107.6 | 127.5 |
| July | 119.2 | 88.4 | 108.7 | 127.7 |
| August | 119.4 | 89.4 | 109.5 | 127.4 |
| September | 120.2 | 92.2 | 111.4 | 127.7 |
| October | 119.5 | 90.4 | 109.5 | 127.5 |
| November | 119.6 | 91.0 | 109.2 | 127.5 |
| December | 119.2 | 89.1 | 108.8 | 127.5 |
| 1963: | | | | |
| January | 119.4 | 90.2 | 108.7 | 127.5 |
| February | 119.0 | 88.4 | 108.4 | 127.4 |
| March [1] | 118.6 | 87.4 | 106.9 | 127.4 |

[1] Preliminary.

Source: Bureau of Labor Statistics.

TABLE 4.—*Wholesale prices of industrial commodities by stage of processing by year 1947–62—by month 1962 through March 1963*

[Indexes 1947–49=100]

| Period | Industrial crude materials | Industrial intermediate materials | Producer finished goods | Consumer finished durable goods |
|---|---|---|---|---|
| 1947 | 92.9 | 95.3 | 92.8 | 94.8 |
| 1948 | 108.5 | 103.7 | 101.1 | 101.3 |
| 1949 | 98.6 | 101.0 | 106.1 | 104.0 |
| 1950 | 109.9 | 105.7 | 108.7 | 105.1 |
| 1951 | 120.8 | 118.5 | 119.3 | 112.1 |
| 1952 | 109.3 | 114.7 | 121.3 | 113.0 |
| 1953 | 108.5 | 116.2 | 123.1 | 113.8 |
| 1954 | 103.3 | 116.7 | 124.7 | 114.7 |
| 1955 | 113.4 | 120.1 | 128.5 | 115.9 |
| 1956 | 120.0 | 126.0 | 138.1 | 119.8 |
| 1957 | 118.3 | 129.3 | 146.7 | 123.3 |
| 1958 | 113.7 | 129.1 | 150.4 | 125.0 |
| 1959 | 120.0 | 131.2 | 153.2 | 126.5 |
| 1960 | 115.3 | 131.7 | 153.5 | 126.0 |
| 1961 | 114.1 | 130.0 | 153.9 | 125.5 |
| 1962 [1] | 112.3 | 129.8 | 154.4 | 124.9 |
| 1962: | | | | |
| January | 115.6 | 129.9 | 154.3 | 125.2 |
| February | 115.2 | 129.8 | 154.3 | 125.0 |
| March | 114.0 | 129.9 | 154.3 | 124.9 |
| April | 112.4 | 130.3 | 154.4 | 124.8 |
| May | 111.8 | 130.2 | 154.4 | 124.9 |
| June | 110.8 | 130.0 | 154.3 | 124.9 |
| July | 110.8 | 129.9 | 154.6 | 125.2 |
| August | 111.3 | 129.6 | 154.6 | 125.0 |
| September | 111.6 | 129.6 | 154.4 | 125.0 |
| October | 111.3 | 129.5 | 154.3 | 124.8 |
| November | 111.0 | 129.4 | 154.4 | 124.9 |
| December | 111.3 | 129.3 | 154.6 | 124.8 |
| 1963: | | | | |
| January | 111.1 | 129.3 | 154.6 | 124.7 |
| February | 111.4 | 129.1 | 154.6 | 124.7 |
| March [1] | 111.4 | 129.0 | 154.4 | 124.5 |

[1] Preliminary.

Source: Bureau of Labor Statistics.

TABLE 5.—*Trend of basic steel prices and general wholesale and retail prices by year, 1940–62, and by month 1962 through March 1963*

[Indexes 1940=100]

| Year | Basic steel prices | Wholesale price index: All commodities | Wholesale price index: All commodities except farm and food | Consumer price index: All items | Consumer price index: All items except food |
|---|---|---|---|---|---|
| 1940 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1941 | 100.4 | 111.2 | 107.2 | 105.0 | 102.9 |
| 1942 | 100.6 | 125.6 | 115.0 | 116.4 | 110.1 |
| 1943 | 100.7 | 131.1 | 116.7 | 123.5 | 113.1 |
| 1944 | 100.7 | 132.3 | 118.5 | 125.5 | 117.4 |
| 1945 | 103.1 | 134.6 | 120.0 | 128.4 | 120.2 |
| 1946 | 112.1 | 154.0 | 131.8 | 139.2 | 125.4 |
| 1947 | 131.4 | 188.6 | 160.4 | 159.4 | 137.0 |
| 1948 | 150.0 | 204.3 | 174.1 | 171.6 | 146.8 |
| 1949 | 162.6 | 194.1 | 170.5 | 169.9 | 148.4 |
| 1950 | 171.2 | 201.8 | 176.8 | 171.6 | 150.1 |
| 1951 | 184.6 | 224.7 | 195.1 | 185.3 | 159.7 |
| 1952 | 188.6 | 218.4 | 190.6 | 189.5 | 163.5 |
| 1953 | 203.6 | 215.5 | 191.9 | 191.0 | 166.7 |
| 1954 | 212.7 | 215.9 | 192.8 | 191.7 | 167.7 |
| 1955 | 222.9 | 216.6 | 197.0 | 191.2 | 168.2 |
| 1956 | 241.4 | 223.7 | 205.7 | 194.0 | 171.2 |
| 1957 | 264.6 | 230.1 | 211.4 | 200.7 | 176.9 |
| 1958 | 273.8 | 233.3 | 212.1 | 206.2 | 180.8 |
| 1959 | 278.4 | 233.9 | 215.8 | 208.0 | 184.3 |
| 1960 | 278.0 | 234.1 | 216.0 | 211.2 | 187.3 |
| 1961 | 276.9 | 233.1 | 215.0 | 213.4 | 189.3 |
| 1962 [1] | 276.2 | 233.9 | 215.2 | 215.9 | 191.6 |
| 1962: | | | | | |
| January | 276.5 | 234.7 | 215.7 | 214.0 | 190.2 |
| February | 276.5 | 234.5 | 215.3 | 214.7 | 190.6 |
| March | 276.5 | 234.5 | 215.3 | 215.0 | 190.9 |
| April | 276.5 | 233.7 | 215.5 | 215.5 | 191.5 |
| May | 276.5 | 233.3 | 215.5 | 215.6 | 191.5 |
| June | 276.5 | 232.9 | 215.0 | 215.7 | 191.6 |
| July | 276.2 | 233.7 | 215.3 | 216.0 | 191.6 |
| August | 275.9 | 234.1 | 214.8 | 216.0 | 191.9 |
| September | 275.9 | 235.7 | 215.3 | 217.4 | 192.7 |
| October | 276.2 | 234.3 | 215.0 | 217.2 | 192.8 |
| November | 275.9 | 234.5 | 215.0 | 217.2 | 192.8 |
| December | 275.9 | 233.7 | 215.0 | 216.7 | 192.8 |
| 1963: | | | | | |
| January | 275.9 | 234.1 | 215.0 | 217.2 | 192.5 |
| February | 275.9 | 233.8 | 214.8 | 217.4 | 192.7 |
| March [1] | 275.6 | 232.5 | 214.8 | n.a. | n.a. |

[1] Preliminary.
n.a. Not available.

Source: Bureau of Labor Statistics.

TABLE 6.—*Prices of important steelmaking raw materials, 1940–62 by year, and by month 1962 through March 1963*

[Indexes 1947–49=100]

| Year | Iron ore [1] | Composite scrap steel [2] | Coke | Year | Iron ore [1] | Composite scrap steel [2] | Coke |
|---|---|---|---|---|---|---|---|
| 1940 | 73.5 | 53.0 | 55.7 | 1960 | 171.0 | 95.1 | 170.4 |
| 1941 | 71.0 | 55.7 | 60.2 | 1961 | 172.9 | 104.2 | 170.4 |
| 1942 | 71.0 | 54.9 | 61.7 | 1962 | [3] 165.4 | 81.2 | [3] 170.4 |
| 1943 | 71.0 | 54.9 | 62.0 | 1962: | | | |
| 1944 | 71.0 | 53.4 | 65.8 | January | 172.8 | 108.4 | 170.4 |
| 1945 | 71.0 | 54.9 | 66.9 | February | 169.8 | 102.4 | 170.4 |
| 1946 | 76.9 | 57.7 | 71.2 | March | 164.2 | 92.4 | 170.4 |
| 1947 | 88.6 | 102.1 | 84.2 | April | 164.2 | 88.3 | 170 4 |
| 1948 | 96.5 | 119.1 | 104.3 | May | 164.2 | 75.5 | 170.4 |
| 1949 | 114.9 | 78.8 | 111.5 | June | 164.2 | 71.0 | 170.4 |
| 1950 | 123.0 | 101.3 | 116.0 | July | 164.2 | 71.8 | 170.4 |
| 1951 | 132.3 | 123.6 | 124.0 | August | 164.2 | 77.5 | 170.4 |
| 1952 | 137.6 | 120.1 | 124.7 | September | 164.2 | 75.1 | 170.4 |
| 1953 | 153.8 | 114.3 | 132.0 | October | 164.2 | 70.6 | 170.4 |
| 1954 | 157.7 | 82.4 | 132.4 | November | 164.2 | 67.8 | 170.4 |
| 1955 | 160.5 | 113.9 | 135.2 | December | 164.2 | 73.8 | 170.4 |
| 1956 | 173.0 | 153.2 | 149.7 | 1963: | | | |
| 1957 | 181.6 | 135.0 | 161.7 | January | 164.2 | 76.4 | 170.4 |
| 1958 | 177.1 | 108.4 | 161.9 | February | 164.2 | 79.3 | 170.4 |
| 1959 | 169.9 | 108.0 | 169.8 | March | [3] 164.2 | 79.0 | [3] 170.4 |

[1] BLS index, Iron Ore (10–11) used for the period 1947–March 1963. BLS series, Iron Ore, Mesabi, nonbessemer (10–11–06) used for the period 1940–46.
[2] Annual data from Metal Statistics 1948 and 1962 and monthly data from the American Metal Market, Apr. 9, 1963. Includes No. 1 heavy melting steel scrap at Pittsburgh, Philadelphia, and Chicago.
[3] Preliminary.

Source: Bureau of Labor Statistics.

TABLE 7.—*Prices of selected steelmaking materials, 1947–62 by year, and by month 1962 through March 1963*

[Indexes 1947–49=100]

| Period | Industrial crude materials | Iron ore | Coke | Pig iron |
|---|---|---|---|---|
| 1947 | 92.9 | 88.6 | 84.2 | 83.6 |
| 1948 | 108.5 | 96.5 | 104.3 | 102.7 |
| 1949 | 98.6 | 114.9 | 111.5 | 113.6 |
| 1950 | 109.9 | 123.0 | 116.0 | 116.2 |
| 1951 | 120.8 | 132.3 | 124.0 | 128.5 |
| 1952 | 109.3 | 137.6 | 124.7 | 131.1 |
| 1953 | 108.5 | 153.8 | 132.0 | 136.6 |
| 1954 | 103.3 | 157.7 | 132.4 | 138.4 |
| 1955 | 113.4 | 160.4 | 135.2 | 141.4 |
| 1956 | 120.0 | 173.0 | 149.7 | 149.9 |
| 1957 | 118.3 | 181.7 | 161.7 | 160.1 |
| 1958 | 113.7 | 177.1 | 161.9 | 163.0 |
| 1959 | 120.0 | 169.9 | 169.8 | 163.0 |
| 1960 | 115.3 | 171.0 | 170.4 | 163.0 |
| 1961 | 114.1 | 172.9 | 170.4 | 163.0 |
| 1962 [1] | 112.3 | 165.4 | 170.4 | 161.7 |
| 1962—January | 115.6 | 172.8 | 170.4 | 163.0 |
| February | 115.2 | 169.8 | 170.4 | 163.0 |
| March | 114.0 | 164.2 | 170.4 | 163.0 |
| April | 112.4 | 164.2 | 170.4 | 163.0 |
| May | 111.8 | 164.2 | 170.4 | 163.0 |
| June | 110.8 | 164.2 | 170.4 | 163.0 |
| July | 110.8 | 164.2 | 170.4 | 163.0 |
| August | 111.3 | 164.2 | 170.4 | 163.0 |
| September | 111.6 | 164.2 | 170.4 | 163.0 |
| October | 111.3 | 164.2 | 170.4 | 163.0 |
| November | 111.0 | 164.2 | 170.4 | 155.5 |
| December | 111.3 | 164.2 | 170.4 | 155.5 |
| 1963—January | 111.1 | 164.2 | 170.4 | 155.5 |
| February | 111.4 | 164.2 | 170.4 | 155.5 |
| March [1] | 111.4 | 164.2 | 170.4 | 155.5 |

[1] Preliminary.

Source: Bureau of Labor Statistics.

TABLE 8.—*Prices of steelmaking materials, 1947–62 by year, and by month 1962 through March 1963*

[Indexes 1947–49=100]

| Period | Industrial crude materials | Iron and steel scrap | Ferro-manganese | Zinc slab | Industrial power [1] | Nickel cathode sheets |
|---|---|---|---|---|---|---|
| 1947 | 92.9 | 96.9 | 90.6 | 86.9 | 99.0 | 94.2 |
| 1948 | 108.5 | 122.3 | 98.2 | 111.7 | 100.3 | 98.2 |
| 1949 | 98.6 | 80.8 | 111.2 | 101.3 | 100.7 | 107.5 |
| 1950 | 109.9 | 104.6 | 113.6 | 115.2 | 100.4 | 120.9 |
| 1951 | 120.8 | 118.8 | 121.2 | 148.0 | 100.6 | 145.3 |
| 1952 | 109.3 | 114.2 | 132.0 | 135.0 | 101.0 | 151.9 |
| 1953 | 108.5 | 103.1 | 148.9 | 91.2 | 101.3 | 160.7 |
| 1954 | 103.3 | 79.8 | 147.6 | 88.4 | 101.7 | 162.5 |
| 1955 | 113.4 | 104.6 | 143.2 | 101.0 | 102.4 | 173.6 |
| 1956 | 120.0 | 132.5 | 164.0 | 110.5 | 103.2 | 175.8 |
| 1957 | 118.3 | 116.9 | 189.4 | 93.7 | 104.5 | 199.1 |
| 1958 | 113.7 | 93.8 | 183.8 | 85.4 | 105.6 | 199.1 |
| 1959 | 120.0 | 100.2 | 183.8 | 94.0 | 106.0 | 199.1 |
| 1960 | 115.3 | 82.9 | 166.6 | 106.2 | 107.7 | 199.1 |
| 1961 | 114.1 | 87.8 | 165.0 | 95.0 | 108.3 | 208.9 |
| 1962 [2] | 112.3 | 71.5 | 142.4 | 95.7 | 109.6 | 215.0 |
| 1962—January | 115.6 | 90.3 | 142.4 | 98.6 | 108.4 | 218.6 |
| February | 115.2 | 87.5 | 142.4 | 98.6 | 110.0 | 218.6 |
| March | 114.0 | 79.0 | 142.4 | 98.6 | 110.0 | 218.6 |
| April | 112.4 | 75.0 | 142.4 | 94.7 | 109.8 | 218.6 |
| May | 111.8 | 68.8 | 142.4 | 94.7 | 109.7 | 218.6 |
| June | 110.8 | 64.1 | 142.4 | 94.7 | 109.6 | 212.6 |
| July | 110.8 | 65.3 | 142.4 | 94.7 | 109.6 | 212.6 |
| August | 111.3 | 69.9 | 142.4 | 94.7 | 109.6 | 212.6 |
| September | 111.6 | 68.1 | 142.4 | 94.7 | 109.6 | 212.6 |
| October | 111.3 | 64.1 | 142.4 | 94.7 | 109.4 | 212.6 |
| November | 111.0 | 61.0 | 142.4 | 94.7 | 109.5 | 212.6 |
| December | 111.3 | 65.0 | 142.4 | 94.7 | 109.5 | 212.6 |
| 1963—January | 111.1 | 67.6 | 142.4 | 94.7 | 109.4 | 212.6 |
| February | 111.4 | 69.5 | 127.6 | 94.7 | 109.4 | 212.6 |
| March [2] | 111.4 | 69.0 | 127.6 | 94.7 | 109.2 | 212.6 |

[1] Includes commercial power also prior to 1958.
[2] Preliminary.

Source: Bureau of Labor Statistics.

TABLE 9.—*Steel raw materials and product prices, 1947–62 by year, and by month 1962 through March 1963*

[Indexes 1947–49=100]

| Year | Industrial crude materials | Basic steel products | Basic steelmaking materials |
|---|---|---|---|
| 1947 | 92.9 | 88.8 | 92.4 |
| 1948 | 108.5 | 101.4 | 105.6 |
| 1949 | 98.6 | 109.9 | 102.0 |
| 1950 | 109.9 | 115.7 | 112.5 |
| 1951 | 120.8 | 124.8 | 122.9 |
| 1952 | 109.3 | 127.6 | 122.6 |
| 1953 | 108.5 | 137.6 | 125.2 |
| 1954 | 103.3 | 143.9 | 118.9 |
| 1955 | 113.4 | 150.7 | 128.1 |
| 1956 | 120.0 | 163.2 | 145.7 |
| 1957 | 118.3 | 178.9 | 147.8 |
| 1958 | 113.7 | 185.2 | 140.2 |
| 1959 | 120.0 | 188.2 | 141.1 |
| 1960 | 115.3 | 187.9 | 137.8 |
| 1961 | 114.1 | 187.2 | 138.8 |
| 1962 [1] | 112.3 | 186.7 | 133.2 |
| 1962—January | 115.6 | 186.9 | 139.1 |
| February | 115.2 | 186.9 | 138.5 |
| March | 114.0 | 186.9 | 134.9 |
| April | 112.4 | 186.9 | 134.0 |
| May | 111.8 | 186.9 | 132.4 |
| June | 110.8 | 186.9 | 131.2 |
| July | 110.8 | 186.7 | 131.3 |
| August | 111.3 | 186.5 | 132.3 |
| September | 111.6 | 186.5 | 132.0 |
| October | 111.3 | 186.7 | 130.8 |
| November | 111.0 | 186.5 | 130.1 |
| December | 111.3 | 186.5 | 130.9 |
| 1963—January | 111.1 | 186.5 | 131.2 |
| February | 111.4 | 186.5 | 130.6 |
| March [1] | 111.4 | 186.3 | 130.2 |

[1] Preliminary.

Source: Bureau of Labor Statistics.

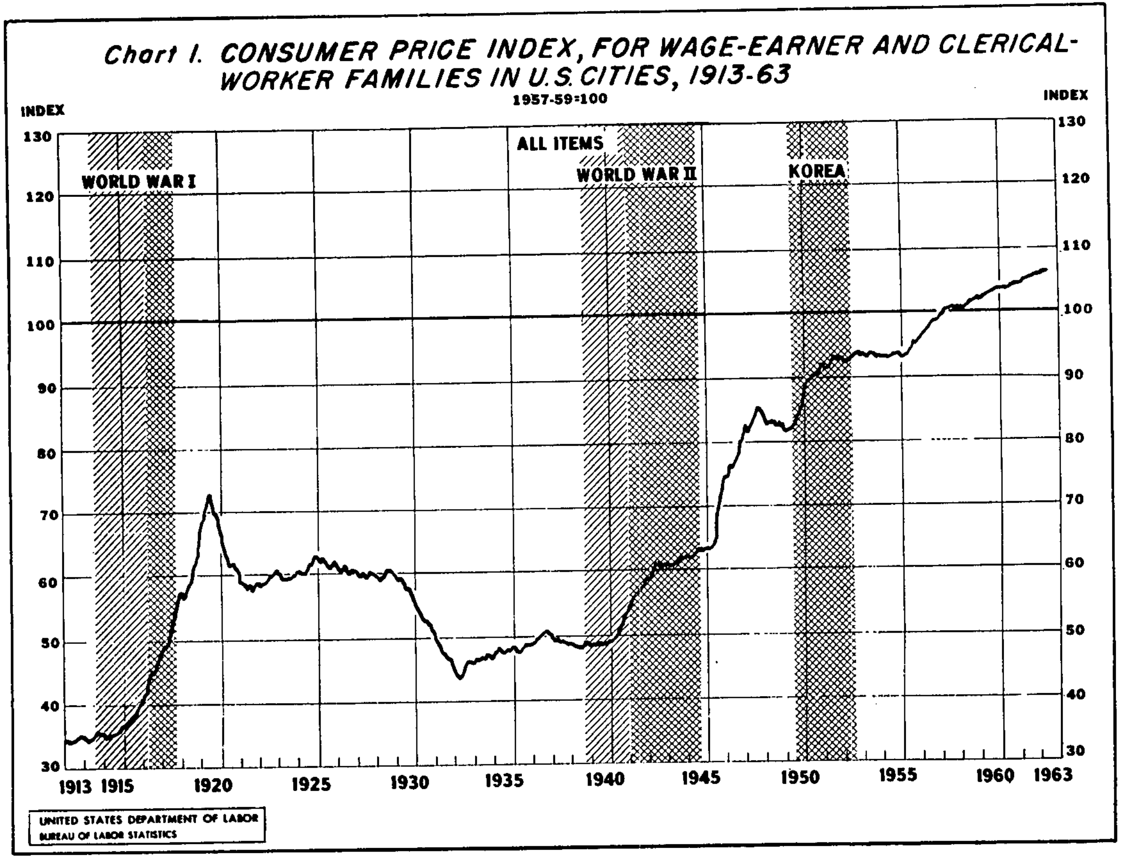



*Chart 1.* CONSUMER PRICE INDEX, FOR WAGE-EARNER AND CLERICAL-WORKER FAMILIES IN U.S. CITIES, 1913-63

*Chart 2. CONSUMER PRICE INDEX, SPECIAL GROUPINGS, 1939-63*

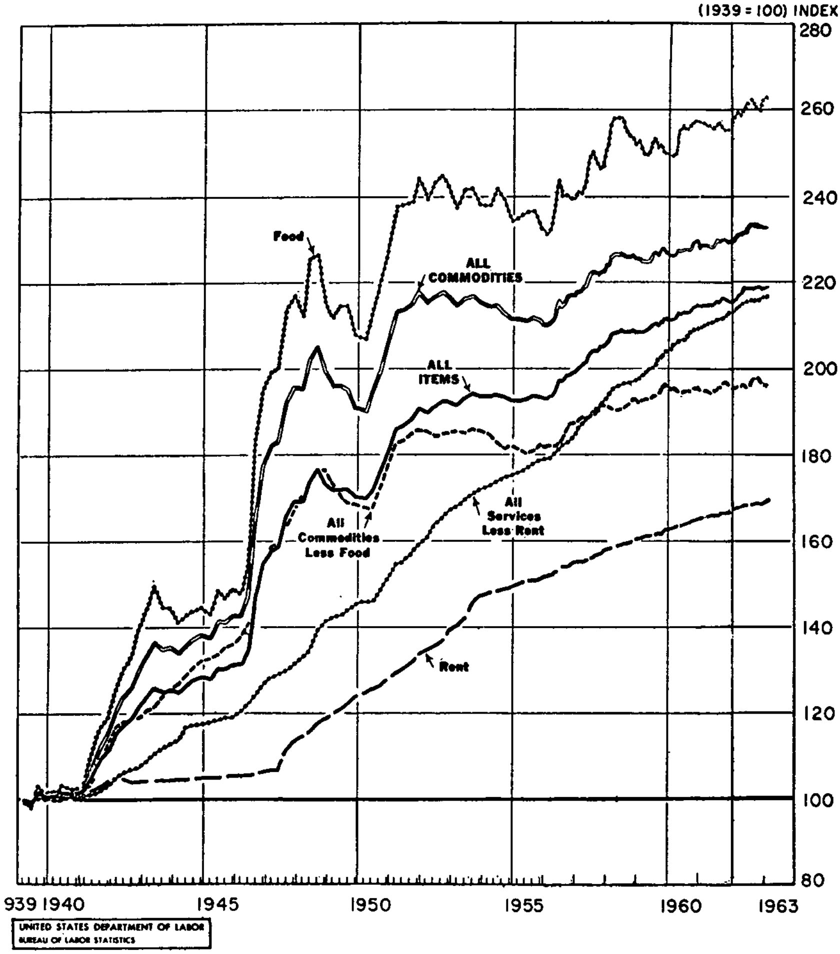


Chart 3. WHOLESALE PRICE INDEX, 1926-63

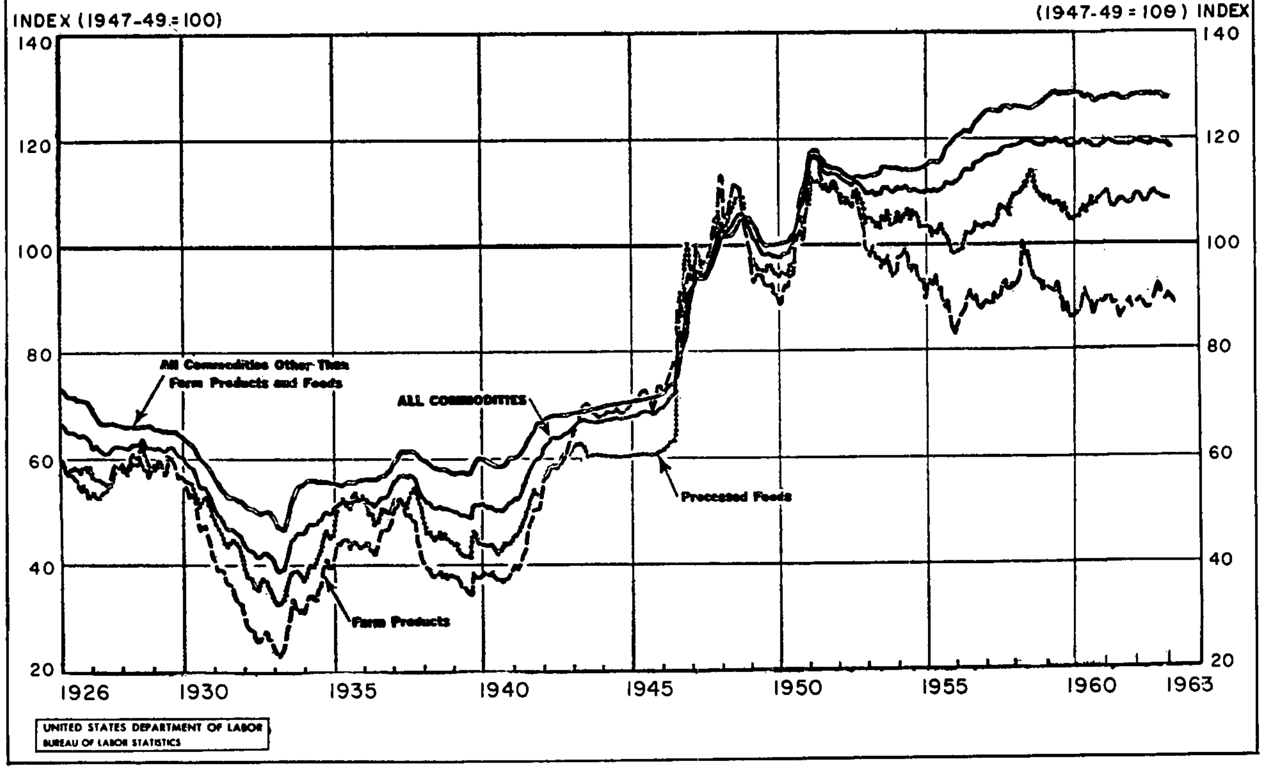


**Chart 4.** *WHOLESALE PRICES OF INDUSTRIAL COMMODITIES, BY STAGE OF PROCESSING, ANNUALLY 1947-62, MONTHLY 1962 TO DATE*

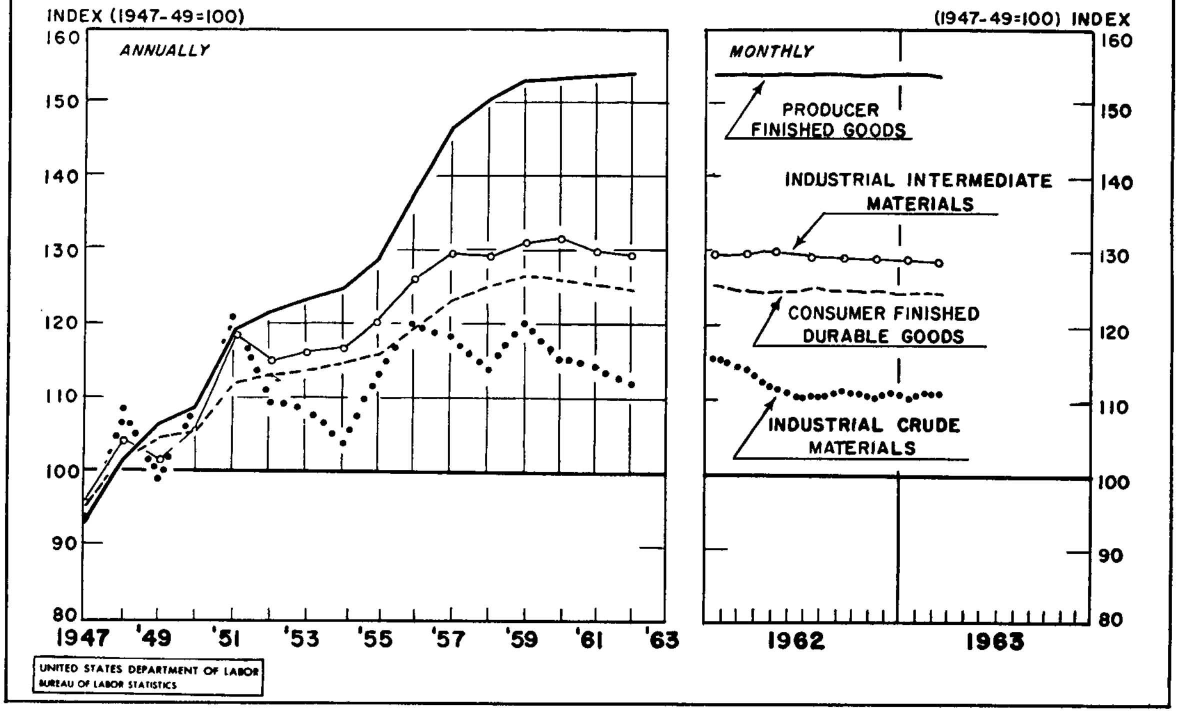


Chart 5. *TREND OF BASIC STEEL PRICES AND GENERAL WHOLESALE AND RETAIL PRICES, 1940 TO DATE*

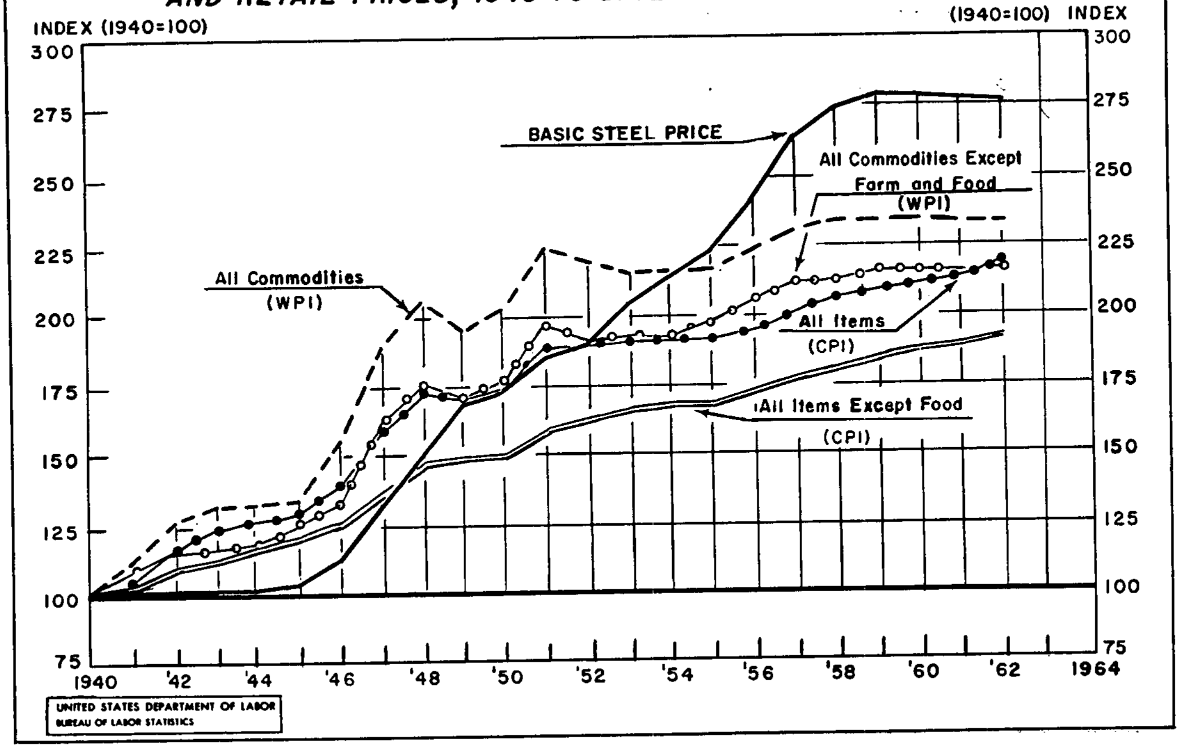


Chart 6. PRICES OF IMPORTANT STEEL-MAKING RAW MATERIALS, ANNUALLY 1940-62, MONTHLY 1962 TO DATE

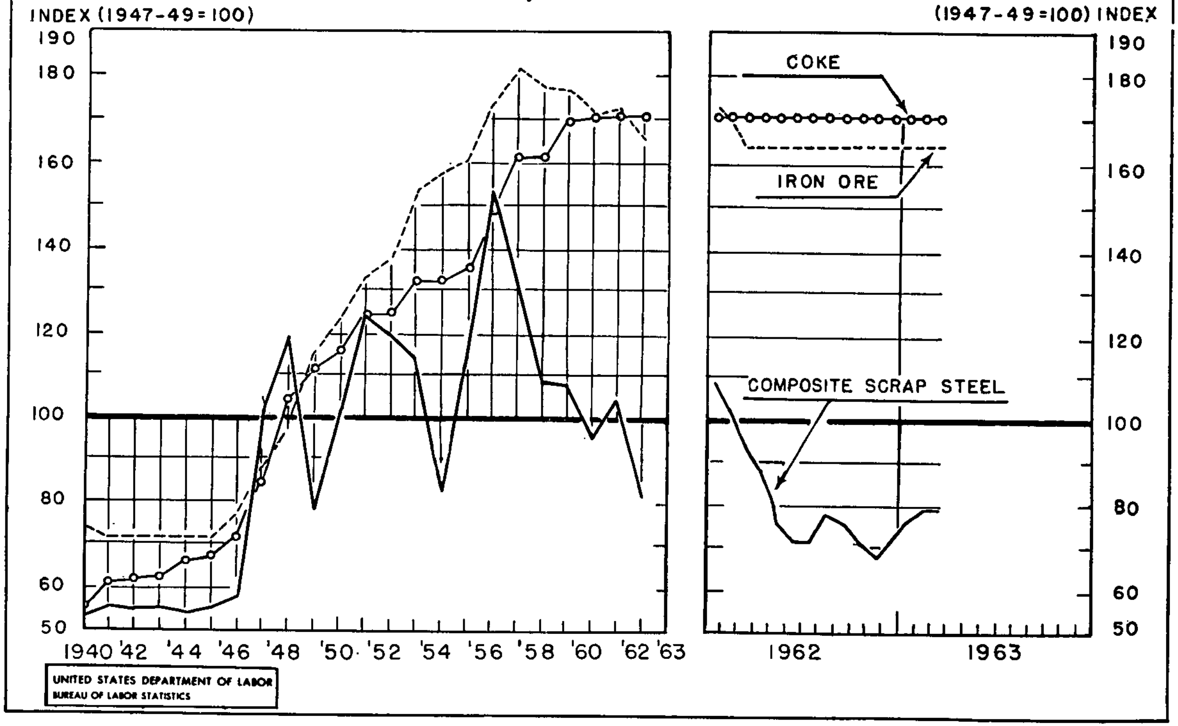


Chart 7. PRICES OF SELECTED STEEL-MAKING MATERIALS
ANNUALLY 1947-62, MONTHLY 1962 TO DATE

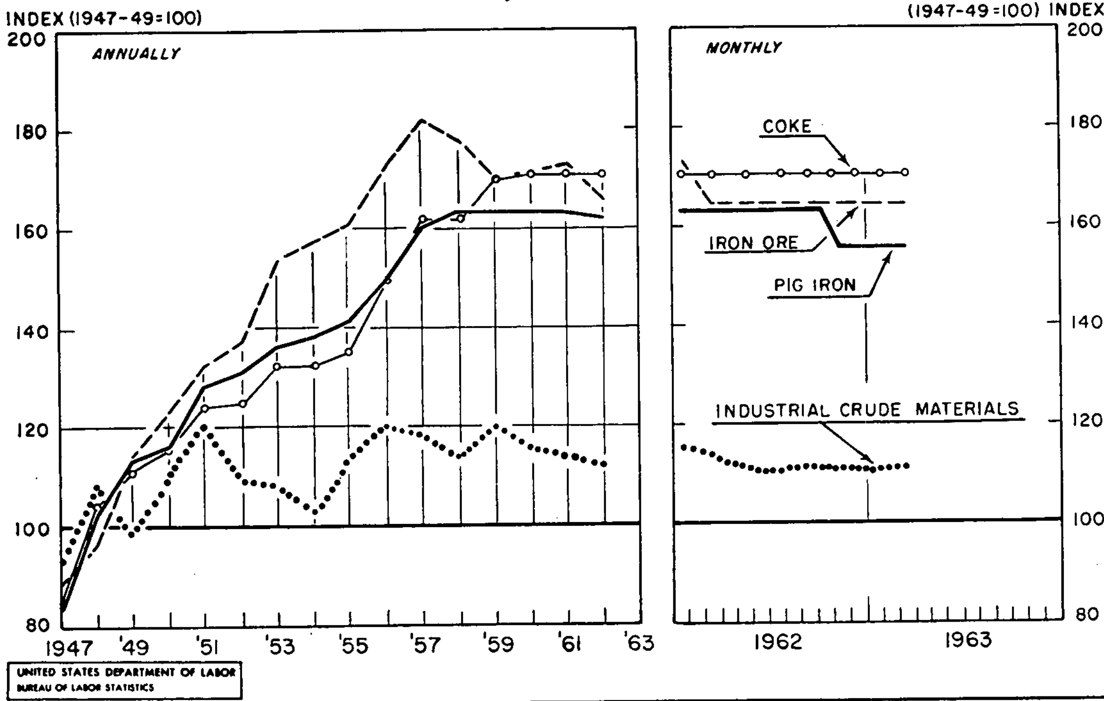
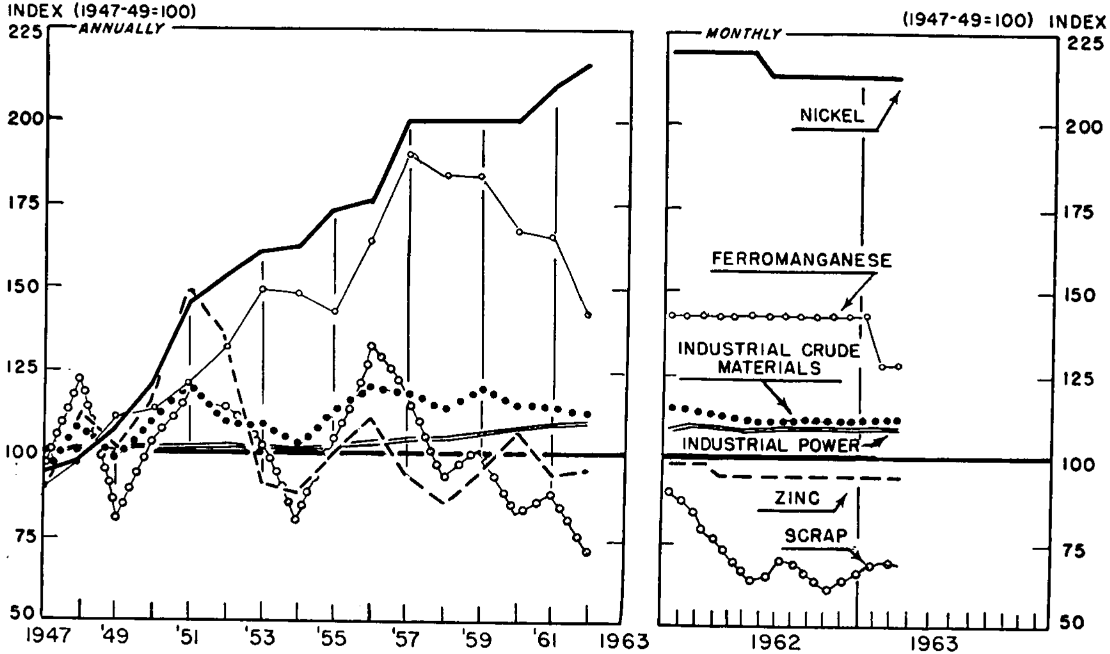
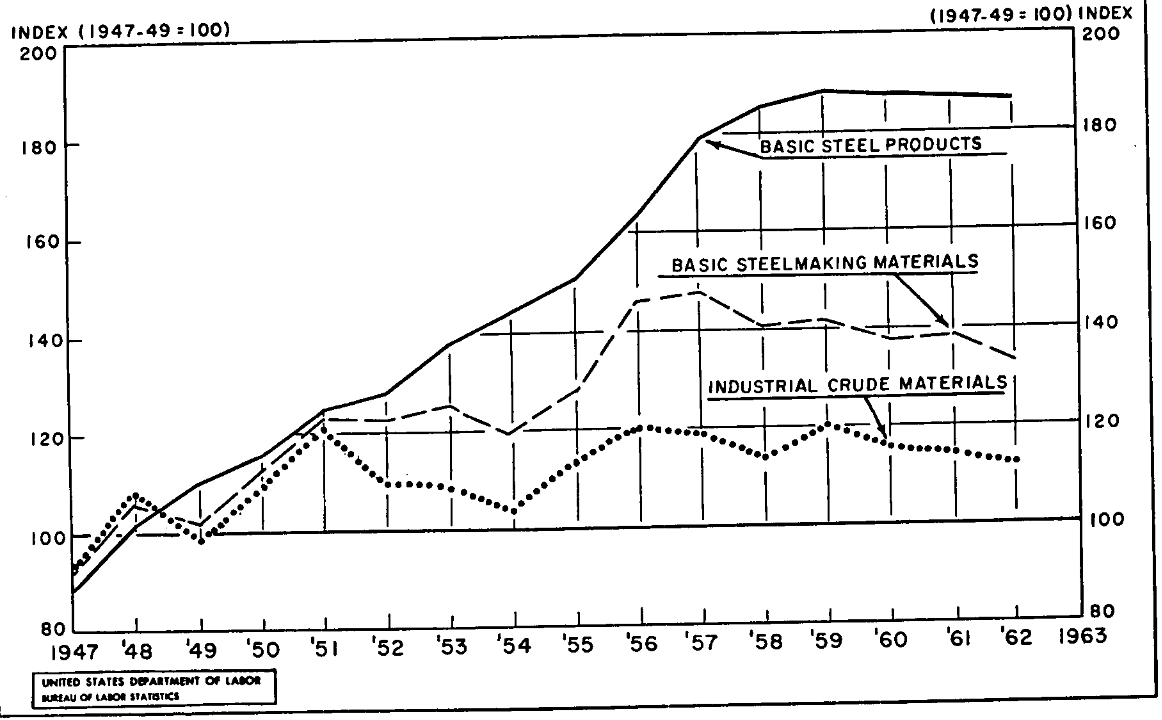


Chart 8. PRICES OF SELECTED STEEL-MAKING MATERIALS
ANNUALLY 1947-62, MONTHLY 1962 TO DATE




UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Chart 9. STEEL RAW MATERIALS AND PRODUCT PRICES, 1947-62



Mr. CHASE. I would now like to call your attention to chart 1.

This is a chart which shows the trend of the Bureau of Labor Statistics Official Consumer Price Index over the period from 1913 up to date. You will observe that the price increases that have taken place in our economy have come generally as the result of the war situations. This is the Korean, continuing the uptrend after World War II.

Those are the periods of most increases in consumer prices. However, as a result of the 1955–57 investment boom, we had an additional sharp advance in consumer prices and an additional jump in 1959 during the recovery from the 1958 recession. From that time until the present the annual increase in the consumer price index has slowed down considerably.

Over the past year, for example, the consumer price index has advanced by just a little more than 1 percent.

Chairman DOUGLAS. May I ask if it is true that the increase in the last 5 or 6 years has been almost entirely in the field of services and not in the field of commodities?

Mr. CHASE. Yes, sir; that is true. That fact will be brought out more clearly on the next chart. This chart is on a 1939 base in order to show the difference in the movement of various types of commodities and services since 1939.

I should explain the makeup of this chart. We have the solid black line which is the all-items index, including all commodities and services. Then the commodities which are separate from services are shown by this line, and food is broken out of commodities and shown separately.

Then we have a line here for all services less rent, and a separate line for rent. You will observe that the prices of rent and services lagged behind the increase in the price of commodities during World War II and for some time thereafter. They have continued to lag until at about the present time they appear to have caught up with the increase in prices of commodities except that rent is still low relative to 1939 as compared with the prices of commodities and other services.

This shows clearly that the increase in the consumer price index in recent years has been mostly in the prices of services. Rents continue to go up about one-tenth of 1 percent almost every month. I would call your attention especially to this line that represents all commodities less food before we leave this chart, because it is in this area that any effect of a steel price change is likely to be most noticeable.

Chairman DOUGLAS. That indicates almost constant prices.

Mr. CHASE. Yes, sir. That index has remained very stable since 1960 or since about 1959.

Chairman DOUGLAS. Food has been going up.

Mr. CHASE. Food also has continued up since 1960.

Chairman DOUGLAS. Although prices to the farmer have not been increasing.

Mr. CHASE. Yes, sir. I don't have that shown on this chart; however, it will show up some on the next chart, Senator. If we move now to chart No. 3, this is the index of prices of all commodities at the wholesale level, and the green line is the line for farm products. These are wholesale prices of farm products. You will observe that they reached a peak in 1951, but from that time on have trended downward except for a jump in 1958.

Chairman DOUGLAS. Despite the fact that food prices at retail since 1952 have risen by about 20 points or by about 8 percent; is that correct?

Mr. CHASE. Yes, sir; that is right.

Chairman DOUGLAS. During that same period farm products have fallen by 20 points, or by 18 percent; is that correct?

Mr. CHASE. Yes, sir. There is another line here which also relates to the point you are making, Senator, and that is the line for processed foods. These are the farm products prices. These are the prices for processed foods. You will observe instead of a downward trend following the farm product prices, there is a slight upward trend in prices of processed foods at the wholesale level.

That is the picture of the general trend of prices as represented by the Bureau of Labor Statistics' Consumer Price Index and Wholesale Price Index.

But before we leave the field of general price trends, I should like to call your attention to chart No. 4, which shows the trend of wholesale prices of industrial commodities by stage of processing. I think this chart is quite interesting in that it shows the divergence in trends between prices of industrial crude materials and industrial intermediate materials as against the prices of finished goods, especially producer finished goods.

You will notice that there is a considerable difference in the movement of prices of consumer finished durable goods, which we will get into more in the session that is scheduled for April 26. There are special factors involved here, but notice that prices of finished goods have risen much more sharply since 1947 than prices of crude materials.

Chairman DOUGLAS. As a matter of fact, in 1951 both crude materials and producer finished goods were at about the same relative level, with a 20-percent increase over 1947–49. But since then, while industrial crude materials have gone down from 120 to 111, producer finished goods have gone up from 120 to 154.

How do you explain that? A 9-point drop, a 7.5-percent decrease in raw materials, at the same time you have a 34-point or 28-percent increase in industrial finished goods. That is an extraordinary development. How do you explain that?

Mr. CHASE. There are two interesting aspects, it seems to me, on this chart. First, the fluctuation in prices of crude materials, showing that we still have what are classical market prices operating in that area. However, in the intermediate area, and even to a greater extent in the finished goods area, it seems clear that once a price increase takes effect, it very seldom is rescinded. These prices become rigid after they have increased and do not decline on declining demand.

Chairman DOUGLAS. I think we ought to send a copy of this to Senator Kefauver.

Mr. CHASE. That is one of the interesting aspects of this line. The fluctuation in crude material prices, the tendency for rigidity in intermediate and finished goods prices, and the divergence between these as time goes on.

I think this indicates that there is a tendency also for increases in prices at the raw materials level to be pyramided as they go through the additional stages of processing.

Representative REUSS. Not only is the difference in the indexes for producer finished goods and for industrial crude materials interesting, but the time when the lines began to diverge seems equally interesting. By and large it looks as if 1955 was the time when producer finished goods started leaping upward both relatively and absolutely; is that right?

Mr. CHASE. Yes, sir. There was a fairly sharp increase in all of them through 1951. But then, as you noted, in 1955 there began a very sharp rise in prices of producer finished goods, while crude materials trended downward at that time. Intermediate materials sort of leveled off and maintained that 1955 level.

Representative REUSS. What are some ready examples of producer finished goods, industrial intermediate materials, and industrial crude materials?

Mr. CHASE. The producer finished goods would be of special interest here because they do consist to a very large extent of machinery and equipment. In the intermediate area, using the example of interest in these particular hearings, it would be prices of finished steel products as they go into further processing. The crude materials would include the raw materials that go into steelmaking.

Representative REUSS. The Department of Justice has recently completed an antitrust suit which I think ended in a consent decree against various manufacturers of producer finished goods, notably electrical machinery. Do you recall the evidence in that suit?

What I am getting at, did the shenanigans at the Hotel Barclay in New York and various other places start in about 1954 or 1955? If they did, that may account for the big divergence in the green line and the fact that producer finished goods went up so much more in price than anything else.

Mr. CHASE. I am not sure of the date, but I think it was later than 1955 when that evidence came out. The prices we have here would show the prices originally charged for that equipment and would not reflect the final prices as determined after the investigation.

Representative REUSS. The prices in your index there reflect whatever price fixing there may have been.

Mr. CHASE. Yes, sir; they would. If we might proceed now to chart 5, I know that the committee does not wish this morning to go into the prices of finished steel, but I thought while we were looking at the general price picture we might take a quick glance at what has happened to basic steel prices as compared with the general wholesale price index and the consumer price index broken down into crude and other items.

You will notice that prices of basic steel remain practically unchanged through the war period. They began an increase in 1946 and then continued upward, but did not catch up with the increase in the consumer price index until 1953 when they crossed the consumer price index line, and not with the wholesale price index until 1955. But from 1955 on they have continued on upward with only a slight downtrend since 1959.

Chairman DOUGLAS. But comparative price stability during the last 4 or 5 years for basic steel prices.

Mr. CHASE. Yes; that would be 5 years.

Chairman DOUGLAS. Just as labor costs per unit of output tended to be constant, so basic steel prices tended to be constant.

Mr. CHASE. This completes the presentation of the general price trends picture. We are ready now to begin to look at prices of steelmaking materials in particular.

Before we open this discussion, I should like to explain to the committee that we have some data problems. One of these is that, as the committee knows, most of the iron ore, coke, and pig iron that are consumed in the industry are produced by the large, integrated steel companies. We estimate that not more than about 20 percent of all of the iron ore consumed actually goes through an open market. Not more than about 14 percent of the coke consumed actually goes through an open market. The percentage is even smaller for pig iron, probably not in excess of 6 percent.

The price data which we have represent only those open-market transactions. The balance of the charge for these raw materials is represented only in charges on the books of the integrated companies, and we do not know how closely those charges may follow the open-market prices, so that this may not represent the actual cost to the steelmaking companies of their raw materials charges on their books.

One other factor which we have not been able to take into account as far as these price data are concerned is that we have not yet been able to obtain prices of taconite. As the committee knows, the steel companies have been going into rather large-scale use of taconite, so we are using here iron ore as such.

Another problem is that this analysis would be interesting back to 1940. However, most of the BLS data which can be used for this analysis are available only back through 1947. We have prepared in chart 6 trend lines for three of the important basic materials for steel back to 1940. This is not a complete index and may not represent the movement of prices of these materials from 1940 to 1947 very accurately, but we have shown those trends on chart 6.

In the first case, we take the price of scrap and we see that scrap prices were fairly stable during the war. They began to go up in 1946 and took a sharp jump in 1947. They have fluctuated since then, in 1949, dropping back to only about 50 percent above their 1940 level. They reached a peak in 1956 and from that point have dropped back again to only about 50 percent above the 1940 level.

In the case of iron ore, the prices were stable during the war, but started up and have continued to go up until 1957. At that point they were more than double the 1940 level. They have dropped a little since then and took a dip in 1962, according to preliminary figures.

In the case of coke, the prices did not go up quite as fast as for iron ore, but they stabilized about three times the 1940 level in 1959 and 1960.

Chairman DOUGLAS. What year is that?

Mr. CHASE. 1957.

Chairman DOUGLAS. Is that 1957?

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. Am I correct in thinking that since 1957 there has been a decrease in the price of iron ore?

Mr. CHASE. Yes, sir; according to the figures which we have been able to get. I should also point out that these figures do not represent a very large proportion of the foreign ores that are now being consumed in the industry. It is our understanding that the five companies which developed the Canadian ores are consuming all those ores and that the one company that developed the Venezuelan ores is consuming those ores. So the only foreign ore we have in this index is Brazilian ore. The Swedish ore used to be of some significance but in recent years it is no longer important in the U.S. market. This is the Mesabi ore and the Brazilian ore here.

Chairman DOUGLAS. Let me continue on this. Do these figures indicate a very sharp drop in the price of steel scrap since 1956?

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. A fall from something over 160 to about 80?

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. In other words, steel scrap is only one-half what it was 7 years ago?

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. What proportion of the steel comes from melting of steel scrap?

Mr. CHASE. I don't know that I can give you a precise answer to that question. However, later on in discussing the composite index, as I recall the figure, it represents somewhere around 27 percent of the total input in steelmaking.

Chairman DOUGLAS. The prices of steel scrap have fallen in half in the course of the last 7 years?

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. On the other hand in the case of coke the price went up slightly from 1956–57 to 1958 and has been constant since then, is that right?

Mr. CHASE. That is right.

Chairman DOUGLAS. The price of coal does not directly enter into raw materials but only when made into coke?

Mr. CHASE. In order not to duplicate the coal and the coke we have shown only the coke separately here.

Representative CURTIS. Mr. Chairman, may I ask a question?

Chairman DOUGLAS. Yes, Mr. Curtis.

Representative CURTIS. On these scrap prices, isn't there some variance in the use of scrap in steelmaking?

Mr. CHASE. Yes, sir; that is my understanding. At times the companies will use a larger proportion of scrap and other times a larger proportion of pig iron.

Representative CURTIS. Can you give us the trends over the period for which you have the scrap prices so that we can relate the usage and the variations?

Mr. CHASE. No, sir. This varies from melt to melt or from month to month, at least, and we do not have that information from any source that I am aware of.

Representative CURTIS. Could you get them, because I think it has a real bearing or could have a real bearing—I don't know that it does—

on the usage by the steel companies of scrap. It certainly would affect the prices, wouldn't it?

Mr. CHASE. Yes, sir.

Representative CURTIS. I don't understand. Knowing that there is this variance, why you don't have that factor evaluated?

Mr. CHASE. In another index which I am going to show you later we have taken account of these to some extent in this way. In the early years up to 1956, we have used 1947 input data and from 1956 or on we have used 1961 input data. So that if there was a change over that period of time, it is reflected.

Representative CURTIS. When we are talking about prices you put it on a yearly basis. So in order to understand this we must put it on a yearly basis too. Using a stretch from one period of, say, 1947 to 1962, doesn't give us any insight into these variations. You show a real fluctuation in your lines from year to year. Demand is a very important factor in prices.

Mr. CHASE. I should point out, Mr. Curtis, that I think this fluctuation is the result more of the rate of steel operations than it is the change in the use of scrap in steelmaking.

Representative CURTIS. That is the issue. How do you know that if you have not made the studies? I don't understand this. You have left out an important ingredient. So how can you say that? Maybe it is true, but how do you know?

Mr. CHASE. I am not aware that there are any statistics on the relative use of scrap in steelmaking from time to time. If they are they would be compiled by American Iron & Steel Institute and if we can get those we will supply those for the record.

Representative CURTIS. You have come in after a considerable study of this matter and I am frankly a little bit disturbed when you say maybe there are figures in the Iron & Steel Institute. This raises the question why your research didn't include that. I don't know how you can give us these figures and make them meaningful if you have not evaluated what is an important ingredient. I think you agree that it is an important factor.

Chairman DOUGLAS. May I make a comment on this, if I may? Mr. Chase thus far has not been trying to combine these into a combined index. He has been taking each one separately. The relative importance of these materials would be a matter of real interest in getting a combined index.

But with each price index considered separately, this is not particularly important. However, for the record may I say I hold in my hand, as someone has marked, the annual statistical report of the American Iron & Steel Institute for 1961, and I read from page 17. This gives the consumption of scrap and pig iron in the production of steel by types of furnaces, 1958, and I will read to the nearest 100,000 tons: 44 million tons of scrap, 52.9 million tons of pig iron.

Representative CURTIS. What year is this?

Chairman DOUGLAS. 1958. 1959, 50 million tons of scrap, 56.2 million tons of pig iron. 1960, 52.1 million tons of scrap, 61.7 million tons of pig iron. 1961, 50.8 million tons of scrap, 61.3 million tons of pig iron. The difference insofar as these 4 years are concerned seem to range between 6 and 9 million tons only, or a variation of only about

3 percent in the total quantity of scrap and pig iron consumed. To the degree that these figures can be believed as reflecting the percentage of scrap, instead of being 27 percent it seems to be larger than 27 percent. It seems to range somewhere around 45 percent, although, of course, the conversion rate between scrap and pig iron can vary.

Mr. CHASE. Mr. Chairman, in connection with that 27 percent I was talking about, it was the importance of scrap in the total steel input not the proportion of scrap and pig iron.

Chairman DOUGLAS. What I am simply trying to say is that I think the witness has been completely scrupulous in taking each of these price indexes by itself. When he comes to a combined index then he can go into the question of weighting.

Representative CURTIS. My interrogation is to find out the extent to which these factors are evaluated in these indexes. I am very interested in the development of this. If the chairman feels that it is a question of rehabilitating this witness, I didn't look at it that way at all.

Chairman DOUGLAS. I don't think the witness needs rehabilitation.

Representative CURTIS. No, I don't think this should be presented as if through my questions, when I try to find out a few things, I am trying to destroy the witness. I don't approach it that way at all. I assume, as the chairman said in the beginning, we are going to try to get an objective study of this.

Chairman DOUGLAS. That is exactly right, and that is why I made the statement that I did.

Representative CURTIS. All right, but each time I make interrogations, it seems as if something is required on the chairman's part to put a different kind of light on it. Mine is only for inquiry, Mr. Chairman. I hope I can interrogate the witness——

Chairman DOUGLAS. Without interruption or addition.

Representative CURTIS. Not necessarily that. I am glad to have both if it helps to gain information. But I am not arguing a point. I am trying to find out.

Senator MILLER. Mr. Chairman.

Chairman DOUGLAS. Mr. Miller.

Senator MILLER. I would like to ask Mr. Chase a question which might follow or tie in with what Congressman Curtis was asking. Can you tell us what percentage of steel output or steel production we are talking about with relationship to each of those lines? For example, can you tell us that the line representing coke represents figures from production of 50 percent of total steel production, or 100 percent of total steel production? Do you understand my question?

Mr. CHASE. I am not sure that I do.

Senator MILLER. I would like to make it clear. I have a feeling, because of your indication that some of the iron ore is coming in from foreign countries, and we only have figures with respect to Brazilian imports, that not all of steel production is represented by this chart.

Mr. CHASE. I see, sir.

Senator MILLER. Therefore, I would like to know how much steel production we are talking about when you use these figures that you have presented to us.

Mr. CHASE. As I indicated before, the lines for iron ore are the market price and only about 20 percent of iron ore moves into an open market. In trying to evaluate this against the cost of producing steel, we have to assume that the price that is quoted in the open market represents the charge that the steel companies make against themselves when they produce their own ore. The same is true in the case of coke where only about 14 percent of it goes into the market. We have to assume, because we don't have any other information, that this represents the cost of the coke to the steel companies.

Senator MILLER. I appreciate your response which amounts to this—that the line representing coke is 14 percent of the total coke used in steel production.

Mr. CHASE. Yes, sir.

Senator MILLER. The line representing iron ore is 20 percent?

Mr. CHASE. Yes, sir.

Senator MILLER. What is the line on scrap steel?

Mr. CHASE. It is all scrap. In the case of scrap the indexes represent all the scrap market.

Senator MILLER. So this is 100 percent?

Mr. CHASE. Yes, sir.

Senator MILLER. Have you had occasion to test out your assumption that this would be the proper charge made by companies in an integrated operation, or by companies using foreign imports of ore?

Mr. CHASE. No, sir. We have no way of finding out what the steel companies charge themselves on their books for the materials that do not go through a market. We have no information on that.

Senator MILLER. What I am thinking about, Mr. Chairman, for example, is that if the integrated operations are increasing with respect to iron ore, I can understand how this might have a depressing effect upon the market for iron ore, and that the market for iron ore might decline because of the increased integration operations. When you talk about 20 percent, I can see where that might exist. Do you know what the trend has been? You say this represents 20 percent. Does that represent 20 percent for the entire spread of years, or does it represent 20 percent for 1962? Has this percentage been fluctuating during the period of time?

Mr. CHASE. These percentages are for 1961. My impression would be that they have not changed a great deal over the last few years.

Senator MILLER. Could you get those figures for us and supply them for the record?

Mr. CHASE. Yes, sir.

Senator MILLER. I wonder, Mr. Chairman, if that would meet with the chairman's approval?

Chairman DOUGLAS. Yes.

Senator MILLER. I think it might give us some interesting statistics to tie in with what you have there.

Chairman DOUGLAS. That will be done.

Senator MILLER. Thank you.

(The document furnished follows:)

DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
*Washington, D.C., April 29, 1963.*

JOINT ECONOMIC COMMITTEE,
*U.S. Congress,*
*Washington, D.C.*

GENTLEMEN: I have attempted to obtain the data requested by the committee showing the percentage of iron ore consumed in the United States each year which passes through open markets. The Bureau of Mines, U.S. Department of the Interior, informs me that this precise information is not available. However, that agency cites a report "The Iron Ore Industry and the Cleveland-Cliffs Iron Co., the Hanna Mining Co., the M. A. Hanna Co." which states (on p. 31) "The industry has been described as being 80 percent captive." The report was published by F. S. Smithers & Co., 45 Wall Street, New York, N.Y., in 1960.

I regret that I am unable to furnish the full information which the committee requested.

Very truly yours,

ARNOLD E. CHASE,
*Assistant Commissioner, Prices and Living Conditions.*

Representative CURTIS. May I ask another question on this same area?

Chairman DOUGLAS. Certainly.

Representative CURTIS. You talk about the prices of iron ore, but as I understand, there have been changes in quality. To what extent have you evaluated that in these prices?

Mr. CHASE. As I explained these prices do not reflect what happened to taconite or the fact that the steel companies have had to go to the use of lower grade ores and they do not reflect the prices for beneficiated ores. This is an operation that is carried on by the steel companies themselves so that it doesn't go into a market.

Representative CURTIS. I remember a few years ago, and I have forgotten what this committee was going into at that time, I made the remark that it would be interesting to know what the cost of the depletion of the Mesabi Range would mean in the price of steel. I don't know that any study ever was conducted on that. But I dare say it has had an impact.

Mr. CHASE. I am sure it has; yes, sir.

Representative CURTIS. I guess this would not show here, but probably quite a bit of money has been spent in recent years on new discovery.

Mr. CHASE. Yes, sir.

Representative CURTIS. Those costs, I guess, are spread over into the future as the returns come in. But the immediate outlay is there. Would they enter into any of these price figures you have here on the costs?

Mr. CHASE. No, sir; they would not be reflected directly. Presumably the rise in the price of iron ore that goes through the open market would indirectly, at least, reflect this higher cost of obtaining iron ore. So that indirectly presumably they are reflected but they are not reflected directly. Even the differential—and there is a slight differential between the price of Brazilian ore and the price of Mesabi—is not reflected as a change in this index. It is just brought in as a separate item. I would like to emphasize the fact that this does not represent, certainly precisely and may not even in a very general way, the increased cost to the steel companies of obtaining their iron ore.

Representative CURTIS. I can see that and your statement has been quite fair. You point out because of this integration in this area of months of the production, it is very difficult to evaluate. It would be book entries. I was just trying to figure out roughly how much steel production is traceable to the use of scrap. That is a varying figure, is it not? But about how much of it is? Would that show in those figures you have here, Mr. Chairman? It is a little over half as I see these figures on page 17 of the annual statistical report of American Iron and Steel Institute, 1961. Scrap is 50 million. I am reading 1961. Scrap is 50.8; ingots, 96.7. 1960 scrap 52.1; ingots 97.9. Yes, it ranges a little over half each time, in 1959, 50 to 92; 1958, 43 to 84. Thank you.

Mr. CHASE. If we may proceed now to a chart which represents the movement of steelmaking material prices in more detail since 1947. I would remind the committee that up to this point we were concentrating pretty largely on prices of iron ore, coke, and scrap from 1940 to 1947. Here we are able, with the data available, to pick up the movement of these prices in more detail. On this chart and those which follow we have carried as a benchmark line the index for all industrial crude materials, which is the solid black line that you see here. This is the one that we had on that chart by stages of processing. So that in this chart and in those which follow we will regard this as a sort of benchmark against which we can measure the change in prices of steelmaking materials. Of course, those materials are included in here also, but now pulled out separately here. So that you see the prices of industrial crude materials as a whole went up from 1947 through 1951 and then dropped and currently are about 20 percent above their 1947 level. This line represents the 20-percent increase over 1947.

Chairman DOUGLAS. But the steel scrap is omitted from this chart?

Mr. CHASE. It is on the next chart, sir.

Representative CURTIS. I note, Mr. Chairman—it was perhaps a little premature—on page 5 of your statement, referring to chart 8, you say scrap prices have fluctuated widely reflecting the varying rate of steel operations which determine scrap demand. This was the point that was worrying me as it related to that previous figure. I was wondering how much of that fluctuation in price was the result of this fluctuating demand. I don't know that it is. That is the thing that bothered me when you apparently were unable to say whether it was or wasn't.

Mr. CHASE. Yes, sir; that is right. The two materials here are the blast-furnace materials and pig iron, the product of the blast furnace. Here again we see the rise in prices of iron ore much more than the prices of all crude materials up to 1957 and a decline from that point on.

Again the change in the price of coke, reaching a point about double the 1947 level in 1959 and staying about the same since that time.

The product of the blast furnace also followed along to about twice the 1947 level in 1957 and has continued at about that level with only a slight downturn in 1962.

So that to summarize this, with all industrial crude materials up about 20 percent, iron ore is up about 90 percent over 1947, coke about double, and pig-iron prices about double what they were in

1947. Additional steelmaking, alloying and coating material prices are shown on the next chart.

Again we have repeated this benchmark line of prices of all crude materials. The red line represents nickel prices and they show by far the largest increase of all of these materials.

In 1962, nickel prices were about 125 percent above 1947. Ferromanganese followed a sharp increase up through 1957 also, and from that time has dropped back, and in 1962 was down below the 1953 level. So we had a sharp increase in 1956 and it dropped back below the 1953 level.

Zinc took a substantial increase in 1947 to 1951, but then has dropped down below the 1947 level and now is less than 10 percent above the 1947 level.

Here we have a scrap gain. Now you see the difference when you start with the 1947 figure rather than a 1940 figure. We get these fluctuations in prices of scrap with a peak in 1956, but then a decline up to the present time, and it is now down 25 percent under the 1947 level, and down 50 percent from the 1956 peak.

Representative CURTIS. If I could interject here, this information has been supplied to me. This is from one of the people in the industry. They call to my attention that when we were talking about table 17, Mr. Chairman, that we were talking about the purchased scrap, and table 15——

Chairman DOUGLAS. You mean page 17?

Representative CURTIS. Page 17 is the total of the scrap. But on page 15 there is shown a breakdown between that which is produced and that which is purchased. The produced scrap apparently has not had the variation; but net purchased, if you will look at the third column, shows a decline from 26.3 million in 1955 to 17.9 in 1961. I don't know what difference that makes, but I would ask you the question: Have you tried to make a breakdown between the difference of produced scrap and the purchase of scrap?

Mr. CHASE. I should have said that this represents purchased scrap.

Representative CURTIS. This is purchased rather than produced?

Mr. CHASE. Yes, sir. The so-called home scrap is not included in this.

Representative CURTIS. And yet the home scrap is the bulk of scrap as I can see it in these figures. In 1955, the produced scrap is 37 million net tons and the purchased is 26 million, compared when the produced scrap was 32 million and the purchased was 17 million. It looks like home produced is always bigger.

Mr. CHASE. Yes, sir.

Representative CURTIS. But this is the purchased scrap?

Mr. CHASE. Yes, sir.

Senator MILLER. Mr. Chairman, may I suggest that in those figures that Mr. Chase furnished, regarding the fluctuations of the percentages of the various items, that you break down the scrap between the produced scrap and the purchased scrap.

Chairman DOUGLAS. Yes. I think the material on page 15 as well as that on page 17 of the report of the Iron and Steel Institute should be included in the record and that will be done.

(The information referred to follows:)

*Scrap—Inventory analysis (reported by companies producing about 99 percent of the total output of ingots and steel for castings)*

[Net tons]

| | 1961 | 1960 | 1959 | 1958 | 1957 | 1956 | 1955 |
|---|---|---|---|---|---|---|---|
| Inventory—beginning of year | [1] 7,703,469 | [1] 8,322,109 | [1] 8,119,838 | [1] 7,540,906 | [1] 5,945,581 | [1] 5,734,761 | [1] 5,860,724 |
| Production and purchases: | | | | | | | |
| Produced [2] | 32,564,134 | 33,309,996 | 30,481,035 | 28,173,449 | 36,949,486 | 35,888,375 | 37,407,155 |
| Net purchases (receipts less shipments) [2] | 17,890,128 | 18,172,856 | 19,924,920 | 16,359,790 | 22,632,337 | 27,499,845 | 26,366,539 |
| Total | 50,454,262 | 51,482,852 | 50,405,955 | 44,533,239 | 59,581,823 | 63,388,220 | 63,773,694 |
| Consumption | 50,844,617 | 52,105,813 | 50,205,793 | 43,975,635 | 58,005,970 | 63,162,064 | 63,929,625 |
| Inventory—end of year | 7,313,114 | 7,699,148 | 8,320,000 | 8,098,510 | 7,521,434 | 5,960,917 | 5,704,793 |

[1] Revised.
[2] Includes production and sales of scrap by integrated and nonintegrated steel companies.

Source: Annual Statistical Report, American Iron & Steel Institute, 1961, p. 15.

*Consumption of scrap and pig iron, and production of steel by types of furnaces, (reported by companies producing about 99 percent of the total output of ingots and steel for castings)*

[Net tons]

| Type of furnace | Consumed | | | Steel production [1] | |
|---|---|---|---|---|---|
| | Scrap | Pig iron [2] | Total | Ingots | Castings |
| **1961** | | | | | |
| Bessemer | 51,792 | 955,542 | 1,007,334 | 881,060 | |
| Open hearth | 37,036,303 | 54,438,832 | 91,475,135 | 84,127,405 | 115,974 |
| Basic oxygen process | 1,063,204 | 3,486,619 | 4,549,823 | 3,967,158 | |
| Electric | 7,835,630 | 231,346 | 8,066,976 | 7,717,660 | 54,678 |
| Cupola | 1,219,607 | 407,667 | 1,627,274 | | |
| Air | 29,994 | 11,436 | 41,430 | | |
| Blast | 3,398,229 | | 3,398,229 | | |
| Other | 209,858 | 1,799,044 | 2,008,902 | | |
| Total | 50,844,617 | 61,330,486 | 112,175,103 | 96,693,283 | 170,652 |
| **1960** | | | | | |
| Bessemer | 88,007 | 1,272,283 | 1,360,290 | 1,189,196 | |
| Open hearth | 37,543,177 | 55,036,862 | 93,580,039 | 85,802,152 | 135,242 |
| Basic oxygen process | 960,421 | 2,882,750 | 3,843,171 | 3,346,156 | |
| Electric | 7,661,653 | 312,207 | 7,973,860 | 7,595,581 | 60,571 |
| Cupola | 1,123,173 | 599,293 | 1,722,466 | | |
| Air | 40,842 | 13,905 | 54,747 | | |
| Blast | 3,533,359 | | 3,533,359 | | |
| Other | 155,181 | 1,602,074 | 1,757,255 | | |
| Total | 52,105,813 | 61,719,374 | 113,825,187 | 97,933,085 | 195,813 |
| **1959** | | | | | |
| Bessemer | 123,438 | 1,459,159 | 1,582,597 | 1,380,283 | |
| Open hearth | 38,244,195 | 50,926,592 | 88,170,787 | 80,842,020 | 112,142 |
| Basic oxygen process | 568,937 | 1,553,155 | 2,122,092 | 1,864,338 | |
| Electric | 7,910,326 | 353,674 | 8,264,000 | 7,932,399 | 44,358 |
| Cupola | 1,046,307 | 580,630 | 1,626,937 | | |
| Air | 29,279 | 11,637 | 40,916 | | |
| Blast | 3,109,918 | | 3,109,918 | | |
| Other | 173,393 | 1,328,628 | 1,502,021 | | |
| Total | 50,205,793 | 56,213,475 | 106,419,268 | 92,019,040 | 156,500 |
| **1958** | | | | | |
| Bessemer | 103,322 | 1,503,113 | 1,606,435 | 1,395,985 | |
| Open hearth | 33,533,127 | 48,301,251 | 81,834,378 | 75,376,945 | 118,635 |
| Electric [3] | 6,695,684 | 1,310,192 | 8,005,876 | 7,537,860 | 42,432 |
| Cupola | 640,675 | 481,093 | 1,121,768 | | |
| Air | 28,529 | 9,731 | 38,260 | | |
| Blast | 2,735,834 | | 2,735,834 | | |
| Other | 238,464 | 1,264,068 | 1,502,532 | | |
| Total | 43,975,635 | 52,869,448 | 96,845,083 | 84,310,790 | 161,067 |

[1] For total production of steel, see page 10 of report.
[2] Including molten metal.
[3] Includes consumption and production by basic oxygen process units.

Source: Annual Statistical Report, American Iron & Steel Institute, 1961, p. 17.

Senator MILLER. Mr. Chairman, I would like to ask a couple of questions before we go on. Are there any other significant items that we have not included in these charts? I am thinking for example of tin or aluminum or oxygen.

Mr. CHASE. Yes, sir; there are other important materials. I thought you were going to mention limestone. We don't have prices of limestones, so I am sorry I cannot provide them. But we do have prices of tin and some of the other coating or alloying materials. We publish those prices regularly so we can furnish all the price data that we have for the record, if you would like.

With respect to oxygen, we have a special data problem. The kind of oxygen that is included in our index is in cylinders, and the steel industry does not use oxygen out of cylinders. The oxygen is generated at the site. The prices we have in our index reflect the prices of cylinders as much as it does the price of oxygen. We can furnish that, but it won't reflect the steelmakers' cost of oxygen.

Chairman DOUGLAS. In the case of aluminum, that is a competing rather than a complementing product, is it not?

Mr. CHASE. Yes. We can furnish prices of aluminum, if you like.

Senator MILLER. May I suggest if these are significant items—you mentioned limestone—tin and aluminum and anything else that you think is really a significant item, should be included to round off what you have given us here.

Mr. CHASE. In a way, Mr. Miller, we will do that in the next index we are going to talk about on chart 9, because we have taken into account all of the major materials insofar as we could in preparing this special index.

Representative CURTIS. May I say at this point, Mr. Chairman, that I think we need to know or have a chart showing approximately the percentage of costs of the various ingredients?

In answering Senator Miller's question intelligently, he says they are significant. We talked yesterday about labor costs. I don't know what the average percent of that is in relation to the product, relating to the cost of the raw materials. Is it 80 to 20?

Chairman DOUGLAS. Would the Congressman permit me?

Representative CURTIS. Certainly.

Chairman DOUGLAS. This is given on table 5 in the material which was introduced yesterday and it shows in 1961, employment costs were 40.1 percent of all costs. Material and service costs were 41.8 percent. So in 1961 they were approximately equal in importance.

In 1940 employment costs were 35.9 percent; material and service costs, 44.4 percent. But these are the two largest ingredients in final cost. There is no doubt about that. At present they seem to be of approximately equal importance, though originally material costs were more important than employment costs.

Representative CURTIS. Now I think it would be helpful if we could get some reference of the raw materials. How much is coke? How much is scrap? How much is new ore? Do you have that for a couple of years that would give us some reference here?

Mr. CHASE. Yes, sir. I would like to qualify the data because I am going to qualify the result similarly. We could supply the committee with a table which would show in this index which I am going to present now the relative importance of the principal materials.

Chairman DOUGLAS. Do you have that with you?

Mr. CHASE. Not in a form that can be used for the record.

Chairman DOUGLAS. I wonder if the members of the Bureau of Labor Statistics would telephone down for the weighting system which is used in the compilation of the composite basic raw materials data, because this is important.

Mr. CHASE. I have the table here. (See table D, p. 257.)

Chairman DOUGLAS. Of the weighting system?

Mr. CHASE. Yes, sir; but it has some other things on it. I could read from it but it needs to be cleaned up for the record.

Representative CURTIS. Perhaps you should give us a reference. I don't have any idea how much is coke and so on.

Mr. CHASE. I would like to qualify the figures before I give them to you in that these are not published figures by the Bureau of Labor Statistics up to this time. A study was made from the input-output studies that were conducted using 1947 data. We have brought this up to date with 1961 data. So that we have the figures here for 1947 and 1961. But these are unrefined figures and I hope they will be regarded as such because we are not drawing any precise conclusions from these figures.

For example, coke has a relative importance in 1947 of about 25 percent in the total input of materials.

Chairman DOUGLAS. Is this in terms of cost of materials?

Mr. CHASE. It is the value of materials that went into steelmaking, using AISI data on physical quantities and applying the appropriate price. Again, I would like to remind you that this price is the market price.

Representative CURTIS. Yes; this gives us some ratio which is valuable.

Chairman DOUGLAS. Coke, 25 percent?

Mr. CHASE. That was 1947.

Senator MILLER. On that point, that is 25 percent of 14 percent of total steel output, is that not right?

Mr. CHASE. No, sir; this represents total steel output, but the price measure that was used to value the coke that went into steelmaking represented only 14 percent of the coke.

Senator MILLER. Thank you.

Mr. CHASE. In 1961 that had dropped down to a little more than 17 percent. Another major item is electric power. In 1947 that was about 12.5 percent. In 1961, about 8.5 percent. Iron ore in 1947 was about 16.5 percent. I do not have the figure for 1961. But we can supply that.

Another important item in 1947, steel scrap, 26 percent, and in 1961 it dropped down to about 12 percent. There are a number of other items, ferromanganese about 5.5 percent in 1947 and a little more than 4 percent in 1961.

The other items are relatively small except oxygen and we do not have that for 1947. It was not an important factor then. But in 1961 it was a little more than 7.5 percent.

Chairman DOUGLAS. Which system of weights did you use in the preparation of your composite index?

Mr. CHASE. We used the 1947 weights up through 1956, and then linked an index with 1961 weights on to 1956.

Representative CURTIS. I was just roughing this out, in 1947, the ones you listed—coke, power, iron, scrap and manganese—are about 84 percent.

So our miscellaneous group would amount to another 15 or 16 percent.

Mr. CHASE. Yes, sir. There are quite a number of items. They will be shown in as much detail as we have in the material submitted for the record.

Senator MILLER. Those will include limestone and tin and aluminum.

Mr. CHASE. I think we have something on dolemite, but that is as near as we can come to it. That is the limestone.

Senator MILLER. What about tin and aluminum?

Mr. CHASE. Tin will be included.

Senator MILLER. Thank you.

Mr. CHASE. And the price series, also, for tin and aluminum and the other coating materials. In order to try to summarize this for the committee, we did prepare this special index. I would like to emphasize again that it is not a refined index and should be used only to indicate the general order of magnitude of the change in prices of raw materials that go into steelmaking.

Again we have the index of industrial crude materials in which these materials are included. It shows a very small increase up to 1962 over 1947, actually about 20 percent. In contrast with that the prices of steelmaking materials have gone up about 60 percent. That is up to 1957 they have gone up about 60 percent.

But then they dropped down since then about 10 percent from the 1957 peak, reflecting the decline in the price of scrap. That is primarily the reason for that decline since 1957.

Chairman DOUGLAS. Mr. Chase, I wondered if we can't make the text of the record even more precise than this. Do I understand that in 1956 the relative index for basic steel materials was 145.7 on table 9?

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. In 1957 this rose to 147.8. Will the other members of the Bureau of Labor Statistics check my citations? 147.8; is that correct?

Mr. ARNOW. For 1957 that is right, sir.

Chairman DOUGLAS. But in 1959 this fell to 140.2.

Mr. ARNOW. No; that was 1958.

Chairman DOUGLAS. In 1958 it fell to 140.2.

Mr. ARNOW. That is right.

Chairman DOUGLAS. In 1959 there was a slight rise to 141.1.

Mr. ARNOW. That is correct.

Chairman DOUGLAS. In 1960, there was a fall to 137.8.

Mr. ARNOW. That is right.

Chairman DOUGLAS. 1961 there was a slight rise to 138.8.

Mr. ARNOW. That is correct.

Chairman DOUGLAS. In 1962, a fall to 133.2.

Mr. ARNOW. That is right.

Chairman DOUGLAS. The composite index is therefore 12.5 percentage points less than it was in 1956.

Mr. ARNOW. That is percentage points.

Chairman DOUGLAS. Point I said, I did not say percentage. This is equal to approximately somewhere between 8 and 9 percent. Could you give this in percentages?

Mr. ARNOW. Roughly 8 percent; that is correct.

Chairman DOUGLAS. Now would you look at table 5 which you produced yesterday. Is it true that in 1961 material and service costs amounted to 41.8 percent of total costs?

Mr. ARNOW. That is correct, sir.

Chairman DOUGLAS. Employment costs were 40.1 percent.

Mr. ARNOW. That is correct.

Chairman DOUGLAS. And there has been, therefore, a decrease of approximately 8 percent in material costs since 1956 and in 1961 this comprised approximately 42 percent of total cost, or roughly three-sevenths of total cost.

Mr. ARNOW. That appears to be the case. These calculations from table 5, sir, are the various elements of cost as a percent of steel revenue.

Chairman DOUGLAS. Percentage of steel revenue rather than a percentage of total cost?

Mr. ARNOW. That is right. We have no figures on the relationship to total cost. This is the nearest approximation we could make.

Chairman DOUGLAS. It is very important to correct the record to that degree; that is even more important; 41.8 percent of total revenue experienced a decrease of approximately 8 percent in cost since 1956.

Mr. ARNOW. That is right, sir.

Representative CURTIS. Mr. Chairman, I think we are making an error in trying to draw these conclusions at this time, particularly as this data is not available on the composite of the weightings of material. Let me point out that I gave the figures as you gave them to me and, rough as they are, they showed that the different components, coke, power, iron ore, scrap, and manganese, totaled about 85 percent in 1947. I have the same figures on the other side and you didn't have iron ore so I will put it in at the same 16.5 percent. These five ingredients in 1961 totaled 56 percent. The miscellaneous ingredients in 1947 were 15 percent. If my arithmetic is right, the miscellaneous ingredients in 1961 are 43 percent. As I understand it, the other ingredients are the more costly ingredients. I hope that this has not been presented with the idea that, at this stage of the game with the press present, we are trying to draw the kind of conclusions the chairman wants.

Chairman DOUGLAS. Just a minute.

Representative CURTIS. No; I am going to make my statement. The record is here. These conclusions have been drawn. I notice some of the press reporting yesterday. I am very hopeful, as the chairman has indicated, that we are going to make an objective study, which means that we are not going to start drawing conclusions for the benefit of the newspapers or anybody else and to make headlines until we get the facts. Certainly the conclusion that the country wants, we want, and the people want, are the conclusions that we are discussing now. I think I have clearly demonstrated in these figures the fact that we didn't have present these figures of the composite of the ingredients going to make up raw materials which can create that impression. Just looking at this amazing switch in the mix indicates to me that this has been, as I tried to find out yesterday, a dynamic change in steel production over these past years. And with change entering that much, involving retraining, research and development, and other factors, we have an even more difficult task of trying to follow costs and cost comparisons.

I want to get to the bottom of this, Mr. Chairman, but I don't want to have conclusions drawn for the benefit of the press, not saying that you were doing that either.

Chairman DOUGLAS. I will let the Congressman finish his sentence and then I would like to have the privilege of replying.

Representative CURTIS. Certainly you may have the privilege of replying. We are all aware of the fact that the country is interested in this and the press is, too. But it is very easy for us to make suggestions which we know will be printed as conclusions. I hope I will try to refrain from drawing conclusions, and that we all do, except insofar as it helps us getting an objective study forth.

Chairman DOUGLAS. May I speak?

Representative CURTIS. Certainly.

Chairman DOUGLAS. I would like to point out that I have never, either yesterday or today, expressed any opinion as to the justification or lack of justification of a price increase. I have thought it appropriate to put into the record in words what the figures and the tables show. That is all I have done.

If the Congressman from Missouri objects to my asking whether there has been a decrease in the composite index of materials since 1956, he may do so. I am simply trying to bring out the facts. If he objects to my asking whether in 1961 material and service costs formed 41.8 percent, I thought originally of cost, but now I find of total revenues, he may do so. I am not trying to draw conclusions. I am trying to get facts.

The great difficulty we have is that we get frequently a lot of undigested material thrown at us and fail to get at the significant trends. It has always seemed to me that it was a function of a congressional committee to try to find the meaning of what was happening.

I may say that on this weighting system there is a difference in the weights for 1947 and the weights for 1961. This is a familiar difficulty in index number practice and theory, as to whether you use base-year weights or end-year weights. Irving Fisher devoted a book of some 700 pages to this and came out with the theory that what you should use is a geometrical average of the two. But this alternative method of splicing at an intermediate year is also justified. There is just one missing item in the list for 1961 as compared to 1947, and that is for ore.

Do you have the figures for 1961 for ore?

Mr. CHASE. No, sir; I don't have them on this table.

Chairman DOUGLAS. I wonder if you would supply them.

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. So that they may be printed, if they are the same as they were in 1947 then apparently the sum of the weights in 1961 amount to 64 as compared to 84.

Representative CURTIS. I think I make my arithmetic a total of 31—it should be 57—power is 8—so the figure is 57 percent in 1961 in relation to 85 percent in 1947. All I am saying is that this is an amazing mix. I didn't have oxygen because he didn't mix oxygen. I took the five ingredients, coke, power, iron ore, scrap, manganese, which gives us 85, if my arithmetic is right, and in 1961 the same 5 ingredients amount to 57.

Mr. Chairman, let me try to explain this. This is a delicate problem. I am not trying to say that in any sense you were doing this. Of course, I want you to ask these questions. I am trying to keep it in balance when we see what seems to me to be a major missing ingredient, such as this weighing and such a big shift so that we don't draw conclusions, as we are bound to before the press or anyone else, without getting this added material. When this comes in it still may prove the point that these ingredients and the costs have declined or at least held stable. It looks like this is such a big factor that we may find the costs have increased. I don't know.

Chairman DOUGLAS. Will the Department of Labor immediately telephone down to find out what the weights on iron ore are for 1961?

Mr. ARNOW. We have that, Mr. Chairman.

Chairman DOUGLAS. Would you supply that for the record?

Mr. ARNOW. 24.7 percent for 1961.

Representative CURTIS. That is up 8 percent from the other. That would give us 65 percent in relation to the 85 percent, still a very important shift.

Mr. CHASE. If the committee would like, I could read the relative importance of a number of other items right now.

Chairman DOUGLAS. Very good.

Mr. CHASE. I can go down the whole list for 1961. I think that is the important point.

Representative CURTIS. This is something you need to evaluate. It is my understanding that some of these items are the more costly items. In other words, they cost more than coke, but these are dollar figures anyway, so it wouldn't make any difference.

Mr. CHASE. I think there is some misunderstanding of what these figures actually represent and I would like to clear that up if we have an opportunity; that is, the difference between the 1947 and 1961 figures.

In 1961 we have data for more items, so that part of the shift in the relative importance is because we have more items included. For example, oxygen is a new item. So we are talking here about the total input.

Chairman DOUGLAS. But you don't put oxygen in the price index.

Mr. CHASE. We use a price in order to get the value of the oxygen input; yes, sir.

Chairman DOUGLAS. Where is your price for oxygen?

Mr. CHASE. We have a published price on oxygen, but it is oxygen in cylinders.

Chairman DOUGLAS. But that is not in your price of basic materials, is it?

Mr. CHASE. Yes, sir; in 1961.

Chairman DOUGLAS. I think that may be a defect in the index if the price is quoted in terms of cylinders when cylinder oxygen is not used.

Representative CURTIS. Even with your ingredients, we do have the miscellaneous category of 15 in which all these 1947 items would be included.

Mr. CHASE. We have made an adjustment in the price of oxygen in order to get the value to include in the weights. We are not using that price. It is an adjusted price.

Chairman DOUGLAS. What about these other commodities?

Mr. CHASE. In order to be sure that the list is complete, I will start at the top and go right down. First is coke. I am going to round the percentages. Coke, 17.3; natural gas, 1.5; electric power, 8.5; residual fuel oil, 2; iron ore, 16.7. That is the Bessemer type. Iron ore, non-Bessemer, 3.5; steel scrap, 11.8; manganese, 4.2; ferrosilicon, 0.6; aluminum ingot, 0.5; lead, 0.1; nickel, 2; tin, 1.8; liquid petroleum gas—I am sorry, I don't have the weight for that—oxygen, 7.6; sulfur, 0.1; coal tar pitch, 1.3; pig iron, basic, 1.4; pig iron, Bessemer, 0.1; ferrochromium, 2.2; cobalt, 0.6; titanium sponge, 1.2.

Chairman DOUGLAS. Do you have prices for all these commodities?

Mr. CHASE. We have prices or values from census data; yes, sir.

Chairman DOUGLAS. You have done so much, would it be ungracious to ask you if you would compute your index with all these commodities in rather than with these selected commodities in? Do you have all these commodities in?

Mr. CHASE. Yes, sir. All these commodities are represented in this index from 1956 on.

Chairman DOUGLAS. What is the total?

Mr. CHASE. These are relative importances and they total to 100.

Chairman DOUGLAS. In other words, the 1961 weights are more inclusive than the 1947 weights, rather than less inclusive.

Mr. CHASE. That is right.

Chairman DOUGLAS. Then it seems to me that a lot of the criticism which is advanced by the Congressman from Missouri—and I must admit that from the information you gave me I formed the same conclusion—doesn't hold. The index from 1956 on is even more thorough than the index from 1947 to 1956.

Mr. CHASE. Yes, sir. I said I thought there was a misunderstanding about this and I wished we could clear it up.

Senator MILLER. Mr. Chairman, may I make this point? Do I understand that the fluctuation or that there is a substantial fluctuation of these various items in the mix over that period of years?

Mr. CHASE. No, sir. In an index number of his kind, we have two weighting periods: one is 1947 and the other is 1961. We have this kind of information only for those 2 years. So that we have used the 1947 weights up through 1956. But from 1956 on we have applied the 1961 weights.

Senator MILLER. May I ask, Mr. Chairman, how you happened to arrive at that mix? For example, I can see what you are trying to come up with as a reasonable approach to this. I am curious as to why, for example, you would have applied the 1961 rather than the 1954 mix to 1955. What was the rationale behind this approach?

Mr. CHASE. We knew that there had been a change in the materials that were going into steelmaking over this whole period from 1947 to 1962. Oxygen is an important one of these materials. I can't say for sure that 1956 is any better than 1955 or 1957, but we had to select one year here to carry the index back with the new weights and it seemed to fit most closely in 1956, so that we linked at that point. You could link at another year.

Chairman DOUGLAS. May I ask this: Whatever you linked to, the record from 1956 on is for a composite index composed of items forming 100 percent of the cost of materials; is that correct?

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. So that it is a complete index from 1956 on. Again, may I ask for the record, and I ask the Bureau of Labor Statistics to check, is it true that in 1956 the index for basic steelmaking materials was 145.7? This is on table 9 of the material produced this morning.

Mr. Arnow. Would you repeat that again, sir?

Chairman Douglas. Is it true that in 1956 the index of prices for basic steelmaking materials on this composite index, comprising 100 percent of cost items, was 145.7?

Mr. Arnow. That is correct.

Chairman Douglas. Is it true that in 1962 the composite index of basic steel materials was 133.2?

Mr. Arnow. That is right.

Chairman Douglas. Is my subtraction correct, that there was a decrease of 12.5 points during this period?

Mr. Arnow. That is right, sir.

Chairman Douglas. Have you been able to round off to the nearest tenth of a percent what the percentage decrease was?

Mr. Arnow. 8.6 percent.

Chairman Douglas. 8.6 percent on items which, according to the table introduced yesterday for 1961, formed 41.8 percent of total revenue?

Mr. Arnow. That is right.

Chairman Douglas. And in 1956 formed 45.8 percent of total revenue?

Mr. Arnow. That is correct, sir.

Chairman Douglas. May I say I think it is appropriate that these facts should appear in the record in terms of words and not merely as items within tables.

Senator Miller. Mr. Chairman, might I ask Mr. Arnow a question?

Chairman Douglas. Certainly.

Senator Miller. In your response to Senator Douglas, for example, you were asked, "Is it true that the index was 145 in 1956?" Your answer was "Yes." This is what the chart shows.

Mr. Arnow. That is correct.

Senator Miller. But as I understand it from Mr. Chase, this is only an estimate based upon relating the 1961 mix back to 1955 or 1956—I am sorry; I forget which year you said.

Mr. Chase. 1956.

Senator Miller. Based on relating the 1961 mix back to 1956. By definition, that is merely an estimate. It is perhaps the best you can come up with, but no one really knows. Perhaps it should have been related to 1957. Maybe if you put all of your staff on this for a year, you might come up with the fact that it should have been July 1958 as the precise, accurate point of relating the mix of 1961 backwards.

I am not criticizing your efforts to come up with a reasonable conclusion here. I merely want to find out from you whether or not I am correct in deducing that this is your best estimate rather than a precise calculation in view of what Mr. Chase has said.

Mr. Chase. Mr. Chairman——

Senator Miller. I would like to ask Mr. Arnow that question.

Mr. Arnow. Yes; in all of these calculations there is naturally a certain amount of estimating. This is, as you indicated, our best estimate.

Senator Miller. And it is based on the relation of the mix of 1961 back to 1956?

Mr. Arnow. Yes, sir.

Senator MILLER. I think that should be in the record, Mr. Chairman, because, as I say, these gentlemen are trying to give us their best estimate. I would be very interested in seeing what the picture would look like if we related the 1961 mix back to 1958 instead of to 1956.

Chairman DOUGLAS. Before you answer, I would like to make a comment.

The most notable change in the mix from 1947 to 1961 has been the decrease in the importance of scrap from 26 to 12 percent. This has been going on during the entire period. Furthermore, scrap is the item which has shown the greatest decrease in price. Prices have fallen in half since 1956.

If you had taken the 1956 weights as a basis, you would have had a much greater decrease in the price of basic raw materials than if you took 1961. It seems to me that the Bureau of Labor Statistics has taken the most conservative system of weighting that they could. They have taken 1961, where scrap which had shown the greatest decrease in price assumed a lesser importance.

If you had given it the importance which it had in 1947 or 1956, the index would have fallen still more, so I submit this is a vindication of the method of the Bureau of Labor Statistics, and if there is an error, it is an error in understating the decrease in the prices of steel raw materials which actually occurred.

Senator MILLER. Mr. Chairman, I am perfectly willing to let the chips fall where they may. My question was the rationale behind the selection of 1956 as the beginning point for the 1961 mix. All I have had is that this is your best guess. Maybe it should have been 1957; maybe it should have been 1955. I don't know. I place a lot of reliance upon the judgment of the Department, but I think that the record ought to show the rationale behind which this selection was made.

Chairman DOUGLAS. May I ask the Bureau of Labor Statistics to do this: I would appreciate it if you would recompute this index from 1956 on, using 1947 weights throughout the period. If you have material for 1956, get another index from 1956 on, using 1956 weights.

I am willing to bet a hat with the Senator from Iowa that when you use these earlier weights, you will show a greater decrease in relative prices than when you use the later ones.

Will you do that?

Mr. ARNOW. We will do that.

Chairman DOUGLAS. Can you come in within the next week?

Mr. CHASE. Yes, sir, Mr. Chairman, I can bring that in Friday, as a matter of fact, if you would like.

Chairman DOUGLAS. Very good.

Mr. CHASE. I still think this is being misunderstood.

Chairman DOUGLAS. We will ask the Republican member of the staff to work with you and see that you do your cooking in the kitchen properly.

Senator MILLER. Mr. Chairman, before you and I each lose a hat on this——

Chairman DOUGLAS. I am not going to lose the hat. You are going to lose the hat. I am not going to lose any hat.

Senator MILLER. Would it be possible for you to calculate this by year according to mix?

Mr. CHASE. No, sir; we cannot do that. We can do it for three periods, 1947, 1954, and 1961. We can do it for three periods.

Senator MILLER. Why can't you do it for each year?

Mr. CHASE. We can do this. We can use the weights for each of these 3 years throughout the whole sieries, but we do not have the data available to do it for each year individually.

Chairman DOUGLAS. Have you taken up that bet? Has the bet been accepted?

Mr. CHASE. There was an industrial census in 1947, another one in 1954, and, of course, there was one in 1958. But we cannot do it for any other year.

Senator MILLER. I wouldn't want to put you to an undue amount of effort, Mr. Chase. I can't understand why you couldn't work up the mix for each year. Aren't those data available? Why would they be available for 1954 and not for 1955?

Mr. CHASE. Because of the industrial census being taken in that year.

Senator MILLER. In other words, the reason is that the industrial census is taken only once every 5 years.

Mr. CHASE. Yes, sir. It has not been regularly on that basis, I think, either.

Senator MILLER. I was wondering why it was spread between 1954 and 1961.

Chairman DOUGLAS. 1956 was the year, was it not?

Mr. CHASE. We actually computed this index with 1961 weights back to 1947. We had done that on a test basis. We computed with 1947 weights through 1962.

Chairman DOUGLAS. Have you got those figures with you?

Mr. CHASE. I don't have the figures with me.

Chairman DOUGLAS. Will you telephone down and get them, because I want to get that hat this morning before Senator Miller leaves the room.

Mr. CHASE. So you can see the difference that it makes. In index number construction, usually you don't want to carry weights for one period past the point where you have weights for another period, so at some point you will link the index with the beginning period weights and the index with end period weights.

And 1956 was the year in which these two fitted most closely. That is why we selected 1956. It has no other significance.

Senator MILLER. What about the 1954 weights, Mr. Chase?

Mr. CHASE. We will supply the index with 1954 weights also.

Senator MILLER. May I say, Mr. Chairman, I know the chairman doesn't wear a hat.

Chairman DOUGLAS. I have a hat; yes, indeed.

Senator MILLER. I would rather suggest an Iowa steak as the wager, and I would be more than happy to buy an Iowa steak because I know he will eat it.

Chairman DOUGLAS. I will be glad to have a steak. I will accept a steak.

Senator MILLER. By the way, you can prepare this on the 1954 mix, too.

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. Do you have this?

Mr. ARNOW. No, sir. It turns out we had some of the material here, but we don't have them in precisely that form. There would still have to be computations made, but they can be done by Friday.

Chairman DOUGLAS. Very well. The understanding between the Senator from Iowa and the chairman is that if the index, on the basis of 1956 weights, shows a greater decrease than on the basis of 1961, that he buys me a hat, and if he doesn't, I buy him a steak; is that right?

Senator MILLER. No; that is not right.

Chairman DOUGLAS. I need a hat much more than I need a steak.

Senator MILLER. We are going to have the 1954 weights.

Chairman DOUGLAS. No; it is 1956.

Representative REUSS. Besides, Friday is not a meat day.

Chairman DOUGLAS. I will take them for any year. The earlier weights will show a greater decrease in price than the later weights due to the decreasing importance of scrap which has experienced the greatest reduction in price.

Senator MILLER. I will be happy to buy the Senator a steak anyhow.

Chairman DOUGLAS. No, no; this is a bet. This is not merely a "Good Will Charlie" performance. This is a bet.

Senator MILLER. I would like to see the 1954 mix.

Chairman DOUGLAS. Certainly you can see that.

Senator MILLER. And the 1961 mix from 1954 on. But as I understand it, you do not have a 1956 mix; is that correct?

Mr. CHASE. That is right; yes.

Chairman DOUGLAS. Take the 1954, then; very good.

Mr. CHASE. Mr. Chairman, I was about at the end of my presentation. I wanted to show that, at the end of the period, prices of steelmaking materials as shown by this index have been about 45 percent above their 1947 level and basic steel prices had about doubled. This is from 1947 to 1962. It does not compare back to 1940.

Chairman DOUGLAS. May I ask one final question? Looking at table 9, is it true that basic steel products—and what are included under basic steel products?

Mr. CHASE. That is all types of semifinished and finished steel as it is known in the steel industry.

Chairman DOUGLAS. Is it true that on the basis of 1947–49 equals a hundred, their price in March 1963 was 186.3 or an increase of 86.3 percent; is that right?

Mr. CHASE. That's an increase of 86.3 percent over 1947–49 base; yes, sir.

Chairman DOUGLAS. Is it true that the increase in basic steel materials on the other hand was only 130.2, or an increase of 30.2 percent? Is that true? I wish you gentlemen from the Bureau would reduce the load upon Mr. Chase, who is testifying without tables in his hand, and whether you will confirm or correct the statements which I make. Is it true that the index for basic steel materials was 130.2?

Mr. ARNOW. Yes, sir.

Chairman DOUGLAS. Or the basic steel products had risen by 56 percentage points more than the index in basic steelmaking materials; is that right?

Mr. ARNOW. That is right, sir.

Chairman DOUGLAS. Have you finished?

Mr. CHASE. Yes, sir; that is the end of my presentation.

Chairman DOUGLAS. I think I have done enough questioning.

Congressman Reuss?

Representative REUSS. I have no questions other than to commend Mr. Chase for his very clear presentation.

Chairman DOUGLAS. I would like to join in that. It is proof that statistics can be interesting and at times strike fire.

Senator Javits.

Senator JAVITS. Mr. Chase, I would like to ask you a few questions, if I could. I am sorry I missed out on the hat and the steak.

Chairman DOUGLAS. If you want to bet on this, Senator, I will take you on, too.

Senator JAVITS. Of course, in New York we hardly bet on a hat or a steak.

Chairman DOUGLAS. I thought you liked to promote the sale of hats in New York? I don't accuse you of ever talking through your hat.

Senator JAVITS. Mr. Chairman, I am puzzled by one set of circumstances which perhaps Mr. Chase could help me with. I notice that as you examine table 5—would you be good enough to pick up table 5, directing your attention to the first two entries next to 1956—that 1956 represents the first year in which basic steel prices have materially outrun the rate of increase in the wholesale price index generally.

Mr. CHASE. Yes, sir.

Senator JAVITS. In view of that fact could you pinpoint for us what the other indexes show in that year, which would account for that particular change? That year seems to be the breaking point. And at that point basic steel prices according to your index materially outran wholesale commodity prices, and then continued that trend right through until today.

Mr. CHASE. Senator, if you will look at table 3 and chart 3 you will see the trend of wholesale prices as a whole. These are all commodities, including farm commodities and processed foods as well as the industrial commodities. This chart is so close that you may not be able to see the dates at the bottom here now, but you will notice that there was a sharp rise in this index in 1956, continued on in 1957, and 1958 and reached a peak in about 1959. That is the index of all commodities at wholesale. Since 1958–59 it has been almost on a level.

Senator JAVITS. I don't think that quite answers my question. I direct your attention to the fact that your basic steel price trend in 1956 is 241.4.

Mr. CHASE. Yes, sir.

Senator JAVITS. Using the base year of 1940 as a basic standard, the steel price index in 1956 is 241.4. Now I want to point out that in that same year the wholesale price index of all commodities is 223.7. That year, 1956, is the first year in which the rate of increase in basic steel prices sharply outstripped wholesale commodity prices generally and from then on that trend never changed until today. I ask you, where in the other indexes do we find an answer to that, if there is any? What other commodity price went up which went into steel-making which brought about that radical shift in that year? That year, 1956, apparently is the year of the turn, if you want to call it that.

Mr. CHASE. If you will look at the chart on table 6, you will see, for example, that steel scrap prices reached a peak in 1956. Then from that point on declined and were down rather sharply. Coke prices had not reached their peak at that point but continued on up after that. Then iron ore prices reached a peak in 1957 rather than 1956. But they have declined since that point.

Senator JAVITS. Composite scrap steel prices, according to the same chart, were fairly low at that period, were they not?

Mr. CHASE. Yes, sir; that is right.

Senator JAVITS. So there is no clue in any other of your charts really to account for the new trend which apparently developed in 1956; that is, the trend of a materially greater rate of increase in basic steel prices than the prices of all commodities of wholesale?

Mr. CHASE. I would say that is not evident from the materials we have.

Senator JAVITS. It may be from some other aspect of the operation but not this.

Mr. CHASE. That is right.

Senator JAVITS. Would it therefore be fair to say, Mr. Chase—you don't have to agree with me if you don't want to—that this is something which your charts leave to be explained? In other words, that they indicate an explanation desirable from other basic data for 1956 being the shift year as it were?

Mr. CHASE. Yes, sir, I would agree that it would bear investigation.

Senator JAVITS. Thank you very much. Thank you, Mr. Chairman. Mr. Chairman, I would say, coming from New York, I would be glad to bet you a dress for Mrs. Douglas.

Chairman DOUGLAS. Bet me what? That the use of 1961 weights——

Senator JAVITS. No, I am not getting into that.

Chairman DOUGLAS (continuing). Gives a decrease?

Senator JAVITS. No, I will just bet you tomorrow will be a nice day.

Chairman DOUGLAS. You are backing out of the bet, Senator Miller.

Senator MILLER. Just to make sure that what we have been talking about, chart 9, if I may refer you to that, Mr. Chase, contains nothing relating to labor costs, does it?

Mr. CHASE. No, sir, not directly.

Senator MILLER. Nothing relating to direct labor costs of the steel production?

Mr. CHASE. That is right.

Senator MILLER. It contains nothing with respect to capital equipment?

Mr. CHASE. That is right.

Senator MILLER. That is coming tomorrow. Nothing with respect to taxes?

Mr. CHASE. No, sir.

Senator MILLER. We will get those other figures and we have already had some on labor costs; yes, sir. We will have these other items later. I would like to ask you, Have you related the value of the dollar in terms, let us say, of 1939 when it was worth 100 cents in purchasing power, and today as I understand it is down to around 45 cents in purchasing power—have you related the decline in the purchasing power of the dollar to any of these charts that you have given us this morning? I am thinking particularly of the chart 1, the consumer price index.

Mr. CHASE. Yes, sir. We do that as a regular matter. We publish on our reports of the Consumer Price Index the purchasing power of the consumer dollar each month. We publish that figure. The series goes clear back to 1913.

Senator MILLER. Perhaps I didn't make my question quite clear. Have you related the purchasing power of the dollar to the Consumer Price Index, because as I understand it, the purchasing power of the dollar is determined on the basis of Consumer Price Index and the cost of services, including not only private but governmental services. At least it seems that in the Economic Indicators, which we have given us by the Council of Economic Advisers every month, that is the mix they use. I am wondering how the value of the dollar ties in specifically with the Consumer Price Index itself?

Chairman DOUGLAS. May I testify for the witness?

Senator MILLER. I would be very happy to have the chairman testify.

Chairman DOUGLAS. The purchasing power of the dollar is merely the reciprocal of the price index, 1 over the index number of prices. I will be very glad to work out these percentages for the Senator. Roughly it is 1 over—what is the index now?

Mr. CHASE. On a 1939 basis, it is 216, or thereabouts.

Chairman DOUGLAS. It is 1 over 216, which roughly is about 45 cents.

Mr. CHASE. Yes, sir, Mr. Chairman, thank you.

Chairman DOUGLAS. I knew you could answer it but I wanted to show that I knew how to compute it.

Mr. CHASE. Each of these does produce its own purchasing power, each of these indexes does, of the consumer dollar which does include consumer services but does not include government. Also there is a purchasing power of the wholesale dollar, and it does not include government. But it includes all commodities but no services.

Senator MILLER. Why not government?

Mr. CHASE. There is no index of the prices of government services. The only way that can be even indirectly found is through the implicit price deflator of the gross national product. That is the figure that is carried in the economic indicators.

Senator MILLER. What you are saying, then, is that the implicit price deflator has not been used in these consumer price indexes?

Mr. CHASE. Each index can be used to compute its own measure of purchasing power. To get the purchasing power of the consumer dollar, you use the consumer price index. To get the purchasing power of the wholesale dollar, the wholesale price index.

Senator MILLER. Since the implicit price deflator includes the cost of government services—I believe you just said it does.

Mr. CHASE. Yes.

Senator MILLER. Then we are not squarely on the purchasing power of the dollar by using the consumer price index, are we?

Mr. CHASE. That is true.

Senator MILLER. I do get back to my question. Have you attempted to relate the purchasing price of the dollar which includes that implicit price deflator to the consumer price index?

Mr. CHASE. I don't have the material here. I have done this from time to time because I was very much interested to see how different it was. Generally there is not a great deal of difference primarily because in the implicit deflator there are certain assumptions in regard to the deflation of government services. It is more or less in general line with the deflators for all other commodities and services. So it is bound to come out nearly the same.

Senator MILLER. May I ask if you have those figures if you could furnish them to us, say, for the last 5 years?

Mr. CHASE. Yes, sir.

Senator MILLER. Because it is merely a process of elimination, as I see it. Whatever the implicit price deflator shows in relationship to the consumer price index, that is the difference between the consumer price index and the implicit price deflator will, by process of elimination, reflect governmental service costs.

Mr. CHASE. Yes.

Senator MILLER. Would it be all right, Mr. Chairman, to have Mr. Chase provide that for the record?

Chairman DOUGLAS. Surely.

(The material furnished follows:)

*Purchasing power of the dollar, 1939–62, as measured by 3 different price indexes*

[Annual averages: 1939=$1]

| Year | Consumer price index | Wholesale price index | GNP implicit price deflator [1] |
|---|---|---|---|
| 1939 | $1.000 | $1.000 | $1.000 |
| 1940 | .992 | .981 | .983 |
| 1941 | .944 | .882 | .909 |
| 1942 | .853 | .781 | .807 |
| 1943 | .803 | .748 | .741 |
| 1944 | .790 | .741 | .723 |
| 1945 | .772 | .728 | .707 |
| 1946 | .712 | .637 | .645 |
| 1947 | .622 | .520 | .579 |
| 1948 | .578 | .480 | .543 |
| 1949 | .583 | .505 | .545 |
| 1950 | .578 | .486 | .537 |
| 1951 | .535 | .436 | .500 |
| 1952 | .523 | .449 | .490 |
| 1953 | .519 | .455 | .486 |
| 1954 | .517 | .454 | .481 |
| 1955 | .519 | .452 | .475 |
| 1956 | .511 | .438 | .460 |
| 1957 | .494 | .426 | .444 |
| 1958 | .481 | .420 | .434 |
| 1959 | .477 | .419 | .427 |
| 1960 | .470 | .419 | .421 |
| 1961 | .465 | .421 | .415 |
| 1962 | .459 | .419 | .410 |

[1] Computed by BLS from Department of Commerce data.

Source: Bureau of Labor Statistics.

Chairman DOUGLAS. Senator Jordan?

Senator JORDAN. No questions, Mr. Chairman.

Chairman DOUGLAS. Thank you very much, Mr. Chase. I want to congratulate you and the Bureau on the care which you have shown in the preparation of this material. I think that the morning should have developed the fact that in the last 7 years the prices of basic raw materials entering into steel from a 100 percent index—that is an index covering 100 percent of costs—has declined somewhere between 8 and 9 percent. Without wishing to humiliate anyone may I say if anyone wishes to find any fault with this material, whether from the Iron and Steel Institute or organized labor, they are invited to testify now. I don't want to humiliate them but I will simply say that if objections are being made to this material I would certainly invite them to testify now.

Mr. BERNSTEIN. Yes, sir.

Chairman DOUGLAS. Whom do you represent?

Mr. BERNSTEIN. United Steelworkers. We don't have an objection. We think, however, that it would help to present a more complete picture if we made reference to the fact that during this period under discussion there has been a considerable change in the source of iron ore. That we have increased imports of iron ore considerably.

These imports all come or practically all come from the foreign operations of the American steel companies. They are importing their iron ore which they mine abroad. We do not know what has happened to the prices. They set their own prices. We do not know how they set them. They must establish some price for customs purposes. But we do not know what has happened to the price picture there because as I say the prices don't mean anything except for customs records. We think it would be well if the record would show the change in the sources of iron ore over this period.

Chairman DOUGLAS. Do you have statistics on the relative proportion of ore from Labrador and Venezuela now as compared with 1956?

Mr. BERNSTEIN. Yes. This is provided by the Bureau of Mines and we have this record for each month.

Chairman DOUGLAS. Would you submit that for the record?

Mr. BERNSTEIN. Yes, I should be glad to.

Chairman DOUGLAS. Are there any other comments?

We will recess until tomorrow morning when we will discuss capital per unit of output and the Department of Commerce will be responsible for the presentation.

We will meet in this room at 10 o'clock.

(Whereupon, at 11:55 a.m., the committee recessed until 10 a.m. on April 25, 1963.)

# STEEL PRICES, UNIT COSTS, PROFITS, AND FOREIGN COMPETITION

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THURSDAY, APRIL 25, 1963

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
*Washington, D.C.*

The joint committee met at 10 a.m., pursuant to recess, in room 318, Senate Office Building, Senator Paul H. Douglas (chairman of the joint committee) presiding.

Present: Senators Douglas, Pell, Javits, Miller, and Jordan; Representatives Reuss and Curtis.

Also present: James W. Knowles, executive director.

Chairman DOUGLAS. The committee will be in order. This is the third of our hearings. The first hearing we considered labor costs per unit of output. Yesterday we considered costs of raw materials per unit of output. Today we are going to consider capital per unit of output and related investment data. We are very happy to welcome an old friend, Mr. Louis J. Paradiso, who is Assistant Director and Chief Statistician of the Office of Business Economics. Mr. Paradiso, you may proceed in your own way.

## STATEMENT OF LOUIS J. PARADISO, ASSISTANT DIRECTOR AND CHIEF STATISTICIAN, OFFICE OF BUSINESS ECONOMICS, U.S. DEPARTMENT OF COMMERCE, ACCOMPANIED BY PAUL McGANN, BDSA; MURRAY FOSS, OBE; AND JACOB LEVIN, DEPARTMENT OF COMMERCE

Mr. PARADISO. Thank you, Mr. Chairman.

Mr. Chairman and members of the committee, Dr. Richard H. Holton, Assistant Secretary of Commerce for Economic Affairs, asked me to prepare and make this presentation since it involves data and other materials of a technical nature.

In the attached materials, I have presented some selected data relating to the physical and financial aspects of the steel industry, one of the few industries for which there is a wealth of information available. This is true not only for the industry as a whole, but also for individual companies. However, there are still many gaps in the available data and information. It is not my purpose to present a mass of data, much of which is available in trade publications, in AIS compilations, and in various hearings before congressional committees. Rather, I have selected certain data and relationships which I hope will throw light on the nature and characteristics of this important industry. The industry's $15.7 billion sales comprised 3.8 percent of all manufacturing sales in 1962. In terms of income originating, the steel industry accounted for 6 percent of all income originating in manufacturing industries in 1962 and 1.7 percent of total national income in that year.

The industry depends on demands stemming from other industries. In implementing these demands, however, the industry has an important effect on numerous suppliers for its products, on transportation demand, on jobbers' activities, and on various other operations affecting a broad spectrum of the economy. It is an industry beset by severe competition both from domestic sources and from abroad. In addition, less steel is being utilized in many products either because of improved technology or because of changes in tastes and shifting requirements of consumers of steel products. A clear illustration is afforded by the smaller steel requirements of the automobile industry which resulted from shifts to compact cars.

In addition, on a number of occasions the industry operations have been greatly affected by strikes or threats of strikes. This has been reflected in a bunching of orders and with a subsequent reduced business when steel consumers liquidate their excess stocks. Demand for steel products is elastic relative to that for other durable goods.

Chairman DOUGLAS. Doctor, do you have statistics to back up that statement?

Mr. PARADISO. I do. These statistics will be shown later in this statement.

Chairman DOUGLAS. This is very important because there has been a great dispute on whether the demand for steel is elastic or inelastic.

Mr. PARADISO. Yes.

Chairman DOUGLAS. I regard this as one of the most important issues. I remember papers were produced, I believe before the Temporary National Economic Committee 25 years ago by Mr. Yntema, who is now vice president of Ford, which seemed to indicate that demand was inelastic.

Mr. PARADISO. I think, Mr. Chairman, that I am not discussing here demand elasticity with respect to price, but demand elasticity with respect to durable goods output. That is what I am describing. In other words, I am saying here that demand for steel products is elastic relative to that for other durable goods, I have not made any statement here with respect to price elasticity.

Chairman DOUGLAS. Are you going to present any evidence on price elasticity?

Mr. PARADISO. I am not going to present any evidence because most of the work we have done on price elasticity shows that there is very little price effect on demand in the steel case. I agree with you, studies made both before the TNEC hearings as well as others that have been made, have shown that as far as price elasticity is concerned, it is very inelastic. Demand is very inelastic. I am talking about elasticity in relationship to demand for durable goods, and you can see it in the chart which I will have a little later on.

If we assume that there are no further inroads made in the industry through more intensive competitions, and if the economy should achieve full employment say by 1966, steel ingot production could be expected to reach 160 million tons in that year, on the basis of past relationships. This would be a record high rate of production. If, on the other hand, it is assumed that the competitive inroads made on the domestic industry were to slow down somewhat as a result of special efforts made by the steel industry, the projected rate of production would be 150 million tons. It would result in a comfortable rate of operations with a consequent improved profit ratio to stockholder's equity. Furthermore, since profits are also affected by high rates of utilization, this would provide a large cash flow to permit higher investment outlays in new and more efficient facilities.

With the permission of the chairman and the committee, I shall submit and discuss several charts and accompanying materials bearing on what I consider to be important aspects of the industry. In a later presentation, I shall deal primarily with the financial phases of the industry.

Now let us turn to chart 1 and table 1 and here we are going to talk about steel operations and the current picture.

CHART 1

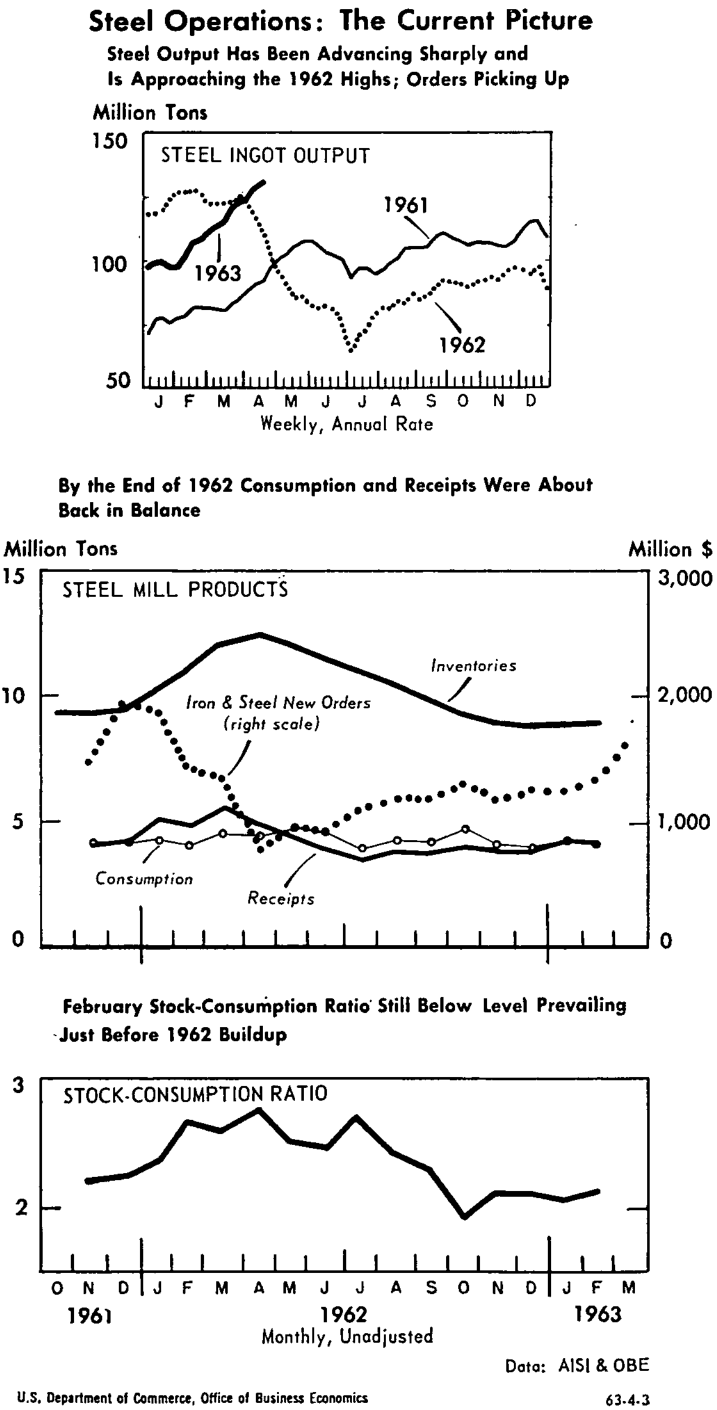

Steel Operations: The Current Picture
Steel Output Has Been Advancing Sharply and
Is Approaching the 1962 Highs; Orders Picking Up
Million Tons
150
100
50
STEEL INGOT OUTPUT
1961
1963
1962
J F M A M J J A S O N D
Weekly, Annual Rate
By the End of 1962 Consumption and Receipts Were About
Back in Balance
Million Tons
Million $
15
10
5
0
3,000
2,000
1,000
0
STEEL MILL PRODUCTS
Inventories
Iron & Steel New Orders
(right scale)
Consumption
Receipts
February Stock-Consumption Ratio Still Below Level Prevailing
Just Before 1962 Buildup
3
2
STOCK-CONSUMPTION RATIO
O N D J F M A M J J A S O N D J F M
1961
1962
1963
Monthly, Unadjusted
Data: AISI & OBE
U.S. Department of Commerce, Office of Business Economics
63-4-3

TABLE 1.—*Steel industry: Production of steel ingots and castings; new orders, iron and steel industry; receipts, consumption, and month-end inventories, and stock-consumption ratio (manufactures only)*

| | Production of steel ingots and castings (unadjusted) (million net tons) | New orders, iron and steel industry (seasonal adjustment) (dollars in billions) | Consumption (manufacturers only) steel mill shapes (unadjusted) | | | |
|---|---|---|---|---|---|---|
| | | | Receipts | Consumption (million net tons) | Month-end inventories | Stock-consumption ratio |
| 1961—October | 9.2 | 1.5 | | | 9.4 | |
| November | 8.7 | 1.5 | 4.1 | 4.2 | 9.3 | 2.21 |
| December | 9.6 | 1.9 | 4.3 | 4.2 | 9.4 | 2.24 |
| 1962—January | 10.4 | 1.9 | 5.1 | 4.3 | 10.2 | 2.37 |
| February | 9.7 | 1.4 | 4.9 | 4.1 | 11.0 | 2.68 |
| March | 10.6 | 1.3 | 5.6 | 4.6 | 12.0 | 2.61 |
| April | 9.2 | .8 | 4.9 | 4.5 | 12.4 | 2.76 |
| May | 7.5 | 1.0 | 4.5 | 4.8 | 12.1 | 2.52 |
| June | 6.7 | .9 | 3.9 | 4.6 | 11.4 | 2.48 |
| July | 6.2 | 1.1 | 3.5 | 4.0 | 10.9 | 2.72 |
| August | 7.1 | 1.2 | 3.9 | 4.3 | 10.5 | 2.44 |
| September | 7.3 | 1.2 | 3.7 | 4.3 | 9.9 | 2.30 |
| October | 7.8 | 1.3 | 4.1 | 4.8 | 9.2 | 1.92 |
| November | 7.8 | 1.2 | 3.9 | 4.2 | 8.9 | 2.12 |
| December | 8.1 | 1.2 | 3.9 | 4.1 | 8.7 | 2.12 |
| 1963—January | 8.4 | 1.2 | 4.4 | 4.3 | 8.8 | 2.07 |
| February | 8.2 | 1.3 | 4.2 | 4.2 | 8.9 | 2.14 |
| March | 10.1 | 1.6 | | | | |

Source: American Iron & Steel Institute and Department of Commerce.

Chairman DOUGLAS. Do you have larger charts?

Mr. PARADISO. I am sorry, Mr. Chairman, we did not have time to make larger charts. So we have to rely on the small charts accompanying the text. Steel production and the rate of steel operations also have been rising sharply in recent months after a relatively slow beginning last August. In March of this year, steel ingot output was about 20 percent above the fourth quarter of 1962, after seasonal adjustment. The March rate of operations was equivalent to about 73 percent of estimated capacity as of January 1, 1963, as compared with 62 percent in the final 3 months of 1962 based on a somewhat lower capacity base. I might make later a little remark about this capacity figure for January 1, 1963. For the first 3 weeks of April, production advanced further, reaching the highest level since April 1960, an annual rate of close to 130 million tons. This, by the way, being unadjusted for seasonal variations, and some 8 percent above the March weekly average.

Consumer demand for steel is rising. In March alone, new orders received by the steel industry rose by over 20 percent on top of an 8-percent rise in February. There is considerable evidence that these orders reflect, in part, a rebuilding of depleted stocks by steel users.

From April, last year, to November, raw material inventories of steel users were being steadily liquidated. Notice that the bottom panel of the chart shows that the current stock consumption ratio of manufacturers, consumers of steel, is still relatively low. Steel producers are now operating at rates well above consumption by users, suggesting that some inventory accumulation is now occurring to build stocks beyond current or prospective requirements in order to meet possible unfavorable developments as the outcome of the labor-management negotiations to begin in May.

The chart to which I am referring is chart 1, and I would like to point out particularly the top panel of that chart which shows the very steep, sharp rate of increase in steel ingot output that is going on at the present time.

Chairman DOUGLAS. Do you have an estimate as to what that capacity in the steel industry is now?

Mr. PARADISO. The Office of Business Economics has made an estimate of the capacity of the steel industry as of January 1, 1963. As you know, the Iron and Steel Institute discontinued publication of its capacity after 1960. I regard a capacity rate as being exceedingly important for analytical purposes. The industry has perhaps very good reasons for discontinuing the publication of such a figure. However, what we have done is projected the 1960 figure at a rate of 1½ percent per year to come up with a number of 155 million tons of capacity as of January 1, 1963.

Chairman DOUGLAS. One hundred and fifty-five million tons?

Mr. PARADISO. Yes, of steel ingot capacity. However, there have been estimates, Mr. Chairman, of a figure even higher than that. I have seen the figure of around 160 million tons of capacity. So the figure here is not an accurate one. It is one that is based on assumption. We use it because of its great importance for analytical purposes. In my judgment, when I hear that the steel industry is producing, say, 2 millions tons per week, while it is a number, I am not able to judge this number as well as I would judge a rate of capacity operations. Consequently, we have made this projection, which should be regarded only as an approximation and nothing more.

Chairman DOUGLAS. May I ask this? On the basis of these figures, what was the percentage of capacity utilized in 1961, 1962 and what is the percentage for March?

Mr. PARADISO. I have these in a subsequent table, Mr. Chairman, and I will look that up. This is given in table 6, and in table 6 the capacity for your question was for 1960. It was 148.6 million tons in 1960. We raised that to 151 million tons in 1961, 153 in 1962, and 155 in 1963. We don't have the March figures because these all refer to capacity at the beginning of the year.

Chairman DOUGLAS. The figures of capacity for 1960 were 66.8 percent on the basis of the American Iron and Steel Institute figures, and then the figures for 1961 and 1962 are 65 and 64 percent?

Mr. PARADISO. That is right.

Chairman DOUGLAS. So they have been operating roughly at two-thirds of capacity and one-third capacity lying idle?

Mr. PARADISO. That is right.

Chairman DOUGLAS. How many tons of steel were produced in March? Do you have those figures, or for February?

Mr. PARADISO. The production of steel in March was about 10 million tons. But for April alone we estimate an annual rate of almost 130 million tons which, by the way, involves accumulation of steel for two reasons; namely, for the rebuilding of these stocks held by steel consumers, as well as some hedging for a possible steel strike.

Chairman DOUGLAS. If my arithmetic is correct that is approximately 84 percent of estimated capacity?

Mr. PARADISO. Based on 155 million tons of capacity as of January 1, you are right. If you base it on 160 million tons, it is around 80 percent.

Chairman DOUGLAS. Thank you.

Representative CURTIS. Mr. Chairman.

Chairman DOUGLAS. Yes, Mr. Curtis?

Representative CURTIS. I think it is important, in as much as this is interjected, to get into the reliability of capacity figures. As I understand it, and in fact we had testimony before this committee when we had a study of industrial capacity, the reason that the Iron & Steel Institute dropped the figure on capacity was because it was so misunderstood and so difficult to obtain a meaningful figure; am I not correct?

Mr. PARADISO. You are quite correct. There is substitute ability. This is very similar to the situation in the paper industry.

Chairman DOUGLAS. May I comment on that?

Representative CURTIS. Surely.

Chairman DOUGLAS. The iron and steel industry has been embarrassed for many years that their own figures show a very large percentage of the capacity which they said they possessed not being used. There may have been another motive for discontinuing the figures on capacity.

Representative CURTIS. I want to say I think that is a very unfair remark, to impugn the motives of an industry, unless the gentleman from Illinois can back that up.

Chairman DOUGLAS. I did not impugn that. I said it might well have been.

Representative CURTIS. That is the old technique that has been employed for some time and I know the gentleman from Illinois has criticized that technique on the floor of the Senate. Unless the gentleman is willing to back that up, I think he should withdraw even a suggestion.

Chairman DOUGLAS. I don't see any reason for withdrawing any statement. It is well known that on their own figures a very large percentage of unused capacity was shown, and this constantly raises the question in the mind of the public why cannot the industry utilize a larger percent of capacity?

Representative CURTIS. Exactly. It gets down to the question of what are the problems in measuring capacity. If this is going to remain an objective study, and I hope it will, we need to get into those reasons and not impugn motives. One of the major reasons given—I can give some others, but I am not an expert in this at all—is that when you have dynamic technological changes in an industry, you have an increased incidence of obsolescence. There is also a question of what is obsolete capacity and what is not. That is one of the things. The use of oxygen, which is a detail in this picture, directly relates to capacity. As I understand it, if you put oxygen into some of the present producing units, you can increase capacity considerably. Another very important factor is the development of stronger steel, which means that for the same tonnage, I don't know how to put this, a purchaser, who would buy a certain tonnage of steel for a certain use, can now buy half the tonnage and have the equivalent results.

Mr. PARADISO. Mr. Curtis, I have made a very considerable study of the steel industry but it was many, many years ago. In fact I wrote a book on the capital requirements of the steel industry. At that time I paid particular attention to this question of measuring capacity. The capacity is measured on an engineering basis. In other words, engineers actually go through and see how much can actually be produced by the blast furnace and the open hearths, say over a period of a week. Then this is multiplied to obtain an annual rate. It seems to me that a careful study perhaps could still be made showing how much capacity the industry really has.

I don't think there is any question, that with the amount of money that the industry has been spending in the last several years, that the capacity has risen. The question is, how much it has risen? I think we have used a rather conservative figure.

Representative CURTIS. It is not only how much has capacity risen, but also what is the incidence of obsolescence. As I understand it, last year steel spent about a billion dollars to increase capacity. I surely assume it was not redundant capacity, if they had been operating at a 60-percent capacity. But it was obviously for a new product or a new way of making something, which would render some capacity obsolescent in its wake.

I know you have tried to evaluate that, too.

Mr. PARADISO. Yes.

Representative CURTIS. The point I think this committee needs to make, if we are going to do an objective study, is to get into the details that you use, Mr. Paradiso. I certainly respect your reason for wanting to have some sort of figure, even though it has to be based on many, many assumptions. But I think until there is contrary evidence, we can assume that the reason the Iron & Steel Institute abandoned these figures is because they felt it was too difficult to come up with meaningful figures, and that the figures they might print would be misused and misunderstood. I think this is their reason. I respect them for it.

But I am willing to examine it, Mr. Chairman, to see if there is merit to it. This committee can do exactly that and should. Now I have one other general question on this. The fact has been supplied to me by the iron and steel people that our steel capacity over 60 years, before World War II, would run around 70 percent. The post-World War II capacity, when it did go up—and it went up over a hundred percent I remember in 1 year during the Korean war—was most unusual. This is understandable, too, because during World War II we had a pent-up demand for autos, consumer durables, structures, and so forth. So in talking about capacity I think we need to relate it to what is the norm. I think we also should have greater capacity.

Mr. PARADISO. That is right.

Representative CURTIS. Would you comment on that?

Mr. PARADISO. Yes. Unless the Iron & Steel Institute people contradict this, it is my understanding that these figures on capacity, are what is called practical capacity. That is, they make some allowance for the fact that every once in a while they have to repair the equipment and reline furnaces. So there have been at times, particularly in the twenties, two figures published. One, the theoretical capacity, and one, a practical capacity, which is something like 10 percent below theoretical. This is the reason why, at times, the industry can operate at or above practical capacity. As a matter of fact, it happened once during the postwar period when they operated above the capacity rate. So it is true that the industry does have and has to have means for operating at a rate which would exceed the practical capacity rate.

Representative CURTIS. The practical capacity rate is sound, because for the long pull, you must have a shutdown for proper maintenance. You can eat into your capital by operating beyond the 100 percent, which you certainly can do in an emergency.

Mr. PARADISO. That is correct.

Representative CURTIS. That is true in any area. In flying airplanes, you have certain routine down time for your engines and so forth. You do not have to do it. Good safety and long-range planning requires that you should, but in an emergency you can fudge on that. I think we would recognize that over the long pull we would be eating into capital by operating beyond 100 percent capacity.

Mr. PARADISO. I respectfully suggest that we continue with the analysis in terms of using what I regard as rather conservative capacity estimates that we made since 1960 because there are quite a number of implications that are implied in the subsequent part of my testimony based on that.

If the iron and steel industry should object strenuously to these estimates as being considerably in error we shall be glad to take that into consideration.

I just don't believe that we have really gone overboard in terms of putting a number down that is too high.

Representative CURTIS. I am very happy to have you go forward, and I am very happy you brought these figures in, Mr. Paradiso. All I am trying to point out, again like yesterday, is that my colleague, the chairman, seems to want to draw conclusions from incomplete data. I just want to get the data all in. It is not in. But on the other hand, what you are presenting is important and has value.

If this committee is going to be objective, let us all try to refrain from drawing conclusions until we can evaluate the facts. That was the reason for my entire position.

Chairman DOUGLAS. Since the gentleman from Missouri has raised this question, may I say that the only conclusions which I have drawn were based upon specific facts produced, and they have largely consisted of repeating the statistical evidence which is before us.

If the gentleman from Missouri says that no member of this committee should offer any comments or have any testimony emphasized, I will be very glad to have us go into executive session. He can propose that as a rule for the committee.

Representative CURTIS. I would say, Mr. Chairman, it is a matter of self-discipline because if this is an objective study, you know we want to get all the facts before we reach conclusions.

As I said yesterday, we know that the public and the press are waiting for conclusions. This is complicated material, and they will grab upon a conclusion that you make or I might make and it will become news. I think we should refrain from that if we are going to have an objective study. It is a matter of self-discipline.

Chairman DOUGLAS. I think we should go into executive session now in an adjoining room to decide whether or not members of the committee are to make any comments.

Representative CURTIS. It is a matter of self-discipline.

Chairman DOUGLAS. I suggest the gentleman from Missouri needs some self-discipline, too.

Representative CURTIS. That is all right. You can say that.

Chairman DOUGLAS. We will recess.

Representative CURTIS. I am not going to propose any rules. This is a matter of your own integrity.

Chairman DOUGLAS. I will answer for my own integrity and need not have it questioned by the gentleman from Missouri, either.

Representative CURTIS. You questioned mine.

Chairman DOUGLAS. I did not question your integrity.

Representative CURTIS. You certainly did.

Chairman DOUGLAS. I would suggest that the witness proceed, that we all refrain from asking questions while he proceeds and then the questioning will be at the end of his testimony.

Representative CURTIS. That would be helpful.

Senator JAVITS. Mr. Chairman——

Chairman DOUGLAS. Having imposed this rule, I will be glad to recognize the Senator from New York on a procedural matter, but I think unless there is objection that we should refrain from asking any question.

Senator JAVITS. The Senator from New York reserves the right to object, and the committee has not voted on this question of interrupting the witness. As the Chair knows, I am tremendously respectful of him but I did wish to make an observation on this point if the chairman would allow me under my reservation. I deeply feel that members should have perfect freedom to comment, to question in any way that they choose. We are all over 21 and if we think any unjustified conclusions are being drawn, we can rebut them. I think if we get into arbitrary limitations upon asking questions or making comments it will make a mockery of our hearing.

I respectfully submit that.

Chairman DOUGLAS. That is my own view.

Representative CURTIS. It is mine, too.

Senator JAVITS. I would respectfully suggest to the Chair that the rules of the committee continue as before with recognition being when the Chair recognizes whatever time may be and members be perfectly free to proceed by question or observation as they normally do in committee hearings.

Chairman DOUGLAS. Those in favor signify by saying "aye." Opposed. It is carried.

Senator MILLER. Mr. Chairman, may I ask whether or not in view of the vote that was just taken it is understood that we will continue to have at the Chair's pleasure the opportunity to ask pertinent questions like we did yesterday as we go along?

Chairman DOUGLAS. Yes; that is right. It should be remembered that on the first day I requested that members of the committee not monopolize time, that they be brief in the questions they ask and confine these questions to the testimony which is before us.

Senator MILLER. If that is so, I wonder if I might ask two brief questions of the witness?

Chairman DOUGLAS. Certainly. First, may I say that Congressman Reuss had previously asked, and since we have recognized one gentleman from the minority, I think it is proper that we recognize him.

Representative REUSS. I had thought, Mr. Chairman, that the usual procedure of the Joint Economic Committee was to let the witness finish his statement and then for members to be recognized in order from both sides for 5 minutes each, and then to go through that as many times as is necessary so that everyone had his day in court.

I assumed when I voted for the little motion of our friend from New York, Mr. Javits, that that was what we were doing, and I would hope that the witness, by and large, could complete his statement because then we know what his total statement is. Otherwise, we are forever stopping him on early portions of his delivery which he is going to get to later anyway.

I, in fact, had a question but I am going to withhold it until he is through.

Chairman DOUGLAS. Senator Miller?

Senator MILLER. These are very brief and I do think they are right on the point and perhaps they can be helpful. Mr. Paradiso, in your statement on chart 1, table 1, you say steel producers are now operating at rates well above consumption by users.

Do you have an estimate of the amount of production that would be required to meet the current requirements of consumption? Do you understand what I am getting at?

Mr. PARADISO. Yes.

Senator MILLER. Your statement indicates there is a piling up of inventories. I am wondering if we could have your judgment on what is the productive capacity necessary to meet consumer demand without the pileup of inventories.

Mr. PARADISO. There is sufficient capacity now to meet all present consumer demands of all types, and producer demands.

Senator MILLER. But the question is, What is the amount of the productive capacity that is necessary to meet that consumer demand? Let us say a normal demand.

Mr. PARADISO. I would say that the first-quarter rate of production has been around 105 million tons, and that this has been roughly the amount of consumption. By the way, we don't have very recent figures on consumption and the receipts. But the 105 million tons of steel production would be roughly, in my judgment, the amount that is equivalent to the current consumption rate.

The reason why I say that the industry is producing more than is currently being consumed is because of the fact that they have received such large orders from the steel consumers and orders received by the machinery industry in the first quarter of this year were somewhat lower.

In other words, they had not received large orders to warrant their placing a 20-percent increase in orders in March over February.

Senator MILLER. I understand. That 105 million tons would have included requirements for export as well as domestic consumption?

Mr. PARADISO. Yes.

Senator MILLER. The second question I had relates to capacity, the 155 million or 160 million ingot tons capacity which you referred to.

Do you have any breakdown of that capacity according to quality? You call it practical capacity but do you have a breakdown of the practical capacity, let us say, into two categories, modern and competitive, particularly competitive with foreign competition?

Let us say less desirable and leading into obsolescence. Do you have any breakdown on the qualitative portions?

Mr. PARADISO. I do not and I have not seen such a breakdown.

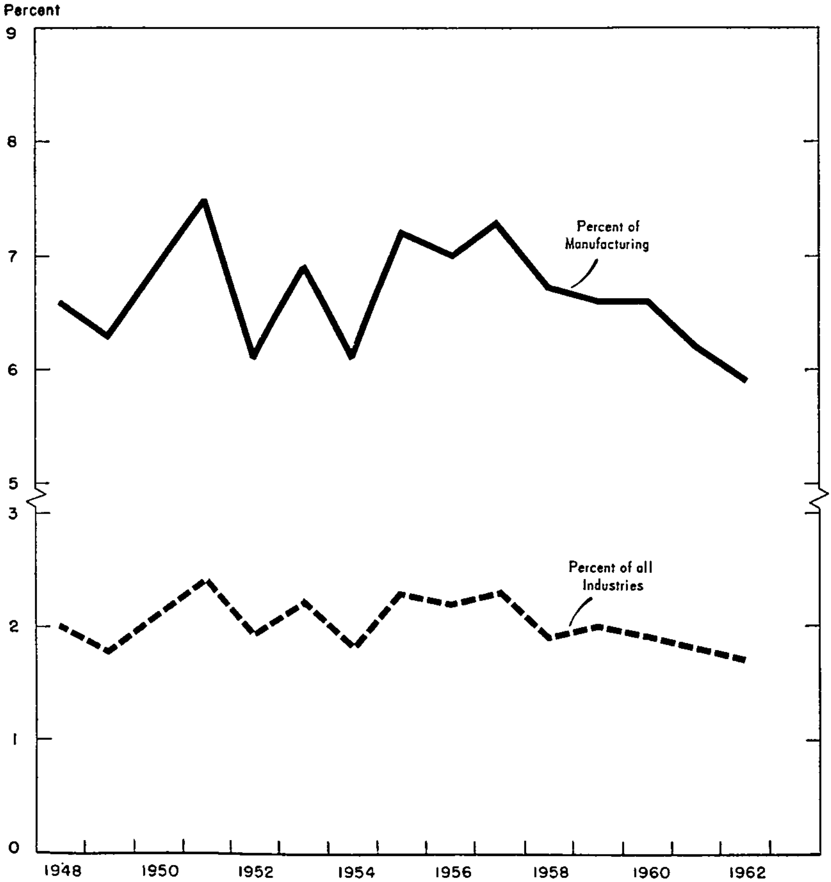
Senator MILLER. Thank you very much.

Chairman DOUGLAS. Will you continue, Mr. Paradiso?

Mr. PARADISO. Now, turning to table 2, this table, and the accompanying chart, shows the relative importance of the iron and steel industry in the overall economy and in manufacturing as measured by what we call most overall indication; namely, income originating. Income originating is the net value added to production by the industry.

CHART 2

**National Income Originating in the Iron and Steel Industry as a Percent of National Income Originating in Total Manufacturing And in All Industries**




U.S. Department of Commerce, Office of Business Economics

TABLE 2.—*National income originating in the iron and steel industry, in total manufacturing, and in all industries*

| Year | Amount (millions of dollars) | | | Iron and steel as percent of— | |
|---|---|---|---|---|---|
| | Iron and steel | Total manufacturing | All industries (total national income) | Total manufacturing | All industries |
| 1948 | 4,377 | 66,777 | 223,487 | 6.6 | 2.0 |
| 1949 | 3,951 | 62,702 | 217,690 | 6.3 | 1.8 |
| 1950 | 5,155 | 74,371 | 241,876 | 6.9 | 2.1 |
| 1951 | 6,614 | 88,495 | 279,313 | 7.5 | 2.4 |
| 1952 | 5,545 | 90,172 | 292,155 | 6.1 | 1.9 |
| 1953 | 6,762 | 97,953 | 305,573 | 6.9 | 2.2 |
| 1954 | 5,547 | 91,057 | 301,794 | 6.1 | 1.8 |
| 1955 | 7,510 | 104,490 | 330,206 | 7.2 | 2.3 |
| 1956 | 7,652 | 109,268 | 350,836 | 7.0 | 2.2 |
| 1957 | 8,266 | 112,476 | 366,943 | 7.3 | 2.3 |
| 1958 | 6,987 | 103,817 | 367,384 | 6.7 | 1.9 |
| 1959 | 7,908 | 119,929 | 400,481 | 6.6 | 2.0 |
| 1960 | 8,075 | 121,987 | 415,480 | 6.6 | 1.9 |
| 1961 | 7,512 | 121,704 | 427,829 | 6.2 | 1.8 |
| 1962 | 7,831 | 133,586 | 458,002 | 5.9 | 1.7 |

Source: U.S. Department of Commerce, Office of Business Economics.

Mr. PARADISO. In general, it equals the market value of an industry's product plus any subsidies it receives, less all nonfactor costs incurred. That is, purchases from other industries, indirect business taxes, business transfer payments, and capital consumption allowances.

I would have preferred to have made an estimate, by the way, of the gross production originating in this industry, but we don't have enough figures to do that. Another way to measure income originating is to simply add the labor costs to the corporate profits, to the non-corporate-business income, and to net interest. That is another approach to measuring income originating.

Broadly speaking, the iron and steel industry has accounted for 2 percent of the Nation's total production and for 6½ to 7 percent for manufacturing output. The peaks and troughs shown on the chart reflect the highs and lows of business cycle activity.

This points up the well-known fact that the steel industry is considerably more sensitive to cyclical changes in economic activity than most other industries. Apart from changes reflecting the business cycle, the economic output of the steel industry held comparatively stable relative to all manufacturing and all industries through 1957.

Since that time——

Representative CURTIS. Mr. Chairman, may I ask a question at that point?

Chairman DOUGLAS. Certainly.

Representative CURTIS. Is this fluctuation true of other basic material industries like aluminum, or is it peculiar to steel?

Mr. PARADISO. It is peculiar to steel. We will have a chart here on aluminum.

Representative CURTIS. Thank you.

Mr. PARADISO. Since that time, output in steel industry has expanded at a significantly lower rate. If you examine the chart you can see the percent of manufacturing originating, that is the percent of iron and steel in relation to manufacturing income originating. Notice the wide fluctuations which are involved in that picture at the top and then much smaller fluctuations, of course, in terms of percent of all industry income originating.

Now to continue, I want to get on to shipment of steel mill products related to durable goods production. I regard this chart as the most significant chart. It is a little more complicated than the others because it involves what we call a correlation analysis.

This chart shows that the steel shipments are basically dependent upon the demand for durable goods by consumers, business and Government. However, in recession periods, steel shipments tend to fall more than durable demand and conversely in recovery periods they rise at a faster rate.

CHART 3

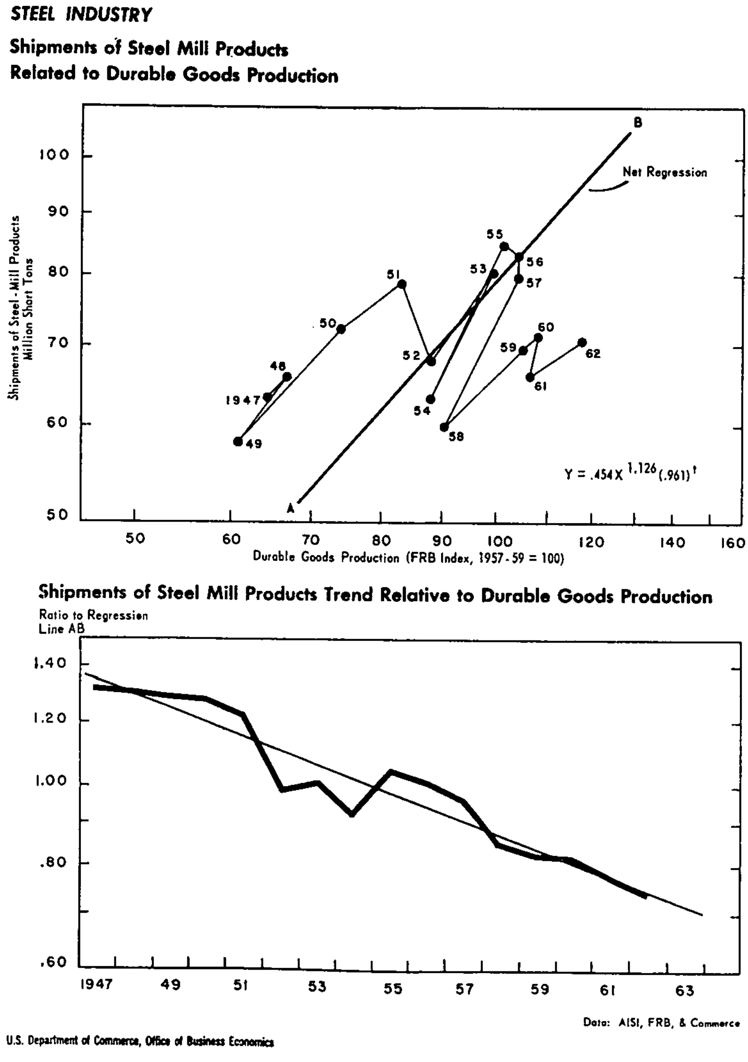


TABLE 3.—*Steel industry: Shipments of steel mill products related to durable goods production*

| | Shipments of steel mill products (million short tons) | Durable goods production (FBR index, 1957–59=100) | | Shipments of steel mill products (million short tons) | Durable goods production (FBR index, 1957–59=100) |
|---|---|---|---|---|---|
| 1947 | 63.1 | 64.3 | 1956 | 83.3 | 104.0 |
| 1948 | 66.0 | 67.0 | 1957 | 79.9 | 104.0 |
| 1949 | 58.1 | 60.9 | 1958 | 59.9 | 90.3 |
| 1950 | 72.2 | 74.1 | 1959 | 69.4 | 105.6 |
| 1951 | 78.9 | 83.5 | 1960 | 71.1 | 108.5 |
| 1952 | 68.0 | 88.5 | 1961 | 66.1 | 107.0 |
| 1953 | 80.2 | 99.9 | 1962 | 70.6 | 117.9 |
| 1954 | 63.2 | 88.4 | 1963 | | |
| 1955 | 84.7 | 101.9 | | | |

Source: American Iron & Steel Institute, and Board of Governors of the Federal Reserve System.

Mr. PARADISO. For the postwar period, the relationship shows that everything else being equal, with a 10-percent increase in durable goods output as measured by the Federal Reserve Board index, steel shipments tend to rise by an average of 11.3 percent.

Mr. Chairman, this is what I meant with regard to elasticity of steel in relation to durable goods demand. But steel shipments have tended to show a deterioration relative to durable goods demand over the postwar period. This is shown in the lower panel where the deviations from the relationship of steel shipments to durable goods output are indicated. These deviations reflect the effects on steel shipments of the ingots made by competitive products, both from domestic sources and from abroad.

The lower panel shows that abstracting from the effects of changes in durable goods demand, steel shipments have tended to decline by an average of 4 percent per year. That is, after you remove the effect of changes in durable goods demand on steel shipments, the steel industry has suffered a decline on an average of 4 percent per year.

Representative CURTIS. This is in tons?

Mr. PARADISO. This is in steel shipment tons. This has serious consequences on employment in the industry as well as on profitability. There are, of course, exceptions to the general downtrend of steel shipments relative to durable goods output.

In 1955, for example, steel shipments improved relative to durable goods demand mainly because of the exceptional demand by the automobile industry to meet the record consumer buying of cars.

In 1956 and 1957, a favorable factor was the exceptionally high outlays for plant and equipment by business. In general, however, the industry is dependent on the orders from other industries, and is always under the constant struggle to maintain its position relative to an ever-increasing competitive situation.

If you turn to the chart you will notice the correlation at the top of the chart, what we call the net regression, the line that shows the general tendency of steel shipments to rise as durable goods production rises, and the lower chart shows the declining trend, the losing position of the industry over the postwar period.

TABLE 3-A.—*Changes in output of selected basic materials and durable goods, 1952-62*

| | Percent change, 1952 to 1962 |
|---|---|
| Selected materials: | |
| Steel | —1 |
| Nonferrous | 35 |
| Portland cement | 35 |
| Plastics and resin materials | 268 |
| Selected durable goods industries: | |
| Motor vehicles and parts | [1] 72 |
| Electrical machinery | 64 |
| Instruments | 57 |
| Nonautomotive transportation equipment | 49 |
| Fabricated metals | 32 |
| Nonelectrical machinery | 15 |
| Total durable goods manufacturing | 33 |

[1] In 1952, passenger car production was restricted by Korean situation.

Source: Federal Reserve Board, Department of the Interior, and U.S. Tariff Commission.

Mr. PARADISO. Now, I want to turn to changes in output of selected basic materials in durable goods. The next three charts provide some explanation for this declining trend in the steel industry.

The purpose is to see why has there been a deterioration relative to durable goods production in the steel industry. In the decade from 1952 to 1962, output of durable goods manufactures rose by 33 percent according to the Federal Reserve Board's index of industrial production. Output of steel consuming industries as motor vehicles, nonautomative-transportation equipment, instruments, electrical machinery, advanced from 50 to over 70 percent in this decade. Fabricated metals and nonelectrical machinery increased by 33 and 15 percent, respectively.

Steel production in 1962, however, was somewhat higher than in 1952. While some of this divergence in movement can be attributed to an increase in the complexities of fabrication and to larger net imports of steel a more important factor has been the competition of other materials.

As can be seen in the table, the growth in output of nonferrous metals and Portland cement from 1952 to 1962 has slightly exceeded that of total durable goods, while the production of plastics and resin materials has risen by more than 2½ times.

Representative CURTIS. Could I ask a question on that, Mr. Chairman?

Chairman DOUGLAS. Certainly.

Representative CURTIS. Did you put any weighting in there, or is there any weighting as the result of the use of stronger steel at considerably less weight in this mix that you have here?

Mr. PARADISO. Yes. This will come forth in the next two charts.

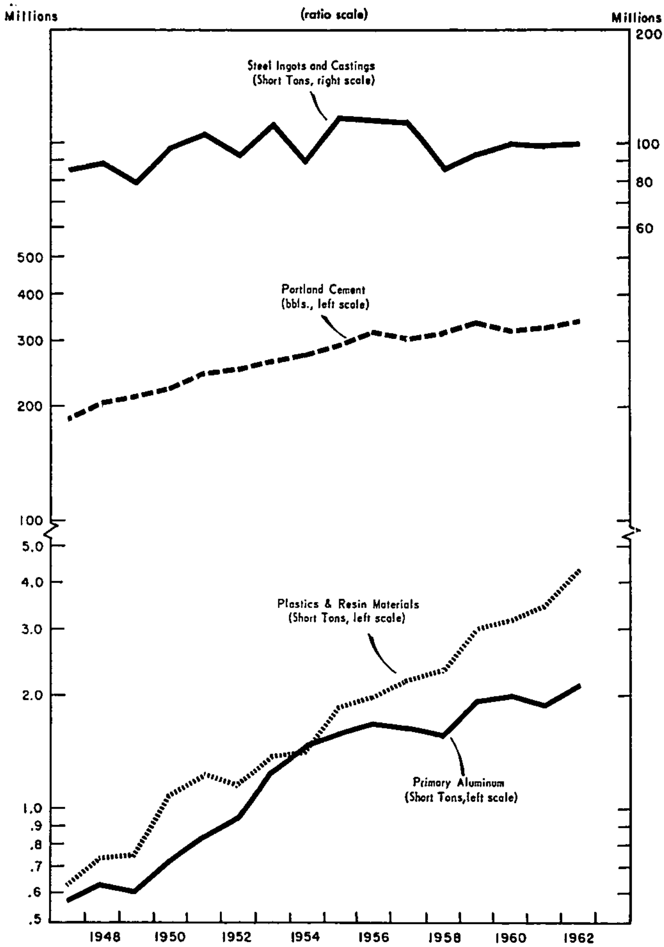
Representative CURTIS. I beg your pardon?

Mr. PARADISO. In the next chart—by the way, we were in a rush to do this material, and so I was not able to do a chart for table 3-A and I am sorry for that—table 4 does have a chart accompanying it. Steel has always been in competition with other materials, but in most recent periods the displacement of steel with substitute material seems to have become more significant, although relative magnitudes have to be kept in mind.

Chart 4 and table 4 show that the growth of competing materials in the postwar period has been considerably greater than that for steel. The average annual rate of growth for steel from 1948 to 1962 has been less than 1 percent. This compares with a 3½-percent growth for cement—this is per year—steel's traditional competing material, a 9-percent growth per year for aluminum, and a 13-percent growth for plastics.

CHART 4

**Comparison of Steel Ingot Production with Output of Major Competing Materials**




Data: AISI, Interior, & Tariff Comm.

U.S. Department of Commerce, Office of Business Economics

TABLE 4.—*Comparison of steel ingot production with output of major competing materials*

| Year | Steel ingots and steel for castings (million short tons) | Portland cement (million barrels) | Primary aluminum (thousand short tons) | Plastics and resin materials (thousand short tons) |
|---|---|---|---|---|
| 1947 | 84.9 | 186.5 | 572 | 626 |
| 1948 | 88.6 | 205.4 | 623 | 742 |
| 1949 | 78.0 | 209.9 | 603 | 746 |
| 1950 | 96.8 | 226.0 | 719 | 1,076 |
| 1951 | 105.2 | 246.1 | 837 | 1,220 |
| 1952 | 93.2 | 249.1 | 937 | 1,167 |
| 1953 | 111.6 | 264.0 | 1,252 | 1,388 |
| 1954 | 88.3 | 271.3 | 1,461 | 1,414 |
| 1955 | 117.0 | 296.8 | 1,566 | 1,870 |
| 1956 | 115.2 | 316.5 | 1,679 | 1,988 |
| 1957 | 112.7 | 297.8 | 1,648 | 2,170 |
| 1958 | 85.3 | 311.3 | 1,566 | 2,330 |
| 1959 | 93.4 | 338.5 | 1,954 | 3,010 |
| 1960 | 99.3 | 319.1 | 2,014 | 3,141 |
| 1961 | 98.0 | 323.4 | 1,904 | 3,429 |
| 1962 | 98.3 | 336.3 | 2,118 | 4,30 |
| Average annual rate of growth (1948–62) | 0.7 | 3.6 | 9.1 | 13.3 |

Sources: Steel production, American Iron & Steel Institute; cement and aluminum, Department of the Interior; plastics, U.S. Tariff Commission.

Mr. PARADISO. It is not to be implied that the differential rates of growth of these major products have all been at the expense of steel. Even apart from their substitution for steel, these products would have shown independent growth. In addition there has been, of course, competition from abroad. This will be treated in more detail in the later hearing of this committee.

If you will notice the chart, you will see the slow growth in the steel ingots and castings at the top of the chart, the fairly fast growth of 3½ percent for portland cement, and the rapid growth of plastics and resin materials of 13 percent, and the growth of aluminum of 9 percent.

Again, I want to emphasize the fact that these growths might have gone on anyway, but there has certainly been this substitution for steel.

Then the next chart and table——

Senator MILLER. You say that these growths might have been anyhow?

Mr. PARADISO. Yes.

Senator MILLER. I am sure you didn't mean at the same rate.

Mr. PARADISO. No, I didn't mean at the same rate.

Senator MILLER. Thank you.

Mr. PARADISO. Table 5 shows a comparison of steel shipments for use in major products. The industry has not only lost to major competitor products, aluminum, plastics, concrete, and so forth, but also shipments have decreased to users of steel for producing major products. Mainly, this has been the result of using less steel in these products, and a higher degree of fabrication.

TABLE 5.—*Comparison of steel shipments for use in major products, 1953–61*

| | 1953 | 1961 | Percent change |
|---|---|---|---|
| Intercity freight (trillion ton-miles) | 1.20 | 1.32 | 10 |
| Steel shipments to rail transportation (million net tons) | 4.79 | 1.59 | −67 |
| Total automotive production (autos and trucks) (million units) | 7.32 | 6.68 | −9 |
| Steel shipments to automotive production (million net tons) | 14.66 | 12.59 | −14 |
| Appliance production (1957=100) | 87 | 118 | 36 |
| Steel shipments to appliance production (million net tons) | 2.05 | 1.75 | −15 |
| Value of new construction (billion 1959 dollars) | 42.78 | 55.85 | 31 |
| Steel shipments to construction (less oil and gas) and contractors' products (million net tons) | 10.30 | 11.09 | 8 |
| Machinery production (1957=100) | 96 | 106 | 10 |
| Steel shipments to machinery (million net tons) | 6.44 | 5.73 | −11 |

Source: As reported by the American Iron & Steel Institute in the Competitive Challenge to Steel, 1963 edition.

The table clearly shows that over the 8-year period from 1953 to 1961, in all cases the output of the products increased substantially, while steel shipments declined significantly. In the case of automobile production, which was the only instance in this group where production declined 9 percent, steel shipments to the industry declined even more, 14 percent.

These comparisons are only indicative of the trend since some buyers utilize jobbers for their suppliers. There is also the question of utilizing inventories. But the table clearly shows one major problem of the industry; namely, less steel being used in producing hard goods.

Representative CURTIS. Is this the chart that would show the point I was asking about, the use of stronger steel and less weight?

Mr. PARADISO. Yes, this is the point.

Representative CURTIS. How much is that a factor?

Mr. PARADISO. I can't tell, but if you will take a look at the table and examine some of the items.

Representative CURTIS. I was wondering if some of it could be because they don't use as much steel, period.

Mr. PARADISO. That is right.

Representative CURTIS. Some of it could be because the amount of steel they use has less weight, but is stronger steel.

Mr. PARADISO. That is right.

Representative CURTIS. Can you distinguish between the two in the table?

Mr. PARADISO. I cannot distinguish. Perhaps some of the experts in the industry can. If we take a look at a few of the items here, I think it is interesting to see in table 5, for example, intercity freight in this period of 1953–61 increased 10 percent. What happened to steel shipments? They dropped 67 percent to the rail transportation industry.

In total automative production, here there was a decline of 9 percent. Steel shipments dropped 14 percent. How about appliance production? Appliance production, according to the Federal Reserve Board Index, increased 36 percent over this period.

What happened to the shipments of steel to the appliance industry? A drop of 15 percent. Take "Value of New Construction," which increased 31 percent. The industry showed only an 8-percent rise in the shipments.

Representative CURTIS. Mr. Paradiso, in new construction would that include highways and bridges and so forth?

Mr. PARADISO. "Value, New Construction" does; yes.

Senator MILLER. Mr. Paradiso, in the decline in steel shipments, does that mean decline in steel shipments from domestic steel producers?

Mr. PARADISO. From domestic steel producers, but it does not include the imports.

Senator MILLER. In other words, the mere fact that we find a decline of steel shipments to appliance production of 15 does not necessarily mean that that was the amount of the decline in the use of steel in the appliance manufacturing?

Mr. PARADISO. No; that is right.

Senator MILLER. Because we might have had a substitute in whole or in part by foreign imports.

Mr. PARADISO. That is right. But these steel declines are so large that it is inconceivable to me to assume that the amount of imports would make up for such large reductions.

Take a look at the last one, machinery production. It increased 10 percent. Yet steel shipments to the machinery industry dropped 11 percent. Now, true, some of the steel could have been bought from jobbers, some of the steel could have been bought from abroad, but the declines are large enough to make the case, as Mr. Curtis was pointing out, that there is just less steel. There are more scientists being applied, more technicians being applied, more degree of fabrication being applied.

The electronic industry does not use much steel. It is more of a technical problem. So I think this is a very crucial problem for the steel industry; namely, the use of less steel in many of these products, and the compact cars are a good example, where they use less steel for one-third of the total automobile production of the industry.

Senator MILLER. We hear that all the time, but we also hear that imports have cut in. Do you people have any figures or data indicating what the true decline in use of steel would be in some of these categories?

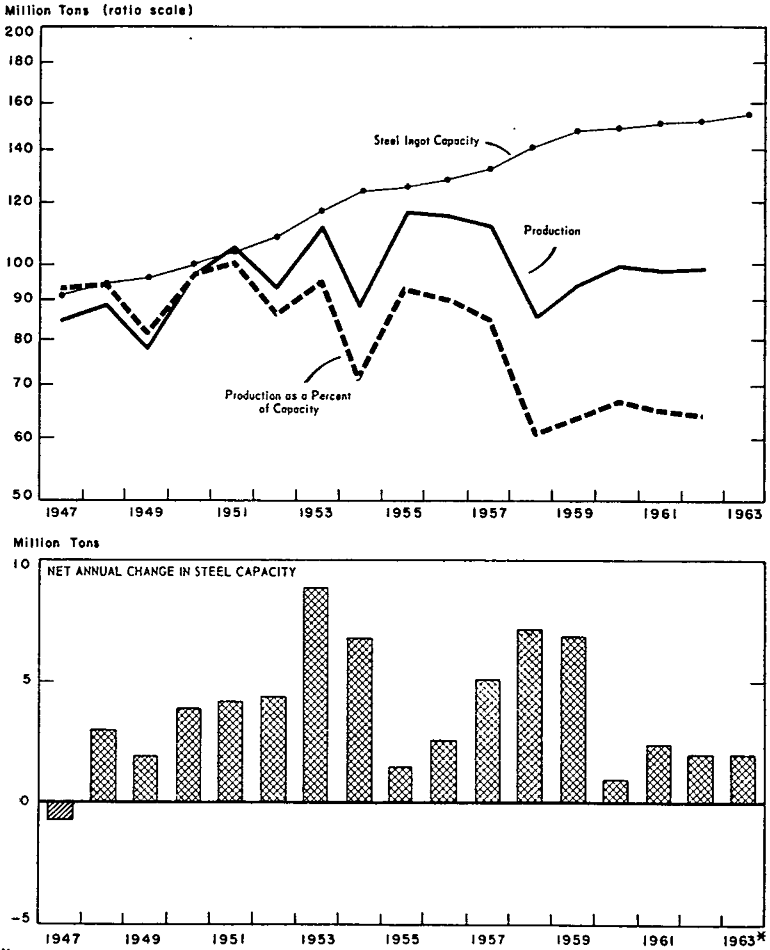
Mr. PARADISO. I have not done this. We are going to have a session, as you know, on the question of foreign trade, exports, and imports, and I hope that the gentleman who will make the presentation can throw some light on this question using his data in connection with these.

Senator MILLER. Thank you.

Mr. PARADISO. Now to continue, I want to get on now to steel capacity production and capacity utilization. Table 6 and chart 6 show the capacity to produce steel ingots. While it is recognized that capacity is a difficult concept to measure for any industry, nevertheless, a fairly good approximation can be made of steel ingot capacity.

CHART 6

**Steel Capacity, Production, and Capacity Utilization**




* First Quarter

U.S. Department of Commerce, Office of Business Economics

Data: AISI & Commerce

98133—63——13

TABLE 6.—*Steel capacity, production, and capacity utilization, United States, 1947–63*

[Capacity and production in millions of net tons]

| Year | Capacity [1] | Production of steel ingots and castings | Production as a percent of capacity |
|---|---|---|---|
| 1947 | 91.2 | 84.9 | 93.0 |
| 1948 | 94.2 | 88.6 | 94.1 |
| 1949 [2] | 96.1 | 78.0 | 81.1 |
| 1950 | 100.0 | 96.8 | 96.9 |
| 1951 | 104.2 | 105.2 | 100.9 |
| 1952 [2] | 108.6 | 93.2 | 85.8 |
| 1953 | 117.5 | 111.6 | 94.9 |
| 1954 | 124.3 | 88.3 | 71.0 |
| 1955 | 125.8 | 117.0 | 93.0 |
| 1956 [2] | 128.4 | 115.2 | 89.8 |
| 1957 | 133.5 | 112.7 | 84.5 |
| 1958 | 140.7 | 85.3 | 60.6 |
| 1959 [2] | 147.6 | 93.4 | 63.3 |
| 1960 | 148.6 | 99.3 | 66.8 |
| 1961 | [3] 151.0 | 98.0 | [3] 65.0 |
| 1962 | [3] 153.0 | 98.3 | [3] 64.0 |
| 1963 | [3] 155.0 | | |

| | Production of steel ingots and castings | | Production as a percent of steel capacity | |
|---|---|---|---|---|
| | Unadjusted | Seasonally adjusted [4] | Unadjusted | Seasonally adjusted [4] |
| Average for quarter: | | | | |
| 1960—January–March | 11.6 | 11.2 | 93.8 | 90.4 |
| April–June | 8.7 | 8.5 | 70.2 | 68.8 |
| July–September | 6.5 | 7.0 | 52.5 | 56.1 |
| October–December | 6.3 | 6.3 | 50.4 | 50.1 |
| 1961—January–March | 6.6 | 6.3 | 52.0 | 50.0 |
| April–June | 8.4 | 8.2 | 66.0 | 65.0 |
| July–September | 8.6 | 9.1 | 68.0 | 73.0 |
| October–December | 9.2 | 9.1 | 73.0 | 72.0 |
| 1962—January–March | 10.2 | 9.8 | 80.0 | 77.0 |
| April–June | 7.8 | 7.7 | 61. | 60.0 |
| July–September | 6.8 | 7.3 | 54. | 57.0 |
| October–December | 7.9 | 7.9 | 62.0 | 62.0 |
| 1963—January–March | 8.9 | 8.6 | 69.0 | 66.0 |

[1] As of Jan. 1, except for 1950, which is an average of data as of Jan. 1 and July 1.
[2] Years of major steel strikes.
[3] Official figures on steel capacity are no longer being issued. Estimates used assume a growth in capacity of approximately 1½ percent for 1961, 1962, and for 1963. If capacity as of Jan. 1, 1963, were 160 million tons, then the 1st quarter rates of production as a percent of capacity would be 67 percent unadjusted and 64 percent adjusted.
[4] Based on Federal Reserve Board's seasonal factor for iron and steel production.

Source: American Iron & Steel Institute.

Mr. PARADISO. The American Iron & Steel Institute published capacity figures through 1960. Presumably these measure so-called practical capacity. Because of its importance in gaging the rate of operations of the industry, the Office of Business Economics has estimated rather crudely the change in capacity since 1960 when the publication of the series was discontinued by the AISI.

On the assumption of a raise of 1½ percent each year since then, we estimate that as of January 1, 1963, the capacity reached about 155 million tons, and perhaps even more. This 1½ percent growth was not based just by picking it out of the air. We do have the amount of money which the industry is spending each year to add to its capacity, and we made some judgment with regard to the increase in this capacity over the last 3 years.

The capacity of the steel industry has increased each year since 1947, being 91 million in that year and growing by an average of 4 million tons per year since then. As the lower panel shows, the largest annual addition in the postwar period occurred during 1952.

By the way, the chart shows 1953, but the numbers really should have been shifted 1 year because we are measuring capacity at the beginning of the year. So I just took the difference between the capacity at the beginning of the year and the capacity at the end of the year and that represented a net addition.

Representative CURTIS. Mr. Paradiso, when was it over 100-percent capacity? Was it about that time?

Mr. PARADISO. It was about 1951. You notice production in 1951 on the chart. It just went a little above capacity.

Representative CURTIS. Yes; I see it.

Mr. PARADISO. It should be recognized that the industry was helped considerably by the Government in financing capacity expansion, particularly during the Korean period. From 1950 to the beginning of 1954, the industry added 24 percent to its capacity. In the last 4 years, the additions to capacity have been relatively small.

That is based on this crude assumption that we have made. But I think it is a valid conclusion that these additions have been relatively smaller than they have been in prior years.

Representative CURTIS. Can you relate capacity to dollars spent? I have used a figure, and I don't know that it is accurate, that the steel industry spent about $1 billion last year on increased capacity. What would that mean in tonnage, roughly—$1 billion would mean how much?

Mr. PARADISO. I have a rough figure in my mind. I think the iron and steel should correct me on this. It is just a rough figure of about $300 per ton for a new plant. I may be off on that.

Representative CURTIS. I understand. It just gives us some idea.

Senator MILLER. We talk about this expenditure and in the same breath say to increase capacity. I am just wondering how much of that outlay might have been to replace capacity with more efficient capacity.

Mr. PARADISO. That is a rather interesting question because talking to some of the steel economists, they often can't tell whether the expenditure is for replacement or to increase capacity. As you know, in more recent years there has been a shift. More of the expenditure has been for replacement than for additions. But in the case of the steel industry, if they want to replace, this often leads to increased capacity. It is very hard to distinguish in this industry when you are making repairs or replacing a blast furnace or open hearth whether this merely substitutes for the old equipment or means additional capacity.

I think this is a real difficult, technical question. As far as I know, it is very difficult to distinguish when an expenditure is made as to whether it results only in a replacement or both replacement and capacity increase. I believe it is both.

Senator MILLER. I can see where it would be very difficult for you. About the best you can conclude is that some of it would be increase, some of it would be replacement.

Mr. PARADISO. That is right.

Senator MILLER. Thank you.

Representative CURTIS. I don't want to prolong it, but it is on the same point. The use of oxygen, as I understand it, increases the capacity of the particular melt, or whatever, by a big factor. What is that factor?

Mr. PARADISO. I do not know. I may ask one of the experts back here.

I have been informed it can increase up to double in special applications, but typically I think the applications are rather less. The typical application is, so far.

Representative CURTIS. That is a costly item.

Mr. MCGANN. The oxygen itself is usually purchased from a chemical company who puts an oxygen plant in the steel mill and that is an additional cost of material.

Representative CURTIS. It would go in materials rather than capital.

Mr. MCGANN. Yes, sir; because the chemical plant usually retains the ownership of the oxygen plant and sells the oxygen to the steel mill and they benefit from it by more intensive use of their capital and labor.

Representative CURTIS. That is an important point.

Then, Mr. Paradiso, do you have any idea on these figures of the increase of capacity? How much of it has been the result of oxygenizing or whatever they might use to describe it?

Mr. PARADISO. No; I don't have any idea on that point. In contrast to the steady rise in capacity production of ingots and casting has shown wide fluctuations varying from 78 million tons in 1949 to a high of 117 million tons in 1955. During the recession periods, the rate of capacity utilization drops rapidly. For example, in the first quarter of 1960 the seasonally adjusted rate was 90 percent. A year later, at the bottom of the 1960–61 recession, the rate dropped to 50 percent.

Because of the relatively low demand for durables, the rate of capacity utilization has been below 80 percent each quarter in the past 2 years. Since the beginning of this year, production has increased sharply to an annual rate in the first quarter of more than 105 million tons—unadjusted—and is continuing to rise.

As a result of the increase in production in the first 4 months of this year, output of steel as a percent of capacity may now be around 80 percent. This number is a rough estimate since the official capacity figure is now known, as I have already indicated.

Now we turn to plant and equipment expenditures and percent utilization of capacity. This is given in table 7.

TABLE 7.—*Plant and equipment expenditures and percent utilization of capacity, all manufacturing and steel industry*

| | Plant and equipment expenditures | | Percent utilization of capacity | |
|---|---|---|---|---|
| | All manufacturing | Iron and steel | All manufacturing | Steel [1] |
| | *Millions* | *Millions* | | |
| 1947 | $8,703 | $638 | 87 | 93.0 |
| 1948 | 9,134 | 772 | 85 | 94.1 |
| 1949 | 7,149 | 596 | 76 | [2] 81.1 |
| 1950 | 7,491 | 599 | 86 | 96.9 |
| 1951 | 10,852 | 1,198 | 89 | 100.9 |
| 1952 | 11,632 | 1,511 | 88 | [2] 85.8 |
| 1953 | 11,908 | 1,210 | 92 | 94.9 |
| 1954 | 11,038 | 754 | 82 | 71.0 |
| 1955 | 11,439 | 863 | 90 | 93.0 |
| 1956 | 14,954 | 1,268 | 89 | [2] 89.8 |
| 1957 | 15,959 | 1,722 | 86 | 84.5 |
| 1958 | 11,433 | 1,192 | 76 | 60.6 |
| 1959 | 12,067 | 1,036 | 85 | [2] 63.3 |
| 1960 | 14,480 | 1,597 | 84 | 66.8 |
| 1961 | 13,677 | 1,127 | 82 | 65.0 |
| 1962 | 14,680 | 1,104 | 87 | 64.0 |
| | Seasonally adjusted annual rate | | | |
| | *Billions* | *Billions* | | |
| 1960—1st quarter | $14.10 | $1.60 | 87 | 90.4 |
| 2d quarter | 14.70 | 1.60 | 85 | 68.8 |
| 3d quarter | 14.65 | 1.75 | 84 | 56.1 |
| 4th quarter | 14.40 | 1.45 | 80 | 50.1 |
| 1961—1st quarter | 13.75 | 1.35 | 78 | 50.0 |
| 2d quarter | 13.50 | 1.05 | 82 | 65.0 |
| 3d quarter | 13.65 | 1.10 | 84 | 73.0 |
| 4th quarter | 14.00 | 1.10 | 85 | 72.0 |
| 1962—1st quarter | 14.20 | 1.00 | 86 | 77.0 |
| 2d quarter | 14.45 | 1.10 | 87 | 60.0 |
| 3d quarter | 15.05 | 1.20 | 87 | 57.0 |
| 4th quarter | 15.00 | 1.10 | 87 | 62.0 |
| 1963—1st quarter | [3] 15.30 | [3] 1.20 | 86 | 66.0 |

[1] Based on Federal Reserve Board's seasonal factors for iron and steel production.
[2] Years of major steel strikes.
[3] Anticipated.

Sources: Operations as percent of capacity: American Iron & Steel Institute and Federal Reserve Board. Plant and equipment expenditures: Department of Commerce and Securities and Exchange Commission.

The capacity utilization data point up a striking difference between steel companies on the one hand and all manufacturing firms on the other hand. Since 1957, the steel-operating rate has ranged from about three-fifths to two-thirds of capacity on an annual basis, although for particular quarters within the year the spread has been considerably greater. The significant point is that the steel rate has been considerably below the average for the midfifties or the prior postwar years, while the manufacturing rate of utilization as measured by the Federal Reserve Board in recent years has also fallen below that of the earlier postwar years.

The difference is considerably smaller than in the case of steel. This differential behavior in capacity utilization is perhaps the chief factor accounting for the rather pronounced difference in the recent patterns of plant and equipment outlays. While 1962 investment by all manufacturers and for steel companies as well was lower than in the peak year of 1957, the decline for steel firms has been substantially greater than that for all manufacturing.

Now we turn to gross capital stock. Here the estimates, of necessity, are rough. There are many assumptions which have to be made, but these calculations were made by technicians in the Business and Defense Services Administration, and I am using this, however, with the caution that they are estimates. We do not have accurate figures.

Actually, the numbers depend pretty much on the assumptions used on the average life of the equipment and how often you change the life of this equipment. Table 8 and chart 7 compare the movements from 1947 to 1960 of estimates of iron and steel establishments' gross stocks of plant and equipment, and by gross stock I mean the stocks less the retirements, but not allowing for depreciation.

CHART 7

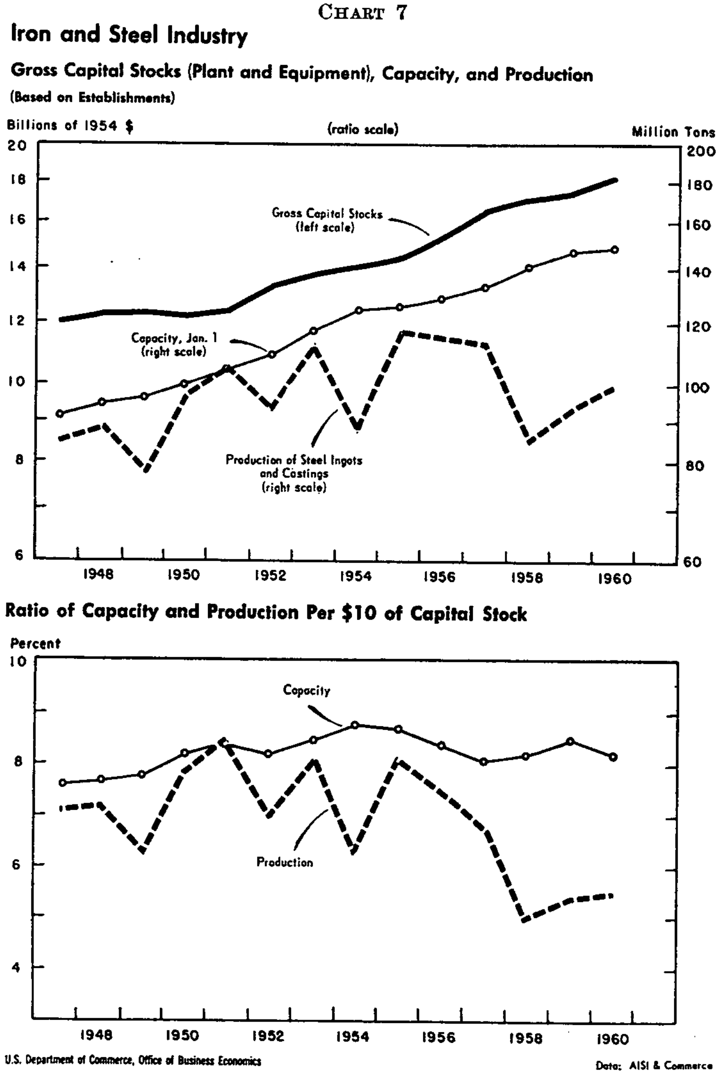


TABLE 8.—*Iron and steel industry: Gross capital stocks (plant and equipment), capacity, and production*

[Based on establishments]

| Year | Capital stocks | Capacity Jan. 1 | Production of steel ingots and castings | Ratio per $10 of capital stock (1954 prices) | |
|---|---|---|---|---|---|
| | | | | Capacity | Production |
| | *Billion 1954 dollars* | *Million tons* | *Million tons* | *Percent* | *Percent* |
| 1947 | 12.0 | 91.2 | 84.9 | 7.6 | 7.1 |
| 1948 | 12.3 | 94.3 | 88.6 | 7.7 | 7.2 |
| 1949 | 12.3 | 96.1 | 78.0 | 7.8 | 6.3 |
| 1950 | 12.2 | 100.0 | 96.8 | 8.2 | 7.9 |
| 1951 | 12.4 | 104.2 | 105.2 | 8.4 | 8.5 |
| 1952 | 13.3 | 108.6 | 93.2 | 8.2 | 7.0 |
| 1953 | 13.8 | 117.5 | 111.6 | 8.5 | 8.1 |
| 1954 | 14.1 | 124.3 | 88.3 | 8.8 | 6.3 |
| 1955 | 14.4 | 125.8 | 117.0 | 8.7 | 8.1 |
| 1956 | 15.3 | 128.4 | 115.2 | 8.4 | 7.5 |
| 1957 | 16.5 | 133.5 | 112.7 | 8.1 | 6.8 |
| 1958 | 17.1 | 140.7 | 85.3 | 8.2 | 5.0 |
| 1959 | 17.4 | 147.6 | 93.4 | 8.5 | 5.4 |
| 1960 | 18.2 | 148.6 | 99.3 | 8.2 | 5.5 |

Sources: Capital stock, Department of Commerce (unpublished estimates); capacity and production of steel, American Iron and Steel Institute.

Mr. PARADISO. By the way, these are put in constant dollars, constant 1954 dollars.

These are compared with the capacity and with production of steel ingots and castings in terms of millions of tons. It will be observed that the gross stock estimates of the capacity series follow approximately the same sharply rising curve. Production of steel ingots and castings has been much more erratic, rising even more sharply to 1951, and then showing a subsequent relatively flat trend running through pronounced peaks and troughs.

The relative stability of the relationship of capacity to gross stocks of fixed assets and a decreasing ratio of production in terms of millions of tons of steel ingots and casting per billion 1954 dollars in gross stock in plant and equipment is shown directly in the table.

With your permission, I would like to make a slight correction in this chart. One of our computers happened to put the decimal point in the wrong place. In the bottom part of the chart where it says "Ratio of Capacity and Production," instead of per dollar of capital stock it is per $10 of capital stock.

On the table 8, the last two columns at the top, instead of the ratio per dollar of capital stock, it is the ratio per $10 of capital stock, and this puts the numbers in their proper perspective. Finally, I want to make some comments about the depreciation cost.

Representative CURTIS. May I ask just one question? When you figure capital stock, do you eliminate the depreciation? How do you do that?

Mr. PARADISO. We don't do it in this particular case. We did not eliminate depreciation. We figured the gross capital stock and subtracted out only the retirements.

There are, as you know, Mr. Curtis, a number of figures on capital stock where they are evaluated first in original cost and then in replacement cost and then depreciation is taken out with retirements, but in this particular series we are using the series exclusive of retirements, but not of depreciation.

Representative CURTIS. I see. Thank you.

Senator MILLER. When you have that figure for 1960 of 148.6 million tons capacity?

Mr. PARADISO. Yes; that is the Iron and Steel Institute figure.

Senator MILLER. If you carried it on to the current date in your estimates, you would have it up to around 155 or possibly 160.

Mr. PARADISO. 155 as of January 1, 1963.

Senator MILLER. Thank you.

Representative CURTIS. Would a chart like No. 7 for the prewar periods indicate that my figure would be about right, as you recall, for the previous 60 years, that it was about 70 percent, or two-thirds capacity? Taking the same chart from 1948 to 1960, which is post-World War II, I want to get it in context with what it would have been over a longer period.

Mr. PARADISO. There are data available. I don't have them here. I think I can find them rather quickly.

Representative CURTIS. Offhand, do you know whether my premise is about right?

Mr. PARADISO. Seventy percent; you say?

Representative CURTIS. Around there.

Mr. PARADISO. What period are you talking about?

Representative CURTIS. The 60 years prior to World War II.

Mr. PARADISO. I just don't recall. We can get the figure for you fairly soon.

(The information is as follows:)

From 1916 through 1962, production of steel ingots and castings as a percent of capacity averaged 74 percent. This is based on AISI data on production and capacity, except that capacity figures for 1961 and 1962 were estimated by OBE.

Mr. PARADISO. On depreciation cost relative to capital stock, and this will lead pretty much into the session on Monday on the whole question of financing, the most striking feature of this table 9 is the rapid advance in depreciation relative to increases in capital stock, capacity, and production.

TABLE 9.—*Depreciation costs relative to capital stocks, capacity, and production in the iron and steel industry, 1947–62* [1]

| Year | Amounts | | | | Depreciation costs in dollars per unit of | | |
|---|---|---|---|---|---|---|---|
| | Depreciation (in millions of dollars) | Capital stocks (in billions of 1954 dollars) | Capacity (millions of net tons) | Production (millions of net tons) | Capital stocks | Capacity | Production |
| 1947 | 203 | 12.0 | 91.2 | 84.9 | .017 | 2.23 | 2.39 |
| 1948 | 250 | 12.3 | 94.2 | 88.6 | .020 | 2.65 | 2.82 |
| 1949 [2] | 258 | 12.3 | 96.1 | 78.0 | .021 | 2.68 | 3.31 |
| 1950 | 283 | 12.2 | 100.0 | 96.8 | .023 | 2.83 | 2.92 |
| 1951 | 337 | 12.4 | 104.2 | 105.2 | .027 | 3.23 | 3.20 |
| 1952 [2] | 454 | 13.3 | 108.6 | 93.2 | .034 | 4.18 | 4.87 |
| 1953 | 658 | 13.8 | 117.5 | 111.6 | .048 | 5.60 | 5.90 |
| 1954 | 760 | 14.1 | 124.3 | 88.3 | .054 | 6.11 | 8.61 |
| 1955 | 821 | 14.4 | 125.8 | 117.0 | .057 | 6.53 | 7.02 |
| 1956 [2] | 834 | 15.3 | 128.4 | 115.2 | .055 | 6.50 | 7.24 |
| 1957 | 843 | 16.5 | 133.5 | 112.7 | .051 | 6.31 | 7.48 |
| 1958 | 776 | 17.1 | 140.7 | 85.3 | .045 | 5.52 | 9.10 |
| 1959 [2] | 754 | 17.4 | 147.6 | 93.4 | .043 | 5.11 | 8.07 |
| 1960 | 779 | 18.2 | 148.6 | 99.3 | .043 | 5.24 | 7.84 |
| 1961 | 814 | (3) | 151.0 | 98.0 | (3) | 5.39 | 8.31 |
| 1962 [4] | 872 | (3) | 153.0 | 98.3 | (3) | 5.70 | 8.87 |

[1] The financial figures used as the numerators in deriving this table are on a company basis and relate to total operations of the companies and not to steel production alone. As a result, the levels of these per-ton series are too high by an indeterminate amount. On the assumption that the "mix" of company activities and their cost relationships have not changed significantly, however, the year-to-year changes in the series are reasonable indicators of changes in the profit and other financial positions of the companies' steel-producing operations.

[2] Years of major steel strikes.

[3] Not available.

[4] Does not include effect of liberalized depreciation guidelines.

Sources: American Iron & Steel Institute; U.S. Department of Commerce.

Depreciation, including amortization and depletion in the iron and steel industry rose from $200 million in 1947 to nearly $900 million in 1962. I want to make a comment here on the depreciation figures which we have used. The Office of Business Economics, as you know, uses depreciation figures in connection with estimating the national income. In doing this, we make use of the IRS figures, which are not necessarily identical with the figures that are reported to stockholders.

The SEC-FTC figures are somewhat different from the OBE figures. They represent pretty much what companies report to stockholders. Often they use straight-line depreciation. On profits, for example, they may combine the domestic operations with foreign operations. We eliminate the foreign operations in our own figures and put that in what we call the "rest of the world" category. There are many other differences. We eliminate capital gains and losses.

So we find that the figures which I am using here are based on the official figures of the Office of Business Economics that are used in conjunction and depreciation and corporate profits.

I have computed a table using the FTC-SEC figures and I will be very glad to produce that table, which will be analogous to the one I have here where we use the OBE figures.

Chairman DOUGLAS. Without objection, that will be submitted for the record.

(The table referred to follows:)

*Depreciation costs in the iron and steel industry, as shown in FTC-SEC reports and as estimated by OBE based on internal revenue data*

[Millions of dollars]

| | FTC-SEC | OBE | | FTC-SEC | OBE |
|---|---|---|---|---|---|
| 1947 | (1) | 203 | 1955 | 832 | 821 |
| 1948 | (1) | 250 | 1956 | 844 | 834 |
| 1949 | 329 | 258 | 1957 | 875 | 843 |
| 1950 | 380 | 283 | 1958 | 806 | 776 |
| 1951 | 445 | 337 | 1959 | 799 | 754 |
| 1952 | 519 | 454 | 1960 | 825 | 779 |
| 1953 | 699 | 658 | 1961 | 863 | 814 |
| 1954 | 773 | 760 | 1962 | 1,069 | 872 |

[1] Not available.

Senator MILLER. When you say you use IRS figures in your table, are you talking about the Bulletin F figures or are you talking about the use of the faster methods of writeoff which Congress authorized?

Mr. PARADISO. In 1962 we did not include the faster writeoff.

Senator MILLER. I didn't mean the 1962 investment credit. I am talking about the declining balance method double the straight-line rates.

Mr. PARADISO. Just as they report them to IRS, yes; we use those.

Senator MILLER. You use those rather than the Bulletin F figures.

Mr. PARADISO. Yes, we use those as reported to the IRS where they took the declining method and so on. We use those.

Senator MILLER. These are income tax return figures.

Mr. PARADISO. Yes, based on income tax return figures.

Senator MILLER. Thank you.

Mr. PARADISO. Let me go on with my statement.

It should be noted that the 1962 figure on the OBE basis does not include the additional depreciation authorized by the liberalized depreciation guidelines issued by the Treasury Department in mid-1962. We are now—by "we" I mean the OBE—making a company survey to determine the extent to which the depreciation was increased on this account.

When this survey has been completed, which I expect to be around May of this year, and published in the July issue of Survey of Current Business, the results will be incorporated into the national income accounts.

The more than threefold increase in depreciation in the iron and steel industry far outstrips the rise in stocks, capacity, and production. In these later measures, expansion from 1947 to the present ranged from a gain of one-sixth in production to a growth of two-thirds of capacity. The swift rise in depreciation costs is set in perspective by the figures in the right portion of table 9. These express annual depreciation in terms of dollars per unit of capacity, production, and stocks. Each such measure mirrors clearly the step-up in depreciation charges.

Representative CURTIS. On that, Mr. Paradiso, what is the impact of the post-World War II inflation, because your depreciations taken in 1947 would have been on equipment put on the books in terms of the preinflated dollar?

Would you comment on that? Is that true?

Mr. PARADISO. That would include the inflated dollar.

Representative CURTIS. How big a factor is that? Granted there is an increase, but how big a factor is attributable to the change in dollar value?

Mr. PARADISO. Offhand, I couldn't tell you, but I would be very glad to submit that figure for the record.

Representative CURTIS. Thank you.

(The information furnished follows:)

No estimates are available placing depreciation in the iron and steel industry on a basis other than original cost, and to prepare such data would require a considerable amount of research. However, estimates of depreciation on a constant (1954) cost basis for all manufacturing establishments have been published by the Office of Business Economics based on the assumption of Bulletin F service lives and straight line depreciation. This provides for manufacturing as a whole an approximate idea of the effect of price changes on depreciation charges.

The figures below show depreciation calculated on three price bases. Original cost reflects depreciation of assets acquired under varying prices and is the usual basis employed by business firms. Constant (1954) cost makes the assumption that all assets were acquired, and were charged off, at prices prevailing in 1954. Replacement cost assumes that all depreciation taken in 1947 was charged off at 1947 prices for fixed assets, and that 1961 depreciation was charged off at 1961 prices, etc.

*Depreciation of manufacturing establishments*

[Dollars in billions]

| | Original cost | Constant cost (1954 dollars) | Replacement cost |
|---|---|---|---|
| 1947 | \$2.3 | \$4.7 | \$3.6 |
| 1961 | \$7.3 | \$7.9 | \$9.8 |
| Increase from 1947 to 1961: | | | |
| Dollars | \$5.0 | \$3.2 | \$6.2 |
| Percent increase | 216 | 69 | 174 |

The pattern applicable to actual depreciation charges for the iron and steel industry would be somewhat different for various reasons. One important factor affecting the steel industry is the large amount of rapid amortization and the influence of the larger initial writeoffs authorized by the 1954 Revenue Act. This would tend to reduce the effect of price changes. Other factors are the length of life of capital assets, the relative proportions of plant and equipment, and the timing of capital expenditures in iron and steel as compared with other manufacturing.

Mr. PARADISO. A part of the sharp rise in depreciation relative to the other three factors reflects the fact that the latter are expressed in real terms, while depreciation charges include the effect of price changes, which is your point, on the additional dollar value of capital investment.

These price increases are minimized by the use of historical costs rather than replacement costs in calculating depreciation, but there nevertheless is an inflation involved in this part.

Representative CURTIS. I would think that the use of historical costs rather than replacement costs would maximize the differential between the depreciation taken. When you say it minimizes it, I would think it would be the other way around.

Mr. PARADISO. Cost of increase in prices. If you start using replacement costs, you would have higher prices.

Representative CURTIS. I meant on your table. That is what I understand your table is pointing out, between the depreciation in dollars taken in 1947 compared to 1962. If you used replacement in 1947, it would not show as big a difference as in 1962, or am I in error?

Mr. PARADISO. If you did it in terms of replacement costs, since we had the continuing price increases all the way through, you would be maximizing the total amount involving the inflationary effect.

Representative CURTIS. The big inflation entered around 1951. It has been a sort of creeping thing since then.

Mr. PARADISO. In the machinery area they did go up.

Representative CURTIS. It was a little different in this area.

Mr. PARADISO. Yes, sir.

Representative CURTIS. You will supply some additional data?

Mr. PARADISO. Thank you.

Senator MILLER. May I ask a question on that table 9, Mr. Paradiso?

In the left-hand column you have depreciation, millions of dollars. Are those in 1954 dollars?

Mr. PARADISO. Those are 1954 dollars. They have been converted into the 1954 price levels.

Senator MILLER. So that both accounts, capital stock and depreciation, are in terms of 1954 dollars. I notice that you have billions of 1954 dollars in capital stocks, but you didn't say anything about 1954 in the depreciation account.

Mr. PARADISO. The capital stock is in 1954 dollars, not the depreciation. That is in the regular prices of the period.

Senator MILLER. These are pure tax return figures?

Mr. PARADISO. These OBE figures are on the basis of the tax return figures.

Senator MILLER. Would it be feasible for you to convert those to 1954 dollars so that the two columns would be on the basis of the same dollars?

Mr. PARADISO. On depreciation? I will have to check into that. We may be able to do it.

Senator MILLER. Mr. Chairman, I wonder if we might have that done. I imagine it is pretty much a mathematical computation, but I think it would be helpful to have the dollar amount shown in identical dollar values.

Mr. PARADISO. I understand we have this for all manufacturing, but we don't have it as yet for iron and steel. We will look to see whether we can do it for the steel industry.

Senator MILLER. Perhaps you could apply the decline in the dollar value for years in these figures, based on 1954 prices. Will you try to do that?

Mr. PARADISO. Yes.

Senator MILLER. If you could do that, may we have that in the record, Mr. Chairman?

Chairman DOUGLAS. We always grant every request that the Senator from Iowa makes.

That material will be in the record.

Mr. PARADISO. The sharpest rise in depreciation relative to the other three factors occurred during the period from 1950 through 1954–55. This reflects the emergency amortization authorized shortly after the outbreak of the hostilities in Korea in mid-1950.

The slowing down in 1955 of the relative rise in depreciation compared with stocks and capacity, and the downturn in these relationships in 1957–58 reflect the termination of the emergency amortization for new facilities.

Countering this development in part was the increase in depreciation stemming from the use of the declining balance and sum of years digit method of calculating depreciation as authorized in the Revenue Act of 1954. The pronounced rise in depreciation relative to production after 1955 stems from the foregoing factors, plus the steady downdrift in production as a percent of capacity in recent years.

That concludes my testimony.

Chairman DOUGLAS. We will now proceed to question on the paper as a whole by the committee. The chairman said on this series members would be limited to 15 minutes and we would move from majority to minority, alternating, so I now call on Congressman Reuss.

Representative REUSS. Mr. Chairman, I am sure it would not take 15 minutes.

Chairman DOUGLAS. Ten minutes.

Representative REUSS. Or 10 minutes, for that matter.

Mr. Paradiso, you spoke of the growing substitution for steel in the last 10 years of aluminum, concrete, and plastics. Can you give us, I don't want to say "concrete" examples of that, but some examples?

Mr. PARADISO. Where this occurred?

Representative REUSS. Yes. I have a general idea.

Mr. PARADISO. Some cars are now using aluminum pistons instead of steel. Right at the moment aluminum is being used in the case of some new buildings in Pittsburgh. Steel furniture now is being replaced by aluminum furniture. There are many examples which we could dig up. At the moment I don't happen to think of too many.

Representative REUSS. Where has concrete edged out steel? You still need to reinforce concrete with steel.

Mr. PARADISO. In buildings.

Representative REUSS. Don't you still need to reinforce concrete with steel?

Mr. PARADISO. You do, except I think they use more and more of the concrete. I am not sure about highways, but there may be some in highways. You have to reinforce that, too. I will be glad to make a list for you.

Representative REUSS. I think it would be interesting if you could at this point.

Mr. PARADISO. Just where this substitution is taking place in particular items. For plastics this is obvious. Many items were made of steel and now many, many items are just plastic and not steel.

Representative REUSS. Yes; I am sure many of the items you list will turn out to be commonplace, but, nevertheless, I would like to have them.

Mr. PARADISO. Yes.

(The list referred to follows:)

Below is a partial list of products made of aluminum and plastics which compete directly with similar or identical products made from steel. While the list is not complete, it is representative of the type of products which use aluminum and plastics in place of steel. The amount of actual steel displaced in each item is not known, nor should it be assumed that all items are of equal importance, or that steel itself has not made inroads in some fields previously dominated by other materials.

Aluminum:
- Metal doors, sash, and trim
- Wall siding
- Roofing and roof drainage equipment
- Ornamental fixtures
- Lighting fixtures
- Screen wire
- Window and door awnings
- Roof ventilators
- Metal household furniture (lawn types)
- Venetian blinds
- Pots and pans
- Truck and bus bodies
- Truck trailer bodies
- Trailer coaches bodies
- Wheel casings for trucks and buses
- Auto trim and grilles
- Railroad freight and passenger cars
- Aircraft fuselages
- Fruit juice cans, beer cans, oil cans
- Bolts, nuts, rivets, nails
- Housings for power mowers

Plastics:
- Pipe for irrigation, cable, etc.
- Reinforced plastic auto bodies
- Truck bodies, partitions, and linings
- Gears, bearings, bushings, and cams
- Corrugated panels for carports
- Screen wire
- Window and door awnings
- Dashboards in autos and trucks
- Pails and containers
- Drums
- Cans
- Outside cases for typewriters, telephones, adding machines, and other equipment
- Trays
- Linings for refrigerators and freezers
- Coat hangers

Representative REUSS. Mr. Chairman, I have been struck, during the testimony of Mr. Paradiso, that at several points there have been real limitations to the light he can give us by reason of nonavailability of certain data. For example, Mr. Curtis made the point—I thought it was a valid one—that we don't really have the definitive answers on capacity for the last couple of years. There is an unresolved question in my mind, at least, as to the extent to which the new capacity that has added to overall capacity and the extent to which it has merely replaced obsolescent capacity.

Then you have the point made by Senator Miller on the amount of steel usage, as to whether the steel that is now being used may not be stronger and hence you need to use less of it than before.

Most of these questions seem to be technical questions that the American Iron and Steel Institute would be in a uniquely good position to answer. I am wondering, therefore, if Congressman Curtis, who said, earlier this morning, that he had obtained some information from the Iron and Steel Institute, couldn't use his good offices with them to see if they won't give us the benefit of their testimony in this hearing, particularly on the two points I mentioned.

Representative CURTIS. I couldn't agree with the gentleman more. I hope they will. That is why I was happy, and I want to put in that happy note, to commend the chairman for setting up this format, inviting those people as well as labor union people to be present to comment on the testimony and to fill in information. I have no special good offices. I am just another Congressman interested in getting the facts. I am sure they would be just as glad to do it for you as for me.

Representative REUSS. I note you mentioned that they had given you some information on these points. I think it would be very helpful to have that for the whole committee and the public, too.

Representative CURTIS. I think so, too. I lobby them more than they lobby me. That is the way I get a lot of my information.

Representative REUSS. I would hope, therefore, that we could get their testimony.

Thank you, Mr. Chairman.

(The following was later received for the record:)

APRIL 26, 1963.

Mr. JOHN P. ROCHE,
*Executive Vice President, American Iron & Steel Institute,*
*New York, N.Y.*

DEAR MR. ROCHE: In this committee's hearing on steel, on April 25, there was a series of colloquies at various points which involved technical matters about the measurement of capacity and its rate of use in the steel industry. These questions involved both how the American Iron & Steel Institute measured capacity of the industry in the series it constructed up to 1960, and the meaning that could be attached to them. There were also questions as to why the measures were discontinued and what these measures would have looked like if the whole series had been continued up to January 1963.

I am sure your observers have reported these exchanges, but I thought it would be useful if I had a copy made of one of the particularly relevant exchanges between Representative Henry S. Reuss, (Democrat, Wisconsin) and Representative Thomas B. Curtis (Republican, Missouri). I am enclosing a copy of this particular passage of the transcript. You will note that the exchange indicates a belief on the part of the members of the committee that the American Iron & Steel Institute is the best equipped organization to give us some answers on the problems of measurement of capacity and on recent changes in capacity in steel.

I am sure that the committee will greatly appreciate any facts that the American Iron & Steel Institute could supply to aid the committee on these very technical questions.

Yours very truly,

JAMES W. KNOWLES,
*Executive Director.*

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AMERICAN IRON & STEEL INSTITUTE,
*New York, N.Y., May 3, 1963.*

Mr. JAMES W. KNOWLES,
*Executive Director, Joint Economic Committee,*
*Congress of the United States, Washington, D.C.*

DEAR MR. KNOWLES: This will acknowledge receipt of your letter of April 26. Since we discontinued collection of information on steel industry capacity in 1960, we are not in position to comment on the correctness of Commerce Department or other estimates of current steel industry capacity.

At the time that the Institute discontinued collection of capacity data, it issued a news release dated December 14, 1960, which stated in part:

"The Institute said the decision (to discontinue collecting capacity data) stemmed from suggestions both from within and outside the steel industry. It is believed that percentages of capacity operated have become unrealistic as a measure of economic activity in the steel industry, due to changing production techniques, better steels, and new products.

"Recent technological developments that increase production from existing facilities, including the use of oxygen and improved quality of raw materials have introduced new, yet to be defined, relationships between production and physical capacity of iron and steelmaking facilities."

However, we are glad to clarify the measures of capacity which we issued through 1960. The form distributed by the Institute on which capacities were reported by the various companies contained the following instruction:

"Annual capacity should be computed by multiplying the number of days in the current year by 24 hours per day by the number of furnaces less the number of hours the furnaces will be idle due to lost time account of relining and rebuilding and due to holiday shutdowns, times the expected net tons per operating hour."

The determination of capacity as reported to the Institute was made individually by each company on the basis of the above instruction.

Since we have collected no capacity data since early 1960, we are not in a position to estimate the extent to which new capacity makes existing capacity obsolete or adds to existing capacity.

We hope this will clarify some of the questions referred to in your letter.

Very truly yours,

J. P. ROCHE,
*Executive Vice President.*

Mr. PARADISO. I might say that the McGraw-Hill Co., as you know, conducts a survey each year, and this survey will be out tomorrow. In this survey they ask the questions as to how much of the additional capacity is for replacement purposes as against new additions. So we may be able to get some light on that tomorrow with regard to their plans for this year. They do this each year. I don't know how accurate this information is, because, again, I want to stress the point that in this particular industry it is very difficult to separate replacement from additions to capacity. They enlarge and that adds to capacity. They improve and that adds to capacity.

Representative REUSS. Yes; but I can think of no organization better able to give us accurate answers on this than the Iron and Steel Institute of the steel industry itself. I do hope they won't withhold that from the committee.

Thank you, Mr. Chairman.

Chairman DOUGLAS. Mr. Curtis?

Representative CURTIS. I am certain there will be no withholding of information by anyone. I hope not. I was pleased to note, Mr. Paradiso, that you said that statistics in this industry are considerably better than in almost any other. I am correct, am I not?

Mr. PARADISO. You are quite correct. There are gaps, however.

Representative CURTIS. Surely, of course there are. There is need to develop these if we can. But I think in doing this, we need to do it along the point I suggested.

For example, iron and steel stopped trying to estimate capacity, as I understand—and they have testified before our committee in subcommittees as to why they did—because of the variables in the thing and the difficulties of it. Do you have any figures on research and development moneys and how much has been spent by the iron and steel industry over a period of years?

Mr. PARADISO. For research and development?

Representative CURTIS. Yes.

Mr. PARADISO. I think there are such figures. I don't have them at the moment. I can supply those, too.

(The information requested follows:)

TABLE 1.—*Funds for performance of research and development, by industry, 1960 and 1961*

| Industry | Total R. & D. funds (in millions) | | R. & D. funds as a percent of manufacturers' sales | |
|---|---|---|---|---|
| | 1960 | 1961 | 1960 | 1961 |
| Total [1] | $10,546 | $10,891 | 2.9 | 3.0 |
| Food and kindred products | 104 | 107 | .2 | .2 |
| Textiles and apparel | 32 | 31 | .1 | .1 |
| Lumber, wood products, and furniture | 13 | 12 | .2 | .2 |
| Paper and allied products | 54 | 57 | .4 | .4 |
| Chemicals and allied products | 998 | 1,092 | 3.6 | 3.7 |
| Industrial chemicals | 663 | 695 | 5.9 | 5.8 |
| Drugs and medicines | 165 | 181 | 5.3 | 5.5 |
| Other chemicals | 170 | 216 | (2) | (2) |
| Petroleum refining and extraction | [3] 298 | [3] 308 | .8 | .8 |
| Rubber products | 118 | 124 | 1.9 | 2.1 |
| Primary metals | 160 | 161 | .6 | .7 |
| Primary ferrous products | 93 | 95 | .6 | .6 |
| Nonferrous and other metal products | 67 | 66 | .7 | .6 |
| Fabricated metal products | 107 | 106 | .5 | .5 |
| Machinery, nonelectrical | 962 | 924 | 2.9 | 2.7 |
| Electrical machinery | 2,415 | 2,377 | 10.3 | 9.9 |
| Communication equipment and electronic components | 1,240 | 1,176 | | |
| Other electrical equipment | 1,175 | 1,201 | | |
| Motor vehicles and other transportation equipment | 851 | 789 | 3.0 | 3.2 |
| Professional and scientific instruments | 400 | 385 | 6.6 | 6.0 |

[1] Includes industries not shown separately.
[2] Not available.
[3] Geological and geophysical exploration activities of petroleum companies are excluded from the definition of research and development.

Sources: Department of Commerce, except R. & D. funds, National Science Foundation.

TABLE 2.—*Funds for performance of research and development, by industry, 1956–61* [1]

[Millions of dollars]

| Industry [2] | 1961 | 1960 | 1959 | 1958 | 1957 | 1956 |
|---|---|---|---|---|---|---|
| Total | 10,891 | 10,546 | 9,610 | 8,353 | 7,718 | 6,588 |
| Food and kindred products | 107 | 104 | 90 | 75 | 67 | 58 |
| Paper and allied products | 57 | 54 | 49 | 41 | 35 | 36 |
| Chemicals and allied products | 1,092 | 998 | 891 | 805 | 728 | 651 |
| Industrial chemicals | 695 | 663 | 599 | 560 | 514 | 459 |
| Drugs and medicines | 181 | 165 | 148 | 128 | 104 | 94 |
| Other chemicals | 216 | 170 | 144 | 117 | 110 | 98 |
| Petroleum refining and extraction [3] | 308 | 298 | 276 | 253 | 224 | 194 |
| Rubber products | 124 | 118 | 114 | 88 | 107 | (4) |
| Primary metals | 161 | 160 | 136 | 126 | 111 | 93 |
| Fabricated metal products | 106 | 107 | 110 | 122 | 103 | 88 |
| Machinery | 924 | 962 | 938 | 804 | 698 | 566 |
| Electrical equipment and communication [5] | 2,377 | 2,415 | 2,253 | 1,942 | 1,778 | 1,487 |
| Motor vehicles and other transportation equipment | 789 | 851 | 844 | 825 | 677 | 655 |
| Aircraft and missiles [6] | 3,964 | 3,637 | 3,188 | 2,656 | 2,605 | 2,182 |
| Professional and scientific instruments | 385 | 400 | 339 | 295 | 249 | 200 |
| Scientific and mechanical measuring instruments | 190 | 216 | 185 | 156 | 139 | 97 |
| Optical, surgical, photographic, and other instruments | 195 | 184 | 154 | 139 | 110 | 103 |
| Other industries [7] | 498 | 442 | 382 | 320 | 338 | 273 |

[1] Data on R. & D. funds for all industries combined and for certain individual industries, 1956–60, shown here are revisions of previously published figures, as, for example, National Science Foundation, Reviews of Data on Research and Development, No. 30, "Funds for Performance of Research and Development in American Industry, 1960," Washington, D.C., Superintendent of Documents, U.S. Government Printing Office, September 1961. These statistical data do not include company-financed research and development contracted to outside organizations.

[2] Industries are arrayed in accordance with their standard industrial classification code numbers, as for example, food and kindred products, 20; textiles and apparel, 22 and 23.

[3] Geological and geophysical exploration activities of petroleum companies are presently excluded from the definition of research and development.

[4] Not separately available but included in total.

[5] The communication industry (SIC Code No. 48) and the electrical equipment industry (SIC Code No. 36) have been combined.

[6] Include companies primarily engaged in the manufacture of aircraft and parts (SIC Code No. 372) and the manufacture of ordnance and accessories, including complete guided missiles (SIC Code No. 19).

[7] Include several industries for which separate figures are shown in tables 3, 4, and 5 of this bulletin, as follows: Textiles and apparel; lumber, wood products, and furniture; stone, clay, and glass products; other manufacturing industries; and nonmanufacturing industries.

NOTE.—Detail may not add to totals or subtotals because of rounding.

TABLE 3.—*Funds for performance of research and development, by industry and source, 1960 and 1961*

[Dollar amounts in millions]

| Industry [1] | Total R. & D. funds | | | Federal Government | | | Company [3] | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1961 | 1960 [2] | Percentage change, 1960–61 | 1961 | 1960 [2] | Percentage change, 1960–61 | 1961 | 1960 [2] | Percentage change, 1960–61 |
| Total | $10,891 | $10,546 | 3 | $6,436 | $6,127 | 5 | $4,455 | $4,419 | 1 |
| Food and kindred products | 107 | 104 | 3 | 4 | 9 | (4) | 103 | 95 | 8 |
| Textiles and apparel | 31 | 32 | −3 | 5 | 8 | (4) | 26 | 24 | 8 |
| Lumber, wood products, and furniture | 12 | 13 | (4) | 4 | 3 | (4) | 8 | 10 | (4) |
| Paper and allied products | 57 | 54 | 6 | (5) | (5) | (4) | 57 | 54 | 6 |
| Chemicals and allied products | 1,092 | 998 | 9 | 218 | 182 | 20 | 874 | 816 | 7 |
| Industrial chemicals | 695 | 663 | 5 | 133 | 128 | 4 | 562 | 535 | 5 |
| Drugs and medicines | 181 | 165 | 10 | (6) | (6) | (6) | (6) | (6) | (6) |
| Other chemicals | 216 | 170 | 27 | (6) | (6) | (6) | (6) | (6) | (6) |
| Petroleum refining and extraction [7] | 308 | 298 | 3 | 32 | 26 | 23 | 276 | 272 | 1 |
| Rubber products | 124 | 118 | 5 | 36 | 37 | −3 | 88 | 81 | 9 |
| Stone, clay, and glass products | 104 | (6) | (6) | 7 | (6) | (6) | 97 | (6) | (6) |
| Primary metals | 161 | 160 | 1 | 15 | 16 | −6 | 146 | 144 | 1 |
| Primary ferrous products | 95 | 93 | 2 | 3 | 2 | (4) | 92 | 91 | 1 |
| Nonferrous and other metal products | 66 | 67 | −2 | 12 | 15 | (4) | 54 | 53 | 2 |
| Fabricated metal products | 106 | 107 | −1 | 30 | 33 | −9 | 76 | 74 | 3 |
| Machinery | 924 | 962 | −4 | 290 | 378 | −23 | 634 | 589 | 9 |
| Electrical equipment and communication [8] | 2,377 | 2,415 | −2 | 1,565 | 1,603 | −2 | 812 | 812 | (9) |
| Communication equipment and electronic components | 1,176 | 1,240 | −5 | 837 | 884 | −5 | 339 | 356 | −5 |
| Other electrical equipment | 1,201 | 1,175 | 2 | 728 | 719 | 1 | 473 | 456 | 4 |
| Motor vehicles and other transportation equipment | 789 | 851 | −7 | 187 | 212 | −12 | 602 | 639 | −6 |
| Aircraft and missiles [10] | 3,964 | 3,637 | 9 | 3,615 | 3,198 | 13 | 349 | 439 | −21 |
| Professional and scientific instruments | 385 | 400 | −4 | 167 | 202 | −17 | 218 | 198 | 10 |
| Scientific and mechanical measuring instruments | 190 | 216 | −12 | 106 | 138 | −23 | 84 | 78 | 8 |
| Optical, surgical, photographic, and other instruments | 195 | 184 | 6 | 61 | 64 | −5 | 134 | 120 | 12 |
| Other manufacturing industries | 162 | (6) | (6) | 110 | (6) | (6) | 52 | (6) | (6) |
| Nonmanufacturing industries | 189 | 160 | 18 | 151 | 118 | 28 | 38 | 42 | −10 |

[1] See table 2, footnote 2.
[2] Revisions in the 1960 figures as compared to those previously published (National Science Foundation, Reviews of Data on Research and Development, No. 30, "Funds for Performance of Research and Development in American Industry, 1960," Washington, D.C., Superintendent of Documents, U.S. Government Printing Office, September 1961) are described in the "Scope of Data" section of this report.
[3] R. & D. performance financed by companies excludes by definition those R. & D. funds contracted by industrial firms to outside organizations. Research and development conducted by outside organizations financed by industrial firms annually amounts to about 4 percent of company-financed research and development for all industries.
[4] Percentage changes are not shown for industries in which the amount of R. & D. performance in 1960 was less than $15 million.
[5] Less than $0.5 million.
[6] See table 2, footnote 4.
[7] See table 2, footnote 3.
[8] See table 2, footnote 5.
[9] Less than 0.5 percent.
[10] See table 2, footnote 6.

[National Science Foundation Release No. 36, September 1962]

Representative CURTIS. I am very anxious to get those. I am also anxious to get anything that will give us an indication of the amount of technological advancement in this industry. I suspect that there has been a relatively great technological advancement. Of course, if there are any measurements for that, I would appreciate your comment.

Mr. PARADISO. This is one of the reasons why I think the industry is continually adding to capacity even though the rate of operations has been fairly low for such a long period. In other words, they just have to add to capacity because of the technological advances that are occurring. They just can't fall behind in that. I believe it is part of the reason for their expanding capacity.

Representative CURTIS. This relates in the area of depreciation. This is really a question as to whether you have any data on any change in the useful life of the steel industry plant. Maybe in the pre-World War II useful life was 15 years. I don't know this. This is what I am trying to see. There may be a decline to where it is below 10. Do you have any figures that would bear on this that might show us whether there has been any change in the useful life or plant?

Mr. PARADISO. I think we have some figures. I don't have them with me. I believe we can furnish some information on that point.

Representative CURTIS. Am I right in my premise that there has been a decline in useful life?

Mr. PARADISO. Yes.

(The following tables taken from the U.S. Treasury sources show changes in useful lives of steel company facilities:)

IRON AND STEEL INDUSTRY

The iron and steel manufacturers included in this category are those manufacturing the basic products such as ingots, bars, sheets, etc. The overall life of depreciable assets, including buildings, for this industry is approximately 25 years, which varies somewhat according to plants, as shown in the following list:

| | *Average useful life (years)* |
|---|---|
| Annealing furnaces | 22 |
| Blast furnace plants | 25 |
| Blooming mills | 25 |
| Byproduct coke plants, complete | 25 |
| Electric weld tube mills | 25 |
| Foundries | 25 |
| Heating furnaces and equipment | 20 |
| Ingot molds, stools, annealing boxes, and rolls are generally treated as inventory items | 6 |
| Land improvements—roads, pavements, sidewalks, culverts, etc | 33 |
| Lap and butt weld pipe mills | 25 |
| Merchant bar mills | 25 |
| Open hearth furnace plants | 25 |
| (*a*) Electric furnaces (smelting) | 20 |
| (*b*) Bessemer convertor plants | 20 |
| Pickling equipment | 18 |
| Plate mills | 30 |
| Rail mills | 35 |
| Seamless tube mills | 20 |
| Sheet mills—2 high | 20 |
| (*a*) Cold rolling, 2 high | 20 |
| (*b*) Cold rolling, 4 high | 30 |
| Strip mills, 2 high, continuous, up to 24 inches wide | 20 |
| (*a*) Strip mills, cold rolling, 2 high | 20 |

*Average useful life (years)*—Continued

| | |
|---|---|
| Strip mills, 4 high, continuous, 36 to 96 inches | 25 |
| (*a*) Cold rolling, 4 high, 36 to 96 inches | 30 |
| Structural mills | 25 |
| Wire rod mills, complete | 25 |

Source: Bulletin F (revised January 1942), U.S. Treasury Department, Bureau of Internal Revenue.

PRIMARY METALS

Includes the smelting, reducing, refining, and alloying of ferrous and nonferrous metals from ore, pig, or scrap and the manufacture of castings, forgings, and other basic ferrous and nonferrous metals products:

| | *Years* |
|---|---|
| (*a*) Ferrous metals | 18 |
| (*b*) Nonferrous metals | 14 |

Source: "Depreciation Guidelines and Rules," U.S. Treasury Department, Internal Revenue Service, publication No. 456(7-62), July 1962.

Mr. Paradiso. There is, you know, a very large question here, namely, whether the actual useful life may not be declining year after year. You are making computations we assume that the useful life is 30 years over this period and then it drops to 20 years over the next period and maybe 15 years after that. Some economists have argued that perhaps you can't take even as long a period as 5 or 10 years. That is, the useful life might be a year-to-year kind of change.

Representative Curtis. I suspect so, if we are in a period of relatively rapid technological advancement. Of course, your useful life would tend to become less in those periods. As technological advancement tapers off, your useful life would extend. This would give us some indication of how much technological advancement is going on. It is a reverse.

I have one other comment. You say you are looking into the impact of the new schedule (F) on depreciation. That would reveal whether or not it was necessary, in setting up the new depreciation schedules, to give much shorter life than we had been given.

Mr. Paradiso. That is right, it would.

Representative Curtis. Do you have any judgment on that now?

Mr. Paradiso. No, we don't. We are just now getting the information in. We haven't tabulated anything as yet, or examined our returns, so I don't have any judgment as yet. We will in about a month.

Representative Curtis. Thank you. Thank you, Mr. Chairman.

Chairman Douglas. Mr. Paradiso, I want to compliment you for doing the best with the figures you had at your disposal, and we appreciate the difficulties both because of lack of data and the pressure of time. I must say I am somewhat disappointed that the evidence has not thrown any light upon the basic issue that we wanted to have considered, namely, the amount of capital per unit of output. Because what we are trying to do is to find the cost of capital per unit of output in comparison with prices. In the first two sessions we covered both employment costs and wage costs per unit of output. In the second session we covered material costs per unit of output. I had hoped that today we might get material on capital cost per unit of output. As I say we recognize the difficulties under which you have been laboring and there is no stigma to be attached to you or to your agency. I do think this is something that is badly needed.

If anyone would care to volunteer information on this point it will be very welcome.

The second question I should like to rasie is connected with table 9 (193), if you would look at that. Especially, the last column. The last column gives the ratio of book costs for depreciation in terms of production. It starts off showing that the ratio is 2.39, it remains at 2.82, 3.20, for the early years.

Mr. PARADISO. Yes.

Chairman DOUGLAS. It rises to 8.31 and 8.87. In other words, this shows a rise in depreciation charges per ton of steel; is that right?

Mr. PARADISO. That is right. In the latter period it is primarily the effect of two things. Namely, the increases in depreciation, coupled with a reduction in production.

Chairman DOUGLAS. Now, if you will look at the third from the end, the ratio of depreciation cost to capital stock, you will find that those rise from around 2 percent a year.

Mr. PARADISO. That is right.

Chairman DOUGLAS. Which would mean replacement in 50 years; is that right?

Mr. PARADISO. That is about right; 50 years.

Chairman DOUGLAS. To a figure in recent periods from 4 to 5 percent a year, or replacement in from 25 to 20 years?

Mr. PARADISO. That is right.

Chairman DOUGLAS. Do you have any record as to the degree to which these depreciation costs were actually put back into the business or the degree to which they merely increase the cash flow of the companies?

Mr. PARADISO. We will have that, Mr. Chairman, on Monday. There we intend to explore the entire set of financial data.

Chairman DOUGLAS. That is going to be on Monday.

Mr. PARADISO. Yes. Total sources and uses of funds and related matter on Monday.

Chairman DOUGLAS. To the degree to which depreciation cost is not actually spent in the industry, it occupies a very curious position, doesn't it? On the one hand it is a cost.

Mr. PARADISO. That is right.

Chairman DOUGLAS. On the other hand it is an asset.

Mr. PARADISO. Yes.

Chairman DOUGLAS. If invested in Government securities or in bank deposits it is income yielding?

Mr. PARADISO. Yes.

Chairman DOUGLAS. So you have this curious position that something that appears as a cost can be an earning asset?

Mr. PARADISO. Yes. We are addressing ourselves exactly to that question on Monday.

Chairman DOUGLAS. The third question that I want to raise is on what is going to happen in the future on the ratio of capital per ton of output. I think that in the past the historical development has been, with the passage of time, that more and more capital is used per unit of output. But I wonder if there are not three developments in the steel industry which may reverse this tendency. The first is that which has already been referred to, namely, the oxygen conversion method, which as you say, greatly speeds up the time required to melt iron ore both at the blast furnace and the open hearth furnace, and therefore increases the capacity of blast furnaces greatly in terms of tons of steel. And whereas you say since the oxygen process is rented from outside companies—I suppose this is largely Koppers—that the result is that you get an expansion in output without a corresponding increase in fixed capital there.

Mr. PARADISO. That is right.

Chairman DOUGLAS. Therefore, the ratio of capital to output diminishes; isn't that true?

Mr. PARADISO. Yes.

Chairman DOUGLAS. Now let us take the so-called process of continuous castings. As I understand it, this process largely bypasses the blooming mills?

Mr. PARADISO. I believe that is correct.

Chairman DOUGLAS. Would you have your experts confirm this?

Mr. PARADISO. I have been informed that is correct.

Chairman DOUGLAS. May I ask if there are any companies which now have the process of continuous castings?

Mr. MCGANN. There is a plant in operation in Great Britain. The Koppers Co. has rights to at least one of these processes, and the United States Steel company has been experimenting with this and the picture on their last annual report in color right on the front page shows their experimental installation.

Chairman DOUGLAS. I have seen that picture. Therefore, this is a development which may well occur in the near future?

Mr. PARADISO. It looks very promising.

Chairman DOUGLAS. Now, the result of this, by bypassing the blooming mills, will be to diminish the ratio of capital per ton of steel, will it not?

Mr. PARADISO. Yes; at that stage of production.

Chairman DOUGLAS. First we started on the open hearth furnaces and the blast furnaces. Now I am speaking about the blooming mills. Will not this greatly reduce the amount of capital which is now invested in blooming mills?

Mr. MCGANN. We don't have figures on it, but it looks as if it will.

Chairman DOUGLAS. Very well. The third point I want to make deals with the so-called sensimer process in the planetary mills. I am not quite certain of the precise nature of this process, but I am told that it greatly reduces the number of separate rolls that the slabs have to go through and results in a speedup and diminishes the amount of capital required in the rolling mills. Is or is not that correct?

Mr. PARADISO. I am not familiar with that.

Mr. MCGANN. Again we don't have figures on the amount of capital involved in these installations.

Chairman DOUGLAS. This process has been used in Austria for a number of years, has it not?

Mr. MCGANN. Modifications of it have; yes, sir.

Chairman DOUGLAS. What has been the effect in Austria?

Mr. MCGANN. For certain products there have been economies in the ratio of capital to output.

Chairman DOUGLAS. Have there been any products in which the ratio of capital to output has increased?

Mr. PARADISO. I believe there have, but we can get you what data we can assemble on that.

Chairman DOUGLAS. Let me ask a general question. Overall, what has been the effect of the sensimer process? Does it reduce the amount of capital required in the rolling mills or not?

Mr. PARADISO. I would say it would for the same quality of output, sir.

Chairman DOUGLAS. So that all three of these developments which lie in the offing taken individually would reduce the ratio of capital per ton of steel.

Mr. PARADISO. Yes.

Mr. McGANN. I think there is an important qualification that should be entered and that is that typically the per ton of steel tends to be a higher quality of steel.

Chairman DOUGLAS. I understand.

Mr. McGANN. If we could correct for quality, I think the statement would be right, but if we think in terms of gross tons, the ratio has not gone down appreciably.

Chairman DOUGLAS. If there is an improved quality there will be an increase in price, other things being considered. If we shift from tons to dollars of output the ratio of capital per $100 of output will diminish; is that true?

Mr. McGANN. It would appear from these examples that it should but the data don't seem to give convincing evidence.

Chairman DOUGLAS. Have these processes been widely used as yet?

Mr. McGANN. Not in the United States.

Chairman DOUGLAS. That is just the point. Are you speaking from an American experience or European experience?

Mr. McGANN. Primarily from American experience.

Chairman DOUGLAS. How can you judge on this on European experience if the processes have not yet been used except in isolated instances?

Mr. McGANN. We can't judge conclusively. The difficulty is the shortage of data from the European experience.

Chairman DOUGLAS. I think this is a very significant factor and it should be considered in the matter of these depreciation ratios. We may well find that the depreciation ratios which have increased so enormously in recent years will be adequate to provide for this new capital required in the change of processes without increasing capital from outside through bond issues, and can be done with an actual decrease in the ratio of capital to product. Do you have any comment on that?

Mr. PARADISO. It would appear to be that way, but I think we have to have more information.

Chairman DOUGLAS. This is very important so far as the future is concerned and concerning the capital requirements of the future. My time is up. Senator Javits.

Senator JAVITS. Mr. Paradiso, you know more about the past than you do about the future; is that right?

Mr. PARADISO. I am pretty sure that is the case.

Senator JAVITS. So you have had material improvements, haven't you, in steelmaking in the past?

Mr. PARADISO. Yes; that is right.

Senator JAVITS. Including this oxygen process?

Mr. PARADISO. That is right.

Senator JAVITS. What do your facts and figures show on that? In other words, is the capital investment per ton of steel output less or more today than it was 10 years ago?

Mr. PARADISO. The data don't show too much difference. You can see from the chart I have here the ratios are pretty flat. It has not varied a great deal.

Senator JAVITS. What chart were you referring us to?

Mr. PARADISO. Table 8 and chart 7. You notice the ratio of capacity per $10 ton of capital stock, 10 years ago, going back to 1952, the ratio has not been a great deal different. That line there, as you can see, is fairly flat but not too much different.

Mr. McGANN. You see the solid line shows some fluctuation but not a great deal. It was 8.2 percent in 1960, and it was 8.8 percent in 1954, and that was the peak.

Senator JAVITS. In those 10 years, have processes of steel production materially improved technologically?

Mr. PARADISO. Yes; I think they have.

Senator JAVITS. Do you have any reason for supposing that the pattern will be any different in the ensuing 10 years with other improvements? In other words, can you speculate that there will be less capital invested in the ensuing 10 years per ton of capacity according to this chart than you can in the past 10 years based upon improvements which actually occur?

Mr. PARADISO. It would only be my judgment. It would be less capital.

Senator JAVITS. Just a speculation on your part; is that right?

Mr. PARADISO. Yes, sir.

Senator JAVITS. What does it take in order to install these new facilities? Does it take large investments of capital?

Mr. PARADISO. Yes; relatively large investments.

Senator JAVITS. It does?

Mr. PARADISO. Yes.

Senator JAVITS. In order to attract those investments isn't it a fact that you have to show a satisfactory rate of profit?

Mr. PARADISO. You have to have a good rate of profit, but you have these depreciation allowances. This whole question I would like to defer until we get to the capital financing and what is needed. I would like to defer that to Monday because there we will present the whole picture in terms of what the source of these funds is and the uses of these funds.

Senator JAVITS. I understand, sir, but what Congressman Curtis is complaining about, and I think quite properly, that first you give us your opinion that it will take less capital, and now you answer that you wish to defer the whole consideration until Monday. So you have given the conclusion before you have given us the evidence. I would be inclined to agree with Congressman Curtis. I think I am as dispassionate as anybody sitting on this committee, not more so but certainly not less so. I really want to find out. But I must say these ad hoc opinions which come before the facts worry me, too. In short, you are saying that it will take less capital and then when you are pressed for facts to back it up, you say you will produce the facts on Monday.

Mr. PARADISO. I was saying it would take less capital on the basis of these new things we have discussed, the oxygen process and so on. On that basis I would think that the industry to use all kinds—would try to use all kinds of new devices for speeding up production. It is only on that basis. Not on any financial basis or otherwise.

Senator JAVITS. You are now saying that you cannot tell us before Monday whether the reserves for depreciation will be adequate and in your view to represent this new investment or whether new capital will have to be raised. Is that what I understand your answer to be?

Mr. PARADISO. Yes; whether it will be adequate or not adequate and what they do with the money.

Senator JAVITS. Do you agree that if new capital has to be raised it will be attracted by a satisfactory rate of profit in steel operations? Is it not true that they will need it in order to attract new captial, if they need new capital?

Mr. PARADISO. That is right.

Senator JAVITS. That is what I wanted to ascertain. The other thing I would like to ask you is about capacity. You gave us some figures on capacity. How much of that is obsolescent capacity? It is constantly charged that the claim that America is operating at only partial capacity in terms of its facilities, especially in steel, is really not an accurate figure because much of the capacity that is called capacity is obsolescent and would not be used unless you are ready to toss all cost factors overboard because of an emergency.

Mr. PARADISO. That is right.

Senator JAVITS. Could you give us any information on that?

Mr. PARADISO. I don't have anything on how much is obsolescent. This is a concept—a conceptual problem of what a company considers to be obsolescence. It could vary quickly. In other words, equipment might be all right this month and the next month you might find that it becomes obsolescent. The rate of obsolescence is accelerating.

Senator JAVITS. You would agree that there is capacity in the figure on capacity you gave us which is obsolescent?

Mr. PARADISO. I think there is some in that figure.

Senator JAVITS. You would not be prepared to estimate how much?

Mr. PARADISO. No.

Senator JAVITS. You would, however, I assume, accept with respect the estimates of industry or labor?

Mr. PARADISO. Yes.

Senator JAVITS. To what extent is this capacity national interest capacity? In other words, to what extent is this capacity maintained for standby to serve the national interest? Would a war or some other grave national problem require a tremendous acceleration of steel production?

Mr. PARADISO. What extent is it being maintained for that purpose?

Senator JAVITS. Yes; could you give us any estimate of that?

Mr. PARADISO. I don't think I can. If the emergency is great enough they can do what they did during the war or during the Korean period. They can let go what they are doing for civilian purposes and use the capacity for the emergency requirements.

Senator JAVITS. I would like to make a request to the Chair, and I think the Chair knows me well enough to take me at my word, that I really believe the public has a right to know in this situation. I think the hearings are splendid from that point of view. I think the public and consumers, and the consumer is still king in this country, will take care of the price situation if we give them all the facts.

Chairman DOUGLAS. Where would you get these facts?

Senator JAVITS. I was just going to suggest that to the chairman. I was going to suggest that if it is not security information and the chairman ascertains whether it is or not, I think it would be very useful to find out what steel capacity is being maintained on a national interest basis at the request of any of the Government agencies charged with security.

Chairman DOUGLAS. You are proposing that we get this information from Government agencies, not from the industry?

Senator JAVITS. No; from Government agencies.

Chairman DOUGLAS. That will be done.

(Upon inquiry of various governmental agencies the committee staff has been informed that no "standby" steel production capacity is currently maintained at Government cost, a longstanding Defense Department interest in certain highly specialized facilities having been terminated because of declining need for the product.)

Senator JAVITS. I thank the chairman and the witness.

Chairman DOUGLAS. Senator Miller?

Senator MILLER. Mr. Paradiso, I would like to refer to chart 3–A just briefly, or table 3–A, rather, you state that steel production in 1962 was the same as in 1952. Are you talking in terms of volume only? You say steel production in 1962 was the same as 1952. Is this in terms of tonnages only or are we talking qualitatively?

Mr. PARADISO. No; we are talking in terms of tonnages.

Senator MILLER. If we are talking only in terms of tonnages, I am wondering if that is going to be meaningful, to just say that the tonnage in 1962 is the same as 1952 and if what we really should be looking for is the qualitative comparison?

For example, taking the agriculture, we might say the agriculture production of dairy products was the same in 1962 and in 1952, but we might find an entirely different mix with an entirely different set of demands and an entirely different number of competitive factors. I was wondering what the point is in trying to compare mere tonnages between 1962 and 1952 with all of the technological changes and changes in consumer demand which you brought out in the form of competitive products.

Mr. PARADISO. The first question is whether the changes have been large enough to account for the significant discrepancy that you have as between the production of steel and these other items. All I am trying to demonstrate here is that steel products have not moved a great deal. It is true, as you say, that the quality changes. But the quality of these other items changes, too.

Senator MILLER. I am sorry I didn't hear what you just said.

Mr. PARADISO. I said the quality of these other materials changes, too. It is not just a one-way street.

Senator MILLER. I am sure that has happened. But I fail to grasp the significance of simply coming out with a statement that tonnage production in 1962 is the same as it was in 1952, without taking into account the qualitative changes and other changes that have occurred in the competitive situation, in the consumer demand situation during that period of time. If they were identical all the way through, I can see some significance to it. But without these other qualitative changes being put into the picture, I am at a loss to understand the significance.

Mr. PARADISO. You are quite right. We have no way of measuring qualitative differences here. All I am going to say is that the percentages are so striking, so large, that they could not in my judgment be accounted for merely by quantitative changes. Perhaps some could. There is such a striking difference here in the changes over this period that I just can't see that qualitative changes would make that difference.

Senator MILLER. But they would make some difference?

Mr. PARADISO. They might make some difference.

Senator MILLER. Thank you. I would now like to refer to your statement. You state that in the economy—if the economy should achieve actual employment by 1966—by full-time employment, full employment I take it you mean 4 percent unemployment?

Mr. PARADISO. Four percent rate of unemployed.

Senator MILLER. You say by 1966 if we have only 4 percent unemployed as against 5.7 percent today, I believe it is, that we could expect to have steel ingot production up to 160 million tons?

Mr. PARADISO. Let me make sure this is clearly understood in terms of what I am saying. If you turn to the chart to which that table refers, namely chart 3, it is important to understand this calculation because it could be misunderstood. Chart 3, you will recall, represents the relationship between steel shipments and durable goods production. Then this decline—this declining trend over the years.

What I am saying is that if this declining trend should stop in the next three years by the industry doing all kinds of things—I don't know how many things can be done—but if it should stop, if there should be no further deterioration in this 4-percent decline in the loss of steel year after year, after you take into account this effect of increased durable goods, then you would reach 160 million tons, approximately. On the other hand if there is a continuation of this declining trend, and I have assumed that the industry will try to do something to moderate this decline—I have assumed instead of 4 percent that the decline would be 3 percent next year and 2 percent the year after and perhaps even 1-percent decline the year after that—in other words, a moderation of this declining trend, then the production at full employment 1966 would reach 150 million tons. But you could make another calculation. You could assume that the rate of decline continues as it has in the past, at a 4-percent rate, in which case you would have a smaller steel production associated with a full employment situation than 150 million tons. I thought these numbers would be of interest because of the implication, namely, that if somehow the steel industry, just as the cotton industry when dacron came out, you remember they thought they were going to lose a lot of sales to shirt manufacturers. What happened? They developed a cotton shirt which competes very nicely with dacron. If the steel industry can go ahead and in one way or another expand its markets not only here but perhaps abroad, and halt this decline trend, then I say they will have an extremely favorable production and demand picture.

Senator MILLER. May I say that I agree that this would be interesting. But I am wondering how practical it is. Let me ask you this question: On what basis was the 160 million tons computed? Was it based upon the rate of 130 million tons which we have right now, or was it based upon the 100-ton annual consumer demand which you gave me in a previous answer?

Mr. PARADISO. That is an annual rate for the annual production.

Senator MILLER. In other words, Mr. Paradiso, what you are telling us is that while the annual consumer rate would be 100 million tons—I believe that was your response to the question.

Mr. PARADISO. 130 million.

Senator MILLER. In reaching this 160 million tons you have not used that, but you have used the current 130-million-ton rate?

Mr. PARADISO. No; I am sorry, I have not. In fact, this computation, as you can see, ends with 1962. I have not used the 130-million rate for the simple reason that I don't think this is a rate that is sustainable in terms of the composition of demand going on at the present time.

The 130-million rate includes a considerable amount of demand for inventory purposes.

Senator MILLER. That is correct. Then you used the 100-million-ton annual consumer rate.

Mr. PARADISO. I have used the information, as you can see, from the chart through 1962. There is no weekly or monthly data. I have used annual data in chart 3 using all of the years from 1947 to 1962 and developed the correlation that is involved between steel shipments by years—actual annual data in relation to durable goods production.

Then when I look at that diagram, as you can see, there is a deterioration going on, there is a declining trend. When you simply take the difference between the actual steel shipments from this line which I call AB in that diagram and plot that difference, you find that the industry has been losing relative to the durable goods production.

Senator MILLER. I see what you have done now. Let me ask you this: Would we come up with a different figure than 160 million tons by 1963 using your assumptions, if we used as a base for calculating our calculations of increased consumption the 100-million-ton annual rate of consumption today which is the figure you gave me in answer to an earlier question?

In other words, if we projected ourselves from today to 1963 on the assumption of a 4-percent unemployment rate and used 100 million tons annual consumer demand, would we come up to the 160 million tons by 1966? That is a 60-million-ton increase.

Mr. PARADISO. That is right. If we make this assumption which is very important, namely, that there is no further deterioration or loss in the industry relative to durable demand.

I should emphasize in reaching a full-employment situation that a characteristic of that must be a very high investment expenditure by industry. In other words, if we don't get high levels of demand for durable goods of all kinds, it is my judgment we will not get a full employment situation.

Senator MILLER. It seems to me, and please tell me if I am wrong in my interpretation, that what you are saying is that if we reduce our unemployment rate from 5.7 to 4 percent, that within 3 years we are going to have an increase in steel production based upon consumer demand of 60 million tons a year. Because as of now the annual rate of consumption is 100 million and within 3 years you are going to go to 160 million. I find this very hard to understand.

Mr. PARADISO. You reach 160 million by 1966.

Senator MILLER. I am sorry; within 6 years it will increase by 60 million tons?

Mr. PARADISO. That is right. In other words, you would have a 15-million-ton average addition per year provided there is gain on the basis of the assumption I made. If there is still deterioration in the industry, then you reach 150 million tons.

By the way, I think the rate for the first quarter, a more normal rate would be about 105 million tons.

Senator MILLER. I do not care where the chips fall, if it is 100 million or 105—that is all right. I am wondering if you would be good enough to use a 105 million base of annual rate of consumption and project that forward, to see whether you come out to 160 million by 1966. I have a feeling that we will get a different answer. But if it will check out with what you have here, I think it would give me a more comfortable feeling.

Would you mind doing that?

Mr. PARADISO. I will investigate that from that point of view.

(The information requested follows:)

The calculations of 160 and 150 million tons steel ingot production were derived from a correlation analysis utilizing a relationship between steel shipments and durable goods production and the residual time trend. The derivation was not based on a simple projection of the trend from any past year or quarter. It was obtained from a combination of the relationship to durable goods production and of the time trend which reflects the loss of steel demand from domestic and foreign sources.

With respect to Senator Miller's question, the following additional calculation might serve his purpose. We shall assume that the postwar trend—after allowing for the effect of demand on steel production—of an average 4-percent decline per year would continue through 1966. This would simply imply that the inroads made on steel by competitive products and by other factors would continue at the same rate as in the past in the next 3 years. On this basis steel ingot production in 1966, assuming a full employment situation (equivalent to 4 percent rate of unemployment), would amount to 135 million tons.

Senator MILLER. Thank you.

I have one further point. I know it is very well to say that if the steel industry does this, if it improves product attractiveness for consumers, that we can do so much. But I find myself in the same problem in the agriculture industry. We could say if we could increase our export shipments, if we could increase industrial demand for agricultural products, we could expand our agricultural base and instead of losing 236,000 farm workers and farm operators, as we have in the last 2 years, we won't lose any for the next 2 or 3 or 4 years. But the trend from all the information we have seems to indicate that is not going to happen.

I am wondering how practical it is to say that if this is done, and if this is done, in the face of the facts of life that we are going to have a certain situation, granted that we all want to see increased consumer demand for certain products, we want to see full employment, and full employment particularly in the steel industry, how practical that "if" is in the face of the trend and facts we know today.

Mr. PARADISO. I think it is practical. I think the iron and steel industry today is doing a great deal to see about expanding its markets. All you have to do is go through iron and steel magazines and see the kind of new things they are proposing for certain products for steel to be used in.

I think they are going to push this kind of thing more and more. I don't know that they will actually stop this declining trend completely. I think that may be impractical. But it seems to me that the industry is doing even now a great deal. I hope that the gentlemen from the Iron and Steel Institute can supply actual information in terms of where they are trying to capture certain markets that have been lost.

Senator MILLER. If they are successful in doing this, is it absolutely necessary that this full employment rate be attained? Might not this result be achieved even with an aggravation of the unemployment situation?

Mr. PARADISO. I think you need a large amount of investment in order for the steel industry to have a greatly stepped-up rate of operation. This is the basic source of their demands, durable goods. If you have a large expansion of durable goods, I just don't see how the steel industry cannot expand its operations. Therefore, in order to get full employment, what I said before is that you must have an expansion in durable goods.

This is an implication of a full employment situation. This is the reason why we are trying to provide incentives to the manufacturers of machinery and so on so that they can expand more than they have been expanding.

The slow rate of growth in the economy has been attributable, in my judgment, to the fact that plant and equipment spending in the last 5 years has been below the long-term trend of the economy. That consumer spending on durable goods has been below the long-term trend of the economy. Even residential construction to some extent has been below.

What I am saying is that in the process of going to full employment, you have to have an acceleration in the demand of these durable goods which have their immediate impact on the steel demand.

Senator MILLER. Would what you just said vary according to the type of unemployment we had? If this is unemployment across the board, that might be one thing. If it is unemployment in a specific area, might we not have a different situation?

In other words, is it not possible that we might have chronic unemployment in certain areas? We might have actually no unemployment at all in others, and that is where your consumer demand for durable goods is going to be so great as to offset the lack of demand in the other area?

The point I am making is, how valid is it that we have to have a reduction of 1.7 percent in the unemployment rate in order to get this target of increased steel production to which you have referred?

Mr. PARADISO. I just can't see how we can reach such a high level of steel production without having a much higher rate of growth in the economy and a full employment economy.

Just to repeat, a full employment economy must entail high level investment.

Senator MILLER. When you say "a growth in the economy," you premise that on the kind of growth which means increased durable goods?

Mr. PARADISO. That is right.

Senator MILLER. Rather than a fictitious growth in the economy which might be based upon some other type of consumer demand?

Mr. PARADISO. That is right. I am assuming that the growth will occur in pretty much the same way as it has been in the past. We have had full employment in the past. We had it in 1955.

I am not assuming, for example, that the Government expenditures will rise a great deal over this period in the attainment of full employment. I am assuming, primarily, that the full employment will come about pretty much through the private economy. There will be increases in services. This might be one offset, by the way, to the question of how much durable goods demand might go into full employment, namely, the fact that there has been some shift from goods to services.

I am assuming a product mix here which is not too greatly different from what we have had in other periods of the postwar full employment; this does mean high investment and high durable goods consumer demand.

Senator MILLER. Do you think that is a safe assumption to make, in view of the tremendous technological changes we are going through now? Let me give you an example of what I am thinking about: Suppose that the growth in the economy from one year to the next can be pinpointed to be pretty much as the result of a tremendous increase in governmental expenditures for space activities. I can see where that might not have too much of an impact on the durable goods industries calling for steel. Some, yes, but I can see it would have a lesser impact than if the increase in economic growth was attributable largely to greater outlays for conventional types of armament, such as tanks, guns, which would require a comparable increase in steel production.

I am wondering how practical it is for you to make that assumption, in view of the technological changes that we are going through and the changes in governmental requirements for spending.

Mr. PARADISO. I don't think you could assume that one element is going to do the job in getting us to full employment. I think it is going to be an expansion of consumer demand, of business demand, as well as some Government demand, particularly State and local.

It could be, under certain conditions, that the Government may have to come in and do all the expanding in an emergency situation. I am not talking about that. I am talking about a situation where we are going to grow in a healthier way than we have in the past several years.

In the past year, for example, the growth of the economy has been due primarily to the increases in consumer spending and Government, particularly State and local government, and to some extent the Federal.

Now we are getting to a position where the growth is on a broader base. Business is going to expand more on plant and equipment this year. It has already started. There is more being spent on inventories. Residential construction, while it was low in the first quarter, is expected to be somewhat higher in the second quarter. So we are moving in a more balanced way. This is essentially what I am assuming in making this calculation. That it will be a balanced recovery which will lead us to full employment rather than concentrated in one particular phase.

Senator MILLER. If you use that as an assumption that the balance will continue, aren't we forced to use the assumption that the continued inroads in the steel market by competitive products such as the plastics is going to continue, too?

Mr. PARADISO. I have. I have two calculations. This is the reason why I brought two calculations in here. I have 160 million tons, if this declining trend stops. I also said this is probably unlikely, that there may be a continuation of the inroads.

I hope the industry will do enough to moderate this decline of 4 percent per year in terms of getting new products and expanding its markets.

So I have assumed a continuation of these inroads, but at a smaller rate than in the past. That gave me the 150 million tons.

Now I said you could make a third calculation, and, if you so desire, I will make the third calculation, on the assumption that the 4-percent deterioration continues all the way through the next 3 years and see how much steel production would result on that basis.

In other words, they just don't make any improvement in this long-term trend that they have had over the postwar period.

Senator MILLER. I did not ask you make that one, but if you do, I think it would be helpful. I would repeat my request to use that 105 million present consumer demand annual rate base, also.

Mr. PARADISO. Yes, sir.

Senator MILLER. Thank you, Mr. Paradiso.

Chairman DOUGLAS. I wish to be very courteous and polite to the Senator from Iowa. I did not wish to interrupt. I think it is appropriate to observe that his questioning consumed 23 minutes, as compared to an allowance of 10 minutes. I hope, in the future, we can all try to confine ourselves under the 10-minute rule, and then, if there are subsequent questions, it can be covered in the second go-round.

As I said on the first day, questions and answers on the second go-round can be printed right after the questions and answers on the first go-round, so there will be a question between the two.

Now, Mr. Paradiso, if I may ask you to turn to chart 6 and table 6 of your text (p. 186), the first paragraph, the third sentence, you stated the American Iron and Steel Institute published capacity figures through 1960; presumably these measure the so-called practical capacity. Since a lot, or since many, of the conclusions depend upon this question of capacity, I would like to have you state again the difference, as you understand it, between practical capacity and theoretical capacity.

Mr. PARADISO. As I understand, the engineers make a determination of the maximum amount of production which they can get from the blast furnaces, open hearths, say, working 24 hours for the day. They say this is the total amount, working steadily, 24 hours, day for day, that they can produce. That would be called the theoretical capacity. But obviously, they can't keep producing continuously at that rate because there are breakages and there are relinings to be made.

Therefore, they make an allowance for the fact that you have to stop the production for a period in order to fix these furnaces.

I am sure you can get a much more recent figure from the American Iron and Steel Institute. But I seem to recall that the difference between theoretical capacity and practical capacity was 10 percent. This is a recollection on my part from some work I have done sometime ago.

If the people from the Institute feel that the measurement has changed radically from the time I have not know about it, I wish they would insert it in the record but this is my understanding of what it is.

Chairman DOUGLAS. Is it your understanding that the published figures up to 1960 were on the basis of so-called practical capacity?

Mr. PARADISO. That is my understanding.

Chairman DOUGLAS. Do you have any evidence to support this?

Mr. PARADISO. They had been operating at times beyond 100 percent.

Chairman DOUGLAS. Have they ever stated in print the difference between practical and theoretical capacity?

Mr. PARADISO. They have, but that was years ago. I have not seen the statement recently. Perhaps there is a statement more recently.

Chairman DOUGLAS. You published a book on the steel industry?

Mr. PARADISO. I published a book on the steel industry back in 1938 in which I made similar calculations—how much steel would be required if we should have full employment in that period.

Chairman DOUGLAS. I notice that one of your associates raised his hand on this point. I wonder if he would come forward and identify himself and respond to this question.

## STATEMENT OF MURRAY FOSS, OFFICE OF BUSINESS ECONOMICS

Mr. FOSS. My name is Murray Foss, and I am a colleague of Dr. Paradiso's in the Office of Business Economics. I recall seeing a few years ago some figures put out by a trade source. I can't identify specifically the source. But in connection with the capacity figures that were put out at that time, a few years ago, they said that in the case of steel ingots and castings, the capacity assumed a certain amount of down time in the neighborhood of this 10-percent figure Dr. Paradiso mentioned.

I think it was roughly 8 or 9 percent. This is based on recollection. I did see it from a trade source.

Chairman DOUGLAS. Was that in Iron Age?

Mr. FOSS. It might have been Iron Age.

Chairman DOUGLAS. Without wishing to raise old scores, I do hope that if these statements are not accurate that the Iron & Steel Institute will correct them because this is obviously a very important point.

Is it also your understanding that the figures which the Iron & Steel Institute published up until 1961 were based on practical capacity rather than on theoretical capacity?

Mr. FOSS. I believe that is so but I really can't speak on that subject.

Chairman DOUGLAS. Are there any of the other experts here who can testify on the point? Would you come forward and identify yourselves for the record?

## STATEMENT OF JACOB LEVIN, DEPARTMENT OF COMMERCE

Mr. LEVIN. My name is Jacob Levin, Department of Commerce.

The American Iron & Steel Institute in one of its publications, "Steel Facts," pointed out that down time of about 12½ percent, which is close to the 10 percent here, is normally allowed for relining furnaces and repairs and so on.

In those terms I think they talk about practical capacity, allowing for normal repairs and so on.

Chairman DOUGLAS. I wonder if you would be willing to prepare a more detailed statement for the record on this point?

Mr. PARADISO. Surely.

(The information requested follows:)

Note on annual steel capacity (ingots and steel for castings) as of January 1, 1958:

"The [following] figures represent *net steel capacity* after average deduction of 9.1 percent was made by the producers for operating time lost account of rebuilding, relining, repairs, and holiday shutdowns" (p. 13, "Annual Capacities of Coke Ovens, Blast Furnaces, and Steelmaking Furnaces as of January 1, 1958," American Iron & Steel Institute).

A similar note from the same source applicable to January 1, 1960, capacity listed a figure of 8.7 percent for down time.

Chairman DOUGLAS. Again, I want to renew my invitation that if these statements are not accurate, I hope the Iron & Steel Institute will correct them.

Mr. Curtis?

Representative CURTIS. I was very interested in Senator Miller's development of the question of these 160 million tons. Your chart 4 and the table with it gives us the production from 1947 to 1962. This was during a period when we were satisfying pent-up war demands for autos, consumer durables, and construction of all sorts, and, therefore, a period of strong demand. Yet, your increase there is only from 85 to 98.3. The fluctuations iron themselves out each time.

I just do not see where there is any realism at all in this projection of a 50-percent increase in demand during 6 years, compared to a period when we knew the demand was going to be so great, and was.

Mr. PARADISO. Would you please turn to chart 3, Mr. Curtis?

Representative CURTIS. Yes.

Mr. PARADISO. Let us take a look at the top of the panel of that chart.

Representative CURTIS. I am willing to do that.

Mr. PARADISO. By the way, this is a statistical procedure which many statisticians use for determining relationships which are rather complex.

Representative CURTIS. I understand that.

Mr. PARADISO. Whenever you can't determine all the facts, such as the inroads made by aluminum and so on, then we try to get it by use of a declining trend.

If you look at this, you notice the period 1947, 1948, 1949, 1950, 1951, if you draw an imaginary line through there you find that line is parallel to the line A–B.

In other words, the increase in steel shipments in that period have been in the same proportion as the line which I have drawn A–B.

Representative CURTIS. Yes, but you can't use that line; 1951 is the Korean war.

Mr. PARADISO. I am not using that line. Let me follow through.

Representative CURTIS. I am sorry.

Mr. PARADISO. Then as you move into the period 1952, 1953, 1954, 1955, again that line represents roughly the kind of increases that have occurred over that period. In other words, in any period you choose here you find that abstracting from the declining trend which the industry has suffered, that they have been able to get 11.3 percent more steel shipments for every 10-percent increase in durable goods production, except that each year they have lost, as shown in the bottom chart, a certain amount of steel shipments due to competition and other factors.

Representative CURTIS. That is all very well. But you get back to the fact that where you have a high demand in this longer period of 1947 to 1962, you find there has been some increase from 85 to 98. This is a period of 15 years.

Yet, this premise is suggesting that in a matter of 6 years, you are going to have a 50-percent increase. It is all based on consumer demand, whether automobiles, consumer durables, construction of homes, industrial construction, highways, or military.

To suggest that we are entering into a different period to that extent is so unrealistic that I don't even understand what it is doing in here.

Mr. PARADISO. I am not suggesting you are entering a different kind of period.

Representative CURTIS. I don't understand what that is doing here in our studies. It seems to me so unrealistic that it doesn't reveal anything. I am seeking to discover what you are trying to suggest here.

Mr. PARADISO. What I am trying to suggest here is that in the past this industry has lost to competition in other products.

Representative CURTIS. That is true.

Mr. PARADISO. I am saying that if we were able to obtain a full employment situation, I asked myself the question: Just how much better off would this industry be? Where would it be? Suppose we achieve this full employment. I think this is a legitimate question for any analyst to ask. What is the implication of a full-employment situation not only on steel but on automobiles and other products? I asked myself the question where would it be. The question then has to be answered in terms of saying, are they going to deteriorate as they did in the past, or will perhaps this trend stop? Let us see what the figure would be if the trend stops. I get 160 million tons of steel ingots. Let us see what it would be if the trend continued downward at a slower rate: I get 150 million tons.

Representative CURTIS. I see your point, and my observation is that there are so many important variables that I honestly don't see how this is very meaningful. More meaningful are the absolute figures in increased population which bear upon demand. I don't think we are even close enough to pose this, but I want to. One of the interesting facts is that the age group now actually in the business, not beyond family formation but starting to buy homes and consumer durables is relatively small. We also have the very low birth rates of the thirties. This is the present 20-to-30-age group. I think 25 to 35 probably illustrates the group that does most of the purchasing here. It is these components that have a lot more to do with a realistic figure, I suggest, than some abstract concept of a 4-percent employment rate and what it might do. It is technically true in this respect. Let me ask this question. You made the remark that you thought residential construction in durable goods would continue to expand, as I recall.

Mr. PARADISO. I was just talking about the second quarter of the year.

Representative CURTIS. I thought you were talking about this period of time.

Mr. PARADISO. There would be some rise over this period of time; your remark about the population growth, I think that would imply that the real big boom in housing would probably occur after 1965.

Representative CURTIS. I guess it would be. Also this boom will be evident in consumer durables when the baby crop of 1940's moves in. I thought a lot of this so-called sluggishness in the economy resulted from the low birth rates of the thirties affecting consumer demand at this time. I know a lot of market research people have put their finger on it, but I have seen it very seldom discussed in our Joint Economic Committee reviews. I am relaxed about the discussion early in your statement as long as it is one of these abstract exercises and no attempt is made to relate it to reality. I am relaxed on it because it is so unrealistic that it tends to be confusing.

Mr. PARADISO. Let me suggest that I don't think this is divorced from reality in the sense that you are implying. There are two calculations. I could make a third. One of those I think is realistic. These are not entirely unrealistic. When the question is posed, if we should get full employment, many businessmen and marketing people would like to know at a full employment situation how much are you going to sell?

Representative CURTIS. That is right.

Mr. PARADISO. I think this is of interest. Maybe my assumption of a halt in that declining trend may be completely unrealistic, and therefore I had a second assumption. I think it is of interest for the industry to know that if they should stop that trend and we get to full employment they can expect a very high level of demand and production.

Representative CURTIS. That is what I would question. Even cutting out this decline, I would like to have the actual past from 1947 to 1962. I realize that here you had a tremendous demand because of the pent-up situation of World War II. These were some of your biggest years. You had 2 or 3 years below this so-called full employment rate and things just don't move that way.

Mr. PARADISO. When you look at the figures, you see, you are not taking into account the fact that there has been this declining trend.

Representative CURTIS. I am willing to eliminate it from this consideration, but I would interject another factor. Although we don't have this figure, we should. How much of this steel tonnage is a replacement of light, stronger steel for the heavier steel? I suspect we are dealing in sizable percentages. Incidentally, this increased quality steel, I understand, is selling for roughly the same price of the heavier steel. If we continue a trend of lowering the amount of steel that must be used for a specific purpose, we should not be measuring in tons, unless we adjust for this impact.

Mr. PARADISO. Also that may be the very reason why steel might expand its demand.

Representative CURTIS. You are right, if they went no further, in the use of lighter and stronger steel.

Mr. PARADISO. That is right.

Representative CURTIS. Mr. Chairman, thank you.

Chairman DOUGLAS. Senator Pell.

Senator PELL. No.

Chairman DOUGLAS. I have no questions. Mr. Curtis, do you have any further questions?

Representative CURTIS. I have no further questions.

Chairman DOUGLAS. Thank you very much, Mr. Paradiso. We meet tomorrow in the same room at 10 a.m.

Does anybody want to make a comment?

Meyer Bernstein, representing the United Steelworkers of America.

Mr. BERNSTEIN. Yesterday you requested me to prepare some statistics on the imports of iron ore, particular from Venezuela and Canada. I have done so by expanding on a report I prepared a few weeks ago for the officers of my organization and I should like to present it to you now.

Chairman DOUGLAS. I will accept that and have it printed in the record.

(The information referred to follows:)

UNITED STEELWORKERS OF AMERICA,
*Washington, D.C., March 20, 1963.*

MEMORANDUM

To: President David J. McDonald, Secretary-Treasurer I. W. Abel, Vice President Howard R. Hague.
From: Meyer Bernstein.
Subject: Iron ore imports.

Canada has now definitely replaced Venezuela as the chief exporter of iron ore to the United States.

Iron ore, of course, is imported by American steel companies from their own mines abroad. Only a comparatively small amount of imported iron ore is purchased in the normal manner.

In 1962, 33,410,000 long tons of iron ore was imported, and just over half of this, or 16,831,000 long tons, came from Canada. Venezuela provided only 10,306,000 long tons.

In 1960, the ratio was almost reversed with Venezuela providing 14½ million long tons compared with Canada's 10½ million.

The reasons for this change are not far to seek.

The two American operations in Venezuela are both incorporated in the United States, that is to say that United States Steel's Orinoco Mining Co., and Bethlehem Steel's Iron Mines Co. of Venezuela both pay taxes to the United States. Furthermore. they are subject to limited taxation in Venezuela. During the dictatorship the Government was pretty lax on such matters. But now the Betancourt democratic regime has compelled back payments running in excess of $20 million.

As a consequence, production in Venezuela has been dropping from 19½ million long tons in 1960 to 14½ million in 1961, and then down to 13¼ million in 1962.

At the same time the new mines in Canada are beginning to go into operation. Most of these pay no taxes to the United States, since they are incorporated in

Canada, and for a 3-year period at least, also pay no taxes to Canada. The Canadian Government has a business inducement arrangement similar to those offered by several Southern States. The Canadian mines, of course, are with almost negligible exceptions organized by the United Steelworkers of America.

During the last 5 years iron ore imports have ranged from a low of 25.8 million long tons in 1961 to a high of 35.6 million in 1959. Last year's was the third largest of the past 5.

At the same time U.S. iron ore production ranged from a low of 60.3 million long tons during the strike year 1959 to a high of 88.8 million long tons in 1960; 1962's production was about average at 72.3 million.

It is interesting to note that imports last year increased by almost one-third, that is, from 25.8 to 33.4 million long tons, while U.S. iron ore production remained relatively stable, that is, at 71.3 million long tons in 1961, and 72.3 million in 1962, as did U.S. ingot steel production which amounted to 98 million net tons in 1961 compared with 98.3 million net tons in 1962.

*Iron ore reports*

| | Venezuela | Canada | Total imports (all countries) | Total U.S. production | U.S. ingot steel production |
|---|---|---|---|---|---|
| | *Long tons* | *Long tons* | *Long tons* | *Long tons* | *Net tons* |
| 1951 | 635,000 | 1,971,000 | 10,147,000 | 116,505,000 | 105,200,000 |
| 1952 | 1,846,000 | 1,833,000 | 9,772,000 | 97,918,000 | 93,168,000 |
| 1953 | 1,950,000 | 1,853,000 | 11,086,000 | 117,995,000 | 111,610,000 |
| 1954 | 5,210,000 | 3,538,000 | 15,793,000 | 78,129,000 | 88,311,000 |
| 1955 | 7,160,000 | 10,081,000 | 23,476,000 | 103,003,000 | 117,036,000 |
| 1956 | 9,254,000 | 13,724,000 | 30,412,000 | 97,877,000 | 115,216,000 |
| 1957 | 12,291,000 | 12,537,000 | 33,652,000 | 106,148,000 | 112,715,000 |
| 1958 | 12,180,000 | 8,289,000 | 27,544,000 | 67,709,000 | 85,255,000 |
| 1959 | 13,543,000 | 13,446,000 | 35,613,000 | 60,276,000 | 93,446,000 |
| 1960 | 14,559,000 | 10,597,000 | 34,590,000 | 88,784,000 | 99,282,000 |
| 1961 | 10,482,000 | 9,683,000 | 25,809,000 | 71,329,000 | 98,014,000 |
| 1962 | 10,306,000 | 16,831,000 | 33,410,000 | 72,305,000 | 98,328,000 |

Source: U.S. Bureau of Mines.

Mr. BERNSTEIN. May I say a word to clarify some confusion on the use of oxygen?

Chairman DOUGLAS. Yes, indeed.

Mr. BERNSTEIN. There are two main purposes for the use of oxygen in the steel mill today. One is to enrich the air in the blast furnace or in the open hearth. This means by the use of a very small investment it is possible to get increased production from equipment which has already been purchased. This has been very successful and the American steel industry has been leading in this field. The second use is entirely new. It was developed in Austria at the Linz plant of what was formerly the Hermann Goering plant and is now owned by the Austrian Government. The name for this was LD which means the Linz jet process. It is called the jet because it brings in oxygen into the vat at a rate exceeding the speed of sound. This has been developed in Austria. The Americans picked it up, as did other countries, and it has now reached the highest form of development in the United States. The Americans improved that, expanded on it, built it up, so that our converters—we now call them basic oxygen converters—are much larger than those used in Austria and our production of oxygen steel in the United States from this process today is several times that of Austria.

Last year we produced more than 5 million tons of basic oxygen system steel. The first quarter of this year we produced at the rate of 8 million tons. Just recently the Republic Steel Corp. announced that it was purchasing new oxygen furnaces. United States Steel

Corp. and other companies in the United States are now beginning to use this. The great advantages are threefold. First, it involves a very much smaller capital investment for the same amount of steel production than a basic open hearth furnace.

Chairman DOUGLAS. The acoustics are not very good here. I understand this involved a smaller investment of capital per ton of steel.

Mr. BERNSTEIN. A very much smaller investment, that is right, than the common system used in the United States; namely, the open hearth. Second, it requires fewer workers than the open hearth system, considerably fewer workers. Third, it produces at a much faster rate. We can produce a bath in 20 or 30 minutes compared with 6 to 8 hours for the open hearth process which it replaces. As I say, we have expanded this, developed it, and improved upon it. The American engineers and the American steel industry have shown a great deal more imagination than the Europeans in developing and perfecting this process.

Representative CURTIS. What is the quality? Is there improved quality or is it about the same?

Mr. BERNSTEIN. The matter of quality has been somewhat questioned. I would say, and I think this is universally accepted, that the quality of open hearth steel in most cases is no better than that of the basic oxygen system at least as applied now by the Americans. I have seen the process in Linz. I have seen the furnaces they have there. They are very small. I have been to the plants in the United States where our furnaces are much, much bigger or our converters. We now have them up to as high as 300 tons compared to the original 25 or 30 tons in Europe. Another point I want to correct or at least give a little more explanation on is that of the continuous casting process. That has been developed more in Europe than in the United States. But the development in the European countries; namely England, where they have a continuous casting operation in effect and Germany where they have one, are still very, very small. A few hundred thousand tons, which is nothing compared with our production or theirs. Germany produced 39 million tons of steel the last year and the year before. This is just a couple of hundred thousand tons made by continuous casting.

However, the development particularly by the United States Steel Corp. offers great promise from the viewpoint of the American industry for the future if the thing works out on a large scale. It would mean, first, that you would eliminate the pouring platform from the steel industry. You would eliminate the dinkies taking the steel ingots and the molds to the stripper. You would eliminate the stripping process. You would eliminate a good part if not all of—I can't think of the English word—the soaking pits and it would eliminate the blooming mills. It would eliminate a considerable proportion of the steel plant operations we now have in effect. But you can't use any statistics on that today because it is so small in operations. It is in effect only in a couple of plants and even where it is in effect it represents a minuscule percentage of our steel production. However, the future is something entirely different.

Chairman DOUGLAS. Thank you very much.

(Whereupon, at 12:40 p.m., the committee recessed until 10 a.m. on Friday, April 26, 1963.)

# STEEL PRICES, UNIT COSTS, PROFITS, AND FOREIGN COMPETITION

FRIDAY, APRIL 26, 1963

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
*Washington, D.C.*

The Joint Committee met at 10 a.m., pursuant to recess, in room 318, Senate Office Building, Senator Paul H. Douglas (chairman of the Joint Committee) presiding.

Present: Senators Douglas, Javits, Proxmire, and Jordan, and Representative Kilburn.

Also present: James W. Knowles, executive director.

Chairman DOUGLAS. It is now 10 o'clock. The committee will come to order. We are very glad to welcome you back, Mr. Chase, and today you are going to discuss the prices for basic steel and also the prices of products which use steel. Mr. Arnow, did you want to make a preliminary statement?

## STATEMENT OF PHILIP ARNOW, ASSOCIATE COMMISSIONER FOR PROGRAM PLANNING AND PUBLICATIONS, AND ARNOLD E. CHASE, ASSOCIATION COMMISSIONER FOR PRICES AND LIVING CONDITIONS, BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR

Mr. ARNOW. No, thank you, but we will submit our prepared statement for the record at this point.

SUMMARY OF STATEMENT BY ARNOLD E. CHASE, ASSISTANT COMMISSIONER FOR PRICES AND LIVING CONDITIONS, BUREAU OF LABOR STATISTICS, U.S. DEPARTMENT OF LABOR

In the discussion today we shall be considering the relationship of prices for basic steel to prices of major products using steel. In opening this discussion, I should like to refer back to chart 5 and the accompanying table which were presented at the hearings on April 24. The committee will recall that there was a lag in basic steel prices behind price increases for the general wholesale price index and the Consumer Price Index through World War II and up to about 1953. From that time on basic steel prices have risen more than prices in general.

Over the whole period since 1940 prices of basic steel products not only have increased substantially more than the wholesale price index, but they have increased more than prices for any other major group of commodities except lumber and wood products as shown in chart 1. Specifically, the index for basic steel products has advanced by nearly one-fifth more than the general wholesale price index for all commodities since 1940. The increase in steel prices since 1947–49 has been more than four times as large as that for general wholesale prices. Observe also on this table that prices of metals and metal products and of machinery and motive products, all of which are major users of steel, have shown more increase than any other group of products except lumber.

Advances in prices since 1947 have varied considerably for the different major types of steel products, as shown on chart 2 and the accompanying table. In general, the recently announced price increases have applied mostly to those types which previously have been raised by the smaller amounts. The shaded segments of selected bars on the chart show how much would be added to four major items when typical recent increases are included. These are the principal items affected by most of the recent price actions. They appear to have been quite selective.

In order to determine with any precision the direct impact of steel price increases on costs to producers of products using steel, it would be necessary to make a detailed study of cost and price structures within each steel-using industry. The BLS has not been able to make such a study and, insofar as I know, no study of this kind has been made by any other agency. Furthermore, if such a study were made, it would tell us only the direct added cost to producers of steel-using products resulting from a steel price increase; and not how much price change to expect in their final products. Each final product has its own market. In some market situations, the added cost of steel might be absorbed. In other situations, producers might decide to reexamine their entire cost and price structures and to adjust the prices of their products by either more or less than the added cost of steel. Some might even find the market so competitive that they must reduce prices; in which case, they undoubtedly will have added incentives to use substitute materials wherever possible.

While, in view of these considerations, we cannot be precise in estimating the effect of changes in steel prices on prices of steel-using products, some light may be shed on the subject by comparing price trends over time. This has been done in chart 3 and the accompanying table, which compares price trends for basic steel products with those for machinery and other metal products and with prices of all industrial commodities.

The period of especially rapid increase in steel prices was from 1952 to 1959 when they advanced by a total of 47 percent. Machinery and equipment prices rose by 29 percent during the same period, and other metal products using steel by 19 percent, while prices of all industrial commodities were going up by only 13 percent. A closer look shows that, in 1956, when steel prices advanced 8 percent, machinery prices increased by nearly the same amount and prices of other metal products rose about 6½ percent. In 1957, when steel prices advanced again by about 9½ percent, the increases were about 7 percent for machinery and 4½ percent for other metal products. The nature of the general market situation at that time is indicated by the fact that the price index for all industrial commodities rose by nearly 4½ percent in 1956 and nearly 3 percent in 1957. This is in striking contrast with the general stability, or slight downward drift in this broad index for the last 5 years. It indicates a different general market situation at present which could influence the extent to which prices of steel-using products may be adjusted for the higher price of steel.

The next chart (chart 4) shows trends of prices for steel-using products in more detail. Note that prices of metalworking machinery, in particular, have followed the advance in basic steel prices fairly closely, with the expected time lag. By 1962, metalworking machinery prices were approximately the same amount above the 1947–49 base as basic steel prices. Construction machinery prices have followed the advance in steel prices only a little less closely.

The committee may be especially interested in agricultural machinery and equipment prices which have risen by nearly 70 percent since 1947, compared with the more than 100-percent increase in prices of basic steel products. Motor trucks stand out in this comparison with the smallest increase of any of the major steel-using products. They actually have declined a little since 1959, following the slight downward trend in basic steel prices.

We have summarized the relationship of steel price trends to those for finished goods at the primary market (wholesale) level in chart 5 and the accompanying table. Note that prices of producer finished goods have risen more than twice as much as wholesale prices of consumer durable goods since 1947. While steel prices doubled, producer finished goods were up by 65 percent, and consumer goods prices by just over 30 percent. There could be many reasons for this marked difference. A major factor probably is the extremely competitive situation which has developed in the field of household equipment and appliances, as reflected in the next chart.

The picture shown by chart 6 is in striking contrast to most of those we have seen on the earlier charts. Note that all of the lines, except that for new cars, have dropped below their 1947–49 average. Electric refrigerators now are actually lower in price than they were in 1940, when account is taken of improvements in quality. The other major items of household equipment and appliances are only relatively moderately above their prewar price levels. New car prices, however, have risen 140 percent since 1940.

Prices of household equipment and appliances did rise during and immediately after World War II, reaching a peak generally during the Korean emergency. But since then, intense competition and new merchandising methods brought prices down substantially. New car prices showed less increase immediately after the war, but they continued to rise through 1959, except for a dip in 1955. They have declined a little since 1959.

Finally, the committee may be interested in the effect that the recent steel price increases can be expected to have on the general price indexes. In chart 7 and the accompanying table, we have plotted their expected direct effect on the wholesale price index. As the committee knows, prices are still being adjusted, but we do not expect the steel mill products index to go up by more than about 1 percent. When these products are combined with other products, the increase in the iron and the steel index may be about 0.7 percent, and for metals and metal products, about 0.3 percent. Such an increase would not affect the industrial commodities index, or the all-commodities wholesale price index by as much as 0.05 percent.

We do not have a basis for a similar computation with respect to the Consumer Price Index. However, a direct pass-through of the increased cost of steel alone would not affect the all-items Consumer Price Index by more than a fraction of one-tenth of 1 percent.

TABLE 1.—*Wholesale price changes: Basic steel and other products*

| Major commodity groups | Percent change: From 1940 to 1962 | Percent change: From 1947–49 to 1962 [1] |
|---|---|---|
| Basic steel products | 176.2 | 86.7 |
| All commodities | 133.9 | 19.5 |
| Farm products and processed foods | 143.8 | –.5 |
| All commodities except farm and foods | 115.2 | 27.6 |
| Textiles and apparel | 81.7 | –4.8 |
| Hides, skins, leather, and leather products | 105.3 | 12.5 |
| Fuels and related products, and power | 88.5 | 14.4 |
| Chemicals and allied products | 89.4 | 7.2 |
| Rubber and rubber products | 68.6 | 35.2 |
| Lumber and wood products | 232.1 | 16.9 |
| Pulp, paper, and allied products | (2) | 30.9 |
| Metals and metal products | 141.7 | 51.8 |
| Machinery and motive products | 131.3 | 53.1 |
| Furniture and other household durables | 81.9 | 21.5 |
| Nonmetallic mineral products | 98.7 | 38.5 |
| Tobacco products and bottled beverages | 73.1 | 33.8 |
| Miscellaneous products | (2) | –.4 |

[1] Based on preliminary 1962 data.
[2] Not separately available back to 1940.

Source: Bureau of Labor Statistics.

TABLE 2.—*Percent increase in prices from 1947 to December 1962 for selected semifinished and finished steel products*

| Product | Percent increase | With additional advances of amounts indicated, percent increase since 1947 would be— | |
|---|---|---|---|
| | | Advance, dollars per ton | Percent increase |
| Wire rods, carbon | 153.9 | | |
| Billets, rerolling, carbon | 149.3 | | |
| Pressure tubes, carbon | 146.0 | | |
| Drawn wire, carbon | 144.2 | | |
| Bars, tool steel, c.f. alloy | 137.0 | | |
| Tie plates, low or high carbon | 136.9 | | |
| Structural steel shapes | 136.3 | | |
| Bars, h.r., stainless | 129.5 | | |
| Rails, standard, carbon | 121.0 | | |
| Bars, c.f., carbon | 118.8 | | |
| Bars, h.r., carbon | 118.7 | | |
| Skelp, carbon | 117.4 | | |
| Plates, carbon | 116.9 | | |
| Nails, wire, 8d common | 114.6 | | |
| Pipe, black, carbon | 114.3 | | |
| Strip, c.r., carbon | 110.6 | 5 | 116.3 |
| Sheets, h.r., carbon | 105.6 | 4 | 112.3 |
| Woven wire fence, galvanized | 105.5 | | |
| Bars, h.r, alloy | 104.6 | | |
| Bars, reinforcing | 98.7 | | |
| Pipe, galvanized, carbon | 88.6 | | |
| Tin plate, hot dipped | 86.5 | | |
| Sheets, c.r., carbon | 81.4 | 5 | 87.6 |
| Sheets, galvanized, carbon | 80.3 | 7 | 87.5 |
| Barbed wire, galvanized | 74.7 | | |
| Strip, c.r., stainless | 56.3 | | |
| Slabs, stainless | 18.7 | | |

Source: Bureau of Labor Statistics.

TABLE 3.—*Wholesale prices of steel-finished goods*

[Index 1947–49=100]

| Period | Basic steel products | Machinery and equipment | Other metal products using steel [1] | All industrial commodities |
|---|---|---|---|---|
| Annual average: | | | | |
| 1947 | 88.8 | 93.2 | 90.6 | 95.3 |
| 1948 | 101.4 | 101.0 | 102.5 | 103.4 |
| 1949 | 109.9 | 105.8 | 106.9 | 101.3 |
| 1950 | 115.7 | 109.4 | 110.5 | 105.0 |
| 1951 | 124.8 | 122.3 | 121.6 | 115.9 |
| 1952 | 127.6 | 122.5 | 120.7 | 113.2 |
| 1953 | 137.6 | 125.2 | 122.7 | 114.0 |
| 1954 | 143.9 | 127.5 | 124.8 | 114.5 |
| 1955 | 150.7 | 131.4 | 127.9 | 117.0 |
| 1956 | 163.2 | 142.1 | 136.1 | 122.2 |
| 1957 | 178.9 | 151.9 | 142.4 | 125.6 |
| 1958 | 185.2 | 155.2 | 143.6 | 126.0 |
| 1959 | 188.2 | 158.5 | 143.5 | 128.3 |
| 1960 | 187.9 | 159.8 | 144.1 | 128.3 |
| 1961 | 187.2 | 159.7 | 144.7 | 127.7 |
| 1962 [2] | 186.7 | 159.7 | 144.8 | 127.7 |
| Monthly: | | | | |
| 1962—January | 186.9 | 159.9 | 144.7 | 127.9 |
| February | 186.9 | 159.6 | 144.7 | 127.7 |
| March | 186.9 | 160.0 | 145.0 | 127.7 |
| April | 186.9 | 160.0 | 145.1 | 127.8 |
| May | 186.9 | 160.0 | 145.0 | 127.8 |
| June | 186.9 | 159.9 | 144.9 | 127.5 |
| July | 186.7 | 159.7 | 144.8 | 127.7 |
| August | 186.5 | 159.6 | 144.8 | 127.4 |
| September | 186.5 | 159.6 | 144.7 | 127.7 |
| October | 186.7 | 159.9 | 144.7 | 127.5 |
| November | 186.5 | 159.6 | 144.7 | 127.5 |
| December | 186.5 | 159.9 | 144.7 | 127.5 |
| 1963—January | 186.5 | 159.9 | 144.7 | 127.5 |
| February | 186.5 | 159.7 | 144.7 | 127.4 |
| March [2] | 186.3 | 159.3 | 144.7 | 127.4 |

[1] Includes metal containers, hardware, heating equipment, and fabricated structural and nonstructural metal products.
[2] Preliminary.

Source: Bureau of Labor Statistics.

TABLE 4.—*Selected machinery and other metal goods prices*

[Indexes 1947–49=100]

| Period | Basic steel products | Metal containers | Agricultural machinery and equipment | Construction machinery and equipment | Metalworking machinery and equipment | General purpose machinery and equipment | Electrical machinery and equipment | Motor trucks |
|---|---|---|---|---|---|---|---|---|
| 1947 | 88.8 | 90.6 | 90.4 | 89.9 | 93.6 | 92.6 | 96.1 | 93.0 |
| 1948 | 101.4 | 100.6 | 101.4 | 101.8 | 100.8 | 100.9 | 100.7 | 101.5 |
| 1949 | 109.9 | 108.8 | 108.3 | 108.3 | 105.6 | 106.5 | 103.2 | 105.6 |
| 1950 | 115.7 | 109.3 | 110.7 | 111.5 | 112.0 | 110.3 | 106.4 | 104.6 |
| 1951 | 124.8 | 121.1 | 120.1 | 123.6 | 125.8 | 123.5 | 121.9 | 113.1 |
| 1952 | 127.6 | 122.0 | 121.6 | 125.4 | 128.5 | 122.6 | 120.3 | 116.2 |
| 1953 | 137.6 | 127.3 | 122.3 | 129.3 | 131.1 | 125.4 | 123.7 | 115.0 |
| 1954 | 143.9 | 130.6 | 122.2 | 131.6 | 133.2 | 128.1 | 126.2 | 113.8 |
| 1955 | 150.7 | 132.9 | 123.2 | 137.0 | 142.6 | 134.0 | 128.2 | 118.0 |
| 1956 | 163.2 | 141.6 | 127.6 | 148.5 | 156.4 | 147.5 | 138.4 | 127.2 |
| 1957 | 178.9 | 151.2 | 133.6 | 159.8 | 167.0 | 157.6 | 149.0 | 134.0 |
| 1958 | 185.2 | 155.7 | 139.1 | 166.1 | 170.1 | 160.0 | 152.1 | 139.8 |
| 1959 | 188.2 | 153.8 | 143.4 | 171.9 | 174.5 | 165.3 | 154.4 | 142.3 |
| 1960 | 187.9 | 154.0 | 146.1 | 175.6 | 179.8 | 166.8 | 153.8 | 138.8 |
| 1961 | 187.2 | 156.6 | 148.9 | 178.4 | 182.6 | 165.5 | 151.8 | 138.7 |
| 1962 [1] | 186.7 | 159.2 | 151.9 | 178.9 | 186.4 | 166.3 | 149.4 | 138.3 |
| 1962—January | 186.9 | 159.2 | 150.9 | 178.7 | 185.7 | 176.6 | 150.0 | 138.7 |
| February | 186.9 | 159.2 | 151.4 | 178.5 | 185.9 | 165.5 | 150.0 | 138.7 |
| March | 186.9 | 159.2 | 151.7 | 178.5 | 186.2 | 166.1 | 149.9 | 138.7 |
| April | 186.9 | 159.2 | 151.4 | 178.7 | 186.6 | 165.9 | 149.7 | 138.7 |
| May | 186.9 | 159.2 | 151.6 | 178.7 | 186.7 | 166.1 | 149.7 | 138.7 |
| June | 186.9 | 159.2 | 151.9 | 178.7 | 187.1 | 165.9 | 149.4 | 138.8 |
| July | 186.7 | 159.2 | 151.9 | 178.5 | 186.9 | 165.6 | 149.0 | 138.7 |
| August | 186.5 | 159.2 | 151.7 | 178.7 | 186.7 | 166.3 | 148.8 | 138.7 |
| September | 186.5 | 159.2 | 151.7 | 178.7 | 186.4 | 166.7 | 149.4 | 183.0 |
| October | 186.7 | 159.2 | 152.0 | 179.2 | 186.4 | 166.9 | 149.4 | 136.9 |
| November | 186.5 | 159.2 | 152.8 | 179.5 | 186.4 | 166.9 | 149.0 | 136.9 |
| December | 186.5 | 159.2 | 153.2 | 179.7 | 186.4 | 167.1 | 149.0 | 136.9 |
| 1963—January | 186.5 | 160.5 | 153.7 | 179.7 | 186.2 | 167.2 | 148.8 | 136.9 |
| February | 186.5 | 160.5 | 153.7 | 180.0 | 186.0 | 166.7 | 148.5 | 136.3 |
| March [1] | 186.3 | 160.5 | 153.9 | 180.5 | 186.2 | 166.4 | 147.3 | 136.3 |

[1] Preliminary.

Source: Bureau of Labor Statistics.

TABLE 5.—*Wholesale prices—Basic steel and finished goods*

[Index 1947-49=100]

| Period | Basic steel products | Producer finished goods | Consumer finished durable goods |
|---|---|---|---|
| Annual average: | | | |
| 1947 | 88.8 | 92.8 | 94.8 |
| 1948 | 101.4 | 101.1 | 101.3 |
| 1949 | 109.9 | 106.1 | 104.0 |
| 1950 | 115.7 | 108.7 | 105.1 |
| 1951 | 124.8 | 119.3 | 112.1 |
| 1952 | 127.6 | 121.3 | 113.0 |
| 1953 | 137.6 | 123.1 | 113.8 |
| 1954 | 143.9 | 124.7 | 114.7 |
| 1955 | 150.7 | 128.5 | 115.9 |
| 1956 | 163.2 | 138.1 | 119.8 |
| 1957 | 178.9 | 146.7 | 123.3 |
| 1958 | 185.2 | 150.4 | 125.0 |
| 1959 | 188.2 | 153.2 | 126.5 |
| 1960 | 187.9 | 153.5 | 126.0 |
| 1961 | 187.2 | 153.9 | 125.5 |
| 1962 [1] | 186.7 | 154.4 | 124.9 |
| Monthly: | | | |
| 1962—January | 186.9 | 154.3 | 125.2 |
| February | 186.9 | 154.3 | 125.0 |
| March | 186.9 | 154.3 | 124.9 |
| April | 186.9 | 154.4 | 124.8 |
| May | 186.9 | 154.4 | 124.9 |
| June | 186.9 | 154.3 | 124.9 |
| July | 186.7 | 154.6 | 125.2 |
| August | 186.5 | 154.6 | 125.0 |
| September | 186.5 | 154.4 | 125.0 |
| October | 186.7 | 154.3 | 124.8 |
| November | 186.5 | 154.4 | 124.9 |
| December | 186.5 | 154.6 | 124.8 |
| 1963—January | 186.5 | 154.6 | 124.7 |
| February | 186.5 | 154.6 | 124.7 |
| March [1] | 186.3 | 154.4 | 124.5 |

[1] Preliminary.

Source: Bureau of Labor Statistics.

TABLE 6.—*Retail price trends of major consumer products using steel—Annual average indexes, 1940–62: Quarterly, 1962*

[1947–49=100]

| Year | New cars | Appliances[1] | Ranges | Washing machines | Electric refrigerators |
|---|---|---|---|---|---|
| 1940 | 57.1 | 57.8 | 54.5 | 52.9 | 61.6 |
| 1941 | 61.4 | 60.1 | 58.9 | 57.0 | 61.9 |
| 1942 | (2) | 67.1 | 68.0 | (2) | (2) |
| 1943 | (2) | 68.6 | 69.5 | (2) | (2) |
| 1944 | (2) | 72.6 | 74.8 | (2) | (2) |
| 1945 | (2) | 76.3 | 79.2 | (2) | (2) |
| 1946 | (2) | 81.4 | 82.6 | (2) | (2) |
| 1947 | 91.2 | 98.4 | 97.4 | 95.6 | 94.5 |
| 1948 | 99.7 | 103.0 | 103.2 | 102.9 | 104.4 |
| 1949 | 109.1 | 98.5 | 99.4 | 101.5 | 101.2 |
| 1950 | 110.0 | 96.7 | 96.4 | 100.3 | 99.0 |
| 1951 | 115.2 | 102.3 | 107.3 | 107.1 | 104.2 |
| 1952 | 125.1 | 98.7 | 106.2 | 107.5 | 100.3 |
| 1953 | 126.3 | 97.0 | 106.6 | 105.9 | 96.5 |
| 1954 | 124.3 | 92.8 | 105.0 | 103.4 | 89.9 |
| 1955 | 119.9 | 88.3 | 102.5 | 100.5 | 84.5 |
| 1956 | 123.2 | 84.1 | 101.9 | 98.2 | 72.9 |
| 1957 | 129.7 | 84.3 | 103.8 | 99.4 | 67.1 |
| 1958 | 133.9 | 82.9 | 103.0 | 98.3 | 64.8 |
| 1959 | 139.6 | 83.0 | 103.2 | 96.4 | 64.6 |
| 1960 | 137.7 | 82.4 | 102.1 | 94.0 | 63.3 |
| 1961 | 137.7 | 80.5 | 100.0 | 91.1 | 62.4 |
| 1962—March | 137.6 | 78.9 | 100.5 | 89.3 | 62.2 |
| June | 136.4 | 78.0 | 99.9 | 88.7 | 61.1 |
| September | 134.9 | 77.2 | 99.1 | 88.3 | 60.1 |
| December | 137.9 | 76.9 | 98.2 | 87.9 | 59.8 |
| Average | 137.2 | 78.0 | 99.6 | 88.7 | 60.9 |

[1] Includes radio and television sets.
[2] Not available during the war period.

Source: Bureau of Labor Statistics.

TABLE 7.—*Steel price increase—Estimated direct effect on wholesale price indexes*

| Index | Relative importance December 1960 | Estimated percent increase |
|---|---|---|
| Steel mill products | 3.470 | 1.0 |
| Iron and steel | 4.728 | 0.7 |
| Metals and metal products | 12.826 | .3 |
| All commodities other than farm products and foods | 75.373 | .0 |
| All commodities | 100.000 | .0 |

Source: Bureau of Labor Statistics.

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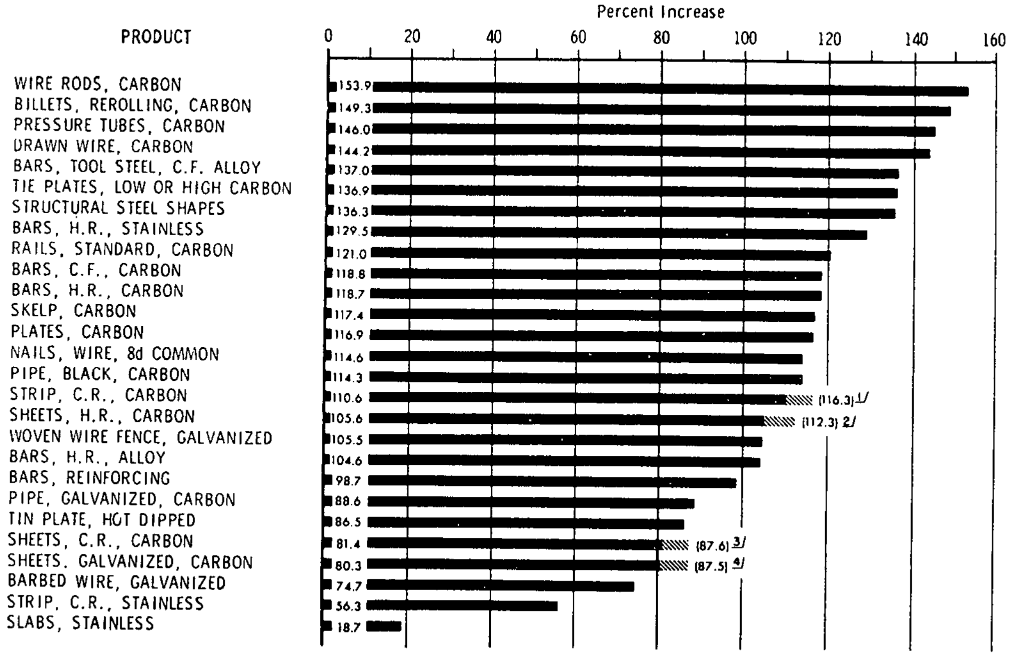
## Table 1 WHOLESALE PRICE CHANGES: BASIC STEEL AND OTHER PRODUCTS

| MAJOR COMMODITY GROUPS | PERCENT CHANGE | |
|---|---|---|
| | FROM 1940 TO 1962 | FROM 1947 - 49 TO 1962 1/ |
| BASIC STEEL PRODUCTS | 176.2 | 86.7 |
| ALL COMMODITIES | 133.9 | 19.5 |
| FARM PRODUCTS AND PROCESSED FOODS | 143.8 | - .5 |
| ALL COMMODITIES EXCEPT FARM AND FOODS | 115.2 | 27.6 |
| TEXTILES AND APPAREL | 81.7 | - 4.8 |
| HIDES, SKINS, LEATHER, AND LEATHER PRODUCTS | 105.3 | 12.5 |
| FUELS AND RELATED PRODUCTS, AND POWER | 88.5 | 14.4 |
| CHEMICALS AND ALLIED PRODUCTS | 89.4 | 7.2 |
| RUBBER AND RUBBER PRODUCTS | 68.6 | 35.2 |
| LUMBER AND WOOD PRODUCTS | 232.1 | 16.9 |
| PULP, PAPER, AND ALLIED PRODUCTS | (2/) | 30.9 |
| METALS AND METAL PRODUCTS | 141.7 | 51.8 |
| MACHINERY AND MOTIVE PRODUCTS | 131.3 | 53.1 |
| FURNITURE AND OTHER HOUSEHOLD DURABLES | 81.9 | 21.5 |
| NONMETALLIC MINERAL PRODUCTS | 98.7 | 38.5 |
| TOBACCO PRODUCTS AND BOTTLED BEVERAGES | 73.1 | 33.8 |
| MISCELLANEOUS PRODUCTS | (2/) | - .4 |

1/ Based on preliminary 1962 data. 2/ Not separately available back to 1940.

Source: Bureau of Labor Statistics.

**Chart 2. PERCENT INCREASE IN PRICES FROM 1947 TO DECEMBER 1962 FOR SELECTED SEMIFINISHED AND FINISHED STEEL PRODUCTS**

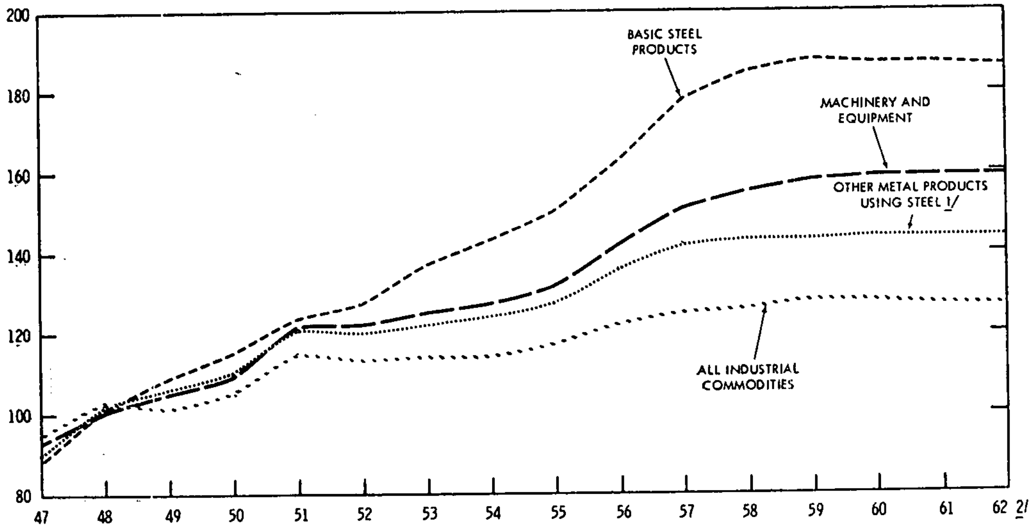



Source: Bureau of Labor Statistics.

Based upon an increase in the price per ton of
1/ $5.00 3/ $5.00
2/ $4.00 4/ $7.00

## Chart 3 WHOLESALE PRICES OF STEEL FINISHED GOODS

(INDEXES 1947-49=100)



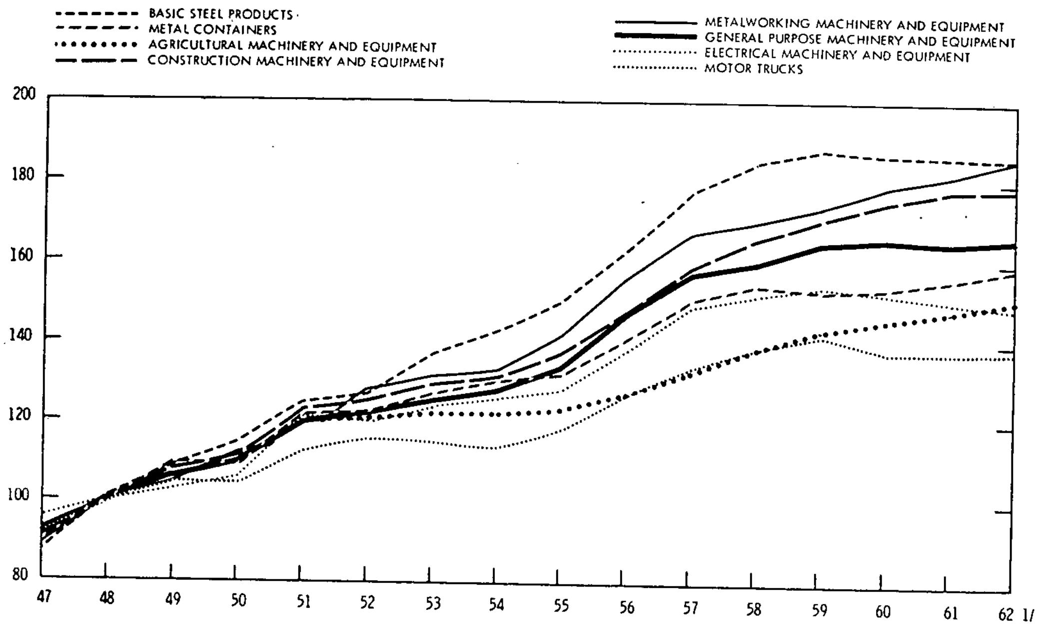

1/ Includes metal containers, hardware, heating equipment, and fabricated structural and nonstructural metal products.

2/ Preliminary

Source: Bureau of Labor Statistics.

## Chart 4 SELECTED MACHINERY AND OTHER METAL GOODS PRICES

(INDEXES 1947-49=100)

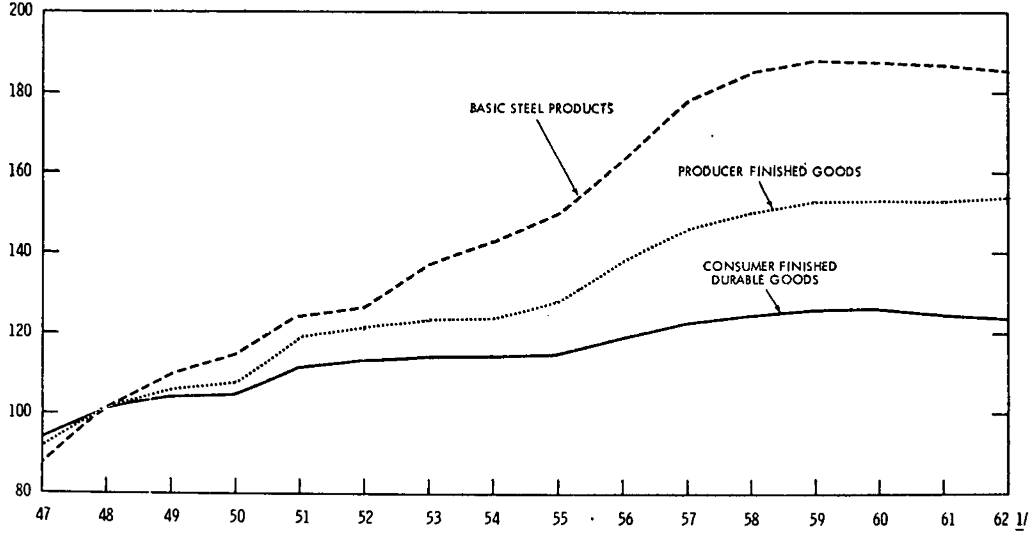



1/ Preliminary

Source: Bureau of Labor Statistics

**Chart 5 WHOLESALE PRICES –– BASIC STEEL AND FINISHED GOODS**

(INDEXES 1947-49=100)



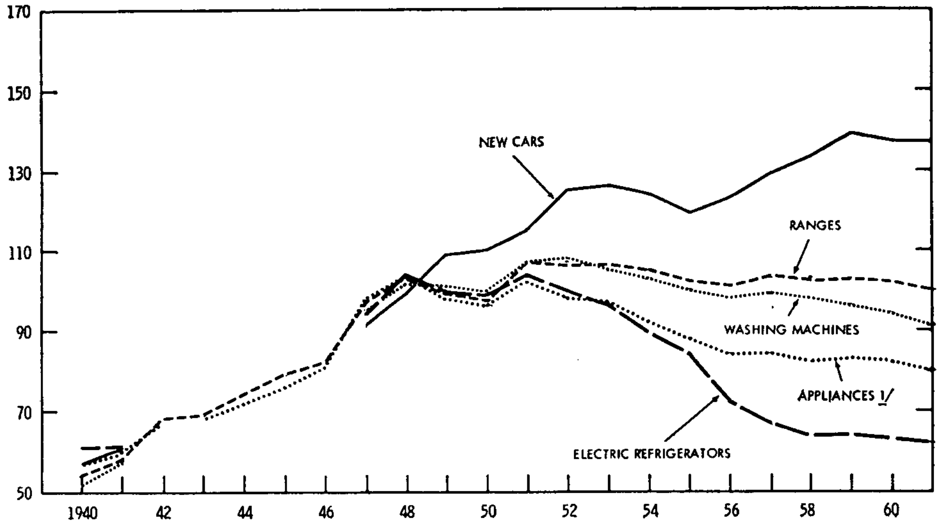

1/ Preliminary

Source: Bureau of Labor Statistics

**Chart 6 RETAIL PRICE TRENDS OF MAJOR CONSUMER PRODUCTS USING STEEL**

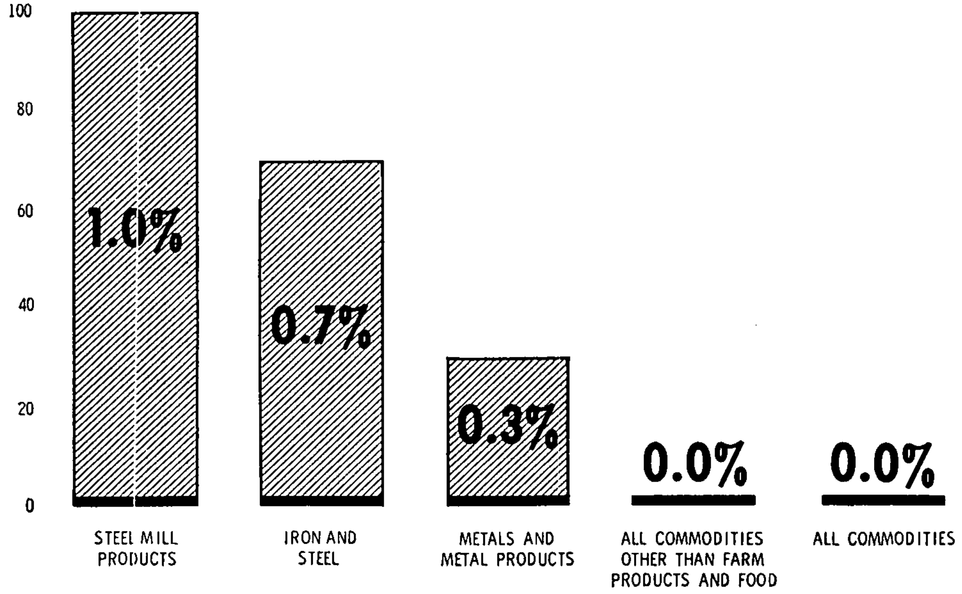
ANNUAL AVERAGE INDEXES, 1940 - 1962

( 1947 - 49 = 100 )




1/ Includes radio and television sets
2/ Not available during the war period
Source: Bureau of Labor Statistics

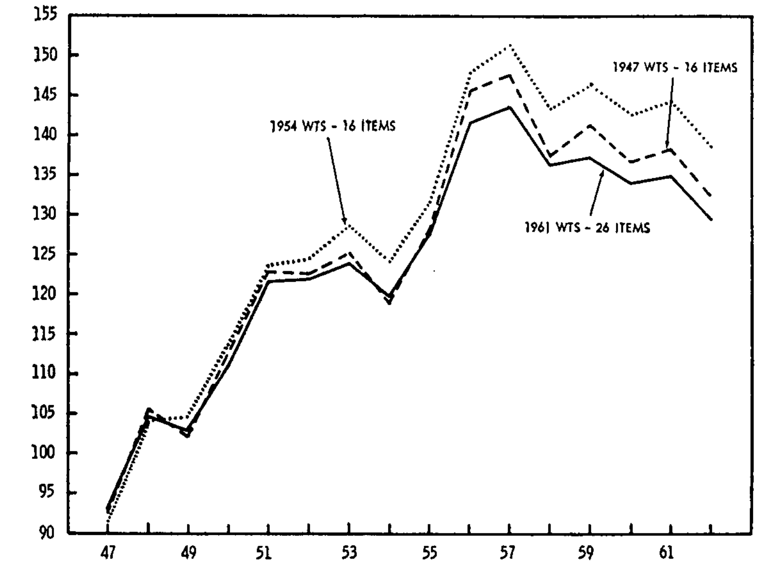
Chart 7 STEEL PRICE INCREASE ESTIMATED DIRECT EFFECT ON WHOLESALE PRICE INDEXES




Source: U.S. Department of Labor
Bureau of Labor Statistics
Washington 25, D.C.
April 23, 1963

**Chart A PRICES OF BASIC STEELMAKING MATERIALS**

(VARIOUS FIXED-WEIGHTING PATTERNS) - 1947 - 1962
(1947 - 49 = 100)



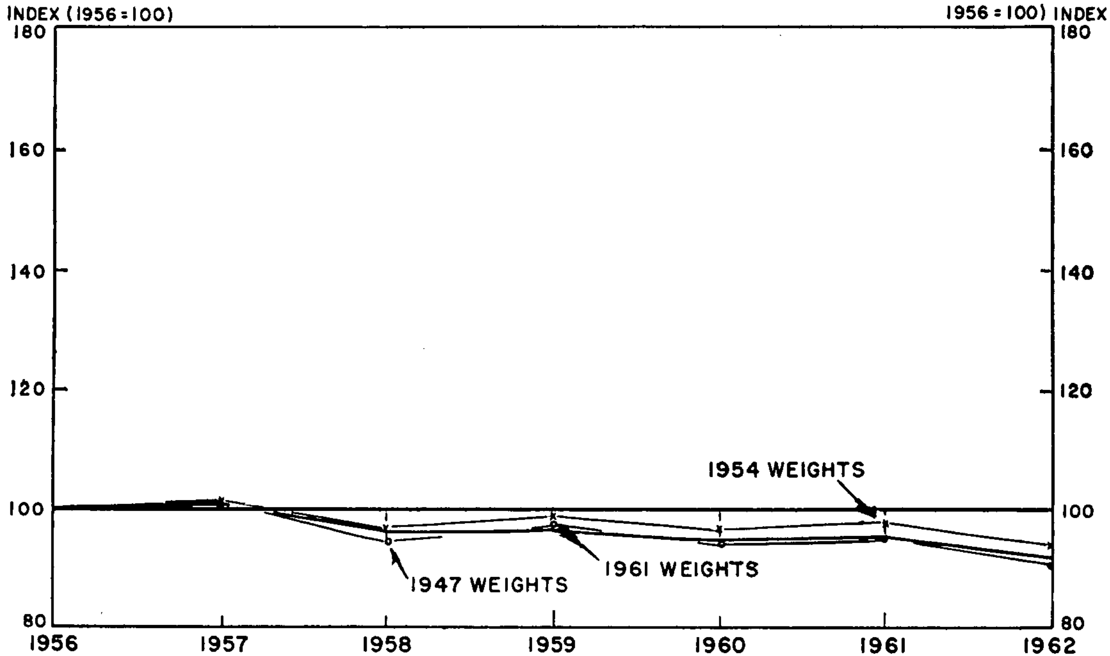

SOURCE: BUREAU OF LABOR STATISTICS

## Chart B PRICES OF BASIC STEELMAKING MATERIALS

(VARIOUS CHANGING WEIGHTING PATTERNS) - 1947 - 1962
(1947 - 49 = 100)


SOURCE: BUREAU OF LABOR STATISTICS.

*Chart C. PRICES OF BASIC STEELMAKING MATERIALS, 1956-62*
*Various Fixed Weighting Patterns*




Source: U.S. Department of Labor, Bureau of Labor Statistics.

Chairman DOUGLAS. Mr. Chase?

Mr. CHASE. Thank you, Mr. Chairman. We propose to start this morning with a brief review of the price trends for finished steel products and then to go on to the relationship of those prices to prices of steel-using products. In presenting this material I should like to refer briefly back to a chart which was presented on April 24 showing the trend of prices of basic steel products from 1940 through 1962, and comparing that with the trend of the general wholesale price index and the general consumer price index. You will recall that steel prices lagged during and for some time after World War II, but then by 1953 had caught up with the increase up to that point in the consumer price index, and by 1955 had caught up with the increase in the wholesale price index, and from that point on advanced more rapidly than either of these general price measures. This is shown in greater detail and summarized in table 1, which shows the percent change from 1940 to 1962, and from the 1947–49 average to 1962 for basic steel products compared with other groups of products in the wholesale price index. You will note that the increase for basic steel products from 1940 to 1962 was 176.2 percent, and from 1947–49 average to 1962, 86.7 percent. The increase over the whole period from 1940 to 1962 not only exceeded that for all commodities in the wholesale price index, but was considerably larger than the increase for any other major group of products except lumber and wood products. The same is true for the period from 1947–49 through 1962, where the prices of basic steel products increased by more than four times the amount of the increase in the general wholesale price index. You will note also on this chart the increases for metals and metal products and for machinery and automotive products, which are large users of steel and which increased more than any other major group of products except lumber and wood products.

Chairman DOUGLAS. Mr. Chase, there was some objection made to my pointing out that labor costs had not increased appreciably since 1958 and that material costs in steel had diminished. I would like to ask what has happened to the price of basic steel products since 1958, because I think all of these facts should be developed.

Mr. CHASE. Looking again at chart 5 from the April 24 testimony, Mr. Chairman, you will note that from 1958 there was a further slight advance in basic steel prices to 1959. But since 1959 there has been a slight decline in the prices of basic steel products.

Chairman DOUGLAS. From 188.2 to 186.7, 1.5 index points?

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. Or approximately a little less than 1 percent?

Mr. CHASE. Around 1 percent.

Chairman DOUGLAS. Is there any objection to this being noted in the record?

Senator JAVITS. Mr. Chairman.

Chairman DOUGLAS. The Senator from New York.

Senator JAVITS. May I say, the Chair is entirely within his rights in pointing up such factual information bearing on the main point. I will not take exception to it. We are over 21 and are well able to make our own points and I take no objection whatever to the Chair's pointing up what the Chair thinks is important in his view.

Chairman DOUGLAS. I want to point out that in doing this I have not drawn any conclusions as to whether an increase in prices from now on is or is not justifiable.

Senator JAVITS. May I say, too, to the Chair, that I think it is an extraordinary innovation that the representatives of labor and management are here, and I am sure that every opportunity will be afforded to them at any time that they wish it, to highlight the situation in the eyes of the press and to do exactly what we are doing here, making our main points when we think they are the most opportune. I wish to call that to their attention. I hope I am reflecting our general views. I thank the Chair for his indulgence.

Chairman DOUGLAS. I wonder if it is appropriate since the Senator from New York has made this very gracious statement, with which I completely agree, if I might also ask if there is some shading of prices which does not enter into the formal price index. That is, do you not get shadings and discounts? During the war it was rumored that there were under-the-table increases in order to get steel. Have there been under-the-table decreases during this subsequent period?

Mr. CHASE. Mr. Chairman, these changes are not reflected directly in the price data which we have.

Chairman DOUGLAS. I understand.

Mr. CHASE. We understand that at times there have been what are called shading or shaving of prices of steel. Generally if this goes on long enough and becomes widespread in the industry then it will be reflected in the published prices, and then we will have it in our index. At times when there is a change in the market, a rather significant change in the market, it is possible that there is some shading of prices which are not reported to us. Proceeding then, Mr. Chairman, on chart 2 we have shown the change in prices for many of the principal finished steel products and some semifinished products; the percent increase from 1947 to 1962. These are arrayed in descending order of the percentage increase. You will note that the amount of increase, or the percentage increase, has varied considerably for these major products during this period. Now with respect to the recent price increases recently announced, they are shown on this chart by the shaded areas at the right of the bars. Those are for four principal items. Those are the major items on which price increases have recently been announced. We have also indicated by the length of that shaded area the additional percentage increase that that would represent from 1947 to the present time. You will note that these increases—these typical increases—have been largely on items which previously had increased by the smaller amounts. The amounts which we have shown here as being added to those prices are the typical amounts. As the Chair and the committee know there are adjustments still being made in those announced price increases, so that it is not possible for us at this time to work out an average but we have plotted the typical price increase that would be added to the previous increase and shown it in these shaded areas added to the prices for major items.

Chairman DOUGLAS. The acoustics in the room are not very good. Do I understand you to say that the shaded areas represent the increases which have been announced by the companies recently?

Mr. CHASE. Yes, sir; those are typical amounts that have been added by the companies recently. And added to the previous bar would represent the amount of increase including the recent increases. They are on items which have been previously increased by smaller amounts, so that it does appear that these increases have been quite selective.

Turning now to the prices of major steel using products, I should like to explain to the committee that in order to determine with any precision the direct impact of a steel price increase on costs to producers of products using steel, it would be necessary to make a very detailed study of cost and price structures within each steel using industry. The Bureau of Labor Statistics has not been able to do this, and so far as I know, no other agency has done this either. So that there is no measure of the precise direct impact of a steel price increase. If there were such a study, it would tell us only the effect of the added cost of steel and would not tell us the probable price change that resulted from this added cost of steel. Each final product has its own market. In some market situations, it might be possible to absorb an increase in the cost of steel to a final product. In other markets, market situations, the producer undoubtedly would want to reexamine his whole cost and price structure and might decide to change the price of his final product by either more or less than the increase in the cost of steel to him. In still other situations, he might find the market so competitive that he would even have to reduce prices, in which case he probably would be looking for substitutes for steel because of their added cost. So that in view of these considerations we are not able to estimate the direct impact of a steel price increase on prices of steel using products.

Chairman DOUGLAS. Have you an estimate as to what the overall increase in basic steel will be from these selective increases?

Mr. CHASE. Yes, sir; we will show that in the last chart today if I may delay until then to answer your question. As we look at the prices of finished products using steel we have plotted on chart 3 the line showing the increase in prices of basic steel products, and two major groupings of steel using products. One is machinery and equipment and the other is all other metal products using steel. The increase was especially marked during the period from 1952 to 1959. During that period steel prices advanced by 47 percent. The prices of machinery and equipment increased during that same period by 29 percent, and prices of other metal products using steel by 19 percent. This is from 1952 to 1959, the period of most rapid increase in prices of basic steel. In order to present a yardstick against which we can measure those prices changes we have also included on this chart the wholesale prices of all industrial commodities. They increased during the period from 1952 to 1959 by 13 percent. To repeat, then, 1952 to 1959, basic steel, plus 47 percent; machinery and equipment, plus 29 percent; other metal products using steel, 19 percent; while all industrial commodities were going up by 13 percent. If we take a closer look at 1956, prices of basic steel advanced by about 8 percent in 1956. At the same time the prices of machinery and equipment increased by about the same amount. But prices of other metal products using steel went up by about six and a half percent in 1956.

Steel about 8 percent, machinery and equipment nearly the same amount, and other metal products using steel, by six and a half percent.

Then in 1957, we had a further advance in prices of steel of about nine and a half percent, and prices of machinery and equipment followed along with about a 7-percent increase. Other metal products about four and a half percent. So that there was some correlation between the prices of steel and the prices of these products using steel. At the same time, during those 2 years, the general index of all industrial commodities went up by four and a half percent in 1956 and about 3 percent in 1957. That figure is brought out to show that we had a market situation existing in 1956 and 1957 which is in marked contrast to the current situation. In other words, we had a fairly general price rise in the economy at that time whereas since 1958, as we noted on the charts on April 24, we have had a very stable general price level as far as the wholesale prices are concerned. This may mean that the effect, the direct impact of a steel price increase, may be quite different from what it was in 1956 and 1957. If we move on, then, to the next chart, we are presenting the change in prices of major products using steel in more detail. The red line at the top here is basic steel prices again. The green line represents metal-working machinery and equipment, which followed along fairly closely with basic steel prices, and by 1962 was at about the same percentage above 1947–49 as basic steel prices.

The next line, the yellow line is for construction equipment. It followed a little less closely but was not far from showing the same amount of increase as metalworking machinery. The committee probably would be especially interested in agricultural machinery and equipment which while steel prices were doubling since 1947, has gone up by nearly 70 percent, that is, agricultural machinery and equipment. The most outstanding line here is the orange line at the bottom for motor trucks. They are in considerable contrast with the increases for the other types of equipment. Since 1959, they have actually declined some, following the decline in prices of basic steel. If we may move on to the next chart, chart No. 5, we have attempted to summarize the change in finished goods as compared with the prices of basic steel, showing the increase for producer finished goods since 1947 of about 65 percent. This is more than twice as much as the increase in prices of consumer finished goods at the wholesale price level. They have risen since 1947 by about 30 percent. So we see the doubling of the price of steel, a 65-percent increase in prices of producer finished goods, and about a 30-percent increase in prices of consumer durable goods at the wholesale level. On chart 6, we see a striking contrast with all the previous charts. This represents retail prices of the major consumer durable goods using steel. You will note that practically all of the lines except new cars were down in 1962 below the 100 level. In other words, they are below the 1947-49 average. All of these major consumer durables except new cars. There may be many reasons for this, but those usually advanced are that the development of new merchandising techniques, the discount houses, and the intense competition at retail has resulted in not only holding down these prices but actually causing them to decline since the 1947-49 average. In fact, the prices of electric refrigerators in 1962 were lower than in 1940 when account is taken of the improvements in quality since 1940.

Senator JAVITS. May we ask a question, Mr. Chairman?

Chairman DOUGLAS. Surely.

Senator JAVITS. Are these translated into some basic dollar equivalent? I mean is it a dollar of a certain year you are using here, or is it the absolute dollar?

Mr. CHASE. It is the 1947–49 average dollar.

Senator JAVITS. And secondly, are you trying in any way to relate the price of steel to these particular items, or does steel bulk large enough in these items that are referred to on your chart to make a material difference in their own price levels?

Mr. CHASE. I am not trying at this point to draw a direct relationship between prices of steel and prices of these steel-using products, because that, as I explained, cannot be done with the information that we have. By following the price trends over a period of time, we can see that except for these consumer durables which are subject to a special factor, the increase in the price of steel has been followed generally by an increase in prices of producer finished goods and some of the consumer durables.

Senator JAVITS. The consumer durables that you refer to are subject to very intense competition?

Mr. CHASE. Yes, sir.

Senator JAVITS. Are you asking us to draw any conclusion from that that they didn't follow the steel price trend because of the heavy competitive factors?

Mr. CHASE. I think that is a logical conclusion.

Senator JAVITS. You do?

Mr. CHASE. Yes, sir.

Senator JAVITS. Would you be prepared, as you go along, and I am sure you can't do it at this instance, to break that down in terms of more detailed analysis as to content of steel, et cetera, which would indicate perhaps more conclusively that the competitive situation had everything to do with keeping those prices down. Also perhaps its effect upon mortality in the interest rate of profit, cost of production, et cetera. In other words, to go in some detail into the true effect of more intense competition upon the cost to the consumer.

Mr. CHASE. I think I can present some evidence which will partially answer that question, but I can't answer it completely. At the end of the presentation, I plan to get into the effect on the Consumer Price Index, and at that point I could present some rough estimates. That is all they will be, rough estimates.

Senator JAVITS. That is all right. Thank you very much.

Mr. CHASE. We might just note that there was a rise in prices of some of these major appliances immediately after World War II. Then they held fairly steady except for a dip in 1950. It is since about 1953–54 that we have begun to see the effect of this competition. Even in the period of 1956–57 when steel prices were most rapidly changing, we have seen very little effect on the prices of consumer finished goods. We thought the committee would be interested in the direct effect of the recent increases in steel prices on our basic indexes which are a part of our wholesale price index. We show in chart 7 that, although there are changes still being made in the announced increases, we would estimate that the increase in our steel mill products index as a result of those announcements will be not more than about 1 percent. When steel mill products are combined with other products to make up our iron and steel index, that will translate into an increase of about seven-tenths of 1 percent. Then when those are combined with other items to make our metals and metal products index, it will be about three-tenths of 1 percent. When all of these are put together into our index for industrial commodities or all commodities other than farm and food, it will not have any effect on the published index. In other words, it will be less than five-hundredths of 1 percent. The same is true of the all-commodities wholesale price index.

Chairman DOUGLAS. I think that is a very valuable statement and should allay some of the alarms which developed.

Mr. CHASE. Yes, sir. We cannot make a similar computation with respect to the Consumer Price Index. However, we have attempted to sort out of all the commodities and services that are contained in the Consumer Price Index, those which are major users of steel. We find that the weights for these particular items add up to not more than about 16 percent of the total weights for the Consumer Price Index. So that with an increase of the magnitude shown here at the wholesale level, a direct pass through of this steel price increase would not affect the Consumer Price Index sufficiently so that it would show up in the published indexes. In other words, the effect would be very minor. In connection with Senator Javits' question, and I said these would have to be very rough approximations, we do estimate that there would be an increase as a result of a direct pass through of this increase in steel prices of not more than about $10 on an automobile, not more than about 50 cents on a refrigerator, not more than about $4 on a small tractor, and possibly in the neighborhood of $5 on a house. So that the effect would be relatively small on these particular items as far as we can estimate them roughly. Mr. Chairman, that concludes my prepared presentation this morning.

Chairman DOUGLAS. Thank you very much. Senator Proxmire.

Senator PROXMIRE. Yes. Senator Javits asked you, Mr. Chase, about the competitive situation, and I wanted to ask you the same kind of question. Let me approach it a little differently. I notice in your charts, chart 3 and 4, you talk about machinery and equipment, other metal using steel, all industrial commodities, and so forth. Have you made any analysis of the unused capacity in these other industries as contrasted or compared with steel?

Mr. CHASE. We have not.

Senator PROXMIRE. Do you know of your own knowledge whether these industries are characterized by about the same degree or a lesser degree of unused capacity?

Mr. CHASE. It is my impression from the rather sketchy figures that are available, and I think they are not official Government figures, that there is unused capacity in many of these industries that might be close to that in the steel industry.

Senator PROXMIRE. It is about the same?

Mr. CHASE. That is my impression; yes, sir.

Senator PROXMIRE. So that from a strictly classical economic standpoint, it is hard to understand why with unused capacity and ample facilities available, there should be any increase in price. I am talking about the classical economic approach in which you would assume that prices are based on supply and demand and not on a cost accounting system within which you fix your price at a level to give you a profit and let the consumer pay that price, and if he doesn't pay it you just cut your capacity down.

Mr. CHASE. Sir, I think the answer to this goes back to an earlier statement where I assumed that in certain market situations—and of course the percent utilization of capacity is a part of that market situation—producers might reexamine their entire price and cost structure at a time when something like this happens, that is, an increase in prices of steel. I would assume that if they do so they will make their decision based not just on the cost of steel alone but their total cost and price structures.

Senator PROXMIRE. The fact is that in each one of these cases, as you indicate, they seem to have substantial unused capacity, a third, a quarter, very big unused capacity, yet prices are rising. The only way that I can understand that is that they follow the same practice we did in the business that I had, although it was a little business. What we did in our business was to try to cost our product as we produced it, and we established a price and worked to get that price. If we didn't get it, we would not sell at a loss.

I think this is very common in industry. The reason I asked this question is that it seemed to me that we should expect the increase in price by steel to be passed through. Any notion that they are likely to absorb it would seem to run counter to the practices which industry generally has followed in the past. If they have an adequate cost accounting system, they determine what the cost of what they are producing is, and then they establish their price on that basis, and that is it.

Doesn't that seem logical?

Mr. CHASE. Yes, sir; it does. Of course, you prefaced your remark, Senator, by saying in a classical economy this is what we would expect.

Senator PROXMIRE. Yes, in a classical economy we would not have expected rising prices when there is excess capacity, but we are not operating in a classical economy. We are operating in an economy which is quite different, in which we have a control over prices by all producers.

I do not mean to attack the steel industry, but all producers. Labor, through its union organization, establishes and fixes its price in negotiations. It has nothing to do with supply and demand. It has everything to do with power and the capacity to establish the price.

Your concluding statement, I thought, was very helpful, and I want to commend you on it. You did not talk in generalities. You were specific. You said $10 on an automobile, $4 for a small tractor, $5 on a house, 50 cents on a refrigerator. While this would be the impact from the direct action taken by the steel companies, we think of steel as a bellwether industry that sets the pace not only in terms of its precise and direct impact, but in terms of its psychological impact.

In other words, if you are going to get this kind of increase by steel, this is only one of the ingredients in all of these things we are talking about. If you get a similar pattern developing throughout industry in the many other ingredients that go into construction, and if you get a similar reaction from labor that they should get some increase, isn't it true that the effect would be several multiples of this?

In other words, not a $10 increase on an auto, but very possibly $100 or more?

Mr. CHASE. Yes, sir; there is a possibility here, I am sure.

Senator PROXMIRE. Isn't it likely? You don't expect steel to act in a certain way and then the rest of American industry to say, "Well, that is it"?

Mr. CHASE. Referring back to the figures comparing machinery and equipment with basic steel products in 1956 and 1957, over the whole period from 1952 to 1959, you recall that in that period basic steel prices went up 47 percent, the prices of machinery and equipment 29 percent, and other metal-using products 19 percent, so that the amount of increase was not as much as the increase in the price of steel.

Senator PROXMIRE. Wouldn't you also say that the amount of increase was not caused simply by the steel ingredient that was in the ultimate product; it was caused by other decisions?

Mr. CHASE. Yes, sir. I would think that those amounts that these steel-using products did increase were more than the amount of the added cost of steel; however, we did have a market situation then where industrial commodities in general went up 4½ percent in 1956 and 3 percent in 1957 and that is in rather striking contrast to the current situation where we have had stability in industrial prices for a period of almost 5 years now.

So that on the face of that alone, it appears that the current situation is quite different. Even the percent increase that we got related to the increase in price of steel in 1956 and 1957 probably would not take place now.

Senator PROXMIRE. You spoke about the changes still being made in the announced price increases. These seem pretty encouraging to those who would like to see price stability as much as possible.

Did I misinterpret newspaper articles which indicated that they are retreating a little bit from the initially announced price? Some of them are withdrawing from it and may for various reasons reduce their price back to where it was in some areas.

Mr. CHASE. Our official price reports for April were too early to catch these changes, including the original increases and the changes that have been made since then, so we do not have official reports yet to show precisely what has happened. We have to rely on what is reported in the newspapers, also, as far as those changes are concerned. I think they are reliable.

For example, two or three companies did increase prices of steel plates, but then it seems quite clear that they subsequently rescinded those increases.

Senator PROXMIRE. I think that is it for the time being.

Chairman DOUGLAS. Senator Jordan.

Senator JORDAN. Mr. Chase, may we take a look at your chart 5 that you were referring to?

Mr. CHASE. The first chart?

Senator JORDAN. It is chart 5 in my folder. I want to take a look at it because some of my questions will relate to it.

I noticed that you used the year 1947 as a base in many of your computations of price increases. I wonder why you used 1947, because it does appear on this chart that is the time that the steel prices were further behind the general price level than at any other time on your chart.

Could that be because steel was under very rigid price control during the war period? How do you account for that wide variation there? Why do you select 1947 as a base instead of 1940, for instance?

Mr. CHASE. Sir, I think it was the average 1947–49, rather than just 1947 alone, which was used as a base in many of these charts, or most of them. That was the official Government index base until about 2 years ago, or a year ago. Then we shifted to a 1957–59 base. These are bases established by the Office of Statistical Standards in the Bureau of the Budget for all general-purpose Government indexes.

Senator JORDAN. I appreciate that, and I know that is true. Is it not true that steel was under very rigid regulation during those years and at the end of the war we had a great backlog of steel orders and the plants were no doubt operating at full capacity to catch up on this backlog of orders?

Mr. CHASE. Yes, sir; I think that is probably true. This line does represent price controls. They were more rigid, apparently, on steel than they were on many other products during the war, so that steel lagged and had not caught up until 1953, actually.

Senator JORDAN. Actually it crosses the all-commodities curve at what year?

Mr. CHASE. It crossed the wholesale price index in 1955.

Senator JORDAN. Again with steel under some regulation during the Korean war——

Mr. CHASE. Yes, sir; there was allocation of steel at that time.

Senator JORDAN. And again the backlog built up?

Mr. CHASE. Yes, sir.

Senator JORDAN. If your computations were made using 1940 as the base year, you would come out with quite a different set of percentages, would you not?

Mr. CHASE. Sir, actually this chart is on a 1940 base, but the base you use doesn't change the slope of the line. It makes them look different. If you pull them together here, they will spread apart back here, but the slope of the line is unchanged.

Senator JORDAN. That is very true. I am thinking now of the rate of increase in steel, for instance. You have a flat curve in steel from 1940 to 1945–46, and if you use the 1947–49 base you get a higher percentage over a shorter period of time than if you were back on the 1940 base.

Mr. CHASE. If you read the figures from the base to some other time, that would be true, sir; but again, if you are talking about a percent change, it is not affected by whatever base you take. The percent change remains the same whether you use the 1940, 1947–49, or 1957–59 base. The percent change remains the same.

Senator JORDAN. Except if you were to calculate the rate of gain, if you used the longer period the rate would be more favorable with respect to steel.

Mr. CHASE. Yes, sir; average per year.

Senator JORDAN. There is another question I have, Mr. Chase.

We have heard back through the past several days reference to improvement in quality of steel. I wonder if that factor is taken into account, if it is measurable, if it is taken into account in the basic steel prices that you have used?

Mr. CHASE. We price a precise specification of steel. These specifications are worked out with the American Iron and Steel Institute and other representatives of the iron and steel industry. This specification is designed to give us a price on the same quality of steel from one time to another.

It is true that at certain times the steel industry may introduce new types of steel as they did on thin tinplate which is used in cans. We in our index computations introduce that as a new item and it does not affect the level of the index. In other words, this is not a cost index. It is a price index. So that the user of this thin tinplate may find his costs are lower per ton of steel, but it will not be reflected in this price index. That is a cost factor.

Senator JORDAN. Mr. Chase, if the quality of steel is improved, say, 10 percent, it would require only 90 percent as much weight to get the equivalent strength, we will say, in beams or structural steel and that sort of thing, as perhaps a few years ago.

My point is, was this taken into account?

Mr. CHASE. We take it into account in the price data that we collect, but we introduce it into the index in such a way that it does not affect the level of the index, whenever there is a measurable change in the quality that is involved of the kind you are talking about, a higher strength steel.

Senator JORDAN. Then along a little different line, the data we have seen show that the price changes indicate that steel prices have gone up much more than other commodities since 1940. It would indicate, then, that the steel companies have received higher revenues. Do you have, then, information as to where these revenues have gone?

Mr. CHASE. I believe, Mr. Chairman, that is the subject of another meeting of this committee. I do not have it, sir.

Senator JORDAN. This is coming on Monday. Very well, I shall not get into that at this time.

That is all. Thank you, Mr. Chairman.

Chairman DOUGLAS. Thank you very much, Mr. Jordan.

Congressman Kilburn?

Representative KILBURN. I have no questions.

Chairman DOUGLAS. Senator Proxmire?

Senator PROXMIRE. I think it would be interesting to see steel profits on the chart along with steel prices.

Chairman DOUGLAS. That is Monday.

Senator PROXMIRE. I realize we get into that on Monday. I want to make one point which relates to this, and that is that I suspect that there is going to be an inverse relationship, and the reason why I say that is because, as Senator Jordan properly pointed out, or implied in his questioning, during this period when you had low prices or stable prices from 1940 to 1945 under price controls, you had very heavy capacity utilization, and I suspect pretty high profits earned because the steel companies were turning out an enormous amount and the overhead was taken care of.

As prices rose capacity operation began to drop. I suspect even though the prices were higher that the profits contradictorily were lower. This would suggest that it may well be that the capacity utilization is the real key to prosperity for the steel industry. I am sure industry leaders know this. I think maybe the public doesn't know it, and it is something that, as a Member of the Senate, it is good to have reinforced as I think you do in your charts here.

I would like to ask just one question on this chart 7. Will you again explain why it is that the current steel price increases have absolutely no effect whatsoever, or, as you say, an 0.05 percent effect or one-twentieth of 1 percent?

Mr. CHASE. Five one-hundredths of 1 percent.

Senator PROXMIRE. One-twentieth of 1 percent on all commodities, and yet you get some effect in your finished product, in your automobile, in your tractor, and so forth, or is that also as infinitesimal as this would be? You gave a $10 price increase for automobiles.

Mr. CHASE. Yes, sir. I am glad to clarify this point because in this chart 7, and the table which accompanies it, this is the effect of the increase in prices of steel mill products only on this index. It does not include whatever price effect there may be on products using steel because we are not able to estimate that at the present time.

We don't know what is going to happen to prices of products using steel because that decision will be made by the producers as they evaluate the market, so we have included here the effect on the wholesale price index of just the increase in prices of steel.

Senator PROXMIRE. Can you give us an example of that, because I think this is a very important point and I am not sure I understand it yet.

Mr. CHASE. Steel mill products are a group of products that are in the wholesale price index. They actually represent only 3.47 percent of the total weight in the wholesale price index. In other words, about 3½ percent of the total weight in the wholesale price index is represented by these steel mill products.

So even though you have a 1-percent increase in steel mill products, by the time they get combined with everything else in the index it comes out to less than five one-hundredths of 1-percent increase.

Senator PROXMIRE. So you can have specific increases that are more substantial, but because they represent in the whole cosmos of what is purchased a very small percentage, only 3½ percent, the real impact on the total price situation is extremely modest.

Mr. CHASE. Yes, sir; the direct.

Senator PROXMIRE. Say a word about the indirect.

Mr. CHASE. We have not estimated the indirect here because we cannot guess at this time what is going to happen to prices of products using steel, so the direct effect is on the steel products themselves. That is what this represents, but it does not include any change in the products using steel.

Senator PROXMIRE. You might have a product using steel which goes up in price and it is part of a commodity which is ultimately sold. You might have an increase in machinery or other things which have to be bought and ultimately go into things that are purchased, so this has not been traced. You are not making an estimate. You cannot give us a close approximation or even a rough approximation of what that will be, but it will be something; is that about it?

Mr. CHASE. Yes, sir. It will be added to this. Whatever it amounts to will be added to this.

Senator PROXMIRE. This zero does not represent the effect of a price increase indirect, only direct?

Mr. CHASE. Only direct; yes, sir.

Senator PROXMIRE. Thank you, Mr. Chairman.

Chairman DOUGLAS. Thank you very much, Mr. Chase.

Now, on Wednesday we asked if you would work out index numbers for the period 1947–62 for the cost of raw materials in the steel industry, first based on 1947 weights throughout the period, and then 1961 weights and 1956 weights.

I am told that there are no 1956 weights, but 1954 weights. The question is what has been the relative movement of the price of these commodities of basic raw materials in steel using each one of these indexes?

I believe the index which you showed last time was one which used 1947 up to 1956 and then used 1961, from 1956 on; is that correct?

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. That showed a decrease of 8.6 percent.

Mr. CHASE. Yes, sir.

Chairman DOUGLAS. Or 8.6 percentage points.

Mr. CHASE. 8.6 percent.

Chairman DOUGLAS. Would you describe this? I held this off to the end in the hope that Senator Miller and Congressman Curtis would be present, but I think it would be better to have it introduced now rather than not to have it introduced at all.

Mr. CHASE. Mr. Chairman, in introducing this material, I should like to express the professional opinion that no great significance should be attached to the differences between these indexes using the different set of weights. Actually, in my judgment the differences are within the range of error of the indexes themselves, so with that introductory statement, I would like to point out that we did do what the committee asked.

We plotted the change in prices of steelmaking materials from 1947 through 1962, using three different sets of weights. The red line here is the line representing 1961 weights all the way through.

Chairman DOUGLAS. The index which you presented originally used composite weights, did it not, 1947 up to 1956 and 1961 weights from 1956 on?

Mr. CHASE. Yes, sir. I show that on another chart to compare another way to do this. There are many ways to do this kind of job, as the chairman knows. I will show that combination on another chart.

The red line here represents using 1961 weights all the way through, not just back to 1956, but all the way back to 1947.

The yellow line represents 1947 weights all the way through, going beyond 1956 and through 1962 instead of stopping in 1956.

The chairman did ask us to prepare the index based on 1956 weights, but we do not have the weights for 1956, so we did use, instead, the 1954 weighted index.

I would like to explain in connection with that index that we did not use it in compiling the input index that we presented on Wednesday, because the weight for coke in that set of weights is unreasonably high. We could not explain the difference between the weight of coke in 1947, 1954, and 1961. We had no basis for adjusting it. We were convinced that it was unreasonably high so that it had an effect on the index that is shown by this blue line here, because coke prices continued up after 1956 and prices of scrap went down. So the higher weight applied to coke in the 1954 weighted index reflects that continued increase in prices of coke.

The chairman will notice that over the whole period these lines are quite close together. They are linked back here in 1956.

On the next chart I will show you how that worked out. The blue line represents the 1947 weights, from 1947 to 1956, and the 1961 weights from 1956 to 1962, and it is the index that we presented on Wednesday.

The red line represents weights for 1947, from 1947 through 1951, and 1954 weights from 1951 to 1956, and 1961 weights, 1956 to 1962.

The movements are a little different here, but not significantly so in my judgment. Because we did not want to use the 1954 weights on account of this error in the weight for coke, we linked only the two weighted indexes, 1947 and 1961. When you have a situation where you have beginning period weights and end period weights in constructing an index number, it is good statistical practice to move forward with the beginning period weights to some point and move back with the end period weights and to link those two at a point where you think that the change between the two has become significant.

In other words, in 1947 we had a given distribution of the weights for the various products going into steelmaking. In 1961 we had a different distribution. Somewhere in between a change took place, so that we, in our judgment, thought that if we linked in 1946 it would reflect the time when there was a significant difference between 1947 and 1961. That is why we have combined the two indexes .

Now, with respect to the specific point that was raised on Wednesday, we have plotted on this chart, using 1956 as 100, the various indexes. The committee will note that they run very closely together. If we had used 1947 weights for 1956 through 1962, it would have shown a larger decline than the index using the 1961 weights.

Chairman DOUGLAS. Which was the contention of the Senator from Illinois.

Mr. CHASE. Yes, sir; that is right. It had to be so because the main factor that affected this during that period was a decline in the price of scrap. The Senator was quite right in noting that if you had a higher weight for scrap, which we did have in the 1947 index, that it would cause the index to go down more.

Chairman DOUGLAS. Just a minute. Since Mr. Curtis and Mr. Miller are not here, I think I should defend their position a little bit.

You notice that if you take 1954 weights, that the decrease was less, 6.4 percent as compared to 8.6 percent. In other words, if you take 1947 weights, the decrease is more, but if you take 1954 weights, the decrease is less.

I am going to propose, therefore, to our Republican friends, that both Mr. Miller and I, buy a 5-pound steak and give it to Children's Village to be eaten by the kids there who don't have enough to eat anyway. I will send my steak out on Monday morning if Mr. Miller will reciprocate. I would say that is a draw battle.

Mr. CHASE. Mr. Chairman, that covered the material that I thought we had as a result of the question that was raised last Wednesday. We have submitted other materials that the committee requested.

Chairman DOUGLAS. I would like all these materials to be made a part of the record.

(The materials referred to follow:)

TABLE A.—*Prices of basic steelmaking materials (various fixed weighting patterns), 1947–62*

[1947–49=100]

| Year | 1947 weights | 1954 weights | 1961 weights |
|---|---|---|---|
| 1947 | 92.4 | 91.2 | 92.6 |
| 1948 | 105.6 | 104.0 | 104.6 |
| 1949 | 102.0 | 104.7 | 102.8 |
| 1950 | 112.5 | 113.4 | 110.9 |
| 1951 | 122.9 | 123.4 | 121.5 |
| 1952 | 122.6 | 124.2 | 121.9 |
| 1953 | 125.2 | 128.6 | 123.9 |
| 1954 | 118.9 | 124.0 | 119.7 |
| 1955 | 128.1 | 131.4 | 127.5 |
| 1956 | 145.7 | 147.9 | 141.6 |
| 1957 | 147.7 | 151.3 | 143.6 |
| 1958 | 137.4 | 143.2 | 136.3 |
| 1959 | 141.3 | 146.2 | 137.2 |
| 1960 | 136.7 | 142.6 | 134.0 |
| 1961 | 138.3 | 144.2 | 135.0 |
| 1962 | 132.2 | 138.5 | 129.4 |

Source: Bureau of Labor Statistics.

TABLE B.—*Prices of basic steelmaking materials (various changing weighting patterns), 1947–62*

[1947–49=100]

| Year | 1947 and 1961 weights [1] | 1947, 1954, and 1961 weights [2] | Year | 1947 and 1961 weights [1] | 1947, 1954, and 1961 weights [2] |
|---|---|---|---|---|---|
| 1947 | 92.4 | 92.4 | 1955 | 128.1 | 130.9 |
| 1948 | 105.6 | 105.6 | 1956 | 145.7 | 147.4 |
| 1949 | 102.0 | 102.0 | 1957 | 147.8 | 149.5 |
| 1950 | 112.5 | 112.5 | 1958 | 140.2 | 141.8 |
| 1951 | 122.9 | 122.9 | 1959 | 141.1 | 142.8 |
| 1952 | 122.6 | 123.8 | 1960 | 137.8 | 139.4 |
| 1953 | 125.2 | 128.2 | 1961 | 138.8 | 140.4 |
| 1954 | 118.9 | 123.6 | 1962 | 133.2 | 134.7 |

[1] 1947 weights 1947–56; 1961 weights 1956–62.
[2] 1947 weights 1947–51; 1954 weights 1951–56; 1961 weights 1956–62.

Source: Bureau of Labor Statistics.

TABLE C.—*Prices of basic steelmaking materials (various fixed weighting patterns), 1956–62*

[1956=100]

| Year | 1947 weights | 1954 weights | 1961 weights |
|---|---|---|---|
| 1956 | 100.0 | 100.0 | 100.0 |
| 1957 | 101.4 | 102.3 | 101.4 |
| 1958 | 94.3 | 96.8 | 96.3 |
| 1959 | 97.0 | 98.9 | 96.9 |
| 1960 | 93.8 | 96.4 | 94.6 |
| 1961 | 94.9 | 97.5 | 95.3 |
| 1962 | 90.7 | 93.6 | 91.4 |

Source: Bureau of Labor Statistics.

TABLE D.—*Relative importance of basic steelmaking materials*

| Commodity | Wholesale price index code | Relative importance | | |
|---|---|---|---|---|
| | | 1947 (1947 weights) | 1954 (1954 weights) | 1961 (1961 weights) |
| Coke | 05-20-00 | 25.448 | 32.192 | 17.284 |
| Natural gas [1] | 05-31-00 | 1.175 | 1.749 | 1.513 |
| Electric power, industrial [2] | 05-41-03 | 12.653 | 9.480 | 8.466 |
| Residual fuel oil [3] | 05-74 | 3.407 | .657 | 2.005 |
| Iron ore | 10-11-00 | 16.530 | 28.600 | [4] 24.732 |
| Dolomite [5] | Bureau of Mines | 1.132 | 1.057 | 8.883 |
| Steel scrap [6] | 10-12-00 [6] | 26.054 | 12.529 | 11.842 |
| Ferromanganese | 10-16-11 | 5.455 | 6.607 | 4.175 |
| Ferrosilicon | 10-16-12 | 1.820 | 1.498 | .634 |
| Aluminum ingot | 10-22-01 | .398 | .415 | .533 |
| Copper ingot, electrolytic | 10-22-06 | .851 | .691 | .280 |
| Lead, pig, Common | 10-22-11 | .217 | .076 | .053 |
| Nickel, cathode sheets | 10-22-16 | .904 | 1.253 | 1.997 |
| Tin, pig, Grade A | 10-22-26 | 2.011 | 1.623 | 1.775 |
| Zinc, slab, Prime Western | 10-22-31 | 1.883 | 1.239 | 1.056 |
| Scrap nickel anodes | 10-23-26 | .062 | .334 | |
| Liquified petroleum gas | 05-32 | | | .006 |
| Oxygen | 06-11-49 | | | 7.629 |
| Sulfur | 06-11-85 | | | .002 |
| Coal tar pitch | 06-12-36 | | | 1.285 |
| Pig iron, Basic | 10-16-01 | | | 1.403 |
| Pig iron, Bessemer | 10-16-02 | | | .023 |
| Ferrochromium | 10-16-13 | | | 2.165 |
| Cobalt | 10-22-04 | | | .601 |
| Titanium sponge | 10-22-56 | | | 1.208 |
| Total | | 100.000 | 100.000 | 100.000 |

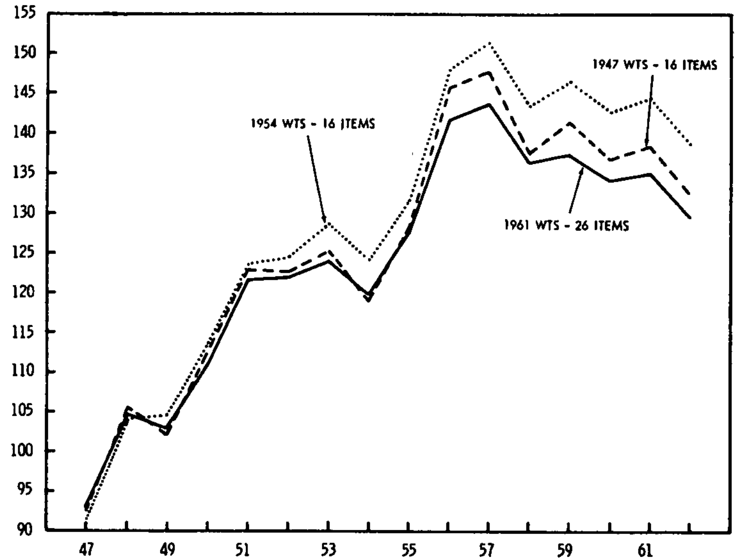
[1] Gas fuels (code 05-3) used in index through 1956.
[2] Electricity (code 05-4) used in index through 1956.
[3] Residual fuel oil, Oklahoma (code 05-74-03) used in index through 1956.
[4] Iron ore, Bessemer 16.716 percent; non-Bessemer 3.476 percent; imported 4.540 percent.
[5] Calcium oxide (code 06-11-29) used in index through 1956; Bureau of Mines data used from 1957 forward.
[6] No. 1 heavy melting steel scrap, Pittsburgh used in index through 1956; wholesale price index product class for iron and steel scrap (code 10-12) less cast iron scrap used from 1957 forward.

Source: Bureau of Labor Statistics.

**Chart A PRICES OF BASIC STEELMAKING MATERIALS**

(VARIOUS FIXED-WEIGHTING PATTERNS) - 1947 - 1962

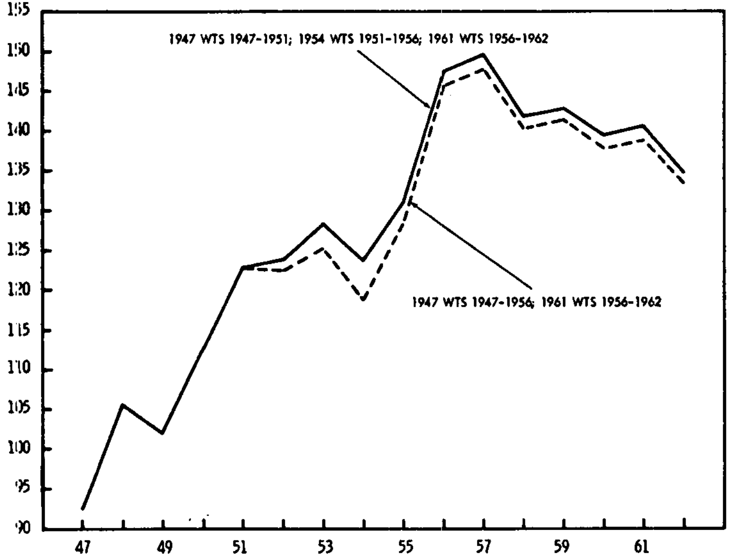
(1947 - 49 = 100)




SOURCE: BUREAU OF LABOR STATISTICS

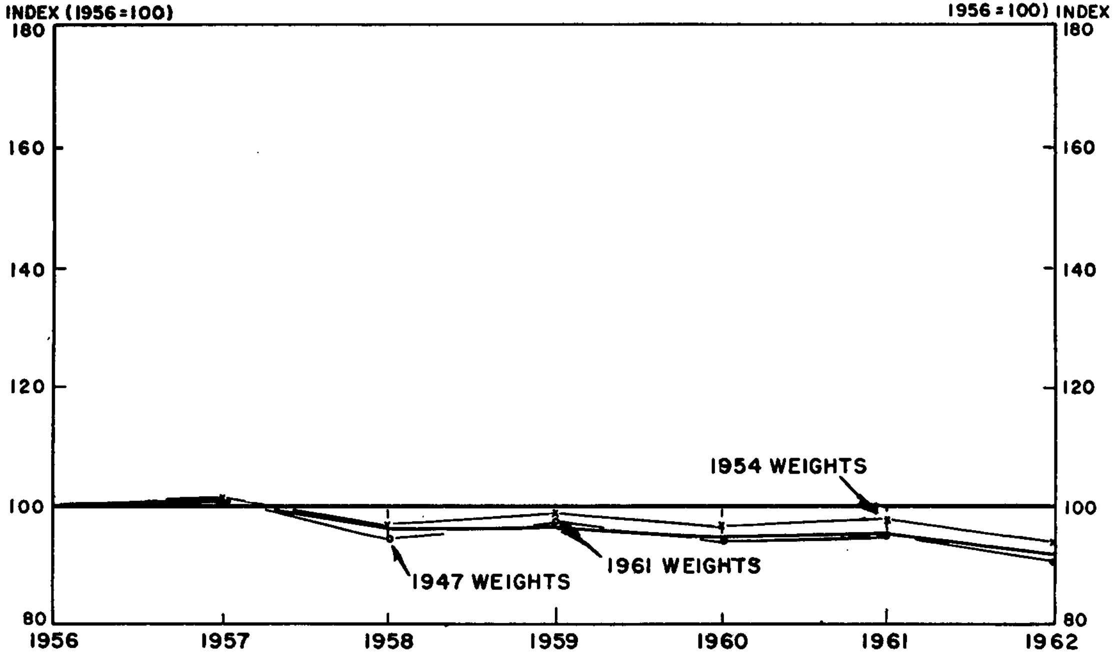
## Chart B PRICES OF BASIC STEELMAKING MATERIALS

(VARIOUS CHANGING WEIGHTING PATTERNS) - 1947 - 1962
(1947 - 49 = 100)




SOURCE: BUREAU OF LABOR STATISTICS.

**Chart C. PRICES OF BASIC STEELMAKING MATERIALS, 1956-62**
**Various Fixed Weighting Patterns**




Source: U.S. Department of Labor, Bureau of Labor Statistics.

*Prices included in basic steelmaking materials index (common to 1947 weighted and 1961 weighted indexes), annual average indexes*

[1947–49=100]

| Year | Coke, wholesale price index code 05–2 | Ferromanganese, wholesale price index code 10–16–11 | Ferrosilicon, wholesale price index code 10–16–12 | Aluminum ingot, wholesale price index code 10–22–01 | Copper ingot, wholesale price index code 10–22–06 | Lead, pig, common, wholesale price index code 10–22–11 | Nickel, wholesale price index code 10–22–16 | Tin, pig, grade A, wholesale price index code 10–22–26 | Zinc, slab, prime western, wholesale price index code 10–22–31 |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | 84.2 | 90.6 | 83.1 | 94.3 | 101.2 | 91.7 | 94.2 | 84.5 | 86.9 |
| 1948 | 104.3 | 98.2 | 99.6 | 98.9 | 106.1 | 112.6 | 98.2 | 107.8 | 111.7 |
| 1949 | 111.5 | 111.2 | 117.3 | 106.8 | 92.7 | 95.8 | 107.6 | 107.7 | 101.4 |
| 1950 | 116.0 | 113.6 | 117.3 | 111.1 | 102.7 | 82.9 | 120.8 | 104.3 | 115.2 |
| 1951 | 124.0 | 121.2 | 128.7 | 119.4 | 116.5 | 109.2 | 145.3 | 137.8 | 148.0 |
| 1952 | 124.7 | 132.1 | 128.7 | 122.0 | 116.5 | 102.1 | 152.0 | 130.1 | 135.0 |
| 1953 | 132.0 | 149.0 | 128.7 | 131.2 | 137.9 | 84.3 | 160.7 | 103.3 | 91.3 |
| 1954 | 132.4 | 147.6 | 120.4 | 136.9 | 142.4 | 87.9 | 162.5 | 100.0 | 88.4 |
| 1955 | 135.2 | 143.1 | 124.0 | 148.7 | 177.4 | 94.4 | 173.6 | 102.7 | 100.9 |
| 1956 | 149.7 | 163.9 | 134.3 | 163.5 | 198.8 | 99.9 | 175.7 | 109.7 | 110.5 |
| 1957 | 161.7 | 189.4 | 137.3 | 172.9 | 144.1 | 91.3 | 199.1 | 104.7 | 93.7 |
| 1958 | 161.9 | 183.8 | 148.5 | 169.0 | 124.7 | 75.8 | 199.1 | 103.2 | 85.4 |
| 1959 | 169.8 | 183.8 | 151.6 | 168.4 | 147.8 | 76.2 | 199.1 | 110.7 | 94.0 |
| 1960 | 170.4 | 166.6 | 151.6 | 176.5 | 154.4 | 74.4 | 199.1 | 110.1 | 106.2 |
| 1961 | 170.4 | 165.0 | 146.7 | 173.0 | 143.9 | 67.8 | 208.9 | 122.9 | 95.0 |
| 1962 [1] | 170.4 | 142.5 | 148.9 | 162.0 | 147.3 | 60.1 | 215.0 | 124.4 | 95.7 |

[1] Preliminary.

Source: Bureau of Labor Statistics.

*Prices included in basic steelmaking materials index (used only in 1947 weighted indexes), annual average indexes*

[1947–49=100]

| Year | Gas fuels, wholesale price index code 05–3 [2] | Electric power, wholesale price index code 05–4 [3] | Residual fuel oils, Oklahoma, wholesale price index code 05–74–03 | Calcium oxide, wholesale price index code 06–11–29 | Iron ore, wholesale price index code 10–11 | Steel scrap, Pittsburgh, wholesale price index code 10–12–1–01 | Scrap nickel anodes, wholesale price index code 10–23–26 [4] |
|---|---|---|---|---|---|---|---|
| 1947 | 96.1 | 98.0 | 111.3 | 93.5 | 88.6 | 101.6 | 94.2 |
| 1948 | 102.4 | 99.2 | 134.3 | 98.8 | 96.6 | 115.9 | 98.2 |
| 1949 | 101.5 | 102.8 | 54.5 | 107.7 | 114.9 | 82.5 | 107.6 |
| 1950 | 98.2 | 100.1 | 95.8 | 107.8 | 123.1 | 109.7 | 120.8 |
| 1951 | 100.7 | 98.1 | 106.6 | 115.1 | 132.3 | 126.6 | 145.3 |
| 1952 | 103.7 | 98.9 | 71.9 | 115.9 | 137.6 | 123.3 | 152.0 |
| 1953 | 107.8 | 99.1 | 64.2 | 117.9 | 153.8 | 115.1 | 320.7 |
| 1954 | 108.8 | 101.8 | 75.5 | 121.3 | 157.7 | 83.5 | 262.4 |
| 1955 | 111.6 | 97.0 | 102.0 | 123.6 | 160.5 | 113.6 | 352.3 |
| 1956 | 115.1 | 94.2 | 124.3 | 132.1 | 173.0 | 149.9 | 761.2 |
| 1957 | 116.1 | 95.5 | 132.6 | 140.1 | 181.6 | 133.5 | 428.8 |
| 1958 | 126.2 | 96.4 | 82.2 | 137.3 | 177.1 | 101.1 | 200.0 |
| 1959 | 137.6 | 96.9 | 101.8 | 140.1 | 169.9 | 107.6 | 227.1 |
| 1960 | 144.6 | 97.9 | 104.3 | 143.2 | 171.0 | 88.1 | 227.1 |
| 1961 | 147.2 | 98.4 | 97.1 | 144.1 | 172.9 | 94.5 | 237.1 |
| 1962 [1] | 147.8 | 98.8 | 97.2 | 144.2 | 165.4 | 78.6 | 248.7 |

[1] Preliminary.
[2] 1947 through 1957 estimated on movement of former wholesale price index series for gas.
[3] 1947 through 1957 estimated on movement of former wholesale price index series for electricity.
[4] 1947 through 1952 estimated on movement of the primary metal.

Source: Bureau of Labor Statistics.

*Prices included in basic steelmaking materials index (used only in 1961 weighted indexes), annual average indexes*

[1947–49=100]

| Year | Gas, except LPG,[2] wholesale price index code 05–31 | Gas, liquefied petroleum,[2] wholesale price index code 05–32 | Electric power,[3] wholesale price index code 05–41–03 | Residual fuels, wholesale price index code 05–74 | Oxygen, wholesale price index code 06–11–49 | Sulfur, wholesale price index code 06–11–85 | Coal tar pitch,[4] wholesale price index code 06–12–36 | Dolomite (Bureau of Mines) |
|---|---|---|---|---|---|---|---|---|
| 1947 | 96.1 | 96.1 | 99.0 | 96.0 | 94.2 | 94.3 | 101.5 | 90.8 |
| 1948 | 102.4 | 102.4 | 100.3 | 128.1 | 102.0 | 102.8 | 107.0 | 102.3 |
| 1949 | 101.5 | 101.5 | 100.7 | 76.0 | 103.9 | 102.8 | 91.4 | 107.0 |
| 1950 | 98.2 | 98.2 | 100.4 | 88.5 | 103.9 | 108.5 | 97.1 | 109.4 |
| 1951 | 100.7 | 100.7 | 100.6 | 99.2 | 103.9 | 125.7 | 121.2 | 118.8 |
| 1952 | 103.7 | 103.7 | 101.0 | 88.9 | 105.8 | 125.7 | 113.1 | 119.9 |
| 1953 | 107.8 | 107.8 | 101.3 | 87.4 | 105.5 | 141.3 | 114.2 | 121.4 |
| 1954 | 108.8 | 108.8 | 101.7 | 93.3 | 105.3 | 151.4 | 111.2 | 127.9 |
| 1955 | 111.6 | 111.6 | 102.4 | 104.8 | 105.3 | 151.4 | 111.1 | 130.7 |
| 1956 | 115.1 | 115.1 | 103.2 | 119.2 | 109.3 | 151.4 | 114.2 | 137.9 |
| 1957 | 116.0 | 116.0 | 104.5 | 141.5 | 111.8 | 145.7 | 116.3 | 141.1 |
| 1958 | 126.7 | 124.1 | 105.6 | 111.7 | 114.3 | 134.2 | 115.5 | 146.1 |
| 1959 | 140.1 | 127.5 | 106.0 | 105.0 | 114.3 | 134.2 | 115.5 | 147.5 |
| 1960 | 152.3 | 112.9 | 107.7 | 111.9 | 114.3 | 134.2 | 115.5 | 147.7 |
| 1961 | 159.9 | 90.6 | 108.3 | 115.6 | 114.3 | 134.2 | 110.3 | 145.3 |
| 1962 [1] | 162.9 | 80.5 | 109.6 | 113.7 | 114.3 | 134.2 | 110.3 | 146.1 |

[1] Preliminary.
[2] 1947 through 1957 estimated on movement of former wholesale price index series for gas.
[3] 1947 through 1957 estimated on movement of data from Federal Power Commission.
[4] 1947 through 1957 estimated on movement of wholesale price index product class for organic chemicals.

Source: Bureau of Labor Statistics.

| Year | Iron ore, Bessemer, wholesale price index code 10–11–01 | Iron ore, non-Bessemer, wholesale price index code 10–11–16 | Iron ore, imported,[2] wholesale price index code 10–11–12 | Steel scrap [3] | Pig iron, basic, wholesale price index code 10–16–01 | Pig iron, Bessemer, wholesale price index code 10–16–02 | Fessochromium [4] low carbon, wholesale price index code 10–16–13 | Cobalt, wholesale price index code 10–22–04 [5] | Titanium sponge, wholesale price index code 10–22–56 [5] |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | 88.8 | 88.6 | 88.6 | 101.6 | 83.6 | 83.5 | 85.3 | 92.7 | 92.7 |
| 1948 | 96.6 | 96.5 | 96.5 | 115.9 | 102.8 | 103.8 | 101.8 | 107.7 | 107.7 |
| 1949 | 114.6 | 114.9 | 114.9 | 82.5 | 113.6 | 112.7 | 112.9 | 99.6 | 99.6 |
| 1950 | 122.7 | 123.2 | 123.0 | 109.7 | 116.2 | 116.4 | 115.6 | 102.2 | 102.2 |
| 1951 | 131.7 | 132.5 | 132.3 | 126.6 | 128.4 | 127.0 | 126.6 | 127.4 | 127.4 |
| 1952 | 136.8 | 137.7 | 137.6 | 123.3 | 131.0 | 129.5 | 130.9 | 121.8 | 121.8 |
| 1953 | 152.8 | 154.0 | 153.8 | 115.1 | 136.5 | 134.8 | 138.4 | 110.1 | 110.1 |
| 1954 | 156.7 | 158.0 | 157.7 | 83.6 | 138.3 | 136.6 | 137.6 | 111.1 | 111.1 |
| 1955 | 159.3 | 160.7 | 160.4 | 113.6 | 141.4 | 139.6 | 138.6 | 126.6 | 126.6 |
| 1956 | 171.6 | 173.3 | 173.0 | 149.9 | 149.9 | 147.8 | 151.4 | 137.2 | 137.2 |
| 1957 | 180.0 | 181.9 | 181.7 | 133.5 | 160.0 | 157.7 | 164.9 | 118.8 | 118.8 |
| 1958 | 180.8 | 182.7 | 166.4 | 98.5 | 163.0 | 160.4 | 164.2 | 110.3 | 99.3 |
| 1959 | 180.8 | 182.7 | 145.1 | 102.1 | 163.0 | 160.4 | 164.2 | 97.7 | 81.4 |
| 1960 | 180.8 | 182.7 | 148.4 | 84.4 | 163.0 | 160.4 | 145.9 | 85.0 | 78.4 |
| 1961 | 180.8 | 182.7 | 154.0 | 91.0 | 163.0 | 160.4 | 137.2 | 82.7 | 71.9 |
| 1962 [1] | 170.4 | 171.5 | 154.0 | 72.1 | 161.7 | 159.3 | 137.1 | 82.7 | 67.2 |

[1] Preliminary.
[2] 1947 through 1957 estimated on movement of product class iron ore.
[3] Wholesale price index product iron and steel scrap excluding cast iron scrap.
[4] 1947 through 1957 estimated on movement of product class pig iron and ferroalloys.
[5] 1947 through 1957 estimated on movement of product class, primary metal refinery shapes.

Source: Bureau of Labor Statistics.

Senator PROXMIRE. Does chart C indicate that the basic steel-making materials, that is, what the steel companies had to buy, the ore and the coke and the scrap, and so forth, this price was stable from 1956 to 1962, roughly?

Is that what that chart shows?

Mr. CHASE. It shows a decline.

Senator PROXMIRE. A decline; that is right.

Mr. CHASE. Yes, sir.

Senator PROXMIRE. During this period?

Mr. CHASE. Yes, sir. Somewhere between 8 and 10 percent.

Senator PROXMIRE. How significant is this in view of the fact that these steel companies own a great deal of their raw materials? They own the shipping lines, they are vertically integrated in many cases.

Mr. CHASE. Yes.

Senator PROXMIRE. In other words, what I am trying to say is this. The real cost that they are paying of what they are really buying is labor at all levels. I suppose also as they increase facilities they have to pay more as everybody does for what they construct and so forth, the plants they build and that kind of thing. It is hard for me to understand unless we put this into some kind of a perspective, in other words, relate it to all costs of the steel companies, including the cost of labor, what the significance of this particular chart is, that they have had a drop of 8 percent in their costs from 1940 to 1956.

Mr. CHASE. We did go into this Wednesday to point out that the prices used to construct this index for iron ore probably did not represent more than about 20 percent of the total consumption of iron ore because only about that percentage goes through open markets. We are not able to get information on what the steel companies charged themselves on their own books for the ore they produce themselves. So that the prices we have here for iron ore——

Senator PROXMIRE. As far as iron ore is concerned if only 20 percent goes through the market, it means 80 percent doesn't matter, no matter what they charge themselves, because they are paying it to themselves. It is not a cost to the total corporation, isn't that right?

Mr. CHASE. I wouldn't like to try to answer that question. I think they would consider it a cost.

Senator PROXMIRE. It is both. It is a cost and also an element of income?

Mr. CHASE. That is the point. I don't know how they divide this on their books and we have not been able to find it.

Senator PROXMIRE. I don't want to repeat anything that went on Wednesday. I just wanted to see if I could put this in perspective and see if I can determine what basic steelmaking materials mean as related to the total cost of the steel industry. Would this be 10 percent, would it be 20 percent, would it be more, or would it be less?

Mr. CHASE. According to a table which I believe has been submitted to the committee, based on the gross dollar sales, it ran around 42 percent.

Senator PROXMIRE. That is very impressive, it surprises me. Thank you very much.

Chairman DOUGLAS. I want to commend you for this very excellent statement. There are two things I should like to say before we close this morning's hearing. Is there an observer from the Commerce Department present? Does the Commerce Department have someone who is present?

I will ask Mr. Knowles to get in touch with the Commerce Department in view of Senator Proxmire's inquiry and ask the Commerce Department to come prepared with tables and charts on used and unused capacity in the steel industry to present at the same time as the discussion of profits. Then finally, is there anyone else here who wishes to make a comment?

Mr. Bernstein, representing the United Steelworkers.

Mr. BERNSTEIN. Mr. Chairman, in the interest of providing the committee with fuller understanding, it seems to me that the report, table 11, dealing with U.S. and foreign steel prices, ought to be offered in more complete detail. This has been done—table 11 I am referring to is statistical materials relating to the steel industry, compiled by the Department of Commerce and the Department of Labor.

Chairman DOUGLAS. There was the original set of 18 tables which were submitted on the first day and now dated ahead to April 30.

Mr. BERNSTEIN. That is right, sir.

Mr. ARNOW. April 30. 1962, Mr. Chairman.

Chairman DOUGLAS. I beg your pardon, April 30, 1962. This subject comes up next Thursday, Mr. Bernstein.

Mr. BERNSTEIN. All right, sir. Perhaps in advance of that you ought to have some additional detail.

Chairman DOUGLAS. We will be very glad to have it.

Mr. BERNSTEIN. Which has been prepared by the OECD.

Chairman DOUGLAS. Very good.

Mr. BERNSTEIN. Which shows the price developments specifically for export, both for the continent and from Great Britain. Also, incidentally, from Japan. This is broken down by major products and brought back to 1958. I have a copy of this report with me and if the committee desires to have it, I could either introduce it now or have it Xeroxed so I may keep my own copy.

Chairman DOUGLAS. How many pages is it?

Mr. BERNSTEIN. Just two pages.

Chairman DOUGLAS. I would suggest that those be Thermo-Faxed and copies be made available to members of the committee, with a copy or two made available for the press as well.

Mr. BERNSTEIN. I can do that. Would you also like the home prices for the year 1961?

Chairman DOUGLAS. Of the European countries?

Mr. BERNSTEIN. Broken down by product and by country.

Chairman DOUGLAS. In other words, this raises the question as to whether there is dumping by the European countries.

Mr. BERNSTEIN. I might say that this information will undoubtedly be presented to the Tariff Commission in the dumping hearings; yes.

Chairman DOUGLAS. Do you regard this as important for us to consider next week?

Mr. BERNSTEIN. I don't think you ought to get into the dumping question, but you certainly ought to have the information when you compare prices.

Chairman DOUGLAS. Will this take up much space?

Mr. BERNSTEIN. No. These are just statistical tables.

Chairman DOUGLAS. I would suggest that these also be Thermo-Faxed and made available to the committee, to each member of the committee and a limited number of copies for the press.

Mr. BERNSTEIN. Very good, sir.

(The tables referred to follow:)

98133 O—63——18

# L'INDUSTRIE SIDÉRURGIQUE, 1961

## Publié par, l'Organisation de Coopération, et de Développement Économiques

Tableau 51. PRIX DE BASE INTERIEURS DE CERTAINS PRODUITS SIDERURGIQUES

Table 51. BASIC HOME PRICES OF CERTAIN IRON AND STEEL PRODUCTS

Prix f.o.b.* en dollars à la tonne métrique, taxe non comprise, qualité Thomas
F.o.b.* prices in dollars per metric ton, excluding taxes, basic Bessemer quality

Indice 1956 = base 100 — Index 1956 = 100

| DATE | LAMINES MARCHANDS MERCHANT BARS | | POUTRELLES JOISTS | | FEUILLARDS ET BANDES HOOP AND STRIP | | FIL MACHINE WIRE ROD | | TOLES FORTES HEAVY PLATES | | TOLES FINES A CHAUD HOT-ROLLED SHEETS | | DATE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U.S. $ | INDICE INDEX | U.S. $ | INDICE INDEX | U.S. $ | INDICE INDEX | U.S. $ | INDICE INDEX | U.S. $ | INDICE INDEX | U.S. $ | INDICE INDEX | |
| **Allemagne - Germany** | | | | | | | | | | | | | |
| 1. 1.1961 ............ | 99.20 | 111 | 96.90 | 111 | 112.90 | 111 | 101.00 | 111 | 106.50 | 109 | 132.60 | 108 | ............ 1. 1.1961 |
| 1. 4.1961 ............ | 104.16 | 116 | 101.76 | 117 | 118.56 | 116 | 106.08 | 116 | 111.84 | 114 | 139.20 | 114 | ............ 1. 4.1961 |
| 1. 7.1961 ............ | 104.16 | 116 | 101.76 | 117 | 113.04 | 111 | 106.08 | 116 | 111.84 | 114 | 133.20 | 109 | ............ 1. 7.1961 |
| 1.10.1961 ............ | 104.16 | 116 | 101.76 | 117 | 113.04 | 111 | 106.08 | 116 | 111.84 | 114 | 133.20 | 109 | ............ 1.10.1961 |
| 1. 1.1962 ............ | 104.16 | 116 | 101.76 | 117 | 113.04 | 111 | 106.08 | 116 | 111.84 | 114 | 133.20 | 109 | ............ 1. 1.1962 |
| **Autriche - Austria** | | | | | | | | | | | | | |
| 1. 1.1961 ............ | 96.50 | 116 | 96.50 | 117 | 105.20 | 114 | 96.50 | 116 | 114.00 | 116 | 131.50 | 111 | ............ 1. 1.1961 |
| 1. 4.1961 ............ | 96.50 | 116 | 96.50 | 117 | 105.20 | 114 | 96.50 | 116 | 114.00 | 116 | 131.50 | 111 | ............ 1. 4.1961 |
| 1. 7.1961 ............ | 96.50 | 116 | 96.50 | 117 | 105.20 | 114 | 96.50 | 116 | 114.00 | 116 | 131.50 | 111 | ............ 1. 7.1961 |
| 1.10.1961 ............ | 96.50 | 116 | 96.50 | 117 | 105.20 | 114 | 96.50 | 116 | 114.00 | 116 | 131.50 | 111 | ............ 1.10.1961 |
| 1. 1.1962 ............ | 96.50 | 116 | 96.50 | 117 | 105.20 | 114 | 96.50 | 116 | 114.00 | 116 | 131.50 | 111 | ............ 1. 1.1962 |
| **Belgique - Belgium** | | | | | | | | | | | | | |
| 1. 1.1961 ............ | 102[1] | 99 | 106 | 101 | 109 | 109 | 110 | 106 | 108 | 94 | 145.30 | 106 | ............ 1. 1.1961 |
| 1. 4.1961 ............ | 102 | 99 | 106 | 101 | 109 | 109 | 110 | 106 | 108 | 94 | 145.30 | 106 | ............ 1. 4.1961 |
| 1. 7.1961 ............ | 102 | 99 | 106 | 101 | 109 | 109 | 110 | 106 | 108 | 94 | 145.30 | 106 | ............ 1. 7.1961 |
| 1.10.1961 ............ | 102 | 99 | 106 | 101 | 109 | 109 | 94 | 90 | 102 | 89 | 145.30 | 106 | ............ 1.10.1961 |
| 1. 1.1962 ............ | 102 | 99 | 106 | 101 | 109 | 109 | 94 | 90 | 102 | 89 | 145.30 | 106 | ............ 1. 1.1962 |
| **Danemark - Denmark[2]** | | | | | | | | | | | | | |
| 1. 1.1961 ............ | 100.00 | 95 | 98.00 | .. | | | | | 107.00 | 92 | | | ............ 1. 1.1961 |
| 1. 4.1961 ............ | 104.00 | 99 | 100.00 | .. | | | | | 111.00 | 96 | | | ............ 1. 4.1961 |
| 1. 7.1961 ............ | 104.00 | 99 | 100.00 | .. | | | | | 111.00 | 96 | | | ............ 1. 7.1961 |
| 1.10.1961 ............ | 102.00 | 97 | 99 | .. | | | | | 108.00 | 93 | | | ............ 1.10.1961 |
| 1. 1.1962 ............ | 93.00 | 89 | 94.00 | .. | | | | | 97.00 | 84 | | | ............ 1. 1.1962 |
| **Espagne - Spain[3]** | | | | | | | | | | | | | |
| 1. 1.1961 ............ | 96.30 | 118 | 90.80 | 118 | 126.70 | 121 | 108.40 | 119 | 119.70 | 114 | 136.30 | 122 | ............ 1. 1.1961 |
| 1. 4.1961 ............ | 96.30 | 118 | 90.80 | 118 | 126.70 | 121 | 108.40 | 119 | 119.70 | 114 | 136.30 | 122 | ............ 1. 4.1961 |
| 1. 7.1961 ............ | 96.30 | 118 | 90.80 | 118 | 126.70 | 121 | 108.40 | 119 | 119.70 | 114 | 136.30 | 122 | ............ 1. 7.1961 |
| 1.10.1961 ............ | 96.30 | 118 | 90.80 | 118 | 126.70 | 121 | 108.40 | 119 | 119.70 | 114 | 136.30 | 122 | ............ 1.10.1961 |
| 1. 1.1962 ............ | 96.30 | 118 | 90.80 | 118 | 126.70 | 121 | 108.40 | 119 | 119.70 | 114 | 136.30 | 122 | ............ 1. 1.1962 |
| **France[4]** | | | | | | | | | | | | | |
| 1. 1.1961 ............ | 89.30 | 146 | 90.40 | 151 | 96.95 | 141 | 93.50 | 152 | 102.70 | 143 | 119.15 | 139 | ............ 1. 1.1961 |
| 1. 4.1961 ............ | 89.30 | 146 | 90.40 | 151 | 96.95 | 141 | 93.50 | 152 | 102.70 | 143 | 119.15 | 139 | ............ 1. 4.1961 |
| 1. 7.1961 ............ | 89.30 | 146 | 90.40 | 151 | 96.95 | 141 | 93.50 | 152 | 102.70 | 143 | 119.15 | 139 | ............ 1. 7.1961 |
| 1.10.1961 ............ | 89.30 | 146 | 90.40 | 151 | 96.95 | 141 | 93.50 | 152 | 102.70 | 143 | 119.15 | 139 | ............ 1.10.1961 |
| 1. 1.1962 ............ | 89.30 | 146 | 92.85 | 155 | 96.95 | 141 | 93.50 | 152 | 102.70 | 143 | 119.15 | 139 | ............ 1. 1.1962 |
| **Irlande - Ireland[5]** | | | | | | | | | | | | | |
| 1. 1.1961 ............ | 120.00 | .. | | | | | | | | | | | ............ 1. 1.1961 |
| 1. 4.1961 ............ | 120.00 | .. | | | | | | | | | | | ............ 1. 4.1961 |
| 1. 7.1961 ............ | 124.00 | .. | | | | | | | | | | | ............ 1. 7.1961 |
| 1.10.1961 ............ | 124.00 | .. | | | | | | | | | | | ............ 1.10.1961 |
| 1. 1.1962 ............ | 124.00 | .. | | | | | | | | | | | ............ 1. 1.1962 |

1) Non compris les ronds à béton.
2) Qualité Martin.
3) Qualité Martin, indices calculés sur la base de la peseta.
4) Indices calculés sur la base du franc français.
5) F.o.b. Haulbowline.
* Pour les pays de la C.E.C.A., à prix départ point de parité.
N.B. - Les prix indiqués aux tableaux 51 à 53 ne sont pas comparables entre pays.

1) Excluding reinforcing rounds.
2) Open hearth quality.
3) Open hearth quality. Indices based on pesetas.
4) Indices based on French francs.
5) F.o.b. Haulbowline.
* For E.C.S.C. countries : ex basing point.
N.B. - The prices given in Tables 51 to 53 are not comparable as between countries.

Tableau 51. PRIX DE BASE INTERIEURS DE CERTAINS PRODUITS SIDERURGIQUES (suite)

Table 51. BASIC HOME PRICES OF CERTAIN IRON AND STEEL PRODUCTS (continued)

Prix f.o.b.* en dollars à la tonne métrique, taxe non comprise, qualité Thomas

F.o.b.* prices in dollars per metric ton, excluding taxes, basic Bessemer quality

Indice 1956 = base 100 — Index 1956 = 100

| DATE | LAMINES MARCHANDS MERCHANT BARS | | POUTRELLES JOISTS | | FEUILLARDS ET BANDES HOOP AND STRIP | | FIL MACHINE WIRE ROD | | TOLES FORTES HEAVY PLATES | | TOLES FINES A CHAUD HOT-ROLLED SHEETS | | DATE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U.S. $ | INDICE INDEX | U.S. $ | INDICE INDEX | U.S. $ | INDICE INDEX | U.S. $ | INDICE INDEX | U.S. $ | INDICE INDEX | U.S. $ | INDICE INDEX | |
| **Italie - Italy** | | | | | | | | | | | | | |
| 1. 1.1961 ............. | 112.00 | 92 | 113.60 | 96 | 121.60 | 95 | 121.60 | 100 | 140.80 | 98 | 168.00 | 103 | ............. 1. 1.1961 |
| 1. 1.1961 ............. | 112.00 | 92 | 113.60 | 96 | 121.60 | 95 | 121.60 | 100 | 140.80 | 98 | 168.00 | 103 | ............. 1. 4.1961 |
| 1. 7.1961 ............. | 112.00 | 92 | 113.60 | 96 | 121.60 | 95 | 121.60 | 100 | 140.80 | 98 | 168.00 | 103 | ............. 1. 7.1961 |
| 1.10.1961 ............. | 108.80 | 89 | 110.40 | 93 | 118.40 | 93 | 116.80 | 96 | 132.80 | 92 | 139.20 | 85 | ............. 1.10.1961 |
| 1. 1.1962 ............. | 108.80 | 89 | 110.40 | 93 | 118.40 | 93 | 116.80 | 96 | 132.80 | 92 | 136.00 | 83 | ............. 1. 1.1962 |
| **Luxembourg** | | | | | | | | | | | | | |
| 1. 1.1961 ............. | 100 | 105 | 104 | 109 | 107 | 108 | 103 | 108 | 118 | 114 | 138.60 | 109 | ............. 1. 1.1961 |
| 1. 4.1961 ............. | 100 | 105 | 104 | 109 | 107 | 108 | 103 | 108 | 118 | 114 | 138.60 | 109 | ............. 1. 4.1961 |
| 1. 7.1961 ............. | 100 | 105 | 104 | 109 | 107 | 108 | 103 | 108 | 118 | 114 | 138.60 | 109 | ............. 1. 7.1961 |
| 1.10.1961 ............. | 100 | 105 | 104 | 109 | 107 | 108 | 103 | 108 | 118 | 114 | 138.60 | 109 | ............. 1.10.1961 |
| 1. 1.1962 ............. | 100 | 105 | 104 | 109 | 107 | 108 | 103 | 108 | 118 | 114 | 138.60 | 109 | ............. 1. 1.1962 |
| **Pays-Bas - Netherlands[1]** | | | | | | | | | | | | | |
| 1. 1.1961 ............. | 107.00 | 100[2] | | | 114.25 | 102[3] | 111.75 | 108[3] | 107.50 | 98[2] | 131.56 | 95[2] | ............. 1. 1.1961 |
| 1. 4.1961 ............. | 111.10 | 103 | | | 119.95 | 107 | 117.30 | 113 | 112.85 | 103 | 138.10 | 100 | ............. 1. 4.1961 |
| 1. 7.1961 ............. | 111.10 | 103 | | | 119.95 | 107 | 117.30 | 113 | 110.90 | 101 | 132.85 | 96 | ............. 1. 7.1961 |
| 1.10.1961 ............. | 111.10 | 103 | | | 117.30 | 105 | 117.30 | 113 | 110.90 | 101 | 132.85 | 96 | ............. 1.10.1961 |
| 1. 1.1962 ............. | 111.10 | 103 | | | 117.30 | 105 | 117.30 | 113 | 103.00 | 94 | 132.85 | 96 | ............. 1. 1.1962 |
| **Royaume-Uni - United Kingdom[4]** | | | | | | | | | | | | | |
| 1. 1.1961 ............. | 116.17 | 119[5] | 104.38[6] | 122 | 104.73[7] | 108 | 109.83[8] | 119 | 111.20[6] | 122 | 131.05[9] | 119 | ............. 1. 1.1961 |
| 1. 4.1961 ............. | 116.17 | 119 | 104.38 | 122 | 104.73 | 108 | 109.83 | 119 | 111.20 | 122 | 131.05 | 119 | ............. 1. 4.1961 |
| 1. 7.1961 ............. | 117.33 | 120 | 105.42 | 123 | 105.78 | 109 | 110.93 | 120 | 112.31 | 123 | 132.36 | 120 | ............. 1. 7.1961 |
| 1.10.1961 ............. | 117.33 | 120 | 105.42 | 123 | 105.78 | 109 | 110.93 | 120 | 112.31 | 123 | 132.36 | 120 | ............. 1.10.1961 |
| 1. 1.1962 ............. | 117.33 | 120 | 105.42 | 123 | 115.06 | 119 | 110.93 | 120 | 112.31 | 123 | 132.36 | 120 | ............. 1. 1.1962 |
| **Suède - Sweden[10]** | | | | | | | | | | | | | |
| 1. 1.1961 ............. | 118.30 | 94 | | | | | 131.30 | 104 | | | 173.75[11] | 99 | ............. 1. 1.1961 |
| 1. 4.1961 ............. | 118.30 | 94 | | | | | 131.30 | 104 | | | 150.60 | 86 | ............. 1. 4.1961 |
| 1. 7.1961 ............. | 120.30 | 95 | | | | | 131.30 | 104 | | | 137.10 | 78 | ............. 1. 7.1961 |
| 1.10.1961 ............. | 114.50 | 91 | | | | | 126.45 | 101 | | | 137.10 | 78 | ............. 1.10.1961 |
| 1. 1.1962 ............. | 113.50 | 90 | | | | | 126.45 | 101 | | | 137.50 | 78 | ............. 1. 1.1962 |
| **Canada[12]** | | | | | | | | | | | | | |
| | CAN. $ | IND. | CAN. $ | IND. | CAN. $ | IND. | CAN. $ | IND. | CAN. $ | IND. | CAN. $ | IND. | |
| 1. 1.1961 ............. | 116.85 | 109.2 | 121.28 | 113.5 | 110.25 | 107.9 | 125.68 | .. | 112.45 | 104.9 | 109.15 | 103.5 | ............. 1. 1.1961 |
| 1. 4.1961 ............. | 116.85 | 109.2 | 121.28 | 113.5 | 110.25 | 107.9 | 125.68 | .. | 112.45 | 104.9 | 109.15 | 103.5 | ............. 1. 4.1961 |
| 1. 7.1961 ............. | 116.85 | 107.0 | 121.28 | 113.5 | 110.25 | 107.8 | 125.68 | .. | 112.45 | 104.9 | 109.15 | 103.3 | ............. 1. 7.1961 |
| 1.10.1961 ............. | 116.85 | 107.0 | 121.28 | 113.5 | 110.25 | 107.8 | 125.68 | .. | 112.45 | 104.9 | 109.15 | 103.3 | ............. 1.10.1961 |
| 1. 1.1962 ............. | 116.85 | 107.0 | 121.28 | 113.5 | 110.25 | 107.8 | 125.68 | .. | 112.45 | 104.9 | 109.15 | 103.5 | ............. 1. 1.1962 |

1) Qualité d'acier comparable à l'acier Thomas.
2) Indice : 1er juillet 1958 = 100.
3) Indice : 1er octobre 1958 = 100.
4) Prix à la livraison, qualité Martin en majorité.
5) Profilés relaminés, non essayés, par lots de 4 tonnes.
6) Par lots de 50 tonnes, livraison côte du Nord-Est.
7) Feuillards et bandes laminés à chaud, par lots de 100 tonnes, 10 pouces par 3/16 de pouces (en coils), non essayés.
8) Fil machine en acier non allié, par lots de 50 tonnes, acier doux au four basique.
9) Tôles minces laminées à chaud de moins de 3 mm d'épaisseur, affranchies, de 48 à 96 pouces de long, et 30 à 49 pouces de large. (de 25 à moins de 50 tonnes).
10) France.
11) Tôles minces laminées à froid.
12) Acier Martin basique et acier basique à l'oxygène. Il n'existe pas de liste uniforme et pondérée des prix. Dans la première colonne on indique des prix typiques de barème f.o.b. usine, cités par la presse commerciale. A la deuxième colonne figure un indice des prix f.o.b. usine calculé régulièrement pour quelques produits sidérurgiques.
* Pour les pays de la C.E.C.A. : prix départ point de parité.

1) Steel of a quality comparable with Basic Bessemer.
2) Index : 1st July 1958 = 100.
3) Index : 1st October 1958 = 100.
4) "Delivered" prices, mainly open hearth quality.
5) Re-rolled sections, u.t., 4-ton lots.
6) 50-ton lots, delivered North-East coast.
7) Hot-rolled hoop and strip, 100-ton lots, 10" by 3/16" (in coils) u.t.
8) Non-alloy wire rod, 50-ton lots, soft basic quality.
9) Hot-rolled sheet, under 3 mm. thick, side trimmed, 48" to 96" long, 30" to 49" wide (25 to under 50 tons).
10) Delivered prices.
11) Cold-rolled thin sheets.
12) Basic open-hearth and/or basic oxygen steel. A uniformed and properly weighted price schedule is not available. In the first column are listed typical posted prices f.o.b. mill as obtained from trade journals. In the second column is indicated a price index f.o.b. mill which is calculated regularly for several steel products.
* For E.C.S.C. countries : ex basing point.

Tableau 52. PRIX A L'EXPORTATION DE CERTAINS PRODUITS SIDERURGIQUES[1], PRODUCTEURS CONTINENTAUX
Table 52. CONTINENTAL PRODUCERS' EXPORT PRICES FOR CERTAIN IRON AND STEEL PRODUCTS[1]
Acier Thomas, taxes non comprises - Basic Bessemer quality, excluding taxes

En dollars par tonne f.o.b. — $ per metric ton f.o.b.

| DATE | RONDS A BETON / CONCRETE REINFORCING ROUNDS | ACIERS MARCHANDS[2] GRANDES DIMENSIONS / MERCHANT BARS (LARGE SIZES)[2] | POUTRELLES ET FERS EN U (Dimensions en mm) / JOISTS AND CHANNELS (mm. sizes) | FEUILLARDS ET BANDES LAMINES A CHAUD / HOT ROLLED HOOP AND STRIP | FIL MACHINE (5,5 mm) / WIRE ROD (5.5 mm.) | TOLES FORTES (3/8" et au-dessus) / PLATE (3/8" and over) | DATE |
|---|---|---|---|---|---|---|---|
| 3.10.58 | 81 - 83 | 87 - 88 | 85 - 87 | 96 - 100 | 86 - 88 | 92 - 94 | 3.10.58 |
| 2. 1.59 | 76 - 78 | 82 - 84 | 81 - 83 | 90 - 98 | 85 - 86 | 85 - 87 | 2. 1.59 |
| 14. 4.59 | 88 - 89 | 88 - 92 | 86 | 93 | 92 | 92 - 93 | 14. 4.59 |
| 3. 7.59 | 98 - 100 | 103 - 106 | 94 | 98 - 99 | 108 - 110 | 98 - 100 | 3. 7.59 |
| 6.10.59 | 104 - 105 | 110 - 112 | 99 - 100 | 107 | 123 - 125 | 103 - 105 | 6.10.59 |
| 5. 1.60 | 108 - 110 | 110 - 114 | 101 - 102 | 110 - 112 | (jusqu'à) 140 (up to) | 110 - 112 | 5. 1.60 |
| 29. 3.60 | 98 - 99 | 102 - 106 | 96 - 97 | 112 | 118 - 122 | 101 - 103 | 29. 3.60 |
| 5. 7.60 | 100 - 102 | 103 - 105 | 96 - 98 | 111 - 112 | 116 - 118 | 105 | 5. 7.60 |
| 4.10.60 | 94 - 95 | 100 - 102 | 95 - 96 | 111 | 110 | 101 - 103 | 4.10.60 |
| 10. 1.61 | (jusqu'à) 96 (up to) | 99 - 101 | 94 - 95 | 109 - 111 | 105 - 107 | 99 - 100 | 10. 1.61 |
| 7. 4.61 | 90 - 92 | 99 - 101 | 94 - 95 | 106 - 107 | 101 - 105 | 99 | 7. 4.61 |
| 4. 7.61 | 89 - 90 | 99 - 100 | 93 - 95 | 104 | 96 - 98 | 94 - 96 | 4. 7.61 |
| 3.10.61 | 78 - 79 | 92 - 93 | 89 - 90 | 99 | 87 - 88 | 89 | 3.10.61 |
| 2. 1.62 | 83 | 95 | 94 | 93 | 89 | 91 | 2. 1.62 |
| 3. 4.62 | 72 - 73 | 89 - 90 | 89 - 90 | - | 84 - 85 | 89 - 90 | 3. 4.62 |
| 11. 5.62 | 72 net | 86 - 88 | 86 - 88 net | 92 - 95 | 82 - 83 | 85 net | 11. 5.62 |
| Prix de janvier 1962 par rapport à ceux de janvier 1961 | -13.5% | -4.0/-5.9% | ±0.0/-1.1% | -14.7/-16.2% | -15.2/-16.8% | -8.1/-9.0% | January 1962 prices compared with January 1961 |

1) SOURCE : "Metal Bulletin". Le "Metal Bulletin" publie régulièrement ses estimations des prix pratiqués par les aciéries du Continent ; ces estimations sont fondées sur les cours du marché ; de plus, elles se réfèrent souvent à des spécifications particulières d'importance secondaire. Elles n'en concernent pas moins des transactions effectivement réalisées et peuvent être considérées comme suffisamment représentatives ; la comparaison de ces chiffres pendant une certaine période donne donc une indication valable de la tendance du marché.

2) Jusqu'à octobre 1960 : cornières de moins de 3".

1) SOURCE : "Metal Bulletin". The "Metal Bulletin" publishes regularly its estimates of Continental steel mills' current quotations; they are based on market information ; moreover, they often relate to special specifications of a marginal character. However, they do refer to transactions actually carried out and can be considered sufficiently representative ; the comparison between them over a certain period does, therefore, give a valid indication of the market trend.

2) Up to October 1960 : Angles under 2".

Tableau 53. PRIX A L'EXPORTATION DE CERTAINS PRODUITS SIDERURGIQUES, TAXES NON COMPRISES
Table 53. EXPORT PRICES FOR CERTAIN IRON AND STEEL PRODUCTS, EXCLUDING TAXES

Autriche - Austria

En dollars par tonne f.o.b. — $ per metric ton f.o.b.

| DATE | FERS MARCHANDS / MERCHANT BARS | POUTRELLES / JOISTS | FEUILLARDS ET BANDES / HOOP AND STRIP | FIL MACHINE / WIRE ROD | TOLES FORTES / HEAVY PLATES | TOLES LAMINEES A CHAUD / HOT-ROLLED SHEET | DATE |
|---|---|---|---|---|---|---|---|
| 1.10.58 | 88 | 89 | 97 | 109 | 131 | 152 | 1.10.58 |
| 1. 1.59 | 87 | 74 | 90 | 106 | 99 | 140 | 1. 1.59 |
| 1. 4.59 | 81 | 70 | 88 | 97 | 105 | 135 | 1. 4.59 |
| 1. 7.59 | 81 | 72 | 87 | 98 | 110 | 135 | 1. 7.59 |
| 1.10.59 | 97 | 81 | 102 | 96 | 113 | 135 | 1.10.59 |
| 1. 1.60 | 105 | 89 | 108 | 106 | 111 | 141 | 1. 1.60 |
| 1. 4.60 | 107 | 91 | 112 | 125 | 118 | 147 | 1. 4.60 |
| 1. 7.60 | 114 | 92 | 107 | 111 | 118 | 140 | 1. 7.60 |
| 1.10.60 | 106 | 99 | 113 | 113 | 111 | 151 | 1.10.60 |
| 1. 1.61 | 106 | 99 | 113 | 113 | 111 | 149 | 1. 1.61 |
| 1. 4.61 | 109 | 97 | 115 | 108 | 123 | 147 | 1. 4.61 |
| 1. 7.61 | 113 | 99 | 112 | 106 | 127 | 129 | 1. 7.61 |
| 1.10.61 | 105 | 91 | 112 | 95 | 119 | 125 | 1.10.61 |
| 1. 1.62 | 109 | 90 | 110 | 92 | 110 | 126 | 1. 1.62 |
| Prix de janvier 1962 par rapport à ceux de janvier 1961 | +2.8% | -9.1% | -2.7% | -18.6% | -0.9% | -15.4% | January 1962 prices compared with January 1961 |

Tableau 54. PRIX A L'EXPORTATION DE CERTAINS PRODUITS SIDERURGIQUES
Table 54. EXPORT PRICES FOR CERTAIN IRON AND STEEL PRODUCTS

Royaume-Uni - United Kingdom

Prix nominal ou minimal à l'exportation, qualité Martin, en dollars par tonne métrique, f.o.b. port du Royaume-Uni
Nominal or minimum basis export prices, open-hearth quality in $ per metric ton, f.o.b. United Kingdom port

| DATE | RONDS A BETON / CONCRETE REINFORCING ROUNDS | LARGE PLATS 1) / FLATS 1) | POUTRELLES 2) / JOISTS 2) | POUTRELLES A AILES LARGES 2) / BROAD-FLANGED BEAMS 2) | TOLES EN ACIER DOUX DE 3/16 DE POUCE ET PLUS ET TOLES UNIVERSELLES 2) / M.S. PLATE 3/16" AND OVER AND UNIVERSALS 2) | TOLES NOIRES 3) / BLACK SHEETS 3) | DATE |
|---|---|---|---|---|---|---|---|
| 7.10.58 | 112.85 | 116.03 | 110.24 | 110.24 | 117.13 | 146.06/152.95 | 7.10.58 |
| 13. 1.59 | 108.71 | 111.89 | 109.19 | 110.24 | 116.02 | 146.06/152.95 | 13. 1.59 |
| 7. 4.59 | 108.71 | 111.89 | 109.19 | 110.24 | 116.02 | 146.06/152.95 | 7. 4.59 |
| 30. 6.59 | 111.61 | 114.72 | 109.19 | 110.24 | 116.02 | 146.06/152.95 | 30. 6.59 |
| 6.10.59 | 111.61 | 114.72 | 109.19 | 110.24 | 116.02 | 146.06/152.95 | 6.10.59 |
| 5. 1.60 | 111.61 | 114.72 | 109.19 | 110.24 | 116.02 | 146.06/155.02 | 5. 1.60 |
| 29. 3.60 | 111.61 | 114.72 | 106.44 | 106.44 | 114.70 | 146.06/155.02 | 29. 3.60 |
| 5. 7.60 | 111.61 | 114.72 | 109.19 | 106.44 | 114.70 | 146.06/155.02 | 5. 7.60 |
| 4.10.60 | 111.61 | 114.72 | 109.19 | 106.44 | 114.70 | 146.06/155.02 | 4.10.60 |
| 10. 1.61 | 111.61 | 114.72 | 109.19 | 106.44 | 114.70 | 146.06/155.02 | 10. 1.61 |
| 1. 4.61 | 111.61 | 114.72 | 109.19 | 106.44 | 114.70 | 146.06/155.02 | 1. 4.61 |
| 1. 7.61 | 111.61 | 114.72 | 109.19 | 106.44 | 114.70 | 146.06/155.02 | 1. 7.61 |
| 1.10.61 | 111.61 | 114.72 | 109.19 | 106.44 | 114.70 | 146.06/155.02 | 1.10.61 |
| 1. 1.62 | 111.61 | 114.72 | 109.19 | 106.44 | 114.70 | 146.06/155.02 | 1. 1.62 |
| Prix de janvier 1962 par rapport à ceux de janvier 1961 | - | - | - | - | - | - | January 1962 prices compared with January 1961 |

1) Large plats de 1 1/4 de pouce à 5 pouces sur 1 1/4 pouce, essayés.
2) Prix sujets à variations suivant les marchés et les circonstances.
3) Cours effectifs d'après le marché, "hand mill C.R.C.A." 17 à 20 B.G. 6, 7 ou 8 pieds sur 3 pieds.

1) Large flats 1 1/4" to 5" by 1 1/4", tested.
2) Subject to variation depending on the market and circumstances.
3) Actual quotations according to market, "hand mill C.R.C.A." 17 to 20 B.G., 6, 7 or 8 ft. x 3 ft.

Tableau 55. PRIX A L'EXPORTATION DE CERTAINS PRODUITS SIDERURGIQUES
Table 55. EXPORT PRICES FOR CERTAIN IRON AND STEEL PRODUCTS

Japon - Japan

U.S. $ par tonne métrique f.o.b. port japonais - Quotations pour qualité Martin
U.S. $ per metric ton f.o.b. Japanese port - Representative quotations for O.H. steel

| DATE (DE PUBLICATION AU METAL BULLETIN) | ACIER DOUX RONDS / MILD STEEL PLAIN ROUND BARS 3/8" | ACIER DOUX CORNIERES / MILD STEEL EQUAL ANGLES 25 x 25 x 3 mm. | ACIER DOUX POUTRELLES / MILD STEEL JOISTS 600 x 190 x 13 mm. | ACIER DOUX TOLES FORTES ET MOYENNES / MILD STEEL PLATES 3/8" | FIL MACHINE ACIER DOUX LAMINE A CHAUD / WIRE ROD H.R. MILD STEEL SWG 6 | TOLES FINES A CHAUD NOIRES / H.R. SHEETS BLACK USG 18 x 3' x 6' x 7' x 8' | FEUILLARDS A CHAUD EN COILS / H.R. HOOP IN COILS 1,6 - 6 mm. x 2,60 - 6,00 mm. | DATE (OF METAL BULLETIN PUBLICATION) |
|---|---|---|---|---|---|---|---|---|
| 12. 1.60 | 112 | 125 | 145 | 115 | 125 | Nominal | 125 | 12. 1.60 |
| 12. 4.60 | 109 | 120 | 140 | 112 | 123 | 160 | 130 | 12. 4.60 |
| 8. 7.60 | 107 | 120 | 135 | 110 | 112 | 147 | 130 | 8. 7.60 |
| 9. 9.60 | 105 | 118 | 125 | 110 | 113 | 147 | 120 | 9. 9.60 |
| 20.12.60 | 103 | 118 | 125 | 110 | 111 | 143 | 118 | 20.12.60 |
| 30. 3.61 | 102 | 118 | 125 | 108 | 110 | 135 | 112 1) | 30. 3.61 |
| 6. 6.61 | 105 | 130 | - | 108 | 113 | 128 | 112 1) | 6. 6.61 |
| 17.10.61 | 105 (nominal) | 120 | 145 (nominal) | 106 | 108 | - | 112 1) | 17.10.61 |
| 23. 1.62 | 94 (nominal) | 112 | 140 | 100 | 105 | - | 112 1) | 23. 1.62 |
| 15. 5.62 | 86 | 105 | 130 | 108.20 | 99 | - | 112 1) | 15. 5.62 |
| 29. 6.62 | 79 | 92 | 120 | 100.20 | 94 | - | 115 | 29. 6.62 |

1) 1.2 - 6.60 mm. x 2.60 - 6.00 mm.

SOURCE : Metal Bulletin.

Chairman DOUGLAS. Thank you. Thank you, gentlemen, very much. We will adjourn until next Monday in this room when the Department of Commerce, Messrs. Holton and Paradiso, will present a paper on profits and related financial data.

(Whereupon, at 11:10 a.m., the committee recessed until 10 a.m., Monday, April 29, 1963.)

# STEEL PRICES, UNIT COSTS, PROFITS, AND FOREIGN COMPETITION

**MONDAY, APRIL 29, 1963**

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
*Washington, D.C.*

The joint committee met at 10 a.m., pursuant to recess, in room 318, Senate Office Building, Senator Paul H. Douglas (chairman of the joint committee) presiding.

Present: Senators Douglas, Proxmire, Miller, and Jordan; Representatives Reuss, Curtis, and Widnall.

Also present: James W. Knowles, executive director; Donald A. Webster, minority economist; and Hamilton D. Gewehr, administrative clerk.

Chairman DOUGLAS. It is now 10 o'clock. The committee will come to order.

We are very happy to welcome this morning Mr. Richard Holton, Assistant Secretary of Commerce for Economic Affairs, accompanied by Mr. Louis J. Paradiso, Assistant Director and Chief Statistician of the Office of Business Economics.

Mr. Paradiso?

## STATEMENT OF LOUIS J. PARADISO, ASSISTANT DIRECTOR AND CHIEF STATISTICIAN, OFFICE OF BUSINESS ECONOMICS, U.S. DEPARTMENT OF COMMERCE, ACCOMPANIED BY JOHN A. GORMAN, OF OBE

Mr. PARADISO. Thank you, Mr. Chairman.

Chairman DOUGLAS. Is Mr. Holton not here?

Mr. PARADISO. Mr. Holton is not here, Mr. Chairman, and I will make the presentation.

Chairman DOUGLAS. Very well. Begin in your own way.

Mr. PARADISO. Thank you.

Mr. Chairman and members of the committee, I might start by saying that we have a great deal of information available in this area, but we have made a certain selection of data for a limited number of hours of presentation. This selection was made with the consultation of the staff of the committee.

We, of course, are happy to provide any additional information which the committee thinks would be relevant to this subject. The subject of my presentation today is concerned with certain financial aspects and relationships bearing on the steel industry.

In part, the financial well-being of the industry is related to the physical demand-capacity-stock picture which I presented last Thursday. The sources of the industry's funds are basically dependent on the combination of profits and depreciation charges, with the former being closely dependent on the volume of sales.

The net cash flow—that is, the internal funds of the companies—is the major source for financing replacement of wornout equipment, new and more efficient facilities, as well as new processes and innovations. Because of the rapidity with which improved facilities and new processes have been developed in recent years, the industry has had to constantly replace obsolescent equipment and this has usually resulted in increasing its capacity, even though demand and production have been relatively low.

While the industry's depreciation charges have been rising constantly, and since the beginning of last year have been bolstered by the new liberal regulations of the Treasury, the amount of the retained profits has been declining rather sharply, so that the net cash flow—retained profits plus depreciation charges—has fluctuated within a narrow range since 1957, although they have been considerably below the highs of the 1955–57 period.

For the postwar period as a whole, net cash flow and capital expenditures have been about equal. For the period of 1951 to 1962 each of these has amounted to $14.6 billion. Of course, in some years net cash flow has been somewhat above capital expenditures and in others below.

Since 1957, because of the relatively low rate of durable goods demand, profits of the industry have shown a sharp decline not only absolutely, but also in relation to profits of all manufacturing industries.

I shall now submit for your consideration a series of charts and tables with a commentary on the highlights shown in each of these materials. I want to make it clear that I shall not comment on any judgment as to whether or not the profits, depreciation, and other funds are adequate to finance the industry's capital expenditures. I shall present the statistics as we have assembled them.

I should like to turn to chart 1, which I think is pretty much self-explanatory. Chart 1 represents sales and profits in the iron and steel industry. As you will notice, there has been an upward trend in sales to a peak of $22 billion in 1957 and dropping to $18.6 billion by 1962. On the other hand, the profits before taxes have shown a somewhat more reduced rate of decline and, as a matter of fact, dropping considerably since the peak reached in 1957.

In 1957, profits before taxes were $2.6 billion, and they went down to $1.4 billion in 1962. This is because of the fact there are certain fixed costs which affect the profits in relation to sales, so that when we look at the relation of profits to sales in the lower panel of that chart, you can see that they reached a peak ratio to sales in 1961 of 16 percent, and then they reached a subsidiary or lower peak of 14.5 percent in 1955, but from then on that ratio declined rather steadily until in 1962 when the ratio was down to 7½ percent.

Now, in order to complete the picture, we should really have a profit for the industry after taxes. This picture is quite similar to the one before taxes except for the period when we had the excess profits tax in the 1950–53 period. At that time the ratio of profits after taxes to sales was somewhat lower relative to the ratio of profits before taxes to sales than it has been more recently, but since 1954 you will find that the ratio of profits after taxes to sales was just about exactly half of the ratio shown here of profits before taxes to sales. The exception was in 1962, when the ratio of profits after taxes to sales was a little higher because of the fact that the industry took advantage of the investment tax credit and new guidelines on depreciation.

This is essentially the story on sales and profits in the iron and steel industry. Now we come to the question of profits and gross cash flow per ton of steel.

I want to make a comment here. The chart which we have with the text was unfortunately drafted by the charters incorrectly for two of the curves. They plotted the gross cash flow not on a per-ton basis, and they plotted the profits before taxes also not on a per-ton basis. However, the profits after taxes are correct and the profits before taxes plus depreciation are correct.

I have the new chart here, Mr. Chairman, which I will pass around and, of course, will submit the corrected chart for the record.

Chairman DOUGLAS. That correction will be made.

Mr. PARADISO. You will notice that profits before taxes plus depreciation per ton of steel produced rose from 1951 to 1957. They generally increased. The same thing was true of profits after taxes per ton of steel. In other words, they also rose pretty much from 1951 to 1957.

However, both of these showed considerable drop from 1958 to 1962. There was a differential movement, however; the profits after taxes per ton rose through 1957, but dropped thereafter.

The depreciation per ton showed a rising tendency throughout the entire period. It went from $4.22 per ton in 1949 to $10.87 per ton in 1962. I am talking about depreciation charges per ton of steel.

Then there is a cyclical behavior involved here. The profits before taxes, plus depreciation per ton, declined in recession years 1954 and in 1958 and then rose during the recovery periods. The profits after tax plus depreciation per ton of steel tend to rise during recession and continue high as higher depreciation charges reduced tax liabilities.

Now, let us take the components of these two, profits after tax and depreciation alone. Profits after tax and depreciation move in opposite fashion. First, depreciation charges per ton of steel tend to peak in recession periods as lower volume of output is spread over existing capital. Then they tend to fall during recovery when output spurts draws idle capacity into production.

On the other hand, the profits after tax per ton of steel produced move in the opposite way. They tend to rise during recovery periods. So there is a different behavior of these two magnitudes, namely, profits after tax as against depreciation per ton of steel produced.

Now, I want to comment on the role of the recent revision in the tax accounting rules for depreciation.

Senator MILLER. Mr. Chairman, before we leave this, I would like to ask Mr. Paradiso what real significance do these other figures on profit and cash flow, other than gross cash flow and profit after taxes, have? I am just trying to take a common, ordinary citizen's viewpoint of this.

It seems to me that what really counts is profit after taxes. I know there has been a lot of talk in my State about farm income. Farmers are very unimpressed when they are told they have an increase in gross income. All they are interested in is how much do they have in the bank after taxes in the form of net after-tax farm income.

I would suggest that is pretty much what most of us are interested in. We are interested in how much do we have left after taxes.

Mr. PARADISO. That is right.

Senator MILLER. So what are we trying to show, or what are we trying to prove by talking about profits before taxes, plus depreciation?

Mr. PARADISO. The depreciation has an effect on profits after taxes. What I am trying to show here is the complete picture, so that we see exactly what happens to the total gross cash flow of the industry. Certainly depreciation charges have some effect on profits after taxes, but I agree with you that the ultimate interest is the profits after taxes; but here the main purpose is to show the complete picture, so we see what the effect is of depreciation on the total gross flow of the industry. This is about all that is involved here.

Senator MILLER. Do you have the facilities for projecting a line here on depreciation itself?

Mr. PARADISO. We have that in one of the later carts. We will have depreciation itself in one of the later charts.

Senator MILLER. Thank you.

Mr. PARADISO. Now, with respect to the recent role of the tax accounting rules in the change in 1962, in 1961–62 output was substantially unchanged. The value of profits before tax, plus depreciation per ton, declined by only 25 cents. But profits after taxes, plus depreciation per ton, rose $1.20 to $18.20 per ton in 1962.

The tax per ton fell from $8.02 per ton in 1961 to $6.58 per ton last year. So that the fall in tax liabilities reflected primarily the advance of $2.06 per ton of steel produced in depreciation charges from 1961 to 1962; thus there has been a rather significant effect of this increase in depreciation charges made by the steel companies as a result of the liberalized terms of the Treasury last year.

Let us turn to the next table.

Senator MILLER. Pardon me, Mr. Paradiso. The figures for 1962, are those for calendar year 1962?

Mr. PARADISO. These are all for calendar years.

Senator MILLER. The depreciation shown in the last column, if I understand it from your testimony last week, or testimony from one of the Government witnesses, is based upon the income tax returns filed with the Internal Revenue Service.

Mr. PARADISO. These items that I have here are all taken from the Federal Trade Commission and the Securities and Exchange Commission. In other words, they come from those sources. They are all on company basis and all comparable in terms of the depreciation charges, the taxes, and the earnings of the industry and so on.

Last Thursday we were using information from the Internal Revenue Service in conjunction with income originating because that is what we use in terms of our national income accounts. They are somewhat different because we have to make some adjustments to the Federal Trade Commission figures in order to make them comparable to the IRS figures.

We add depletion and we make quite a number of other adjustments. So there is some difference between using the IRS as against using these from the Federal Trade Commission and Securities and Exchange Commission. These would be on a comparable company basis, so we have comparability here all across the line.

Senator MILLER. What I am getting at, from purely an accounting standpoint, we are talking about profits after taxes, and these profits I assume, are as computed for income tax purposes.

Mr. PARADISO. They are reported to stockholders, not necessarily as computed for income tax purposes, because they may use different depreciation procedures as reported to stockholders as against reporting to the IRS. For example, some companies will use straight-line depreciation as reported to stockholders, whereas, they can save on taxes by using the more rapid writeoffs permitted by IRS rules on depreciation in reporting to IRS, so there is a difference in that respect.

Senator MILLER. Have you made a comparison between the profit after taxes as computed for Internal Revenue Service purposes, and depreciation as computed for Internal Revenue Service purposes, and the figures you have in this chart?

Mr. PARADISO. Yes, we make this comparison. We have to do it in conjunction with our estimate of the national income accounts, and if you so desire, sir, we will be glad to give you a comparison between the two and the adjustments which are involved.

Senator MILLER. Mr. Chairman, I think that might be helpful. I wonder if we could have that supplied for the record?

Chairman DOUGLAS. That will be done.

(The material to be furnished follows:)

The accompanying table shows the Internal Revenue Service and Federal Trade Commission-Securities and Exchange Commission measures for the primary iron and steel industry, for the period 1951 through 1960, the latest year for which income tax return data are available. As shown in the table, both sets of data display similar year-to-year variations and have tended to move together over the long run. However, the Federal Trade Commission-Securities and Exchange Commission measures of gross cash flow and profits after taxes are consistently higher than those from the tax returns, while the tax-returns measures of depreciation, depletion, and amortization are consistently higher than those reported to the SEC–FTC.

The higher tax-return measures of depreciation, depletion, and amortization reflect principally the use of more rapid writeoffs for tax purposes than the companies customarily report on their own books, together with the excess of percentage depletion used on tax returns over the depletion used on company books. These higher depreciation, depletion, and amortization charges on the tax return, in turn contribute heavily to the lower level of after-tax profits reported on the tax returns.

The fact that the gross cash flow is higher on the FTC-SEC reports than on the tax return data probably reflects the greater degree of consolidation in the former data than in the latter; companies are required to fully consolidate their subsidiaries in reporting to the Securities and Exchange Commission, while they have the option of consolidating or filing separately in preparing their tax returns.

Many subsidiaries that are included in the FTC–SEC statistics for primary iron and steel are accordingly classified in other industries by the Internal Revenue Service when they file separate returns. Thus, to the extent that the subsidiaries retain any of their profits in the business rather than pay dividends to their parent companies, the tax return figures for primary iron and steel are likely to be lower than the figures reported to the Federal Trade Commission and Securities and Exchange Commission.

Finally, it is likely that the tax-return statistics include only earnings remitted from foreign operations, while the FTC–SEC materials would probably include all of the earnings, whether remitted or not.

*Alternative measures of primary iron and steel companies' profits, 1951–60*

[Millions of dollars]

| Year | Profits after taxes | | Depreciation, depletion, and amortization | | Gross cash flow [1] | |
|---|---|---|---|---|---|---|
| | IRS [2] | FTC-SEC | IRS [2] | FTC-SEC | IRS [2] | FTC-SEC |
| 1951 | 797 | 960 | 327 | 445 | 1,124 | 1,404 |
| 1952 | (3) | 687 | (3) | 519 | (3) | 1,206 |
| 1953 | 674 | 912 | 770 | 699 | 1,444 | 1,611 |
| 1954 | 495 | 728 | 844 | 773 | 1,339 | 1,501 |
| 1955 | 998 | 1,305 | 936 | 832 | 1,934 | 2,137 |
| 1956 | 952 | 1,335 | 911 | 844 | 1,863 | 2,179 |
| 1957 | 959 | 1,327 | 937 | 875 | 1,896 | 2,202 |
| 1958 | 643 | 884 | 846 | 806 | 1,489 | 1,690 |
| 1959 | 828 | 1,041 | 809 | 799 | 1,637 | 1,840 |
| 1960 | 700 | 945 | 852 | 825 | 1,552 | 1,770 |

[1] Profits after taxes plus depreciation, depletion, and amortization.
[2] These statistics are for the sum of the 2 internal revenue industry classifications: "Blast furnaces, steel works, and rolling and finishing mills" and "Iron and steel foundries."
[3] Not available.

Sources: Internal Revenue Service, Federal Trade Commission, Securities and Exchange Commission, and U.S. Department of Commerce, Office of Business Economics.

Mr. PARADISO. Now we will go to table 3 which refers to the elements of the profits before taxes and depreciation. Here, before I start with the data, you will notice the order of the chart.

First, we have it with the iron and steel industry, and then for all corporations. That is in the lower panel. For the iron and steel industry and in the other case, also, what we did is, we started out to see what profits before taxes plus depreciation were, and then we removed the income taxes. Then the dividends. Then the second panel essentially represents what you might call the internal funds of the companies. In other words, the depreciation charges and the retained profits. So I am going to speak of this particular chart in that order.

As you will notice on the chart, the profits before taxes, plus depreciation, moved up until 1957, when it reached a peak of $3½ billion. Since 1957 this total varied from $2.9 billion in 1959 to $2.4 billion in 1962. That is the upper line of this chart showing that there has been some slight decline in the profits before taxes plus depreciation, since 1959.

Apart from the 1950–53 period, when we had the excess profits taxes in effect, the income taxes have mirrored year-to-year movements in the before taxes profits plus depreciation, but have declined relative to that total over the long run, mostly because depreciation charges have risen.

As you look at that chart on income taxes, you will see a rather sharp decline in income taxes since 1957, more so than the profits before tax plus depreciation. Profits after tax plus depreciation charges moved up faster through 1957, but declined less since then than did the total before tax profits plus depreciation.

The next point which I would like to make is that retained earnings have taken a really sharp drop. The steel companies increased dividends through mid-1950's, and as you can see from the chart, they have maintained these dividends since that time despite the decline in profits. With profits after tax plus depreciation declining in recent years, and with depreciation rising, and dividends holding steady, retained profits have declined from the 1957–59 peaks ranging from $700 million to about $150 million in 1962.

Now, with respect to all corporations, the figures are somewhat more favorable. As you will notice in the top chart, profits before taxes plus depreciation, they have been rising rather steadily, except for the more recent period when the rate of increase was not as large.

As in the case of the iron and steel industry, fast-rising depreciation reduced the tax bite out of the total profits before tax plus depreciation, and the gross cash flow has expanded steadily, apart from the cyclical swings. Dividend payments, in this case for all corporations, companies as a whole have increased them steadily as compared with the stability of dividend payments as shown by the iron and steel industry in recent years. Nevertheless, the portion of profits after tax plus depreciation paid out in dividends for all corporations have increased only a little in the past 6 years.

The rise in internal funds for all corporations, and this is what is important, since 1957 has just about equaled the increase in depreciation charges. You will notice the reason for that is that the retained earnings in these recent years have been fairly level. Consequently, for the combination of the two, depreciation and retained earnings, the increase has been due almost entirely to the rise in depreciation charges. •

This was in contrast to the iron and steel industry where, as you will note in the panel above, the depreciation charges increased a little, particularly in 1960–61, but retained earnings declined very sharply. The contrast here is clear with the steel industry having a very substantial drop in retained earnings, whereas in the case of all corporations retained earnings in recent periods have been relatively flat except for the 1958 dip reflecting the recession.

I think this is a rather interesting contrast between the iron and steel industry and all other corporations.

Senator Miller. Might I ask, Dr. Paradiso, as to retained profits, how are these retained? Are you talking about the retention of profits in the bank accounts, or is this a balance sheet retained profit which might actually have been paid out for capital assets such as new equipment?

Mr. Paradiso. They are used for that purpose. They may be used for other purposes. These retained profits are simply what the companies keep and they use them together with depreciation set-asides, with borrowing, or stock issues. They use them for all types of purposes. They might even use them for financing inventories, for example.

Generally, depreciation and retained earnings are used to finance fixed capital but not necessarily so. They can use them for other purposes.

Senator Proxmire. May I ask, Mr. Chairman, you relate the profits and depreciation and taxes. I think all of us have in mind the rate of capacity utilization and the volume of output. What we are interested in to even greater extent is the effect of steel pricing on this whole situation.

As I understand it, prices were somewhat increased up until about 1957 or 1958. Since then they have not been increased until just a few weeks ago. I am wondering if you have any chart or any data which shows relationship of pricing to profits. Can you plot that in any way?

Mr. PARADISO. We don't have that chart. It is very easy to obtain. I am sure we will supply it.

Senator PROXMIRE. What I am concerned about is the extent to which the steel companies can solve their problem by increasing prices, making the assumption this would not have a very significant effect on volume. If we make the assumption it doesn't have, we can see it clearly.

Mr. PARADISO. That is right. One of the problems is that if you use the overall prices, it is very difficult to tell whether those are the real prices.

Senator PROXMIRE. I understand.

Mr. PARADISO. Of course, the sales are made up of volumes times prices. Prices recently have not changed very much. The change in sales must be primarily a function of the production. In other words, the steel shipments.

Senator PROXMIRE. I don't want to complicate this too much because I think the great virtue of this is its simplicity. But the other element is the labor cost per unit of output.

Mr. PARADISO. Yes.

Senator PROXMIRE. And the relationship that has to profits.

Mr. PARADISO. That is right. We will be glad to furnish that information relating to price.

Senator PROXMIRE. Thank you.

(The information to be furnished follows:)

*Primary iron and steel, prices and profits before taxes, 1951–62*

| Year | Basic steel prices, (index 1940=100) | Profits before taxes |
|---|---|---|
| | | *Millions* |
| 1951 | 184.6 | $2,654 |
| 1952 | 188.6 | 1,426 |
| 1953 | 203.6 | 2,183 |
| 1954 | 212.7 | 1,442 |
| 1955 | 222.9 | 2,621 |
| 1956 | 241.4 | 2,635 |
| 1957 | 264.6 | 2,635 |
| 1958 | 273.8 | 1,750 |
| 1959 | 278.4 | 2,065 |
| 1960 | 278.0 | 1,880 |
| 1961 | 276.9 | 1,589 |
| 1962 | 276.2 | 1,366 |

Sources: Bureau of Labor Statistics, Federal Trade Commission, and Securities and Exchange Commission.

Mr. PARADISO. Now we turn to chart 4, and here we are concerned with the sources and uses of funds of the steel industry.

Again, before I start, I might say you notice the way we broke it up in the chart. We have depreciation, retained earnings, and then the external, long-term sources. The chart below that shows the uses, which are plant equipment and the net working capital.

I might say, Mr. Chairman, that the table which follows gives a very complete detail of these sources of use of funds broken down into the short-term funds and their composition, and the long-term funds and their composition, so you get a great deal of information out of examining the details of that particular table.

We note the major sources of long-term investment funds are depreciation and retained earnings. These totaled $14½ billion from 1951 to 1962. Curiously enough—and this may be merely a coincidence—over the same period the companies purchased exactly the same amount of plant and equipment, $14½ billion.

The steel companies also resorted to outside sources for $3¾ billion. Remember now, I am taking the aggregate of the period 1951 through 1962. These numbers refer now to this long period, so they resorted to outside sources for $3¾ billion of long-term funds; stocks, $1.4 billion; bonds and other long-term debt, $2 billion; and long-term bank loans amounting to about four-tenths of a billion dollars.

Again, let me emphasize for the entire period, 1951–62, over the same period they invested nearly $3 billion in net working capital, including other assets. These include inventories of $1.9 billion, plus the increase in financial assets of $1.5 billion, and then less short-term sources amount to a little less than a half billion dollars.

I want to emphasize the equality of the aggregate of plant and equipment expenditures and internal funds over the period 1951–62 does not mean that such outlays are necessarily dependent on internal funds. In other words, the plant equipment spending is not necessarily dependent just on the internal funds. Such funds, as I said before, can be used to add to working capital and retire long-term debt, and so on; and on the other hand, plant and equipment expenditures can be financed by issue of stocks, drawing down liquid balances, and use of long-term borrowing.

Now let us consider for a moment the annual figures in this particular table. In 1951–52 when the excess profits tax held down internal funds, plant and equipment outlays exceeded internal sources, and the use of long-term borrowing was substantial. Following the repeal of the excess profits taxes in 1954 and during the mostly good business through 1957, internal funds were above the plant and equipment outlays and so resort to outside financing was reduced and substantial additions were made to working capital, principally in the form of liquid assets in 1955, and in inventories in 1956 and 1957.

With the decline in internal funds after 1957, resort to external financing was stepped up and additions to working capital were at a slower pace, as plant and equipment expenditures remained high, apart from the cyclical swing, that is, the components of working capital.

The liquid assets, such as cash and U.S. Governments, have increased little in the past 11 years and have fluctuated sharply over the course of the cycle. Increases in cash and U.S. Governments went up markedly during the recovery years and the balances have been drawn upon subsequently to pay taxes, to finance inventories, and to some extent, to finance plant and equipment expenditures.

That is essentially the story on the sources and uses of funds.

Now we turn to the next table and chart, which shows the net cash flow and plant and equipment spending for the iron and steel industry compared to all nonfinancial corporations, and the reason why we had to use nonfinancial corporations instead of all corporations is because we did not have time to obtain, and in fact may not be available, the information on plant and equipment spending. Anyway, if we can get the information for all financial corporations, we will try to do that.

So I will be dealing here with the iron and steel industry, the net cash flow which represents in other terms the internal funds, and the plant and equipment spending.

Now, this chart and table compares this net cash flow for the iron and steel industry and all nonfinancial corporations. As noted in discussing chart 3, such a direct comparison should not be taken as indicating that net cash flow was used solely to finance plant and equipment spending. I want to emphasize that point. Nevertheless, with net cash flow being the major source of long-term finance for business corporations, the comparison can indicate the ability of different industries to finance requirements without recourse to bank loans and security issues.

The chart shows that the iron and steel industry had roughly the same pattern of growing plant and equipment outlays outstripping net cash flows through 1957, as did all nonfinancial corporations. Since that year, however, the pattern has diverted very sharply; whereas, net cash flow or the internal funds of the iron and steel industry has declined sharply, that of nonfinancial corporations as a whole has expanded from $28 billion in 1957 to $35 billion in 1962.

In both iron and steel and nonfinancial corporations as a whole, capital outlays had not regained their 1957 peak, as you can see from the chart. I think the chart is rather interesting. May we refer to it once more?

You will notice the top panel of the chart shows the plant and equipment spending in recent years, outstripping the net cash flow or the internal funds of the iron and steel industry. On the other hand, for all nonfinancial corporations, you will notice that the net cash flow has been rising, except for one little dip in 1960. But generally it has tended to rise above the plant and equipment spending.

I think this is in very striking contrast between the iron and steel industry position as against all nonfinancial corporations.

Senator MILLER. Before you leave that, do you have any suggestion as to the impact of this differential between the iron and steel industry and all nonfinancial corporations and their dividend policies?

Mr. PARADISO. In the case of nonfinancial corporations, I think their dividends kept going steadily up, as I indicated earlier, whereas, in the iron and steel industry the dividends kept pretty flat in recent years. There was no rise, but they held the dividends at a rather constant rate. That was essentially the difference I noticed between the two.

Senator MILLER. Has this had any difference between the two groups of industries with respect to the type of financing they have used? Stock versus bonds, for example?

Mr. PARADISO. Maybe Mr. Gorman, who has worked in detail on these financial figures, might have some knowledge on that. Do you have any information?

Mr. GORMAN. Let me submit it later.

Senator MILLER. You can supply that?

Mr. GORMAN. Yes, sir.

Senator MILLER. I don't mean a lot of specific figures. I am interested in trends or overall relationships and whether or not bond issues versus stock issues have been used greater one than another and what the trend has been. Could you get that for us?

Would that be all right, Mr. Chairman?

Chairman Douglas. Certainly.

(The information to be furnished follows:)

*Stock issues and external long-term financing—Primary iron and steel and all nonfinancial corporations, 1951–62*

[Millions of dollars]

| Year | Primary iron and steel | | | All nonfinancial corporations | | |
|---|---|---|---|---|---|---|
| | External long term sources | Stocks | Stocks as a percent of external long term sources | External long term sources | Stocks | Stocks as a percent of external long term sources |
| 1951 | $432 | $67 | 15.5 | $7,747 | $2,700 | 34.9 |
| 1952 | 445 | −43 | −9.7 | 9,397 | 2,987 | 31.8 |
| 1953 | 2 | 69 | 3,450.0 | 7,551 | 2,266 | 30.0 |
| 1954 | 277 | −8 | −2.9 | 6,341 | 2,065 | 32.6 |
| 1955 | 263 | 222 | 84.4 | 8,625 | 2,696 | 31.3 |
| 1956 | 254 | 230 | 90.6 | 11,061 | 3,147 | 28.5 |
| 1957 | 382 | 257 | 67.3 | 11,913 | 3,457 | 29.0 |
| 1958 | 497 | 122 | 24.5 | 10,854 | 3,564 | 32.8 |
| 1959 | 285 | 63 | 22.1 | 9,541 | 3,706 | 38.8 |
| 1960 | 316 | 147 | 46.5 | 9,775 | 3,014 | 30.8 |
| 1961 | 651 | 141 | 21.7 | 11,060 | 4,497 | 40.7 |
| 1962 | 43 | 138 | 320.9 | 9,619 | 2,055 | 21.4 |

Sources: Federal Trade Commission, Securities and Exchange Commission, U.S. Department of Commerce, Office of Business Economics.

Mr. PARADISO. Finally, we will move on to the last statement which is the ratio of profits and cash flow to stockholders' equity, this being defined as the surplus, plus the book value of common and preferred stock.

I think this tabel is rather interesting. The chart and table compare profits before and after taxes, and net cash flow or the internal funds, each per dollar of stockholders' equity for the iron and steel industry and for all manufacturing corporations.

While the profits and cash flow, data have been discussed in connection with charts 1, 2, and 3, I thought it would be useful to relate them to a measure of capital employed. Capital employed has increased in both the iron and steel industry and in manufacturing as a whole. Stockholders' equity is used because it is a familiar base for computing rates of return and because tests show that the use of the alternative basis of total assets or plant and equipment plus inventories, in other words, the increase in physical assets, show pretty much the same type of trend over the long period.

So now, turning to the chart, the ratios for the iron and steel industry were generally above those for all manufacturing corporations, particularly in boom years through 1957. Since that year the ratios to net worth in the iron and steel industry have consistently been below those enjoyed by all manufacturing companies together.

If you look at the chart, you will notice that profits before taxes, the upper part shows that for all steel companies, it has been declining and actually has been diverging more rapidly from the ratio for all manufacturing. The profits after taxes the same way. For all manufacturing the ratio is way above, or considerably above the ratio for steel and again has been diverging.

The same thing is true of the gross cash flow, which is the profits after taxes plus depreciation. There has been a more favorable picture for all manufacturing in terms of stockholders' equity than has been the case for steel.

This concludes my statement, Mr. Chairman.

(Mr. Paradiso's charts follow:)

CHART 1 AND TABLE 1. SALES AND PROFITS IN THE IRON AND STEEL INDUSTRY

With steel production and sales being relatively low in the past 5 years, the companies' profits before taxes have run substantially below the total reached in the peak sales year of 1957. Indeed, on a quarterly basis, the decline has been even sharper: the peak quarter for sales and profits before taxes was the second quarter of 1959, when inventory buildup in anticipation of a strike pushed seasonally adjusted annual rate iron and steel sales to nearly $26 billion, and profits before taxes to over $4 billion.

As shown in the chart, steel companies' profits before taxes customarily vary much more rapidly than sales, in part because of fixed costs. In addition to the sharp cyclical fluctuations in the ratio of profits to sales, there has been a marked downtrend in this ratio since the peaks reached in the midfifties, which in turn were noticeably below the 1950–51 rate when the companies realized substantial inventory profits.

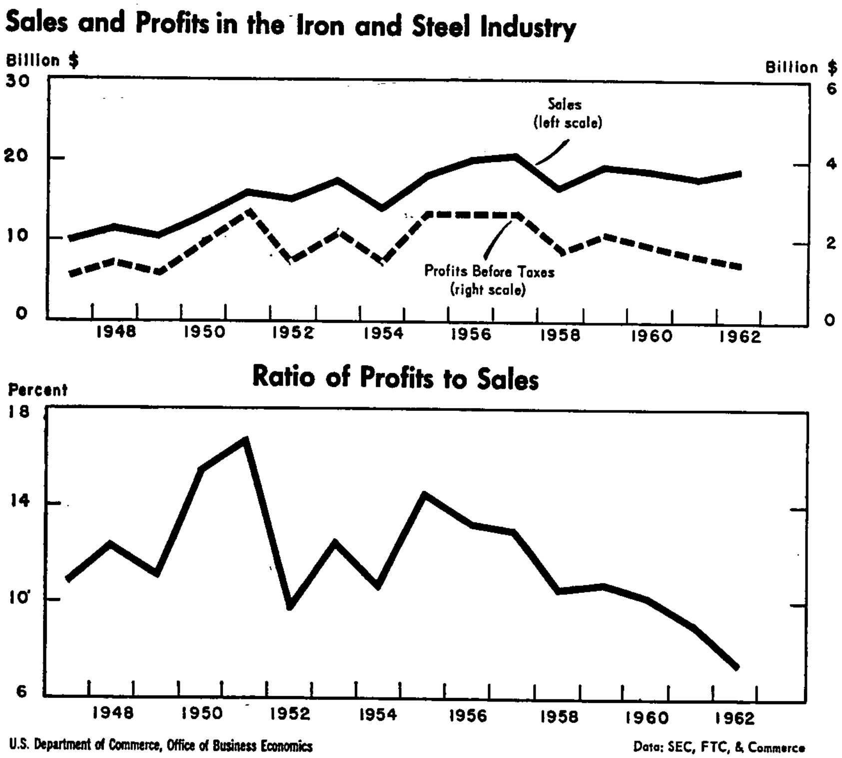


TABLE 1.—*Sales and profits in the iron and steel industry*

[Dollar amounts in millions]

| | Sales | Profits before taxes | Ratio of profits before taxes to sales |
|---|---|---|---|
| | | | *Percent* |
| 1947 | $9,801 | $1,070 | 10.9 |
| 1948 | 11,451 | 1,416 | 12.4 |
| 1949 | 10,028 | 1,115 | 11.1 |
| 1950 | 12,793 | 1,987 | 15.5 |
| 1951 | 16,574 | 2,654 | 15.9 |
| 1952 | 14,719 | 1,426 | 9.7 |
| 1953 | 17,357 | 2,183 | 12.6 |
| 1954 | 13,689 | 1,442 | 10.5 |
| 1955 | 18,075 | 2,621 | 14.5 |
| 1956 | 19,911 | 2,635 | 13.2 |
| 1957 | 20,225 | 2,635 | 13.0 |
| 1958 | 16,470 | 1,750 | 10.7 |
| 1959 | 19,130 | 2,065 | 10.8 |
| 1960 | 18,590 | 1,880 | 10.1 |
| 1961 | 17,532 | 1,589 | 9.1 |
| 1962 | 18,556 | 1,366 | 7.4 |

Sources: Securities and Exchange Commission, Federal Trade Commission, and U.S. Department of Commerce.

CHART 2 AND TABLE 2. PROFITS AND GROSS CASH FLOW PER TON OF STEEL INGOTS PRODUCED

Profits before taxes plus depreciation, and profits after taxes per ton of steel ingots produced showed a rising tendency from 1951 through 1957, followed by a considerable reduction during the low output period 1958–62. The components of gross cash flow portray different patterns: After-tax profits per ton of steel rise through 1957 and decline thereafter, while depreciation per ton shows a rising tendency throughout the period under review.

The chart also shows marked differences in cyclical behavior in the measures: Before-tax profits plus depreciation per ton of steel output declined in recession years—1954 and 1958—and rose during recoveries. Gross cash flow, however, tended to rise during recessions and to continue high during recoveries, as growing depreciation charges reduced tax liabilities.

The components of gross cash flow moved in opposite fashion: Depreciation charges peaked in each recession as a lower volume of output was spread across existing capital stocks, and fell during the ensuing recovery, when output spurts drew idle capacity into production. After-tax profits showed just the opposite movements.

The role of recent revisions in tax-accounting rules for depreciation in providing more internal funds is graphically illustrated by the 1961–62 experience of these measures. Output was substantially unchanged from 1961 to 1962, and the value of before-tax profits plus depreciation per ton produced declined by 24 cents. Yet the gross cash flow per ton rose $1.20 to $18.20 as income taxes per ton fell from $8.10 in 1961 to $6.56 last year. The fall in tax liabilities in turn reflected primarily the advance of $2.08 in depreciation charges per ton.

**Profit and Gross Cash Flow per Ton of Steel Ingots Produced**

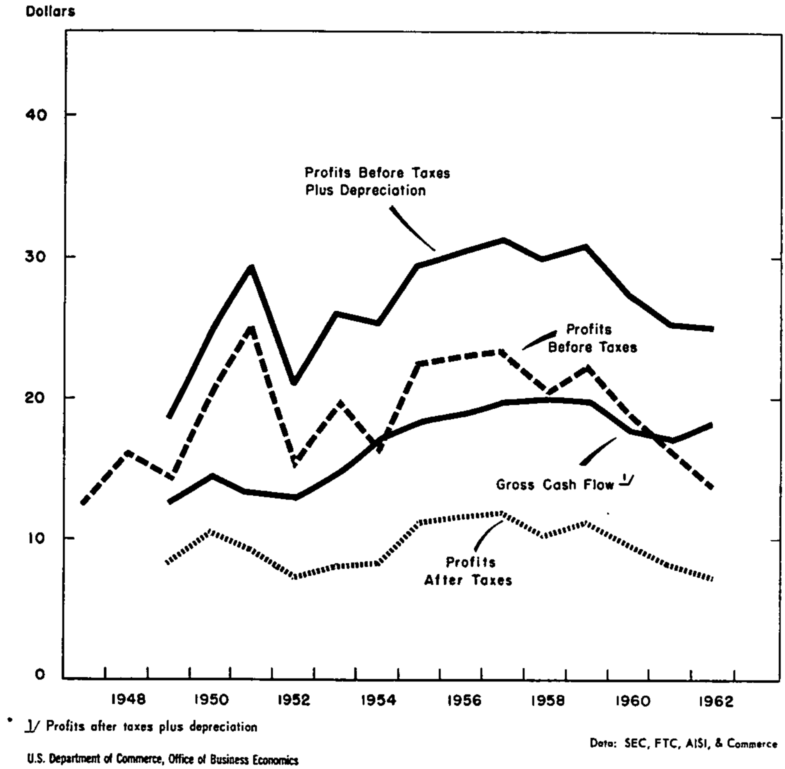



TABLE 2.—*Profits and gross cash flow per ton of steel ingots produced*[1]

[Dollars per ton]

| Year | Profits before taxes plus depreciation | Profits before taxes | Profits after taxes | Gross cash flow [2] | Depreciation |
|---|---|---|---|---|---|
| 1949 [3] | 18.52 | 14.29 | 8.37 | 12.59 | 4.22 |
| 1950 | 24.44 | 20.53 | 10.40 | 14.33 | 3.93 |
| 1951 | 29.46 | 25.23 | 9.13 | 13.36 | 4.23 |
| 1952 [3] | 20.88 | 15.30 | 7.37 | 12.94 | 5.57 |
| 1953 | 25.82 | 19.56 | 8.17 | 14.44 | 6.26 |
| 1954 | 25.08 | 16.33 | 8.24 | 17.00 | 8.75 |
| 1955 | 29.50 | 22.40 | 11.15 | 18.26 | 7.11 |
| 1956 [3] | 30.20 | 22.87 | 11.59 | 18.91 | 7.33 |
| 1957 | 31.14 | 23.38 | 11.77 | 19.54 | 7.76 |
| 1958 | 29.98 | 20.52 | 10.36 | 19.81 | 9.44 |
| 1959 [3] | 30.65 | 22.11 | 11.15 | 19.70 | 8.55 |
| 1960 | 27.25 | 18.93 | 9.52 | 17.82 | 8.31 |
| 1961 | 25.02 | 16.21 | 8.19 | 17.00 | 8.81 |
| 1962 | 24.76 | 13.90 | 7.32 | 18.20 | 10.87 |

[1] The financial figures used as the numerators in deriving this table are on a company basis and relate to total operations of the companies and not to steel production alone. As a result, the levels of these per-ton series are too high by an indeterminate amount. On the assumption that the "mix" of company activities and their cost relationships have not changed significantly, however, the year-to-year changes in the series are reasonable indicators of changes in the profit and other financial positions of the companies' steel-producing operations.
[2] Profits after taxes plus depreciation.
[3] Years of major steel strikes.

Sources: Federal Trade Commission, Securities and Exchange Commission, U.S. Department of Commerce, American Iron and Steel Institute.

CHART 3 AND TABLE 3. ELEMENTS OF PROFITS BEFORE TAXES PLUS DEPRECIATION, IRON AND STEEL INDUSTRY AND ALL CORPORATIONS

This chart and table concentrate on the allocation of profits plus depreciation to taxes, dividends, depreciation, and retained profits for both the iron and steel industry and for all manufacturing corporations.

Considering the iron and steel companies first, the chart shows that apart from rather sharp cyclical swings, the total of profits before taxes and book depreciation charges moved up until 1957 when it reached $3½ billion. Since 1957 this total has fluctuated within a range of $2.4 to $2.9 billion. Apart from the 1950–53 period, when the Korean war excess profits tax was in effect, income taxes have generally mirrored the year-to-year movements in before-tax-profits plus depreciation—although declining relative to that total over the longer run as depreciation charges moved up. Reflecting this fact, profits after taxes plus depreciation moved up faster through 1957 and declined less in the period since then, than did the total of before-tax profits and depreciation.

During the prosperous period of the midfifties, steel companies generally increased their dividend payments, and have since maintained them at the same level despite the fall in profits. With gross cash flow declining in recent years, depreciation rising, and dividends holding steady, retained profits have declined from 1955–57 peaks, ranging around $700 million, to recent year figures of about $150 million.

The 1962 revision in depreciation practices also shows up markedly on the chart. The table indicates that the bulk of this increase occurred in the fourth quarter, when writeoffs reached the unprecedented total of $1½ billion.

Turning now to the lower half of the chart: This shows the same data for manufacturing corporations in order to afford a basis for comparison. In the case of manufacturing companies as a whole, profits plus depreciation has moved up over the entire period; while the rate of increase has slowed since 1957, the figure for last year was still $15.3 billion above 1957.

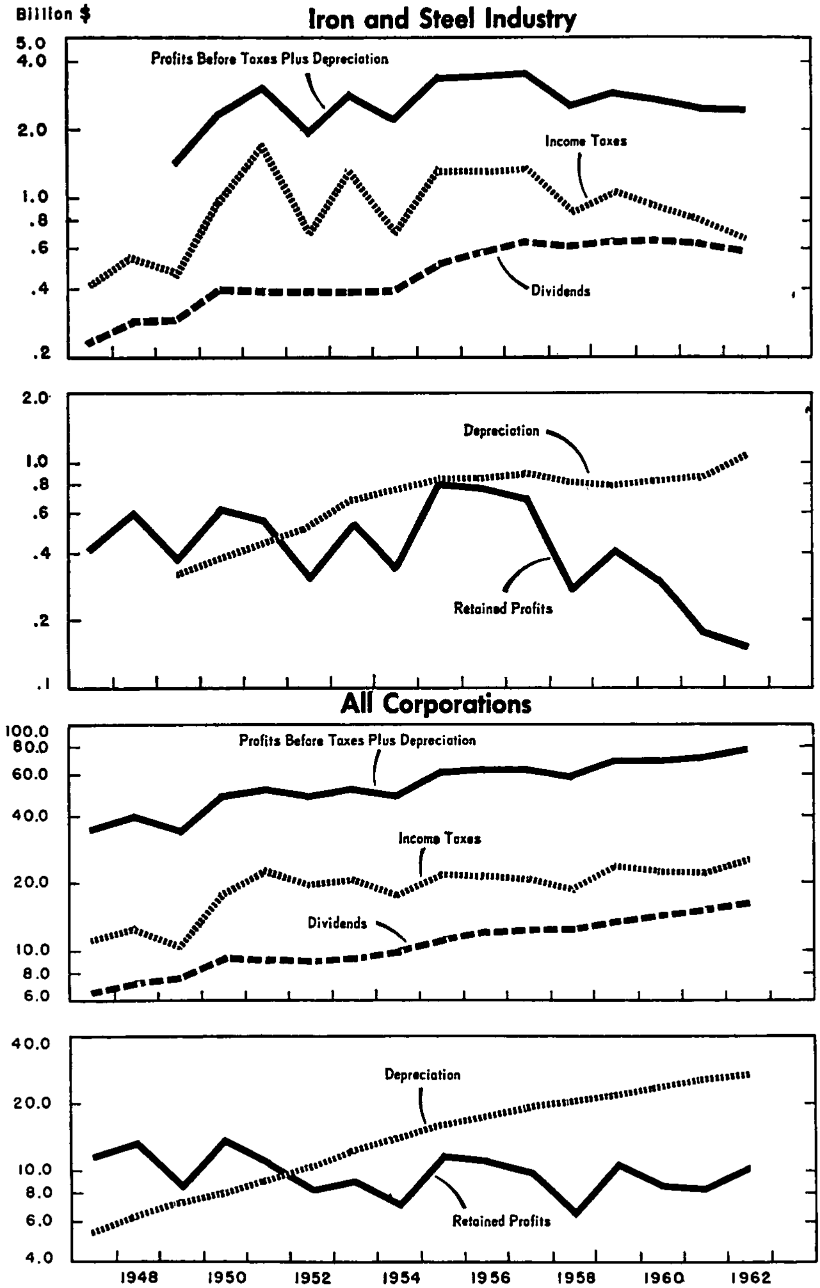
As in the case of iron and steel, fast-rising depreciation charges have reduced the tax bite out of the total profits before taxes plus depreciation, and gross cash flow has expanded steadily, apart from cyclical swings.

Manufacturing companies on the whole have increased their dividend payments—as compared with the stability of steel payments in recent years. Nevertheless, the portion of gross cash flow so paid out has increased little in the past 6 years.

The rise since 1957 in net cash flow for all manufacturing corporations has just about equaled that in depreciation charges, so that retained profits in 1962 at $10 billion were almost the same as in the peak year 1957—in contrast to the sharp drop noted for steel companies.

CHART—3

## Elements of Profits Before Taxes and Depreciation, Iron and Steel Industry and All Corporations




U.S. Department of Commerce, Office of Business Economics

Data: FTC, SEC, & Commerce

TABLE 3.—*Elements of profits before taxes plus depreciation, iron and steel industry, and all corporations, 1949–62*

[Millions of dollars]

| Year | Iron and steel industry | | | | | All corporations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Profits before taxes plus depreciation | Income taxes | Dividends | Depreciation | Retained profits | Profits before taxes plus depreciation | Income taxes | Dividends | Depreciation | Retained profits |
| 1949 | 1,444 | 462 | 288 | 329 | 365 | 33,593 | 10,375 | 7,473 | 7,223 | 8,522 |
| 1950 | 2,367 | 980 | 402 | 380 | 605 | 48,532 | 17,865 | 9,208 | 7,904 | 13,555 |
| 1951 | 3,099 | 1,698 | 399 | 445 | 561 | 51,282 | 22,447 | 9,029 | 9,129 | 10,677 |
| 1952 | 1,945 | 739 | 383 | 519 | 304 | 47,114 | 19,459 | 8,954 | 10,423 | 8,278 |
| 1953 | 2,882 | 1,271 | 384 | 699 | 528 | 50,340 | 20,222 | 9,225 | 12,029 | 8,864 |
| 1954 | 2,215 | 714 | 397 | 773 | 331 | 47,755 | 17,220 | 9,839 | 13,694 | 7,002 |
| 1955 | 3,453 | 1,316 | 501 | 832 | 804 | 60,790 | 21,827 | 11,215 | 15,928 | 11,820 |
| 1956 | 3,479 | 1,300 | 569 | 844 | 766 | 62,171 | 21,227 | 12,132 | 17,488 | 11,324 |
| 1957 | 3,510 | 1,308 | 643 | 875 | 684 | 62,541 | 20,922 | 12,588 | 19,333 | 9,698 |
| 1958 | 2,556 | 866 | 608 | 806 | 276 | 57,960 | 18,646 | 12,358 | 20,550 | 6,406 |
| 1959 | 2,864 | 1,024 | 638 | 799 | 403 | 69,571 | 23,188 | 13,682 | 21,914 | 10,787 |
| 1960 | 2,705 | 935 | 648 | 825 | 297 | 68,878 | 22,435 | 14,378 | 23,454 | 8,611 |
| 1961 | 2,452 | 786 | 627 | 863 | 176 | 70,668 | 22,251 | 15,018 | 25,115 | 8,284 |
| 1962 | 2,435 | 646 | 574 | 1,069 | 146 | 77,900 | 25,000 | 15,900 | 26,600 | 10,300 |

Sources: Federal Trade Commission, Securities and Exchange Commission, and U.S. Department of Commerce.

CHART 4 AND TABLE 4. SOURCES AND USES OF IRON AND STEEL COMPANY FUNDS

Now that we have reviewed the picture with respect to profits and the generation of internal funds, let us turn to chart 4 which sketches the sources and uses of iron and steel company funds.

The upper panel details the major sources of long-term investment funds used by these companies in the 1951–62 period. The major source is of course the net cash flow—retained profits plus depreciation which totaled $14½ billion from 1951 to 1962. The steel companies also resorted to outside sources for $3¾ billion of long-term funds—stocks, bonds, and long-term bank loans. Over the same period, the companies purchased $14½ billion of new plant and equipment and invested nearly $3 billion in net working capital, including "other assets."

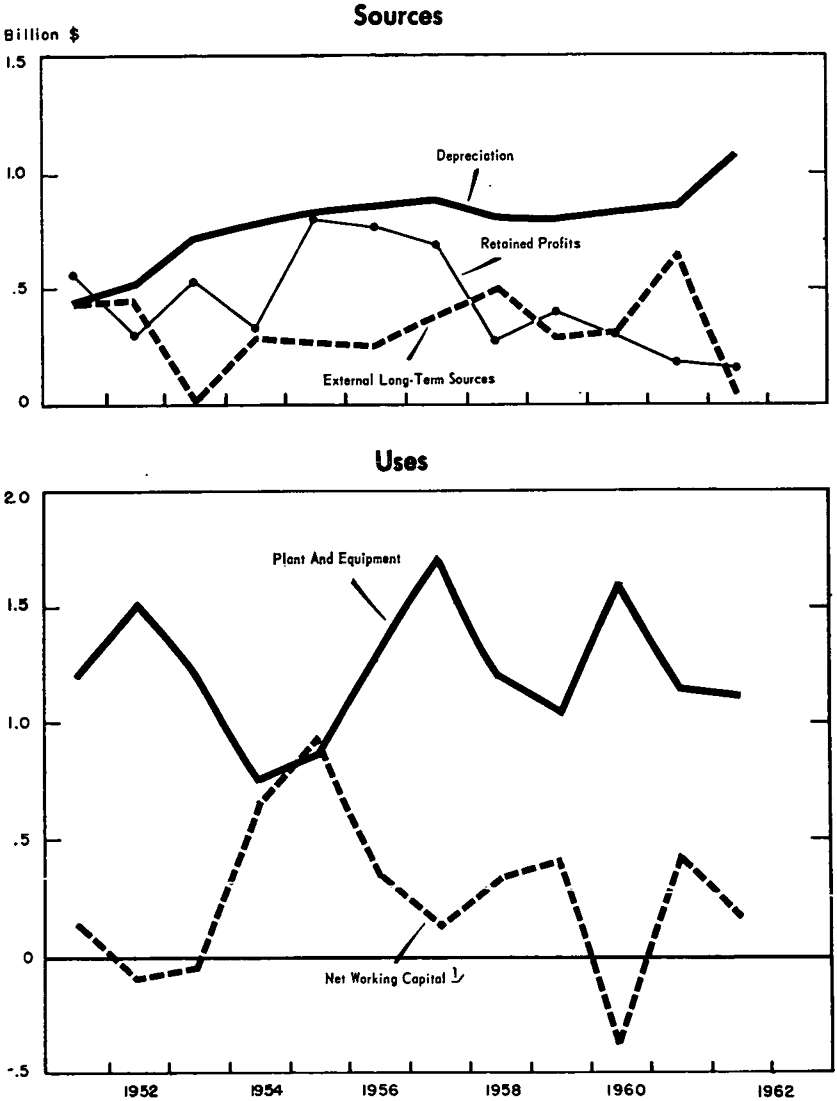
The comparative equality of net cash flow and plant and equipment outlays for the period as a whole does not mean that such outlays are necessarily dependent upon internal funds. Such internal funds can be used to add to working capital or to retire long-term debt, and plant and equipment spending can be financed by the issue of stock (drawing down liquid balances) and long-term borrowing.

Turning now to the annual statistics shown in the chart: During 1951 and 1952, when excess profits taxes held down the net cash flow, plant and equipment outlays exceeded internal sources, and use of long-term borrowing was substantial. Following repeal of the excess profits tax in 1953, and during the mostly good business period through 1957, net cash flow was substantially above plant and equipment outlays, resort to outside financing was reduced and substantial additions to working capital were made—in the form of liquid assets in 1955 and inventories in 1956–57. With the decline in net cash flow after 1957, resort to external financing was stepped up and additions to working capital were made at a slower pace as plant and equipment spending remained high, apart from cyclical swings. In this connection it should be noted that outlays are programed to rise through the current year.

Turning to the components of net working capital: Liquid assets have increased little over the past 11 years, have fluctuated sharply over the course of the cycle. Increases in cash and U.S. Governments have been marked during recovery years, and the balances have been drawn upon subsequently to pay taxes and finance inventory accumulation and some plant and equipment spending.

CHART 4

**Sources and Uses of Funds in Iron and Steel Industry, 1951 - 62**




1/ Inventories plus increase in financial assets less short-term sources.

Data: FTC, SEC, & Commerce

U.S. Department of Commerce, Office of Business Economics

**TABLE 4.—*Sources and uses of iron and steel company funds, 1951–62***

[Millions of dollars]

| | Total, 1951–62 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources, total | 18,870 | 2,337 | 655 | 1,593 | 733 | 2,634 | 2,092 | 1,774 | 1,212 | 2,032 | 1,071 | 1,735 | 1,002 |
| Internal sources | 14,625 | 1,006 | 823 | 1,227 | 1,104 | 1,636 | 1,610 | 1,559 | 1,082 | 1,202 | 1,122 | 1,039 | 1,215 |
| Retained profits | 5,276 | 561 | 304 | 528 | 331 | 804 | 766 | 684 | 276 | 403 | 297 | 176 | 146 |
| Depreciation | 9,349 | 445 | 519 | 699 | 773 | 832 | 844 | 875 | 806 | 799 | 825 | 863 | 1,069 |
| External long-term sources | 3,847 | 432 | 445 | 2 | 277 | 263 | 254 | 382 | 497 | 285 | 316 | 651 | 43 |
| Stocks | 1,405 | 67 | −43 | 69 | −8 | 222 | 230 | 257 | 122 | 63 | 147 | 141 | 138 |
| Bonds and other debt | 2,442 | 365 | 488 | −67 | 285 | 41 | 24 | 125 | 375 | 222 | 169 | 510 | −95 |
| Bonds | 2,048 | 248 | 288 | 39 | 372 | 91 | −32 | 56 | 286 | 235 | 111 | 351 | 3 |
| Bank loans | 394 | 117 | 200 | −106 | −87 | −50 | 56 | 69 | 89 | −13 | 58 | 159 | −98 |
| Short-term sources | 398 | 899 | −613 | 364 | −648 | 735 | 228 | −167 | −367 | 545 | −367 | 45 | −256 |
| Bank loans | 110 | 70 | 62 | 119 | −199 | −10 | 55 | 38 | −17 | −16 | 31 | 48 | −71 |
| Trade payables | 231 | 146 | 163 | −239 | −39 | 233 | 211 | −218 | −55 | 358 | −309 | 74 | −94 |
| Federal tax liabilities | −433 | 665 | −876 | 455 | −473 | 460 | −117 | −28 | −319 | 100 | −67 | −109 | −124 |
| Other | 490 | 18 | 38 | 29 | 63 | 52 | 79 | 41 | 24 | 103 | −22 | 32 | 33 |
| Uses, total | 17,969 | 2,226 | 794 | 1,525 | 766 | 2,531 | 1,847 | 1,676 | 1,161 | 1,993 | 845 | 1,601 | 1,004 |
| Increase in physical assets | 16,460 | 1,515 | 1,777 | 1,360 | 626 | 1,046 | 1,796 | 1,987 | 1,298 | 970 | 1,920 | 1,363 | 802 |
| Plant and equipment | 14,582 | 1,198 | 1,511 | 1,210 | 754 | 863 | 1,268 | 1,722 | 1,192 | 1,036 | 1,597 | 1,127 | 1,104 |
| Inventories | 1,878 | 317 | 266 | 150 | −128 | 183 | 528 | 265 | 106 | −66 | 323 | 236 | −302 |
| Increase in financial assets | 1,509 | 711 | −983 | 165 | 140 | 1,485 | 51 | −311 | −137 | 1,023 | −1,075 | 238 | 202 |
| Receivables | 482 | 41 | 97 | −180 | −25 | 444 | 183 | −285 | 92 | 340 | −416 | 279 | −88 |
| Liquid assets | −129 | 560 | −1,113 | 343 | 82 | 1,037 | −498 | −161 | −197 | 485 | −667 | −119 | 119 |
| Cash | −29 | 63 | −126 | −9 | 26 | 118 | −91 | 75 | −25 | 67 | −102 | −39 | 14 |
| U.S. Government | −100 | 497 | −987 | 352 | 56 | 919 | −407 | −236 | −172 | 418 | −565 | −80 | 105 |
| Other assets | 1,156 | 110 | 33 | 2 | 83 | 4 | 366 | 135 | −32 | 198 | 8 | 78 | 171 |
| Discrepancy (uses-sources) | −902 | −112 | 139 | −68 | 33 | −103 | −245 | −98 | −51 | −39 | −226 | −134 | 2 |
| Net working capital [1] | 2,988 | 128 | −104 | −49 | 660 | 933 | 351 | 121 | 336 | 412 | −385 | 429 | 156 |

[1] Inventories plus increase in financial assets less short-term sources.

Source: U.S. Department of Commerce; based on data from the Federal Trade Commission and Security and Exchange Commission.

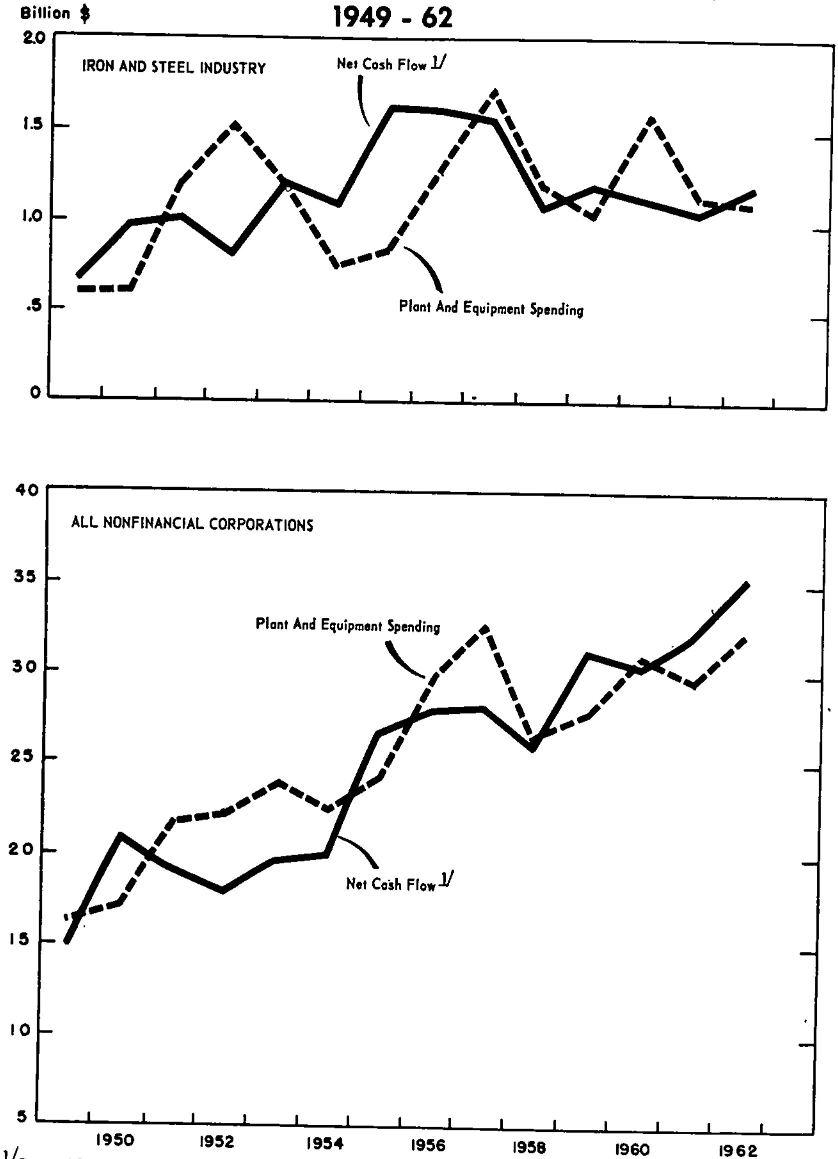
CHART 5 AND TABLE 5. NET CASH FLOW AND PLANT AND EQUIPMENT SPENDING, IRON AND STEEL INDUSTRY, AND ALL NONFINANCIAL CORPORATIONS

This chart and table compare net cash flow and plant and equipment outlays for the iron and steel industry and for all nonfinancial corporations. As noted in discussing chart 3, such a direct comparison should not be taken as indicating that net cash flow is used solely to finance plant and equipment spending. Nevertheless, with net cash flow being a major source of long-term finance for business corporations, the comparison can indicate the ability of different industries to finance their requirements without recourse to bank loans or security issues.

The chart shows that the iron and steel industry had roughly the same pattern of growing plant and equipment outlays outstripping net cash flow through 1957 as did all nonfinancial corporations. Since that year, however, the patterns have diverged sharply; whereas net cash flow of the iron and steel industry has declined sharply, that of nonfinancial corporations as a whole has expanded from $28 billion in 1957 to $35 billion in 1962. In both iron and steel and in nonfinancial corporations as a whole, capital outlay had not regained its 1957 peak by 1962.

CHART 5

**Net Cash Flow and Plant and Equipment Spending, Iron and Steel Industry and All Nonfinancial Corporations, 1949 - 62**




1/ Retained Profits Plus Depreciation

U.S. Department of Commerce, Office of Business Economics

Data: FTC, SEC, & Commerce

TABLE 5.—*Net cash flow and plant and equipment spending, iron and steel industry and all nonfinancial corporations, 1949–62*

| Year | Iron and steel industry | | All nonfinancial corporations | |
|---|---|---|---|---|
| | Net cash flow [1] | Plant and equipment spending | Net cash flow [1] | Plant and equipment spending |
| | *Millions* | *Millions* | *Billions* | *Billions* |
| 1949 | $695 | $596 | $14.9 | $16.3 |
| 1950 | 985 | 599 | 20.8 | 16.9 |
| 1951 | 1,006 | 1,198 | 19.0 | 21.6 |
| 1952 | 823 | 1,511 | 17.8 | 22.4 |
| 1953 | 1,227 | 1,210 | 19.7 | 23.9 |
| 1954 | 1,104 | 754 | 19.8 | 22.4 |
| 1955 | 1,636 | 863 | 26.6 | 24.2 |
| 1956 | 1,610 | 1,268 | 27.8 | 29.9 |
| 1957 | 1,559 | 1,722 | 28.0 | 32.7 |
| 1958 | 1,082 | 1,192 | 26.0 | 26.4 |
| 1959 | 1,202 | 1,036 | 31.1 | 27.7 |
| 1960 | 1,122 | 1,597 | 30.4 | 30.8 |
| 1961 | 1,039 | 1,127 | 32.0 | 29.6 |
| 1962 | 1,215 | 1,104 | 35.3 | 32.3 |

[1] Retained profits plus depreciation, depletion, and amortization.

Sources: Federal Trade Commission, Securities and Exchange Commission, and U.S. Department of Commerce.

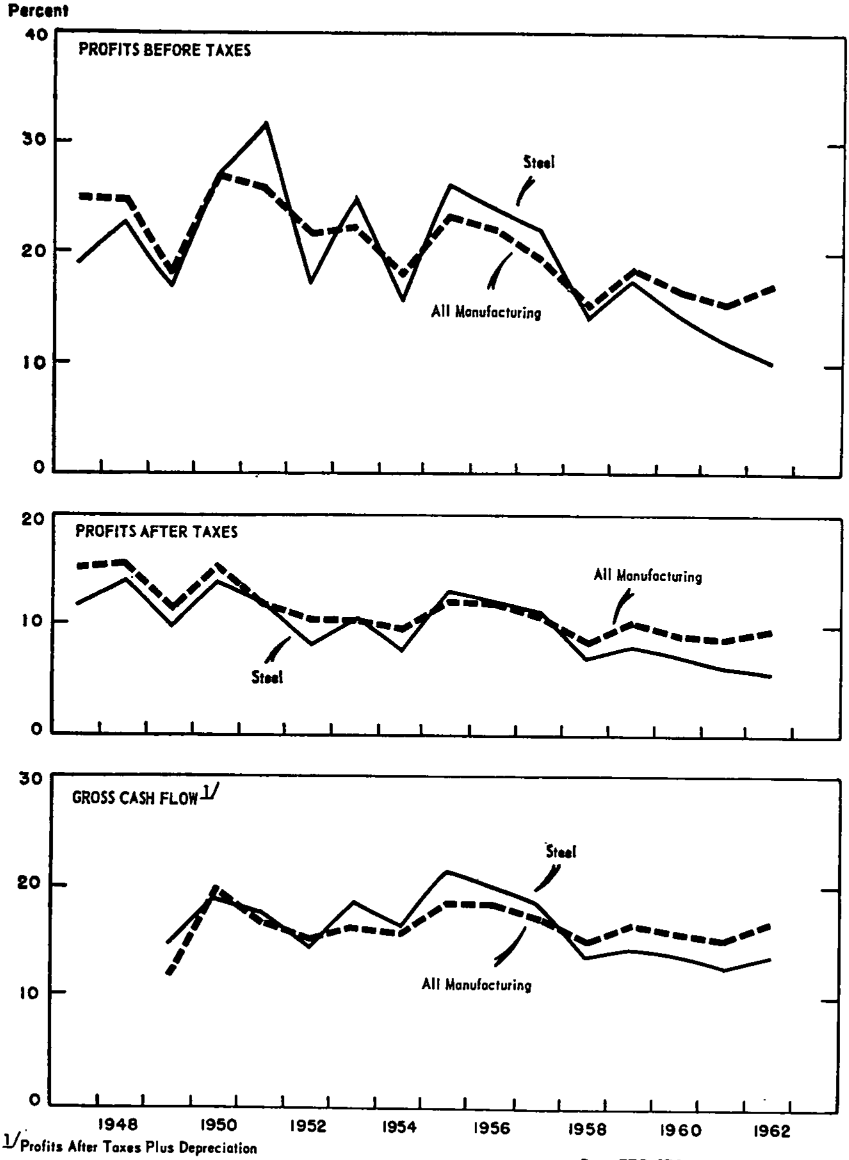
## CHART 6 AND TABLE 6. RATIO OF PROFITS AND CASH FLOW TO STOCKHOLDERS' EQUITY, IRON AND STEEL AND ALL MANUFACTURING

The chart and table compare profits before and after taxes and net cash flow, each per dollar of stockholders' equity for the iron and steel industry and for all manufacturing corporations. While the profits and cash flow data have been discussed in connection with charts 1, 2, and 3, I thought it would be useful to relate them to a measure of capital employed. Capital employed has increased in both the iron and steel industry and in manufacturing as a whole. Stockholders' equity is used because it is a familiar base for computation of rates of return, and because tests show that the use of the alternative bases of total assets or plant and equipment plus inventory would not yield sufficiently different results over time.

Turning now to the chart, the ratios for the iron and steel industry were generally above those for all manufacturing corporations—particularly in boom years—through 1957. Since that year, the ratios to net worth in iron and steel have consistently been below those enjoyed by all manufacturers taken together, and the discrepancy is increasing.

CHART 6

**Ratio of Profits and Cash Flow to Stockholders' Equity, Iron and Steel and All Manufacturing**




1/ Profits After Taxes Plus Depreciation

U.S. Department of Commerce, Office of Business Economics

Data: FTC, SEC, AISI, FRB & Commerce

TABLE 6.—*Profits after taxes, gross cash flow, iron and steel industry and all manufacturing, annually 1947–62; quarterly, 1960–62*

| Year | Percent of stockholders' equity [1] | | | | | |
|---|---|---|---|---|---|---|
| | Profits before taxes | | Profits after taxes | | Gross cash flow [2] | |
| | Steel | All manufacturing | Steel | All manufacturing | Steel | All manufacturing |
| 1947 | 19.2 | 24.7 | 11.7 | 15.1 | n.a. | n.a. |
| 1948 | 22.7 | 24.7 | 13.9 | 15.5 | n.a. | n.a. |
| 1949 | 16.8 | 18.3 | 9.8 | 11.4 | 14.8 | 11.5 |
| 1950 | 27.3 | 27.0 | 13.8 | 15.0 | 19.0 | 19.6 |
| 1951 | 31.9 | 25.8 | 12.1 | 11.8 | 17.8 | 16.6 |
| 1952 | 17.2 | 21.8 | 8.3 | 10.2 | 14.5 | 15.4 |
| 1953 | 25.1 | 22.3 | 10.5 | 10.4 | 18.6 | 16.1 |
| 1954 | 15.7 | 18.2 | 7.9 | 9.8 | 16.3 | 15.7 |
| 1955 | 26.3 | 23.2 | 13.1 | 12.3 | 21.4 | 18.5 |
| 1956 | 24.2 | 22.1 | 12.3 | 12.0 | 20.0 | 18.4 |
| 1957 | 22.1 | 19.5 | 11.1 | 10.7 | 18.4 | 17.2 |
| 1958 | 14.0 | 15.1 | 7.1 | 8.4 | 13.5 | 15.0 |
| 1959 | 17.6 | 18.5 | 8.0 | 10.2 | 14.1 | 16.6 |
| 1960 | 14.4 | 16.4 | 7.3 | 9.1 | 13.6 | 15.6 |
| 1961 | 12.1 | 15.6 | 6.1 | 8.7 | 12.7 | 15.3 |
| 1962 | 10.3 | 17.3 | 5.4 | 9.6 | 13.5 | 16.6 |

AT ANNUAL RATES

| | UA [3] | SA [4] | UA [3] | SA [4] | UA [3] | SA [4] | UA [3] | SA [4] | UA [3] | SA [4] | UA [3] | SA [4] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average for quarter: | | | | | | | | | | | | |
| 1960—January–March | 25.0 | 26.3 | 18.4 | 19.5 | 12.1 | 12.7 | 10.0 | 10.8 | 19.1 | 19.8 | 16.4 | 17.4 |
| April–June | 15.8 | 14.1 | 18.0 | 17.0 | 8.0 | 7.2 | 10.0 | 9.3 | 14.6 | 13.7 | 16.4 | 15.8 |
| July–September | 7.7 | 9.1 | 15.4 | 16.1 | 4.0 | 4.8 | 8.8 | 9.0 | 9.8 | 10.7 | 15.2 | 15.6 |
| October–December | 8.8 | 8.5 | 14.8 | 14.6 | 4.6 | 4.3 | 8.4 | 8.0 | 10.5 | 10.1 | 15.2 | 14.6 |
| 1961—January–March | 6.9 | 7.2 | 12.6 | 13.5 | 3.2 | 3.3 | 6.8 | 7.6 | 9.2 | 9.5 | 13.6 | 14.2 |
| April–June | 14.4 | 12.8 | 16.8 | 15.7 | 7.0 | 6.2 | 9.2 | 8.6 | 13.6 | 12.7 | 16.0 | 15.3 |
| July–September | 12.4 | 14.7 | 15.8 | 16.5 | 6.4 | 7.7 | 8.8 | 9.2 | 13.2 | 14.7 | 15.6 | 15.9 |
| October–December | 14.9 | 14.5 | 18.5 | 18.2 | 8.0 | 7.6 | 10.5 | 10.0 | 15.0 | 14.4 | 17.2 | 16.8 |
| 1962—January–March | 15.5 | 16.2 | 16.7 | 17.9 | 7.6 | 7.9 | 9.0 | 9.9 | 14.5 | 14.9 | 15.6 | 16.8 |
| April–June | 11.2 | 10.0 | 18.9 | 17.5 | 5.8 | 5.1 | 10.3 | 9.6 | 12.6 | 11.9 | 17.2 | 16.5 |
| July–September | 6.5 | 7.8 | 16.7 | 17.4 | 3.4 | 4.1 | 9.3 | 9.6 | 10.3 | 11.3 | 16.4 | 16.6 |
| October–December | 8.0 | 7.8 | 18.1 | 17.8 | 5.0 | 4.7 | 10.5 | 10.0 | 16.5 | 15.9 | 18.0 | 17.6 |
| 1963—January–March | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ | ------ |

[1] Stockholders' equity is based on book value at yearend.
[2] Profits after taxes plus depreciation.
[3] UA=Unadjusted.
[4] SA=Seasonally adjusted.

Source: Department of Commerce, Federal Trade Commission, and Securities and Exchange Commission.

Chairman DOUGLAS. Senator Proxmire?

Senator PROXMIRE. In your experience and on the basis of your observation of many years of industry's pricing policies, has there been a tendency on the part of industry to increase prices for the purpose of providing more capital so that they can modernize, and so forth? This is also contradictory in terms of the economics that we learn as elementary economics. When you are in a position of excess capacity it is just pushing water up hill to increase your prices.

I am just wondering if this is a pattern which is quite common in industry or if it is confined to only some segments of industry.

Mr. PARADISO. My judgment on that is that it is not a pattern that is common to all industries. I don't think it is common. I think there is a tremendous amount of competition involved in many,

many industries, and so their pricing has to pretty much conform to the competitive situation. But I don't want to make a judgment on any particular industry.

Senator PROXMIRE. I am not asking for that.

Mr. PARADISO. I don't really feel it is a common practice among all industries. There is just too much competition involved to permit this kind of an action to take place.

Senator PROXMIRE. I do not know whether I am asking this at the right time or of the right person and, if not, please tell me, but I am wondering if the situation is so changed since 1957 in the steel industry—competitive situation, the import situation, the competition from abroad, maybe the domestic competition—that a price increase regardless of what attitude or action the Government might take has just been economically unwise.

I am not asking you to say whether they should or should not have increased. But this could be a defensible thesis. Would this seem logical in view of your experience as an economist?

Mr. PARADISO. To an economist it would seem logical.

Senator PROXMIRE. It would seem logical?

Mr. PARADISO. There again it is a judgment on my part, but I would not make any comment as to particular companies or even to a group of companies. Taking the more general case, where you have a situation of tremendous competition with products from abroad—and I am not talking about steel here particularly—and where you have competition, also, within the domestic markets, one way of recapturing the market and getting the greatest share is to do something about price, with this one exception: there are many industries where demand is inelastic. Whatever you do about price will not necessarily enable you to capture a larger share of that market.

Senator PROXMIRE. That is exactly what I am asking. Is the demand in the steel industry sufficiently inelastic as far as domestic users are concerned because the fact is that there has been a concerted decision on prices?

Mr. PARADISO. All studies that have been made that I know of starting way back when an economist for the Macy Co., as I remember a Mr. Whitman, at the time of the TNEC hearings, made one of the early studies showing the correlation between steel demand, industrial production, price change, and the rate of price change; this showed that demand for steel was inelastic. And in studies made since we have not found any correlation between demand and price.

I want to modify this in this respect: Demand is inelastic within the range of price variation that we have experienced. This may not necessarily be true, for example, if the price should drop tremendously or if the price should go up way beyond what we have experienced.

These correlations only take into account the changes which have occurred over the period over which the studies have been made. I don't mean to imply that this inelasticity is necessarily true if prices should change very drastically.

I don't mean that it can't be changed. I mean the studies that have been made within our experience. As a matter of fact, this went back as I recall, to the end of the twenties and during the depression period.

Senator PROXMIRE. If this situation still maintains, this would certainly qualify and modify your initial answer, because if the demand is inelastic within limits, then it would make sense for the steel industry to the extent that they have established a pattern of acting to some extent in concert to increase their price.

Obviously, if they can increase their price without reducing their volume significantly within limits, they will increase their profits. In this way they can secure the funds they need for capital expansion. Otherwise, they would have to go to the market to borrow.

Mr. PARADISO. Let us take a look in another way: Suppose this were so, and making an assumption only, suppose that the automobile industry should increase its price by $100 or $200, that means that consumer has that much less to spend for something else.

In other words, even though demand is elastic, still if a consumer is able to pay less for one item he has more to buy of other items. In other items there may be price elasticity.

Senator PROXMIRE. This is an element of the elasticity of the demand for steel. What I am trying to find out is, since the prices have been stable in the steel industry has there been any change because of foreign competition, because of the behavior of some of the elements in the steel industry on the west coast and elsewhere?

If there has been any change which has provided economic persuasion for price stability. I take it there has been some change. It is hard to estimate how much. There is still inelasticity within limits. There would still be an incentive for increasing prices in a moderate way and this would not diminish volume significantly.

Is that roughly correct?

Mr. PARADISO. It probably would not diminish it significantly, although sometimes even small differences in the differential price between competitive items and steel could result in a large shift into these other products. This has been true especially in the case of oil versus coal, where a small differential in price results in some companies having standby equipment, they will immediately shift to oil if the price is favorable and then to coal if its price happens to be more favorable.

So while it is true that demand is inelastic, nevertheless you do have substitution that can come about. It is not just the question of getting more demand for steel. It is a question of substitutability, too, that counts.

Senator PROXMIRE. One other brief line of questioning: How about the alleged cost-push effect on prices? As wages increase or as the labor costs per unit of output increases. Has there seemed to have been a situation in the steel industry in the last 4 or 5 years which would require the steel companies to increase their prices if they are going to maintain their prices?

Mr. PARADISO. To decrease prices.

Senator PROXMIRE. To increase prices if they are going to maintain their profits.

Mr. PARADISO. We made some studies. As a matter of fact, Mr. Gorman on my left here, has made a study, and Mr. Graham made a rather interesting study in which for the first time we were able to obtain the gross national product for corporations and broke that down into the various components.

The interesting thing that it showed is that the ratio of labor cost to the product in the corporations has remained constant.

Senator PROXMIRE. Is this true in the steel industry?

Mr. PARADISO. I don't know.

Mr. GORMAN. We don't know.

Senator PROXMIRE. There is no study made of that?

Mr. GORMAN. It is not complete.

Senator PROXMIRE. Will such a study be made? When you say "not complete," I presume you imply there may be such a study?

Mr. GORMAN. Yes.

Senator PROXMIRE. It is in process?

Mr. GORMAN. Yes.

Senator PROXMIRE. Thank you, Mr. Chairman. My time is up.

Chairman DOUGLAS. Mr. Curtis?

Representative CURTIS. I would like to clarify some of the points raised by Senator Proxmire's questions. On price elasticity, you said if there were a big drop in price, there might be some effect. Would that be primarily in inventory accumulation which would wipe out over a period of a cycle?

In other words, I can see where lower prices would suggest to the consumer to accumulate inventory. Of course, as he accumulates it, his purchasing in ensuing months might be less. Is this what you meant, or is this the fact?

Mr. PARADISO. Are you talking about a very substantial price drop beyond the experience we have had?

Representative CURTIS. What you were talking about. I do not know what you were talking about.

Mr. PARADISO. I was talking about a very simple thing, Mr. Curtis, namely, in making these studies on demand elasticity we had to go on the basis of past experience. The changes in steel prices have been rather limited in relation to many other types of prices. Within those limited changes in our steel price experience we found that demand is inelastic.

Representative CURTIS. That is right.

Mr. PARADISO. What I was saying was that we don't know if the change had been much greater than past experience—this is a "maybe" affair—maybe we would have had a different type of result.

Representative CURTIS. That is what I was directing attention to, this "maybe." I was asking if the factor that would apply there would be the type of inventory accumulation that might occur if the prices went down considerably. Is that what you would think?

Mr. PARADISO. It would be more than that.

Representative CURTIS. That is what I want to know.

Mr. PARADISO. Yes; it would be more than that. You would cut in on some of the substitute items if the price were low enough.

Representative CURTIS. In figuring price elasticity, I assume you wipe out inventory accumulation. In other words, do you take that over a cycle and get to your usage figures?

Mr. PARADISO. Yes.

Representative CURTIS. One other point on here: It is my understanding that steel is actually ordered. In other words, the amounts that are made up are the result of ordering. So there is a limit in the amount of stockpiling that can be done in steel.

Do you follow my question?

Mr. PARADISO. That is right.

Representative CURTIS. Am I correct in that?

Mr. PARADISO. That is correct. There is a limit. As a matter of fact, the steel industry itself has a limit in terms of how much it can stockpile. When orders come in very heavy volume as they are today, they will close their books at a certain point and say, "The books on the second quarter are closed, and that is it."

Representative CURTIS. As I understand it, a good bit depends on the kind of steel that is ordered. It would have a different composition depending on the orders?

Mr. PARADISO. That is right.

Representative CURTIS. The semantics of the phrase, "before tax profits," bothers me a bit. Where does that come in? I have not seen that phrase very often. I do not understand why it is used at all, because it is not a profit.. Tax is just as much a charge against the dollar as anything else. What is the purpose of using the figure before tax profits, in the first place?

In the second place, what is the justification for the semantics? If anything, it is gross income. That is what we use in tax terminology.

Mr. PARADISO. I see. I am using primarily the terms which we use in the national income accounting. In national income accounting this is the term we use. That is all. It is just that.

Representative CURTIS. What is the advantage of the term? I do not understand it. When we get into this subject, the figure we are interested in is after tax profits, which is the real profit.

Mr. PARADISO. Aren't you interested in knowing of the total amount of profits that the industry makes after depreciation and how much goes into taxes and how much is divided?

Representative CURTIS. I want to know what the taxes are, and we do know that.

Mr. PARADISO. And the proportions that are involved. When you talk about cutting the tax rate from 52 percent to whatever other number, we are talking about cutting the tax rate on profits before taxes.

Representative CURTIS. I see what you mean. I was trying to figure out where they were used. Sure I am interested in tax figures. I was going to comment, however, that before tax profits, using that phrase—and I would rather use gross income, because it is more meaningful and not confusing—as a general connotation, robs itself of its legitimate meaning.

Gross revenue is important, and after tax profits or the real profits are important, and the tax varies. One reason for this variation is that you have been using before tax profits. With my remaining time, I want to get into chart 6 and table 6 and chart 4 and table 4. First on chart 6, I have been looking for this figure of stockholders' equity as a chart itself. You must have that.

I wonder if we could get that table, showing only stockholders' equity over the same period of time, 1948 to 1962. Do you have it here?

Mr. PARADISO. We don't have it here. We have it, and we will be glad to submit it to you.

Representative CURTIS. Also, to complete the table, could you supply stockholders' equity for all manufacturing?

Mr. PARADISO. That is right.

(The document referred to follows:)

*Stockholders equity, end of year, 1948–62*

[Millions of dollars]

| End of year | Iron and steel | All manufacturing | End of year | Iron and steel | All manufacturing |
|---|---|---|---|---|---|
| 1948 | 6,244 | 74,448 | 1956 | 10,897 | 134,748 |
| 1949 | 6,642 | 78,804 | 1957 | 11,947 | 144,232 |
| 1950 | 7,284 | 85,859 | 1958 | 12,495 | 149,821 |
| 1951 | 7,912 | 100,581 | 1959 | 13,016 | 160,242 |
| 1952 | 8,291 | 105,065 | 1960 | 13,021 | 167,623 |
| 1953 | 8,683 | 109,386 | 1961 | 13,115 | 175,853 |
| 1954 | 9,204 | 115,125 | 1962 | 13,225 | 184,086 |
| 1955 | 9,979 | 123,089 | | | |

Sources: Federal Trade Commission, and Securities and Exchange Commission.

Representative CURTIS. Let me ask: Has the amount of stockholders' equity from 1948 to 1962 been increasing?

Mr. PARADISO. Yes, I believe it has. It has been increasing.

Representative CURTIS. Has it been a substantial amount? To me, there is your key figure, because we are talking about profits in relation to investment. Of course, we need to know what the base is. The base as chart 6 shows is stockholders' equity, one of the ingredients to give you a percentage.

Mr. PARADISO. I recognize, Mr. Curtis, that there are a lot of background data which we should have submitted here. We had 3 days to process all of these materials. It was a question of the time limitation. We will be glad to submit this material, and in fact even make some comments if you so desire, on this very point you are raising.

Representative CURTIS. You do give us the percentages, which are very important, in table 6. Profits after taxes, which are true profits as far as I am concerned, 1947, 11.7 and it is now down to 5.4. This is the base on which you attract new capital into an industry.

Mr. PARADISO. Exactly.

Representative CURTIS. How do you arrive at the figure of stockholders' equity?

Mr. PARADISO. It is the surplus plus the total book value of common and preferred stock.

Representative CURTIS. Book value. That is understated considerably, then; is it not?

Mr. PARADISO. That is the way it is defined. It would be understated in terms of the higher prices.

Representative CURTIS. Yes, particularly in inflationary periods?

Mr. PARADISO. Yes.

Representative CURTIS. Let me ask this question: Would it not reflect plowed-back earnings? You are using book value of equity investment—wait a second, book value. I beg your pardon, you are using book value.

Mr. PARADISO. Book value, yes.

Representative CURTIS. How do they keep their books on that? Would it show that?

Mr. PARADISO. I think it is mostly plowed back.

Representative CURTIS. It would be reflected in most of the bookkeeping entries?

Mr. PARADISO. That is right.

Representative CURTIS. I guess it would. That was the question I had in mind. I see my time is up.

Mr. PARADISO. I would like to make one other comment, Mr. Curtis. We have a rather interesting table showing the various ratios to sales. You know I have only given you one ratio to sale, profits before taxes to sales. I mentioned I will also provide profits after taxes to sales. But we have all the other components of depreciation and so on in relation to sales as a whole if you have any interest at all.

Representative CURTIS. I am interested in sales for other reasons. The basic figure we need, as refined as we can get it, is profits per unit of capital investment.

Mr. PARADISO. That is right.

Chairman DOUGLAS. Congressman Reuss?

Representative REUSS. Mr. Chairman, Mr. Paradiso, I would like to ask you a rather broader question in your capacity as assistant director of the Bureau of Business Economics, and I would like to have you take into account not just today's testimony but the entire testimony adduced during the weeklong hearings.

As I see this steel picture, future prospects for the industry do not seem to me to be particularly good. I would like to put several conclusions to you and then ask you to comment.

The year 1957 seems to be a sort of watershed in many of these charts. Things have not looked as good since then. I am struck, for instance, that the use of steel in the consumer durables industry appears to have approached closer to saturation at about that time. Since that time, our armaments industry seems to have concentrated more and more on the so-called sophisticated items using little steel as opposed to weapons using armor plate and a lot of other types of steel.

A great many substitutes—aluminum, plastics, concrete—seem to have arrogated to themselves a larger share of the total. Imports have increased some. Then if you look at profits after taxes and net cash flow, you find there, too, as you testified this morning, that they have compared rather poorly with profits and cash flow for industry, generally.

Then, take into account the fact that the steel industry, unless I am mistaken, is not much diversified. It makes steel, and that is about it.

Finally, as you mentioned this morning, prices are relatively inelastic, that is to say, little price increases don't seem to chill off sales at any particular volume very much, although you wisely reserved prediction on the elasticity of steel if larger price increases are put into effect.

Taking all these things together, I put it to you that this is not a particularly healthy industry, and being an optimist by nature, I would like to have you tell me if my analysis is too pessimistic. Maybe you can throw some cheer on this.

Mr. PARADISO. I have given this a considerable amount of thought. As a matter of fact, we have had quite a number of discussions among our own technicians on this same point. It is a problem with the industry.

The very points you mention are factors apparently tending to reduce the share of this industry, or you might say, the total receipts of this industry in relation to all other industries. However, I would like to make this point: I think the root problem here is sales. These sales must originate, and I think I said this on Thursday, from increased capital investment by business as a whole.

If we are able to get a much larger amount of plant and equipment spending, and if consumers buy more automobiles—by the way, the amount of automobiles they are buying today, which is around 7 million, or so, is not an extraordinary amount. It is not out of line with incomes and with the prices of cars as they exist today. It is just about in line. This is not an abnormal demand that is occurring today.

But suppose our incomes were to rise and automobile demand and plant and equipment spending would rise way beyond what they have contemplated for this year, it would seem to me that this is the real solution to the steel industry, although it does not solve all the problems by any means.

It would certainly be a big help in terms of turning this thing around somewhat that you have been describing.

Representative REUSS. If a business has marked cost increases in labor or materials, I can understand a price increase. If an industry is in a situation where there is an expanding demand, I can understand a price increase, though I might not applaud it as a public official. But where neither of these situations obtain, and where the deficiency is in sales, then a price increase seems to me to complicate the other woes that beset the industry.

I have not heard anything from you in your answer to my question, frankly, to throw much optimism on that analysis.

Mr. PARADISO. I didn't want to comment on price because I don't want to make a judgment on this. There are a lot of complications on price.

I did make the comment with respect to the sales for the industry and the total amount of the shipments. If they can be increased, I think it would go along way toward helping this industry. The way to increase those is to increase the total volume of our national economic activity.

As far as making a judgment on price, I would rather not make that judgment because I think this is a matter that is rather complicated and requires a lot more study. Anyway, it is not my business to do that.

Representative REUSS. Thank you, Mr. Chairman.

Chairman DOUGLAS. Mr. Miller?

Senator MILLER. Thank you, Mr. Chairman.

Mr. Paradiso, with respect to table 2, I am wondering if you could supply the committee with two additional columns. We have a column "Profits after taxes." I wonder if you could supply us with the figures in terms of 1949 dollars. Unless I misunderstood the chart, I believe these are in terms of dollars that are inflated.

Mr. PARADISO. That is right. They are dollars containing actual prices. They are in terms of per ton.

Senator MILLER. So if we apply the implicit price deflator to these dollar figures, I wonder if we could not have a column showing profits after taxes in terms of 1949 dollars all the way through?

Mr. PARADISO. I don't think we can do that. I don't see how we can get prices applicable to these particular items.

Senator MILLER. Might I suggest that I think you could do so if you would use some of the resources available, including particularly the implicit price deflator, which would keep the dollar at a constant value all the way through.

Will you try to do that?

Mr. PARADISO. Let me put it this way: If we can do it, we will do it. If we can't, we will give you a statement as to what the problems are which would not enable us to do this kind of a calculation.

In other words, we will try to do it if we can.

Senator MILLER. I would not want you to do anything you cannot do. It would be incredible to me that you could not carry this through in terms of a fixed dollar value. We know what the cost-of-living index is for each year. Why can't you reduce the dollar amount according to the amount of increase from year to year so we get a straight picture all the way through in terms of 1949 dollars?

I suggest 1949 dollars because you started in 1949. If you can't start there because of lack of data, wherever you can start, if you would carry it on through. Maybe you have to start in 1953. That is all right, but have a column over here showing in terms of fixed value of the dollar.

Mr. PARADISO. I understand your problem. The problem is what kind of prices would you use here. If these items were used for purchasing plant and equipment, we have the price of machinery. We can deflate by those prices. But they are being used for all sorts of uses, for inventories, for net working capital. They are used all around.

So the question is, "Can you derive a suitable weight-of-price index which would be appropriate for these items?" As I said, we will see what we can do. If we find conceptually that this cannot be done, we will give you all the reasons for it.

Senator MILLER. So you will be absolutely sure what I have in mind: According to the Treasury Department the value of our dollar in 1939 was 100 cents. The value today is something like 45.4 cents. We can tie this in year by year so that we will see a fixed value of the dollar for this column "profit after taxes" and also for the column of "depreciation."

I think it might help us in analyzing the trends.

Mr. PARADISO. We will be glad to do what we can on that.

(The information referred to follows:)

I have reviewed the possibilities of deflating iron and steel company profits and depreciation and have concluded that it would be impossible to prepare unambiguous results at the present time. Profits and depreciation allowances are applied, among other uses, to the acquisition of financial assets or the reduction of debt; these items cannot be deflated meaningfully.

Even if we were to omit these intangible items from the computation of a deflator, and confine ourselves to using the price indexes for plant and equipment, these indexes would not be appropriate from the standpoint of measuring changes in plant and equipment capacity insofar as capacity changes from technological improvement.

Finally, while we have deflators for new investment in manufacturing as a whole, we do not have a separate one for the iron and steel industry, and could not compute one without a great deal of work.

Senator MILLER. The second question with respect to chart 6: This shows the relation of profits to cash flow in stockholders' equity. Would it be too much trouble to give us a similar chart to both borrowed and invested capital?

Mr. PARADISO. Yes; we can do that. In fact, we have a complete table which we will submit showing in much more detail than this and we will be glad to give you that.

Senator MILLER. That is fine.

(The information to be furnished follows:)

*Percent of stockholders' equity and total liabilities—Iron and steel industry*

| | Profits before taxes | Income taxes | Profits after taxes | Dividends | Retained profits | Depreciation | Profits before taxes plus depreciation | Profits after taxes plus depreciation | Retained profits plus depreciation |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | 13.7 | 5.4 | 8.4 | 3.0 | 5.3 | (1) | (1) | (1) | (1) |
| 1948 | 16.2 | 6.2 | 9.9 | 3.2 | 6.7 | (1) | (1) | (1) | (1) |
| 1949 | 12.5 | 5.2 | 7.3 | 3.2 | 4.1 | 3.7 | 16.2 | 11.0 | 7.8 |
| 1950 | 19.0 | 9.4 | 9.7 | 3.9 | 5.8 | 3.6 | 22.7 | 13.3 | 9.4 |
| 1951 | 21.3 | 13.6 | 7.7 | 3.2 | 4.5 | 3.6 | 24.9 | 11.3 | 8.1 |
| 1952 | 11.2 | 5.8 | 5.4 | 3.0 | 2.4 | 4.1 | 15.3 | 9.5 | 6.5 |
| 1953 | 16.3 | 9.5 | 6.8 | 2.9 | 3.9 | 5.2 | 21.5 | 12.0 | 9.2 |
| 1954 | 10.7 | 5.3 | 5.4 | 2.9 | 2.5 | 5.7 | 16.4 | 11.1 | 8.2 |
| 1955 | 17.4 | 8.7 | 8.7 | 3.3 | 5.3 | 5.5 | 23.0 | 14.2 | 10.9 |
| 1956 | 16.2 | 8.0 | 8.2 | 3.5 | 4.7 | 5.2 | 21.4 | 13.4 | 9.9 |
| 1957 | 15.3 | 7.6 | 7.7 | 3.7 | 4.0 | 5.1 | 20.4 | 12.8 | 9.1 |
| 1958 | 9.8 | 4.9 | 5.0 | 3.4 | 1.6 | 4.5 | 14.4 | 9.5 | 6.1 |
| 1959 | 10.8 | 5.4 | 5.5 | 3.3 | 2.1 | 4.2 | 15.0 | 9.7 | 6.3 |
| 1960 | 9.8 | 4.9 | 4.9 | 3.4 | 1.6 | 4.3 | 14.2 | 9.3 | 5.9 |
| 1961 | 8.0 | 4.0 | 4.1 | 3.2 | .9 | 4.4 | 12.4 | 8.4 | 5.2 |
| 1962 | 7.0 | 3.3 | 3.7 | 2.9 | .7 | 5.5 | 12.4 | 9.1 | 6.2 |

[1] Not available.

Sources: Federal Trade Commission, Securities and Exchange Commission, and U.S. Department of Commerce.

Senator MILLER. Let me ask your own opinion on something here. From all we have heard it looks to me that labor costs in this particular industry are higher than they are in the same industry in foreign countries.

We all know that tax costs in the United States are higher, not only with respect to this industry, but with respect to foreign competitive countries. It appears from the chart here that profits after taxes have been going down.

We also hear the statement that we must, in order to compete with foreign steel companies, have the most modern equipment and plant available.

The question then comes up: Where is the steel industry going to get the money for this modern plant and equipment?

Mr. PARADISO. It has been putting in modern plant and equipment now for some time. The question is, How much more does it need?

The administration, as you know, is doing a great deal in that respect. The tax credit on investment of last year, depreciation guidelines. The President, as you know, now has a proposal to reduce corporate tax rates. These should provide some considerable additional funds.

As a matter of fact, the iron and steel industry took considerable advantage of the provisions of last year and has added just in the fourth quarter alone last year, $1½ million to its depreciation at an annual rate as a result of taking advantage of those provisions.

So, some incentives are being given to the industry in this respect. As I say, if the economy is moving ahead, as it is now, and continues to move ahead, the steel industry should be operating at much higher rates, and this will provide some more funds. There are these two sources: One, from increased operations, and two, from the incentives which already have been passed last year and made use of by the industry.

Senator MILLER. Let me ask you this: On a long-term basis, how meaningful is this depreciation? Because whether they take it at faster rates or slower rates they are eventually going to run out. They will be paying more taxes if they decline on the depreciation.

On a short-term basis, I can see where it would be a shot in the arm. We have to look at these problems from a long-term basis.

I am wondering if this depreciation is very meaningful on a long-term basis, at least?

Mr. PARADISO. But the history of this industry has been that its capacity has been growing all the time. When you are continually adding to the equipment and plant you are constantly getting advantages from the speeded up depreciation.

In other words, a growing industry in terms of expanding equipment does always keep ahead.

Senator MILLER. Is there not a day of reckoning on something like this?

Mr. PARADISO. This has been the history. They have expanded capacity all the time and they really have to because of the new processes and technological developments that are coming through.

So what I am saying is what you described is absolutely true for an industry that is standing still and doesn't grow. But as an industry grows, there are advantages in having speeded up depreciation, because continually you are buying more equipment and getting advantage on that. There is some advantage in that respect.

Senator MILLER. You would admit, I presume, that there is a substantial difference between that kind of advantage which might or might not work in a particular company, and the actual tax cut which comes from the investment tax credit?

Mr. PARADISO. Yes.

Senator MILLER. You suggest that between the investment tax credit and the revised depreciation rates we may find the main sources for solving the problem that I put to you?

Mr. PARADISO. Plus some increase in steel shipments, arising from increased activity for the economy as a whole. I would assume if we do have substantial increases—the economy, by the way, is headed up—and plant and equipment spending will be larger this year than last year, it is that kind of increase which I think will result in much higher rates of operation for the industry, and therefore, improved profits.

Senator MILLER. Then with respect to the last factor you mentioned, we have to look to the sources of use of the steel, and hope that they are going to increase their demands?

Mr. PARADISO. That is right.

Senator MILLER. They will hope that their demands will not get into competitive items but will end up in the steel uses?

Mr. PARADISO. The use of steel, that is right. Keep in mind that the industry has estimated that the competitive items actually have made inroads only to the extent of 2 million tons of steel in the total.

When you consider steel shipments as a whole around 80 million tons and the competition of aluminum, plastics, and so on, is around 2 million—this is not my estimate, this is an estimate I read that the steel industry itself has computed, and I don't know how accurate it is—that is the extent of the inroads by competition. After all, steel is the basic element that goes into the major items like refrigerators and automobiles, and so on, and all kinds of machine tools. I need not tell you. You know this better than I do, perhaps.

This is the kind of thing I have in mind. Larger investments, I think, are really a very important part—it is not the whole answer—a very important part to a more favorable picture in the steel industry.

Senator MILLER. Thank you; my time is up.

Chairman DOUGLAS. Congressman Widnall?

Representative WIDNALL. Thank you, Mr. Chairman.

Mr. Paradiso, in the chart and table No. 3 on "Elements of profit before taxes," I notice that from 1956 through 1962 the depreciation item has gone up about 26.6 percent in the case of the iron and steel industry, and in all corporations it has gone up in the same period about 50 percent.

Is there anyway of accounting for that? The amount taken for depreciation is almost a 50-percent increase from 1956 through 1962 for all corporations, but about 26.6 percent for the steel industry.

What would account for that difference?

Mr. PARADISO. I think in the case of steel, if we look at the steel capacity, there has been some slowing down in not only the rate of capacity increase but also some slowing down in the total increase in stock. This may account for part of this. I don't know. Maybe, Mr. Gorman, you may have a different answer or a better explanation for it.

Mr. GORMAN. Essentially for all corporations the amount of invested capital moved faster than in the steel industry, therefore you had a greater depreciation. If you look on chart 5 you can see compared there the annual additions to plant and equipment on the part of the iron and steel and all nonfinancial corporations. There is a somewhat greater uptrend in that than the steel industry.

Representative WIDNALL. Does this mean that the steel industry has been allowing its equipment to get more obsolescent than the other corporations?

Mr. GORMAN. Not necessarily.

Representative WIDNALL. Wouldn't the fact that it has been taking less depreciation tend to inflate the amount of profits available for dividends?

Mr. PARADISO. This would be a factor. But the problem is how much sales they have. That is the important factor which would be an offsetting factor. The sales have been declining and steel shipments have been declining. That is the important factor in the profits picture.

Representative WIDNALL. It is still not quite clear to me how you could have so much more taken for depreciation in the all-corporation chart as compared with the steel industry itself.

In chart No. 1 on "Ratio of profits to sales," there are two peaks. One, 1951, and the other about 1955.

As I understand it, the peak around 1951 reflected substantial inventory profits.

Mr. PARADISO. That is right.

Representative WIDNALL. Was there any particular reason for the peak in 1955?

Mr. PARADISO. 1955 might have had an influence of two factors. One is that they had a tremendous amount of automobile sales, it was the biggest automobile year we had; and also there was some increase in plant and equipment spending that year from the 1954 low. That might have accounted for the higher sales.

Representative WIDNALL. This was just prior to the steel strike, too. Wasn't the steel strike in 1956?

Mr. PARADISO. 1956 was a steel strike.

Representative WIDNALL. So they could have been buying in anticipation of that at that time?

Mr. PARADISO. They could, although not so much in that year, as I recall.

Representative WIDNALL. Of course, the following year the ratio of profits to sales came down. I suppose that reflected part of the year being included in the strike?

Mr. PARADISO. That is right.

Representative WIDNALL. That is all. Thank you.

Chairman DOUGLAS. Senator Jordan?

Senator JORDAN. Mr. Paradiso, on your chart 6, if you please, the middle plate shows the profits after taxes between all manufacturing and steel running fairly identical until about the year 1957 when we see a sharp dropoff in profits after taxes for steel and a comparing leveling off in profits after taxes for all manufacturing.

My question is, "Would this condition probably result in a flow of investment capital out of the steel industry to other manufacturing?"

Mr. PARADISO. I don't see how that would be.

Senator JORDAN. I wonder if any studies have been made with respect to that. It seems to me it points up a rather alarming situation here with respect to the declining profits after taxes for the steel industry and the fairly constant profits after taxes for all other manufacturing.

Mr. PARADISO. It seems to me that the basic reason for that is that other manufacturing has some stable industries, such as the food industry and the drug industry, which do not react very much to the cyclical influence. Not only cyclical influence but they have a rather steady demand.

In contrast to that we have had this situation since 1957 where plant and equipment spending has just been on the low level. It has just not come back to the long-term trend. This does reflect a situation that has occurred since 1957. This is what we are trying to remedy.

Senator JORDAN. Then it would be reflected in the type of capital that goes into the steel industry whether it would be in the sale of common stock, equity capital, or whether it would be funded debt in bonds and long-term loans?

Mr. PARADISO. I don't think so. Do you have any comment on that?

Mr. GORMAN. We promised earlier to supply some information on this point and until the information is gathered, I am unable to answer it, in comparing steel with other industries. We just don't know the answer.

Senator JORDAN. Have we made any studies about the percent of the net profit that is paid out to stockholders by the steel industry compared to the percent of profit that is paid out to stockholders of all other manufacturing industries?

Mr. PARADISO. Yes; those we have.

Senator JORDAN. Are such tables available?

Mr. PARADISO. We can make them available; yes, sir.

Senator JORDAN. Mr. Chairman, I think it would be interesting to have such a table.

Chairman DOUGLAS. That will be done.

(The information to be furnished follows:)

*Dividends as a percent of after-tax profits—Primary iron and steel and all manufacturing corporations, 1947–62*

| Year | Primary iron and steel | All manufacturing corporations | Year | Primary iron and steel | All manufacturing corporations |
|---|---|---|---|---|---|
| 1947 | 36.1 | 36.7 | 1955 | 38.4 | 45.1 |
| 1948 | 32.5 | 37.7 | 1956 | 42.6 | 45.5 |
| 1949 | 44.1 | 50.0 | 1957 | 48.5 | 48.9 |
| 1950 | 39.9 | 43.9 | 1958 | 68.8 | 58.2 |
| 1951 | 41.6 | 46.7 | 1959 | 61.3 | 48.4 |
| 1952 | 55.7 | 51.2 | 1960 | 68.6 | 54.5 |
| 1953 | 42.1 | 49.3 | 1961 | 78.1 | 56.0 |
| 1954 | 54.5 | 52.9 | 1962 | 79.7 | 52.4 |

Sources: Federal Trade Commission, Securities and Exchange Commission, and U.S. Department of Commerce, Office of Business Economics.

Senator JORDAN. That is all.

Chairman DOUGLAS. I wonder if you would turn to table 6?

Mr. PARADISO. Yes, sir.

Chairman DOUGLAS. I think Congressman Reuss was correct in saying that the years 1957–58 were turning points in the steel industry. In 1958, the steel industry apparently suffered some blows resulting in reduced ratio of output to plant. This may have come from outside in the form of increased foreign competition and the substitution of other materials.

I think it is worth noting according to the figures which Mr. Chase of the Bureau of Labor Statistics produced last week, that whereas in 1957 the wholesale price of basic steel products was 178.9, in 1958, the price index was 185.2. There was an increase, therefore, of 6.3 percentage points or about 3½ percent.

Therefore, in this year in which industry is going through difficulties, it increased its prices by about 3½ percent. It raises the question as to the degree to which the internal situation in the industry contributed to the difficulties.

Then in 1958–59 this was followed up with a further increase to 188.2 or 3 percentage points, or about 1⅓ percent.

So in the 2 years there was an increase of approximately 5 percent. I would like to have you look at the next to last column, the figure on gross cash flow, which, as I understand it, consists of profits after taxes plus depreciation.

Mr. PARADISO. Yes, sir.

Chairman DOUGLAS. Does the index for 1958 indicate gross cash flow of 13.5 percent of stockholders' equity?

Mr. PARADISO. Yes, sir.

Chairman DOUGLAS. Then it went up to 14.1 in 1959. It went down to 13.6 but still above 13.5, in 1960. It went to 12.7 in 1961. It wound up at 13.5 in 1962, which was the precise figure of 1958; is that correct?

Mr. PARADISO. In 1958?

Chairman DOUGLAS. So that if we take gross cash flow, the steel industry in 1962 was in precisely the same position that it was in in 1958?

Mr. PARADISO. You must keep in mind that the 1962 figure was helped by the fact that they took advantage of the new guidelines.

Chairman DOUGLAS. 1962, did you say?

Mr. PARADISO. Yes, 1962.

Chairman DOUGLAS. I did not hear your comment.

Mr. PARADISO. I said in 1962 the industry increased its depreciation in line with the new guidelines.

Chairman DOUGLAS. That is precisely the point I am going to make.

Mr. PARADISO. I see.

Chairman DOUGLAS. If you will look at "Profits after taxes" you find that these declined from 8.0—pardon me, from 7.1 in 1958 to 6.1 in 1961, and to 5.4 in 1962. This decline has been given a good deal of emphasis. But was not this caused by the increase in depreciation?

Mr. PARADISO. To some extent it was, yes.

Chairman DOUGLAS. In 1958 the profits after taxes amounted to 7.1 percent, depreciation amounted to 6.4 percent. The total amounted to 13.5 percent. Is that not right?

Mr. PARADISO. That is right.

Chairman DOUGLAS. In 1962, while profits were 5.4 percent, depreciation was 8.1 percent, and the two formed 13.5 percent. Is that not true?

Mr. PARADISO. Yes, sir.

Chairman DOUGLAS. So that the decline in profits after taxes as a percentage of stockholders' equity was due to a bookkeeping change increasing the amount of depreciation; is that not true?

Mr. PARADISO. Yes.

Chairman DOUGLAS. From 6.4 to 8.1 and this accounted for the decline of 1.7 percent?

Mr. PARADISO. That is right.

Chairman DOUGLAS. Yet the depreciation is available for investment; is it not?

Mr. PARADISO. Yes. And for other purposes.

Chairman DOUGLAS. And for other purposes.

Mr. PARADISO. Mostly for investment.

Chairman DOUGLAS. I understand. Is it not true that two things happened in 1962? First, the steel industry was granted a greatly accelerated rate of depreciation; and second, the 7-percent investment credit went into effect?

Mr. PARADISO. That is correct.

Chairman DOUGLAS. To the degree that accelerated depreciation was provided and taken advantage of—and I am informed this practice was virtually universal in the steel industry—this added depreciation would show up as a cost, would it not?

Mr. PARADISO. Yes.

Chairman DOUGLAS. And therefore in itself would diminish the rate of profit; is that not true?

Mr. PARADISO. That is true. That showed up in the first table, although I didn't give the profits after taxes there. I do have the figures which show that there was a decline in profits after taxes from $803 million in 1961 to $720 million in 1962. Those figures are not on your table, Mr. Chairman, but we are going to provide them.

So there was some decline in profits after taxes as a result of this.

Chairman DOUGLAS. The 7-percent investment credit would diminish the tax burden, would it not, on the industry?

Mr. PARADISO. That is right, it would.

Chairman DOUGLAS. Now, one other question: We commented the other day on the fact that the cash flow did not necessarily have to be reinvested. It could be reinvested in plant and equipment or it could be put in liquid assets, in which event it would show up as an earning asset at the same time as it shows up as an expense; is that not true?

Mr. PARADISO. That is true.

Chairman DOUGLAS. It appears on both sides.

Mr. PARADISO. It appears on both sides.

Chairman DOUGLAS. I thought some of your tables seemed to indicate that during this period the sum total of depreciation—pardon me—the sum total of cash flow internally plus sale of securities exceeded the amount of investment by approximately $3 billion.

Am I correct in that?

Mr. PARADISO. I think you are correct. I think that is shown in table 4. The last item on table 4 which shows the $3 billion.

Chairman DOUGLAS. While it is hard to allocate this as to its origin, as to whether it comes from the sale of securities or from internal depreciation allowances, since the latter was approximately four to five times the magnitude of the former, it would be fair to say, would it not, that a considerable proportion of the depreciation funds were not put back in plant and equipment but put into liquid assets, I assume Government securities, deposits in banks, and so forth?

Mr. PARADISO. I think that is true.

If you look at the liquid asset on that same table, you will find that the cash was 29, U.S. Government's actually were reduced. So I think your statement is quite correct on this.

As a matter of fact, you don't find in this chart, the previous chart on the "Sources and Use of Funds," any close correlation between plant and equipment expenditures and net working capital as well as external long-term sources.

In other words, if the internal sources had been used mostly for financing plant and equipment you might find a pretty high correlation. This is not so.

Chairman DOUGLAS. So the apparent decline in profits as a percentage of stockholders' equity is really caused by a bookkeeping change increasing the amount of depreciation, and that this was available for internal capital investment—gross capital investment—and a considerable percentage of it was put in liquid form and therefore became an earning asset?

Mr. PARADISO. I don't think a considerable percentage was in that form. For the whole period?

Chairman DOUGLAS. Yes.

Mr. PARADISO. Yes, for the whole period.

Chairman DOUGLAS. My time is up.

Mr. Curtis?

Representative CURTIS. This is the chart 4 I wanted to get into. This has been quite interesting. Actually, you do have a breakdown on table 4. Increasing financial assets, inventories, of $1.8 billion made up a good part of that $3 billion; is that right?

Mr. PARADISO. That is right.

Representative CURTIS. Inventory is hardly an asset on which you earn money?

Mr. PARADISO. That is right.

Representative CURTIS. It is broken down quite well. Receivables about 500,482.

Mr. PARADISO. That is right.

Representative CURTIS. Of course, as you expand, you have to expand your receivables, which is not an earning item. What would the large item of $1.1 billion, under the term "Other assets," include? Can you give any components?

Mr. GORMAN. No. That actually includes foreign investment.

Representative CURTIS. I do not want to put words in your mouth if it is wrong, but would that be foreign investments in steel companies.

Mr. GORMAN. Yes; if there are any. I don't know if there are.

Representative CURTIS. I do not know either. It is such a big item that we ought to have the components.

There is a discrepancy of almost a billion dollars, or $902 million.

Mr. PARADISO. This is a problem.

Representative CURTIS. Sure it is. It leads me to raise the point that when we draw conclusions at this time from this kind of chart——

Mr. PARADISO. We do have a problem. It is a similar type of problem we have on gross national product and national income. We use different sources. We tried our best to minimize, as much as we can, this discrepancy. We have not had enough time to do so, but we are making an effort in that direction.

Representative CURTIS. I was referring to drawing conclusions from these figures without considering the components, and also the fact that there is this kind of discrepancy. It is very obviously a rather crude figure. It clearly indicates from the components that this does not go into something outside the steel industry that is bearing investment or return.

Mr. Knowles has supplied me figures which I think are probably right on the stockholders' equity. In 1948 it was $6.2 billion. In 1962 it was $13.6 billion. This is an increased flow of equity investment over and above depreciation that has gone into the steel industry of about $7.4 billion. Of that, I think we can find on your chart 4, retained profits was $5.276 billion, which is new equity investment, and stock, $1.4 billion, making a total of $6.7 billion, roughly, which is just about that figure.

Incidentally, the figures also show that the increase in physical assets, plant, and equipment, was $14.5 billion, and inventory, which is included in there, $1.8 billion. But strangely enough, inventory is included in that working capital.

At any rate, your increase in physical plant assets is $16.5 billion, which was financed by about $6.6 billion of new equity and about $10 billion, I guess, by return of capital. I like that term because some people try to create the impression that depreciation is somehow other than return of capital. That return of capital was reinvested and then $6.6 billion was added to it, as I see these figures.

One thing I don't understand on this chart is this: In looking at your bonds, I thought United States Steel alone floated a $600 million issue of bonds 3 or 4 years ago, but I don't see it reflected in this chart. The most we have is $351 million in 1961 of total bonds. Is this a net?

Mr. PARADISO. It is a net.

Representative CURTIS. I see. So this is over and above that which they paid off in bonds before.

Mr. PARADISO. That is right.

Representative CURTIS. But the figure of bonds of $2.4 billion doesn't show the total bonds outstanding, does it?

Mr. PARADISO. No, sir.

Representative CURTIS. Could we get that, because this is important from this angle. I suspect, although it would show up in book value of stock, it does increase the equity or the value of the equity.

I wonder what the total bonded indebtedness was in 1951 and what it is in 1962, or I should say what were the same items you have here. You have bonds and other long-term debt, and the same thing for bank loans, so we can see what our totals are.

Mr. PARADISO. Yes, sir.

Representative CURTIS. I am also curious to see if you have any figures to show accounts receivable as a net figure. This is under increase in financial assets, receivables.

Mr. GORMAN. Yes.

Representative CURTIS. That is a net, but it still doesn't give us a base.

Mr. GORMAN. That is right.

Representative CURTIS. It is the net for the year. If you can get them, we need all of these figures in relation to what the base is.

Mr. PARADISO. Would the base be 1951?

Representative CURTIS. To the extent you can. I don't want to overburden you, but we do need a picture of this.

(The information furnished follows:)

*Primary iron and steel companies—Balance sheet, Dec. 31, 1951 and 1962*

[In millions of dollars]

| | Dec. 31 | |
|---|---|---|
| | 1951 | 1962 |
| Assets: | | |
| Cash on hand and in banks | 1,267 | 1,175 |
| U.S. Government securities | 1,927 | 1,330 |
| Notes and accounts receivable | 1,208 | 1,649 |
| Inventories | 2,162 | 3,723 |
| Other current assets | 62 | 479 |
| Total current assets | 6,626 | 8,356 |
| Property, plant, and equipment | 10,584 | 21,990 |
| Less: Reserve for depreciation and depletion | 5,296 | 11,941 |
| Other noncurrent assets | 533 | 1,162 |
| Total assets | 12,447 | 19,568 |
| Liabilities: | | |
| Short-term bank loans | 95 | 84 |
| Trade accounts and notes payable | 987 | 1,072 |
| Federal income taxes accrued | 1,869 | 771 |
| Installments due in 1 year or less on long-term debt | (1) | 180 |
| Other current liabilities | 381 | 724 |
| Total current liabilities | 3,332 | 2,831 |
| Long-term debt due in more than 1 year: | | |
| Loans from banks | 159 | 436 |
| Other long-term debt | 1,010 | 2,697 |
| Other noncurrent liabilities | 35 | 380 |
| Total liabilities | 4,536 | 6,344 |
| Stockholders' equity: | | |
| Reserves not reflected elsewhere | 262 | 259 |
| Capital stock, capital surplus | 3,742 | 4,882 |
| Earned surplus and surplus reserves | 3,908 | 8,084 |
| Total stockholders' equity | 7,912 | 13,225 |
| Total liabilities and stockholders' equity | 12,447 | 19,568 |

[1] Included in long-term debt.

Sources: Federal Trade Commission and Securities and Exchange Commission.

Representative CURTIS. I want to make a comment on the change in the depreciation schedules referred to as a bookkeeping item. It is a great deal more than a bookkeeping item. It is an allocation of assets which put it very definitely outside of the area from which you can declare dividends.

The depreciation is merely return of capital and becomes a capital item. In the long run, over the period of the life of the article, you don't get any more depreciation, save for this 7-percent investment credit.

I am talking about the normal depreciation. It is a great deal more than a bookkeeping item. It is a real item; is it not?

Mr. PARADISO. That is right.

Representative CURTIS. Certainly as far as financing is concerned. How much effect did the 7-percent investment credit, which actually does give an additional return or a tax reduction of about 3½ percent, have in 1962? We did make that retroactive.

Mr. PARADISO. We made it retroactive to January 1.

Representative CURTIS. How much of an item was that in 1962?

Mr. GORMAN. We don't know at this time. We will know that in a couple months.

Mr. PARADISO. We are now conducting a survey on this and we will have that item by late May or early June.

Representative CURTIS. Incidentally, I was very unhappy about that. I thought this investment credit was a very bad tax law and very bad economics. I did what I could do to keep it from coming about, but there it is. That is really a tax reduction for the steel industry or anyone who uses it. This is not just a 100-percent return of the capital invested.

I am also intrigued by the flow of new stock issues in 1951, 1952, 1953, 1954—practically nothing. Then, when we gave the stock dividend credit, it jumped to 222 and runs from then on in the three figures, save for 1959. I guess it would be unfair to ask you how you interpret what happened in 1954 that might have caused a greater use of new equity financing.

Mr. PARADISO. I don't know.

Representative CURTIS. You don't know of anything other than that it was interposed at that time?

Mr. PARADISO. No, sir.

Representative CURTIS. Thank you. My time is up.

Chairman DOUGLAS. Mr. Miller?

Senator MILLER. First, let me just add that I, too, felt that the investment tax credit was a very unwise approach to tax relief and did what I could on the other side of the Capitol to stop it. Notwithstanding the fact that we had the investment tax credit with us in 1962, it appears that the profit after taxes for steel—I am referring to table 6 now—in the percent of stockholders equity was the lowest since we have had it in 1947; is that correct, Mr. Paradiso?

Mr. PARADISO. Yes; that is right.

Senator MILLER. Then as far as the flow of funds as a percent of stockholders equity is concerned, except for 1958, the figure shown there is the lowest since 1947.

Mr. PARADISO. That is right.

Senator MILLER. I would like to ask you this about 1958 and 1962, which each show 13.5 in the flow of funds or cash flow as a percent of stockholders' equity:

Inasmuch as we have had a decline in the purchasing power of our money steadily year after year, would it be accurate to say that this industry is in precisely the same position in 1962 as it was in 1958?

Mr. PARADISO. In the same position relative to what?

Senator MILLER. We have the same figure of 13.5 percent.

Mr. PARADISO. I understand we have the same figure.

Senator MILLER. I was just wondering if we should draw the conclusion that since those figures are the same, that in the face of the fact that we have had a decline in the purchasing power of the dollar, this necessarily means that the steel industry is in the same position in 1962 as it was in 1958?

Mr. PARADISO. To the extent that the prices increased since then, they are not able to buy as much in terms of real property, plant, and equipment.

Senator MILLER. So in terms of real purchasing power, 1958 versus 1962, they are not in the same position.

Mr. PARADISO. Not in terms of purchasing power; that is right.

Senator MILLER. That is pretty important, isn't it?

Mr. PARADISO. Surely.

Senator MILLER. What kind of depreciation was used in computing these figures of profits after taxes? I notice that you drew the data from the Department of Commerce, Federal Trade Commission, and Securities and Exchange Commission, but you didn't mention the Internal Revenue Service.

Mr. PARADISO. No.

Senator MILLER. What kind of depreciation was used in these computations?

Mr. GORMAN. Whatever the companies reported to their stockholders. It was the returns they filed with the Securities and Exchange Commission. As far as what methods were used, we really do not know, and they don't tell us.

Senator MILLER. If I understand the trade a little bit, that is the business trade in general, I think there is no consistent policy on this with respect to types of depreciation used. I am wondering if we could get a more accurate picture of this if we went to the agency where this really counts.

When we talk about profits after taxes, take a look at profits as reported on the good old income tax return with depreciation shown on the income tax return and draw our conclusions from those, because when talk to my constituents, businessmen and working people and farmers, they ordinarily are talking about income tax returns. I wonder about that.

What I am getting at is this, for example: Mr. Paradiso agreed with the chairman that there was greatly accelerated depreciation in 1962 as a result of these new guidelines. I am just wondering how true that is if we look at the income tax returns, because as I understand it, with the greatly accelerated depreciation that was authorized by Congress in 1954, permitting a writeoff on the declining balance method, using the double or straightline rate, that when you take a look at the use of that and compare the use of that to these new guidelines of 1962, the new guidelines didn't have very much impact.

Mr. PARADISO. We will have a more definite answer because that is precisely what we are asking in our questionnaire. We are asking them to report to us what they are reporting to the Internal Revenue Service for tax purposes, so we will have the answer to what you want as soon as we can get our questionnaire completed.

Senator MILLER. Now, one final question. I am sorry that I was absent on Friday. If you covered this last Friday, please tell me.

I don't believe I have seen anything in here relating to the costs of research and development and the trend of the industry here. Do you have anything on that?

Mr. PARADISO. We have prepared three tables on that. Congressman Curtis requested that information when we met last week and it has been transmitted for the record. (See pp. 201, 202, and 203.)

Senator MILLER. Thank you very much.

Chairman DOUGLAS. Congressman Widnall.

Representative WIDNALL. No further questions, Mr. Chairman.

Chairman DOUGLAS. Senator Jordan.

Senator JORDAN. No further questions.

Chairman DOUGLAS. Mr. Paradiso, may I ask you to turn again to table 6. These figures are earnings and stockholders' equity in what type of concerns in the iron and steel industry?

Mr. PARADISO. What type of concerns?

Chairman DOUGLAS. Yes. Will it include earnings in the iron and steel mines?

Mr. PARADISO. Yes.

Chairman DOUGLAS. Will it include earnings on shipping owned?

Mr. PARADISO. By Bethlehem Steel.

Chairman DOUGLAS. By the companies?

Mr. PARADISO. Yes.

Chairman DOUGLAS. To the degree to which these companies have foundries and machine plants, will it include these?

Mr. PARADISO. I think they do, too. In addition to that, they also include earnings of establishments abroad.

Chairman DOUGLAS. Abroad?

Mr. PARADISO. Yes, sir.

Chairman DOUGLAS. So that if the earnings in these other industries were lower than in basic steel itself, and if there had been a greater decline in these other branches of the industry than in basic steel, this would exaggerate the decrease in profits after taxes?

Mr. PARADISO. Yes, sir.

Chairman. DOUGLAS. Do you have any information as to comparative rates of profit in these supplementary industries as compared to basic industry?

Mr. PARADISO. Not in these items. They don't break them down. We don't have the breakdown for these particular items.

Chairman DOUGLAS. Would it be possible to get a breakdown?

Mr. PARADISO. I don't think so. It might for particular companies, but we don't have it for the aggregate.

Representative CURTIS. If the chairman would yield, I think we could get the return on foreign investment from Internal Revenue.

Mr. GORMAN. No. You can get a figure from Internal Revenue on what is reported on the tax return, but there is no reason to believe that what is reported on the tax return is the same as the figure used to compute these ratios. We are now sending out a basic questionnaire to the companies which does not give any further breakdown by type of business.

Chairman DOUGLAS. Do some of the companies operate their concrete business under the heading of the parent company?

Mr. GORMAN. All the operations of the company are in this table.

Chairman DOUGLAS. I am asking a question of fact. Granted that some of the companies manufacturing cement are separate companies, although owned by a parent company, such as United States Steel, do you not have some cement operations which are incorporated under the parent company, utilizing the slag and so forth? That is true, isn't it?

Mr. GORMAN. Yes.

Chairman DOUGLAS. I have no further questions.

Representative CURTIS. I have a couple, Mr. Chairman.

Returning to chart 4, do you have any figures showing the cost of the new indebtedness money, bond money, bank loans, or long-term loans, to the steel industry, I am trying to find out whether they get a prime rate.

Mr. GORMAN. We don't know.

Representative CURTIS. In figuring your profit figures for the industry, do you take into consideration the losses? I guess some companies have actually had losses.

Mr. PARADISO. Yes.

Representative CURTIS. It is a net figure?

Mr. PARADISO. Yes.

Representative CURTIS. I don't know if this occurs, but if there were a bankrupt situation, would you include a loss of equity in your losses? Maybe it is purely academic. Have there been any bankruptcies at all? I don't know of any. How would you compute it if there were?

I have wondered about this in other figures. In manufacturing, what do you do as a statistician and in regard to the bankruptcies where somebody has lost not only money, but also equity capital? This is important when we try to figure the key question of what makes people invest money.

Mr. PARADISO. Suppose we give you an answer on that later.

Representative CURTIS. Would you?

Mr. PARADISO. Yes.

Representative CURTIS. I am really interested in the whole picture.

(The information to be furnished follows:)

The Federal Trade Commission-Securities and Exchange Commission statistics on manufacturing companies are supposed to represent all active companies. If bankruptcy occurs then, the treatment of the company in the statistics will vary according to whether the company is kept operating under receivership or is liquidated. If the company is kept operating in receivership it will continue to appear in the sample. If the company is liquidated, it disappears from the sample with no closing entries to reflect the fact.

Representative CURTIS. One final thing, Mr. Chairman.

I am reading from a chart which is a corrected table of the First National City Bank monthly economic letter, page 40, April 1963 issue. This lists net income of leading corporations for the years 1961 and 1962, industrial groups, iron and steel, and shows the industrial groups. It also includes reported net income after taxes, 1961-62, percent change; book net assets of 1961 and 1962; percent return on net assets, 1961–62; and percent margin on sales, 1961–62.

But the figure for their book assets is $11 billion for 1961, and $11.2 billion for 1962. This doesn't conform to the figures we had of $13.6 billion. I am sure there is some explanation. Yours is about a $2 billion larger item.

Mr. KNOWLES. This includes the companies that are not real basic steel. They would have different profit rates, different investments. This includes more companies than are in the FTC–SEC example, which is about half of that.

Representative CURTIS. I see. This would include the rest. Mr. Chairman, because I referred to it, I would like to put this chart in the record.

Chairman DOUGLAS. That will be done.

(The information referred to follows:)

[Corrected table for p. 40, April 1963 issue, First National City Bank monthly economic letter]

*Net income of leading corporations for the years 1961 and 1962*

[Dollar figures in thousands]

| Industrial groups | Number of companies | Reported net income after taxes | | Percent change | Book net assets Jan. 1[1] | | Percent return on net assets[1] | | Percent margin on sales[2] | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1961 | 1962 | | 1961 | 1962 | 1961 | 1962 | 1961 | 1962 |
| Baking | 16 | $58,993 | $61,144 | +4 | $608,533 | $624,113 | 9.7 | 9.8 | 2.7 | 2.7 |
| Dairy products | 12 | 104,026 | 109,367 | +5 | 947,991 | 1,031,140 | 11.0 | 10.6 | 2.6 | 2.7 |
| Meat packing | 21 | 45,350 | 53,570 | +18 | 975,603 | 991,699 | 4.6 | 5.4 | 0.6 | 0.6 |
| Sugar | 13 | 30,020 | 35,308 | +18 | 453,445 | 448,819 | 6.6 | 7.9 | 3.0 | 3.4 |
| Other food products | 91 | 439,541 | 464,454 | +6 | 3,423,275 | 3,647,434 | 12.8 | 12.7 | 4.3 | 4.3 |
| Soft drinks | 17 | 68,149 | 74,462 | +9 | 435,884 | 467,920 | 15.6 | 15.9 | 6.8 | 6.9 |
| Brewing | 17 | 37,353 | 38,572 | +3 | 395,007 | 416,838 | 9.5 | 9.3 | 4.1 | 4.1 |
| Distilling | 14 | 114,938 | 115,199 | [3] | 1,414,746 | 1,478,579 | 8.1 | 7.8 | 4.0 | 3.9 |
| Tobacco products | 15 | 277,441 | 281,891 | +2 | 1,878,980 | 2,004,533 | 14.8 | 14.1 | 6.1 | 6.0 |
| Textile products | 62 | 128,450 | 167,458 | +30 | 2,231,152 | 2,286,735 | 5.8 | 7.3 | 2.7 | 3.1 |
| Clothing and apparel | 79 | 70,290 | 80,617 | +15 | 656,960 | 715,327 | 10.7 | 11.3 | 3.5 | 3.6 |
| Shoes, leather, etc | 27 | 25,990 | 47,887 | +84 | 477,701 | 478,595 | 5.4 | 10.0 | 1.8 | 3.1 |
| Rubber and allied products | 47 | 249,992 | 245,451 | −2 | 2,440,895 | 2,586,690 | 10.2 | 9.5 | 4.1 | 3.7 |
| Lumber and wood products | 27 | 76,961 | 90,905 | +18 | 1,165,019 | 1,198,986 | 6.6 | 7.6 | 5.3 | 5.3 |
| Furniture and fixtures | 34 | 24,382 | 24,795 | +2 | 342,832 | 359,213 | 7.1 | 6.9 | 3.3 | 3.1 |
| Paper and allied products | 80 | 394,162 | 425,503 | +8 | 4,874,873 | 5,126,476 | 8.1 | 8.3 | 5.2 | 5.2 |
| Printing and publishing | 92 | 128,573 | 125,179 | −3 | 1,078,893 | 1,200,574 | 11.9 | 10.4 | 4.7 | 4.3 |
| Chemical products | 99 | 1,145,750 | 1,269,024 | +11 | 9,709,840 | 10,276,417 | 11.8 | 12.3 | 7.3 | 7.6 |
| Paint and allied products | 23 | 85,868 | 84,791 | −1 | 685,242 | 717,070 | 12.5 | 11.8 | 6.4 | 6.0 |
| Drugs and medicines | 40 | 350,659 | 372,042 | +6 | 1,909,355 | 2,080,239 | 18.4 | 17.9 | 10.5 | 10.3 |
| Soap, cosmetics, etc | 36 | 204,616 | 220,371 | +8 | 1,189,589 | 1,315,678 | 17.2 | 16.7 | 6.2 | 6.1 |
| Petroleum products and refining | 122 | 3,073,270 | 3,298,476 | +7 | 29,615,879 | 31,343,389 | 10.4 | 10.5 | 8.7 | 8.7 |
| Cement | 21 | 98,068 | 97,374 | −1 | 865,774 | 939,071 | 11.3 | 10.4 | 11.2 | 12.5 |
| Glass products | 15 | 145,576 | 159,315 | +9 | 1,310,015 | 1,365,887 | 11.1 | 11.7 | 7.1 | 7.2 |
| Other stone, clay products | 51 | 261,096 | 275,039 | +5 | 2,436,469 | 2,570,090 | 10.7 | 10.7 | 7.6 | 7.4 |
| Iron and steel | 78 | 714,203 | 605,532 | −15 | 11,081,377 | 11,228,896 | 6.4 | 5.4 | 5.1 | 4.1 |
| Nonferrous metals | 59 | 349,628 | 385,575 | +10 | 5,165,886 | 5,329,470 | 6.8 | 7.2 | 5.8 | 6.2 |
| Hardware and tools | 53 | 85,067 | 99,843 | +17 | 674,816 | 719,679 | 12.6 | 13.9 | 6.7 | 7.0 |
| Building, heating, plumbing equipment | 50 | 51,845 | 71,088 | +37 | 1,122,848 | 1,130,344 | 4.6 | 6.3 | 2.4 | 3.0 |
| Other metal products | 80 | 145,264 | 186,545 | +28 | 1,976,485 | 2,050,183 | 7.3 | 9.1 | 3.2 | 3.9 |
| Farm, construction, material-handling equipment | 54 | 172,885 | 242,912 | +41 | 2,966,337 | 3,004,752 | 5.8 | 8.1 | 3.4 | 4.4 |
| Office, computing equipment | 33 | 261,078 | 311,476 | +19 | 1,619,561 | 1,886,212 | 16.1 | 16.5 | 7.5 | 8.0 |
| Other machinery | 213 | 401,915 | 457,295 | +14 | 4,513,988 | 4,753,130 | 8.9 | 9.6 | 4.5 | 4.8 |
| Electrical equipment and electronics | 308 | 743,101 | 899,536 | +21 | 7,465,285 | 7,927,846 | 10.0 | 11.3 | 3.6 | 3.8 |
| Household appliances | 17 | 80,595 | 96,728 | +20 | 876,676 | 912,411 | 9.2 | 10.6 | 4.2 | 4.7 |
| Autos and trucks | 13 | 1,352,223 | 2,077,406 | +54 | 10,221,123 | 10,699,383 | 13.2 | 19.4 | 6.1 | 7.5 |
| Automotive parts | 47 | 89,954 | 143,206 | +59 | 1,313,242 | 1,346,011 | 6.8 | 10.6 | 3.3 | 4.4 |
| Railway equipment | 13 | 42,671 | 54,135 | +27 | 841,758 | 850,794 | 5.1 | 6.4 | 3.4 | 3.7 |
| Aircraft and space | 47 | 119,528 | 351,072 | +194 | 2,737,684 | 2,728,152 | 4.4 | 12.9 | .9 | 2.4 |
| Instruments, photo goods, etc | 84 | 248,814 | 290,774 | +17 | 2,006,999 | 2,174,938 | 12.4 | 13.4 | 6.7 | 6.9 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Miscellaneous manufacturing | 96 | 185, 471 | 189, 640 | +2 | 1, 596, 246 | 1, 731, 296 | 11. 6 | 11. 0 | 4. 7 | 4. 4 |
| Total manufacturing | 2, 316 | 12, 683, 756 | 14, 680, 957 | +16 | 127, 704, 263 | 134, 145, 009 | 9. 9 | 10. 9 | 5. 2 | 5. 5 |
| Metal mining [4] | 18 | 28, 373 | 32, 690 | +15 | 314, 019 | 324, 047 | 9. 0 | 10. 1 | 8. 8 | 9. 9 |
| Coal mining [4] | 23 | 66, 060 | 72, 545 | +10 | 937, 011 | 968, 790 | 7. 1 | 7. 5 | 7. 0 | 7. 1 |
| Other mining, quarrying [4] | 17 | 43, 432 | 45, 721 | +5 | 413, 795 | 431, 857 | 10. 5 | 10. 6 | 17. 2 | 16. 4 |
| Total mining [4] | 58 | 137, 865 | 150, 956 | +9 | 1, 664, 825 | 1, 724, 694 | 8. 3 | 8. 8 | 9. 1 | 9. 2 |
| Chain stores—food | 61 | 249, 765 | 253, 934 | +2 | 2, 048, 428 | 2, 193, 428 | 12. 2 | 11. 6 | 1. 2 | 1. 2 |
| Chain stores—variety, etc | 72 | 128, 832 | 128, 521 | (3) | 1, 572, 946 | 1, 636, 324 | 8. 2 | 7. 9 | 2. 6 | 2. 4 |
| Department and specialty | 70 | 229, 947 | 243, 941 | +6 | 2, 441, 231 | 2, 560, 478 | 9. 4 | 9. 5 | 2. 6 | 2. 5 |
| Mail order | 9 | 250, 035 | 271, 121 | +8 | 2, 230, 403 | 2, 355, 228 | 11. 2 | 11. 5 | 1. 6 | 1. 8 |
| Wholesale and miscellaneous | 159 | 166, 580 | 175, 905 | +6 | 1, 716, 174 | 1, 911, 738 | 9. 7 | 9. 2 | 1. 9 | 1. 8 |
| Total trade | 371 | 1, 025, 159 | 1, 073, 422 | +5 | 10, 009, 182 | 10, 657, 196 | 10. 2 | 10. 1 | 1. 9 | 1. 8 |
| Class I railroads [5] | 103 | 384, 000 | 574, 000 | +49 | 17, 312, 733 | 17, 283, 908 | 2. 2 | 3. 3 | 4. 2 | 6. 1 |
| Common carrier trucking | 22 | 20, 274 | 33, 709 | +66 | 194, 685 | 208, 709 | 10. 4 | 16. 2 | 2. 0 | 3. 1 |
| Shipping | 8 | 17, 691 | 23, 087 | +31 | 353, 451 | 367, 124 | 5. 0 | 6. 3 | 2. 3 | 4. 0 |
| Air transport | 20 | [6] 28, 033 | 55, 541 | (7) | 907, 097 | 900, 916 | (6) | 6. 2 | 0. 4 | 1. 9 |
| Miscellaneous transportation | 48 | 55, 893 | 61, 885 | +11 | 653, 107 | 684, 229 | 8. 6 | 9. 0 | 4. 9 | 5. 0 |
| Total transportation | 201 | 449, 825 | 748, 222 | +66 | 19, 421, 073 | 19, 444, 885 | 2. 3 | 3. 8 | 3. 4 | 5. 0 |
| Electric power, gas, etc [5] | 321 | 2, 259, 593 | 2, 483, 894 | +10 | 22, 696, 698 | 24, 012, 002 | 10. 0 | 10. 3 | 12. 7 | 13. 1 |
| Telephone and telegraph [5] | 29 | 1, 442, 397 | 1, 564, 738 | +8 | 14, 552, 336 | 16, 467, 555 | 9. 9 | 9. 5 | 13. 8 | 14. 0 |
| Total public utilities | 260 | 3, 701, 990 | 4, 048, 632 | +9 | 37, 249, 034 | 40, 479, 557 | 9. 9 | 10. 0 | 13. 1 | 13. 5 |
| Amusements | 56 | 47, 420 | 45, 329 | −4 | 562, 936 | 610, 482 | 8. 4 | 7. 4 | 4. 1 | 3. 7 |
| Restaurant and hotel | 32 | 16, 910 | 16, 196 | −4 | 206, 264 | 216, 047 | 8. 2 | 7. 5 | 2. 3 | 2. 0 |
| Other business services | 101 | 107, 345 | 122, 390 | +14 | 806, 662 | 900, 672 | 13. 3 | 13. 6 | 4. 2 | 4. 3 |
| Construction | 28 | 40, 180 | 56, 038 | +39 | 462, 023 | 492, 324 | 8. 7 | 11. 4 | 3. 8 | 3. 9 |
| Total services | 217 | 211, 855 | 239, 953 | +13 | 2, 037, 885 | 2, 219, 525 | 10. 4 | 10. 8 | 3. 9 | 3. 8 |
| Commercial banks | (8) | 1, 712, 000 | 1, 689, 000 | −1 | 17, 398, 000 | 18, 410, 000 | 9. 8 | 9. 2 | ---------- | ---------- |
| Fire and casualty insurance | 54 | 241, 193 | 198, 255 | −18 | 4, 025, 336 | 5, 045, 137 | 6. 0 | 3. 9 | ---------- | ---------- |
| Investment trusts [9] | 218 | 702, 988 | 781, 388 | +11 | 22, 271, 990 | 28, 854, 020 | 3. 2 | 2. 7 | ---------- | ---------- |
| Sales finance | 82 | 306, 565 | 306, 705 | (3) | 2, 360, 927 | 2, 569, 549 | 13. 0 | 11. 9 | ---------- | ---------- |
| Real estate | 54 | 21, 441 | 31, 477 | +47 | 256, 904 | 301, 909 | 8. 3 | 10. 4 | ---------- | ---------- |
| Total finance | 408 | 2, 984, 187 | 3, 006, 825 | +1 | 46, 313, 157 | 55, 180, 615 | 6. 4 | 5. 4 | ---------- | ---------- |
| Grand total | 3, 831 | 21, 194, 637 | 23, 948, 967 | +13 | 244, 399, 419 | 263, 851, 481 | 8. 7 | 9. 1 | 5. 5 | 5. 7 |

[1] Book net assets at the beginning of each year are based upon the excess of total balance sheet assets over liabilities; the amounts at which assets are carried on the books are far below present-day values.

[2] Profit margins computed for all companies publishing sales or gross income figures, which represent about nine-tenths of total number of reporting companies, excluding the finance groups; includes income from investments and other sources as well as from sales.

[3] Increases or decreases of less than 0.5 percent.

[4] Net income is reported before depletion charges in some cases.

[5] Due to the large proportion of capital investment in the form of funded debt, rate of return on total property investment would be lower than that shown on net assets only.

[6] Deficit.

[7] Not calculable.

[8] Federal Reserve Board tabulation of all member banks: Number of banks (6,050) not included in our totals; assets are annual averages.

[9] Figures in most cases exclude capital gains or losses on investments.

Representative CURTIS. The percent return on net assets in 1961 was 6.4, which is little variance of the figure we had for the 78 companies. But the 5.4-percent return for 1962 conforms to the same return. I note this in reference to the grand total—the 8.7 percent, 1961, return on net assets, and 9.1 percent in 1962. In other words, the steel industry has been going the opposite direction that these industrial groups, as a whole, have been going.

Mr. PARADISO. That is true of the manufacturing groups.

Representative CURTIS. I guess most of these are manufacturing.

No, they list chain stores, department stores, services, and so forth, in here. Here is total manufacturing, 9.9, and then it goes to 10.9.

Mr. PARADISO. We show the same thing in our own table.

Representative CURTIS. Thank you.

Chairman DOUGLAS. Mr. Miller?

Senator MILLER. No questions.

Senator JORDAN. No questions.

Mr. PARADISO. For the convenience of the committee I am adding six tables showing a more comprehensive set of statistics bearing on the iron and steel companies and all manufacturing firms. These are primarily certain financial data expressed in billions of dollars as percent of stockholders' equity and as percent of sales.

*Percent of stockholders' equity—All manufacturing*

| | Profits before taxes | Income taxes | Profits after taxes | Dividends | Retained profits | Depreciation | Profits before taxes plus depreciation | Profits after taxes plus depreciation | Retained profits plus depreciation |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | 24.7 | 9.6 | 15.1 | 5.5 | 9.6 | (1) | (1) | (1) | (1) |
| 1948 | 24.7 | 9.2 | 15.5 | 5.8 | 9.7 | (1) | (1) | (1) | (1) |
| 1949 | 18.3 | 6.9 | 11.4 | 5.7 | 5.7 | 4.6 | 18.4 | 16.0 | 10.3 |
| 1950 | 27.0 | 12.0 | 15.0 | 6.6 | 8.4 | 4.6 | 31.6 | 19.6 | 13.0 |
| 1951 | 25.8 | 14.0 | 11.8 | 5.5 | 6.3 | 4.8 | 30.6 | 16.6 | 11.1 |
| 1952 | 21.8 | 11.6 | 10.2 | 5.2 | 5.0 | 5.2 | 27.0 | 15.4 | 10.2 |
| 1953 | 22.3 | 11.9 | 10.4 | 5.1 | 5.3 | 7.1 | 28.0 | 16.1 | 12.4 |
| 1954 | 18.2 | 8.4 | 9.8 | 5.2 | 4.6 | 5.9 | 24.1 | 15.7 | 10.5 |
| 1955 | 23.2 | 10.9 | 12.3 | 5.5 | 6.7 | 6.2 | 29.4 | 18.5 | 12.9 |
| 1956 | 22.1 | 10.1 | 12.0 | 5.5 | 6.5 | 6.4 | 28.5 | 18.4 | 12.9 |
| 1957 | 19.5 | 8.8 | 10.7 | 5.2 | 5.5 | 6.5 | 26.0 | 17.2 | 12.0 |
| 1958 | 15.1 | 6.7 | 8.4 | 4.9 | 3.5 | 6.6 | 21.7 | 15.0 | 10.1 |
| 1959 | 18.5 | 8.3 | 10.2 | 4.9 | 5.3 | 6.4 | 24.9 | 16.6 | 11.7 |
| 1960 | 16.4 | 7.3 | 9.1 | 4.9 | 4.1 | 6.5 | 22.9 | 15.6 | 10.6 |
| 1961 | 15.6 | 6.9 | 8.7 | 4.9 | 3.8 | 6.6 | 22.2 | 15.3 | 10.4 |
| 1962 | 17.3 | 7.7 | 9.6 | 5.0 | 4.6 | 7.0 | 24.3 | 16.6 | 11.6 |

1 Not available.

Sources: Federal Trade Commission, Securities and Exchange Commission, and U.S. Department of Commerce.

*Percent of sales, all manufacturing*

| | Profits before taxes | Income taxes | Profits after taxes | Dividends | Retained profits | Depreciation | Profits before taxes and depreciation | Profits after taxes and depreciation | Retained profits and depreciation |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | 11.0 | 4.3 | 6.7 | 2.5 | 4.3 | (1) | (1) | (1) | (1) |
| 1948 | 11.1 | 4.1 | 7.0 | 2.6 | 4.3 | (1) | (1) | (1) | (1) |
| 1949 | 9.3 | 3.5 | 5.8 | 2.9 | 2.9 | 2.3 | 11.6 | 8.1 | 5.2 |
| 1950 | 12.8 | 5.7 | 7.1 | 3.1 | 4.0 | 2.2 | 15.0 | 9.3 | 6.2 |
| 1951 | 11.2 | 6.4 | 4.8 | 2.3 | 2.6 | 2.0 | 13.2 | 6.8 | 4.6 |
| 1952 | 9.2 | 4.9 | 4.3 | 2.2 | 2.1 | 2.2 | 11.4 | 6.5 | 4.3 |
| 1953 | 9.2 | 4.9 | 4.3 | 2.1 | 2.2 | 2.9 | 12.1 | 7.2 | 5.1 |
| 1954 | 8.4 | 3.9 | 4.5 | 2.4 | 2.1 | 2.7 | 11.1 | 7.2 | 4.8 |
| 1955 | 10.3 | 4.9 | 5.4 | 2.4 | 3.0 | 2.7 | 13.0 | 8.1 | 5.7 |
| 1956 | 9.7 | 4.4 | 5.3 | 2.4 | 2.9 | 2.8 | 12.5 | 8.1 | 5.7 |
| 1957 | 8.8 | 4.0 | 4.8 | 2.4 | 2.5 | 2.9 | 11.7 | 7.7 | 5.4 |
| 1958 | 7.4 | 3.2 | 4.2 | 2.4 | 1.7 | 3.2 | 10.6 | 7.4 | 4.9 |
| 1959 | 8.8 | 4.0 | 4.8 | 2.3 | 2.5 | 3.0 | 11.8 | 7.8 | 5.5 |
| 1960 | 8.0 | 3.6 | 4.4 | 2.4 | 2.0 | 3.2 | 11.2 | 7.6 | 5.2 |
| 1961 | 7.7 | 3.4 | 4.3 | 2.4 | 1.9 | 3.3 | 11.0 | 7.6 | 5.2 |
| 1962 | 8.2 | 3.6 | 4.6 | 2.4 | 2.2 | 3.3 | 11.5 | 7.9 | 5.5 |

[1] Data not available.

Sources: Federal Trade Commission, Securities and Exchange Commission, and U.S. Department of Commerce.

*Selected financial statistics, all manufacturing corporations (annually), 1951–62*

[Millions of dollars]

| | Profits before taxes | Income taxes | Profits after taxes | Depreciation, depletion and amortization | Gross cash flow [1] | Dividends | Net cash flow [2] | Sales |
|---|---|---|---|---|---|---|---|---|
| 1951 | 27,437 | 15,568 | 11,869 | 4,865 | 16,734 | 5,540 | 11,194 | 244,970 |
| 1952 | 22,913 | 12,199 | 10,714 | 5,517 | 16,231 | 5,487 | 10,744 | 250,184 |
| 1953 | 24,403 | 13,063 | 11,340 | 7,763 | 19,103 | 5,594 | 13,509 | 265,900 |
| 1954 | 20,934 | 9,702 | 11,232 | 6,826 | 18,058 | 5,940 | 12,118 | 248,496 |
| 1955 | 28,561 | 13,462 | 15,099 | 7,620 | 22,719 | 6,812 | 15,907 | 278,394 |
| 1956 | 29,768 | 13,615 | 16,153 | 8,597 | 24,750 | 7,357 | 17,393 | 307,256 |
| 1957 | 28,167 | 12,729 | 15,438 | 9,368 | 24,806 | 7,563 | 17,243 | 320,039 |
| 1958 | 22,637 | 9,986 | 12,651 | 9,788 | 22,439 | 7,368 | 15,071 | 304,592 |
| 1959 | 29,694 | 13,366 | 16,328 | 10,280 | 26,608 | 7,908 | 18,700 | 337,817 |
| 1960 | 27,520 | 12,323 | 15,197 | 10,911 | 26,108 | 8,280 | 17,828 | 345,654 |
| 1961 | 27,508 | 12,197 | 15,311 | 11,625 | 26,936 | 8,581 | 18,355 | 356,424 |
| 1962 | 31,868 | 14,141 | 17,727 | 12,825 | 30,552 | 9,281 | 21,271 | 389,404 |

[1] Profits after taxes plus depreciation, depletion, and amortization.
[2] Gross cash flow less dividends.

Sources: Securities and Exchange Commission and Federal Trade Commission.

*Percent of stockholders' equity, iron and steel industry*

| Year | Profits before taxes | Income taxes | Profits after taxes | Dividends | Retained profits | Depreciation | Profits before taxes plus depreciation | Profits after taxes plus depreciation | Retained profits plus depreciation |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | 19.2 | 7.5 | 11.7 | 4.2 | 7.5 | (1) | (1) | (1) | (1) |
| 1948 | 22.7 | 8.8 | 13.9 | 4.5 | 9.4 | (1) | (1) | (1) | (1) |
| 1949 | 16.8 | 7.0 | 9.8 | 4.3 | 5.5 | 5.0 | 21.8 | 14.8 | 10.5 |
| 1950 | 27.3 | 13.5 | 13.8 | 5.5 | 8.3 | 5.2 | 32.5 | 19.0 | 13.5 |
| 1951 | 31.9 | 19.8 | 12.1 | 5.0 | 7.1 | 5.7 | 37.6 | 17.8 | 12.8 |
| 1952 | 17.2 | 8.9 | 8.3 | 4.6 | 3.7 | 6.2 | 23.4 | 14.5 | 9.9 |
| 1953 | 25.1 | 14.6 | 10.5 | 4.4 | 6.1 | 8.1 | 33.2 | 18.6 | 14.2 |
| 1954 | 15.7 | 7.8 | 7.9 | 4.3 | 3.6 | 8.4 | 24.1 | 16.3 | 12.0 |
| 1955 | 26.3 | 13.2 | 13.1 | 5.0 | 8.1 | 8.3 | 34.6 | 21.4 | 16.4 |
| 1956 | 24.2 | 11.9 | 12.3 | 5.2 | 7.1 | 7.7 | 31.9 | 20.0 | 14.8 |
| 1957 | 22.1 | 11.0 | 11.1 | 5.4 | 5.7 | 7.3 | 29.4 | 18.4 | 13.0 |
| 1958 | 14.0 | 6.9 | 7.1 | 4.9 | 2.2 | 6.4 | 20.4 | 13.5 | 8.6 |
| 1959 | 17.6 | 9.6 | 8.0 | 4.9 | 3.1 | 6.1 | 23.7 | 14.1 | 9.2 |
| 1960 | 14.4 | 7.1 | 7.3 | 5.0 | 2.3 | 6.3 | 20.7 | 13.6 | 8.6 |
| 1961 | 12.1 | 6.0 | 6.1 | 4.8 | 1.3 | 6.6 | 18.7 | 12.7 | 7.9 |
| 1962 | 10.3 | 4.9 | 5.4 | 4.3 | 1.1 | 8.1 | 18.4 | 13.5 | 9.2 |

[1] Data not available.

Sources: Federal Trade Commission, Securities and Exchange Commission, and U.S. Department of Commerce.

*Selected items as percent of sales, iron and steel industry*

| Year | Profits before taxes | Income taxes | Profits after taxes | Dividends | Retained profits | Depreciation | Profits before taxes plus depreciation | Profits after taxes plus depreciation | Retained profits plus depreciation |
|---|---|---|---|---|---|---|---|---|---|
| 1947 | 10.9 | 4.3 | 6.6 | 2.4 | 4.2 | (1) | (1) | (1) | (1) |
| 1948 | 12.4 | 4.8 | 7.6 | 2.5 | 5.1 | (1) | (1) | (1) | (1) |
| 1949 | 11.1 | 4.6 | 6.5 | 2.9 | 3.6 | 3.3 | 14.4 | 9.8 | 6.9 |
| 1950 | 15.5 | 7.6 | 7.9 | 3.1 | 4.8 | 3.0 | 18.5 | 10.8 | 7.8 |
| 1951 | 15.9 | 10.2 | 5.7 | 2.4 | 3.4 | 2.8 | 18.7 | 8.5 | 6.1 |
| 1952 | 9.7 | 5.0 | 4.7 | 2.6 | 2.1 | 3.5 | 13.2 | 8.2 | 5.6 |
| 1953 | 12.6 | 7.3 | 5.3 | 2.2 | 3.0 | 4.0 | 16.6 | 9.3 | 7.1 |
| 1954 | 10.5 | 5.2 | 5.3 | 2.9 | 2.4 | 5.6 | 16.1 | 11.0 | 8.1 |
| 1955 | 14.5 | 7.3 | 7.2 | 2.8 | 4.4 | 4.6 | 19.1 | 11.8 | 9.1 |
| 1956 | 13.2 | 6.5 | 6.7 | 2.9 | 3.8 | 4.2 | 17.4 | 10.9 | 8.1 |
| 1957 | 13.0 | 6.4 | 6.6 | 3.2 | 3.4 | 4.3 | 17.3 | 10.9 | 7.7 |
| 1958 | 10.7 | 5.3 | 5.4 | 3.7 | 1.7 | 4.9 | 15.6 | 10.3 | 6.6 |
| 1959 | 10.8 | 5.4 | 5.4 | 3.3 | 2.1 | 4.2 | 15.0 | 9.6 | 6.3 |
| 1960 | 10.1 | 5.0 | 5.1 | 3.5 | 1.6 | 4.4 | 14.5 | 9.5 | 6.0 |
| 1961 | 9.1 | 4.5 | 4.6 | 3.6 | 1.0 | 4.9 | 14.0 | 9.5 | 5.9 |
| 1962 | 7.4 | 3.5 | 3.9 | 3.1 | .8 | 5.8 | 13.2 | 9.5 | 6.5 |

[1] Data not available.

Sources: Securities and Exchange Commission and Federal Trade Commission.

*Selected financial statistics, primary iron and steel industry—Annually, 1951–62; quarterly, 1960–62*

[Millions of dollars]

| Year | Profits before taxes | | Income taxes | | Profits after taxes | | Depreciation, depletion, and amortization | | Gross cash flow [1] | | Dividends | | Net cash flow [2] | | Capital expenditures | | Excess of net cash flow over expenditures | | Sales | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1951 | 2,654 | | 1,698 | | 960 | | 445 | | 1,405 | | 399 | | 1,006 | | 1,198 | | −192 | | 16,574 | |
| 1952 | 1,426 | | 739 | | 687 | | 519 | | 1,206 | | 383 | | 823 | | 1,511 | | −688 | | 14,719 | |
| 1953 | 2,183 | | 1,271 | | 912 | | 699 | | 1,611 | | 384 | | 1,227 | | 1,210 | | 17 | | 17,357 | |
| 1954 | 1,442 | | 714 | | 728 | | 773 | | 1,501 | | 397 | | 1,104 | | 754 | | 350 | | 13,689 | |
| 1955 | 2,621 | | 1,316 | | 1,305 | | 832 | | 2,137 | | 501 | | 1,636 | | 863 | | 773 | | 18,075 | |
| 1956 | 2,635 | | 1,300 | | 1,335 | | 844 | | 2,179 | | 569 | | 1,610 | | 1,268 | | 342 | | 19,911 | |
| 1957 | 2,635 | | 1,308 | | 1,327 | | 875 | | 2,202 | | 643 | | 1,559 | | 1,722 | | −163 | | 20,225 | |
| 1958 | 1,750 | | 866 | | 884 | | 806 | | 1,690 | | 608 | | 1,082 | | 1,192 | | −110 | | 16,470 | |
| 1959 | 2,065 | | 1,024 | | 1,041 | | 799 | | 1,840 | | 638 | | 1,202 | | 1,036 | | 166 | | 19,130 | |
| 1960 | 1,880 | | 935 | | 945 | | 825 | | 1,770 | | 648 | | 1,122 | | 1,597 | | −475 | | 18,590 | |
| 1961 | 1,589 | | 786 | | 803 | | 863 | | 1,666 | | 627 | | 1,039 | | 1,127 | | −88 | | 17,532 | |
| 1962 | 1,366 | | 646 | | 720 | | 1,069 | | 1,789 | | 574 | | 1,215 | | 1,104 | | 111 | | 18,556 | |
| | SAAR [3] | UA [4] | SAAR [3] | UA [4] | SAAR [3] | UA [4] | SAAR [3] | UA [4] | SAAR [3] | UA [4] | SAAR [3] | UA [4] | SAAR [3] | UA [4] | SAAR [3] | UA [4] | SAAR [3] | UA [4] | SAAR [3] | UA [4] |
| Quarter: | | | | | | | | | | | | | | | | | | | | |
| 1960—I | 3,464 | 822 | 1,792 | 422 | 1,672 | 400 | 932 | 229 | 2,604 | 629 | 664 | 165 | 1,940 | 464 | 1,600 | 330 | 340 | 134 | 23,108 | 5,702 |
| II | 1,844 | 519 | 904 | 257 | 940 | 263 | 848 | 216 | 1,788 | 479 | 652 | 160 | 1,136 | 319 | 1,600 | 420 | −464 | −101 | 18,800 | 4,916 |
| III | 1,192 | 252 | 560 | 120 | 632 | 132 | 772 | 189 | 1,404 | 321 | 648 | 159 | 756 | 162 | 1,750 | 420 | −994 | −258 | 17,104 | 4,122 |
| IV | 1,116 | 287 | 548 | 137 | 568 | 150 | 748 | 191 | 1,316 | 341 | 632 | 164 | 684 | 177 | 1,450 | 430 | −766 | −253 | 15,812 | 3,850 |
| 1961—I | 940 | 224 | 512 | 121 | 428 | 103 | 800 | 197 | 1,228 | 300 | 640 | 159 | 588 | 141 | 1,350 | 280 | −762 | −139 | 15,436 | 3,820 |
| II | 1,668 | 471 | 856 | 242 | 812 | 229 | 840 | 214 | 1,652 | 443 | 620 | 153 | 1,032 | 290 | 1,050 | 280 | −18 | 10 | 17,460 | 4,579 |
| III | 1,924 | 404 | 920 | 196 | 1,004 | 208 | 924 | 223 | 1,928 | 431 | 628 | 154 | 1,300 | 277 | 1,100 | 260 | 200 | 17 | 18,636 | 4,496 |
| IV | 1,908 | 490 | 912 | 227 | 996 | 263 | 892 | 229 | 1,888 | 492 | 624 | 161 | 1,264 | 331 | 1,100 | 300 | 164 | 31 | 19,160 | 4,637 |
| 1962—I | 2,144 | 512 | 1,104 | 261 | 1,040 | 252 | 920 | 228 | 1,960 | 480 | 616 | 154 | 1,344 | 326 | 1,000 | 220 | 344 | 106 | 20,684 | 5,135 |
| II | 1,320 | 373 | 640 | 181 | 680 | 192 | 892 | 228 | 1,572 | 420 | 620 | 153 | 952 | 267 | 1,100 | 280 | −148 | −13 | 18,504 | 4,857 |
| III | 1,028 | 216 | 488 | 105 | 540 | 111 | 964 | 231 | 1,504 | 342 | 548 | 135 | 956 | 207 | 1,200 | 290 | −244 | −83 | 17,380 | 4,193 |
| IV | 1,032 | 265 | 408 | 100 | 624 | 165 | 1,484 | 382 | 2,108 | 547 | 516 | 132 | 1,592 | 415 | 1,100 | 310 | 492 | 105 | 18,112 | 4,370 |

[1] Profits after taxes plus depreciation, depletion, and amortization.
[2] Gross cash flow less dividends.
[3] Seasonally adjusted quarterly totals at annual rates.
[4] Unadjusted for seasonal variation.

Sources: Securities and Exchange Commission, Federal Trade Commission, and Department of Commerce.

Chairman DOUGLAS. Thank you very much, Mr. Paradiso.

We will meet again on Thursday in this room.

Before we formally close the hearings, unless there is objection, I should like to have inserted in the proceedings the joint release from Kaiser Steel Co. and United Steelworkers of America dated last Thursday, April 25, announcing the results of the first month of operations of the long-range cost-sharing plan.

(The release referred to follows:)

[Joint release, United Steelworkers of America and Kaiser Steel—Apr. 25, 1963]

FONTANA, CALIF.

Kaiser Steel Corp. and the United Steelworkers of America today announced results of the first month of operations of the long-range sharing plan inaugurated March 1 for Fontana plant employees who are union members. Cost savings under the plan for the month of March 1963 amounted to $962,000. Under the formula provided in the plan, $312,000 will be distributed in paychecks to eligible employees.

Approximately 3,930 employees will receive payments under the plan. For the most part these employees who were not already on conventional incentive plans customary in the steel industry. Individual employees share to a greater or lesser degree in savings according to the type of work performed, and in accordance with other normal, historical, industry standards commonly used to arrived at various incentive rates.

The basic costs used as the starting point in determining savings are those experienced in the Fontana operations for the year 1961. Therefore, the payments for the first month under the plan not only reflect additional efforts of employees during that month but also reflect the effect of a companywide cost reduction program which has been underway for the past year.

Other benefits already provided by the plan include the protection afforded employees whose jobs have been eliminated by automation or changes in methods resulting in plant improvements.

(Whereupon, at 12:05 p.m., the Joint Committee recessed to reconvene at 10 a.m., Thursday, May 2, 1963.)

# STEEL PRICES, UNIT COSTS, PROFITS, AND FOREIGN COMPETITION

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THURSDAY, MAY 2, 1963

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
*Washington, D.C.*

The Joint Committee met at 10 a.m., pursuant to recess, in room 318, Old Senate Office Building, Senator Paul H. Douglas (chairman of the Joint Committee) presiding.

Present: Senators Douglas, Proxmire, Javits, Miller, and Jordan; Representatives Reuss and (Mrs.) Griffiths.

Also present: James W. Knowles, executive director; Donald A. Webster, minority economist; and Hamilton D. Gewehr, administrative clerk.

Chairman DOUGLAS. Ladies and gentlemen, it is now 10 o'clock.

I would appreciate it if we would come to order and if the witnesses would take their positions.

This is the last of the scheduled hearings on the steel industry in the context of the general economic situation, and the subject this morning is that of international competitive factors.

The presentation is to be made by Mr. Walther Lederer, who is Chief of the Balance of Payments Division of the Office of Business Economics of the Department of Commerce.

I am very glad to welcome you, Mr. Lederer. Will you proceed in your own way?

## STATEMENT OF WALTHER LEDERER, CHIEF, BALANCE OF PAYMENTS DIVISION, OFFICE OF BUSINESS ECONOMICS, DEPARTMENT OF COMMERCE; ACCOMPANIED BY MARIE T. BRADSHAW, CHIEF, MERCHANDISE TRADE SECTION, BALANCE OF PAYMENTS DIVISION, DEPARTMENT OF COMMERCE

Mr. LEDERER. Thank you.

I would like to read the first part of the statement, but then move over to present some of the statistical material at those charts over there.

My assignment is to analyze the international competitive position of the steel industry. My field of work is the balance of international payments of the United States, the compilation of the data and the analysis of the international transactions of the United States, how they affect our international reserves and how they are related to our economy. I am not an expert on steel or the steel industry, and I want to underline that.

With your permission I would like to discuss first our international trade in steel during recent years and point out some of the factors which may have affected it.

One of the major reasons why we are interested in the international competitive position of our steel industry is our concern with the balance of international payments. To evaluate the relationship between international competitiveness of our industry and the balance of payments, I would like to make a few introductory remarks:

(1) Our balance-of-payments difficulties which we have experienced in rather large measure since 1958, and to a lesser extent between 1950 and 1956, suggest that in view of our political commitments abroad the international competitiveness of our economy is not strong enough. This should imply that it is not a matter of an absolute difference in international competitiveness.

There are always people who point out that our exports substantially exceed our imports, and that is true. The problem is, however, that the difference between the two is not large enough in view of all our other expenditures, capital expenditures and political expenditures. So it is not an absolute difference that counts. It is a difference in view of all these other transactions.

(2) This competitiveness includes our ability relative to other countries to attract demand for goods and services and at the same time to attract capital for investments. It would not help the balance of payments if we had lower prices here than abroad, if this were at the expense of depressed business conditions which would make capital investments abroad more attractive than at home. Equally, however, our balance of payments would not be improved in the long run, if a rise in domestic business activity, even if it would result initially in an improvement in the capital balance, would be accompanied by rising prices which would tend to worsen our balance on goods and services.

(3) Competitive strength in international markets for goods, services, as well as capital, is not necessarily reflected in rising international reserves, nor does competitive weakness necessarily result in declining reserves. Countries which can compete successfully can use their expanding foreign exchange receipts to increase their foreign expenditures instead of accumulating reserves. Likewise, competitive weakness can result in a decline in domestic incomes and therefore imports, or, alternatively, in declining reserves. An unfavorable price development is likely to affect the economy adversely by way of its international transactions, but the effects cannot necessarily or only be judged from the changes in its external balance.

Chairman DOUGLAS. Mr. Lederer, are you reading from your paper or is this a separate statement you are making?

Mr. LEDERER. No, no. From the statement.

The potential deficit can be hidden if the economy is operating below its capacity.

(4) Competitiveness in the merchandise field is not simply a matter of price relationships. Prices are important, but, for some commodities at least, quality of the product, adaptation to specific—and often diversified and changing—demands, availability of supplies when needed and the length of delivery periods, credit terms, service facilities, trade restrictions and incentives, and all sorts of sales efforts are also major considerations. Changes in price relationships will tend to affect trade only if they are not offset by any of these other considerations.

Now I would like to mention the statistics which we have compiled and which are attached in the tables following this typewritten report, and I would like to go over to the charts here and demonstrate what we have.

First, I would like to apologize that there was not time to have these charts prepared by professional draftsmen. We have drawn them in our office, and they may look a little amateurish, but I hope they will serve their purpose.

Chairman DOUGLAS. They will be adequate. Thank you.

Mr. LEDERER. For the record, however, we will try to get them properly drawn, if you would like to have them included.

Mr. LEDERER. The first table in the back of the prepared statement shows our international trade in steel mill products from 1953 to 1962 by value and by tonnage.

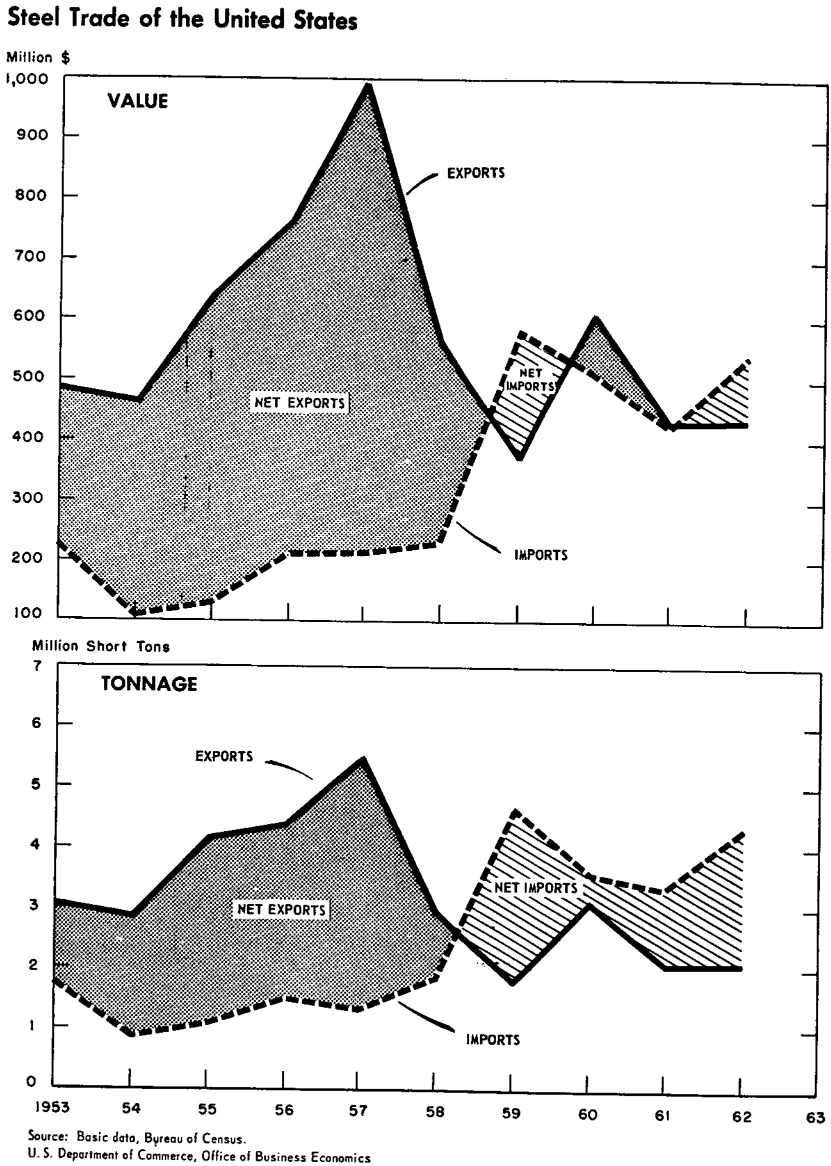
TABLE 1.—*U.S. total exports, imports, and trade balance of steel mill products* [1]

| Year | Quantity (thousand short tons) | | | Value (millions of dollars) | | |
|---|---|---|---|---|---|---|
| | Exports | Imports | Net exports or imports (−) | Exports | Imports | Net exports or imports (−) |
| 1953 | 3,064 | 1,751 | 1,313 | 484 | 225 | 259 |
| 1954 | 2,859 | 887 | 1,972 | 464 | 103 | 361 |
| 1955 | 4,193 | 1,082 | 3,111 | 639 | 130 | 509 |
| 1956 | 4,371 | 1,492 | 2,879 | 762 | 212 | 550 |
| 1957 [2] | 5,454 | 1,306 | 4,148 | 993 | 212 | 781 |
| 1958 | 2,904 | 1,837 | 1,067 | 563 | 230 | 333 |
| 1959 [3] | 1,773 | 4,627 | −2,854 | 372 | 578 | −206 |
| 1960 | 3,067 | 3,570 | −503 | 611 | 506 | 105 |
| 1961 | 2,069 | 3,309 | −1,240 | 429 | 422 | 7 |
| 1962 | 2,092 | 4,312 | −2,220 | 431 | 537 | −106 |

[1] Steel mill products subgroup classification Bureau of Census: Includes castings and forgings; excludes iron ore, pig iron, and scrap; excludes advance iron and steel manufactures.
[2] 1957 was record export year.
[3] 1959 was record steel import year.

NOTE.—Valuation:
(a) Export value is value at point of export, and includes inland freight and insurance to point of export.
(b) Import value is usually market value in the foreign country and is defined to exclude U.S. import duties, ocean freight, and marine insurance.

Source: Basic data, Bureau of Census.




Mr. LEDERER. We have here the same data on the chart and you may notice that we had a very sharp increase in exports up to 1957; that is, both in value and in tonnage; that after 1957 our exports fell while our imports increased.

The blue line is exports; the red line is imports.

And that by 1959 the balance in dollars changed from an export surplus to a small import surplus. There was, again, a reversal to an export surplus in 1960, but in this year, again, we have an import surplus.

Now, in tonnage the change to an import surplus was not interrupted. We had a import surplus in tonnage starting with 1959.

Chairman DOUGLAS. Mr. Lederer, do I understand that you are speaking of basic steel now?

Mr. LEDERER. These are only steel mill products.

Chairman DOUGLAS. What do you mean? This does not include machinery?

Mr. LEDERER. That is right; the figures do not include machinery.

Chairman DOUGLAS. Tools?

Mr. LEDERER. That is correct; the figures do not include tools.

Chairman DOUGLAS. But basic steel?

Mr. LEDERER. Basic steel.

Chairman DOUGLAS. Nonfabricated steel?

Mr. LEDERER. That is correct.

Chairman DOUGLAS. Very good.

Mr. LEDERER. The next table, however, table 2, shows trade in steel mill products; that is, in steel mill products which I have just described. You will see in the first section of that table that our exports during the last 10 years rose from 1953 to 1957 from 3.9 percent of the total exports to 5.1 percent. Then they dropped to 2.1 percent of our total exports in 1962.

The imports, on the other hand, rose from 1 percent in 1954 to 3.7 percent in the year 1959, dropped again in 1960, and came back to 3.3 percent, close to the 1959 level, in 1962. That is in percents of total imports.

The same table also shows the trade in the fabricated steel products; that is, machinery and other steel manufactures; and we have that on the next chart here where you see the trade in steel manufactures.

TABLE 2.—*Share of steel trade in total U.S. merchandise trade*

[Millions of dollars]

EXPORTS

| | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total merchandise exports [1] | 12,263 | 12,855 | 14,294 | 17,338 | 19,507 | 16,373 | 16,406 | 19,609 | 20,152 | 20,901 |
| Exports of steel mill products | 484 | 464 | 639 | 762 | 993 | 563 | 372 | 611 | 429 | 431 |
| Share of total exports (percent) | 3.9 | 3.6 | 4.5 | 4.4 | 5.1 | 3.4 | 2.3 | 3.1 | 2.1 | 2.1 |
| Exports of machinery and other steel manufactures | 4,834 | 4,824 | 5,306 | 6,249 | 6,978 | 6,339 | 6,369 | 7,068 | 7,631 | 8,582 |
| Share of total exports (percent) | 39.4 | 37.5 | 37.1 | 36.0 | 35.8 | 38.7 | 38.8 | 36.0 | 37.9 | 41.1 |

IMPORTS

| | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total merchandise imports | 10,914 | 10,292 | 11,491 | 12,774 | 13,255 | 13,255 | 15,627 | 15,017 | 14,713 | 16,397 |
| Imports of steel mill products | 225 | 103 | 130 | 212 | 212 | 230 | 578 | 506 | 422 | 537 |
| Share of total imports (percent) | 2.1 | 1.0 | 1.1 | 1.7 | 1.6 | 1.7 | 3.7 | 3.4 | 2.9 | 3.3 |
| Imports of machinery and other steel manufactures | 624 | 630 | 782 | 988 | 1,292 | 1,543 | 2,170 | 2,081 | 1,892 | 2,346 |
| Share of total imports (percent) | 5.7 | 6.1 | 6.8 | 7.7 | 9.7 | 11.6 | 13.9 | 13.9 | 12.9 | 14.3 |

[1] Excluding military grant aid shipments.

Source: Office of Business Economics, U.S. Department of Commerce, from basic data of Bureau of the Census.

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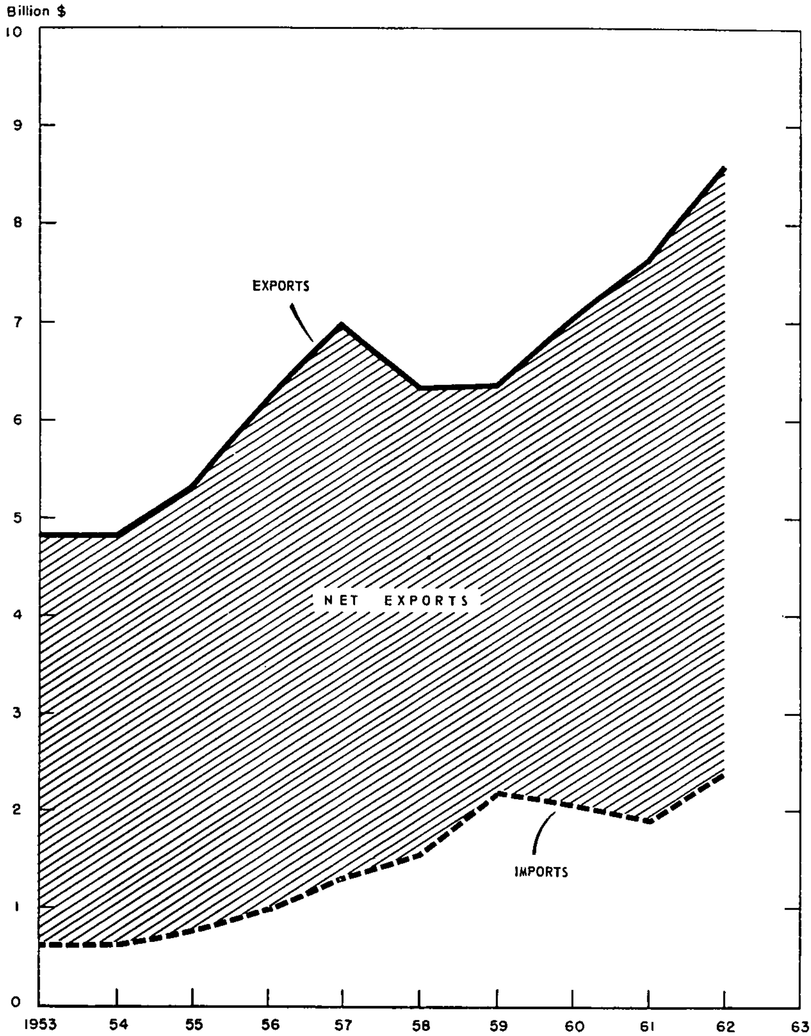
**U.S. Trade in Machinery and Other Manufactures of Steel**




Source: Basic data, Bureau of Census
U. S. Department of Commerce, Office of Business Economics

Chairman DOUGLAS. I wonder if you would indicate some of the individual items in this category, Mr. Lederer. Farm machinery?

Mr. LEDERER. Miss Bradshaw here may have some details on that. The bulk is machinery.

Chairman DOUGLAS. Would farm machinery be in this category?

Mr. LEDERER. I beg your pardon?

Chairman DOUGLAS. Farm machinery?

Mr. LEDERER. Farm machinery and other machinery.

Chairman DOUGLAS. Earthmoving machinery?

Mr. LEDERER. Yes.
Miss BRADSHAW. That is correct.
Chairman DOUGLAS. Tools?
Mr. LEDERER. That is right. Also machinery and automobiles.
Chairman DOUGLAS. Automobiles?
Mr. LEDERER. And automobile parts for assembly.
Miss BRADSHAW. Consumer durables.
Chairman DOUGLAS. Electrical machinery?
Mr. LEDERER. Yes. That is all included in that figure, and some other——

Senator PROXMIRE. How about defense equipment of various kinds?

Miss BRADSHAW. Defense equipment is included except for the grant portion of it. This figure also includes railroad equipment and other heavy transportation equipment, except aircraft.

Mr. LEDERER. The defense equipment, to the extent that we sell it, is included.

Senator PROXMIRE. To the extent we sell it?

Mr. LEDERER. To the extent that we sell it. The defense equipment that we give away under aid is not included.

Chairman DOUGLAS. Very good.

Mr. LEDERER. But all the other things that we export under aid programs are included.

Senator PROXMIRE. So that the steel that goes into the building of a dam which we are providing in a country would be included under the foreign aid program?

Mr. LEDERER. That is correct, yes.

The table shows that, roughly speaking, the percentage of machinery and other steel manufactures in the total exports remained, roughly, the same from 1953 to 1962.

Chairman DOUGLAS. But, Mr. Lederer, what about the total amounts? Will you summarize the total amounts?

Mr. LEDERER. The value?

Chairman DOUGLAS. Yes.

Mr. LEDERER. The value in 1953 was about $4.8 billion, and it rose to $8.6 billion in 1962.

Chairman DOUGLAS. Or an increase of $3.8 billion?

Mr. LEDERER. That is correct; about $4 billion, or close to $4 billion, approximately in the same proportion as total exports, so that the percentage in total exports remained about the same.

Chairman DOUGLAS. Your figures show from 39.4 in 1953 of total exports to 41.1 in 1962?

Mr. LEDERER. Yes.

Chairman DOUGLAS. Now, that may be an isolated year. It may not be typical. But on the face of the results this would indicate an increase of 1.7 percent?

Mr. LEDERER. Yes.

Chairman DOUGLAS. Among the total exports.

Mr. LEDERER. Yes, that is correct.

Chairman DOUGLAS. That may not be a typical year.

Mr. LEDERER. On the import side, the imports of steel mill products or the basic steel products showed a rising trend; 1953 was, perhaps, an exceptional year; 1954 may be a better base to start out from.

The increase was from about $100 million in 1954 to $537 million in 1962, or from 1 percent of the imports to 3.3 percent of the total imports. The imports of machinery increased from an average of around $625 million in 1953–54 to about $2.3 billion in 1962, or from about 5.7 percent of the imports to 14.3 percent.

Chairman DOUGLAS. Mr. Lederer, if my mental arithmetic is correct, this is an increase of $1.7 billion.

Mr. LEDERER. Yes.

Chairman DOUGLAS. In imports.

Mr. LEDERER. Yes.

Chairman DOUGLAS. But there has been an increase of $3.8 billion in exports?

Mr. LEDERER. Yes.

Chairman DOUGLAS. Therefore, the surplus of exports over imports has increased by $2.1 billion?

Mr. LEDERER. That is correct, yes.

The gap between the imports and the exports—except for the years 1958 and 1959—widened rather steadily throughout that period.

Chairman DOUGLAS. May I go back to make a comparison with the movement of exports and imports on machinery and steel manufactures with movement on basic steel.

You have said that there is an approximate gain of 1.8 tons, so far as the surplus of exports over imports on steel manufactures are concerned. There has been a decline from a surplus of $250 million of basic steel in 1953 to a deficit of about $100 million in 1962, or we have lost ground, so far as basic steel is concerned, of approximately $350 million from a surplus of $250 million to a deficit of $100 million; is that correct?

Mr. LEDERER. On table 1 the tonnage figures are on the left part of the table. The export surplus in 1953 was 1.3 million tons, and the import surplus in 1962 was 2.2 million tons, so we lost on the trade in steel mill products about 3.5 million tons.

Chairman DOUGLAS. The figure on table 2 is in terms of dollars?

Mr. LEDERER. That is right.

Chairman DOUGLAS. Not in terms of tons?

Mr. LEDERER. Yes.

Chairman DOUGLAS. Yes, I see, excuse me. Putting it in terms of dollars, then, we lost $350 million, did we?

Mr. LEDERER. Yes.

Chairman DOUGLAS. On basic steel, but gained $2.1 billion on fabricated steel?

Mr. LEDERER. Yes.

Chairman DOUGLAS. So that, taking the steel industry as a whole, there has been a gain of approximately $1.750 billion, in dollars, of exports as compared to imports?

Mr. LEDERER. Yes.

Chairman DOUGLAS. And may the record be changed so that in the discussion of table 2, if I have used the word "tons," that it be changed to "dollars."

Mr. BERNSTEIN. Perhaps in this connection it would be worthwhile to point out that the American Iron & Steel Institute estimates that the steel content of these indirect imports and exports of machinery and the like amounts to, in 1961, exports of 3 million tons and imports of 700,000 tons.

Chairman DOUGLAS. Surplus of 2.3?

Mr. BERNSTEIN. That is right.

Chairman DOUGLAS. Do you have any estimates as to figures for 1953?

Mr. BERNSTEIN. I do not know whether they have carried this back to 1953. I will be glad to check.

Chairman DOUGLAS. If these figures are correct, they approximately balance the deficit in basic steel.

Mr. BERNSTEIN. That is right, sir.

Mr. LEDERER. We have an estimate here in our text in the second paragraph on page 3 where we had estimated more or less on the same basis that Mr. Bernstein used: That in 1962 we may have exported somewhere around, perhaps, 4 million tons in finished products, and imported around 1 million tons in finished products, so that in 1962 we may have had, in finished products, an export surplus of, perhaps, around 3 million tons. That contrasts, then, with the import surplus on steel mill products of 2 million, so that we had an export surplus of 1 million tons, taking all these steel products together.

Chairman DOUGLAS. Then can we conclude tentatively that, to the degree that there is a problem, it is in basic steel rather than fabricated steel?

Mr. LEDERER. Well, I think that we have here a situation which is not entirely unusual in our trade; that there is, perhaps, a tendency to shift toward the more fabricated types of commodities, and that we are competing better in areas which are, perhaps, further removed from the basic commodities, perhaps because competition is more of an imperfect type than in the more basic commodities.

Chairman DOUGLAS. Let me say that over this past weekend I spent most of my time reading the mercantilist literature of the 17th and 18th centuries. I am well aware of the fact that it is impossible for every country to have a surplus of exports or imports on every commodity.

Mr. LEDERER. Now, however, we are going back to the production of the basic steel items.

Table 3 in the testimony here——

Senator JORDAN. Mr. Chairman, before we leave this, I think it might be important to point up that, even though the balances are as you have indicated, that the trend on imports of machinery and other steel manufactures is decidedly an ascending curve, going from 5.7 percent in 1953 to 14.3 percent in 1962, for a gain of 9 percent over that 10-year period.

Chairman DOUGLAS. That is true. This is a very proper question and a very important point.

I would like to ask to what degree is this caused by the increased importation of continental and British automobiles of less weight, the compact cars?

Mr. LEDERER. This, of course, is the value figure. That is a value figure.

Chairman DOUGLAS. Yes, not tonnage, I understand, but I think the Senator from Idaho referred to table 2.

Senator JORDAN. Yes, table 2.

Chairman DOUGLAS. Which is a dollar table.

Mr. LEDERER. You see here that the large rise in imports in 1959 was, in part, the rise in these automobiles. Since then the automobiles have fallen off, and the rise you see from 1961 to 1962 is, to a large extent, in other commodities.

Chairman DOUGLAS. Would you produce figures for automobiles alone and automobile parts?

(The information requested follows:)

*Imports of automobiles and parts*

[In millions]

| | Passenger cars, new | Passenger cars, used | Trucks and buses | Auto parts (including bodies) [1] | Total, autos and parts |
|---|---|---|---|---|---|
| 1953 | $42 | $1 | $1 | $9 | $53 |
| 1954 | 45 | 1 | 1 | 6 | 53 |
| 1955 | 69 | 1 | 2 | 13 | 85 |
| 1956 | 127 | 2 | 4 | 12 | 145 |
| 1957 | 302 | 6 | 12 | 19 | 339 |
| 1958 | 488 | 16 | 21 | 30 | 555 |
| 1959 | 735 | 32 | 27 | 50 | 844 |
| 1960 | 514 | 30 | 30 | 54 | 628 |
| 1961 | 307 | 11 | 13 | 48 | 379 |
| 1962 | 422 | 11 | 17 | 66 | 516 |

[1] Excludes tires and tubes.

Source: Office of Business Economics, U.S. Department of Commerce, from basic data of Bureau of Census.

Mr. LEDERER. The automobile imports, I am told, in 1962, were about half a billion dollars.

Chairman DOUGLAS. And in 1958 or 1957?

Mr. LEDERER. About $550 million in 1958, I think.

Chairman DOUGLAS. That was one-third of the total imports of machinery at that time?

Mr. LEDERER. At what time?

Chairman DOUGLAS. In 1958, the total imports of machinery and other steel manufactures, $1.5 billion; and, if there was $550 million of these automobiles, that would be at least one-third, or more than one-third.

Mr. LEDERER. In 1958, the imports were 550 for autos. In 1959, the autos went up to 840.

Chairman DOUGLAS. That is about one-third?

Mr. LEDERER. Yes.

Chairman DOUGLAS. More than one-third.

Mr. LEDERER. But now they are down to half a billion.

In table 3, the next table, we have imports of steel mill products.

Senator PROXMIRE. Let me just ask one more question on table 2.

Mr. LEDERER. Yes?

Senator PROXMIRE. Why do you exclude airplanes?

Mr. LEDERER. Because, essentially, they are not made out of steel. There is very little steel in them.

Mr. PROXMIRE. But, to the extent that you do use steel, why not include it? Is it too small to be significant, in which case why exclude it? I notice you say "including machinery and vehicles other than airplanes."

Mr. LEDERER. Yes.

Senator PROXMIRE. "Of major steel manufacture."

Mr. LEDERER. Yes.

Well, you see, we do not have, you cannot have, in fact, trade figures on items which are primarily steel as against those which are something different.

Senator PROXMIRE. I see. In other words, it would not be significant if you had it?

Mr. LEDERER. No, but all these figures obviously include other materials as well as steel. They are only the kind of commodities where steel seems to be important, but obviously, if you import automobiles, there are many other materials in them besides steel, and the same is true of many of our exports.

But airplanes probably do not have too much steel in them.

In table 3 we give the percentage of the imports and exports of total domestic new supply, total domestic shipments of steel, and you can see that the imports went up from something around 1.8 and 2.1 percent in 1952 and 1953, respectively, to about 5.6 percent in 1962, while exports fell from about 5.8 percent in 1952 to about 2.9 percent in 1962.

TABLE 3.—*Percent share of foreign steel trade in total U.S. industry shipments and domestic steel supply*

| | Imports as percent of total domestic new supply [1] | Exports as percent of industry shipments | | Imports as percent of total domestic new supply [1] | Exports as percent of industry shipments |
|---|---|---|---|---|---|
| 1952 | 1.8 | 5.8 | 1958 | 2.9 | 4.7 |
| 1953 | 2.1 | 3.6 | 1959 | 6.1 | 2.4 |
| 1954 | 1.3 | 4.2 | 1960 | 4.7 | 4.2 |
| 1955 | 1.2 | 4.6 | 1961 | 4.7 | 3.0 |
| 1956 | 1.7 | 5.2 | 1962 | 5.6 | 2.9 |
| 1957 | 1.5 | 6.7 | | | |

[1] Represents apparent consumption, not taking into account changes in consumers' inventories; made up of domestic industry shipments of finished steel, less exports, plus imports, in tons.

Source: Business and Defense Services Administration, U.S. Department of Commerce.

Mr. LEDERER. The rise in U.S. imports and the decline in U.S. exports of steel mill products would not have been possible without the large increase in foreign steel production and steelmaking capacity.

In table 4 of the testimony we show the amount of steel produced over the last 10 years in the United States, the rest of the free world, and the world as a whole. We have that here on this chart.

The bottom line gives the total production in the United States from 1952 to 1962, and you can see that the trend in output was more or less flat. In the rest of the free world we have an increase from 88 million tons to about 175 million tons.

TABLE 4.—*U.S. and world steel production* [1]

[In millions of short tons]

| | United States | Free world outside United States | Communist bloc | Total, world | U.S. share |
|---|---|---|---|---|---|
| | | | | | *Percent* |
| 1952 | 93 | 88 | 52 | 233 | 39.9 |
| 1953 | 112 | 89 | 58 | 259 | 43.2 |
| 1954 | 88 | 97 | 62 | 247 | 35.6 |
| 1955 | 117 | 112 | 68 | 297 | 39.4 |
| 1956 | 115 | 122 | 75 | 312 | 36.9 |
| 1957 | 113 | 129 | 80 | 322 | 35.1 |
| 1958 | 85 | 125 | 92 | 302 | 28.1 |
| 1959 | 93 | 141 | 102 | 336 | 27.7 |
| 1960 | 99 | 165 | 116 | 380 | 26.1 |
| 1961 | 98 | 175 | 120 | 393 | 24.9 |
| 1962 | 98 | 175 | 126 | 399 | 24.6 |

[1] Primary steel—ingots and castings.

Sources: United Nations; American Iron & Steel Institute.

Chairman DOUGLAS. Are you speaking of the free world?

Mr. LEDERER. The free world, that is correct.

Chairman DOUGLAS. Am I correct that your figures show an increase from 88——

Mr. LEDERER. To 175.

Chairman DOUGLAS. To 175?

Mr. LEDERER. Yes.

Chairman DOUGLAS. Or approximately doubling?

Mr. LEDERER. That is right.

The Communist bloc here increased from about 52 million in 1952 to 126 million in 1962, and the total world output increased from 233 in 1952 to close to 400 million in 1962.

Chairman DOUGLAS. In other words, while production in the United States has remained relatively constant, production in the free world outside of the United States has doubled. Production in the Communist world has increased by about 2 to 2.5 times what it was?

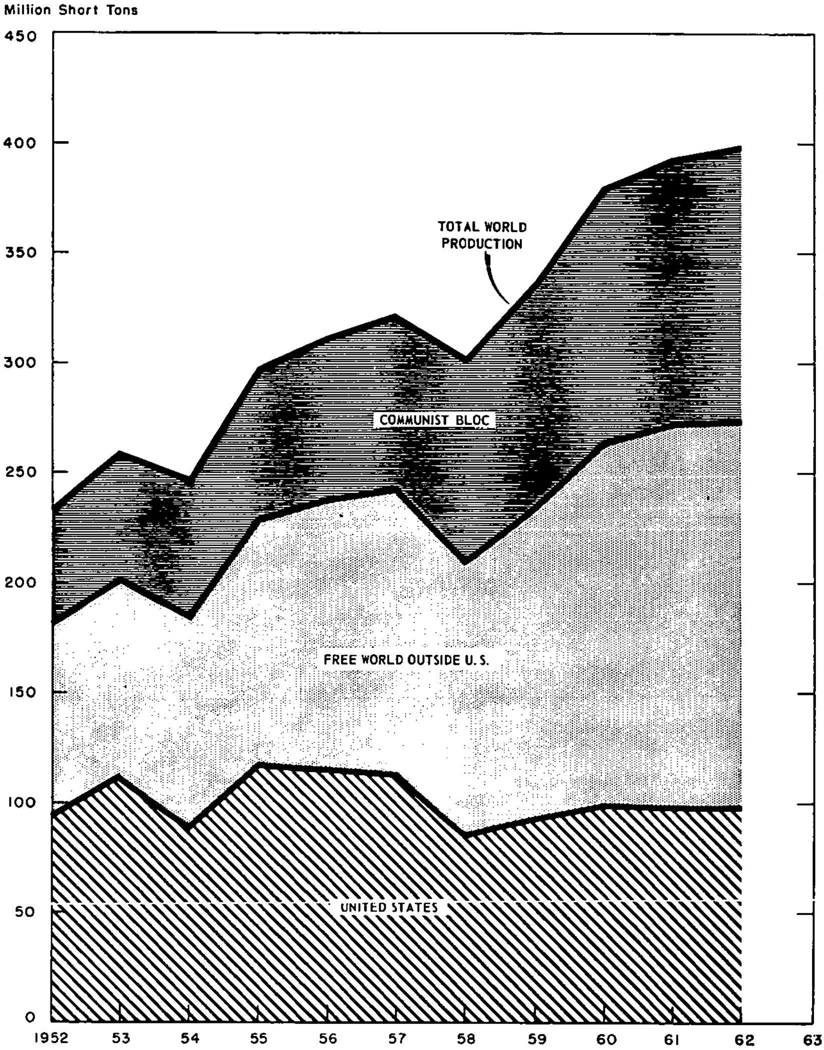
Mr. LEDERER. Yes.

Senator PROXMIRE. Is there any significance in the fact that the free world production did not increase in 1962, and production did increase in the Communist bloc—that it was stable? Does this mean that free world production is about to level off, or was there some reason why there was no increase in 1962 over 1961?

Mr. LEDERER. There is in Europe, as well as in Japan, a slowdown, or there has been a slowdown in their investment activity, and that may account for that flattening out. Whether this is a permanent feature or not, that is hard to tell. The rise in output probably will be less than it was over the last 10 years, but it may not always be as low as it was in that particular year 1962.

It is likely to go up again, perhaps not at the same rate.

## U.S. and World Steel Production[1]




1/ Primary Steel Ingots and Castings.

Source: 1952-54, American Metal Market, October 26, 1957; 1955-62, "Steel" Magazine, March 25, 1963--based on data compiled by American Iron and Steel Institute.

U.S. Department of Commerce, Office of Business Economics

Senator PROXMIRE. Your final column shows that the share of the United States has, therefore, decreased from 39.9 percent, or virtually 40 percent, to 24.6 percent, or virtually 25 percent—from two-fifths to one-quarter, is that correct?

Mr. LEDERER. Yes.

Senator PROXMIRE. These are figures on production, however?

Mr. LEDERER. These are figures on production, and, what is more, they are figures on tonnage, and are not necessarily to be taken as an indication of the quality of the steel.

Senator PROXMIRE. They are not figures on capacity?

Mr. LEDERER. No.

Senator PROXMIRE. Do you have any estimate on capacity? We hear that the capacity in the steel industry now is approximately 150 million tons.

Mr. LEDERER. I saw some figures for the European Coal and Steel Community. Their capacity for 1962 is estimated at over 90 million tons, I believe, for 1963, but I do not have figures for the capacity in other countries.

Senator PROXMIRE. How about our own capacity in this country?

Mr. LEDERER. I think the Senator said that it is 150 million tons.

Senator PROXMIRE. That was a question?

Mr. LEDERER. I do not have precise figures. These are estimates which have been mentioned, but I could not vouch for them.

Senator JORDAN. Mr. Chairman, I think a significant figure here is that the Communist bloc countries in 1952 apparently produced about 23 percent of the total world output. That has increased, if my figures are correct, in 1962 to about 32.5 percent.

Chairman DOUGLAS. Yes, that is very significant. On the basis of capacity, however, we would not come off as badly, would we?

Mr. LEDERER. No, probably not; because the foreign capacity, all in all, is better utilized than our own.

Chairman DOUGLAS. Do you have any material on that, the degree to which foreign capacity is utilized as compared to the American steel industry?

Mr. LEDERER. I do not now. Not at the moment. If we can find something like that, we will put it into the record.

Chairman DOUGLAS. I think this is very important, because it obviously deals with matters of cost.

(The information requested follows:)

*Steel capacity*[1] *and production, 1953–62*

[Million short tons]

| | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 [2] |
|---|---|---|---|---|---|---|---|---|---|---|
| United States: | | | | | | | | | | |
| Capacity | 120.9 | 125.1 | 127.1 | 130.9 | 137.1 | 144.2 | 148.1 | 149.8 | [3] 152.0 | [3] 154.0 |
| Production | 111.6 | 88.3 | 117.0 | 115.2 | 112.7 | 85.3 | 93.4 | 99.3 | 98.0 | 98.3 |
| Operating rate percent | 92.3 | 70.6 | 92.1 | 88.0 | 82.2 | 59.2 | 63.1 | 66.3 | 64.5 | 63.8 |
| European Coal and Steel Community: [4] | | | | | | | | | | |
| Capacity | 54.0 | 56.9 | 60.6 | 65.1 | 70.1 | 74.6 | 77.7 | 84.0 | 88.1 | 91.7 |
| Production | 43.6 | 48.3 | 57.9 | 62.5 | 65.9 | 63.9 | 69.6 | 80.3 | 80.7 | 80.4 |
| Operating rate percent | 80.7 | 84.9 | 95.5 | 96.0 | 94.0 | 85.7 | 89.6 | 95.6 | 91.6 | 87.7 |
| United Kingdom: | | | | | | | | | | |
| Capacity | 20.2 | 20.7 | 22.2 | 23.9 | 25.0 | 26.3 | 27.4 | 28.9 | 29.7 | 31.1 |
| Production | 19.7 | 20.7 | 22.2 | 23.1 | 24.3 | 21.9 | 22.6 | 27.2 | 24.7 | 23.2 |
| Operating rate percent | 97.5 | 100.0 | 100.0 | 96.7 | 97.2 | 83.3 | 82.5 | 94.1 | 83.2 | 74.6 |
| United Kingdom and European Coal and Steel Community: | | | | | | | | | | |
| Capacity | 74.2 | 77.6 | 82.8 | 89.0 | 95.1 | 100.9 | 105.1 | 112.9 | 117.8 | 122.8 |
| Production | 63.3 | 69.0 | 80.1 | 85.6 | 90.2 | 85.8 | 92.2 | 107.5 | 105.4 | 103.6 |
| Operating rate percent | 85.3 | 88.9 | 96.7 | 96.2 | 94.8 | 85.0 | 87.7 | 95.2 | 89.5 | 84.4 |
| Canada: | | | | | | | | | | |
| Capacity | 4.4 | 5.1 | 5.4 | 5.7 | 6.1 | 6.5 | 7.0 | 7.5 | 8.1 | 8.4 |
| Production | 4.1 | 3.2 | 4.5 | 5.3 | 5.0 | 4.3 | 5.8 | 5.7 | 6.3 | 7.2 |
| Operating rate percent | 93.2 | 62.7 | 83.3 | 93.0 | 82.0 | 66.2 | 82.9 | 76.0 | 77.8 | 85.7 |
| Japan: | | | | | | | | | | |
| Capacity | (5) | (5) | (5) | (5) | 19.7 | 20.0 | 20.3 | 25.3 | 32.0 | 36.8 |
| Production | 8.4 | 8.5 | 10.4 | 12.2 | 13.9 | 13.4 | 18.3 | 24.4 | 31.2 | 30.4 |
| Operating rate percent | (5) | (5) | (5) | (5) | 70.6 | 67.0 | 90.1 | 96.4 | 97.5 | 82.6 |

[1] Capacity figures adjusted to an average annual basis.
[2] Most 1962 capacity figures are provisional estimates.
[3] Official figures for steel capacity in the United States have not been published since 1960. Estimates for 1961 and 1962 (Office of Business Economics, Department of Commerce) are based on assumption of 1½ percent annual growth since 1960.
[4] Consists of Belgium, Luxembourg, Western Germany, France, Italy, and Netherlands.
[5] Not available.

Sources:

(*a*) Capacity: United States, 1953–60, from American Iron and Steel Institute, 1961 and 1962 from Office of Business Economics (see footnote 3, above). ECSC, from 1958–62 annual reports—"Investment in the Community—Coal Mining and Iron and Steel Industries." United Kingdom, from Bureau of International Commerce, U.S. Department of Commerce, based on (1) annual reports of the OECD: "The Iron and Steel Industry in Europe," (2) estimates appearing in the Economist (London), Financial Times (London), British Iron and Steel Board; 1962 estimates from Foreign Service Despatch, January 1963. Canada, from Bureau of International Commerce, U.S. Department of Commerce, based on Mineral Information Bulletin (MR-59) "The Canadian Iron Ore Industry in 1961", published by the Canadian Department of Mines and Technical Surveys of the Dominion Bureau of Statisitcs; 1962 from Montreal Gazette, annual commercial review, based on estimate of the Chairman of the Board, Steel Company of Canada. Japan, Japan Iron and Steel Federation, Tokyo (as obtained from Yawata Iron & Steel Co. of Japan, New York Office).

(*b*) Production: United States and foreign countries for 1955–62 from Steel magazine, Mar. 25, 1963; for 1953–55 from AISI Annual Statistical Report, 1960.

Mr. LEDERER. The data in table 5 show our steel trade with Europe. The interesting thing on this chart is that, up to 1960, steel production in Europe increased a little faster than European industrial production. The European industrial production represented here by the green line is based on the OECD estimates. The steel production increased faster up to 1960, but, beginning in 1960 it fell off, although industrial production in Europe continued to rise.

This is a phenomenon that is probably due to the very large investments which were taking place in Europe in the earlier years. In the more recent years the increase in European industrial production is probably somewhat more in the consumer goods industries, and, consequently, the demand for steel is not quite as high as it used to be several years ago.

TABLE 5.—*U.S. steel trade with Europe, and U.S. and European industrial production and steel output, 1953–62* [1]

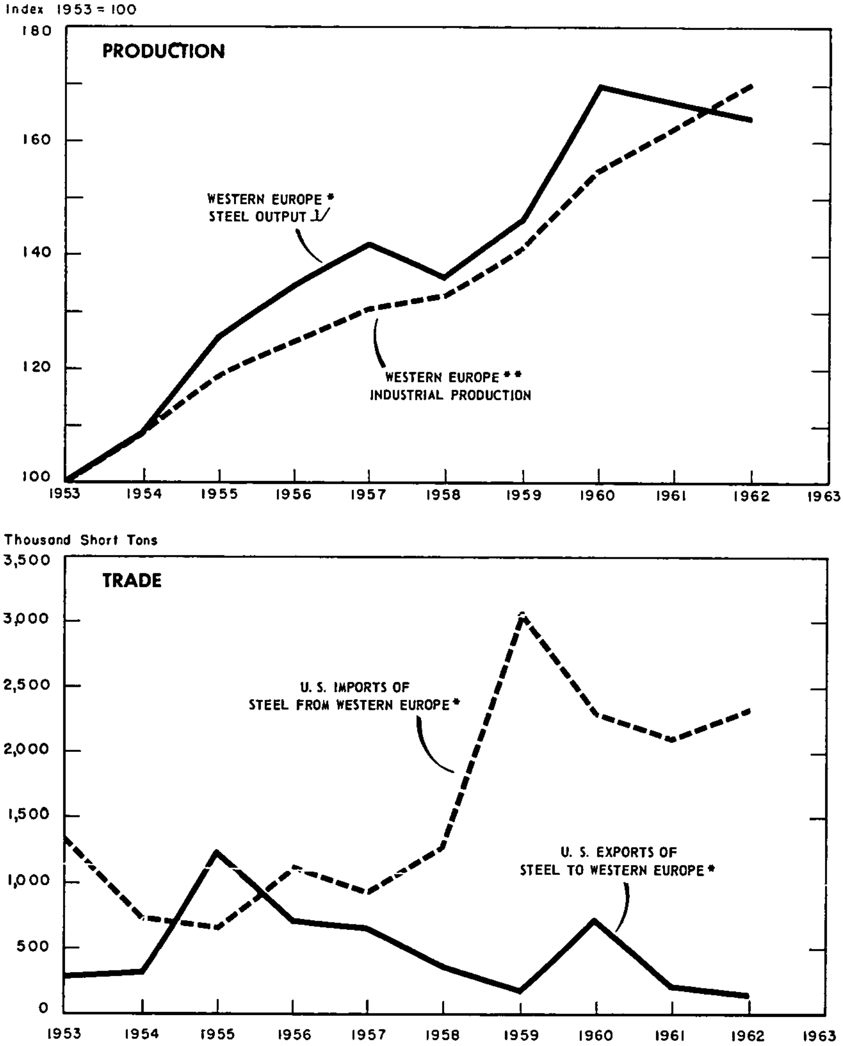
[Index numbers, 1953=100]

| Year | Western Europe production | | U.S. production | | U.S. trade in steel with Western Europe [1] | |
|---|---|---|---|---|---|---|
| | Steel ingots and castings [2] | Total industrial productions [3] | Steel ingots and castings | Total industrial production | Exports to | Imports from |
| 1953 | 100 | 100 | 100 | 100 | 100 | 100 |
| 1954 | 109 | 109 | 79 | 94 | 111 | 53 |
| 1955 | 126 | 119 | 104 | 106 | 430 | 49 |
| 1956 | 135 | 125 | 103 | 109 | 244 | 84 |
| 1957 | 142 | 131 | 101 | 110 | 230 | 70 |
| 1958 | 136 | 133 | 76 | 102 | 122 | 95 |
| 1959 | 146 | 141 | 83 | 116 | 61 | 231 |
| 1960 | 170 | 155 | 88 | 119 | 250 | 172 |
| 1961 | 167 | 162 | 87 | 120 | 71 | 159 |
| 1962 | 164 | 170 | 87 | 129 | 51 | 175 |

[1] Steel production and trade data based on tonnage figures.
[2] United Kingdom and Common Market countries combined.
[3] Office for Economic Cooperation and Development—Europe.

Sources: Office of Business Economics, U.S. Department of Commerce, based on data from Federal Reserve Board, Bureau of Census, Organization for Economic Cooperation and Development, and American Iron & Steel Institute.

**WESTERN EUROPE—Industrial Production, Steel Output, and Steel Trade With United States, 1953-1962**




* Common Market & U. K.

** Western Europe excluding Finland & Yugoslavia

1/ Production of Ingots and Castings

Source: Production - American Iron and Steel Institute, OECD Statistics, Trade - American Iron and Steel Institute, from basic data of Bureau of Census

U.S. Department of Commerce, Office of Business Economics

Mr. LEDERER. That has some bearing on our own steel situation. The lower part of the chart shows the imports of the United States from Europe. You can see that these imports have, all in all, a rising trend. You can see also that the big peak here in 1959 was at the time of our steel strike. But, otherwise, you can find that when Europe had excess capacity—for which I do not have any figures but one can see that in periods like those from 1957 to, roughly, 1960, there must have been some excess capacity in Europe, one could get a rough measure of it by connecting a line between the two peaks of 1957 and 1960—that during that period when Europe, presumably, had some excess capacity, our imports increased.

In 1959, the steel strike here and the anticipations of the strike created the demand, but the ability to meet that demand depended upon the excess capacity which, apparently, existed in Europe at that time. If they would not have had that excess capacity, our imports would not have increased that much.

You can find a similar phenomenon in the last years. Here, too, European mills must have had some excess capacity and have some excess capacity now. Since they produce less now than they actually did produce in 1960, they, obviously, could produce more, and this excess capacity probably has, again, contributed to the rise in our imports and to the fact that our imports in the last few years from 1960 on, were very much higher than what they had been earlier, before 1959.

On the other hand, if you look at our exports—that is represented by the lower line on this chart—you find that our exports to Europe have a declining trend.

Even in that declining trend, however, you find some peaks and valleys, and the peaks, for instance, in 1960, coincide with the rather high demand for steel in Europe When the demand is more slack, then, apparently, our exports fall down.

Chairman DOUGLAS. Mr. Lederer, to keep the record straight, you are now talking about basic steel; is that correct?

Mr. LEDERER. That is right.

Chairman DOUGLAS. You are not talking about fabricated steel products?

Mr. LEDERER. That is correct.

Representative REUSS. Mr. Chairman?

Chairman DOUGLAS. Congressman Reuss.

Representative REUSS. Mr. Lederer, could you insert in the record a table or other material indicating the U.S. tariff structure on steel imports and the tariff structures of the leading European trading countries, including the Common Market, on steel imports?

You might include the leading industrialized countries of the world there, Japan, Canada.

Mr. LEDERER. We shall try to get that answer.

(The requested material follows:)

Range of U. S. Import Duties according to SITC Codes and Schedule A Numbers

| SITC | SCHEDULE A | PRODUCT |
|---|---|---|
| 672.5 | 6022100 - 6022524<br>6042010 - 6042854 | Blooms, billets, slabs, etc. |
| | Duty: 1/8¢ per lb. up to 10½% Ad. Val. | |
| 673.1 | 6036300 - 6036934 | Wire rods. |
| | Duty: Not tempered or treated 0.11¢ lb. to 0.25¢ lb.; tempered or treated 0.225¢ lb. to 0.375¢ lb.; plus 1/16¢ lb. additional if cold finished, plus 1/10¢ lb. if coated with metal. | |
| 673.2 | 6005000 - 6005700<br>6008000 - 6008824<br>6010050 - 6010424<br>6044000 - 6044804 | Bars and Rods (excluding wire rods) etc. Hollow mining drill steel. |
| | Duty: 0.11¢ lb. up to 12½% Ad. Val.; plus 1/16¢ lb. additional if cold finished; plus 1/10¢ lb. if coated with metal. | |
| 673.4 | 6081020 - 6081064<br>6081300 - 6081304 | Angles, shapes, etc. 80 mm or more and sheet piling. |
| | Duty: 1/10¢ lb. up to 7½% Ad. Val. | |
| 673.5 | 6081040 - 6081064 | Angles, shapes, etc. less than 80 mm. |
| | Duty: 1/10¢ lb. up to 7½% Ad. Val. | |
| 674.1 | 6038000 - 6038034<br>6038300 - 6038334<br>6038500 - 6038534 | Heavy plates and sheets, etc. more than 4.75 mm in thickness. |
| | Duty: 0.175¢ lb. up to 9% Ad. Val.; plus 1/10¢ lb. additional if cold rolled; plus 1/10¢ lb. additional if coated with metal. | |
| 674.2 | 6038200 - 6038234<br>6038400 - 6038434<br>6057000 - 6057634 | Medium plates and sheets, etc. 3 mm - 4.75 mm in thickness. |
| | Duty: 1/8¢ lb. up to 11% Ad. Val.; plus 1/10¢ lb. additional if cold rolled; plus 1/10¢ lb. additional if coated with metal. | |

Range of U.S. Import Duties according to SITC Codes
and Schedule A Numbers

| SITC | SCHEDULE A | PRODUCT |
|---|---|---|
| 674.3 | 6056000 - 6056834<br>6057000 - 6057634 | Plates and sheets less than 3 mm in thickness, uncoated. |

Duty: 1/8¢ lb. up to 11% Ad. Val.; plus 1/10¢ lb. additional if cold rolled.

| | | |
|---|---|---|
| 674.7 | 6060100 - 6060300 | Tinned plates and sheets. |

Duty: 0.8¢ lb. up to 1¢ lb.

| | | |
|---|---|---|
| 674.8 | 6056000 - 6056834<br>6057000 - 6057634 | Plates and sheets less than 3 mm in thickness - coated. |

Duty: 1/8¢ lb. up to 11% Ad. Val.; plus 1/10¢ lb. additional for coating with metal.

| | | |
|---|---|---|
| 675 | 6095100 - 6095824<br>6110500 - 6111924 | Hoops and strip. |

Duty: 0.07¢ lb. up to 0.09¢ lb. plus 11% Ad. Val.; plus 1/10¢ lb. additional if coated with metal.

| | | |
|---|---|---|
| 676 | 6090100 - 6090504 | Rails and railway track construction material. |

Duty: 1/20¢ lb. up to 1/8¢ lb.

| | | |
|---|---|---|
| 677 | 6094000 - 6094904 | Wire (excluding wire rods). |

Duty: Baling wire 1/4¢ lb.; other wire 0.3¢ lb. up to 8½% Ad. Val.; plus 1/10¢ lb. additional if coated with metal.

| | | |
|---|---|---|
| 678.2<br>678.3 | 6092030 - 6092805 | Tubes and pipe, seamless and welded. |

Duty: 0.03¢ lb. up to 13½% Ad. Val.

In addition to above duties, alloy steels are subject to an additional duty of 4% Ad. Val.,plus extras for contained Chromium, Molybdenum, Tungsten and Vanadium content.

USCOMM-DC
April 24, 1963

Steel Tariffs of Foreign Countries

COMPARISON OF FREE WORLD IRON AND STEEL TARIFF OF PRINCIPAL IMPORTING COUNTRIES

| COUNTRY | Import Control | Blooms, Billets Slabs&Sheet Bar | Wire Rods | Bars & Rods (excluding Wire Rods) | Angles, Shapes Sheet Piling 80 mm. or more | Angles, Shapes, Sheet Piling Less than 80 mm. | Heavy Plates More than 4.75 mm. | Med. Plates & Sheets 3 mm. to 4.75 mm. | Sheets Less than 3 mm. | Tinned Plates & Sheets | Sheets, less than 3 mm. (Coated) | Hoop and Strip | Rails&Railway Track Material | Wire | Tubes & Pipe (Seamless) | Tubes & Pipe (Welded) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SITC No. | | 672.5 | 673.1 | 673.2 | 673.4 | 673.5 | 674.1 | 674.2 | 674.3 | 674.7 | 674.8 | 675 | 676 | 677 | 678.2 | 678.3 |
| Australia | None | | | | | | | | | | | | | | | |
| Commonwealth Preferential | | $2.69 p.t. plus 5% A.V. up to 17½% A.V. | $3.70 p.t. plus 5% A.V. | $5.60 p.t. | $5.60 p.t. | $5.60 p.t. | $5.38 p.t. | $5.38 p.t. | $5.38 p.t. | Free | $5.38 p.t. | Free to 10% A.V. | $3.36 p.t. to 35% A.V. | 5 to 15% A.V. | 10% A.V. | 22½% A.V. |
| Most Favored Nations | | $7.84 p.t.plus 5% A.V. up to 32½% A.V. | $8.96 p.t. plus 10% A.V. | $11.20 p.t. | $11.20 p.t. | $11.20 p.t. | $7.84 p.t. plus 17½%A.V. | $7.84 p.t. plus 17½%AV | $7.84 p.t. plus 17½%AV | 7½% A.V. | $7.84 p.t. plus 17½%AV | $7.84 p.t.to $7.84 p.t. plus 10%A.V. | $8.96 p.t. to 62½%A.V. | $13.44 p.t. plus 5% A.V. up to 35%A.V. | 35% A.V. | 45% A.V. |
| General | | $7.84 p.t.plus 10% A.V.up to 37½% A.V. | $8.96 p.t. plus 10%A.V. | $13.44 p.t. | $13.44 p.t. | $13.44 p.t. | $7.84 p.t. plus 30%A.V. | $7.84 p.t. plus 30%A.V. | $7.84 p.T. plus 30%A.V. | 7½% A.V. | $7.84 p.t. plus 30%AV | $7.84 p.t.to $7.84 p.t. plus 20%A.V. | $11.20 p.t. to 62½%AV | $13.44 p.t. plus 15% A.V. up to 60%A.V. | 35% A.V. | 50% A.V. |
| Austria | None | 9 to 10% A.V. | 13% A.V. | 12% A.V. | 12 to 13%A.V. | 12 to 13% A.V. | 15 to 17%A.V. | 14 to 16%AV | Free to 16% A.V. | 12% A.V. | 18% A.V. | 14 to 16%AV | 10 to 12% A.V. | 16% A.V. | 25% A.V. | 25% A.V. |

EFTA Countries get 50% reduction from above tariff rates.

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Belgium General | None | 3.6 to 4.5%A.V. | 4.5% to 6% A.V. | 4.5 to 6%AV | 4.5 to 10.5% A. V. | 4.5 to 10.5% A.V. | 5 to 6% A.V. | 4.5 to 6%AV | 5 to 12%AV | 6% A.V. | 6% A.V. | 5.2 to 8%AV | 6 to 7.6% A.V. | 5.2% A.V. | 5.5 to 14% A.V. | 5.5 to 14% A.V. |
| ECM | | Free to 1.5%AV | Free to 2% A.V. | Free to 2% A.V. | Free to 7.5% A.V. | Free to 7.5% A.V. | Free | Free to 3% A.V. | Free to 3%AV | Free | Free | Free to 3% A.V. | Free to 3% A.V. | 2% A.V. | 1.5 to 7.5%A.V. | 1.5 to 7.5% A.V. |

Belgium has a 6 percent basic tax in addition to above rates.

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brazil | * | 50-60% A.V. | 40 to 60% A.V. | 40 to 60% A.V. | 50 to 60%A.V. | 50 to 60%A.V. | 20 to 60%A.V. | 20 to 60%AV | 20 to 60%AV | 20% A.V. | 30-50%AV | 50-60%AV | 10%-60%AV | 20-60%A.V. | 20-60%A.V. | 20-60% A.V. |

*Import restrictions are designed to protect and promote domestic production, to control the balance of payments of position of Brazil, and to earn revenue. In addition, imports are affected by a number of other measures which include: foreign exchange controls, such as the prior deposit requirement, differences in treatment of goods based on their essentiality and on their origin, and limitations on the availability of exchange; documentation and procedural requirements, such as shipping documents, customs clearance documents, and special documents; other fees or taxes; such as consular fees, consumption taxes, customs surtax, port improvement tax. merchant marine improvement tax and warehousing fees. The primary restrictive mechanism is the exchange controls which, further, in some cases are applied in a discriminatory manner, to the detriment of U.S. interests.

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Canada | None | | | | | | | | | | | | | | | |
| British Preferential | | Free | Free | H.R.5% A.V. C.R.5% A.V. | Free to 5%A.V. | Free to 5%A.V. | 5% A.V. | 5% A.V. | 5% A.V. | 10% A.V. | 7½% A.V. | H.R.5% A.V. C.R.5% A.V. | 5% A.V. | 15% A.V. | Free | Free |
| Most Favored Nations | | 5% A.V. | Free | H.R.10% A.V. C.R.15% A.V. | Free to 10%AV | Free to 10%A.V. | 10% A.V. | 10% A.V. | 10% A.V. | 15% A.V. | 15% A.V. | H.R.10% A.V. C.R.20% A.V. | 10% A.V. | 15% A.V. | 5% A. V. | 7½% A.V. |
| General Tariff | | 10% A.V. | $5.00 p.t. | H.R.20%A.V. C.R.25%A.V. | 10 to 20% AV | 10 to 20% A.V. | 20% A.V. | 20% A.V. | 20% A.V. | 25% A.V. | 25% A.V. | H.R.15% A.V. C.R.25% A.V. | 20% A.V. | 20% A.V. | 10% A.V. | 30% A.V. (Expires 6-30-63) |
| Chile | Limited | Not permitted | Prohibited | 30 to 200%AV 1/ | 30% A.V. 1/ | 30% A.V. 1/ | Prohibited | Prohibited | Prohibited | 30 to 100% A.V. 2/ | 100% A.V. 2/ | 30 to 50%A.V. 1&2/ | Prohibited | 30 to 100% A.V. 1/ | 30% A.V. 1/ | 30% A.V. 1/ |

1/ Import deposit payment of 100% of the CIF value of import required. These deposits retained by the Central Bank of Chile for 90 days.
2/ Import deposit payment of 1000% of the CIF value of import required. These deposits retained by the Central Bank of Chile for 90 days.

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Denmark | None | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | 5% A. V. | 6% A.V. | 6% A.V. |

EFTA Countries get 50% reduction from above tariff rates.

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Egypt | Products must be imported thru specified companies | 5 to 10% A.V. | 5 to 20%A.V. | 5 to 20%AV | 5 to 20%A.V. | 5 to 20%A.V. | 5 to 10%A.V. | 10% A.V. | 10% A.V. | 5% A.V. | 10% A.V. | 5 to 20%A.V. | 20% A.V. | 20 to 30%A.V. | 20% A.V. | 20% A.V. |

In addition there is a statistic duty of 1% A.V. on all products.
There is also a pavement duty of 2% of the duty.

98133 O—63——23

COMPARISON OF FREE WORLD IRON AND STEEL TARIFFS OF PRINCIPAL IMPORTING COUNTRIES

PRODUCTS

| COUNTRY | Import Control | Blooms, Billets Slabs&Sheet Bar | Wire Rods | Bars & Rods (excluding (Wire Rods) | Angles, Shapes, Sheet Piling 80 mm.or more | Angles, Shapes, Sheet Piling Less than 80 mm. | Heavy Plates More than 4.75 mm. | Med.Plates & Sheets 3 mm. to 4.75 mm. | Sheets Less than 3 mm. | Tinned Plates & Sheets | Sheets,Less than 3 mm. (Coated) | Hoop and Strip | Rails&Rail-way Track Material | Wire | Tubes& Pipe Seam. | Tubes & Pipe (Welded) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SITC No. | | 672.5 | 673.1 | 673.2 | 673.4 | 673.5 | 674.1 | 674.2 | 674.3 | 674.7 | 674.8 | 675 | 676 | 677 | 678.2 | 678.3 |
| **France** | | | | | | | | | | | | | | | | |
| General | None | 5 to 8% A.V. | 6 to 7% A.V. | 10% A.V. | 10% A.V. | 6% A. V. | 6 to 12% A.V. | 6 to 7% A.V. | 6 to 7% A.V. | 7% A.V. | 7% A. V. | 7 to 16.2%A.V. | 7 to 13%A.V. | 13.8 to 14.4% A.V. | 14.7 to 16.5 % A.V. | 14.7 to 16.5%.A.V. |
| E C M | | Free to 9.5% A.V. | Free to 12.5% A.V. | Free to 12.5% A.V. | Free to 9.5% A.V. | Free to 9.5% AV | Free | Free to 11% A.V. | Free to 11% A.V. | Free | Free | Free to 11.5% A.V. | Free to 11% A.V. | 9.5 to 10% A.V. | 9.5 to 11% A.V. | 9.5 to 11% A.V. |
| **West Germany** | | | | | | | | | | | | | | | | |
| General | None | 4 to 9% A.V. | 6% A.V. | 5 to 10%A.V. | 5 to 6% A.V. | 5 to 6% A.V. | 5 to 10%A.V. | 5 to 10% A.V. | 5 to 10%A.V. | 6% A.V. | 9% A.V. | 8%*to 13%A.V. | 6 to 12%**AV | 8 to 9%AV*** | 11 to 12% A.V. | 11.2% A.V.** |
| E C M | | Free | Free to 6% A.V. | Free to 7% A.V. | Free to 8½% A.V. | Free to 8½% A.V. | Free | Free to 7% A.V. | Free to 7% A.V. | Free | Free | Free to 9.5% A.V. | Free to 7% A.V. | 2.5 to 7% A.V. | 1.5 to 7% A.V. | 4.0 to 7% A.V. |
| * Moving to 10% on July 1, 1963<br>** Moving up July 1, 1963<br>*** Moving toward 10% July 1, 1963 | | | | | | | | | | | | | | | | |
| **Greece** | None | Free to 5% A.V. | 12 to 21%A.V. | 8 to 26%A.V. | 8 to 26% A.V. | 15% | 18 drachma per 100 kg. | 24.5% A.V. | 24.5% A.V. | 18 drach-ma per 100kg. | 18 drachma (to 24.5%AV | 4 to 8.75%A.V. | 10% A.V. | 8 to 16%A.V. | 300 drach-ma per 100 kg. | 300 drach-ma per 100 kg. |
| **India** | Restricted | | | | | | | | | | | | | | | |
| British Preferential | | $1.05 per M.T. or 20% A.V.whichever is higher,plus 5% A.V. | 55% A.V. | $6.51 plus 5% A.V. up to 35% A.V. | ($4.62 plus 5% A.V. | $4.62 plus 5% A.V. | $3.15 per m.t. or 10% A.V. whichever is higher,plus 5% A.V. up to 30% A.V. | $3.15 per m.t. or 10% A.V.* plus 5% A.V. up to 30% A.V. | $3.15 per m.t.or 10% whichever is higher plus 5% A.V. | $16.80 per m.t. plus 5% A.V. | ($3.15 per m. (t.or 10% (whichever (is higher (plus 5%A.V. | Free to 15% A.V. | $2.10 per m.t. or 15% A.V.up to $6.51 per m.t. or 10% whichever is higher. | 30% A.V. | 25% A.V. | $6.72 per m. t.or 10% whichever is higher plus 10% A.V. |
| General | | $1.05 per m.t.or 20% A.V.whichever is higher,plus 5% A.V. | 55% A.V. | $12.60 plus 5% A.V.up to 45% A.V. | $13.44 plus 5% A.V. | $13.44 plus 5% A.V. | $8.40 per m.t. plus 5% A.V. up to 30% AV | whichever is higher $8.40 per m.t. plus 5% A.V. up to 30% AV | $8.40 per m. t. plus 5% A.V. | $21 per m.t.plus 5% A.V. | ($8.40 per m. (t. plus 5% A.V. | 10 to 25% A.V. | $12.60 per m. t. plus 5% AV | 30% A.V. plus $7.35 per m.t. | 25% A.V. | $11.36 per m.t. plus 10% A. V. |
| **Indonesia** | None | Free | Free | Free | Free to 20%AV | Free to 20% A.V. | Free | Free | Free | Free | Free | Free | Free | 20 to 30%A.V. | 20% A.V. | 20% A.V. |
| Exchange controls are in effect. | | | | | | | | | | | | | | | | |
| **Iran** | None | $5.32 to $26.67 per m.t. | $26.67 per m.t. | $26.67 per m.t. | $26.67 per m.t. | $26.67 per m.t. | $40 per m.t. | $40 to $66.67 per m.t. | $40 to $66.67 per m.t. | $46.55 per m.t. | $46.55 per m.t. | $51.33 per m.t. | $9 to $20 per m.t. | $33.25 to $40 per m.t. | $46.67 per m.t. | $46.67 per m.t. |
| Commercial profit tax | | $1.33 to $6.67 per m.t. | $6.67 per m.t. | $6.67 per m.t. | $6.67 per m.t. | $6.67 per m.t. | $6.67 per m.t. | $6.67 per m.t. | $6.67 per m.t. | $6.67 per m.t. | $6.67 per mt | $6.67 per m.t. | $4 per m.t. | $6.67 per m.t. | $6.67 per m.t. | $6.67 Per m.t. |
| In addition there is a Chamber of Commerce tax of 1 percent Ad Valorem and a Municipal tax of 1 percent Ad Valorem. | | | | | | | | | | | | | | | | |
| **Iraq** | License required. | Free | $5 to $7.50 per m.t. | $5 to $7.50 per m.t.up to 6% A.V. | $5 to $7.50 per m.t.up to 6% A.V. | $5 to $7.50 per m.t.up to 6% A.V. | $6.16 per m.t. up to 8% A.V. | $6.16 per m.t. up to 8% A.V. | $6.16 per m.t. up to 8% A.V. | Free | 6% A.V. | $11.20 per m.t.up to 8% A.V. | $7 per m.t. up to 6%A.V. | $7 per m.t. up to 8%A.V. | Free to 10% A.V. | Free to 10% A.V. |
| **Israel** | * | $34.per m. t. | $33 per m.t. plus 15% A.V. | Free to 15 % A.V. | Free to $23.33 per m.t.plus 15% A.V. | Free to $23.33 per m.t. plus 15% A.V. | Free | Free | Free | Free | $10 per m.t. plus 15% A.V. | Free to $10 per m. t.plus 15% A.V. | Free to 15% A.V. | Free to 35% A.V. | Free to 15% A.V. | Free to 15% A.V. |
| *Carbon steel blooms, billets, sheet bar, wire rods, bars, angles, shapes (not sheet piling), Universal and heavy plates, medium plates and sheets, hoop and strip, rails and railway track material, tubes and pipe require import license. | | | | | | | | | | | | | | | | |
| **Italy** | | | | | | | | | | | | | | | | |
| General | None | 5.0 to 13.5%A.V. | 8.0 to 16% A.V. | 8 to 16% A.V. | 9 to 16%A.V. | 9 to 16% A.V. | 9 to 16% A.V. | 9 to 16% A.V. | 9 to 16% A.V. | 9 to 16 % A.V. | 9 to 16% A.V. | 8 to 16% A.V. | 10 to 18 % A.V. | 11.6 to 16.6 % A.V. | 12 to 15.5%A.V. | 12 to 15.5 % A.V. |
| E C M | | Free to 8.1% A.V. | Free to 9.9 % A.V. | Free to 9.9% A.V. | Free to 9.9 % A.V. | Free to 9.9%A.V. | Free to 10.3% A.V. | Free to 10.3% A.V. | Free to 10.3% A.V. | Free to 10.3%AV | Free to 10.3% A.V. | Free to 9.9% A.V. | Free to 10.3%A.V. | 6.7 to 10.3% A.V. | 5.8 to 9.0%A.V. | 5.8 to 9.0% A.V. |
| This country has a 3.3% turnover tax. | | | | | | | | | | | | | | | | |

COMPARISON OF FREE WORLD IRON AND STEEL TARIFFS OF PRINCIPAL IMPORTING COUNTRIES

PRODUCTS

| COUNTRY | Import Control | Blooms, Billets Slabs&Sheet Bar | Wire rods | Bars & Rods (excluding Wire Rods) | Angles, Shapes Sheet Piling 80 mm. or more | Angles, Shapes Sheet Piling Less than 80 mm. | Heavy Plates More than 4.75 mm. | Med. Plates & Sheets 3 mm. to 4.75 mm. | Sheets Less than 3 mm. | Tinned Plates & Sheets | Sheets, less than 3 mm. (Coated) | Hoop and Strip | Rails&Rail-way Track Material | Wire | Tubes& Pipe (Seamless) | Tubes& Pipe (Welded) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SITC No. | | 672.5 | 673.1 | 673.2 | 673.4 | 673.5 | 674.1 | 674.2 | 674.3 | 674.7 | 674.8 | 675 | 676 | 677 | 678.2 | 678.3 |
| Japan | | | | | | | | | | | | | | | | |
| Most favored Nation | The majority of steel products | 12.5% A.V. | 15% A.V. | 15% A. V. | 15% A.V. | 15% A.V. | 15% A.V. | 15 % A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15 % A.V. | 15% A.V. |
| General) | are licensed under the Restrictive Fund Allocation System, which has a significant impact on imports for some items. | 12.5% A.V. | 15% A.V. | 15% A. V. | 15% A.V. | 15 % A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. |
| Luxembourg | None | | | | | | | | | | | | | | | |
| General | | 3.6 to 4.5% A.V. | 4.5% to 6% A V. | 4.5% to 6% A.V. | 4.5% to 10.5%A.V. | 4.5% to 6% A.V. | 5 to 6% A.V. | 4.5 to 6% A.V. | 5 to 12%A.V. | 6% A.V. | 6% A.V. | 5.2 to 8% A.V. | 6 to 7.6% A.V. | 5.2% A.V. | 5.5 to 14% A.V. | 5.5 to 14% A.V. |
| E C M | | Free to 1.5% A.V. | Free to 2% A V. | Free to 2% A.V. | Free to 7.5% A.V. | Free to 7.5% A.V. | Free | Free to 3% A.V. | Free to 3% A.V. | Free | Free | Free to 3% A.V. | Free to 3% A.V. | 2% A.V. | 1.5 to 7.5% A.V. | 1.5 to 7.5% A.V. |
| | There is a 2% turnover tax on duty paid value | | | | | | | | | | | | | | | |
| Mexico | Most items are restricted. | $1.20 per m.t. plus 25% A.V. up to $2 per m.t.plus 30% AV. | ($0.80¢ per (m.t.plus 5% ( up to $8 (per m.t. (plus 35%AV | .80¢ per m.t. plus 5% up to $8 per m.t.plus 35% A.V. | $16 per m.t. plus 50% A.V. | $16 per m.t. plus 50% A.V. | $1.60 per m.t. plus 5% A.V.up to $64 per m. t.plus 5%A.V. | $1.60 per m. t. plus 5% A. V. up to $64 per m.t.plus 5% A.V. | $1.60 per m.t.plus 5% A.V.up to $64 per m.t. plus 5%AV | .80¢per m.t.plus 30% A.V. | $80 per m. t.plus 65% A.V. | $4 per m.t. plus 4%A.V. up to $80 per m.t. plus 30%AV | .80¢ per m.t. plus 30% A.V. up to $4 per m.t. plus 30% A.V. | $8 per m. t.plus 4% A.V.up to $40 per m. t.plus 35% A.V. | $1.20 per m.t.plus 10% A.V. | .80¢ per m. t.plus 7% A.V.up to $120 per m.t.plus 25% A.V. |
| | 3% surcharge of total duty on all imports. Ad Valorem is invoice value minus freight and insurance or Mexican official valuation whichever is higher. | | | | | | | | | | | | | | | |
| The Netherlands | None | | | | | | | | | | | | | | | |
| General | | 3.6 to 4.5% A.V. | 4.5 to 6% A.V. | 4.5 to 6% A.V. | 4.5% to 10.5% A.V. | 4.5 to 6% A.V. | 5 to 6% A.V. | 4.5 to 6% A.V. | 5 to 12% A.V. | 6% A.V. | 6% A.V. | 5.2 to 8% A.V. | 6 to 7.6% A.V. | 5.2%A.V. | 5.5 to 14% A.V. | 5.5% to 14% A.V. |
| E C M | | Free to 1.5% A.V. | Free to 2% A.V. | Free to 2% A.V. | Free to 7.5%AV | Free to 7.5% A.V. | Free | Free to 3% A.V. | Free to 3% A.V. | Free | Free | Free to 3% A.V. | Free to 3% A.V. | 2% A.V. | 1.5 to 7.5% A.V. | 1.5 to 7.5% A.V. |
| | The Netherlands has a 5% basic tax in addition to the above rates. | | | | | | | | | | | | | | | |
| New Zealand | License required. | | | | | | | | | | | | | | | |
| British Preferential | | Free | Free | Free | Free | Free | Free | Free | Free to 25% A.V. | Free | Free to 25% A.V. | Free | Free | Free | Free | Free to 25% A.V. |
| Most Favored Nation* | | Free | 5% A.V. | 5% A.V. | 5% A. V. | 5% A. V. | 5% A. V. | 5% A.V. | 5 to 50% A.V. | 5% A.V. | 5% to 50% A.V. | 5% A.V. | 20% A.V. | 5% A.V. | 20% A.V. | 20 to 50%A.V. |
| General | | 25% A.V. | 12½% A.V. | 25% A.V. | 25% A.V. | 25% A.V. | 25% A.V. | 25% A.V. | 25 to 60% A.V. | 25% A.V. | 25% to 60% A.V. | 25% A.V. | 25% A.V. | 12½% A.V. | 25% A. V. | 25 to 60% A.V. |
| | *The United States enjoys this status. | | | | | | | | | | | | | | | |
| Nigeria | License required but easily obtained. | Free | 10% A.V. | 10% A.V. | 10% A.V. | 10% A.V. | 10% A.V. | 10% A.V. | 10% A.V. | Not exceeding 0.016 inch gauge-Free-Above 0.016"-10% A.V.) | 10% A.V. | 10% A.V. | Free | 10% A.V. | 10% A.V. | 10% A.V. |
| Norway | None | | | | | | | | | | | | | | | |
| General | | Free | Free | Free | H.R. or Extruded Free-Other 10%A.V. | H.R.or Extruded Free-Other 10%AV | Free | Free | Free | Free | Free | More than 3mm thick and less than 150 mm wide 0.04 kg. Other Free. | Free | Cross section not exceeding 1.5 mm -0.08 kg. Other-0.05 kg. | 20% A.V. | 20% A.V. |
| EFTA .... | Presently there is a 50% reduction on above tariff rates to EFTA Countries. | | | | | | | | | | | | | | | |
| | There is a turnover tax of 11.11% on duty paid value. 7.14 crowns per U.S. $1.00. 1 crown equals 14.1¢ | | | | | | | | | | | | | | | |
| Peru | None | $1.12 per m.t. plus 16.167% of CIF value. | $2.30 per m. t.plus 166.167% of CIF value | $2.80 per m. t.plus 166.167% of CIF value | $2.24 per m.t. plus 166.167% of CIF value | $2.24 per m.t. plus 166.167% of CIF value | $3.36 per m.t. plus 16.167% of CIF value | $3.36 per m.t. plus 16.167% of CIF value | $3.36 per mt plus 16.167% of CIF value | $2.24 per m. t.plus 11.75% of CIF value | ($3.73 per m.t.plus 13.175% of CIF value up to $2.24 per m.t.plus 166.167% of CIF value) | $2.80 per mt plus 16.167% up to $13.99 per m.t.plus 16.167% of CIF value | 14.167% of CIF value | $1.12 per m.t plus 16.167% up to $3.36 per m.t.plus 166.167% of CIF value | $2.98 per m. t.plus 13.75% up to $149.20 per m.t. plus 16.167% of CIF value | $2.98 per m. t.plus 13.75% up to$149.20 per m.t. plus 16.167% of CIF value. |

## COMPARISON OF FREE WORLD IRON AND STEEL TARIFFS OF PRINCIPAL IMPORTING COUNTRIES

PRODUCTS

| COUNTRY | Import Control | Blooms, Billets Slabs & Sheet Bar | Wire Rods | Bars & Rods (excluding Wire Rods) | Angles, Shapes Sheet Piling 80 mm. or more | Angles, Shapes Sheet Piling Less than 80 mm. | Heavy Plates More than 4.75 mm. | Med. Plates & Sheets 3 mm. to 4.75 mm. | Sheets Less than 3 mm. | Tinned Plates & Sheets | Sheets, less than 3 mm. (Coated) | Hoop and Strip | Rails & Railway Track Material | Wire | Tubes & Pipe (Seamless) | Tubes & Pipe (Welded) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SITC No. | | 672.5 | 673.1 | 673.2 | 673.4 | 673.5 | 674.1 | 674.2 | 674.3 | 674.7 | 674.8 | 675 | 676 | 677 | 678.2 | 678.3 |
| Pakistan<br>British Preferential<br>Most favored nation<br>General | Licensed | 7½% A.V. | 30% A.V. | 10% A.V. | 10% A.V. | 10% A.V. | 7½ to 10% A.V. | 10½ to 12½% A.V. | 10½ to 12½% A.V. | - | 10½ to 12½% A.V. | 15% A.V. | 20% A.V. | 12½% A.V. | 20% A.V. | 20% A.V. |
| Philippines | None | Free to 10% A.V. | 10 to 40% A.V. | $16 per m.t. to 10% A.V. | 10 to 80% A.V. | 10 to 80% A.V. | 10% A.V. | 10 to 15% A.V. | 10 to 15% A.V. | 15% A.V. | 15% A.V. | 10 to 15% A.V. | 10% A.V. | 10 to 75% A.V. | 10% A.V. | 10% A.V. |
| NOTE: The United States has a preferential arrangement and for the period expiring December 31, 1964, only 75% of these tariff rates apply. For the period January 1, 1965 through December 31, 1973, 90% of these rates apply. 1974 and thereafter, 100% of these rates will apply.<br>During 1963 the sales tax is 5.1%. It declines about 1.7% per year.<br>There is a special sales tax of 7% of the CIF value inflated by 25%. | | | | | | | | | | | | | | | | |
| Portugal | Imports are subject to license but licenses are freely granted. | 2¢ per m.t. | $14 to $42 per m.t. | $14 to $42 per m.t. | $14 to $42 per m.t. | $14 to $42 per m.t. | 2¢ to 6¢ per m.t. | 2¢ to 6¢ per m.t. | 2¢ to 6¢ per m.t. | 2¢ to 6¢ per m.t. | 2¢ to 6¢ per m.t. | 2¢ per m.t. | 4¢ per m.t. | 3¢ per m.t. | $14 to $56 per m.t. | $14 to $56 per m.t. |
| (1 escudo equals .035¢) | | | | | | | | | | | | | | | | |
| South Africa | None | | | | | | | | | | | | | | | |
| British Preferential | | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | 15% A.V. | 15% A.V. |
| General | | Free | 3% A.V. | 3% A.V. | 3% A.V. | 3% A.V. | 3% A.V. | 3% A.V. | 3% A.V. | 3% A.V. | 3% A.V. | Free | 3 to 5% A.V. | 3% A.V. | $2.80 p.t. plus 15% A.V. | 20% A.V. |
| Sweden | None | 4% A.V. | 5% A.V. | 6% A.V. | Sheet piling, free Wide flange I beams-free; others weighing 60 kg. or more free. Others weighing 60 kg. or less, 6% A.V. | Sheet piling, free Wide flange I beams-free; others weighing 60 kg. or more free. Others weighing 60 kg. or less, 6% A.V. | 6% A.V. | 6% A.V. | 6% A.V. | Free | 6% A.V. | H.R.-6% A.V. C.R.-7% A.V. | Free Fishplates 8% A.V. | 7% A.V. | 7% A.V. | 7% A.V. |
| EFTA - Presently there is a 50% reduction in these rates to EFTA Countries.<br>In addition, there is a 6.4% turnover tax on duty paid value. | | | | | | | | | | | | | | | | |
| Turkey | None | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 15% A.V. | 30% A.V. | 30% A.V. | 30% A.V. | 30% A.V. | 15% A.V. | 25% A.V. | 30% A.V. | 20% A.V. | 20% A.V. |
| In addition there is a Customs surtax of 15% of assessed duty.<br>Plus a tax of 5% of CIF value | | | | | | | | | | | | | | | | |
| United Kingdom | None | | | | | | | | | | | | | | | |
| British Preferential | | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free | Free |
| EFTA | | $6.50 p.t. or 5% whichever is greater | $6.30 p.t. or 5% whichever is greater | $6.30 p.t. or 5% whichever is greater | $6.30 p.t. or 5% whichever is greater | $6.30 p.t. or 5% whichever is greater | $6.58 p.t. or 5% whichever is greater. | $6.58 p.t. or 5% whichever is greater. | $8.75 p.t. or 5% whichever is greater | If 3 mm. or more, $6.58 p.t. or 5% whichever is greater; under 3 mm. $13.70 p.t. or 5% whichever is greater. | $10.15 p.t. or 5% whichever is greater | * | $5.95 p.t. or 5% whichever is greater | If value exceeds $60 p.t., $28 or 12½%, whichever is greater; other 16-2/3% A.V. | 10% A.V. | 10% A.V. |
| Full | | $11.20 p.t. or 10% whichever is greater. | $12.60 p.t. or 10% whichever is greater. | $12.60 p.t. or 10% whichever is greater. | $12.60 p.t. or 10% whichever is greater. | $12.60 p.t. or 10% whichever is greater. | $13.30 p.t. or 10% whichever is greater. | $13.30 p.t. or 10% whichever is greater. | $17.50 p.t. or 10% whichever is greater. | If 3 mm. or more $10.15 p.t. or 10% whichever is greater; under 3 mm. $20.30 p.t. or 10% whichever is greater. | $20.30 p.t. or 10% which ever is greater. | ** | $12.04 p.t. or 10% whichever is greater. | If value exceeds $60 p.t. $56 p.t. or 25% whichever is greater; other 33-1/3% A.V. | 20% A.V. | 20% A.V. |
| Venezuela | | $26.40 per m.t. | $1.10 per m.t. | $33 per m.t. | $1.10 per m.t. | $1.10 per m.t. | .22¢ to $44 per m.t. | .22¢ to $44 per m.t. | $11 per m.t. | .22¢ to $88 per m.t. | $22 to $44 per m.t. | $1.10 per m.t. | $19.80 to $22 per m.t. | $1.10 per m.t. | $1.10 per m.t. | $1.10 per m.t. |

* EFTA Countries -- 3 millimetres or more in thickness - $6.58 per ton or 5% whichever is greater.
Less than 3mm. (a) not plated, coated or clad, nor cold rolled, $6.50 or 5% whichever is greater.
(b) other - $9.60 p.t. or 5% whichever is greater.

** FULL - 3 millimetres or more in thickness - $13.30 p.t. or 10% whichever is greater.
Less than 3mm. (a) not plated, coated or clad, nor cold rolled, $12.60 per ton/or 10% whichever is greater.
(b) other - $19.60 per ton or 10% whichever is greater.

Prepared: April 5, 1963
Iron and Steel Division, BDSA

See also Joint Economic Committee Subcommittee on Foreign Economic Policy, "Trade Restraints in the Western Community," Joint Committee Print, 87th Cong., 1st sess.; table, p. 5, "Raw Materials and Energy," steel ingots column; and table, p. 8, "Industrial Products," iron and steel manufactures column.

Representative REUSS. And in a very summary form from your recollection, what is the U.S. tariff structure on basic steel products? What does it average?

Mr. LEDERER. The average tariff on basic steel is about 7 percent.

Representative REUSS. Our overall average on everything is supposed to be around 11 percent or so.

Mr. LEDERER. That I did not check.

Representative REUSS. Have you any idea what the Common Market is?

Mr. LEDERER. The tariff for Common Market countries varies. There are differences between countries, but I saw figures between 10 and 17 percent.

Representative REUSS. What about the upcoming external tariff of the Common Market?

Mr. LEDERER. That I cannot answer now.

Representative REUSS. But, presumably, since it is the average——

Mr. LEDERER. It is somewhere in between that.

Representative REUSS (continuing). Of the constituents' tariffs, it is somewhere in between there?

Mr. LEDERER. Yes.

Representative REUSS. What about quotas and other quantitative restrictions? We have none, so far as I know, is that not so?

Mr. LEDERER. That is so, I believe.

Representative REUSS. What about the countries of Europe? They certainly have them on coal from Illinois and various other States.

Chairman DOUGLAS. They do.

Representative REUSS. What about steel?

Mr. LEDERER. I do not think that they have quotas, but I want to make sure of that.

Representative REUSS. Would you indicate that when you furnish this material?

Mr. LEDERER. Yes.

(See table above.)

Representative REUSS. Thank you.

Senator MILLER. Mr. Chairman, following along on Congressman Reuss' questions for data to be included, while I do think that the duties are very pertinent, I am wondering if we could get from you or if you could get for us for the record the figures by years so we could get the trend with respect to the taxation picture relating to the steel industry in these European countries.

What is the tax on income, particularly, in comparison to that of the United States, and what has been the trend from one year to the next?

What are the depreciation rates that are permitted?

How do they compare with the United States, and what has been the trend on those?

For example, the investment picture and the labor costs. As I understand it, the labor costs have been rising in the European countries. I am just wondering if you can get those data for us by years, so that we could see what the trend has been there and, perhaps, reach some conclusions as to the underlying reasons for the chart figures that you have.

I would expect that the duties would have a bearing, but I would think that these other factors would, too.

Would that be feasible for you to get for us?

Mr. LEDERER. We shall try, but I cannot promise that we can get all that.

(The following was later received for the record:)

## EXHIBIT III

## TAXATION OF FOREIGN INCOME AND INVESTMENT

A. Taxation of Income of U. S. Subsidiaries Abroad: Economic Considerations

B. Income Earned Abroad by Individuals

C. Data on Tax Haven Subsidiaries

D. Administrative Problems Connected with the Auditing of Cases Involving Controlled Foreign Corporations

E. Separate Limitation on Foreign Tax Credit with Respect to Investment Income

F. Foreign Investment Companies

Source: Office of Financial Analysis,
U. S. Treasury Department

EXHIBIT III

THE TAXATION OF INCOME OF U.S. SUBSIDIARIES ABROAD:

ECONOMIC CONSIDERATIONS

SUMMARY STATEMENT

1. Neutrality is a fundamental principle of taxation in the United States. The purpose of neutrality is to promote equity and the most efficient possible allocation of existing resources. Ideally corporate tax rates should be everywhere the same, assuming roughly equivalent government services. We cannot control foreign tax rates and the fact that they may contribute to inequities. But we can prevent the American tax structure from contributing to the artificial diversion of funds into low-tax areas, by taxing the income of our overseas subsidiaries at the same rates as are applicable to income earned at home. The burden of proof for not following the general principle of tax neutrality should be on those who wish to continue a departure from that neutrality.

2. The arguments advanced for preserving tax preferences which favor foreign over home investment, as they relate to the national interest and not to the particular interests of individual business firms, are that tax inducements stimulate foreign investment and that this foreign investment in turn (a) stimulates income, employment, and growth in this country, and (b) improves our balance of payments.

3. The evidence which has been offered from time to time by particular companies in support of the national interest arguments with respect to employment and the balance of payments, in particular with respect to exports generated, runs counter to the evidence for the economy as a whole, for various reasons: (1) the behavior of one company, or even a selected group of companies, is not necessarily typical; (2) the data on capital outflow as reported by individual companies often include only purchases of stock in foreign subsidiaries, that is do not include net increases in inter-company accounts which form a large part of the total capital outflow reported in Department of Commerce data; (3) even if all the measurable inflows and outflows are correctly included in such data, one important element is inevitably excluded because it cannot be readily measured --, that is sales by foreign subsidiaries abroad which displace actual or potential U. S. exports; (4) the illustrations are frequently on a world-wide basis, whereas the Treasury proposal would affect only income earned in developed countries; (5) most important of all, the two types of

flows being compared -- the outflow of new capital and the dividend and export receipts for a given year or period -- are in good part not related to one another: the dividends, and most of the export receipts, of one year or period, have been generated by investment over many years prior to the current year or period; that portion of the inflows which has been generated by past investment, then, has nothing whatsoever to do with the outflow of the current year or period in question.

4. The available data on the economy as a whole indicate the following. A dollar invested in manufacturing in Europe returns only 4 cents worth of "net exports" annually, and a dollar invested in manufacturing in Europe and Canada together, divided in the proportion of 70:30, respectively (which has been the ratio of new capital outflow in recent years), returns only 8 cents worth of "net exports" annually. In contrast to this, a dollar invested in less developed countries of the world yields over 40 cents worth of "net exports" annually. The data on which these results are based do not take account of the possibility that there may be some exports which are not sold to or through foreign subsidiaries (the sales which are used for our "net export" ratio) but are in some way nevertheless dependent upon the existence of subsidiaries; and they exclude the possibility that a substantial amount of sales by subsidiaries abroad, particularly in developed countries, may displace U. S. exports. But in view of the fact that these two major exclusions might at least tend to offset each other, and that more likely the displacement factor is the larger of the two, we believe that the above "net export" ratios if anything overstate the export content of investment in developed countries. If only a little more than one percent of the sales by foreign subsidiaries of goods they produce abroad displace U. S. exports, the "net export" factor is eliminated; if 3 percent displace U. S. exports, any reasonable estimate of the "related export" factor is offset as well.

5. The low "export content" of investment in Europe, or Europe and Canada considered together, means that elimination of tax deferral in these areas would almost inevitably have a favorable effect on income, employment, and growth here at home. For even if only a relatively small fraction of the dollars deterred from moving abroad as a result of elimination of the tax preference accorded foreign income were invested at home, the net effect of the switch would be positive.

6. When all inflows which are related to a given capital outflow are taken into account (including dividend income, income from fees and royalties, and receipts from the sale of exports minus payments for imports), the evidence available indicates that our overall

balance of payments situation will be improved as a result of eliminating tax preferences, for at least 10 to 15 years ahead. For the period 1952 to 1960 it is clear that new capital outflow to Canada and Western Europe exceeded inflows related to that outflow in every year after 1953, i.e., that there was a cumulative widening of the deficit as a result of private foreign investment in these regions. To cut back on a small amount of tax-induced investment can hardly do damage to our balance of payments position, and should improve it. When account is taken of the fact that income remitted to this country should increase with elimination of the tax incentive to leave it overseas, the favorable effect becomes still more pronounced. While any estimate of how much of a difference it should make in our balance of payments position is fraught with hazards, a reasonable "guess" would be that there would be a net favorable effect of $200-400 million in the early years following the new legislation. This improvement would have erased between one-third and two-thirds of the $600 million deficit in the basic balance of 1961.

7. The question of what effect elimination of tax deferral may have on the competitive position of individual firms must be thought of in this context of national interest. But even if viewed from the aspect of the individual firm, the effect could hardly be as severe as is sometimes imagined. First, the fact often referred to that some subsidiaries pay high indirect taxes abroad and so elimination of deferral may mean that total taxes are in excess of 52 percent of income is not relevant in assessing the effect on a firm's competitive position. Such taxes are treated as a part of operating costs, they are not borne out of profits, and they are charged to foreign competitors as well as to American foreign subsidiaries. Second, so far as a subsidiary's position in third-country markets in competition with other foreign firms is concerned, it must be remembered that most other developed countries impose exchange control restrictions on new investment by their nationals, as well as on repatriation of earnings from their foreign investments. Such controls can be far more burdensome to a firm than higher tax rates. Third, many foreign subsidiaries may not be unfairly affected at all by elimination of tax deferral -- it may, for example, simply limit diversification, or the subsidiary may have sufficiently substantial real cost advantages that it will still be able to grow relative to its competitors even while paying somewhat higher taxes. Some foreign subsidiaries, on the other hand, may experience a decline in retained earnings consequent upon elimination of tax deferral--a reduction which reduces their rate of expansion and slowly cuts in to their market share abroad. Faced

with this situation, the subsidiary could offset this by (a) reducing the level of dividends paid to stockholders, or (b) borrowing funds from the parent company or from elsewhere. Whether or not it chooses to do this would depend, in the last analysis, upon the relative profitability of alternative investment opportunities--for example in the United States. If the rate of return abroad over a number of years proved to be greater than the rate of return at home when the tax on both incomes was the same, it would maintain and expand its position abroad relative to its position at home. If this were not the case, it would do the reverse. In short if elimination of tax deferral hurts at all, it will do so only by limiting the growth of foreign subsidiaries and thus possibly reducing its market share vis-a-vis foreign competitors. But this would in fact be the end result only for those firms for whom the tax inducement was or is an important reason for investing abroad.

8. The issue with respect to the taxation of foreign income thus would seem to come to the following. We must ask ourselves whether or not it is in the national interest of the United States to subsidize, through tax preferences, the growth and/or maintenance of market shares of some of our subsidiaries which produce abroad, in order that these foreign subsidiaries may retain their existing competitive position, at the expense of growth of production here in this country. This subsidization would at the same time also result in giving unneeded tax benefits to other foreign subsidiaries which do not need tax benefits to remain competitive. The only justification for doing this is that in the very long run subsidization may contribute positively to our balance of payments liquidity position, although it will clearly worsen our balance of payments liquidity position over at least the next 10 to 15 years.

EXHIBIT III

THE TAXATION OF INCOME OF U. S. SUBSIDIARIES ABROAD:

ECONOMIC CONSIDERATIONS

MAIN STATEMENT

## The Concept of Neutrality

One of the most fundamental of the guiding principles in American income taxation is that there should be equality in the tax treatment of similar groups of taxpayers. Applied to corporations, this principle must be interpreted to mean that the income of any branch or subsidiary of an American corporation operating overseas should as far as possible be subject to the same corporate income tax rates as the income of any branch or subsidiary operating at home.

Justification of this basic principle, as a principle, is made on two grounds: (1) it is "fair" or "equitable"; (2) it promotes the most efficient possible allocation of our own and world resources. Ideally, given the existence of corporate income taxes, the situation which in general would least interfere with efficient resource allocation, and would be most equitable, would be one in which corporate tax rates would be everywhere the same, assuming that government services are comparable. We cannot control tax rates established by foreign governments any more than they can control ours. We thus cannot alter the fact that a relatively low corporate income tax in certain countries of the world artificially induces capital to stay in that country and artificially induces some other capital to come in from the outside, even though such investment may not be justified on true economic grounds, i.e., on the basis of relative rates of return on investment before taxes, a measure which embodies relative costs of production, future market possibilities, risks, etc. But by taxing the income of our overseas subsidiaries at the same corporate rate as domestic activities in the same way that overseas branches of U. S. firms are now generally taxed in the same manner as domestic branches, we can at least prevent the American tax structure from contributing to the artificial diversion of funds into low-tax areas.

## Breaches in the Neutrality Concept

### 1. A failure to "gross-up" dividends

Historically, we have not adhered to the tax neutrality concept as it relates to domestic and foreign corporate income. Ever since 1913 we have taxed the income of foreign subsidiaries only when it was remitted to the United States as a dividend. In addition we have not taxed that income at the full existing rate, with a credit for foreign income taxes paid by the subsidiary, but rather have taxed the dividend at the full rate, allowing credit for the percentage of income paid in foreign taxes times this dividend, as shown in the left-hand column of Table 1. Even if all income after payment of foreign taxes is remitted as a dividend as it is earned, the foreign subsidiary will normally pay a tax equal to around 45 percent of earned income if the foreign tax rate is lower than the U. S. rate, as compared to 52 percent for a domestic subsidiary.

Table 1

The Computation of Corporate Taxes on Foreign Income

| | Existing law : | Proposed law |
|---|---|---|
| | (dollars) | |
| Profits of subsidiary | 100.00 | 100 |
| Foreign tax (assumed rate: 30 percent) | 30.00 | 30 |
| Dividend to U. S. parent | 70.00 | 70 |
| "Gross-up" of dividend | | 30 |
| Tentative U. S. tax at 52 percent | 36.40 | 52 |
| Credit for foreign tax paid by subsidiary | 21.00 | 30 |
| Net U. S. tax | 15.40 | 22 |
| Combined foreign and U. S. tax | 45.40 | 52 |

If the dividends are "grossed up" in computing the U. S. tax due and the foreign tax credit allowed, as illustrated in the right-hand column of Table 1, we will eliminate an unjustified tax advantage accorded income from foreign investment when that income is paid as a dividend. But to the extent that foreign tax rates are lower than the U. S. tax rate, we would still continue to grant a tax advantage to foreign income which is not distributed.

2. The deferral privilege

In deferring U. S. tax until income is remitted to this country, we are giving foreign corporations an interest-free loan equal to the U. S. foreign tax rate differential on the undistributed profits, a loan which can be profitably reinvested in plant and equipment abroad, a loan which is not available to a domestic business. Moreover, if the earnings are never remitted as dividends the "loan" becomes a permanent exemption.

If a foreign tax rate nearly approximates the U. S. tax rate, the tax advantage is relatively small. Representative statutory corporate tax rates for a number of countries are shown in Table 2. With the exception of Belgium and Italy, statutory corporate income tax rates in most developed countries appear to be over 40 percent and thus at least fairly near the existing U. S. rate. a/ But in the case of Belgium and Italy, a tax rate of approximately 30 percent offers a substantial advantage over the 52 percent U. S. rate, as can be seen from the example given in Table 3.

Table 2
Comparison of Maximum Rates of Corporate Income Taxes in Selected Countries

| Country | Rate (percent) |
|---|---|
| Australia | 40 |
| Belgium | 28.5 1/ |
| Canada | 50 |
| Denmark | 44 2/ |
| France | 50 |
| West Germany | 51 3/ |
| Italy | 31 4/ |
| Japan | 49 5/ |
| Luxembourg | 42 |
| Netherlands | 47 6/ |
| Sweden | 40 |
| United Kingdom | 53.5 7/ |

1/ Income tax paid in the previous year is deductible so that the nominal tax rate of 40 percent is reduced to approximately 28.5 percent.
2/ Because of a special deduction measured by a percentage of capital stock outstanding and allowed to all Danish corporations, the rate may be reduced to as low as 22 percent. The average rate for most corporations is 36 percent.
3/ The German corporate rate of 51 percent is reduced to approximately 22 percent if all profits are distributed.
4/ This rate of tax is increased by 15 percent on profits in excess of 6 percent of capital plus certain allowable reserves. The Italian corporate tax is limited to profits from domestic sources.
5/ The rate on distributed profits is 42 percent.
6/ The Netherlands does not impose tax on profits derived abroad.
7/ Takes account of tax rate increase--1961-62 budget.

a/ In fact, however, various studies by both the Commerce and Treasury Departments indicate that effective tax rates, as evidenced by foreign taxes actually paid by U. S. foreign subsidiaries as a

(continued on next page)

Table 3

The Effective Advantage of a 30 percent Foreign Tax Rate

Investment: $500,000
Rate of return: 20 percent on previous year's capital investment
Foreign tax on income: 30 percent of earnings
Assumption: Deferred U.S. taxes used for expansion over 5-year period

| | Year | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Earnings | $100,000 | $104,400 | $108,994 | $113,753 | $118,760 | $123,986 |
| Foreign tax | 30,000 | 31,320 | 32,698 | 34,126 | 35,628 | |
| American tax ploughed back | 22,000 | 22,968 | 23,797 | 25,026 | 26,127 | |
| Capital | 522,000 | 544,968 | 568,765 | 593,801 | 619,928 | |

In this example the firm has earned over a period of five years $569,893 or $69,893 more than it would have if it had paid the full tax on income earned at the time it was earned, as it would have had to do if it had made the same investment in the United States. If it brought that amount back in dividends at the end of five years, it would have to pay 22 percent tax on $69,893, leaving $54,517 (assuming dividends are "grossed up"). Without deferral, the firm would have earned $240,000 after taxes, which could be paid as dividends, for a five-year return of 48 percent on original investment. With deferral the firm earns $295,000 after taxes over the five-year period, for a return of approximately 60 percent. And it is currently earning $24,000 more a year, or $11,520 more a year after all taxes, than it could do with a comparable investment opportunity in this country.

a/ (continued from page 358) proportion of income earned, are often 5 percentage points or so below statutory rates, either because of special provisions in the law or because of special arrangements with the foreign government. These lower effective rates do take into account special investment incentive allowances such as are allowed in the United Kingdom, but do not take into account the fact that in recent years a more rapid write-off of plant and machinery has been allowed in many other European countries as compared with the United States, since this affects reported income and does not alter the foreign tax rate computed on the basis of that reported income. It is estimated that the proposed investment credit, and administrative depreciation revision in the United States will bring the United States much more into line with key European countries with respect to capital consumption allowances.

It is clear from this that there do exist some considerable inequities in the taxation of home and foreign income of corporate subsidiaries. But the above describes only one part of the problem. The fact of the matter is that in recent years the crevice in neutrality created by the existence of the deferral privilege as pictured above has been widened substantially by the growth of "tax haven" operations until now it is more like a canyon, and it may soon be a wide and deep valley.

3. Tax haven operations

Certain countries of the world, among them Switzerland, Panama, and various Western Hemisphere dependencies such as the Bahamas, do not tax at all, or at least tax at very low rates, corporate earnings which are attributable to activities outside their borders. This situation plus the deferral privilege has invited the establishment of what may be termed "tax haven" corporations in these regions. Profits on overseas operations may be channeled into these corporations practically free of income taxes, or at least at a very substantial reduction in taxes, on income as it is earned. The typical activities of such corporations include the handling, as middleman, of many trade transactions--the transactions may be largely paper transactions so far as the tax haven corporation is concerned or there may be a warehouse or a sales force involved--, the sale of management services, the collection of licensing and other royalty payments, the insurance and reinsurance of U. S. risks, and the like. In addition, dividends and interest may be paid these base companies from foreign subsidiaries in other countries, in a way that will involve a saving in taxes. Germany, for example, allows a substantial reduction in corporate income taxes if earnings are distributed as dividends, and clearly they may be distributed to a base company in Switzerland as well as to the parent company in the United States.

Although it is not possible to gauge accurately the full magnitude of "tax haven profits" which exist today (it is known that Commerce Department data on foreign investments do not report all of these profits, for example, and indeed may miss a substantial portion of what is involved), there is little doubt but that tax haven profits of U. S. corporations operating abroad are (a) large, and (b) growing by leaps and bounds. Undistributed earnings of U. S. subsidiaries as reported in Commerce Department data for 1960, other than those in mining, petroleum, and manufacturing, were as follows in these principal "tax haven" regions:

| | |
|---|---|
| Switzerland | $28 million |
| Panama | 42 |
| W. Hemisphere dependencies | 52 |
| Total | $122 million |

This was double the reported amount for 1959. And 85 percent of the earnings of these corporations were undistributed in these years as compared to 55 percent for U. S. foreign investment earnings generally. But as indicated, such data tell only part of the story. The number of American corporations organized in these countries has risen sharply since 1957, until today there are over 1,000 such corporations in Switzerland alone.

There is thus reason to believe that the "tax haven" problem is both qualitatively and quantitatively important. Qualitatively, there is established a substantial breach in the tax neutrality principle; we are here dealing with a tax differential between foreign and domestic operation not of 5 or 10 percentage points, but of 40-50 percentage points, and clearly the existence of such a differential provides a substantial preference for foreign rather than home investment. Quantitatively we know that such operations are of considerable magnitude, and growing sharply every year.

Analysis of Arguments Advanced for Continuing Preferential Treatment in the Taxation of Foreign Investment as Compared with Domestic Investment

Justification for continuing United States preferential tax treatment of income from foreign as compared with home investment has been based essentially on two arguments: (1) to tax U. S. subsidiaries abroad at full U. S. rates as income is earned will deter foreign investment, which will in turn, it is claimed, (a) dampen growth in employment and income in this country by reducing exports to subsidiaries which would have been established or expanded with the deterred investment funds, and (b) worsen rather than improve our balance of payments position because net inflows from direct foreign investments tend to exceed net outflows; (2) Equality in taxation as between firms in this country and U. S. subsidiaries abroad will put the subsidiaries abroad at a competitive disadvantage vis-a-vis foreign firms. Almost all of the economic arguments advanced against the Treasury proposals are related to, and indeed hinge upon the validity of these basic contentions. Let us consider each matter in turn.

1. Possible adverse effects from deterring tax-induced foreign investment

The primary economic impact of removing tax deferral centers upon the possible effect on the outflow of new direct investment capital to manufacturing subsidiaries from the United States and on related inflows from dividend receipts and sale of exports generated by the foreign investment. It is generally agreed that the proposal will probably not affect the activities of petroleum companies. Most of the activities of the latter are carried on through branches rather than through foreign subsidiaries, and there is no deferral of taxes on branch profits. Further, foreign taxes paid by petroleum companies are generally more than 52 percent of income so that no U.S. tax liability arises.

In the hearings before the House Ways and Means Committee in the spring of 1961, the question of the effect of removing deferral was illustrated over and over again by reference to the experience of individual companies. Typically the new capital outflow reported as coming from the United States, usually year by year over some period of time, was compared with dividend income and with receipts from exports sold to or through foreign subsidiaries. "Inflows" so computed generally exceeds "outflows" by a substantial amount, and this has left the impression that the stimulus given foreign investment by tax deferral clearly contributes positively both to our employment situation because of the large export sales generated, and to our balance of payments position because total inflows exceeded outflows. There are five things wrong with this type of evidence.

First, the behavior of one company, or even a selected group of companies, may not be typical; net inflows of one may be more than offset by net outflows of others. Second, the data on capital outflow as reported by individual companies often include only purchases of stock in foreign subsidiaries; but a very large amount of the new capital outflow to Europe and Canada as reported in Commerce Department data consists of net increases in inter-company accounts, i.e. short-term credits for working capital which are not repaid. 1/ Third, even if all the measurable inflows and outflows are correctly included in such data (and many company studies ignore sales by subsidiaries made directly to the United States--an import payment which may be an important offset to export receipts), one important flow is inevitably excluded because it cannot be readily measured--that is, foreign subsidiary sales abroad which displace actual or potential U.S. exports. Fourth, the illustrations are almost invariably on a world-wide basis, whereas the Treasury proposal affects only income earned in developed countries. But as we shall see, there is a remarkable difference between the value of exports generated by a dollar of investment in other advanced industrial countries, and the value of exports generated by a dollar of investment in less developed countries.

1/Capital outflow of this type comprised over half the total to Canada and Western Europe for 1961.

These four limitations to the approach which has been typically employed to support tax deferral are serious enough, but it is a fifth limitation which is crucial. The two types of flows being compared--the outflow of new capital and the dividend and export receipts for a given year, or five-year period, or ten-year period--are, in good part, not related one to another. The dividends, and most of the export receipts, of one year or period, have been generated by investment over many years prior to the current year or period; that portion of the inflows which has been generated by past investment, then, has nothing whatsoever to do with the outflow of the current year or period in question. To illustrate, suppose a corporation at the end of 1951 had $100 million of outstanding investment overseas, and was returning annually $20 million to this country in the form of dividends and payment for exports, royalties, fees, etc. Between 1952 and 1960, $50 million more in new capital goes out from this country (an amount which must include net changes in inter-company accounts), and annual inflows rise to $25 million. It is surely meaningless to say that the outflow of $50 million between 1952 and 1960 brought back $225 million ($25 million for each of 9 years) in inflows. Even to compare the $5 million increase in annual inflows with the $50 million outflow is misleading, since the former was generated in part by reinvested earnings from returns on the investment outstanding in 1951.

Because opinions have been so sharply divided over this issue, the Treasury Department recently undertook extensive re-study of the data in full consultation with interested business groups. We believe that the new investigation yields good measures for the major direct effects stemming from the outflow of direct investment funds, and serves to put the central issues involved in the tax deferral question in proper perspective.

A. Elimination of tax-induced foreign investment and the effect on income and employment

If elimination of tax deferral, or restrictions on the tax status of "tax haven" income, deters some new foreign investment, this will affect the export of some goods and services from the United States and the import of some goods and services into this country. This in turn may affect the current production of home substitutes for these imports. It is, however, a most difficult task to measure the full effects on current output--on income and employment--of new foreign investment, and thus to compare what would happen if the deterred foreign investment takes place with what would happen if it does not take place.

What we need are figures for all of the exports from and imports to the United States which are directly attributable to the existence of foreign subsidiaries, i.e. which would not have existed had the subsidiary not existed. More specifically, what we would like would be data on all of the following:

1. Any increase in American exports in a given year or average of years due to:

(a) The purchase of new United States plant and machinery because of reinvestment of earnings overseas and/or new direct investment from this country;

(b) The purchase of raw materials and intermediate products from the United States by newly created or expanded foreign subsidiaries of United States firms which would not have been sold by United States producers, for example to foreign firms, had the United States subsidiary not been in existence;

(c) The sale of finished goods exports from the United States through newly created subsidiaries which would not have been made through other channels had the subsidiary not been established;

(d) The sale of exports in general (i.e. not to subsidiaries) which arises from a stimulus to growth in income or in productive capacity, or from creating pressure on existing capacity, which is directly attributable to United States investment abroad;

(e) The sale of exports generated by "intangibles" associated with foreign investment--new contacts, the creation of an "international psychology" on the part of American businessmen, etc.

Less

2. The increase in United States imports from the newly created foreign subsidiaries which is additional to imports which would have entered the American market anyway, e.g., from foreign competitors of the subsidiary;

and less

3. The reduction in United States exports to the country where the subsidiary is located or to anywhere else in the world because of production and sale by the newly created foreign subsidiary.

All of these elements, which should enter into the "net export factor" in computing the effect on current production of new foreign investment may be thought of as continuing phenomena, with the exception perhaps of (1)(a). The purchase of new United States plant and equipment by United States subsidiaries should probably be considered a once-and-for-all phenomenon, and therefore be subtracted from the initial outflow of investment funds in our computations rather than added as a (continuing) export receipt, although the argument can be made that a sufficiently large proportion of such exports is for replacement that it is just as well to consider them as an integral part of the regular export bundle.

So much for what we would like to have. What we actually have is the information provided by the 1961 survey by the Department of Commerce of 155 manufacturing corporations comprising 80 percent of all United States manufacturing investments abroad, information which is summarized in Table 4. These data are not as complete as we would like. 1/ And they contain some items that we do not want but cannot separate out. 2/ The qualifications work in both directions, however, i.e. in some situations they understate export receipts, for example, while in other situations they overstate export receipts. In general, the data are sound, and they do provide a foundation for analysis.

1/ We are told, for example, that they do not pick up all of the trade of subsidiaries with the United States because reports were made by the parent company and some subsidiaries both buy and sell in the United States independently of the parent. Since we subtract United States imports from subsidiaries from United States exports to subsidiaries, however, it would seem that such trade might tend to cancel out.

2/ Specifically, we are faced with the following principal limitations. First, the data do not adequately separate capital goods exports from other types of exports; we are forced into considering the former as continuing phenomena in spite of the fact that the very rapid but uneven growth of new investment in Western Europe in particular would suggest treating at least a good part of such exports separately from the main stream of goods moving there. Second, the data include all goods exported to subsidiaries; and there is no separation of raw materials and intermediate products on the one hand from finished goods on the other. Thus, there is absolutely no way, on the basis of Commerce data, even to enter a rough estimate of the volume included which might have been exported even if the subsidiaries had not existed. If a manufacturing subsidiary exists, finished goods exports will often be channeled through it, but a large portion of such sales might have been made without such a subsidiary. (It should be noted that some people have stated that a manufacturing subsidiary, not simply a sales and/or distribution outlet, is almost essential for such sales. There would surely be some validity for this position with respect to packaging and the like, but how far back in the production process one has to go to sell the finished goods would appear to be a debatable point.)

(footnote continued on page 368)

Table 4

Exports from the United States to, and Imports to the United States from Subsidiaries Abroad, 1959-1960 (by Region) (Survey of 155 Manufacturing Companies) 1/

(in millions of dollars)

| | 1959 | 1960 | Average 1959-1960 |
|---|---|---|---|
| **Canada** | | | |
| Manufacturing subsidiaries investment | 4,467 | | |
| Exports from U.S. to subsidiaries | 736 x 1.25 = 920 2/ | 732 x 1.25 = 915 2/ | 918 |
| Exports on commission basis | 13 | 14 | |
| Gross exports | 749 x 1.25 = 936 | 746 x 1.25 = 933 | 934 |
| Ratio of gross exports to investment | | | 20.9% |
| Less imports to U.S. from subsidiaries | 112 x 1.25 = 140 | 117 x 1.25 = 146 | 142 |
| Net exports | 637 x 1.25 = 796 | 629 x 1.25 = 787 | 792 |
| Ratio of net exports to investment | | | 17.7% |
| **Europe** | | | |
| Manufacturing subsidiaries investment | 2,880 | | |
| Exports from U.S. to subsidiaries | 174 x 1.25 = 218 2/ | 265 x 1.25 = 331 2/ | 275 |
| Exports on commission basis | 21 | 26 | |
| Gross exports | 195 x 1.25 = 244 | 291 x 1.25 = 364 | 304 |
| Ratio of gross exports to investment | | | 10.6% |
| Less imports from subsidiaries | 208 x 1.25 = 260 | 90 x 1.25 = 113 | 186 |
| Net exports | -13 x 1.25 = -16 | 201 x 1.25 = 251 | 118 |
| Ratio of net exports to investment | | | 4.1% |
| **Latin America** | | | |
| Manufacturing subsidiaries investment | 1,323 | | |
| Exports from U.S. to subsidiaries | 301 x 1.25 = 376 | 334 x 1.25 = 418 | 397 |
| Exports on commission basis | 94 | 100 | |
| Gross exports | 395 x 1.25 = 494 | 434 x 1.25 = 542 | 518 |
| Ratio of gross exports to investment | | | 42.0% |
| Less imports from subsidiaries | 6 x 1.25 = 8 | 4 x 1.25 = 5 | 7 |
| Net exports | 389 x 1.25 = 486 | 430 x 1.25 = 537 | 511 |
| Ratio of net exports to investment | | | 41.5% |
| **Rest of World** | | | |
| Manufacturing subsidiaries investment | 722 | | |
| Exports from U.S. to subsidiaries | 217 x 1.25 = 271 | 293 x 1.25 = 366 | 319 |
| Exports on commission basis | 15 | 30 | |
| Gross exports | 232 x 1.25 = 290 | 323 x 1.25 = 404 | 347 |
| Ratio of gross exports to investment | | | 48.0% |
| Less imports from subsidiaries | 2 x 1.25 = 2 | 2 x 1.25 = 3 | 2 |
| Net exports | 230 x 1.25 = 288 | 321 x 1.25 = 401 | 345 |
| Ratio of net exports to investment | | | 47.8% |
| **World** | | | |
| Manufacturing subsidiaries investment | 9,285 | | |
| Exports from U.S. to subsidiaries | 1,429 x 1.25 = 1,786 | 1,625 x 1.25 = 2,031 | 1,909 |
| Exports on commission basis | 143 | 170 | |
| Gross exports | 1,572 x 1.25 = 1,965 | 1,795 x 1.25 = 2,244 | 2,105 |
| Ratio of gross exports to investment | | | 22.7% 3/ |
| Less imports from subsidiaries | 328 x 1.25 = 410 | 213 x 1.25 = 266 | 338 |
| Net exports | 1,244 x 1.25 = 1,555 | 1,582 x 1.25 = 1,978 | 1,767 |
| Ratio of net exports to investment | | | 19.0% 3/ |
| **Europe and Canada** | | | |
| Manufacturing subsidiaries investment | 7,347 | | |
| Gross exports | 1,180 | 1,297 | 1,238 |
| Ratio of gross exports to investment | | | 16.9% 4/ |
| Net exports | 780 | 1,038 | 910 |
| Ratio of net exports to investment | | | 12.4% 4/ |
| **Rest of World** | | | |
| Manufacturing subsidiaries investment | 1,954 | | |
| Gross exports | 784 | 946 | 865 |
| Ratio of gross exports to investment | | | 44.5% 3/ |
| Net exports | 789 | 938 | 863 |
| Ratio of net exports to investment | | | 44.2% 3/ |

Office of the Secretary of the Treasury,
Office of Tax Analysis

April 2, 1962

For footnotes and sources, see following page.

Footnotes and sources for Table 4.

1/ All data in the table are multiplied by 1.25 because the Commerce Department sample is said to cover "at least 80 percent of all U.S. manufacturing investments abroad."

2/ Of which it is estimated that $21 million in 1959, and $54 million in 1960 were capital goods exports, the same approximate amount being sent to subsidiaries in Canada and to subsidiaries in Europe. The Commerce Department survey states:

> The manufacturing subsidiaries abroad reported imports of $129 million of capital equipment from the United States in 1960, compared with about half that much in 1959. Canada and Europe each accounted for about one-third of the 1960 total. A number of reporters were not able to segregate exports of capital equipment from other exports, so that the total for equipment is comparatively incomplete.

One-third of $129 million is $43 million, multiplied by 1.25 as per footnote 1/ yields $54 million, and a comparable calculation for a $65 million 1959 total yields $21 million.

3/ These are unweighted ratios, but the weighted ratios are little different. See footnote 4. The weighted net export ratio for the world as a whole on the basis of new capital outflow, 1957-1960, is 16.6 percent.

4/ These are unweighted ratios. Total outstanding investment in manufacturing in 1959 was about equally weighted as between Canada and Europe, but over 70 percent of the new capital outflow between 1957 and 1961 was to Europe, less than 30 percent to Canada. The weighted net export ratio to measure the effect of an average new dollar invested in developed countries is 8.0 percent.

Sources:

Data on exports and imports are from the survey of 155 manufacturing companies made by the U. S. Department of Commerce in 1961, the results being published in Hearings on the President's 1961 Tax Recommendations, Committee on Ways and Means of the House of Representatives, Volume 1, pages 427-31. Data on manufacturing subsidiary investment outstanding are from Table A1 in the appendix to this exhibit.

The evidence accumulated in Table 4 can be interpreted in either of two ways, depending upon our assumptions about the nature of capital goods exports. We can assume that capital goods exports to subsidiaries are a once-and-for-all phenomenon, associated with new capital outflow; or we can assume that these capital goods exports are largely for replacement purposes and can therefore be interpreted as a continuous stream once investment has taken place, much like raw material and other exports. The two interpretations lead to similar results as it turns out, but it may be useful to delineate both so that there will be no confusion.

Consider Europe first, the main area which might be affected by elimination of tax deferral and by tax haven legislation. If we think

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2/ (continued from page 365)
A third limitation of the data has to do with items 1.(d). and 1.(e). Presumably item 1.(d) is small since United States investment is a small proportion of total investment, especially in Western Europe. It has been suggested, however, that the fact that European production has been close to capacity in recent years could have meant that the addition of new U. S. investment funds created a substantial increase in exports from the United States, not directly related to the operations of U. S. subsidiaries, simply because Europe did not at the time have the needed capacity to meet the additional demand for equipment and supplies. Some businessmen feel, furthermore, that the data, which include all exports made to subsidiaries on a commission basis (and thus presumably include some "contact sales"), substantially understate item 1.(e). Management becomes more "internationally minded" with existence of manufacturing subsidiaries, and this leads to more thought about exports, more interest in the promotion of exports, and so forth. However, one weights this factor, it is clearly one which cannot be expressed rigorously in quantitative terms.

When we come to the negative items which must be subtracted from "gross exports," we suggest first of all that 2. may be overstated in the data to the extent that subsidiaries' sales in the United States simply replace imports from foreign competitors which would have been purchased had there been no subsidiary. This is a counterpart to that considered with respect to export items 1.(b) and 1.(c) above. On the other hand, item 3. does not appear in the data at all, and there are good reasons for believing that this item might be very large indeed, as suggested in the text.

of capital goods exports as a once-and-for-all phenomenon, we can reason as follows. Total capital outflow to manufacturing subsidiaries in Europe for the two years 1959-60 was $838 million (see Appendix Table A1). Capital equipment exports to manufacturing subsidiaries in Europe over these two years amounted to approximately $75 million. A dollar of new investment generated, therefore, something less than 10 cents worth of capital goods exports, on a once-and-for-all basis. Subtracting the $75 million from the two-year gross export total of $608 million, we obtain a figure of $533 million for the two year period, or a figure of $267 million as an annual average. These are the continuing exports of raw materials, intermediate products, and finished goods sold to or through manufacturing subsidiaries in Europe-exports which must be related to the total outstanding plant and equipment existing in Europe at this time. Dividing $267 million by the $2,880 million of outstanding investment in 1959 yields approximately 9 cents worth of continuing gross exports. We can say that a new dollar from the United States, or a dollar of European earnings which is reinvested, will yield 9 cents worth of continuing exports of raw materials, intermediate products, and finished goods sold to or through manufacturing subsidiaries in Europe. But investment in Europe also means new sales by subsidiaries to the United States, much of which probably displaces American production and all of which implies an additional import payment in balance of payments terms. Dividing the annual average $186 million of imports by $2,880 million implies that a dollar invested in Europe generates 6 cents worth of imports from subsidiaries into this country. In summary, treating capital goods exports on a once-and-for-all basis we reach the conclusion that a dollar invested in Europe yields something less than 10 cents worth of capital goods exports in the first year, and a continuing stream of "net exports" thereafter of 3 cents a year. 1/

This approach to the problem, as a first approximation, implies that the immediate employment effect in the United States of a dollar invested in Europe might be at most approximately 10 cents. A dollar invested at home has ten times the immediate employment effect of a dollar invested in Europe. Or in other words, if a dollar which

1/ It should be noted that there is a marked distinction between the year 1959 and the year 1960 in the data for Europe. The 1959 data imply a negative "net export" factor, whereas the 1960 data imply a ratio of nearly 7 percent. Our general conclusions would seem to be little affected, however, even if we chose to use the 1960 data alone, rather than averaging the two years.

is induced to go to Europe by special tax privileges is deterred from going there by removal of those privileges, and anything more than 10 cents of that dollar is then invested at home, there should be a favorable short-run effect on income and employment in this country.

Before discussing possible long-run growth and employment effects of elimination of tax deferral, let us consider the second approach to the question of capital goods exports--treating them as part of the continuing stream of exports on the ground that many such exports are to replace existing equipment in European plants rather than designed to go into new plant financed by new capital outflow from this country. Here we would simply divide the total annual average gross exports of $304 million by $2,880 million, obtaining 10.6 percent; or subtracting for European subsidiaries' sales in this country, we would obtain a "net export" ratio of 4 percent, rather than the 3 percent found under our first assumption. We can say that a new dollar of capital outflow from the United States, or a dollar of European earnings which is reinvested, will yield 10 cents worth of continuing exports from the United States, of goods of all kinds, and 6 cents worth of continuing imports into the United States. Noting the above possible qualification with respect to immediate employment effects, it seems best to use this second approach for work which follows, for a number of reasons: (1) many capital goods exports are surely for replacement purposes, that is, there is a steady stream; (2) the figures for capital goods exports are only rough estimates as noted in footnote 2/ to Table 4; (3) the two approaches clearly yield very similar results; and (4) the second is far simpler than the first.

It should be noted that the "net export" factor of 4 cents which we arrive at does not include related exports--exports which are not sold to or through subsidiaries even on a commission basis but may nevertheless be dependent in one way or another on the operation of subsidiaries abroad. Nor does it include displaced exports--exports from the United States either to the European country where the subsidiary is located or sales to third-country markets which may be displaced by sales of the U. S. foreign subsidiary. The "related exports" which were claimed in one private study of 19 major manufacturing companies, on the basis of world-wide data, amounted approximately to one-half of the total gross exports sold to or through foreign subsidiaries. 1/ This would imply a figure of $150 million so far as Europe was concerned, which might be thought of as an upper limit for any estimate of "related exports." So far as the displacement

1/ See the Heinz study in House Ways and Means Committee, Hearings on the President's Tax Program, 1961, 3185-3209.

effect is concerned, total sales of U. S. manufacturing subsidiaries in Europe amounted to $9,310 million in 1960 with approximately one-sixth of such sales comprising exports to countries other than the United States. 1/ Thus, we can say the following. If only a little over one percent of the total sales of American-owned subsidiaries in Europe serve to displace sales from the United States, or if 8 percent of estimated sales by these subsidiaries made outside the country in which they are located displace sales from the United States, the direct "net export" impact on the United States of foreign investment in Europe would be wiped out entirely, i.e. the $118 million shown in Table 4 would be completely offset. If only 1.5 percent of total sales, or 9 percent of export sales other than to the United States, served to displace U. S. exports, the hypothetical "related export" factor of $150 million would be offset by the "displacement factor." And if these percentages on displacement were as high as 3 percent and/or 17 percent, both the possible "related exports" and the "net exports" going directly to and through subsidiaries would be offset by export displacement.

We have already considered the immediate employment effects in the United States of investment in Europe, under the most favorable possible assumptions, and determined that elimination of tax deferral should lead to increased employment in this country. Removal of the tax incentives to invest in Europe should also have a favorable long-run effect on economic growth in this country. The dollar which is induced to go to Europe for these reasons expands plant capacity there, which leads to a continuing 4 cents worth of "net exports" from this country, assuming that demand keeps up with capacity. A dollar invested in this country in new plant and equipment is normally thought to create a continuing stream of 40 cents worth of current output, if demand keeps up with capacity. Thus, if anything more than 10 cents of the dollar that is deterred from going to Europe by elimination of deferral is invested at home, there will be a favorable long-run effect on income and employment in this country.

1/ See Survey of Current Business, September 1961, p. 23, for 1960 sales. No information is available on sales made outside the country of location in this year, but Department of Commerce data for 1957 show that over one-sixth of total sales in that year were exports to countries other than the United States. See U. S. Department of Commerce, U. S. Business Investments in Foreign Countries (1960), Table 22, p. 110.

When investment in Canada is added to investment in Europe, we get a slightly more favorable picture of the effect of new foreign investment on exports. Between 1957 and 1960, 71 percent of the new capital outflow to these two regions went to Europe, 29 percent to Canada, and this ratio was even more pronounced in the direction of Europe in 1961, according to preliminary data. Assuming, then, that any deterred investment consequent upon elimination of tax deferral is distributed in these proportions as between Canada and Western Europe, it turns out that elimination of a dollar of tax-induced new investment in these developed regions means elimination of 8 cents worth, rather than 4 cents worth, of "net exports." 1/

So much for developed regions. We get a very different picture when we look at the relationship between (a) direct investment in manufacturing subsidiaries located in Latin America and in other less developed regions of the world, and (b) exports to these subsidiaries minus imports from them. If we eliminated tax deferral and this step deterred a dollar of new investment in these regions, it would, according to the data in Table 4, eliminate over 40 cents worth of exports from the United States. The nature of manufacturing investment in these regions is radically different from that in advanced industrial countries. Obviously alternative sources of supply are much more limited, and subsidiaries are necessarily thrown much more back on the American market, both for capital equipment and for raw materials and intermediate parts.

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1/ The "net export" ratio for Canada alone is 17.7 percent, but weighting this by 29 percent and the European ratio by 71 percent yields 8.0 percent. Of course, all of these ratios are based on the assumption that average ratios--total exports divided by total direct investment outstanding--correctly reflect incremental ratios, which is what we are really seeking to measure. There is no reason to expect that such would not be the case, and the differential could not under any circumstances be sufficiently significant to alter the basic conclusions.

B. Elimination of tax-induced foreign investment and the overall effect on our balance of payments

There has been much discussion, and considerable disagreement on the issue of the overall effect on our balance of payments of eliminating the special tax incentives now existing which favor investment in other developed countries as compared with investment at home. There are various ways of attempting to show this, but perhaps the best is to ask ourselves: "What has been the effect on our balance of payments of investment in manufacturing in Canada and Western Europe over the last few years, say from 1952 to 1960?" Presumably only a small proportion of new capital outflow over this period was actually tax-induced, but however large or small it should have had the same kind of general effect on the balance of payments as the total gross investment outflow to these regions. 1/

To answer this question, we must add to net export receipts generated by new capital outflow and reinvested earnings other inflows generated in the same fashion, namely, income from management fees and patent and copyright royalties, as well as dividend income. Again we stress that the inflows we add together must be those which are related to the capital outflow over this period, 1952 to 1960, not those related to investment prior to this period, nor to the reinvested earnings of plants already existing in 1951. To compare total inflows with total outflows, even over a nine-year period, as many individual company statements have done, tells us nothing about the magnitude of the inflows generated by the new investment outflow over the period, since a substantial portion of such inflows were actually the result of investment prior to the period.

In Chart 1, based on the data in Tables A1-A5 in the appendix to this Exhibit, we show the cumulative amount of capital outflow to Canada and Western Europe over the period 1952 to 1960, and the cumulative amount of dividend inflows, receipts from fees and royalties, and net export receipts estimated to have been generated (a) by the new investment and (b) by the reinvestment of earnings over the period which were made on this new investment.

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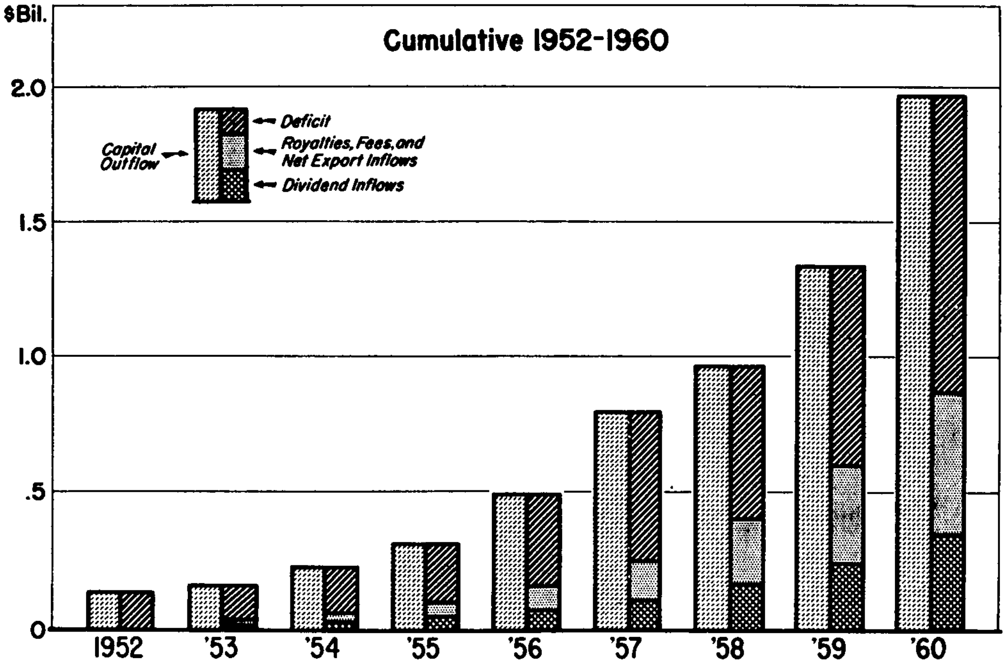
1/Actually, if investment was really induced by tax advantages, and would not have been made without this inducement, it would imply that the rate of return was below the average. This would mean that the net balance of payments effect of such investment was less favorable or more unfavorable than that derived from aggregate data on total investment.

Chart I

## EFFECT OF CAPITAL OUTFLOW TO MANUFACTURING SUBSIDIARIES IN CANADA AND W. EUROPE

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It is clear from Chart 1 that the cumulative deficit generated by new direct investment in other developed countries grew in every year after 1953, i.e. that every year the new capital outflow exceeded the inflows generated by the growth in investment outstanding subsequent to the year 1952. We hasten to add immediately that at some point this situation should right itself; the cumulative deficit should get smaller and eventually disappear unless new investment continues to grow at an ever-increasing rate as it has been doing in recent years, and this hardly seems likely. But clearly the "catching up" period is a long one indeed if the capital outflow keeps growing, even at a steady rate. If the outflow from 1963 forward grows at a steady 10 percent a year, which has been the average over the last eight years, there would be no net improvement in our balance of payments until 1975, i.e. inflows would not catch up to outflows on a cumulative basis until 1975. Even if the growth rate drops to 5 percent a year it will still be the early 1970's before the capital outflow over this period, to developed countries, ceases to add to our balance of payments difficulties and begins to make a positive contribution.

Put another way, the evidence indicates that the elimination of any investment which may now be going to other developed countries primarily because of the tax inducements provided by the existence of the deferral privilege and/or tax haven opportunities, would contribute favorably to our overall balance of payments position over at least the next 10 to 12 years, and probably over a longer period. Because of the difference with respect to the generation of exports already discussed, on the other hand, deterring investment in less developed countries by altering present tax incentives would improve our balance of payments position over a very much shorter period. Here cumulative inflows would be expected to catch up to cumulative outflows in three to four years.

2. <u>Elimination of tax deferral will stimulate the remission of a larger proportion of earnings to the United States</u>

The possible "deterrent effect" on new tax-induced foreign investment as a consequence of removing existing tax preferences with respect to investment in developed countries is an economic issue which has been widely discussed. Less often analyzed, but perhaps more important from the point of view of our overall balance of payments position, is the "switch effect" which may be expected to follow from the elimination of tax deferral and from the tax haven legislation--the possibility that with removal of the special incentives to keep earnings abroad, a larger amount may be sent home, both as dividends and in order to pay the taxes due.

At present, the proportion of earnings which are remitted as dividends from subsidiaries in Canada and Western Europe is substantially below that which prevails for domestic corporations in the United States. Forty-five percent of earnings after foreign taxes, or somewhat less than this after payment of the U.S. tax on distributed earnings as well (if the foreign tax rate is below the U.S. rate) is paid in dividends on foreign manufacturing operations, whereas the proportion for domestic manufacturing corporations is 53 percent. With a foreign tax rate of 40 percent, the typical situation at present would be as shown in the left-hand column of Table 5. If the tax advantage to leaving earnings abroad were removed, we would expect the situation to approximate more nearly the domestic situation, as shown in the right-hand column of Table 5. This might not occur immediately, of course, and if the rate of return on investment after taxes were higher abroad than in this country, the proportion of earnings after all taxes paid as a dividend might be somewhat less than 53 percent. But in general there should surely be some "switch effect"--an effect which would be stronger the lower the foreign tax rate and thus the greater the tax incentive now to leave earnings abroad.

Table 5

The Effect of Eliminating Tax Deferral on Remission of Income to the United States

| | Existing situation | After elimination of deferral |
|---|---|---|
| 1. Income | $100 | $100 |
| 2. Less foreign tax a/ | 40 | 40 |
| 3. Income after foreign tax | $ 60 | $ 60 |
| 4. U.S. tax on income as earned | - | 12 |
| 5. Amount remitted as dividend to parent | 24 b/ | 25 c/ |
| 6. U.S. tax | 3 d/ | |
| 7. Total income remitted (dividend plus U.S. tax) | 27 e/ | 37 |

a/Assumed foreign tax rate: 40 percent.
b/Forty-two percent of income after foreign tax.
c/Fifty-three percent of income after all taxes, which is the average for domestic manufacturing corporations in the United States.
d/Twelve percent of total income remitted (line 7).
e/Forty-five percent of income after foreign taxes. See Table A3 in the appendix to Exhibit III.

In Chart 2, supported by data in Tables A-6 and A-7 in the appendix, we combine the "switch effect" under the above assumptions with the "deterrent effect" in accordance with the general assumptions treated in the previous section in an effort to gain at least some general picture of what the total effect on our balance of payments might be as a result of full acceptance of the proposal to eliminate tax deferral with respect to the taxation of foreign corporate income in developed countries.

With a steady growth in capital outflow of 10 percent a year, income remitted to this country will be higher than at present, and this differential will get steadily larger, in spite of the fact that less earnings will be reinvested and thus the overall growth rate of our outstanding direct investment in developed countries will be reduced. On the other hand, the slower growth rate should gradually reduce our earnings from fees and royalties and "net exports," assuming that this factor is not completely offset by the displacement of U.S. domestic sales in foreign markets as a result of sales by foreign subsidiaries. But even if net exports, fees, and royalties are positive, it will take a long time for these losses to catch up to the gain in income remittances; the cumulative "switch effect" will be favorable at least until 1978 on our assumptions.

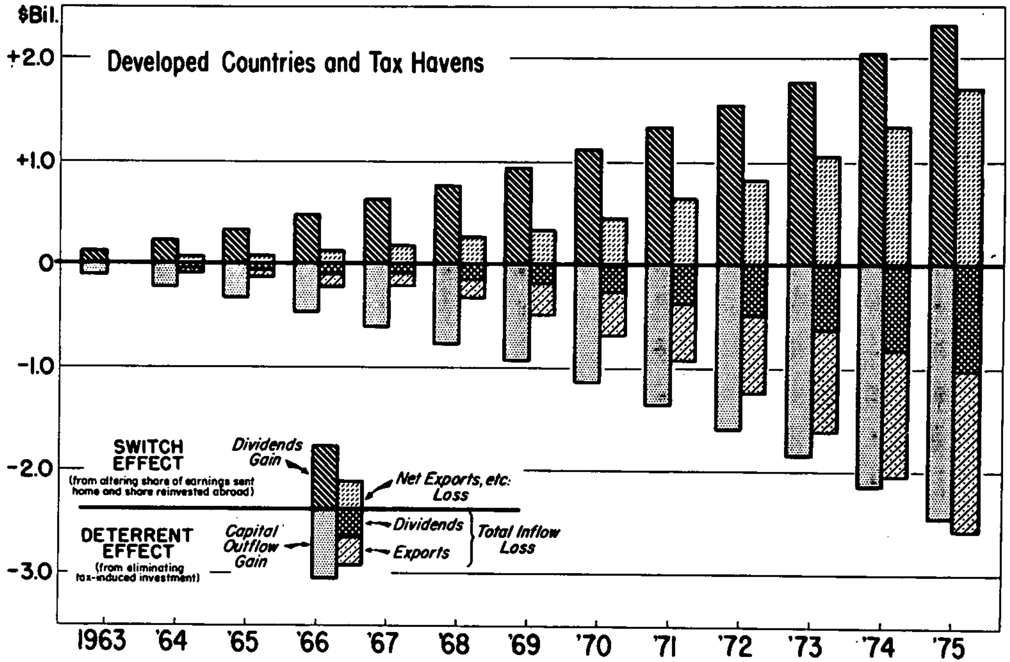
Below the line in Chart 2 we measure the gains and related losses from the "deterrent effect," and it is seen that this, too, will have a favorable effect on our balance of payments, until 1975 at any rate on our conservative assumption that there is no displacement factor, or that it just offsets any "related export" factor, as discussed in the previous section.

It is clear that subsidizing foreign investment through tax deferral <u>may</u> contribute positively to our balance of payments liquidity position in the very long run, but it will clearly worsen our balance of payments liquidity position over at least the next 10 to 15 years.

But if our actions are to turn on this issue, two last points are relevant. We are not mercantilists. We do not want a chronic surplus in our balance of payments. We want an increase in inflows now as compared with outflows because we have a deficit. But balance of payments liquidity problems come and go, governed to a large extent by the behavior of relative prices here and abroad. We may still be in difficulty in the early and middle 1970's. Surely we hope that this will not be the case, however; we hope that we can keep our prices under better control than prices elsewhere in the world in the immediate years ahead, and so get out of our present difficulties.

Chart 2

## ESTIMATION OF CUMULATIVE BALANCE OF PAYMENTS EFFECT OF ELIMINATING TAX DEFERRAL

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The true long-run value of sacrificing goods and services now in order to invest abroad turns, then, on the real benefits to be derived from doing so, not on the monetary benefits. But the real benefits turn on the relationship of capital outflows to dividend inflows alone. When we receive dividends from our investments we, as a nation, can consume more. Export receipts generated by our investment improve our liquidity position but in real terms they simply mean that we are giving up some goods in order to obtain other goods, or in order to obtain gold. As we have seen, however, it will be a long, long time before dividend inflows alone catch up to our ever-increasing capital outflow.

What we really wish to do, then, is to improve our liquidity position in the immediate years ahead so as to eliminate our present "chronic" deficit, and to think thereafter of benefiting in real terms, both from our foreign trade and from our foreign investments. Eliminating deferral, in addition to being sound from the point of view of allocating our resources efficiently and from the point of view of stimulating income and employment in this country, supports both our short-run and our long-run balance of payments objective.

3. Taxation and foreign competition

Much has been made of the argument that the elimination of tax deferral will put U. S. subsidiaries abroad at a competitive disadvantage vis-a-vis foreign competitors, in particular in third-country markets. In considering this contention, it is important to maintain perspective, to analyze carefully what "being at a competitive disadvantage" is likely to mean.

First, consider two extraneous issues, but issues which have nevertheless been raised over and over again. It is argued that some countries have turnover and other types of indirect taxes, and that elimination of tax deferral may therefore mean total taxes in excess of 52 percent. But such taxes are not the same as income taxes. Like excise taxes in the United States they are passed on to the consumer in the form of higher prices since they add to operating costs. They are not borne out of corporate profits, and they are charged to foreign competitors as well as to American subsidiaries operating abroad. In short, the existence of such taxes is not relevant to the issue of tax deferral and the competitive position of American foreign subsidiaries. A second argument frequently heard is that foreign companies are not restricted in third-country markets, are free to use tax haven operations, and so forth, so that U. S. firms will be at a competitive disadvantage in this respect. But companies in most European countries are subject to direct controls of one kind or another, to limit evasion of taxes, to restrict foreign investment which will be harmful to the balance of payments--the latter true of the United Kingdom especially (where stated government policy currently is to restrict new foreign investment unless the pay-back period is two years), and to control remission of dividends and reinvestment of earnings.

Turning to relevant issues with respect to the effect of eliminating tax deferral on the competitive position of U. S. subsidiaries in Europe, what it may in fact mean depends upon how each particular firm reacts to the change. In some cases, the parent firm in the United States may choose to pay any additional taxes due, in which case there will be no effect on the foreign subsidiary's competitive position at all. In other cases, payment of the tax by the subsidiary may simply limit investment in new activities, completely unrelated to its existing activities, or even from lending money to the parent company in the United States -- again not affecting its competitive position at all.

But suppose none of these situations exists, and that elimination of tax deferral reduces retained earnings and reduces expansion in existing activities. Then there are still two possibilities. If, following elimination of deferral, the rate of return after all taxes is greater for the subsidiary than for its foreign competitor, there is no real problem. The subsidiary will presumably continue to grow relative to its competitor if they pay the same dividends to stockholders. The subsidiary in this case has substantial real cost advantages over its competitor--enough to outweigh the disadvantage of having to pay a higher corporate income tax if U. S. rates are higher than those applied to its competitor.

If, on the other hand, after elimination of tax deferral, the foreign subsidiary's rate of return after all taxes is now less than its foreign competitor, the subsidiary may slowly experience a decline in its market share. Faced with this situation, the foreign subsidiary could maintain the level of retained earnings overseas, and thus retain its market share, if it wished to, in one of two ways: (a) reduce the level of dividends paid to stockholders; (b) borrow funds, from the parent company or elsewhere, equal to the interest-free loan it had been getting as a result of tax deferral--the approximate short-run cost of remaining fully competitive would be the interest charge on borrowings equal to the new taxes which would have to be paid.

Whether or not the foreign subsidiary wished to pursue one of these two courses and maintain its share of the foreign market would, in the last analysis, depend upon the relative profitability of alternative investment opportunities--for example, in the United States. If the rate of return abroad over a number of years proved to be greater than the rate of return at home when the tax on both incomes was the same, it would maintain and expand its position abroad relative to its position at home. If this were not the case, it would do the reverse.

And so we inevitably come back again to the principle of neutrality in taxation. A subsidiary abroad will be put at a competitive disadvantage only in the sense that elimination of deferral may reduce its retained earnings and thus limit its overseas growth. It will allow this to happen only if the incentive to invest abroad is in fact based, at least in part, on tax considerations. And it is precisely this type of artificial inducement which is inequitable, which leads to misallocation of our own and world resources, which has an adverse effect on employment, income, and growth in this country, and which will, if allowed to continue, damage our balance of payments position in the critical years ahead.

## EXHIBIT III

## GENERAL STATISTICAL APPENDIX

### Note on Sources

All of the data used in the tables in the appendix and in the text are from published information of the U.S. Department of Commerce unless otherwise noted. The basic information on direct investments in Table A1 is derived from annual surveys on foreign investments, published in the Survey of Current Business each year; using always the latest revised data available.

Table A1
United States Direct Investment Outstanding and Outflows and Inflows by Area and Selected Industries, 1953-1960
(Millions of dollars)

| | 1952 Total (Revised) | 1953 Total (Revised) | 1953 Petroleum (Revised) | 1953 Manufacturing (Revised) | 1954 Total (Revised) | 1954 Petroleum (Revised) | 1954 Manufacturing (Revised) |
|---|---|---|---|---|---|---|---|
| **CANADA** | | | | | | | |
| Investment Outstanding | 4,593 1/ | 5,242 | 933 | 2,418 | 5,871 | 1,152 | 2,592 |
| Capital outflow | 420 | 387 | 181 | 27 | 385 | 190 | 51 |
| Reinvested earnings | 199 | 259 | 36 | 153 | 232 | 25 | 123 |
| Income | 222 | 208 | -20 | 132 | 237 | -10 | 138 |
| Earnings | 421 | 467 | 16 | 274 | 470 | 15 | 249 |
| Royalties & fees | ---- | ---- | 2/ | ---- | ---- | ---- | ---- |
| **WESTERN EUROPE** | | | | | | | |
| Investment Outstanding | 2,145 3/ | 2,369 | 609 | 1,295 | 2,639 | 668 | 1,451 |
| Capital outflow | -8 | 51 | 33 | -7 | 50 | 20 | 21 |
| Reinvested earnings | 174 | 173 | 45 | 115 | 198 | 36 | 134 |
| Income | 129 | 143 | 30 | 75 | 186 | 32 | 106 |
| Earnings | 303 | 316 | 76 | 193 | 384 | 68 | 239 |
| Royalties & fees | ---- | ---- | 2/ | ---- | ---- | ---- | ---- |
| **LATIN AMERICAN REPUBLICS** | | | | | | | |
| Investment Outstanding | 5,758 4/ | 6,034 | 1,684 | 1,149 | 6,244 | 1,689 | 1,240 |
| Capital outflow | 277 | 117 | 58 | -73 | 88 | -22 | 24 |
| Reinvested earnings | 303 | 152 | 51 | 54 | 125 | 29 | 69 |
| Income | 599 | 570 | 356 | 68 | 589 | 351 | 56 |
| Earnings | 902 | 722 | 409 | 122 | 715 | 380 | 123 |
| Royalties & fees | ---- | ---- | 2/ | ---- | ---- | ---- | ---- |
| **REST OF THE WORLD** | | | | | | | |
| Investment Outstanding | 2,323 5/ | 2,684 | 1,709 | 364 | 2,872 | 1,761 | 428 |
| Capital outflow | 161 | 166 | 136 | 0 | 141 | 89 | 15 |
| Reinvested earnings | 200 | 192 | 106 | 39 | 89 | 4 | 50 |
| Income | 469 | 477 | 399 | 34 | 713 | 476 | 45 |
| Earnings | 669 | 669 | 502 | 78 | 800 | 501 | 87 |
| Royalties & fees | ---- | ---- | 2/ | ---- | ---- | ---- | ---- |
| **ALL AREAS** | | | | | | | |
| Investment Outstanding | 14,819 6/ | 16,329 | 4,935 | 5,226 | 17,626 | 5,270 | 5,711 |
| Capital outflow | 850 | 721 | 408 | -53 | 664 | 277 | 111 |
| Reinvested earnings | 876 | 776 | 238 | 361 | 644 | 94 | 376 |
| Income | 1,419 | 1,398 | 765 | 309 | 1,725 | 849 | 345 |
| Earnings | 2,295 | 2,174 | 1,003 | 667 | 2,369 | 964 | 698 |
| Royalties & fees | ---- | ---- | 2/ | ---- | ---- | ---- | ---- |

EXHIBIT III

Table A1 (Continued)

| | 1955 | | | 1956 | | |
|---|---|---|---|---|---|---|
| | Total (Revised) | Petroleum (Prelim.) | Manufacturing (Prelim.) | Total (Revised) | Petroleum (Prelim) | Manufacturing (Prelim.) |
| **CANADA** | | | | | | |
| Investment Outstanding | 6,494 | 1,350 | 2,841 | 7,460 | 1,768 | 3,196 |
| Capital outflow | 300 | 132 | 54 | 542 | 280 | 101 |
| Reinvested earnings | 298 | 40 | 158 | 367 | 48 | 237 |
| Income | 293 | 4 | 172 | 353 | 27 | 156 |
| Earnings | 591 | 44 | 330 | 720 | 75 | 393 |
| Royalties & fees | --- | --- | 2/ | --- | --- | --- |
| **WESTERN EUROPE** | | | | | | |
| Investment Outstanding | 3,004 | 764 | 1,640 | 3,520 | 992 | 1,861 |
| Capital outflow | 140 | 53 | 36 | 486 | 334 | 83 |
| Reinvested earnings | 219 | 40 | 144 | 204 | 63 | 111 |
| Income | 255 | 74 | 130 | 280 | 76 | 135 |
| Earnings | 474 | 114 | 274 | 483 | 139 | 246 |
| Royalties & fees | --- | --- | 2/ | --- | --- | --- |
| **LATIN AMERICAN REPUBLICS** | | | | | | |
| Investment Outstanding | 6,608 | 1,801 | 1,372 | 7,459 | 2,232 | 1,543 |
| Capital outflow | 193 | 49 | 60 | 592 | 365 | 76 |
| Reinvested earnings | 192 | 44 | 67 | 241 | 67 | 72 |
| Income | 678 | 438 | 52 | 800 | 530 | 53 |
| Earnings | 870 | 483 | 119 | 1,041 | 597 | 125 |
| Royalties & fees | --- | --- | 2/ | --- | --- | --- |
| **REST OF THE WORLD** | | | | | | |
| Investment Outstanding | 3,207 | 1,934 | 496 | 3,738 | 2,288 | 552 |
| Capital outflow | 146 | 86 | 10 | 239 | 150 | 8 |
| Reinvested earnings | 189 | 76 | 54 | 188 | 80 | 48 |
| Income | 686 | 523 | 44 | 687 | 515 | 46 |
| Earnings | 876 | 598 | 98 | 876 | 595 | 94 |
| Royalties & fees | --- | --- | 2/ | --- | --- | --- |
| **ALL AREAS** | | | | | | |
| Investment Outstanding | 19,313 | 5,849 | 6,349 | 22,177 | 7,280 | 7,152 |
| Capital outflow | 779 | 320 | 160 | 1,859 | 1,139 | 268 |
| Reinvested earnings | 898 | 200 | 423 | 1,000 | 258 | 468 |
| Income | 1,912 | 1,039 | 398 | 2,120 | 1,148 | 390 |
| Earnings | 2,811 | 1,239 | 821 | 3,120 | 1,406 | 858 |
| Royalties & fees | --- | --- | 2/ | --- | --- | --- |

EXHIBIT III

Table A1(Continued)

| | 1957 Total (Revised) | 1957 Petroleum (Revised) | 1957 Manufacturing (Revised) | 1958 Total (Revised) | 1958 Petroleum (Revised) | 1958 Manufacturing (Revised) |
|---|---|---|---|---|---|---|
| CANADA | | | | | | |
| Investment Out-standing | 8,637 | 2,016 | 3,924 | 9,470 | 2,293 | 4,164 |
| Capital outflow | 718 | 250 | 184 | 421 | 237 | 72 |
| Reinvested earnings | 357 | 67 | 180 | 279 | 40 | 168 |
| Income | 335 | 56 | 171 | 315 | 27 | 188 |
| Earnings | 653 | 112 | 342 | 569 | 57 | 349 |
| Royalties & fees | 60 | 3 | 38 | 65 | 8 | 39 |
| WESTERN EUROPE | | | | | | |
| Investment Out-standing | 4,151 | 1,253 | 2,195 | 4,573 | 1,320 | 2,475 |
| Capital outflow | 287 | 135 | 120 | 190 | 67 | 92 |
| Reinvested earnings | 294 | 95 | 154 | 238 | 8 | 180 |
| Income | 281 | 58 | 145 | 339 | 95 | 165 |
| Earnings | 582 | 152 | 306 | 582 | 103 | 349 |
| Royalties & fees | 58 | 5 | 45 | 82 | 13 | 59 |
| LATIN AMERICAN REPUBLICS | | | | | | |
| Investment Out-standing | 7,434 | 2,702 | 1,270 | 7,751 | 2,825 | 1,316 |
| Capital outflow | 1,163 | 862 | 102 | 299 | 147 | 63 |
| Reinvested earnings | 239 | 64 | 67 | 143 | 13 | 58 |
| Income | 880 | 576 | 62 | 641 | 382 | 47 |
| Earnings | 1,096 | 638 | 129 | 760 | 393 | 104 |
| Royalties & fees | 70 | 17 | 21 | 66 | 14 | 21 |
| REST OF THE WORLD | | | | | | |
| Investment Out-standing | 5,040 | 3,084 | 620 | 5,593 | 3,379 | 718 |
| Capital outflow | 675 | 161 | 26 | 271 | 198 | 42 |
| Reinvested earnings | 473 | 242 | 54 | 285 | 95 | 58 |
| Income | 753 | 586 | 51 | 845 | 685 | 60 |
| Earnings | 1,230 | 824 | 107 | 1,123 | 771 | 124 |
| Royalties & fees | 52 | 31 | 13 | 66 | 44 | 15 |
| ALL AREAS | | | | | | |
| Investment Out-standing | 25,262 | 9,055 | 8,009 | 27,387 | 9,817 | 8,673 |
| Capital outflow | 2,482 | 1,408 | 432 | 1,181 | 649 | 269 |
| Reinvested earnings | 1,363 | 468 | 455 | 945 | 156 | 464 |
| Income | 2,249 | 1,276 | 429 | 2,140 | 1,189 | 460 |
| Earnings | 3,561 | 1,726 | 884 | 3,034 | 1,324 | 926 |
| Royalties & fees | 241 | 56 | 117 | 280 | 78 | 133 |

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EXHIBIT III

Table A1 (Continued)

| | 1959 Total (Revised) | 1959 Petroleum (Prelim.) | 1959 Manufacturing (Prelim.) | 1960 Total (Prelim.) | 1960 Petroleum (Prelim.) | 1960 Manufacturing (Prelim.) | 1961 Total (Est.) 7/ |
|---|---|---|---|---|---|---|---|
| CANADA | | | | | | | |
| Investment Outstanding | 10,310 | 2,465 | 4,558 | 11,198 | 2,667 | 4,827 | N.A. |
| Capital outflow | 417 | 113 | 139 | 471 | 138 | 31 | 295 |
| Reinvested earnings | 393 | 44 | 240 | 389 | 46 | 234 | N.A. |
| Income | 345 | 41 | 206 | 368 | 60 | 176 | 328 |
| Earnings | 713 | 74 | 438 | 718 | 97 | 398 | N.A. |
| Royalties & fees | 78 | 10 | 46 | 74 | 10 | 43 | N.A. |
| WESTERN EUROPE | | | | | | | |
| Investment Outstanding | 5,323 | 1,453 | 2,927 | 6,645 | 1,726 | 3,797 | N.A. |
| Capital outflow | 484 | 148 | 231 | 962 | 273 | 607 | 604 |
| Reinvested earnings | 266 | -7 | 207 | 326 | 1 | 237 | N.A. |
| Income | 393 | 125 | 226 | 427 | 85 | 241 | 495 |
| Earnings | 667 | 114 | 444 | 762 | 85 | 487 | N.A. |
| Royalties & fees | 105 | 20 | 72 | 113 | 15 | 80 | N.A. |
| LATIN AMERICAN REPUBLICS | | | | | | | |
| Investment Outstanding | 8,365 | 2,963 | 1,405 | 8,365 | 2,882 | 1,610 | N.A. |
| Capital outflow | 95 | 129 | 63 | 95 | -7 | 125 | 257 |
| Reinvested earnings | 202 | 31 | 71 | 215 | 33 | 86 | N.A. |
| Income | 600 | 292 | 50 | 641 | 311 | 63 | 641 |
| Earnings | 774 | 321 | 120 | 829 | 345 | 146 | N.A. |
| Royalties & fees | 74 | 17 | 25 | 74 | 15 | 31 | N.A. |
| REST OF THE WORLD | | | | | | | |
| Investment Outstanding | 8,746 | 3,542 | 802 | 6,536 | 3,669 | 918 | N.A. |
| Capital outflow | 698 | 121 | 27 | 166 | 51 | 39 | 436 |
| Reinvested earnings | 228 | 41 | 56 | 324 | 77 | 70 | N.A. |
| Income | 868 | 642 | 67 | 919 | 687 | 70 | 937 |
| Earnings | 1,087 | 676 | 127 | 1,237 | 755 | 145 | N.A. |
| Royalties & fees | 68 | 43 | 15 | 84 | 47 | 17 | N.A. |
| ALL AREAS | | | | | | | |
| Investment Outstanding | 29,805 | 10,423 | 9,692 | 32,744 | 10,944 | 11,152 | N.A. |
| Capital outflow | 1,372 | 511 | 450 | 1,694 | 455 | 802 | 1,592 |
| Reinvested earnings | 1,089 | 109 | 574 | 1,254 | 157 | 627 | N.A. |
| Income | 2,206 | 1,100 | 549 | 2,348 | 1,143 | 550 | 2,401 |
| Earnings | 3,241 | 1,165 | 1,129 | 3,546 | 1,282 | 1,176 | N.A. |
| Royalties & fees | 25 | 90 | 158 | 344 | 87 | 171 | N.A. |

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EXHIBIT III

TABLE A1

FOOTNOTES

1/ Of which $715 million in petroleum and $2,241 million in manufacturing.

2/ Reliable data for fees and royalties prior to 1957 are not available.

3/ Of which $532 million in petroleum and $1,187 million in manufacturing.

4/ Of which $1,577 million in petroleum and $1,166 million in manufacturing.

5/ Of which $1,467 million in petroleum and $326 million in manufacturing.

6/ Of which $4,291 million in petroleum and $4,920 million in manufacturing.

7/ Projections of data for first three quarters.

Source: Compiled from U. S. Department of Commerce data as explained in general note on sources.

EXHIBIT III

Table A2

The Rate of Return on U. S. Direct Investment Abroad,
1953 - 1960 (by region)
(millions of dollars)

| | Earnings: 1953-56 | Investment: 1952-55 | Ratio: % | Earnings: 1957-60 | Investment: 1956-59 | Ratio: % | Earnings: 1953-60 | Investment: 1952-59 | Ratio % |
|---|---|---|---|---|---|---|---|---|---|
| Canada | | | | | | | | | |
| All industries | 2,248 | 22,200 | 10.1 | 2,653 | 35,877 | 7.4 | 4,901 | 58,077 | 8.4 |
| Petroleum | 150 | 4,150 | 3.6 | 340 | 8,542 | 4.0 | 490 | 12,692 | 3.9 |
| Manufacturing | 1,246 | 10,092 | 12.3 | 1,527 | 15,842 | 9.6 | 2,773 | 25,934 | 10.7 |
| Western Europe | | | | | | | | | |
| All industries | 1,657 | 10,157 | 16.3 | 2,593 | 17,567 | 14.8 | 4,250 | 27,724 | 15.3 |
| Petroleum | 397 | 2,573 | 15.4 | 454 | 5,018 | 9.0 | 851 | 7,591 | 11.2 |
| Manufacturing | 952 | 5,573 | 17.1 | 1,586 | 9,458 | 16.8 | 2,538 | 15,031 | 16.9 |
| Subtotal: | | | | | | | | | |
| Canada & Western Europe | | | | | | | | | |
| All industries | 3,905 | 32,357 | 12.1 | 5,246 | 53,444 | 9.8 | 9,151 | 85,801 | 10.7 |
| Petroleum | 547 | 6,687 | 8.2 | 794 | 13,560 | 5.9 | 1,341 | 20,247 | 6.6 |
| Manufacturing | 2,198 | 15,665 | 14.0 | 3,113 | 25,300 | 12.3 | 5,311 | 40,965 | 13.0 |
| Latin American Republics | | | | | | | | | |
| All industries | 3,348 | 24,644 | 13.6 | 3,459 | 31,009 | 11.2 | 6,807 | 55,653 | 12.2 |
| Petroleum | 1,869 | 6,751 | 27.7 | 1,697 | 10,722 | 15.8 | 3,566 | 17,473 | 20.4 |
| Manufacturing | 489 | 4,927 | 9.9 | 499 | 5,534 | 9.0 | 988 | 10,461 | 9.4 |
| Rest of the World | | | | | | | | | |
| All industries | 3,221 | 11,086 | 29.1 | 4,677 | 23,117 | 20.2 | 7,898 | 34,203 | 23.1 |
| Petroleum | 2,196 | 6,871 | 32.0 | 3,026 | 12,293 | 24.6 | 5,222 | 19,164 | 27.2 |
| Manufacturing | 357 | 1,614 | 22.1 | 503 | 2,692 | 18.7 | 860 | 4,306 | 20.0 |
| Subtotal: | | | | | | | | | |
| Latin America & Rest of World | | | | | | | | | |
| All industries | 6,569 | 35,730 | 18.4 | 8,136 | 54,126 | 15.0 | 14,705 | 89,856 | 16.4 |
| Petroleum | 4,065 | 13,622 | 29.8 | 4,723 | 23,015 | 20.5 | 8,788 | 36,637 | 24.0 |
| Manufacturing | 846 | 6,541 | 12.9 | 1,002 | 8,226 | 12.2 | 1,848 | 14,767 | 12.5 |

(concluded on next page)

EXHIBIT III

Table A2 (Continued)

| | Earnings: 1953-56 | Investment: 1952-55 | Ratio: % | Earnings: 1957-60 | Investment: 1956-59 | Ratio: % | Earnings: 1953-60 | Investment: 1952-59 | Ratio: % |
|---|---|---|---|---|---|---|---|---|---|
| World | | | | | | | | | |
| All industries | 10,474 | 68,087 | 15.4 | 13,382 | 107,570 | 12.4 | 23,856 | 175,657 | 13.6 |
| Petroleum | 4,612 | 20,345 | 22.7 | 5,517 | 36,575 | 15.1 | 10,129 | 56,920 | 17.8 |
| Manufacturing | 3,044 | 22,306 | 13.6 | 4,115 | 33,526 | 12.3 | 7,159 | 55,832 | 12.8 |

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Source: Compiled from figures for earnings, and direct investment outstanding, in Table A1.

## EXHIBIT III

Table A3
Earnings on Common Stock, Common Dividends, and Ratio of Dividends to Earnings
U. S. Subsidiaries Abroad, 1953 - 1960 (by region)
(Millions of dollars)

| | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1953-56 | 1957-60 | 1953-60 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **CANADA: All Industries** | | | | | | | | | | | |
| Earnings on Common | 513 | 487 | 602 | 691 | 628 | 574 | 704 | 604 | 2,293 | 2,590 | 4,883 |
| Common Dividends | 196 | 198 | 239 | 228 | 257 | 269 | 284 | 268 | 861 | 1,078 | 1,939 |
| Ratio (%) | | | | | | | | | 37.5 | 41.6 | 39.7 |
| Petroleum | | | | | | | | | | | |
| Earnings | 56 | 49 | 67 | 101 | 106 | 86 | 91 | 105 | 273 | 388 | 661 |
| Dividends | 17 | 21 | 22 | 29 | 37 | 39 | 40 | 50 | 89 | 166 | 255 |
| Ratio (%) | | | | | | | | | 32.6 | 42.7 | 38.6 |
| Manufacturing | | | | | | | | | | | |
| Earnings | 336 | 292 | 359 | 390 | 336 | 343 | 433 | 392 | 1,377 | 1,504 | 2,831 |
| Dividends | 133 | 120 | 153 | 107 | 146 | 162 | 100 | 148 | 513 | 636 | 1,149 |
| Ratio (%) | | | | | | | | | 37.3 | 42.3 | 39.9 |
| **WESTERN EUROPE: All Industries** | | | | | | | | | | | |
| Earnings on Common | 209 | 358 | 449 | 521 | 551 | 509 | 629 | 709 | 1,617 | 2,394 | 4,011 |
| Common Dividends | 111 | 150 | 218 | 261 | 245 | 261 | 341 | 365 | 740 | 1,212 | 1,952 |
| Ratio (%) | | | | | | | | | 45.8 | 50.6 | 48.7 |
| Petroleum | | | | | | | | | | | |
| Earnings | 76 | 71 | 120 | 153 | 163 | 79 | 76 | 87 | 420 | 405 | 825 |
| Dividends | 30 | 34 | 76 | 86 | 67 | 70 | 81 | 85 | 226 | 303 | 529 |
| Ratio (%) | | | | | | | | | 53.8 | 74.8 | 64.1 |
| Manufacturing | | | | | | | | | | | |
| Earnings | 178 | 236 | 262 | 287 | 297 | 338 | 437 | 476 | 963 | 1,548 | 2,511 |
| Dividends | 60 | 94 | 111 | 140 | 134 | 151 | 211 | 226 | 405 | 722 | 1,127 |
| Ratio (%) | | | | | | | | | 42.1 | 46.7 | 44.9 |
| **CANADA & EUROPE: All Industries (Subtotal)** | | | | | | | | | | | |
| Earnings on Common | 802 | 845 | 1,051 | 1,212 | 1,179 | 1,083 | 1,329 | 1,393 | 3,910 | 4,904 | 8,894 |
| Common Dividends | 307 | 348 | 457 | 489 | 502 | 530 | 625 | 633 | 1,601 | 2,290 | 3,891 |
| Ratio (%) | | | | | | | | | 40.9 | 45.9 | 43.7 |
| Petroleum | | | | | | | | | | | |
| Earnings | 132 | 120 | 187 | 254 | 269 | 165 | 167 | 192 | 693 | 793 | 1,486 |
| Dividends | 47 | 55 | 98 | 115 | 104 | 109 | 121 | 135 | 315 | 469 | 784 |
| Ratio (%) | | | | | | | | | 45.5 | 59.1 | 52.8 |
| Manufacturing | | | | | | | | | | | |
| Earnings | 514 | 528 | 621 | 677 | 633 | 681 | 870 | 868 | 2,340 | 3,052 | 5,392 |
| Dividends | 193 | 214 | 264 | 247 | 200 | 313 | 391 | [illegible] | 918 | 1,358 | 2,276 |
| Ratio (%) | | | | | | | | | 39.2 | 44.5 | 42.2 |

EXHIBIT III

Table A3 (Concluded)

| | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1953-56 | 1957-60 | 1953-60 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LATIN AMERICA: All Industries | | | | | | | | | | | |
| Earnings on Common | 219 | 230 | 253 | 250 | 349 | 261 | 300 | 335 | 992 | 1,245 | 2,237 |
| Common Dividends | 86 | 107 | 92 | 80 | 104 | 110 | 92 | 111 | 365 | 417 | 782 |
| Ratio (%) | | | | | | | | | 36.8 | 33.5 | 35.0 |
| Petroleum | | | | | | | | | | | |
| Earnings | 46 | 43 | 53 | 61 | 93 | 40 | 53 | 56 | 203 | 242 | 445 |
| Dividends | 15 | 16 | 19 | 19 | 29 | 27 | 20 | 21 | 69 | 97 | 166 |
| Ratio (%) | | | | | | | | | 34.0 | 40.1 | 37.3 |
| Manufacturing | | | | | | | | | | | |
| Earnings | 94 | 106 | 94 | 96 | 101 | 90 | 102 | 128 | 390 | 421 | 811 |
| Dividends | 37 | 34 | 26 | 24 | 31 | 29 | 29 | 38 | 121 | 127 | 248 |
| Ratio (%) | | | | | | | | | 31.0 | 30.2 | 30.6 |
| REST OF THE WORLD: All Industries | | | | | | | | | | | |
| Earnings on Common | 388 | 310 | 309 | 514 | 722 | 553 | 549 | 634 | 1,601 | 2,508 | 4,109 |
| Common Dividends | 149 | 109 | 163 | 230 | 235 | 261 | 312 | 351 | 731 | 1,159 | 1,890 |
| Ratio (%) | | | | | | | | | 45.7 | 46.2 | 46.0 |
| Petroleum | | | | | | | | | | | |
| Earnings | 208 | 107 | 157 | 243 | 364 | 265 | 253 | 298 | 715 | 1,180 | 1,895 |
| Dividends | 79 | 99 | 68 | 125 | 120 | 170 | 210 | 221 | 371 | 721 | 1,092 |
| Ratio (%) | | | | | | | | | 51.9 | 61.1 | 57.6 |
| Manufacturing | | | | | | | | | | | |
| Earnings | 73 | 92 | 95 | 81 | 104 | 116 | 119 | 135 | 341 | 474 | 815 |
| Dividends | 28 | 37 | 33 | 31 | 46 | 53 | 57 | 58 | 129 | 214 | 343 |
| Ratio (%) | | | | | | | | | 37.8 | 45.1 | 42.1 |
| LATIN AMERICA & THE REST OF THE WORLD: All Industries (Subtotal) | | | | | | | | | | | |
| Earnings on Common | 607 | 540 | 642 | 804 | 1,071 | 814 | 849 | 1,019 | 2,593 | 3,753 | 6,346 |
| Common Dividends | 235 | 296 | 255 | 310 | 339 | 371 | 404 | 462 | 1,096 | 1,576 | 2,672 |
| Ratio (%) | | | | | | | | | 42.3 | 42.0 | 42.1 |
| Petroleum | | | | | | | | | | | |
| Earnings | 254 | 150 | 210 | 304 | 457 | 305 | 506 | 354 | 918 | 1,422 | 2,340 |
| Dividends | 94 | 115 | 87 | 144 | 149 | 197 | 230 | 242 | 440 | 818 | 1,258 |
| Ratio (%) | | | | | | | | | 47.9 | 57.5 | 53.8 |
| Manufacturing | | | | | | | | | | | |
| Earnings | 167 | 198 | 189 | 177 | 205 | 206 | 221 | 263 | 731 | 895 | 1,626 |
| Dividends | 65 | 71 | 59 | 55 | 77 | 82 | 86 | 96 | 250 | 341 | 591 |
| Ratio (%) | | | | | | | | | 34.2 | 38.1 | 36.3 |
| WORLD: All Industries | | | | | | | | | | | |
| Earnings on Common | 1,409 | 1,385 | 1,693 | 2,016 | 2,250 | 1,897 | 2,178 | 2,412 | 6,503 | 8,737 | 15,240 |
| Common Dividends | 542 | 644 | 712 | 799 | 841 | 901 | 1,029 | 1,095 | 2,697 | 3,866 | 6,563 |
| Ratio (%) | | | | | | | | | 41.5 | 44.2 | 43.1 |
| Petroleum | | | | | | | | | | | |
| Earnings | 386 | 270 | 397 | 558 | 726 | 470 | 473 | 546 | 1,611 | 2,215 | 3,826 |
| Dividends | 141 | 170 | 185 | 259 | 253 | 306 | 351 | 377 | 755 | 1,287 | 2,042 |
| Ratio (%) | | | | | | | | | 46.9 | 58.1 | 53.4 |
| Manufacturing | | | | | | | | | | | |
| Earnings | 681 | 726 | 810 | 854 | 838 | 887 | 1,091 | 1,131 | 3,071 | 3,947 | 7,018 |
| Dividends | 258 | 285 | 323 | 302 | 357 | 395 | 477 | 470 | 1,168 | 1,699 | 2,867 |
| Ratio (%) | | | | | | | | | 38.0 | 43.0 | 40.9 |

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Source: Information supplied by U. S. Department of Commerce; series will be published sometime in 1962, probably mid-year. Earnings differ from data in Table A1 in that they exclude profits of U.S. branches abroad. Dividends differ from Income data in Table A1 in that they exclude branch profits (all of which are reported as "Income" in the data in Table A1), as well as preferred dividends and interest payments.

EXHIBIT III

Table A4

Royalties, Management Fees and Other Inflows, from Direct Investments, 1957 (by region)
(Millions of Dollars)

| All Industries | Canada | Europe | Latin America | Rest of World | World | Canada & Europe | Latin America & Rest of World |
|---|---|---|---|---|---|---|---|
| Preferred Dividends | 3 | 1 | 3 | - | 7 | 4 | 3 |
| Interest | 49 | 3 | 26 | 12 | 90 | 52 | 38 |
| Sub-Total | 52 | 4 | 29 | 12 | 97 | 56 | 41 |
| Royalties | 12 | 25 | 10 | 7 | 54 | 37 | 17 |
| Management Fees | 48 | 33 | 60 | 46 | 187 | 81 | 106 |
| Sub-Total | 60 | 58 | 70 | 53 | 241 | 118 | 123 |
| TOTAL | 112 | 62 | 99 | 65 | 338 | 174 | 164 |
| Direct Investment,1956 | 7,460 | 3,520 | 7,459 | 3,738 | 22,177 | 10,980 | 11,197 |
| Ratio % | 1.5 | 1.7 | 1.3 | 1.7 | 1.5 | 1.5 | 1.4 |
| Manufacturing | | | | | | | |
| Preferred Dividends | 2 | - | 1 | - | 3 | 2 | 1 |
| Interest | 18 | 2 | 2 | - | 22 | 20 | 2 |
| Sub-Total | 20 | 2 | 3 | - | 25 | 22 | 3 |
| Royalties | 7 | 19 | 9 | 3 | 38 | 26 | 12 |
| Management Fees | 31 | 26 | 12 | 10 | 79 | 57 | 22 |
| Sub-Total | 38 | 45 | 21 | 13 | 117 | 83 | 34 |
| TOTAL | 58 | 47 | 24 | 13 | 142 | 105 | 37 |
| Direct Investment,1956 | 3,196 | 1,861 | 1,543 | 552 | 7,152 | 5,057 | 2,095 |
| Ratio | 1.8 | 2.5 | 1.6 | 2.4 | 2.0 | 2.1 | 1.8 |

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Source: Compiled from data in Tables 41 and 47, U. S. Department of Commerce, U. S. Business Investments in Foreign Countries (1960). Since preferred dividends and interest payments from U. S. subsidiaries abroad are excluded from the series on Common Dividends in Table A3, but they are nevertheless inflows, they have been added here to royalties (which include licensing fees) and management fees in order to include all inflows on which information is available.

EXHIBIT III

Table A5

Estimated Effect on the Balance of Payments of New Capital Outflow to Manufacturing Subsidiaries in Canada and Western Europe, 1952-1960

(millions of dollars)

| Year | Annual Capital Outflow | Computed Reinvested Earnings | Cumulative Increment to Outstanding Investment | Computed Dividends | Computed Royalties, fees, and net exports | Total Inflows | Cumulative Capital Outflow | Cumulative Net Inflows | Balance |
|---|---|---|---|---|---|---|---|---|---|
| 1952 | 127 | | 127 | | | | 127 | | - 127 |
| 1953 | 20 | 10 | 157 | 9 | 13 | 22 | 147 | 22 | - 125 |
| 1954 | 72 | 13 | 242 | 11 | 16 | 27 | 219 | 49 | - 170 |
| 1955 | 90 | 19 | 351 | 16 | 25 | 41 | 309 | 90 | - 219 |
| 1956 | 184 | 28 | 563 | 24 | 36 | 60 | 493 | 150 | - 343 |
| 1957 | 304 | 45 | 912 | 38 | 58 | 96 | 797 | 246 | - 551 |
| 1958 | 164 | 73 | 1149 | 61 | 94 | 155 | 961 | 401 | - 560 |
| 1959 | 370 | 92 | 1610 | 77 | 118 | 195 | 1331 | 596 | - 735 |
| 1960 | 638 | 128 | 2376 | 108 | 166 | 274 | 1969 | 870 | -1099 |

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Source: This table makes use of actual data on capital outflow and of the parameter values for manufacturing subsidiaries on rate of return on investment, proportion of earnings distributed and reinvested, rate of payment of fees and royalties per dollar of investment, and value of net exports to subsidiaries per dollar of investment computed in Tables A1-A4 in the appendix and Table 4 in the text. In aggregating the data, the parameter values are weighted in accordance with the value of new capital outflow in manufacturing going to each region over the period 1957-1960, i.e. the weights for the sub-total Canada and Western Europe are 28.9 and 71.1 percent, respectively. These weights differ somewhat from those which are in effect applied in arriving at parameter values for sub-groups in Tables A1-A4 in the appendix and Table 4 in the text, for in those tables the weights are direct investment outstanding rather than new capital outflow. The latter weights would seem to reflect the current situation more than the former.

(continued)

Thus, the relevant parameter values used are computed as follows:

Earnings (Table A2)

| | | |
|---|---|---|
| Europe, 1957-60: | 16.8 percent x 71.1 = | 11.94 |
| Canada, 1957-60: | 9.6 percent x 28.9 = | 2.77 |
| | | 14.71 percent |

Proportion of earnings remitted (Table A3)

| | | |
|---|---|---|
| Europe, 1957-60: | 46.7 percent x 71.1 = | 33.2 |
| Canada, 1957-60: | 42.3 percent x 28.9 = | 12.2 |
| | | 45.4 percent |

| | |
|---|---|
| Rate of return on investment which is remitted as a dividend: | 6.7 percent |
| Rate of return on investment which is reinvested: | 7.4 percent |

These two figures are multiplied by the cumulative increment to outstanding investment of the previous period to obtain the figures in col. 2 and col. 4. The cumulative increment to outstanding investment each year, then, is the sum of the previous year's investment and the new capital outflow, plus reinvested earnings of the current year.

In a similar manner, the "rate of return" for royalties and fees, and for net exports are computed as follows:

Royalties and fees (Table A4)

| | | |
|---|---|---|
| Europe, 1957: | 2.5 percent x 71.1 = | 1.78 |
| Canada, 1957: | 1.8 percent x 28.9 = | .52 |
| | | 2.30 percent |

Net exports (Table 4)

| | | |
|---|---|---|
| Europe, 1959-60: | 4.1 percent x 71.1 = | 2.92 |
| Canada, 1959-60: | 17.7 percent x 28.9 = | 5.12 |
| | | 8.04 percent |

The sum of these two rates is then multiplied by the previous year's outstanding investment to yield the data in col. 5. Col. 6 is the sum of col. 4 and col. 5.

EXHIBIT III

Table A6

Estimation of "Switch Effect" on the Balance of Payments as a Result of Eliminating Tax Deferral in Advanced Industrial Countries 1/

| Year | Capital Outflow | Developments with Deferral: Undistributed Profits | Developments with Deferral: Direct Investment | Developments with Deferral: Dividends | Developments without Deferral: Undistributed Profits | Developments without Deferral: Direct Investment | Developments without Deferral: Dividends | Analysis of "Switch Effect": Annual Gain in Dividends Col. (7) - Col. (4) | Cumulative Gain in Dividends | Difference in Investment Without Deferral and With Deferral Col.(6)-Col.(3) | Annual Loss in Net Exports, etc. (10% of Col.10) | Cumulative Loss in Net Exports, etc. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| 0 | | | 10,000 | | | 10,000 | | | | 0 | | |
| 1 | 1,000 | 650 | 11,650 | 550 | 550 | 11,550 | 650 | + 100 | + 100 | - 100 | - 10 | - 10 |
| 2 | 1,100 | 757 | 13,507 | 641 | 635 | 13,285 | 751 | + 110 | + 210 | - 222 | - 22 | - 32 |
| 3 | 1,210 | 878 | 15,595 | 743 | 731 | 15,266 | 864 | + 121 | + 331 | - 329 | - 33 | - 65 |
| 4 | 1,331 | 1,014 | 17,940 | 858 | 840 | 17,437 | 992 | + 134 | + 465 | - 503 | - 50 | - 115 |
| 5 | 1,464 | 1,166 | 20,570 | 987 | 959 | 19,860 | 1,133 | + 146 | + 611 | - 710 | - 71 | - 186 |
| 6 | 1,610 | 1,337 | 23,517 | 1,131 | 1,092 | 22,562 | 1,291 | + 160 | + 771 | - 955 | - 96 | - 282 |
| 7 | 1,771 | 1,529 | 26,817 | 1,293 | 1,241 | 25,574 | 1,467 | + 174 | + 945 | - 1,243 | - 124 | - 406 |
| 8 | 1,949 | 1,743 | 30,509 | 1,475 | 1,407 | 28,930 | 1,662 | + 187 | + 1,132 | - 1,579 | - 158 | - 564 |
| 9 | 2,143 | 1,983 | 34,635 | 1,678 | 1,591 | 32,644 | 1,880 | + 202 | + 1,334 | - 1,991 | - 199 | - 763 |
| 10 | 2,358 | 2,251 | 39,244 | 1,905 | 1,795 | 36,797 | 2,122 | + 217 | + 1,551 | - 2,447 | - 245 | - 1,008 |
| 11 | 2,593 | 2,551 | 44,388 | 2,158 | 2,024 | 41,414 | 2,392 | + 234 | + 1,785 | - 2,974 | - 297 | - 1,305 |
| 12 | 2,853 | 2,885 | 50,126 | 2,441 | 2,278 | 46,545 | 2,692 | + 251 | + 2,036 | - 3,581 | - 358 | - 1,663 |
| 13 | 3,138 | 3,258 | 56,522 | 2,757 | 2,560 | 52,243 | 3,025 | + 268 | + 2,304 | - 4,279 | - 430 | - 2,093 |
| 14 | 3,452 | 3,674 | 63,648 | 3,109 | 2,873 | 58,568 | 3,396 | + 287 | + 2,591 | - 5,080 | - 508 | - 2,601 |
| 15 | 3,797 | 4,137 | 71,582 | 3,501 | 3,221 | 65,586 | 3,807 | + 306 | + 2,897 | - 5,996 | - 600 | - 3,201 |
| 16 | 4,177 | 4,653 | 80,412 | 3,937 | 3,607 | 73,370 | 4,263 | + 326 | + 3,223 | - 7,042 | - 704 | - 3,905 |
| 17 | 4,595 | 5,227 | 90,234 | 4,423 | 4,035 | 82,000 | 4,769 | + 346 | + 3,569 | - 8,234 | - 823 | - 4,728 |

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1/ Table A6 is based on the following assumptions: 1. Capital outflow grows at 10 percent a year, with or without deferral (i.e., for purposes of analysis we separate out the "deterrent" effect to be considered subsequently, and assume it zero here). With deferral, earnings are 12 percent of direct investment outstanding and 46 percent of earnings are distributed, 54 percent retained, so that retained earnings are 6.5 percent of direct investment outstanding in the previous year, dividends 5.5 percent of this figure. Without deferral the proportion of earnings retained and distributed are reversed, and thus 6.5 percent of direct investment outstanding is distributed, 5.5 percent retained. The gain in dividends in Col. (8) is thus the difference in dividends paid without deferral and dividends paid with deferral, or Col. (7) minus Col. (4). Since, however, there are smaller undistributed profits each year when deferral is eliminated, and thus direct investment outstanding increases more slowly, this affects receipts from fees, royalties, and "net exports," which are diminished by approximately 10 percent of the decrease in investment outstanding because of the reduction in reinvested earnings. The beginning figure of $10 billion is a loosely rounded estimate of U.S. manufacturing investment outstanding in all developed countries in 1961, for ease in computation.

EXHIBIT III

Table A7

Estimation of "Deterrent Effect" on the Balance of Payments as a Result of Eliminating Tax Deferral in Advanced Industrial Countries

(Millions of dollars)

| Year | Annual reduction in capital outflow | Cumulative reduction in capital outflow | Annual change in earnings | Annual change in reinvested earnings | Change in direct investment outstanding | Annual change in dividends | Cumulative change in dividends | Annual change in royalties and fees | Annual change in net exports | Cumulative change in royalties, fees, and net exports | Annual change in total inflows | Cumulative change in total inflows | Annual change in net outflow | Cumulative change in net outflow |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| 0 | 100 | 100 | - | - | - 100 | - | - | - | - | - | - | - | + 100 | + 100 |
| 1 | 110 | 210 | - 15 | - 8 | - 218 | - 7 | - 7 | - 2 | - 8 | - 10 | - 17 | - 17 | + 93 | + 193 |
| 2 | 121 | 331 | - 32 | - 17 | - 356 | - 15 | - 22 | - 5 | - 17 | - 32 | - 37 | - 54 | + 84 | + 277 |
| 3 | 133 | 464 | - 52 | - 29 | - 518 | - 24 | - 46 | - 8 | - 29 | - 69 | - 61 | - 115 | + 72 | + 350 |
| 4 | 146 | 610 | - 76 | - 41 | - 706 | - 35 | - 81 | - 12 | - 41 | - 122 | - 88 | - 203 | + 58 | + 408 |
| 5 | 161 | 771 | - 104 | - 57 | - 923 | - 47 | - 128 | - 16 | - 57 | - 195 | - 120 | - 323 | + 41 | + 449 |
| 6 | 177 | 948 | - 136 | - 74 | - 1,174 | - 62 | - 190 | - 21 | - 74 | - 290 | - 157 | - 480 | + 20 | + 469 |
| 7 | 195 | 1,143 | - 173 | - 94 | - 1,463 | - 79 | - 269 | - 27 | - 94 | - 411 | - 200 | - 680 | - 5 | + 464 |
| 8 | 214 | 1,357 | - 215 | - 117 | - 1,794 | - 98 | - 367 | - 34 | - 117 | - 562 | - 249 | - 929 | - 34 | + 430 |
| 9 | 236 | 1,593 | - 264 | - 144 | - 2,174 | - 120 | - 487 | - 41 | - 144 | - 747 | - 305 | - 1,234 | - 69 | + 361 |
| 10 | 259 | 1,852 | - 320 | - 174 | - 2,607 | - 146 | - 633 | - 50 | - 174 | - 971 | - 370 | - 1,604 | - 110 | + 251 |
| 11 | 285 | 2,137 | - 383 | - 209 | - 3,101 | - 175 | - 808 | - 60 | - 209 | - 1,240 | - 443 | - 2,048 | - 158 | + 93 |
| 12 | 314 | 2,451 | - 456 | - 248 | - 3,663 | - 208 | - 1,016 | - 71 | - 248 | - 1,559 | - 527 | - 2,575 | - 213 | - 121 |

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Source: This table is computed in the same manner as Table A5, except that instead of using actual data on new capital outflow for 1952-60, this variable is assumed to grow at 10 percent a year.

EXHIBIT III

B. Income Earned Abroad by Individuals

Table 1 - Number of individual returns claiming bona fide foreign residence, amount of income excluded, and amount of adjusted gross income reported, classified by amount of excluded income, 1960

This table shows that there were over 41,000 individual tax returns claiming exemption from tax on earned income derived abroad because they were bona fide residents of a foreign country. They excluded approximately $440 million of income and reported taxable income of $65 million. Data with respect to persons remaining abroad for 17 out of 18 months are shown in the following two tables.

Table 2 - Number of returns claiming exemption from tax on income earned abroad, amounts of excluded income and of taxable income, by selected countries and in the aggregate, 1960

This table shows that approximately 14,000 returns were filed by individuals who are bona fide residents of Western Europe and industrialized countries elsewhere in the world. Over 27,000 returns were filed by persons resident in other countries, which may be considered the less developed countries of the world. It also includes the data for the individual countries.

Table 3 - Number of returns claiming exemption from tax on income earned abroad, amounts of excluded income and of taxable income, classified by size of excluded income, for (a) Western European countries and other industrialized countries 1/, (b) other countries, and (c) in the aggregate, 1960

This table contains substantially the same data as the preceding one but classifies the information by the amount of income exempt from tax.

Table 4 - Individuals claiming exemption of $100,000 or more in 1959 or 1960 as bona fide residents of a foreign country showing the country of residence, occupation and the amount of income excluded from tax in each year

This table shows for individuals who claimed exemption of $100,000 or more in either 1959 or 1960 as bona fide residents of a foreign country, the country of residence, occupation and the amount of income excluded from tax in each year. While there is some fluctuation from one year to the other, in most cases large amounts were excluded in both years.

Table 1

Number of individual returns claiming bona fide foreign residence, amount of income excluded, and amount of adjusted gross income reported, classified by amount of excluded income, 1960

(Amounts in thousands)

| Size class of excluded income | Number of returns | Excluded income | Adjusted gross income reported |
|---|---|---|---|
| Under - $ 5,000 | 13,224 | $ 35,211 | $ 13,983 |
| $ 5,000 - 10,000 | 8,682 | 64,763 | 11,095 |
| 10,000 - 20,000 | 13,471 | 192,118 | 18,951 |
| 20,000 - 30,000 | 3,456 | 81,553 | 9,261 |
| 30,000 - 35,000 | 508 | 16,330 | 1,921 |
| 35,000 - 40,000 | 297 | 11,007 | 1,347 |
| 40,000 - 50,000 | 286 | 12,538 | 1,784 |
| 50,000 - 100,000 | 269 | 17,063 | 3,471 |
| 100,000 - 500,000 | 52 | 7,845 | 1,214 |
| 500,000 & over | 2 | 1,939 | 182 |
| Not reported | 951 | - | 2,011 |
| Total | 41,198 | 440,369 | 65,221 |

March 17, 1962

Source: Internal Revenue Service, Form 2555

Table 2

Number of returns claiming exemption from tax on income earned abroad, amounts of excluded income and of taxable income, by selected countries and in the aggregate, 1960

| Country | Bona Fide Residence | | | Physical Presence | | | Aggregate | | |
|---|---|---|---|---|---|---|---|---|---|
| | Number | Amount Income Excluded | Amount Adjusted Gross Income | Number | Amount Income Excluded | Amount Adjusted Gross Income | Number | Amount Income Excluded | Amount Adjusted Gross Income |
| Austria | 92 | $ 725,863 | $ 213,806 | 41 | $ 293,562 | $ 118,683 | 133 | $ 1,019,425 | $ 332,489 |
| Portugal | 55 | 531,028 | 99,483 | 48 | 437,338 | 102,501 | 103 | 968,366 | 201,984 |
| Belgium | 218 | 2,532,394 | 464,652 | 51 | 449,873 | 80,511 | 269 | 2,982,267 | 545,163 |
| Spain | 280 | 2,969,601 | 701,069 | 309 | 2,538,045 | 547,984 | 589 | 5,507,646 | 1,249,053 |
| United Kingdom | 1,108 | 15,544,261 | 4,567,804 | 919 | 6,598,581 | 2,495,137 | 2,027 | 22,142,842 | 7,062,941 |
| France | 1,096 | 13,486,328 | 3,569,946 | 401 | 3,098,547 | 1,199,195 | 1,497 | 16,584,875 | 4,769,141 |
| Denmark | 55 | 439,414 | 133,104 | 43 | 398,549 | 67,412 | 98 | 837,963 | 200,516 |
| Greece | 134 | 1,134,311 | 316,963 | 87 | 654,690 | 109,455 | 221 | 1,789,001 | 426,418 |
| Germany | 1,095 | 10,629,612 | 1,825,320 | 974 | 6,575,176 | 2,112,063 | 2,069 | 17,204,788 | 3,937,383 |
| Finland | 10 | 43,499 | 2,873 | 2 | 8,752 | | 12 | 52,251 | 2,873 |
| Ireland | 26 | 210,636 | 46,259 | 13 | 101,415 | 35,864 | 39 | 312,051 | 82,123 |
| Italy | 678 | 7,262,224 | 1,456,352 | 326 | 3,525,710 | 563,549 | 1,004 | 10,787,934 | 2,019,901 |
| Norway | 43 | 319,390 | 76,620 | 43 | 396,966 | 50,059 | 86 | 716,356 | 126,679 |
| Liechtenstein & Switzerland | 686 | 10,979,958 | 2,754,809 | 113 | 826,222 | 346,128 | 799 | 11,806,180 | 3,100,937 |
| Luxembourg | 28 | 364,997 | 68,543 | 6 | 55,432 | 9,476 | 34 | 420,429 | 78,019 |
| Netherlands | 297 | 4,256,758 | 727,163 | 93 | 838,570 | 224,280 | 390 | 5,095,328 | 951,443 |
| Sweden | 129 | 1,016,066 | 153,415 | 33 | 184,927 | 88,591 | 162 | 1,200,993 | 242,006 |
| Turkey | 305 | 3,005,626 | 446,120 | 374 | 3,213,283 | 671,306 | 679 | 6,218,909 | 1,117,426 |
| Canada | 5,224 | 54,049,813 | 8,490,878 | 405 | 2,697,858 | 983,160 | 5,629 | 56,747,671 | 9,474,038 |
| Japan | 1,667 | 12,377,725 | 1,825,774 | 842 | 5,567,359 | 1,995,720 | 2,509 | 17,945,084 | 3,821,494 |
| Australia | 289 | 3,227,239 | 639,991 | 100 | 1,001,477 | 158,914 | 389 | 4,228,716 | 798,905 |
| South Africa | 276 | 1,914,669 | 233,715 | 33 | 224,087 | 44,585 | 309 | 2,138,756 | 278,300 |
| Subtotal | 13,791 | 147,021,412 | 28,814,659 | 5,256 | 39,686,419 | 12,004,573 | 19,047 | 186,707,831 | 40,819,232 |
| Other Countries | 27,407 | 293,347,401 | 36,406,340 | 7,353 | 66,227,199 | 12,632,022 | 34,760 | 359,574,600 | 49,038,362 |
| TOTAL | 41,198 | $440,368,813 | $65,220,999 | 12,609 | $105,913,618 | $24,636,595 | 53,807 | $546,282,431 | $89,857,594 |

Table 3

Number of returns claiming exemption from tax on income earned abroad, amounts of excluded income and of taxable income, classified by size of excluded income, for (a) Western European countries and other industrialized countries 1/, (b) other countries, and (c) in the aggregate, 1960

| Amount of Excluded Income | Bona Fide Residence | | | Physical Presence | | | Aggregate | | |
|---|---|---|---|---|---|---|---|---|---|
| | Number | Amount Income Excluded | Amount Adjusted Gross Income | Number | Amount Income Excluded | Amount Adjusted Gross Income | Number | Amount Income Excluded | Amount Adjusted Gross Income |
| Industrialized Countries: 1/ | | | | | | | | | |
| Total | 13,791 | $147,021,412 | $28,814,659 | 5,256 | $39,686,419 | $12,004,573 | 19,047 | $186,707,831 | $40,819,232 |
| Not reported | 463 | | 976,956 | 141 | | 435,620 | 604 | | 1,412,576 |
| Under $5,000 | 4,190 | 11,035,022 | 6,179,894 | 1,740 | 4,280,353 | 5,922,412 | 5,930 | 15,315,375 | 12,102,306 |
| $5,000 under $10,000 | 3,389 | 25,132,707 | 4,765,427 | 1,761 | 13,250,742 | 3,037,037 | 5,150 | 38,383,449 | 7,802,464 |
| $10,000 under $20,000 | 4,186 | 58,377,191 | 7,635,890 | 1,546 | 20,579,104 | 2,250,633 | 5,732 | 78,956,295 | 9,886,523 |
| $20,000 under $50,000 | 1,401 | 38,758,381 | 6,290,278 | 67 | 1,452,909 | 358,871 | 1,468 | 40,211,290 | 6,649,149 |
| $50,000 under $100,000 | 132 | 8,494,431 | 2,052,008 | | | | 132 | 8,494,431 | 2,052,008 |
| $100,000 under $500,000 | 29 | 4,123,889 | 809,504 | 1 | 123,311 | | 30 | 4,247,200 | 809,504 |
| $500,000 and over | 1 | 1,099,791 | 104,702 | | | | 1 | 1,099,791 | 104,702 |
| Other Countries: | | | | | | | | | |
| Total | 27,407 | 293,347,401 | 36,406,340 | 7,353 | 66,227,199 | 12,632,022 | 34,760 | 359,574,600 | 49,038,362 |
| Not Reported | 488 | | 1,034,069 | 129 | | 253,326 | 617 | | 1,287,395 |
| Under $5,000 | 9,034 | 24,176,034 | 7,803,795 | 1,667 | 4,427,402 | 5,205,923 | 10,701 | 28,603,436 | 13,009,718 |
| $5,000 under $10,000 | 5,293 | 39,630,545 | 6,329,655 | 2,457 | 19,041,409 | 3,192,944 | 7,750 | 58,671,954 | 9,522,599 |
| $10,000 under $20,000 | 9,285 | 133,740,808 | 11,315,036 | 2,913 | 38,765,398 | 3,257,408 | 12,198 | 172,506,206 | 14,572,444 |
| $20,000 under $50,000 | 3,146 | 82,670,917 | 8,022,818 | 187 | 3,992,990 | 722,421 | 3,333 | 86,663,907 | 8,745,239 |
| $50,000 under $100,000 | 137 | 8,568,881 | 1,419,314 | | | | 137 | 8,568,881 | 1,419,314 |
| $100,000 under $500,000 | 23 | 3,721,073 | 404,032 | | | | 23 | 3,721,073 | 404,032 |
| $500,000 and over | 1 | 839,143 | 77,621 | | | | 1 | 839,143 | 77,621 |
| All Countries: | | | | | | | | | |
| Total | 41,198 | 440,368,813 | 65,220,999 | 12,609 | 105,913,618 | 24,636,595 | 53,807 | 546,282,431 | 89,857,594 |
| Not Reported | 951 | | 2,011,025 | 270 | | 688,946 | 1,221 | | 2,699,971 |
| Under $5,000 | 13,224 | 35,211,056 | 13,983,689 | 3,407 | 8,707,755 | 11,128,335 | 16,631 | 43,918,811 | 25,112,024 |
| $5,000 under $10,000 | 8,682 | 64,763,252 | 11,095,082 | 4,218 | 32,292,151 | 6,229,981 | 12,900 | 97,055,403 | 17,325,063 |
| $10,000 under $20,000 | 13,471 | 192,117,999 | 18,950,926 | 4,459 | 59,344,502 | 5,508,041 | 17,930 | 251,462,501 | 24,458,967 |
| $20,000 under $50,000 | 4,547 | 121,429,298 | 14,313,096 | 254 | 5,445,899 | 1,081,292 | 4,801 | 126,875,197 | 15,394,388 |
| $50,000 under $100,000 | 269 | 17,063,312 | 3,471,322 | | | | 269 | 17,063,312 | 3,471,322 |
| $100,000 under $500,000 | 52 | 7,844,962 | 1,213,536 | 1 | 123,311 | | 53 | 7,968,273 | 1,213,536 |
| $500,000 and over | 2 | 1,938,934 | 182,323 | | | | 2 | 1,938,934 | 182,323 |

1/ Includes the countries of Austria, Portugal, Belgium, Spain, United Kingdom, France, Denmark, Greece, Germany, Finland, Ireland, Italy, Norway, Liechtenstein, Switzerland, Luxembourg, Netherlands, Sweden and Turkey.

Table 4

Individuals claiming exemption of $100,000 or more in 1959 or 1960 as bona fide residents of a foreign country, showing country of residence, occupation, and amount of income excluded from tax in each year

COMPARATIVE STATEMENT FOR 1959 AND 1960 OF INDIVIDUALS WHO EXCLUDED $100,000 OR MORE UNDER SECTION 911 IN EITHER 1959 OR 1960

| TAXPAYER * | COUNTRY | OCCUPATION | EXCLUDED INCOME 1959 | EXCLUDED INCOME 1960 |
|---|---|---|---|---|
| C-2-J | Germany | Sales Representative | 98,291 | 208,549 |
| C-3-S | Venezuela | Lawyer | 129,570 | 60,911 |
| C-4-S | Thailand | Sales Representative | 31,986 | 319,695 |
| C-6-J | Brazil | Corp. Executive | 144,833 | 252,602 |
| C-7-J | Venezuela | C.P.A. | Chg. Detroit Office | 116,480 |
| C-8-J | Venezuela | Industrialist | 95,262 | 146,065 |
| C-9-J | Switzerland | Actor | 156,000 | Not Claimed |
| C-10-S | Germany | Life Ins. Salesman | 160,450 | 123,793 |
| C-11-J | Venezuela | --- | 119,551 | 92,766 |
| C-12-J | United Kingdom | Executive | 99,936 | 117,579 |
| C-13-J | Switzerland | Executive | 117,556 | 179,912 |
| C-14-J | Canada | Executive | No Record | 127,897 |
| C-15-S | Canada | Self Employed | 186,750 | No Record |
| C-16-J | Mexico | Commercial Relations | No Record | 185,288 |
| C-17-S | United Kingdom | Executive | 64,800 | 105,366 |
| C-18-J | United Kingdom | Writer & Producer | 162,500 | 131,133 |
| C-19-S | France | Manager | 115,523 | 60,020 |
| C-20-J | Australia | Executive | 130,766 | No Record |
| C-21-S | Switzerland | Insurance Agent | 155,360 | 78,648 |
| C-22-J | Brazil | --- | Not Claimed | 106,623 |
| C-23-J | Canada | Executive | 136,700 | 136,800 |
| C-24-S | Switzerland | Actor | 2,326 | 163,336 |
| C-25-J | Venezuela | Corp. President | 105,145 | 104,800 |
| C-26-J | England | Writer | 217,500 | 200,000 |
| C-27-J | Venezuela | General Manager | 107,367 | 73,863 |
| C-28-S | | Actress | 996,200 | 97,350 |
| C-29-J | Italy | Executive | 45,000 | 145,321 |
| C-31-J | Philippines | Executive | 265,540 | 63,961 |
| C-32-J | Canada | Industrialist | 52,500 | 156,058 |
| C-33-S | Switzerland | Housewife | Not Claimed | 1,099,791 |
| C-34-S | Switzerland | Actor | Not Claimed | 1,099,791 |
| C-35-J | Philippines | Executive | 263,255 | 125,738 |
| C-36-J | Mexico | --- | No Record | 168,883 |
| C-37-J | Argentina | --- | 99,349 | 126,139 |
| C-39-J | Switzerland | Cartoonist | No Record | 110,315 |
| C-40-J | Brazil | Engineer | 31,095 | 107,674 |
| C-41-J | Japan | Executive | 324,909 | 232,964 |
| C-43-J | Argentina | Mfg. Representative | 217.121 | 166,422 |
| C-44-S | Switzerland | Sales Agent | 12,199 | 127,344 |
| C-45-J | Brazil | --- | 125,000 | 125,000 |
| C-46-S | Switzerland | Producer Director | 160,000 | 172,142 |
| C-47-J | Italy | Director | 45,000 | 161,000 |
| C-48-J | Argentina | Engineer | Not Reported | 109,381 |
| C-51-J | Canada | Executive | 84,764 | 112,510 |
| C-52-J | United Kingdom | Executive | 130,766 | 134,577 |
| C-53-J | Venezuela | Executive | 114,244 | 127,851 |
| C-54-J | Switzerland | Motion Picture Producer | No Record | 102,750 |
| C-55-J | Cuba | Executive | 85,000 | 141,666 |
| C-56-J | Philippines | Lawyer | 108,638 | No Record |
| C-57-S | France | Executive | 106,250 | 184,875 |
| C-58-S | South Viet-Nam | --- | 89,103 | 110,687 |
| C-59-J | Japan | Engineer | 99,927 | 102,980 |
| C-60-J | Philippines | Lawyer | 93,949 | 114,605 |
| C-61-S | Japan | Engineer | 122,260 | 85,915 |
| C-62-S | Dominican Republic | Gambling Operator | 150,059 | 8,400 |
| C-63-J | Canada | Executive | 107,088 | 146,464 |
| C-64-J | United Kingdom | Engineer | Not Claimed | 116,862 |
| C-65-S | Brazil | Executive | 79,843 | 242,700 |
| C-66-J | Venezuela | Engineer | 153,078 | 16,000 |
| C-67-S | Mexico | --- | 99,840 | 100,000 |
| C-68-S | Venezuela | Manager | 161,083 | 113,468 |
| C-69-J | Mexico | Executive | 22,916 | 142,914 |
| C-70-J | Lebanon | Executive | 151,167 | 16,250 |
| C-71-J | Canada | Executive | 84,764 | 107,831 |
| C-72-J | Venezuela | Vice President | 107,000 | 81,000 |
| C-73-S | Canada | --- | 28,443 | 123,311 |
| C-74-J | Germany | Banker | 112,768 | 116,783 |
| C-75-J | Hong Kong | Lawyer | 38,145 | 468,609 |
| C-76-J | Brazil | Executive | 583,027 | 839,143 |
| C-77-J | Brazil | Cotton Merchant | 89,359 | 154,761 |
| C-78-J | Germany | Auto. Executive | 160,776 | 171,930 |

* Internal Revenue Service identifying numbers. J indicates joint return filed; S indicates separate return filed.

March 27, 1962

EXHIBIT III

C. DATA ON TAX HAVEN SUBSIDIARIES

Table 1 - Number of foreign corporations created by U.S. interests as reported to IRS on Form 959, for selected "tax haven" countries and for all countries by years of incorporation 1955-61 and for all years

This table indicates that about 3,500 information returns with respect to the creation of a foreign subsidiary have been filed with the Internal Revenue Service through 1961. This filing was pursuant to requirements of the Internal Revenue Code. The inadequacy of both the requirements and the compliance in most past years is revealed by a comparison of this table with the following one.

Table 2 - Subsidiaries in selected "tax haven" countries and total in all countries in 1959 for a group of 1,075 U.S. corporations, classified by year of incorporation of subsidiaries

This table was based on information collected by Internal Revenue agents with respect to a group of corporations comprised in large measure of those that happened to be under audit during a particular period in 1961. These companies reported that they had more than 4,200 foreign subsidiaries, which were organized during the years through 1959. This table indicates that the bulk of the subsidiaries incorporated in so-called tax haven countries were formed subsequent to 1954. Tables 1 and 3 confirm this.

Table 3 - Swiss corporations controlled by U.S. interests and by those in selected European countries, by years 1958-61, and in the aggregate

This table, based upon a study of information published in the official Swiss commercial register, indicates that over a thousand Swiss subsidiaries created by U.S. interests were in existence at the end of 1961. Most of these were established from 1958 on. Subsidiaries created by interests situated in other industrialized countries are also shown, and the number of such subsidiaries controlled in each of the other countries is substantially less than those controlled by U.S. interests. Moreover, most of them were established prior to 1958.

Table 4 - Swiss firms owned by U.S. interests, classified by type of business activity, 1961

This table indicates that of the Swiss companies established by U.S. interests, one-fourth of the companies reported manufacturing among the purposes for which they were established. About two-thirds are sales, licensing and holding companies. Motion picture producing was relatively important, accounting for 32 companies.

Table 1
Number of foreign corporations created by U. S. interests as reported to IRS on Form 959, for selected "tax haven" countries and for all countries by years of incorporation 1955-61 and for all years

| Year | Switzerland | Panama | Venezuela | Bahamas | Liberia | All countries |
|---|---|---|---|---|---|---|
| 1955 | | 40 | 10 | 4 | 109 | 232 |
| 1956 | | 64 | 17 | 4 | 163 | 349 |
| 1957 | | 99 | 23 | 2 | 113 | 364 |
| 1958 | 2 | 95 | 16 | 15 | 82 | 336 |
| 1959 | 6 | 134 | 8 | 27 | 59 | 423 |
| 1960 | 70 | 101 | 16 | 61 | 49 | 676 |
| 1961 | 78 | 42 | 9 | 37 | 17 | 603 |
| Total, 1955-1961 | 156 | 575 | 99 | 150 | 592 | 2,983 |
| Total, All years | 157 | 730 | 104 | 152 | 592 | 3,479 |

Source: Internal Revenue Service

April 2, 1962

Table 2
Subsidiaries in selected "tax haven" countries and total in all countries in 1959 for a group of 1075 U.S. corporations, classified by year of incorporation of subsidiaries

| Year | Bahamas 1/ | Panama | Venezuela | Switzerland | Liberia | All countries |
|---|---|---|---|---|---|---|
| 1959 | 10 | 33 | 12 | 49 | 3 | 339 |
| 1958 | 8 | 31 | 18 | 26 | 7 | 296 |
| 1957 | 9 | 43 | 27 | 12 | 6 | 316 |
| 1956 | 4 | 26 | 25 | 12 | 8 | 277 |
| 1955 | 5 | 23 | 21 | 4 | 6 | 267 |
| 1955-59 | 36 | 156 | 103 | 103 | 30 | 1,495 |
| 1950-59 | 46 | 200 | 126 | 118 | 47 | 2,285 |
| 1940-49 | 8 | 20 | 28 | 11 | 3 | 621 |
| 1939 & prior years | 3 | 13 | 3 | 16 | - | 1,325 |
| Total, all years | 57 | 233 | 157 | 145 | 50 | 4,231 |

April 2, 1962

Source: Internal Revenue Service (IO-362, VI)

1/ Includes Bermuda

Table 3
Swiss corporations controlled by U. S. interests
and by those in selected European countries,
by years 1958-61, and in the aggregate

| Year | U.S. 1/ | Germany 2/ | U.K. 3/ | France | Nether-lands | Belgium |
|---|---|---|---|---|---|---|
| 1961 | 229 | 124 | 27 | 12 | 14 | 4 |
| 1960 | 287 | 110 | 38 | 29 | 15 | 5 |
| 1959 | 164 | 92 | 22 | 26 | 15 | 6 |
| 1958 | 88 | 42 | 20 | 29 | 6 | 2 |
| Prior to 1958 | 257 | 348 | 253 | 251 | 62 | 52 |
| Total, all years | 1,025 | 716 | 360 | 347 | 112 | 69 |

April 2, 1962

Source: Compiled from the official Swiss commercial register.

1/ Total includes 229 firms considered American controlled, because the listed director, officer, or other responsible functionary is a Swiss attorney known to specialize in the organization of Swiss companies for American clients. Experience has shown that in these cases often after a time a U.S. firm emerges as the controlling interest. Some of the companies considered owned by the U.K., etc. may also be American controlled. See footnote 3/.

2/ German tax officials consider the figures to be too high as an index of tax haven operations, and ascribe many of the companies to German nationals living in Switzerland and conducting small enterprises there that have no direct tie to the German economy.

3/ Includes an undetermined number of Swiss companies controlled by U.K. companies which in turn are subsidiaries of U.S. companies. This may also be true of the other countries shown.

Table 4

Swiss firms owned by U.S. interests, classified by type of business activity, 1961

| Business activity 1/ | Number |
|---|---|
| Manufacturing | 243 |
| Sales or purchasing offices | 293 |
| Licensing of patents, know-how, engineering and technical services | 151 |
| Motion picture producing | 32 |
| Holding companies | 177 |
| Other activities | 126 |
| Not reported | 3 |
| Total | 1,025 |

Source: Internal Revenue Service April 2, 1962

1/ Most companies are organized to engage in more than one type of activity. Duplicate counting has been avoided in this table by excluding from each category companies that have been included in categories listed above it. Thus, "manufacturing" includes all companies that engage in other activities besides manufacturing, while none of the other categories include any company engaged in manufacturing.

EXHIBIT III

## D. ADMINISTRATIVE PROBLEMS CONNECTED WITH THE AUDITING OF CASES INVOLVING CONTROLLED FOREIGN CORPORATIONS

The following memorandum from Mortimer Caplin, the Commissioner of Internal Revenue Service details the administrative problems that are encountered in the handling of cases by the Internal Revenue Service involving the use of controlled foreign corporations. Much of the data contained in the memorandum is based on the Internal Revenue Service's experience with 39 cases involving avoidance of U. S. income tax in foreign activities thatwere contained in a memorandum of the Commissioner dated June 19, 1961. This memorandum was made part of the record in the hearings before the Committee on Ways and Means of the House of Representatives on the President's 1961 tax recommendations held June 5 through 9, 1961 (see Vol. 4, page 3534):

Jan. 30, 1962

MEMORANDUM FOR: Honorable Stanley S. Surrey
Assistant Secretary

SUBJECT: Problems of Administration of the Revenue Laws Relating to the Taxation of Foreign Income

Under dates of June 19, 1961, and June 22, 1961, the Service addressed memoranda to you on the above subject in which was described typical cases under examination involving tax avoidance in foreign activities of domestic taxpayers, and the principal administrative problems encountered by the Service in connection with such cases.

In response to your request, I am submitting supplemental detailed data (Exhibit A) developed during the examination of these cases, and additional information concerning the potential over-all workload of cases involving international transactions and the estimated average time which will be required to examine these returns.

WORKLOAD OF CASES

A recent survey discloses that as of January 1, 1962, the number of cases involving substantial foreign transactions selected for examination by our district offices totaled 3,044 domestic taxpayers, involving 6,800 foreign affiliates. These returns were selected on the basis of limited audit information reflected in the returns filed for taxable years prior to 1961. However, for taxable years beginning after December 31, 1960, corporations will be required, under the provisions of Section 6038 of the Code, to furnish additional information regarding foreign corporations and subsidiaries of foreign corporations controlled directly or indirectly by the domestic corporation. This additional audit information will facilitate the selection of cases for examination, and we can expect that this will result in a substantial increase in the number of returns identified and selected for examination.

Aside from the question as to the number of returns filed by taxpayers engaged in foreign activities that must be examined in connection with our foreign enforcement program, notice should be taken of the time and skills required to adequately examine this type of case. As was pointed out in the memorandum of June 22, 1961, the examinations require the use of only the most experienced revenue agents who have been thoroughly trained in the application of Section 482 of the Code which is applicable in practically all of this type of case.

Our experience with the 39 cases submitted to you with our memorandum dated June 1961, discloses that the time expended by revenue agents averaged 44 days. The other cases which are still pending involve an expenditure of an average of 98 days. As to these latter cases, it has been estimated that an average of 47 additional days will be required to complete the examinations. This data relates to the time required to close all of the tax years involved in these cases. In terms of tax years, our computations result in an average examination time of 24 days per tax year to complete the examinations.

The complexity of the examination of returns involving foreign transactions and its impact on our enforcement program is vividly illustrated by contrasting the man-hours of examination time required in such cases with the man-hours spent on all corporate returns disposed of by examination. For purposes of comparison, the average examination time per corporate return, broken down by asset classes is:

| Asset Class of Each Return | Average Man-Hours per Return |
|---|---|
| No balance sheet | 13.4 |
| Under $50,000 | 10.6 |
| $50,000 under $100,000 | 12.0 |
| $100,000 under $250,000 | 13.8 |
| $250,000 under $500,000 | 16.9 |
| $500,000 under $1,000,000 | 20.1 |
| $1,000,000 under $5,000,000 | 28.0 |
| $5,000,000 under $10,000,000 | 42.4 |
| $10,000,000 under $50,000,000 | 66.1 |
| $50,000,000 under $100,000,000 | 99.0 |

It can be readily determined from this table that the average examination time per return ranges from a low of 1.25 days to a high of 12.5 days.

The 39 cases involving substantial foreign transactions upon which the average examination time is based do not include any of the so-called industrial giants, so we have not included in the above table the average examination time devoted to returns filed by these corporations.

The matter of greatest concern to the Service is the tremendous inroads being made on the available examination time of experienced agents so vitally essential to the audit coverage necessary to maintain the highest degree of voluntary compliance among taxpayers whose returns are generally examined by these revenue agents.

These returns must be examined by the most experienced agents, GS-12 and GS-13. Applying the average examination time of 24 man-days per case determined in connection with the 39 cases described above to the 3,044 returns in inventory as of January 1, 1962, the examination of these returns would involve an expenditure of 73,046 man-days, or approximately 289 man-years. These 289 man-years represent about 20 per cent of the GS-12 and GS-13 revenue agents available throughout the Nation for this type of work. (See Exhibit B). If these agents were available for regular examinations in the same ratio, they would be expected to examine about 20,000 returns rather than only 3,044.

This data clearly indicates that a disproportionate amount of revenue agent time is devoted to the examination of cases with international issues, which will have an adverse effect on the over-all desirable total audit coverage so essential to assure a high degree of voluntary compliance.

AUDITING TECHNIQUES

In the examination of corporate returns involving foreign transactions, very detailed and time-consuming auditing techniques must be utilized by the examining officer. I would like to mention briefly some of the extensive auditing steps the agents must take to determine the proper allocation of income and deductions between related corporations.

In making allocations of income and deductions between related corporations, the examining officer is required to do a number of things depending upon the type of activity, i.e., sales of goods or services. If only the sale of goods is involved, the examination may require certain data not pertinent regarding sales of services, and vice versa. If sales of both goods and services are involved, then the requirements of both must be met.

GENERAL CONSIDERATIONS

In the course of any examination the agent must determine whether the foreign and domestic entities are doing business with each other. If so, he must determine whether the corporations (1) have common officers, (2) have interlocking directorates, or (3) are dominated or controlled by the domestic entity.

If the corporations are doing business with each other, and especially if the answer to (1), (2) or (3) is affirmative, the agent must inquire into matters of special consideration, depending upon whether goods, services, or both, are involved.

SPECIAL CONSIDERATIONS

Where sales of goods are involved, the agent must determine the need, or lack of it, to reallocate income arising from intercompany sales. This means the agent must determine whether the intercompany prices are prices that would prevail in transactions between unrelated parties. Usually this is done by:

a. Securing copies of the sales agreements between the related entities and comparing them with any similar agreements with unrelated entities, both before and after the creation of the foreign entity.

b. Analyzing sales journals or other sales invoice data to determine the amount of sales between the domestic entity and related and unrelated foreign entities.

c. Obtaining information regarding foreign activities prior to the creation of the foreign entity to establish a comparative basis of operations.

d. Examining and comparing sales and credit memorandums as between unrelated domestic companies and foreign purchasers either related or unrelated to establish whether there are unwarranted price differentials.

e. Questioning company officials regarding differences in selling prices or unusual discounts and allowances.

f. Reconstructing intercompany sales found "out of line" to fair market basis.

If it is determined that price reallocations are necessary, there are two principal courses available, both fraught with difficulty. First, the agent can obtain data regarding selling prices and practices of comparable products and competing sellers. Second, if there are no competing products he must resort to cost accounting methods and make a decision as to the fair market value or cost of each activity to fairly allocate the income.

What I have said regarding pricing of sales is, of course, equally applicable regarding costs of sales and similar examination techniques must be employed to ascertain that each affiliated company bears all and only its proper share of costs.

Where sales of services are involved such as the providing of "know how" and the companies are related, or there are patents and copyrights involving royalty income and expense, the problem is even more difficult to solve. In these situations shifting of income is easily arranged but difficult to detect. Also, the domestic may divert its royalty income by transfer of its patent or copyright to the foreign affiliate without regard to the nature of any ruling pursuant to Section 367 of the Code. In these situations, the agent must:

a. Obtain copies of the licensing agreements to compare them with licensing agreements that may have been made with unaffiliated licensees.

b. Compare the royalty rates with those usually prevailing in the industry.

c. Determine whether the licenses are exclusive.

d. Determine whether provision has been made for technical assistance.

e. Determine whether or not there are provisions relating to patent improvements and new patents. The agent must also establish whether the royalty income of the domestic entity was greater or less before and after the creation of the foreign entity. He must also determine whether the licensees of the foreign entity to whom the patent or copyright was transferred were the same licensees under the patents or copyrights when held by the domestic entity.

## OTHER CONSIDERATIONS

Income shifting is accomplished in other ways, for example:

a. Intercompany loans.

b. Charging or paying excessive management or technical service fees.

Here, again, the agent must have access to intercompany agreements; he must obtain data of charges for comparable services from competitive or third-party sources; he must determine whether the interposition of the foreign entity has resulted in any real substantive change other than the shifting of income.

All of these matters relate to facts peculiarly within the knowledge of the taxpayer concerned, without whose cooperation the agent is seriously handicapped.

## ILLUSTRATION OF EXAMINATION TIME REQUIRED

The following partial case history is illustrative of the obstacles, complexities and delays encountered by examining personnel in auditing the class of case under discussion. The experience with this case is typical and accounts for the disproportionate amount of time devoted to these cases.

In 1959 the corporation selected for examination had $204,759,000 in assets and had 13 foreign subsidiaries. It also was affiliated with five other foreign corporations in which it owned less than 50 percent. The majority of these corporations were organized prior to 1956 and are manufacturing corporations. One of the corporations is considered as a tax-haven subsidiary, and was organized in 1956. The parent company granted the subsidiary a non-exclusive license to grant sub-licenses to its products for no consideration. Tax-haven subsidiary also purchased the license operations of a third party. The parent company also had a foreign license business, but only one of its licenses was transferred to the subsidiary. The parent company continued to receive license income, and nearly all the license income from its products received by the subsidiary was new business generated by that company.

The tax-haven subsidiary through 1960 returned approximately $470,000 of the earnings of over $600,000 in the form of dividends to the parent company. In recent years the domestic parent company's operations have resulted in losses.

During the examination much opposition was received from the taxpayer in obtaining basic information. The examination was conducted through the corporation's tax section which contained an attorney and an accountant who was the Federal tax administrator.

There follows a summary of the types of information requested, and a recitation of the disputes and delays which were encountered in obtaining responses:

1. History of each foreign subsidiary, capitalization, and a brief summary of the type of business operations.

2. Financial statements of the foreign subsidiaries for the current years under examination.

The tax section of the corporation took the position that the agent had no statutory authority to obtain this information since Section 6046 was enacted to include only years subsequent to the examination. The agent replied that this information was necessary to verify the tax returns. The question was referred to the corporation's legal section, and after several days of cajoling the taxpayer presented the information in a piece-meal fashion. The information on the tax-haven subsidiary was withheld for a period of time since the taxpayer considered that the economic espionage laws of the tax-haven country prevented them from giving the Service the information.

3. Books and records of the tax-haven country subsidiary.

The taxpayer requested that the agent cite his authority to require the production of records of an alien corporation not engaged in business in the United States. The agent explained it was necessary to have the records to verify the parent company's return. The economic espionage laws of the tax-haven country prevented the parent company from bringing the records to the United States, according to the tax section.

4. License agreements of the tax-haven subsidiary.

The taxpayer's tax section stated that the foreign subsidiary wrote the license agreements and they did not believe copies were available in the United States. The tax section also asked why the agent needed the information. The agent explained he needed the information to determine if Sections 482 and 367 applied. The taxpayer wanted a detailed explanation of what this information would prove under these sections, and then started to argue the case before the agent had obtained any basic facts. The taxpayer also stated that this type of information was not available to the Service because of the foreign country's economic espionage laws.

After about a wek of exchanges of this type, the taxpayer relented and brought the licensing agreements out, one at a time, in a painfully slow process. It was necessary to obtain this information to determine whether any license income had been shifted from the parent company and to verify allocation of the license income among the licensed products.

5. Correspondence between the managing director, also the founder of the corporation, and the parent company.

The taxpayer claimed privilege on this correspondence under <u>United States v. United Shoe Machinery Corporation</u>, 89 Fed. Supp. 357, since this correspondence was either with parent company's secretary who is an attorney in the corporation's legal section or in some other undisclosed capacity. The tax section warned the agent to confine his examination to the audit of financial data and not concern himself with internal management documents. The tax section also wanted to know the direction of the audit at this stage since they stated they had provided enough information to prove that both Sections 367 and 482 did not apply. They also stated that they were not providing any more information to support a fishing expedition, since most of the agent's questions did not directly apply to the domestic return. In this case, the taxpayer actually had all of the internal management documents necessary to audit the foreign subsidiaries' transactions which were relevant to the Service's examination.

6. Verifying items of income and expense on the profit and loss statement of the tax-haven subsidiary.

Each question had to be asked with a lengthy explanation of why it was necessary to have the information to verify the domestic corporation's return. The agent had to explain the issue that the information was related to, and in general had to argue the case before the facts were obtained. The taxpayer's explanation for this action is that information was not being furnished to further a fishing expedition. The examination of this case is still in process.

CURRENT TRAINING PROGRAMS IN INTERNATIONAL AREA

In an attempt to cope with this difficult enforcement problem we have developed extensive training programs designed to broaden the knowledge of agents in tax law and auditing techniques pertaining to domestic-foreign controlled transactions. Particular emphasis is placed on tax avoidance devices which have been or could be employed to divert income to foreign areas which should properly be reportable in the domestic parent's return. The enrollees in this intensified training program include GS-12 and GS-13 revenue agents as well as some reviewers, conference coordinators, conferees and group supervisors. Approximately 1,000 employees will be enrolled in the training courses during the fiscal year 1962, and the remaining GS-12 and GS-13 agents and group supervisors will be trained during the fiscal year 1963. These specially trained agents will be assigned those returns involving foreign transactions. In addition, they will be able to draw on our regional coordinators and agents assigned to the Office of International Operations who have been more intensively trained in the examination of international transactions.

While we feel confident that the successful completion of this training course will provide the revenue agents the basic knowledges and techniques which are essential to achieving an effective examination, it will not alter the need to allocate a disproportionate amount of manpower to these cases.

(signed) Mortimer M. Caplin
Commissioner

EXHIBIT A

Supplemental Data on Cases Summarized in Document 5355
Involving Tax Avoidance in Foreign Activities

| Case No. | Tax Years Involved | Date Return Assigned | Status of Case | Grade of Agents Dst. OIO | Examination Time To Date | Examination Time Estimated Additional | Income Adjustment Based on Foreign Issues | Asset Class of Domestic Parent | Date of Incorporation Foreign Subsidiary | Dividends Distributed by Foreign Subsidiary |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1959 | 8/15/60 | Complete | 13 | 297 | None | 22,760<br>404,362<br>427,122 | 10 | 9/56 | None |
| 2 | 1959<br>1960 | 10/27/61 | In Process | 12 | 28 | 80 | 21,033<br>13,940 | 9 | 7/9/54 | None |
| 3 | 1957, '58 & '59 | 1/22/58<br>11/20/59 | In review | 13 | 260 hrs | 80 | 365,486.09 | 7 | 4/30/57 | None |
| 4 | 1947<br>1948 | 4/5/51 | Closed | | | - | (Total tax 1,753,805) | - | 1947 | None |
| 5 | 1958<br>1959 | 1/30/61 | In process | 13 | 479 hrs | 240 hrs | 2,593,977 | 10 | 2/54 | None |
| 6 | - | - | This case is assigned at the present time as a joint investigation and details cannot be given at this time. | | | | | | | |
| 7 | 1957<br>1958 | 3/58 | Closed 11/7/60 | 12 | 600 hrs | 250 hrs | 189,000 | 9 | 12/28/56 | None |
| 8 | '58, 59 & 60 | 2/13/61 | In process | 12 | 90 hrs. | 210 hrs | 900,000 | 9 | 9/56 | None |
| 9 | 1957-59 | 9/2/59 | In Review | 12 | 280 hrs | 80 hrs | 187,000 | Partnership | 2/7/56<br>6/30/60 | None |
| 10 | '55, 56, 57 & 58 | 3/17/58<br>10/4/60 | In Process | 13 (2) | 370 hrs | 400 hrs | 10,000,000 | 10 | 1955<br>1956 | $174,471 |

EXHIBIT A

| Case No. | Tax Years Involved | Date Return Assigned | Status of Case | Grade of Agents Dst. 010 | Examination Time To Date | Examination Time Estimated Additional | Income Adjustment Based on Foreign Issues | Asset Class of Domestic Parent | Date of Incorporation Foreign Subsidiary | Dividends Distributed by Foreign Subsidiary |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 1959 | 2/27/61 | Closed to App. Div. | 13 | 177 hrs | | $280,771 | 10 | 1/5/11 4/21/54 4/12/16 1/16/56 3/12/53 3/26/59 | (18 Subs distributed $2,917,650) |
| 12 | FY 1959 | 2/1/61 | In process | 13 | 120 hrs | | 500,000 | 10 | (13 subs at issue) 3/1/58 | 22,388 |
| 13 | FY 3/31/58 | 6/26/59 | Closed to App Div. | 12 | 172 hrs | | 210,534.01 | 9 | 8/27/42 7/1/56 | None |
| 14 | 1959 1960 | 2/15/61 | Closed | 13 | 46 hrs | | 5,357 | 4 | 2/23/59 | None |
| 15 | 1959 | 2/6/61 | Closed 5/8/61 | 12 | 26 hrs | | None | 7 | 1957 | None |
| 16 | '58, 59 & 60 | 6/9/60 | Pending | 12 | | 1375 hrs | Unknown | 9-10 | (8 subs 1950 thru 1960) | None |
| 17 | '50, 51, 52 53, 54, 55 & 56 | 3/21/55 | Closed 12/31/51 | 13 | 1,198 hrs | | 2,821,068 | 9 | Not known | None |
| 18 | '56, 57, 58 & 59 | 11/29/60 | Closed | 13 | 137 hrs | 54 hrs | 35,000 | 9 | 1957 | None |
| 19 | '57, 58 & 59 | 9/2/59 to 1/4/62 | Closed | 12 | 792 hrs | - | 1,762,616 | 9 | 1956, 58 & 59 | $3,680,962 |
| 20 | 1944 - 1948 | 3/25/48 | Closed | 13 | - | - | (Tax & penalties $3,200,931) | - | - | - |

EXHIBIT A

| Case No. | Tax Years Involved | Date Return Assigned | Status of Case | Grade of Agents Dst. OIC | Examination Time To Date | Examination Time Estimated Additional | Income Adjustment Based on Foreign Issues | Asset Class of Domestic Parent | Date of Incorporation Foreign Subsidiary | Dividends Distributed by Foreign Subsidiary |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | '58, 59 & 60 | 3/31/60 | In process | 12 | | 200 hrs | $ 10,500 | 6 | 1949 | None |
| 22 | 1959 1960 | 9/7/60 | In process | 12 | 400 hrs | | 2,000,000 | 10 | 12/8/58 | None |
| 23 | '56, 58 & 59 | 9/12/60 | In process | 11 | 80 hrs | 48 | 40,700 | 6 & 7 | 5/58 | None |
| 24 | 1955-60 | 10/60 | In process | 13 | 1360 hrs | 200 hrs | 1,102,000 | 11 | 1/1/57 (13 others various dates) | $428,982 |
| 25 | 1959 | 4/14/61 | In process | 13 | 40 hrs | 120 hrs | 272,000 | 9 | 2/13/58 | None |
| 26 | '56, 57, 58 & 59 | 2/58 11/60 | In process | 13 | 1248 hrs | 320 hrs | 35,000 | 11 | 8/19/58 | $4,624,814 |
| 27 | 1957 & '58 | 10/7/60 | Closed | 12 | 508 hrs | | None on foreign issue | None | Prior to 1954 | $5,721.64 |
| 28 | 1957 & '58 | 11/6/59 | Closed | 13 | 40 hrs | | 100,127 | 10 | 8/9/57 | None |
| 29 | '57, 58 & 59 | 2/4/58 | Closed 3/18/60 | 12 | 228 hrs | | 300,000 | 5 | 4/55 | None |
| 30 | 1958 1959 | 7/60 | In process | 13 | 496 hrs | 80 hrs | 100,000 | 10 | 1898 - 1958 | 2,660,881 |

EXHIBIT A

| Case No. | Tax Years Involved | Date Return Assigned | Status of Case | Grade of Agents Dst. OIO | Examination Time To Date | Examination Time Estimated Additional | Income Adjustment Based on Foreign Issues | Asset Class of Domestic Parent | Date of Incorporation Foreign Subsidiary | Dividends Distributed by Foreign Subsidiary |
|---|---|---|---|---|---|---|---|---|---|---|
| 31 | '58 - 60 | 7/20/60 | In process | 13 | 602 hrs | 300 hrs | $1,639,000 | 9 | 1958, 59 & 60 | $500,000 |
| 32 | '55 - 58 | 3/27/57 to 1/19/61 | In process | 13 | 1104 hrs | 1200 hrs | 15,021,933 | 11 | 8/1/50, 11/12/55 5/24/55, 5/15/57 6/15/57, 6/10/60 | 34,316 |
| 33 | 1959 | This is a foreign corporation which receives capital from U. S. investors and is beyond the reach of U. S. tax laws. | | | | | | | | |
| 34 | 1959 | Same as Case #33 | | | | | | | | |
| 35 | 1959 | Same as Case #33 | | | | | | | | |
| 36 | 1946 - 1957 | | Closed | 13 | 592 hrs | | Taxpayer was taxed as a resident foreign corporation. | | | |
| 37 | '58, 59 & 60 | 1/13/61 | In process | 13 | 47 hrs | 24 hrs | 500,000 | 8 | Unknown | None |
| 38 | '57, 58, 59 & 60 | 4/13/60 | In process | 13 | 35 hrs | 54 hrs | Unknown | 11 | 4/5/57 | None |
| 39 | 1960 | 10/24/61 | Not stated | 13 | Unknown | Unknown | Unknown | 8 | 10/15/59 | $5,851. |

EXHIBIT B

## Estimated Man-Year Requirements

## To Examine Returns Involving International Transactions

### July 1, 1961 Available Resources

| | Total Positions | Examining Agent Positions 1/ |
|---|---|---|
| GS-13 | 1611 | 555 |
| GS-12 | 1916 | 1296 |
| Total | 3527 | 1851 |
| Percent Examination Time | | x 85% |
| Examination Man-Years Available | | 1573 |

### Requirements to Examine Returns Involving International Transactions

| | |
|---|---|
| Number of Returns 2/ | 3,044 |
| Man-Days per Return | x 24 |
| Man-Day Requirements | 73,056 |
| | x 8 |
| Man-Hour Requirements | 584,448 |
| Man-Year Requirements (584,448 ÷ 2024) 3/ | 289 |
| Percent of Total Requirements to Available Resources (289 ÷ 1573) | 18 percent |

1/ Excludes:
Chiefs and Assistant Chiefs
Regional Analysts
Group Supervisors
Conference Coordinators
Conferees
Classifying Officers
Engineers
Estate and Gift Tax Agents
Excise Tax Agents
Fraud Agents
Offer-in-Compromise Agents
Reviewers (including Pension Trust)

2/ This total involves only those returns identified as of January 1, 1962.

3/ 2024 equals man-hours per man-year.

EXHIBIT III

E. Separate Limitation on Foreign Tax Credit with Respect to Investment Income

Existing law limits the amount of foreign income tax that a taxpayer can credit against his United States tax. The limitation either is computed separately with respect to each foreign country and possession of the United States, or, at the taxpayer's election, is computed with respect to all foreign countries and United States possessions together.

In substance, the limitation provides that the credit cannot exceed the taxpayer's average United States tax rate multiplied by his taxable income for the particular country or possession or his total foreign taxable income (depending upon which method is elected). Consequently, where the average foreign tax rate exceeds the average United States rate, credit cannot be claimed for a portion of the foreign taxes.

The limitations formula, as presently drawn, however, does allow full credit for foreign taxes exceeding the United States average rate where taxpayers also obtain sufficient other foreign income which is subject to a low rate of tax abroad. In other words, if foreign tax on business income is imposed at a high rate and on interest income at a lower rate, the two taxes are combined and the aggregate average foreign tax rate is somewhere between the two specific rates.

For example, a United States corporation doing business in Canada through a branch might be subjected to a combined Canadian tax of 57-1/2 percent consisting of the normal 50 percent Canadian corporate rate plus a branch profits tax of 15 percent on its remaining income (if not reinvested in certain assets in Canada). If the corporation had $50,000 of Canadian business income, and was subjected to a tax of $28,750 by Canada (57-1/2 percent of $50,000) it would be allowed a credit by the United States of only $26,000 (52 percent of $50,000). This would leave the corporation with an unused foreign tax credit in the amount of $2,750. However, to avoid this result, the taxpayer might transfer sufficient of its funds invested in the United States to bank accounts or investments in Canada to produce $7,500 of investment income. Assuming that this investment income was subjected to only a 15 percent withholding tax by Canada, the corporation would pay a Canadian tax on this investment income of $1,125. Its total Canadian taxes now would be $29,875 which is only slightly less than $29,900 (52 percent of its total Canadian income, $57,500). Accordingly, under present law the corporation would be allowed full credit for all of its Canadian tax payments. Similarly full credit would also be allowable if the investment income had been obtained from a different foreign country also imposing a 15 percent withholding tax provided that the overall limitation (rather than the per-country limitation) had been elected by the taxpayer.

In this example, the effect of allowing use of the unused credit of $2,750 would be to raise the corporation's after-tax return on the $7,500 of investment income from $3,600 ($7,500 less 52 percent of $7,500) to $6,350 ($7,500 less the Canadian withholding tax of $1,125 less additional U. S. tax of $25). Thus, under the circumstances the credit mechanism would provide a strong artificial incentive for the corporation in this example to transfer short-term investment funds from the United States to Canada.

The proposed amendment to the foreign tax credit provisions requires that the limitation on the foreign tax credit for foreign investment income be computed separately from the limitation for other foreign income, whether the limitations are computed on a per-country basis or on the overall basis. Foreign investment income is defined to include only interest income from sources outside the United States and dividend income from sources outside the United States other than dividends received by United States corporate taxpayers owning 10 percent or more of the foreign corporation distributing the dividend. It is believed that these are the principal forms of foreign investment income obtained by taxpayers in response to the above-described tax incentive. Application of the proposed amendment in the preceding example would permit full credit for the $1,125 tax in respect to the $7,500 of Canadian investment income but would not allow the taxpayer to use the $2,750 excess credit arising out of its business income to be applied against the U. S. tax on the investment income.

The enactment of this proposal would remove an unwarranted stimulus now provided by the foreign tax credit provisions to the flow of short-term capital abroad and thus would have a favorable stabilizing impact on this country's balance of payments.

Statutory Language to Implement Separate Limitation on Foreign Tax Credit with Respect to Investment Income

(a) Section 904 (relating to limitations on the foreign tax credit) is amended--

(1) By redesignating subsection (f) thereof, relating to a cross reference, as subsection (g), and

(2) By adding after subsection (e) thereof a new subsection (f) as follows:

"(f) <u>Special rules in case of investment income</u>.--

"(1) <u>In general</u>.--In the case of a taxpayer who has foreign investment income as defined in paragraph (3), this section shall, as provided in paragraph (2), apply separately with respect to--

"(A) Such income, and

"(B) Other taxable income from sources without the United States.

"(2) <u>Application of per-country or overall limitation</u>.--

"(A) In a case where the limitation provided in subsection (a) (1) applies, such limitation shall be applied separately to the foreign investment income from sources within each foreign country or possession of the United States and to all other taxable income from sources within such country or possession, but in each case both types of income shall be included in determining the taxpayer's entire taxable income. In making any computation or determination of taxes paid or accrued to a foreign country or possession of the United States, such taxes shall be divided between those paid or accrued with respect to foreign investment income and those paid or accrued with respect to all other income from sources within the foreign country or possession of the United States.

"(B) In a case where the limitation provided in subsection (a) (2) applies, such limitation shall be applied separately to the total of foreign investment income and to the total of all other income from sources without the United States, but in each case both types of income shall be included in determining the taxpayer's entire taxable income. In making any computation or determination of taxes paid or accrued to all foreign countries and possessions of the United States, such taxes shall be divided between those paid or accrued with respect to the total foreign investment income and those paid or accrued with respect to the total of all other taxable income from sources without the United States.

"(3) Foreign investment income.--As used in this subsection, 'foreign investment income' means the taxable income from interest and dividends (other than dividends received by a domestic corporation from a foreign corporation in which it owns at least 10 percent of the voting stock), but only to the extent constituting taxable income from sources without the United States.

"(4) Transitional rules for carrybacks and carryovers.--

"(A) Where under the provisions of subsection (d) foreign taxes paid or accrued in any taxable year to which this subsection applies are deemed paid or accrued in one or more taxable years preceding the first taxable year to which this subsection applies, any excess foreign taxes which are separately determined solely by reason of the application of this subsection shall be combined (as if this subsection had not been enacted) but only for the purpose of determining the amount of taxes deemed paid or accrued in such preceding taxable years. To the extent such excess is not, under the preceding sentence, deemed taxes paid or accrued in such preceding taxable years, such excess (in the other years for which under subsection (d) it is deemed taxes paid or accrued) shall be deemed paid or accrued with respect to foreign investment income and with respect to other taxable income from sources without the United States in the same ratio as the excess foreign taxes so separately determined bears to the excess taxes as so combined.

"(B) In determining under the provisions of subsection (d), the taxes paid or accrued in any taxable year preceding the first taxable year to which this subsection applies which are to be deemed paid or accrued in any taxable year to which this subsection applies, the excess taxes for such prior taxable year shall be deemed to be excess taxes with respect to foreign investment income in the ratio that the taxes paid or accrued, in the taxable year to which this subsection applies, with respect to foreign investment income bears to sum of such taxes and the taxes paid with respect to other taxable income from sources without the United States, and shall be deemed to be excess taxes with respect to other taxable income from sources without the United States in the ratio that the taxes paid or accrued, in the taxable year to which this subsection applies, with respect to other taxable income from sources without the United States bears to sum of such taxes and taxes paid or accrued with respect to foreign investment income; and shall be deemed taxes paid or accrued in the taxable year to which this subsection applies to the extent provided in subsection (d)."

(b) The amendments made by this section shall be applicable with respect to taxable years beginning after the date of the enactment of this Act.

EXHIBIT III

F. Foreign Investment Companies

This memorandum summarizes data available on foreign investment companies. The memorandum is based on material made available by the Securities and Exchange Commission, including financial reports filed by the companies. The prospectuses of some of the companies, and Canadian balance-of-payments data pertaining to the Canadian companies, have also been examined.

1. Number of Companies

There are fourteen foreign investment companies registered with the Securities and Exchange Commission: 10 Canadian, three Bermudian, and one South African. A list of these companies is attached (Table 1).

The first Canadian company began operations in 1954, the South African company began in 1958, and the first Bermudian company in 1960. The second Bermudian company began operations in 1961 with the sale of $23 million of stock. A third Bermudian company, registered as an investment company in September, 1961, has a registration pending with the Securities and Exchange Commission for the issuance of an initial $10 million of capital stock. One small Canadian company was liquidated during the past year.

2. Method of Operation

The foreign investment companies generally invest only outside the United States so that they have no business in or income from the United States. They generally retain for reinvestment their investment income as well as gains realized from the sale of portfolio investments, and declare no cash dividends, although they may on occasion declare stock dividends. Except for the South African company and one of the Bermudian companies, the companies are open-end; their shares are sold at net asset value (plus a sales commission in most cases) and redeemed at net asset value.

The South African company (closed-end) is believed to be the only foreign investment company which has paid cash dividends. This company holds the bulk of its net assets in the form of shares of South African gold mining companies, a number of which also produce uranium.

The Canadian companies have invested primarily in Canada during most of the period; there has recently been a tendency to shift some of their investments toward other areas, principally Western Europe. Canadian data indicate that at the end of 1959 the nine Canadian companies then in operation held an estimated $331 million in Canadian securities and about $43 million of non-Canadian securities, most of which were European. The

Bermudian companies appear to be oriented largely toward Western Europe, although investment in other areas, such as British Commonwealth countries and Japan, is not ruled out.

3. Capital Flows

Information provided by the SEC indicates that (up to latest available dates in 1961) total stock sales and redemptions were approximately as follows (in millions of dollars):

| | Total | Ten Canadian Companies | One South African Company | Two Bermudian Companies |
|---|---|---|---|---|
| Sales of capital stock | 553 | 484 | 31 | 38 |
| Redemptions of capital stock | 254 | 254 | - | - |
| Net proceeds | 299 | 230 | 31 | 38 |

Not all of these transactions were with U. S. investors. In the case of Canada, it may be assumed that at least 95% were with non-Canadians, in view of the provisions of Canadian tax law regarding Canadian tax treatment. Data from Canadian sources suggest that U. S. ownership of the Canadian funds was somewhat above 95% at the end of 1959. No similar basis for estimating the proportion of U. S. ownership of the South African and Bermudian companies has been found.

A time series on sales and redemptions of capital stock of the foreign investment companies is presented in Table 2. This series is based on an analysis of quarterly data within the fiscal years of these companies; the data do not in all cases coincide precisely with calendar years. The data indicate that there was a net redemption of the shares of the Canadian companies amounting to $94 million during 1959-1961, in contrast to 1954-1957, when there were large net sales.

4. Earnings

The foreign investment companies typically do not distribute income. Accumulated investment income and appreciation of investments enter into net asset value applicable to outstanding shares, so that the redemption of shares involves an element of investment income.

An analysis of annual investment income and annual changes in the undistributed net investment income of the foreign investment companies is contained in Table 3. For the Canadian companies, the difference between net income and changes in undistributed net income is considered to represent the amount of investment income distributed in connection with share redemption. In the case of the South African company these figures represent cash dividends paid.

5. Net Assets

The available data on the net amounts of the foreign investment companies (as of the latest available dates in 1961) have been summarized in Table 4.

January 12, 1962

Table 1 - LIST OF REGISTERED FOREIGN INVESTMENT COMPANIES

| Name 1/ | Net Assets | As of | Date Commission Granted Order Permitting Registration |
|---|---|---|---|
| American-South African Investment Company, Ltd. (South Africa) | $37,544,232 | 6/31/61 | 8/13/58 |
| Canada General Fund (1954) Ltd. | 73,766,842 | 8/31/61 | 8/16/58 |
| Canadian International Growth Fund, Ltd. | 12,006,584 | 6/30/61 | 7/ 6/56 |
| Electronics International Capital Ltd. (Bermuda) | 14,709,811 | 6/30/61 | 9/16/60 |
| Investors Group Canadian Fund, Ltd. | 112,315,051 | 6/30/61 | 3/30/55 |
| Keystone Fund of Canada Ltd. | 17,130,420 | 3/31/61 | 8/18/54 |
| Loomis-Sayles Fund of Canada Ltd. | 20,838,561 | 6/30/61 | 7/ 6/59 |
| New York Capital Fund, Ltd. | 31,470,255 | 6/30/61 | 8/11/54 |
| Scudder Fund of Canada Ltd. | 56,965,437 | 5/31/60 | 4/27/54 |
| Axe Templeton Growth Fund of Canada Ltd. | 6,641,366 | 10/31/61 | 10/ 7/54 |
| UBS Fund of Canada, Ltd. | 3,486,560 | 6/30/61 | 4/ 1/60 |
| United Funds Canada Ltd. | 15,751,773 | 6/30/61 | 8/ 4/54 |
| United International Fund Ltd. (Bermuda) | 22,893,747 | 4/30/61 | 3/ 9/60 |
| World Wide Fund Ltd. (Bermuda) | (10,000,000 proposed) | | 9/18/61 |

1/ Unless otherwise indicated, all companies are incorporated in Canada.

January 12, 1962

Table 2.- Sales and Redemptions of Capital Stock of Foreign Investment Companies

(In millions of dollars)

| Calendar Year 1/ | Total Thirteen Companies | | | Ten Canadian Companies | | | One South African and Two Bermudian Companies | | |
|---|---|---|---|---|---|---|---|---|---|
| | Sales | Redemptions | Net Proceeds | Sales | Redemptions | Net Proceeds | Sales | Redemptions | Net Proceeds |
| 1954.......... | 124 | * | 124 | 124 | * | 124 | | | |
| 1955.......... | 83 | 15 | 68 | 83 | 15 | 68 | | | |
| 1956.......... | 80 | 19 | 61 | 80 | 19 | 61 | | | |
| 1957.......... | 85 | 21 | 64 | 85 | 21 | 64 | | | |
| 1958.......... | 68 | 31 | 37 | 37 | 31 | 7 | 31 3/ | - | 31 3/ |
| 1959.......... | 51 | 64 | -12 | 51 | 64 | -12 | | | |
| 1960.......... | 31 | 52 | -21 | 16 | 52 | -36 | 15 4/ | - | 15 4/ |
| 1961 (to latest available dates 2/) | 30 | 53 | -23 | 7 | 53 | -46 | 23 4/ | - | 23 4/ |
| Total.... | 553 | 254 | 299 | 484 | 254 | 230 | 69 | - | 69 |

1/ Data for four companies are included on basis of fiscal quarters ending closest to end of the calendar year.

2/ Data are available only through a portion of 1961 (ranging from June 30 to October 31).

3/ South African company.

4/ Bermudian companies.

* Less than $500,000.

Note: Detail may not add to totals because of rounding.

Source: Based on material made available by the Securities and Exchange Commission.

January 12, 1962

Table 3. Analysis of Net Investment Income of Foreign Investment Companies 1/
(In Millions of dollars)

| Year 2/ | Ten Canadian Companies: Net Investment Income | Ten Canadian Companies: Undistributed Net Inv. Income: Accumulated Year-End Amount | Ten Canadian Companies: Undistributed Net Inv. Income: Annual Change | Ten Canadian Companies: Imputed Income Distribution 3/ | One South African Company: Net Investment Income | One South African Company: Undistributed Net Inv. Income: Accumulated Year-End Amount | One South African Company: Undistributed Net Inv. Income: Annual Change | One South African Company: Income Distribution 4/ |
|---|---|---|---|---|---|---|---|---|
| 1954 | .9 | .9 | .9 | * | | | | |
| 1955 | 4.0 | 4.7 | 3.7 | .3 | | | | |
| 1956 | 5.8 | 9.8 | 5.1 | .7 | | | | |
| 1957 | 7.6 | 15.8 | 6.0 | 1.6 | | | | |
| 1958 | 8.1 | 22.4 | 6.6 | 1.5 | .6 | .6 | .6 | - |
| 1959 | 8.0 | 27.6 | 5.1 | 2.9 | 1.6 | 1.8 | 1.1 | .5 |
| 1960 | 7.0 | 31.3 | 3.7 | 3.3 | 1.9 | 3.1 | 1.4 | .5 |
| 1961 (to latest available dates 5/) | 4.4 | 32.1 | .8 | 3.6 | 1.0 | 3.9 | .8 | .2 |
| Total | 45.8 | - | 32.1 | 13.7 | 5.1 | - | 3.9 | 1.2 |

1/ Canadian and South African companies only; income reported by the Bermudian companies has been minor.
2/ Data for five companies are included on basis of half-year ending closest to end of the calendar year.
3/ Derived by subtracting the annual change in undistributed net investment income from net investment income for the year.
4/ Cash dividends.
5/ Data are available only through a portion of 1961 (ranging from April 30 to October 31).
* Less than $50,000.
Note: Detail may not add to totals because of rounding.

Table 4.- Sources of Net Assets of Foreign Investment Companies as of Latest Available Dates in 1961

(In millions of dollars)

| | Total | Ten Canadian Companies 1/ | One South African Company 2/ | Two Bermudian Companies 2/ |
|---|---|---|---|---|
| Net proceeds from sales of capital stock...... | 293 | 225 | 31 | 37 |
| Accumulated net realized gain on investments... | 6 | 5 | 1 | - |
| Unrealized appreciation of investments........ | 86 | 84 | 2 | - |
| Total.................................... | 384 | 314 | 33 | 37 |
| Undistributed net investment income........... | 36 | 32 | 4 | - |
| Net assets applicable to outstanding shares................................ | 422 | 346 | 38 | 38 |

Note: Detail may not add to totals because of rounding.

1/ Data are included as of various dates ranging from March 31 to August 30 and may not cross check with table 2 due to exchange rate changes and date differentials.

Source: Based on data made available by the Securities and Exchange Commission.

January 12, 1962

January 11, 1962

Depreciation Practices in Certain Foreign Countries

The following outline is designed to provide information on depreciation practices in leading foreign industrial nations. Countries surveyed are Belgium, Canada, France, West Germany, Italy, Japan, Netherlands, Sweden, and United Kingdom. Replies to a questionnaire sent by the Treasury Department to the United States embassies in the various countries were the main source of data. Among the additional references consulted were published and unpublished material from the World Tax Series prepared by the Harvard Law School International Program in Taxation, Taxation in Western Europe published by the Federation of British Industries, Common Market Fiscal Systems by E. B. Nortcliffe, Canadian Tax Reporter published by CCH Canadian Limited, and Information Guide for Those Doing Business Outside the United States of America published by Price Waterhouse & Co.

The information for each country has been classified under general headings as follows:

Corporate tax rate--This section is designed to give the approximate rate of tax imposed on income of industrial corporations.

Method of computing depreciation--The various methods (straight-line, declining-balance, etc.) of depreciation permitted or required to be used, together with any limitations on the use of a particular method, are covered in this section.

Rates of depreciation--The method by which depreciation rates for assets are determined (i.e. statutory rates, negotiations with individual taxpayers, etc.) is discussed in this section, together with the treatment of salvage value and the relationship of straight-line and declining-balance rates of depreciation. It is difficult to determine with any degree of certainty the useful lives or rates of depreciation allowed in countries where statutory lives or rates are not provided. Just as tax lives of assets in the United States may vary widely from the administrative Bulletin "F" publication, lives may also differ considerably in foreign countries as a result of administrative practices. Thus, the rates of depreciation listed for individual assets in these countries must be regarded as rough averages from which a considerable degree of dispersion might be expected.

Source: Office of Financial Analysis,
U. S. Treasury Department

Types of buildings or equipment not subject to depreciation--Listed here are assets, which would be depreciable under United States depreciation provisions, but on which depreciation is not permitted to be deducted in the foreign country.

Accelerated depreciation--Under this heading are discussed initial or first-year depreciation allowances and statutory reduction of lives of assets. Countries having general provisions for initial or first-year allowances are France, Italy, Netherlands, and the United Kingdom, while Italy also has a general provision for reduction of lives. Special allowances, applicable only to certain assets or industries, are also permitted in a number of the countries.

Incentive allowances--This topic covers provisions for deducting allowances in excess of the cost of the asset, but not including deductions based on the change in the price level. Countries currently having incentive allowances are Belgium, Netherlands, and the United Kingdom.

Adjustments for price level changes--None of the countries covered currently permit adjustment for changes in the price level, although they have previously been permitted in Belgium, France, West Germany, Italy, and Japan. However, these prior adjustments, generally, may be used in computing current depreciation allowances on assets purchased prior to the time of the latest revaluation.

Treatment of gains on sale of depreciable property--Under this heading are discussed any special provisions for the taxation of gains on the sale of depreciable assets. Also discussed are provisions for the deferral of recognition of gain upon reinvestment of proceeds of sale.

Treatment of losses on sale of depreciable property--The tax treatment of loss on sale of depreciable property is covered under this heading.

Relationship of book and tax depreciation--Provisions limiting tax depreciation deductions to depreciation recorded on the books of account is covered in this section.

Provisions of prior law--Expired provisions of the law, concerned either with accelerated depreciation or incentive allowances, are outlined under this heading.

## BELGIUM

### Corporate tax rate

The maximum effective rate of tax (after taking into account the deductibility of the previous years' tax from the current year's taxable income) is 30 percent on undistributed profits. The maximum effective rate on profits distributed as dividends is 47.2 percent.

### Method of computing depreciation

The straight-line method of depreciation is used almost exclusively.

### Rates of depreciation

Depreciation rates are determined by negotiation between the taxing authorities and individual taxpayers on a case by case basis. The fact that an asset may have a shorter useful life than its physical life may be taken into account in determining the rate of depreciation. Generally, salvage value is not considered in computing depreciation deductions. The following might be considered as average for negotiated depreciation rates:

| | |
|---|---|
| Industrial equipment | 10 percent to 20 percent |
| Office furniture | 10 percent |
| Industrial buildings | 3 percent to 5 percent |
| Trucks and cars | 20 percent to 25 percent |

### Types of buildings or equipment not subject to depreciation

Commercial buildings and administrative offices are not subject to depreciation.

### Accelerated depreciation

There are no general provisions for accelerated depreciation. However, special accelerated treatment is given maritime and inland vessels. Depreciation is allowed on vessels at the rate of 20 percent in the first year, 15 percent in each of the two succeeding years, and 10 percent in each of the following eight years.

BELGIUM (CONT'D)

Incentive allowances

A special deduction is allowed for 30 percent of the excess of investment during the year in industrial property over the sum of (1) depreciation for such year on property held at the close of the preceding tax year and (2) the proceeds realized during the year from the sale of land, buildings, machinery and certain investment securities. The deduction is available only if the excess if more than BF 30,000 ($600). The special deduction was enacted originally for 1959 and 1960 and has been extended to 1961 and 1962. The deduction is normally distributed in equal amounts of 10 percent over a three-year period beginning in the year in which the investment is made. However, if the profits in any year are insufficient, the unused portion of the deduction may be carried forward for five years. The deduction does not affect the depreciation allowance otherwise available on the property. Thus, the total of the special deduction and depreciation will exceed the cost of the property. The special deduction gives a maximum benefit of 9 percent of the investment (30 percent of the 30 percent maximum effective tax rate on undistributed profits). Since the deduction applies only to the undistributed profits tax, the result is, in a sense, only a tax deferment, with the deferred tax being collected at the time of distribution of the profits as dividends.

The deduction is available only to industrial enterprises engaged in the extraction, fabrication or transformation of items. It does not apply, for example, to farmers, transportation firms, hotels, and beauty parlors. The source of funds used for the investment is not restricted. The tax incentive is aimed at expansion rather than mere replacement and, for this reason, the proceeds from the sale of capital assets during the year must be subtracted from the qualified expenditures during the year. Thus, an enterprise which replaces its buildings or machinery with other buildings or machinery of the same value does not obtain the benefit of the deduction. Investment qualifying for the special deduction must be made in "business real property and machinery". Such property includes land bought on which to erect "industrial buildings" as well as business buildings, apparatus, tools, office equipment and furniture, and laboratory equipment. It is immaterial whether the taxpayer buys new or used items. However, leased equipment may not be taken into account either by the lessor or the lessee. Only investments in items used in Belgium qualify for the deduction, although there is no rule that the items acquired must have been made in Belgium. Items under contract but not yet delivered may be taken into account to the extent that progress payments are made during the year. For new enterprises the entire amount of the investment during the first year qualifies for the special deduction.

BELGIUM (CONT'D)

Adjustments for price level changes

Taxpayers were allowed in 1947 to revalue assets acquired before December 31, 1940. Subsequent depreciation deductions are permitted on the basis of such revaluation in order to make allowance for the extraordinary rise in prices during and immediately after the war.

Treatment of gains on sale of depreciable property

Generally, gains on the sale of buildings and equipment are treated as ordinary income in the case of corporations. However, under a law enacted in 1959 and subsequently extended to 1962, only one-fifth of the gain is subject to tax if the proceeds of sale are reinvested in fixed assets or equipment located in Belgium. Total exemption of the gain is permitted if the reinvestment is made in designated regions which have suffered from high rates of unemployment.

Treatment of losses on sale of depreciable property

Losses on the sale of buildings, equipment and machinery are fully deductible from income.

Relationship of book and tax depreciation

Depreciation allowed for tax purposes is limited to the amount shown on the books.

Provisions of prior law

A special deduction of 30 percent for "productive investment" in excess of BF 250,000 (approximately $5,000) per year was allowed between mid-1954 and mid-1956. This deduction was spread over a three-year period and was independent of the depreciation deduction. It differed from the special deduction introduced in 1959 in that it was not related to depreciation or the proceeds from the sale of capital assets.

## CANADA

### Corporate tax rate

The maximum corporate tax rate is 50 percent including the 3 percent Old Age Security Tax.

### Method of computing depreciation

With the exception of certain farmers and fishermen permitted to use the straight-line method, all taxpayers are required to compute depreciation under the declining-balance method. Under the declining-balance method, depreciable assets are grouped into classes set forth in the Income Tax Regulations, and depreciation is computed with respect to each class as a whole rather than for individual assets.

### Rates of depreciation

The rates of depreciation which must be used under the declining-balance method are set forth in the Income Tax Regulations. Under these Regulations, all depreciable assets are grouped into classes with a specified maximum rate applying to each of the classes of assets. The classes and declining balance rates of depreciation are as follows:

Class 1 (4 percent) - Property not included in any other class that is (a) a bridge, (b) a canal, (c) a culvert, (d) a dam, (e) a jetty, (f) a mole, (g) a road, sidewalk, aeroplane runway, parking area or similar surface construction, (h) railway track and grading that is not part of a railway system, or (i) tile drainage.

Class 2 (6 percent) - Property that is (a) electrical generating equipment, (b) a pipeline for oil, gas or water, and (c) with certain exceptions, generating and distributing equipment and plant (including structures) of producers or distributors of electrical energy, gas, water, or heat.

Class 3 (5 percent) - Property not included in any other class that is (a) a building or other structure, including component parts such as electrical wiring, plumbing, sprinkler systems, air-conditioning equipment, heating equipment, lighting fixtures, elevators and escalators, (b) a breakwater (other than a wooden breakwater), (c) a dock, (d) a trestle, (e) a windmill, or (f) a wharf.

CANADA (CONT'D)

Class 4 (6 percent) - Property, that would otherwise be included in another class, that is (a) a railway system or part thereof, or (b) a tramway or trolley bus system or a part thereof.

Class 5 (10 percent) - Property that is (a) a chemical pulp mill or ground wood pulp mill, but not including hydro-electric power plants and their equipment, or (b) an integrated mill producing chemical pulp or ground wood pulp and manufacturing therefrom paper, paper board or pulp board, but not including hydro-electric power plants and their equipment.

Class 6 (10 percent) - Property not included in any other class that is (a) a building of frame, log, stucco on frame, galvanized iron, or corrugated iron construction including component parts, (b) a wooden breakwater, (c) a fence, (d) a greenhouse, (e) an oil or water storage tank, (f) a railway tank car, (g) a wooden wharf, or (h) an aeroplane hangar acquired after 1958.

Class 7 (15 percent) - Property that is (a) a canoe or rowboat, (b) a scow, (c) a ship, (d) furniture, fitting or equipment (except radar and radio equipment) attached to a property included in this class, (e) a spare engine for property included in this class, (f) a marine railway, or (g) a ship under construction.

Class 8 (20 percent) - Property that is a tangible capital asset that is not included in another class (except an animal, a tree, shrub, herb or similar growing thing, a gas well, a mine, an oil well, radium, a right of way, a timber limit, and tramway track.)

Class 9 (25 percent) - Property that is (a) auxiliary electrical generating equipment of a taxpayer not engaged in business of distributing electrical energy, (b) radar equipment, (c) radio transmission equipment, (d) radio receiving equipment, or (e) electrical generating equipment having a maximum load capacity of not more than 15 kilowatts.

Class 10 (30 percent) - Property not included in any other class that is (a) automotive equipment, (b) harness or stable equipment, (c) a sleigh, (d) a trailer, or (e) a wagon, and property that would otherwise be included in another class that is (f) a building acquired for the purpose of gaining or producing income from a mine (g) contractor's moveable equipment, (h) a floor of a roller skating rink, (i) gas or oil well equipment that is normally used above ground, (j) mining machinery and equipment, (k) property acquired for cutting and removing timber which will be of no further use to the taxpayer after all merchantable timber has been removed from a timber limit,

CANADA (CONT'D)

(l) mechanical equipment acquired for logging operations, (m) access roads and trails for the protection of standing timber against fire, insects and disease, or (n) property that was acquired for a motion picture drive-in theatre.

Class 11 (35 percent) - Property not included in any other class that is an electrical advertising sign owned by the manufacturer thereof and used to earn rental income.

Class 12 (100 percent) - Property not included in any other class that is (a) a book that is part of a lending library, (b) chinaware, cutlery, or other tableware, (c) a kitchen utensil costing less than $100, (d) a die, jig, pattern, mould, or last, (e) a medical or dental instrument costing less than $100, (f) a mine shaft, main haulage way or similar underground work, sunk or contructed after the mine came into production, (g) linen, (h) a tool costing less than $100, (i) a uniform, (j) the cutting or shaping part of a machine, (k) apparel or costume used for the purpose of earning rental income therefrom, and (l) video tape.

Class 16 (40 percent) - Property that is (a) an aircraft, (b) furniture, fittings or equipment attached to an aircraft, or (c) a spare part for a property included in this class.

Class 17 (8 percent) - Property, that would otherwise be included in another class, that is a telephone or telegraph system or a part thereof, except radio receiving and transmission equipment and property included in class 10.

A taxpayer may elect to include in class 1 all properties which would otherwise be included in another class or, a taxpayer whose chief depreciable properties are in class 2, 4, or 17, may elect that any other property from the same business be included in class 2, 4, or 17.

Types of buildings or equipment not subject to depreciation

None

CANADA (CONT'D)

Accelerated depreciation

A special depreciation allowance to encourage re-equipment and modernization was part of the 1961 Budget proposals to encourage and assist Canadian business to become more competitive in markets abroad and at home. The purpose of the allowance is to help business undertake new capital installations including machinery, equipment and buildings.

The re-equipment and modernization allowance takes the form of a 50 percent increase in the rates of capital cost allowance for the year in which a new asset is acquired. This additional allowance, will apply to new assets acquired in the period June 21, 1961 to March 31, 1963. Since this allowance is intended to encourage re-equipment and modernization it applies only to those capital expenditures which are in excess of normal or ordinary capital expenditures. The regulations provide that the expenditures which qualify for the additional allowance are those made in the taxation year which exceed a certain base amount. The base amount is the aggregate of the amounts spent for depreciable property acquired in the last complete taxation year of the taxpayer ending before June 21, 1961, or the average for the last three years if the average is smaller. In order to guard against existing operations being split up into new ones for tax savings purposes, there are provisions for the carry-over of base expenditures in the case of certain incorporations and reorganizations.

Nearly all assets depreciable on the diminishing balance basis will qualify for the additional allowance. Property which is already eligible for accelerated depreciation under a certificate issued by the Minister of Defense Production, and property which is already eligible for a 100 percent rate of depreciation does not qualify for the new allowance. In addition, second hand assets are not eligible nor is property acquired for use entirely outside Canada.

The amount of capital expenditures qualifying for the allowance is the excess of the aggregate expenditures over the base amount. The excess is not computed on the basis of expenditures for various classes of assets under the Canadian class depreciation system. Thus, qualifying expenditures might all be for automobiles, while the base period expenditures were for buildings. If the taxpayer has acquired property of more than one class, he may allocate the qualifying expenditures in any manner he desires to the various classes of acquisition.

CANADA (CONT'D)

The following example illustrates the operation of this allowance:

Computation of base amount:

Assume that capital expenditures for depreciable property for 1958, 1959, and 1960 (the last complete taxation year ending before June 21, 1961) were $60,000, $50,000, and $40,000, respectively. The base amount would be $40,000 since this is less than the three-year average expenditures of $50,000.

Computation of amount on which additional allowance may be claimed:

| | |
|---|---|
| Purchases of depreciable property in 1962: | |
| Buildings (Class 3) | $20,000 |
| Machinery (Class 8) | 30,000 |
| Automotive equipment (Class 10) | 15,000 |
| | $65,000 |
| Base amount | 40,000 |
| Amount on which additional allowance may be claimed | $25,000 |

The taxpayer may claim the additional allowance with respect to any of the property acquired by him in 1962. Assume the following allocation:

| | |
|---|---|
| Buildings (Class 3) | $ -0- |
| Machinery (Class 8) | 10,000 |
| Automotive equipment (Class 10) | 15,000 |
| | $25,000 |

The additional allowance would be computed as follows:

| | Normal rate | Rate of additional allowance | Cost of property | Allowance |
|---|---|---|---|---|
| Machinery | 20% | 10% | $10,000 | $1,000 |
| Automotive equipment | 30% | 15% | 15,000 | 2,250 |
| | | | | $3,250 |

CANADA (CONT'D)

The taxpayer's total deductions under the class system would be computed as follows given the undepreciated cost at December 31, 1961 and disposals credited to the accounts during the year:

| | Class 3 (5%) | Class 8 (20%) | Class 10 (30%) | Total |
|---|---|---|---|---|
| Undepreciated cost at Dec. 31, 1961 | $110,000 | $135,000 | $ 5,000 | $250,000 |
| Additions - 1962 | 20,000 | 30,000 | 15,000 | 65,000 |
| Disposals - 1962 | -- | (5,000) | (6,000) | (11,000) |
| | $130,000 | $160,000 | $14,000 | $304,000 |
| Normal allowance | $ 6,500 | $ 32,000 | $ 4,200 | $ 42,700 |
| Additional allowance | | 1,000 | 2,250 | 3,250 |
| Depreciation - 1962 | $ 6,500 | $ 33,000 | $ 6,450 | $ 45,950 |
| Undepreciated cost at Dec. 31, 1962 | $123,500 | $127,000 | $ 7,550 | $258,050 |

Another form of accelerated depreciation may be claimed in respect of most types of assets acquired after 1960 which are used either (1) in making a product not previously produced in Canada or (2) in making a product not previously produced in an area of labor surplus. The taxpayer must apply to the Minister of Trade and Commerce for certification of the project as qualifying under the regulations. Structures, machinery and equipment, and patent and license costs are eligible for the special allowance. No distinction is made between new and used assets. However, office furniture and equipment, automobiles, and assets having a capital cost allowance rate in excess of 30 percent are not eligible. The additional allowance is equal to the maximum normal allowance for the year in which the assets are acquired. The full amount of the allowance may be taken in the year of acquisition of the assets or in either of the two years following acquisition or the allowance may be apportioned in any manner over these three years. The additional allowance reduces the undepreciated cost of the asset and thus also reduces the normal depreciation allowance in the following years. Both this allowance and the re-equipment and modernization allowance discussed above may be claimed with respect to the same property. Special provisions are also in effect for accelerated write-off of certain coal property, fishing vessels and defense facilities.

CANADA (CONT'D)

Incentive allowances

None

Adjustment for price level changes

None

Treatment of gains on sale of depreciable property

Treatment of losses on sale of depreciable property

Under the Canadian class system, gains and losses as such are not computed upon the sale of depreciable property. Proceeds up to the amount of the original cost of the assets sold from a class during a

CANADA (CONT'D)

taxable year are deducted from the undepreciated cost of the remaining assets in the class. Any proceeds which exceed the original cost of the assets sold constitute a capital gain not subject to income tax. Under "recapture" provisions, proceeds applied in reduction of the undepreciated cost which exceed the remaining undepreciated cost of the class are required to be included in ordinary income and are taxed at ordinary tax rates. Any undepreciated cost remaining after a taxpayer has disposed of all property in a class and has no property of that class at the end of a taxable year, may be deducted as a "terminal loss" from ordinary income. In general, the operation of the class system results in (1) the deferral of recognition of gain on the sale of depreciable property along with a reduction of future depreciation deductions, (2) deferral of losses on sale of depreciable property with an increase in future depreciation deductions, (3) ultimate recognition as ordinary income of gains on sale of depreciable property to the extent of depreciation previously claimed and ultimate recognition as ordinary deductions of losses on sale of depreciable property.

The following examples illustrate the operation of the class system with respect to disposals of property of a particular class:

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Original cost of assets in class | $100,000 | $100,000 | $100,000 | $100,000 | $100,000 |
| Accumulated depreciation | 75,000 | 75,000 | 75,000 | 40,000 | 50,000 |
| Undepreciated cost before disposition | 25,000 | 25,000 | 25,000 | 60,000 | 50,000 |
| Dispositions: | | | | | |
| Original cost | 35,000 | 35,000 | 35,000 | 20,000 | 100,000 |
| Proceeds | 20,000 | 30,000 | 40,000 | 50,000 | 40,000 |
| Proceeds deducted from undepreciated cost | 20,000 | 25,000 | 25,000 | 20,000 | 40,000 |
| Capital gain | -0- | -0- | 5,000 | 30,000 | -0- |
| Ordinary income under "recapture" provisions | -0- | 5,000 | 10,000 | -0- | -0- |
| Ordinary loss under "terminal loss" provisions | -0- | -0- | -0- | -0- | 10,000 |
| Undepreciated cost remaining | 5,000 | -0- | -0- | 40,000 | -0- |

## Relationship of book and tax depreciation

Depreciation is allowed for tax purposes without regard to the amount of depreciation recorded on the books. For the years 1949 to 1953, depreciation could be deducted for tax purposes only to the extent that it had been recorded on the books. This provision was repealed effective for 1954 and subsequent years.

## Provisions of prior law

In general, depreciation was deferred on assets purchased after April 10, 1951 and before January 1, 1953 unless the Minister of Trade and Commerce had issued a certificate of eligibility for depreciation. The original term of deferment was four years. However, this restriction was lifted and beginning in 1953 depreciation was allowed to commence on such assets.

# FRANCE

## Corporate tax rate

The corporate income tax rate is 50 percent.

## Method of computing depreciation

For all depreciable assets acquired prior to January 1, 1960, straight-line depreciation continues in effect until the assets are fully depreciated. The declining-balance method becomes mandatory for certain types of assets acquired after January 1, 1965. The taxpayer has an election to apply the declining-balance method to qualifying assets acquired between January 1, 1960 and January 1, 1965 or may continue using the straight-line method. However, the same system must be applied to all assets acquired during this period to which the election applies. It should be noted that the various special acceleration provisions will, in general, continue to apply under the straight-line method, but may not be used in conjunction with the declining-balance method.

Assets qualifying for the declining-balance method must be new when acquired by the taxpayer and have a normal useful life of more than three years. The following types of assets qualify for depreciation under the declining-balance method: (1) machinery and equipment used in industry for manufacture, transformation, or transport, (2) handling equipment, (3) water and air purification installations, (4) installations for the production of steam, heat, or energy, (5) fire-detection and fire-fighting equipment, burglar alarms, and industrial safety devices, (6) medical equipment, (7) business machines, except typewriters, (8) machinery and equipment for scientific and technical research, (9) equipment for the storage of merchandise, and (10) all buildings and equipment of enterprises in the hotel business (lodging or meals and lodging) but excluding installations for enterprises in the restaurant business only. Other types of assets must be depreciated under the straight-line method. Such types include all buildings, except hotel buildings, trucks of less than two ton capacity, passenger cars, buses, office furniture, and typewriters.

Under the declining-balance method, a switch to the straight-line method may be made when the point is reached at which the straight-line method produces a greater annual deduction than the declining-balance method.

FRANCE (CONT'D)

Rates of depreciation

Rates of depreciation must be "within limits of those customarily applied in each branch of industry, commerce, or business." Negotiations for rates are in most instances with individual taxpayers, but may sometimes be with industrial groups. Factors such as obsolescence and particularly intensive use may be taken into account in determining depreciation rates. Typical rates under the straight-line method are:

| | |
|---|---|
| Industrial buildings | 5% |
| Commerical buildings or housing | 2% to 3% |
| Machinery and office furniture | 5% to 10% |
| Motor vehicles | 20% to 25% |

The rates under the declining-balance method are determined by applying coefficients to the straight-line rates. The coefficients are 1.5 for assets having a normal useful life of three or four years, 2.0 for assets having a life of five or six years, and 2.5 for assets having a life of longer than six years.

Types of buildings or equipment not subject to depreciation

None

Accelerated depreciation

As explained above, the declining-balance method is mandatory for certain categories of assets acquired after January 1, 1965 and may be elected for qualifying assets acquired between January 1, 1960 and January 1, 1965. A number of forms of accelerated depreciation have been in effect and continue in effect for assets acquired between January 1, 1960 and January 1, 1965 if the taxpayer continues to use the straight-line method. However, these acceleration provisions do not apply if the taxpayer elects to use the declining-balance method with respect to such assets.

For office equipment (other than typewriters), handling equipment, water and air purification equipment, equipment for production of steam, heat, or energy, security equipment, and equipment for scientific research acquired new after January 1, 1954 and utilized for purposes of modernization, a 10 percent initial allowance is permitted. If the 10 percent allowance is claimed, other depreciation deductions

FRANCE (CONT'D)

are on the basis of 90 percent of cost. For orders placed between May 29, 1959 and January 1, 1960, the 10 percent initial allowance was extended to (1) machine tools for metal-working and other named industries, (2) machine tools having a life of at least five years for the food, rubber, plastic, ceramics, shoe, textile, paper and certain other industries, (3) equipment of building contractors having a life of at least five years, (4) trucks weighing five tons or more; and (5) various kinds of electrical and radiological equipment.

New machinery with a useful life of at least five years, if used in industry for manufacture, transformation, handling, or transportation, is subject to accelerated depreciation. This accelerated depreciation takes the form of a double deduction in the first year. The taxpayer, under this procedure, computes annual depreciation for each year in the normal manner, takes two annual deductions in the first year, and the period of depreciation deductions is reduced by one year. For qualifying equipment, both the 10 percent initial allowance and the double deduction in the first year may be claimed. The following table compares the annual deductions available under the straight-line method assuming the 10 percent initial allowance and double deduction in the first year are both applicable with the deductions available under the declining balance method for a $1,000 asset having a useful life of ten years.

| Year | Straight-line method with 10 percent initial allowance and double deduction in first year | Declining-balance method |
|---|---|---|
| 1 | 280 | 250 |
| 2 | 90 | 188 |
| 3 | 90 | 141 |
| 4 | 90 | 105 |
| 5 | 90 | 79 |
| 6 | 90 | 59 |
| 7 | 90 | 44.5 |
| 8 | 90 | 44.5 |
| 9 | 90 | 44.5 |
| 10 | -0- | 44.5 |

Under a 1958 provision, 50 percent of the cost of buildings or machinery acquired for scientific or technical research may be deducted in the first year. The remainder of the cost is deducted in the normal manner over the useful life of the facilities.

FRANCE (CONT'D)

In order to stimulate exports, a special "export" depreciation deduction was established in 1957. The amount of the deduction is determined by multiplying the ordinary depreciation allowance for the year by the ratio between the firm's export sales and total sales for the year. In 1959, this deduction was increased by 50 percent. Steel and coal companies have been permitted to use "output" depreciation based upon a percentage of sales or output.

To encourage modernization of facilities, newspapers and magazines were allowed to expense their acquisitions, writing off the cost of equipment in full, in the year of acquisition. They are also entitled to deductions for certain amounts put in reserve for future acquisition of equipment. The 1961 Finance Act extended these incentives for another two years.

Incentive allowances

None

Adjustments for price level changes

From 1945 through 1958, taxpayers were permitted an annual revision of their balance sheets to reflect, by the use of government-specified coefficients, the decline in the purchasing power of the franc. Depreciation and gain or loss on the disposition of assets were computed on such revalued amounts. Under a 1959 law revaluation was abolished. However, firms were permitted (mandatory for taxpayers with an annual turnover of more than 500 million old francs) a final revaluation as of June 30, 1959. Such revaluation is made by multiplying the cost of the asset (less, where taken, any 10 percent initial allowance claimed) by a stipulated coefficient for the year of acquisition. Similarly, each annual depreciation allowance applicable to the asset is multiplied by the coefficient for the year for which the depreciation was claimed. The total of the revalued depreciation allowances is subtracted from the revalued cost of the assets to obtain a new value which is used as the basis for computing annual depreciation allowances for the remainder of the useful life of the asset. The difference between the old value of the asset and the new value constitutes a special valuation reserve and a tax of 3 percent was imposed on the amount of such reserve. The coefficient of revaluation for depreciable assets acquired in 1914 and prior is 243; 1924, 51.8; 1935, 64.8; 1944, 16.3; 1954, 1.25.

FRANCE (CONT'D)

Treatment of gains on sale of depreciable assets

Gains on sale of depreciable assets are taxable at ordinary income tax rates. However, the taxpayer may defer the taxation of the gain by reinvesting the proceeds of sale in other capital assets within three years following the end of the year within which the sale took place. The reinvested gain serves to reduce the basis of the assets in which reinvestment is made.

Treatment of losses on sale of depreciable property

Losses on sale of depreciable property may be deducted in full from ordinary income.

Relationship of book and tax depreciation

A taxpayer may deduct for tax purposes only such depreciation as is actually recorded in the books of account.

## WEST GERMANY

### Corporate tax rate

The corporate tax rate is 51 percent on retained income and 15 percent on income distributed as dividends.

### Method of computing depreciation

Either the straight-line method or the declining-balance method may be used in depreciating movable property. However, only the straight-line method may be used in computing depreciation on buildings. Individual items costing not more than DM600 (approximately $150) may be fully written off in the year of acquisition.

### Rates of depreciation

Depreciation rates are based on the economic life expectancy of the assets under the particular conditions of the taxpayer. Rates are negotiated between the tax authorities and individual taxpayers. Unusual wear and tear and technical obsolescence may be taken into account in settling the depreciation rates. Normally, salvage value need not be considered unless it can reasonably be expected to be substantial. Rates of depreciation under the declining balance method are twice the applicable straight-line rates. However, the declining-balance rate may in no case exceed 20 percent. Some typical lives and depreciation rates under the declining-balance method are as follows:

| | Estimated life | Declining balance depreciation rate |
|---|---|---|
| Iron and steel industry: | | |
| Blast furnace | 10 years | 20% |
| Open hearth furnace | 10 | 20 |
| Electric furnace (for melting) | 10 | 20 |
| Automobile industry: | | |
| Boring and turning mills | 2 to 5 | 20 |
| Radial drill | 10 | 20 |
| Steel forging hammers | 10 | 20 |
| Engine lathe (automatic) | 6 | 20 |
| Hydraulic press | 8 | 20 |
| Shearing machines | 10 | 20 |
| Textile industry: | | |
| Carding machines | 10 | 20 |
| Combers | 12 | 16 |
| Dyeing machines (wood) | 5 | 20 |
| Dyeing machines (metal) | 10 | 20 |
| Looms (single) | 12 to 15 | 13 to 16 |
| Knitting machines | 8 to 12 | 16 to 20 |

WEST GERMANY (CONT'D)

Industrial buildings, which may be depreciated only under the straight-line method, typically have an estimated life of fifty years.

Types of buildings or equipment not subject to depreciation

None

Accelerated depreciation

In addition to the acceleration provided by the use of the declining-balance method a number of special provisions are in effect. These special allowances are not applicable to the acquisition of used assets. Buildings, if two-thirds of the capacity is used for dwellings, may be depreciated 7-1/2 percent in the year of completion and an equal amount in the following year. For the next eight years, 4 percent per annum may be claimed. All investment in Berlin is eligible for special acceleration provisions. Movable assets may be depreciated up to 75 percent during the first three years if they will continue to be held in Berlin for an additional three years. Housing in Berlin may be depreciated up to 10 percent in each of the first two years and up to 3 percent in each of the following ten years. Refugees and victims of Nazi persecution are granted an initial allowance of 10 percent of business construction costs in each of the first two years. Accelerated depreciation is also granted on a case by case basis for investments in certain eastern border areas. A special first year allowance of from 20 to 30 percent is permitted on certain imported items which are either subject to wide price fluctuation or are vital to the smooth functioning of the economy.

Farmers who keep books of account may depreciate movable assets up to 50 percent and fixed assets up to 30 percent during the first two years. These allowances are in addition to the normal depreciation during this period. However, the total depreciation may not exceed 50 percent of the gross income from agriculture or forestry. Other farmers may write off 25 percent of the cost of movable assets and 15 percent of the cost of fixed property in the year of acquisition. Improvements to buildings constructed before June 21, 1948, and with more than 50 percent of the capacity used for dwellings, may be written off up to 10 percent per annum during the first ten years.

WEST GERMANY (CONT'D)

Private hospitals primarily serving low income groups may write off up to 50 percent of the cost of movable assets and up to 30 percent of the cost of fixed assets in the year of acquisition and the following year in addition to normal depreciation for these years. However, total depreciation may not exceed DM 100,000 (approximately $25,000) in a single year. Fifty percent of investments in movable assets and 30 percent for fixed properties used for the control of sewage and waste may be written off in the first two years. Movable assets for the control of air pollution may be depreciated up to 50 percent during the year of acquisition and the following year. Both of these allowances are in addition to depreciation otherwise allowable for these years.

Incentive allowances

None

Adjustments for price level changes

Currently no adjustments for changes in the price level are allowed. However, taxpayers were permitted to revalue assets acquired prior to June 21, 1948 on the basis of replacement cost in August, 1948. Subsequent depreciation is computed on the basis of such revaluation.

Treatment of gains on sale of depreciable property

Gains on the sale of depreciable property are taxed at ordinary rates except upon the sale of an entire plant. In such cases, special tax rates of from 10 to 30 percent are provided.

Treatment of losses on sale of depreciable property

Losses on the sale of depreciable property may be deducted in determining ordinary income except when an entire plant is sold in which case losses are only partially deductible.

Relationship of book and tax depreciation

Depreciation need not be recorded in the books of account to be deductible for tax purposes.

WEST GERMANY (CONT'D)

Provisions of prior law

The declining-balance method of depreciation was introduced in 1952 for all depreciable assets having a life expectancy of ten years or more. The usual rates of depreciation were 3.5 times the straight-line rates. In 1956, the declining-balance method was limited to movable assets, but was allowed regardless of the expected life. At the same time, the rates were reduced to 2.5 times the straight-line rates with an absolute maximum of 25 percent. In 1960, the rates were further reduced to 2.0 times the straight-line rates with a maximum of 20 percent.

A number of incentives to investment through depreciation allowances have been available to taxpayers in Western Germany since 1948. Under all of these incentive provisions the total charge-off was limited to the original cost of the asset. Generally, the incentive allowances in the early years of the life of the asset were in addition to the regular depreciation allowed for such years. For new assets acquired between January 1, 1949 and June 30, 1951, taxpayers could write off a total of 50 percent of the cost in the first two years up to an annual limit of DM100,000 (approximately $25,000). For ships acquired or constructed after January 1, 1949 and before June 11, 1958, a deduction of up to 15 percent of the cost was allowed in each of the first two years. Under the Investment Assistance Law of 1952, investment in coal, iron ore, iron, steel, and energy producing industries was encouraged by allowing a write-off within the first five years of 50 percent of the cost of newly purchased equipment and 30 percent of the cost of buildings, provided these expenditures served immediately, directly, and exclusively to increase the output in these basic industries. This provision expired in 1960.

## ITALY

Corporate tax rate

Because of the complexity and variations in the tax structure it is not possible to give a precise total rate for corporate income tax. In general, the maximum central government rate may be said to be approximately 40 percent.

Method of computing depreciation

Depreciation must be computed under the straight-line method.

Rates of depreciation

Although not having the force of law, Ministry of Finance tables of depreciation issued in 1957 are the standard base for maximum depreciation allowances. These rates are established, generally, for broad groups of items within a specific industry rather than for specific types of equipment. In exceptional cases of intensive production processes this maximum may be exceeded. Salvage value is not considered in the computation of depreciation. Some typical rates of depreciation are as follows:

| | |
|---|---|
| Iron and steel industry | |
| Furnaces of any type | 10 percent |
| Rod and wire mill: | |
| Automatic | 14 |
| Non-automatic | 10 |
| Metal products industries-machine tools: | |
| Automatic | 8 |
| Non-automatic | 12-1/2 |
| Textile industry (cotton, wool and other natural fibers): | |
| Ordinary machinery and equipment | 10 |
| Machinery used in corrosive solutions | 12-1/2 |
| Special equipment | 25 |
| Industrial buildings (of any construction and size, including plumbing, lighting, and heating): | |
| Agricultural buildings | 3 |
| Non-ferrous metal fabricating buildings | 4-1/2 |

Types of buildings or equipment not subject to depreciation

None

ITALY (CONT'D)

Accelerated depreciation

The normal period of depreciation of new plant and equipment and of expenditures for expansion, conversion, and reconstruction of existing plant and equipment may be reduced by not more than two-fifths. Thus, an asset which normally would be depreciated over twenty years at a 5 percent rate may be depreciated over twelve years at an 8-1/3 percent rate. In addition, for the initial period and for each of the three succeeding periods an additional amount not exceeding 15 percent of the cost of the asset is added to normal depreciation.

Incentive allowances

None

Adjustment for price level changes

At the present time, there is no general provision for adjusting depreciation to take account of changes in the price level. However, not later than 1953, taxpayers were permitted to revalue assets acquired prior to 1948 by coefficients reflecting the depreciation in the value of the currency. Such revalued amounts are used in computing subsequent depreciation.

Treatment of gains on sale of depreciable property

Gains on the sale of depreciable property are taxable as ordinary income.

Treatment of losses on sale of depreciable property

Losses on the sale of depreciable property are deductible from ordinary income.

ITALY (CONT'D)

Relationship of book and tax depreciation

In order to be deductible for tax purposes depreciation must have been recorded in the books of account.

Provisions of prior law

The present system of accelerated depreciation was originally adopted in 1951. In 1957, this system was temporarily superseded by a special deduction for 10 percent of the excess of expenditures for new plants over the depreciation for the year. The deduction was limited to 5 percent of income and was independent of and in addition to the depreciation otherwise allowable on the property. This special deduction was permitted for 1957, 1958, and 1959. In 1960, the original accelerated depreciation provisions were substituted for the special deduction.

## JAPAN

### Corporate tax rate

The maximum corporate tax rate on undistributed profits is 38 percent. The maximum rate on profits distributed as dividends is 28 percent.

### Method of computing depreciation

Either the straight-line method or the declining-balance method may be used in computing depreciation. Generally, assets having a cost of 10,000 yen ($28) or less may be written off in the year of acquisition.

### Rates of depreciation

Useful lives for various assets have been prescribed by the taxation authorities. Such lives must be used in computing depreciation unless permission is obtained for the use of shorter lives. Salvage value of 10 percent of the original cost is required to be set up for machinery and equipment. Declining-balance rates are applied to the original cost of the asset, while straight-line rates are applied to original cost reduced by salvage value.

The general formula for determining the declining-balance rate of depreciation is:

$$1 - \sqrt[n]{.10}\quad, \text{ where } n = \text{useful life.}$$

The following is a comparison of the straight-line rate and declining-balance rate for various useful lives:

| Useful life | Straight-line rate | Declining-balance rate |
|---|---|---|
| 2 years | 50.0% | 68.4% |
| 3 | 33.3 | 53.6 |
| 5 | 20.0 | 36.9 |
| 8 | 12.5 | 25.0 |
| 10 | 10.0 | 20.6 |
| 15 | 6.7 | 14.3 |
| 20 | 5.0 | 10.9 |
| 25 | 4.0 | 8.9 |
| 40 | 2.5 | 5.6 |

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JAPAN (CONT'D)

Some typical useful lives and depreciation rates under the straight-line and declining-balance methods are as follows:

| Asset | Useful life | Rate: Straight-line | Rate: Declining-balance |
|---|---|---|---|
| Iron and steel industry: | | | |
| Blast furnace | 17 years | 5.8% | 12.7% |
| Rod and wire mill | 18 | 5.5 | 12.0 |
| Open hearth furnace | 18 | 5.5 | 12.0 |
| Electric furnace | 12 - 16 | 8.3 - 6.2 | 17.5 - 13.4 |
| Metal products industry: | | | |
| Boring and turning mills | 12 - 17 | 8.3 - 5.8 | 17.5 - 12.7 |
| Radial drills | 12 | 8.3 | 17.5 |
| Wire drawing machines | 12 - 13 | 8.3 - 7.6 | 17.5 - 16.2 |
| Textile industry: | | | |
| Cording machines | 11 - 13 | 9.0 - 7.6 | 18.9 - 16.2 |
| Combers | 13 | 7.6 | 16.2 |
| Spinning frames | 10 - 18 | 10.0 - 5.5 | 20.6 - 12.0 |
| Dyeing machines | 5 - 11 | 20.0 - 9.0 | 36.9 - 18.9 |
| Looms | 13 - 15 | 7.6 - 6.6 | 16.2 - 14.2 |
| Knitting machines | 13 - 17 | 7.6 - 5.8 | 16.2 - 12.7 |
| Industrial buildings: | | | |
| Wooden buildings | 8 - 20 | 12.5 - 5.0 | 25.0 - 10.9 |
| Others | 20 - 55 | 5.0 - 1.9 | 10.9 - 4.1 |

Types of buildings or equipment not subject to depreciation

None

Accelerated depreciation

Specified new equipment in major heavy and technical, mining, and refining industries, agricultural cooperatives, and experimental and research equipment is subject to a 33 1/3 percent first-year depreciation allowance. This first-year allowance is in addition to the depreciation otherwise allowable in the first year on the equipment. The effect is to shorten the over-all period of depreciation. The additional first-year depreciation may be claimed only to the extent that regular depreciation plus the first-year allowance does not exceed one-half of the corporation's taxable income prior to depreciation.

JAPAN (CONT'D)

The following table shows the depreciation deductions for an asset qualifying for the first year allowance and costing $1,000 with a useful life of ten years under both the straight-line and declining-balance depreciation.

| Year | | Straight-line | Declining-balance |
|---|---|---|---|
| 1 | | | |
| | First-year allowance (33-1/3% of $1,000, less $100 salvage) | $300 | $300 |
| | Regular allowance | 90 | 206 |
| | | $390 | $506 |
| 2 | | 90 | 102 |
| 3 | | 90 | 81 |
| 4 | | 90 | 64 |
| 5 | | 90 | 51 |
| 6 | | 90 | 40 |
| 7 | | 60 | 32 |
| 8 | | - | 24 |
| 9 | | - | - |
| 10 | | - | - |
| | Total | $900 | $900 |

New houses which are built for rental and put into use between April 1, 1957 and March 31, 1962 may be depreciated at double the regular rate for the first five years.

Incentive allowances

None

Adjustments for price level changes

The taxpayer is allowed to make adjustments in the depreciation base by applying a special price level index prepared by the Bank of Japan. This index is revised when there are significant changes in the price level. The most recent revisions occurred in 1950 and 1953.

JAPAN (CONT'D)

Treatment of gains on sale of depreciable property

Gains realized from the sale of depreciable assets are taxed at ordinary rates under the corporation income tax.

Treatment of losses on sale of depreciable property

Losses sustained on the sale of depreciable property are deductible in determining ordinary income.

Relationship of book and tax depreciation

Depreciation must have been recorded on the books in order to be deductible for tax purposes.

Provisions of prior law

Prior to April 1, 1961, several provisions for accelerated depreciation were in effect. Depreciation at 150 percent of the normal rate was allowed for each of the first three years on machinery and equipment designated by the Minister of Finance as necessary for the development of the Japanese economy or for the modernization of cooperative business activities. Depreciation of 50 percent was allowed in the first year on machinery and equipment designated by the Minister of Finance as necessary for the modernization of important industries or for use in developing new manufacturing processes. Fifty percent of the cost of machinery and equipment approved by the Minister of Finance for use in experimentation and research could be deducted in the first year, and 20 percent could be deducted in each of the second and third years. In general, these provisions were consolidated into one system of 33-1/3 percent first-year depreciation allowances as of April 1, 1961.

NETHERLANDS

Corporate tax rate

For an annual taxable profit under fl. 40,000 the tax rate is 44 percent. For fl. 40,000 to fl. 50,000 the rate is 44 percent plus a 15 percent surtax on the amount over fl. 40,000. Any taxable profit above fl. 50,000 has a 47 percent tax rate applied to it. The above rates will be replaced once the Dutch Government issues a decree implementing a law passed by Parliament which reverts rates back to the previous 40 and 43 percent, respectively. In addition the new law provides that the tax rate on distributed profits shall be fifteen percentage points under the rate for undistributed profits. The decree has not as yet been issued.

Method of computing depreciation

Taxpayers may use either a straight-line or diminishing-balance method of depreciation. There is no restriction on the method used according to the type of asset acquired. Low value items forming a customary part of initial or production expenses may be written off at the entire cost in the year of acquisition under the "De Minimis Rule".

Rates of depreciation

The basis for depreciation is historical cost not replacement value. Depreciation rates are determined through negotiations between tax authorities and taxpayer. Where useful life of the asset is shorter than the physical life, because, for example, of technological obsolescence, the taxpayer may use this indetermining depreciation rates. Salvage value is taken into consideration, the taxpayer is only allowed to depreciate the difference between historical cost of the asset and its salvage value. Rates under either the straight-line or declining-balance method must result in depreciation to salvage value at the end of the useful life of the asset. Conventional rates are stated to be 10 percent for machinery and 1-1/2 to 3 percent for buildings per year. The general formula for the declining-balance method is:

$$d = (1 - \sqrt[n]{\frac{s}{c}})$$

with d = Annual depreciation rate

s = Salvage value

n = Life of asset in years

c = Historical cost

NETHERLANDS (CONT'D)

The rate per year has no specified limitation, but the taxpayer must remain within the limits of good commercial practices. The Netherlands allow depreciation to begin when the asset is "contracted for". To stop abuse through excessively long production delays a bill is now pending before Parliament which would restrict depreciation to the portion of the asset already paid for.

Types of buildings or equipment not subject to depreciation

None

Accelerated depreciation

Due to a labor shortage assets purchased after April 29, 1960 can now only have one-third of their total cost written off by accelerated depreciation at a lower rate and over a longer time than previously. Under this new formula, 8-1/3 percent of investment per year in machinery and equipment may be written off the first four years, and 6 percent for the first 5-1/2 years of buildings, that is, the total accelerated depreciation, 33-1/3 percent of cost, is taken at 6 percent per year for 5 years, leaving 3-1/3 percent for the sixth year. The final two-thirds cost may be written off over the entire life of the asset in the regular manner. An exception is the 16-2/3 percent per year accelerated write-off allowed for investments by shipping and air transport companies engaged in international traffic. The accelerated provisions are not now applicable to office equipment and motor cars not used primarily for commercial road transport. The accelerated depreciation in respect of an asset need not be applied in the first year in which this is permitted, but if it is applied in a subsequent year the normal depreciation previously applied must be taken into account. Accelerated depreciation applies to used as well as to new property in the Netherlands.

Incentive allowance

A special investment allowance is given which allows individual or corporate taxpayers to deduct a percentage of new investment from taxable profits. The allowance has no connection whatsoever with depreciation. Eligible investment can be acquisition of new or used assets or improvement of already owned assets, but the amount of investment must exceed 3,000 florins (approximately $800.) during the tax year concerned. Investment must be in business assets to qualify for the allowance, land and residential property being ineligible.

NETHERLANDS (CONT'D)

For such assets for which orders were placed after April 29, 1960, the allowance is 5 percent of cost in each of the first two years. In effect, this means that 110 percent cost can be recovered by the investor. If the assets are sold within ten years, the taxpayer must add back to income in the two years following disposition the amount of the allowance.

Adjustments for price level changes

The taxpayer may not make adjustment in the amount of depreciation on the basis of price fluctuations. However, if substantial changes occur in the salvage value of the assets, appropriate adjustment may be allowed by the authorities.

Treatment of gains on sale of depreciable property

All gains from the sale of assets are treated as ordinary income.

Treatment of losses on sale of depreciable property

Losses resulting from sales of assets may be deducted from profits.

Relationship of book and tax depreciation

Fiscal treatment of depreciation is independent of treatment in books of account.

Provisions of prior law

When the loss of Indonesia forced the Netherlands to emphasize increased industrialization of the homeland, substantial initial allowances for depreciation of plant were granted. Accelerated depreciation was first introduced for assets ordered after December 31, 1949. The period over which the one-third of the cost could be depreciated has been changed frequently. For example, in 1950 and 1951, all of the one-third of the cost of buildings could be written off in one year. For buildings, other than new factory buildings, the period was extended to 3-1/3 years in 1953. This same period became effective for new factory buildings after November 1, 1955. For 1959 the period for new factory buildings was changed to two years.

NETHERLANDS (CONT'D)

Similarly, different rates have been in effect for automobiles, office furniture and fixtures, intangible assets, and other machinery. A more specific summary of some of the provisions making different accelerated depreciation methods permissible is as follows:

A - The total permissible amount may be written off at once;

B - The annual amount is limited to 10 percent of cost;

C - In 1952 for certain assets accelerated depreciation was limited to 10 percent of cost; after that year the limitation was withdrawn.

D - In the first year the amount is limited to 16-2/3 percent of cost.

These possibilities may be applied to various classes of assets as follows:

| CLASS OF ASSETS | PERIOD IN WHICH ORDERED OR ACQUIRED.* | POSSIBILITY |
|---|---|---|
| Buildings: | | |
| All buildings | 1950-1951 | A |
| New factory buildings extending production capacity | 1952-October 31, 1955 | A |
| | November 1, 1955-1958 | B |
| New factory buildings | 1959-April 29, 1960 | D |
| Other buildings | 1952-April 29, 1960 | B |
| Automobiles: | | |
| All automobiles | 1950-1951 | A |
| All automobiles operated by a transport enterprise | 1952-October 31, 1955 | A |
| | November 1, 1955-1958 | B |
| | 1959-April 29, 1960 | D |
| Automobiles not operated by a transport enterprise | | |
| Passenger cars | 1952-April 29, 1960 | B |
| Lorries, vans, etc. | 1952-1958 | B |
| | 1959-April 29, 1960 | D |

NETHERLANDS (CONT'D)

| CLASS OF ASSETS | PERIOD IN WHICH ORDERED OR ACQUIRED.* | POSSIBILITY |
|---|---|---|
| Office furniture and fixtures | 1950-1951 | A |
| | 1952-April 29, 1960 | |
| Intangibles | 1950-1951 | A |
| | 1952 | C |
| | 1953-October 31, 1955 | A |
| | November 1, 1955-1958 | B |
| | 1959-April 29, 1960 | D |
| Other assets | 1950-October 31, 1955 | A |
| | November 1, 1955-1958 | B |
| | 1959-April 29, 1960 | D |
| Other assets ordered in 1950-1952 and not paid for at December 31, 1952 | | C |

*Possibility D is applicable only if the asset is ordered and acquired after January 1, 1959. For an asset ordered in 1958 and acquired in 1959 possibility B remains applicable.

The special incentive allowance on investment was introduced in 1953 and several changes have been made in the rates and time of deducting the allowance. The following table summarizes these changes:

| Period in which commitments were entered into or self-made assets were manufactured | Investment deduction | | Disinvestment additions when sold within 10 years | |
|---|---|---|---|---|
| | Number of years | Percentage per annum | Number of years | Percentage per annum |
| April 1, 1953 - Nov. 5, 1956 | 5 | 4 | 5 | 4 |
| | | | No addition when sold in the period Nov. 6, 1956-December 31, 1958 | |
| Nov. 6, 1956 - May 20, 1958 (Except for certain ships and aircraft - see below) | - | - | - | - |

NETHERLANDS (CONT'D)

| Period in which commitments were entered into or self-made assets were manufactured | Investment deduction | | Disinvestment additions when sold within 10 years | |
|---|---|---|---|---|
| | Number of years | Percentage per annum | Number of years | Percentage per annum |
| May 21, 1958 - Dec. 31, 1958 (Except for certain ships and aircraft - see below) | 4 | 4 | 4 | 4 |
| Calendar year 1958. Only for ships and aircraft to be used mainly for international traffic | 5 | 4 | 5 | 4 |
| As from 1959 to April 29, 1960 | 2 | 8 | 2 | 8 |

## SWEDEN

### Corporate tax rate

The national corporate tax rate is 40 percent.

### Method of computing depreciation

Two alternative methods of computing depreciation on machinery and equipment are available. The "book depreciation" method, used by most taxpayers, permits the deduction of whatever depreciation the taxpayer chooses to take on its books, provided the deduction does not exceed the higher of two alternative limitations. One of the alternative limitations is the amount computed by applying a 30 percent rate under the declining balance method for all machinery and equipment. The other alternative limitation is the amount necessary to reduce the book value of all machinery and equipment to a figure equal to (1) its total acquisition cost reduced by (2) depreciation at the rate of 20 percent, on a straight-line basis, since acquisition. In effect, the taxpayer may write off the entire cost of machinery and equipment in five years. The "planned depreciation" method allows taxpayers to write off the cost of machinery and equipment, on the straight-line method, over the estimated useful life.

Equipment having a useful life of three years or less may be written off in full in the year of acquisition.

Buildings must be depreciated on the straight-line method over the estimated useful life.

### Rates of depreciation

Under the "book depreciation" method described above machinery and equipment may be depreciated at any rate desired by the taxpayer, subject to the limitation. Effectively, this method allows the write off of machinery and equipment over a five-year period.

Rates of depreciation for buildings are, generally, between 1-1/2 and 3 percent under the straight-line method.

### Types of buildings or equipment not subject to depreciation

None

SWEDEN (CONT'D)

## Accelerated depreciation

Except for the acceleration provided by the "book depreciation" method of depreciation for machinery and equipment, no special accelerated depreciation allowances are in effect.

## Incentive allowances

No direct incentive allowances are made. However, the operation of the investment reserves for economic stabilization may, in effect, permit the taxpayer either accelerated depreciation or an incentive allowance. Corporations are permitted to set aside up to 40 percent of their pre-tax business income as an investment reserve for economic stabilization. Amounts allocated to the investment reserve are deductible for tax purposes. Forty-six percent of the amount so allocated must be deposited with the Bank of Sweden, the other 54 percent remaining as part of the working capital of the corporation. The control of the use of the reserve is vested in the Labor Market Board. The Board may authorize a corporation to use all or part of its investment reserve whenever the economic and employment situation so warrants. Under the law, the Board may even direct a corporation to use all or part of its investment reserve. The purposes for which the reserve may be used include the construction of buildings, the acquisition of new machinery and equipment, the purchase of inventory, and the development of mineral deposits.

When an investment reserve is used with the permission of the governmental agency, the amount so used is not restored to taxable income. However, the basis of assets acquired by use of the reserve must be reduced correspondingly. A corporation using an investment reserve with the permission of the Labor Market Board receives a special additional "investment deduction" of 10 percent of the amount of the reserve so used. If a reserve is used without permission of the Board, the amount of the reserve plus a penalty of 10 percent must be added to taxable income. However, after five years, the corporation may withdraw up to 30 percent of the reserve without government permission without incurring the 10 percent penalty.

## Adjustments for price level changes

None

SWEDEN (CONT'D)

Treatment of gains on sale of depreciable property

Gains on the sale of machinery and equipment are not taxable as such under the "book depreciation" method. However, any proceeds of sale reduce the basis for depreciation of other machinery and equipment. However, gains on the sale of buildings are considered capital gains. Capital gains are taxed on a sliding scale so that no tax is levied if the buildings have been held ten years or more.

Treatment of losses on sale of depreciable property

Losses on the sale of machinery and equipment are not deductible as such on the "book depreciation" method. The proceeds of sale are credited to the basis of the entire stock of machinery and equipment and thus, any loss is deductible in the form of future depreciation allowances. Losses on the sale of buildings are considered capital losses which are deductible only to the extent of capital gains.

Relationship of book and tax depreciation

Depreciation on machinery and equipment under the "book depreciation" method must be recorded in the books of account in order to be deductible for tax purposes. Other depreciation may be deducted even though it is not recorded on the books.

Provisions of prior law

Beginning in 1938, taxpayers were allowed, under the "book depreciation" method to write off the cost of machinery and equipment in the year of acquisition or to depreciate the cost in any manner chosen by the taxpayer. The present limitations on the amount which may be written off in any one year became effective in 1956.

A temporary tax on certain capital expenditures, the investment tax, was in effect in 1952 and 1953, lifted for 1954, and in effect again in 1955, 1956, and 1957. The tax applied to the total of the taxpayer's taxable investment in excess of an annual exemption. The rate was 12 percent for 1957, but since the tax was deductible for ordinary income tax purposes, the effective rate was somewhat lower. This tax was levied as an anti-inflation measure.

## UNITED KINGDOM

### Corporate tax rate

The maximum corporate tax rate is 53-3/4 percent.

### Method of computing depreciation

Depreciation of plant and machinery may be computed under either the declining-balance or the straight-line method. The declining-balance method is most commonly used. Industrial buildings and structures are required to be depreciated on the straight-line method.

### Rates of depreciation

The rates of depreciation for machinery and equipment are determined by the Commissioners of Inland Revenue and a list of basic rates is published. However, the taxpayer may apply for an increase in these rates. The basic rate under the straight-line method assumes a residual salvage value of 10 percent. Therefore, the formula for the straight-line rate is $\frac{.9}{\text{anticipated normal working life}}$. The formula for the declining balance rate is $1 - \sqrt[n]{.10}$, where n = anticipated normal working life. The basic rates as determined above are multiplied by 5/4 to obtain the rate actually used in computing the depreciation deduction. The rates of depreciation for certain machinery and equipment are as follows:

| | Declining-balance | Straight-line |
|---|---|---|
| Iron and steel manufacturing machinery and plant | 9% | 3.75% |
| Manufacture of motor vehicles: | | |
| High speed precision plant | 15 | 6.6 |
| Steam engines, boilers and shafting | 6 | 2.5 |
| Other manufacturing machinery | 9 | 3.75 |
| Cotton spinning and manufacture: | | |
| Motive power machinery | 6 | 2.5 |
| Process machinery | 9 | 3.75 |

Industrial buildings and structures which are new in the hands of the taxpayer are subject to a 2 percent straight-line rate. Buildings which are used when acquired by the taxpayer are depreciated on a straight-line rate determined by the following formula:

$$\frac{1}{50 - \text{number of years since contruction of building}}$$

UNITED KINGDOM (CONT'D)

In no case, may depreciation be claimed for any period more than fifty years after the date of construction of a building. Also, in general, a purchaser of a used building may not depreciate any portion of his cost which is in excess of the original construction cost of the building.

Types of buildings or equipment not subject to depreciation

Depreciation is not permitted on structures used as dwellings, retail shops, showrooms, hotels, and offices.

Accelerated depreciation

Besides the acceleration provided by the use of the declining-balance method for plant and machinery, a system of first-year allowances is in effect. These initial allowances are in addition to the regular depreciation allowed in the first-year. However, the initial allowances reduce the basis of the asset for purposes of the computation of subsequent years' depreciation under the declining-balance method. The current rates of initial allowance are:

| | |
|---|---|
| New assets | |
| Industrial buildings and structures | 5% |
| Mining works | 20 |
| Automobiles | 30 |
| Agricultural buildings | -0- |
| Scientific research assets | -0- |
| Ships | -0- |
| Other plant and machinery | 10 |
| Used assets, including ships and cars | 30 |

Assets used for scientific research may be depreciated 60 percent in the first year and then 10 percent for four years. Agricultural and forestry buildings may be depreciated at a 10 percent rate for ten years.

Incentive allowances

An "investment" allowance is permitted on the acquisition of many types of new depreciable property. At the present time, both the allowance and the additional first-year depreciation may be claimed on the same property. Rates of allowances are:

| | |
|---|---|
| Industrial buildings and structures | 10% |
| Agricultural works | 10 |

UNITED KINGDOM (CONT'D)

| | |
|---|---|
| Mining works | 20% |
| Scientific research assets | 20 |
| Ships | 40 |
| Cars | -0- |
| Other plant and machinery | 20 |

The following table gives the deductions allowable with respect to a $1,000 new asset, having a ten-year life and qualifying for a 10 percent first-year depreciation and a 20 percent incentive allowance. The regular rate of depreciation for such an asset is 25 percent under the declining-balance method and 11 percent under the straight-line method.

| Year | | Declining-balance method | Straight-line method |
|---|---|---|---|
| 1 | Regular depreciation | $250 | $110 |
| | First-year depreciation | 100 | 100 |
| | Investment allowance | 200 | 200 |
| | | $550 | $410 |
| 2 | | 163 | 110 |
| 3 | | 122 | 110 |
| 4 | | 91 | 110 |
| 5 | | 68 | 110 |
| 6 | | 52 | 110 |
| 7 | | 38 | 110 |
| 8 | | 29 | 110 |
| 9 | | 22 | 20 |
| 10 | | 65 1/ | -0- |
| | | $1,200 | $1,200 |

1/ Remaining undepreciated cost of asset

Adjustments for price level changes

None

Treatment of gains on sale of depreciable property

Gains on the sale of depreciable property are taxable as ordinary income to the extent of depreciation previously allowed with respect to the property. Any gain in excess of this amount is non-taxable as a capital gain. A taxpayer may elect, in the case of plant or machinery,

UNITED KINGDOM (CONT'D)

instead of paying the tax on the gain to reduce correspondingly the basis of the replacement property for purposes of computing the initial depreciation and regular depreciation. However, the election does not decrease the investment allowance on the new asset.

Treatment of losses on sale of depreciable property

Losses on the sale of depreciable property are allowable as deductions in computing ordinary income.

Relationship of book and tax depreciation

Depreciation need not be recorded in the books of account to be deductible for tax purposes.

Provisions of prior law

The system of first-year allowances was introduced in 1946. The rates of allowances have been changed frequently since that time, the present rates being effective for expenditures made after April 7, 1959. Some of the general rates that have been in effect are as follows:

| | Machinery and equipment | Industrial Buildings |
|---|---|---|
| April 6, 1946 to April 5, 1949 | 20% | 10% |
| April 6, 1949 to April 5, 1952 | 40 | 10 |
| April 6, 1952 to April 14, 1953 | -0- | -0- |
| April 15, 1953 to April 14, 1958 | 20 | 10 |
| April 15, 1958 to April 7, 1959 | 30 | 15 |

Investment allowances were first introduced in 1954 and several changes in rates have been made. Up until April 7, 1959 taxpayers could not claim both an investment allowance and first-year depreciation on the same asset. However, for assets acquired after that both allowances may be claimed. Prior general rates of investment allowances have been:

| | Machinery and equipment | Industrial Buildings |
|---|---|---|
| April 6, 1954 to February 17, 1956 | 20% | 20% |
| February 18, 1956 to April 7, 1959 | -0- | -0- |

Treasury Department
Office of Tax Analysis

98133 O—63——31

*European economic community: Hourly labor costs in the iron and steel industry, 1961*

| | West Germany | France | Italy | Netherlands | Belgium | Luxembourg |
|---|---|---|---|---|---|---|
| | In national currency units | | | | | |
| | *Deutsche marks* | *Francs* | *Lire* | *Florins* | *Francs* | *Francs* |
| Total | 5.49 | 5.46 | 651.21 | 5.08 | 62.93 | 73.72 |
| Direct wages [1] | 3.75 | 3.11 | 375.52 | 2.85 | 44.87 | 51.77 |
| Bonuses, overtime, and incentive pay | .28 | .20 | 30.56 | .39 | 1.67 | 3.83 |
| Pay for hours not worked | .36 | .32 | 40.43 | .39 | 4.82 | 4.94 |
| Social security contributions | .79 | 1.16 | 163.85 | .88 | 10.64 | 10.67 |
| Social taxes | | .18 | 4.92 | | | |
| Labor recruiting costs | .09 | .10 | 4.11 | .24 | .11 | .32 |
| Payments in kind | .09 | .28 | 5.41 | .18 | .31 | .75 |
| Other social contributions | .13 | .11 | 25.41 | .15 | .51 | 1.44 |
| | In U.S. dollars | | | | | |
| Total | 1.37 | 1.11 | 1.04 | 1.40 | 1.26 | 1.47 |
| Direct wages [1] | .94 | .63 | .60 | .78 | .90 | 1.03 |
| Bonuses, overtime, and incentive pay | .07 | .04 | .05 | .11 | .03 | .08 |
| Pay for hours not worked | .09 | .06 | .06 | .11 | .10 | .10 |
| Social security contributions | .20 | .24 | .26 | .24 | .21 | .21 |
| Social taxes | | .04 | .01 | | | |
| Labor recruiting costs | .02 | .02 | .01 | .07 | 0 | .01 |
| Payments in kind | .02 | .06 | .01 | .05 | .01 | .01 |
| Other social contributions | .03 | .02 | .04 | .04 | .01 | .03 |

[1] Wages paid for hours worked, but not including pay for apprentices.

Source: U.S. Department of Labor, Bureau of Labor Statistics, "Labor Developments Abroad," January–March 1963, from Statistical Office of European Community, Siderurgie, issue No. 5/6, Luxembourg, 1962.

Senator MILLER. May I say that last year during the debate on the tax bill, particularly the incentive tax credit, and during the discussion about depreciation rates, my recollection is that there were certain tables showing comparative tax figures and comparative depreciation rates for some of these countries in industry as a whole. If we could go from there and transfer those—that is, reduce them down to the steel industry—I think they would be helpful to us.

Mr. LEDERER. We shall try.

Mr. BERNSTEIN. Mr. Chairman, may I say that I have much of the information the Senator has requested, and I will submit it after the hearing today.

Chairman DOUGLAS. Thank you.

Mr. LEDERER. In table 6, the next table, we show the average value per ton of U.S. exports and of imports of steel mill products.

These figures are obtained from the trade statistics. These are not prices. These are simply the values divided by the tonnage, and it reflects both changes in prices and changes in composition or in quality of steel.

But what one can see here is this: That over the period as a whole from 1953 to 1962 the average prices of the imports were roughly the same. There were rises, but the average value came back again. All in all, the trend was flat.

TABLE 6.—*Average value per ton of U.S. exports and imports of steel mill products, 1953–62*

[In dollars]

| | Exports | Imports | | Exports | Imports |
|---|---|---|---|---|---|
| 1953 | 157.96 | 128.50 | 1958 | 193.87 | 125.20 |
| 1954 | 162.29 | 116.12 | 1959 | 209.81 | 124.92 |
| 1955 | 152.40 | 120.15 | 1960 | 199.22 | 141.74 |
| 1956 | 174.33 | 142.09 | 1961 | 207.35 | 127.53 |
| 1957 | 182.07 | 162.33 | 1962 | 206.02 | 124.54 |

Source: Office of Business Economics, U.S. Department of Commerce, from basic data of Bureau of the Census.

Mr. LEDERER. On the export side, you can see that there has been a substantial rise until about 1959, and from then on the average values were about the same.

So that now the difference between export and import prices is such that export prices are, roughly, 65 percent or so higher than the import prices, or import values, I should say.

These differences mean this: That on the export side we seem to be concentrating on the higher value goods; and on the import side, on the lower value goods. The higher value goods which we are exporting are sheets and strips, and the lower value goods would be reinforcing bars, wire rods, wire products and similar products.

I should also say that these figures represent the f.o.b. values. This is the value at the port of loading for the United States and also for the port of loading for the imported goods, and they do not include freight, insurance, and tariffs.

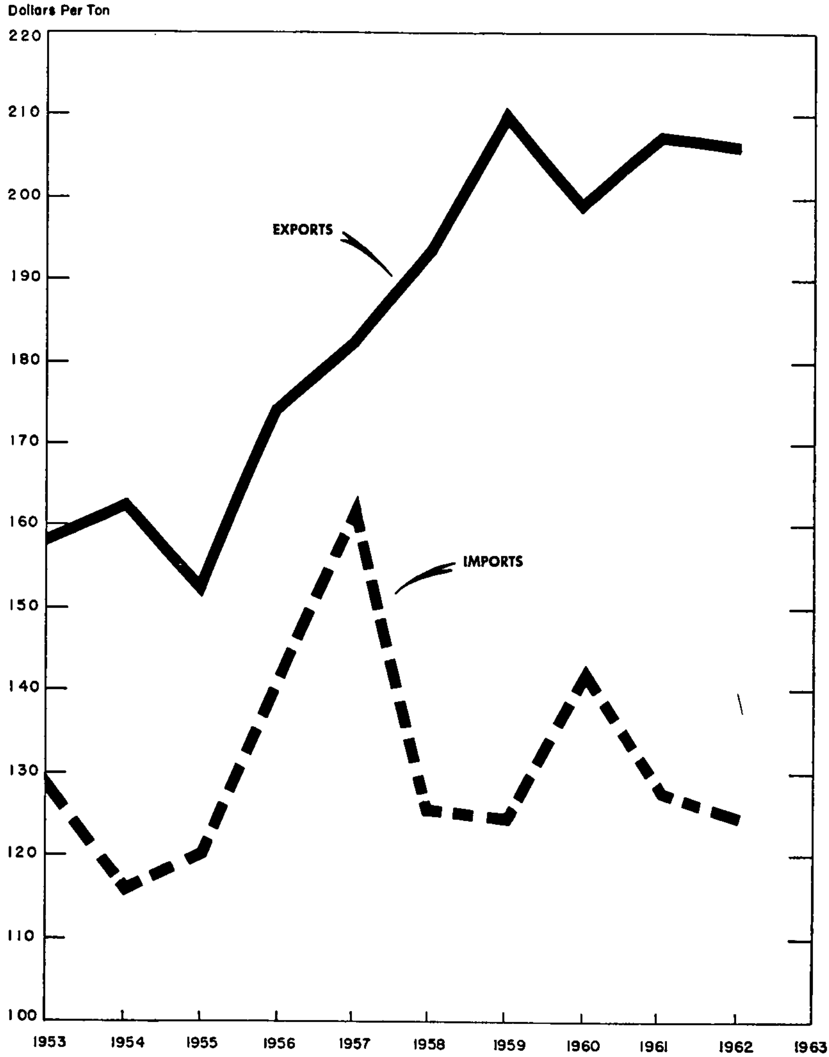
Chairman DOUGLAS. I suppose it is impossible to determine how much of this difference is due to differences in quality, and how much, if any, is due to differences in price—for identical units?

Mr. LEDERER. To some extent, I think we will come to that problem.

Chairman DOUGLAS. Very good.

Mr. LEDERER. Table 7 in the text shows the composition of the steel trade. It shows the average values per ton of exports and imports for the major categories of the items entering the trade, and, again, these averages are obtained from the trade statistics and are based on the value at the port of loading.

**Average Value Per Ton of Steel[1/]**
**U.S. Exports and Imports, 1953-1962**




1/ Steel mill products, including castings and forgings.
Source: Computed from basic data of Bureau of Census.
U.S. Department of Commerce, Office of Business Economics

TABLE 7.—*Composition of U.S. exports and imports of steel, by major product groupings*

EXPORTS

| Product grouping | 1955 Thousands of short tons | 1955 Percent of total | 1957 Thousands of short tons | 1957 Percent of total | 1959 Thousands of short tons | 1959 Percent of total | 1961 Thousands of short tons | 1961 Percent of total | 1962 Thousands of short tons | 1962 Percent of total | 1962 average value per ton (dollars) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ingots, blooms, billets, slabs, etc | 602 | 16 | 510 | 10 | 14 | 1 | 138 | 7 | 253 | 13 | 81 |
| Skelp | 88 | 2 | 197 | 4 | 16 | 1 | 42 | 2 | 12 | (1) | 94 |
| Wire rods | 31 | 1 | 14 | (1) | 4 | (1) | 5 | (1) | 17 | 1 | 226 |
| Structural shapes and piling | 289 | 7 | 471 | 9 | 240 | 16 | 223 | 11 | 159 | 8 | 145 |
| Plates | 216 | 6 | 604 | 11 | 66 | 5 | 97 | 5 | 120 | 6 | 218 |
| Rails and accessories | 74 | 2 | 235 | 4 | 94 | 6 | 108 | 6 | 117 | 6 | 152 |
| Concrete reinforcing bars | 74 | 2 | 85 | 2 | 14 | 1 | 16 | 1 | 22 | 1 | 134 |
| Other bars and tool steel | 132 | 3 | 130 | 2 | 53 | 4 | 76 | 4 | 80 | 4 | 272 |
| Pipe and tubing | 350 | 9 | 1,185 | 22 | 266 | 18 | 211 | 11 | 192 | 9 | 448 |
| Wire nails | 3 | (1) | 4 | (1) | 3 | (1) | 3 | (1) | 4 | (1) | 764 |
| Barbed wire | | | 1 | (1) | 1 | (1) | 1 | (1) | 13 | 1 | 206 |
| Wire fencing | 45 | 1 | 3 | (1) | 1 | (1) | 2 | (1) | 2 | (1) | 288 |
| Other wire and wire products | | | 31 | 1 | 21 | 1 | 20 | 1 | 28 | 1 | 356 |
| Sheet and strip | 1,194 | 31 | 1,075 | 20 | 442 | 29 | 566 | 28 | 600 | 30 | 240 |
| Tin mill products | 773 | 20 | 803 | 15 | 273 | 18 | 481 | 24 | 394 | 20 | 153 |
| Total | 3,871 | 100 | 5,348 | 100 | 1,508 | 100 | 1,989 | 100 | 2,013 | 100 | 211 |

IMPORTS

| Product grouping | 1955 Thousands of short tons | 1955 Percent of total | 1957 Thousands of short tons | 1957 Percent of total | 1959 Thousands of short tons | 1959 Percent of total | 1961 Thousands of short tons | 1961 Percent of total | 1962 Thousands of short tons | 1962 Percent of total | 1962 average value per ton (dollars) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ingots, blooms, billets, and slabs, etc | 146 | 15 | 8 | 1 | 92 | 2 | 179 | 6 | 171 | 4 | 78 |
| Skelp | ... | ... | ... | ... | (1) | (1) | 1 | (1) | 4 | (1) | 89 |
| Wire rods | 48 | 5 | 55 | 5 | 448 | 10 | 451 | 14 | 645 | 16 | 96 |
| Structural shapes and piling | 110 | 11 | 269 | 23 | 506 | 12 | 293 | 9 | 374 | 9 | 98 |
| Plates | 2 | (1) | 22 | 2 | 291 | 7 | 37 | 1 | 150 | 4 | 93 |
| Rails and accessories | 7 | 1 | 5 | (1) | 10 | (1) | 23 | 1 | 12 | (1) | 95 |
| Concrete reinforcing bars | 159 | 16 | 160 | 14 | 852 | 19 | 583 | 18 | 607 | 15 | 73 |
| Other bars and tool steel | 130 | 13 | 103 | 9 | 487 | 11 | 324 | 10 | 388 | 9 | 112 |
| Pipe and tubing | 77 | 8 | 191 | 16 | 553 | 12 | 521 | 16 | 655 | 16 | 148 |
| Wire nails | 131 | 14 | 135 | 12 | 305 | 7 | 245 | 8 | 271 | 7 | 139 |
| Barbed wire | | | 63 | 5 | 78 | 2 | 82 | 3 | 67 | 2 | 131 |
| Wire fencing | 113 | 12 | 30 | 3 | 79 | 2 | 60 | 2 | 73 | 2 | 130 |
| Other wire and wire products | | | 71 | 6 | 239 | 5 | 175 | 6 | 244 | 6 | 185 |
| Sheet and strip | 47 | 5 | 41 | 4 | 385 | 9 | 171 | 5 | 383 | 9 | 163 |
| Tin mill products | (1) | (1) | (1) | (1) | 67 | 2 | 19 | 1 | 56 | 1 | 160 |
| Total | 970 | 100 | 1,153 | 100 | 4,392 | 100 | 3,164 | 100 | 4,100 | 100 | 118 |

1 Less than one-half of 1 percent, or less than 500 short tons.

Source: American Iron and Steel Institute, and basic data of Bureau of the Census.

Mr. LEDERER. The commodities exported and imported may also differ considerably in quantity and quality and with respect to trading terms.

The average values cannot be used as a measure of price differences.

From these figures, however, it may be seen that for the major export items, sheets and strips, the average U.S. value was about 150 percent of the average import value; that is, the import value at the foreign port—while for the major import items, concrete reinforcing bars, wire rods, pipe and tubing, the average U.S. export value was about 183, 235, and 300 percent of the average import values.

The relation of exports to imports here seems to be more or less inverse to the relation of average exports and import values.

That is what one would expect: that those items, which are priced relatively low here compared with foreign prices—they may be priced higher in absolute terms, but compared with other items still relatively low—are the kind of commodities of which we import relatively little and export relatively much, while, on the other hand, those commodities whose prices are relatively high compared to the foreign prices, are the commodities which we import more.

Chairman DOUGLAS. If I may be pardoned for asking further questions, if you will compare the last column, table 7, "average value per ton (dollars)" of exports and imports, you will find that the difference is very slight for ingots, billets, slabs, and so forth, the American price being $3 a ton more in the case of ingots and blooms, $5 a ton more in terms of skelp.

But the differences are very great in wire rods, $226 compared with $96; structural shapes, $145 as compared to $98; plates, $218 as compared to $93; rails and accessories, $152 compared to $95—I hope I am getting these parallel figures—concrete reinforcing bars, $134 as compared to $73; other bars and steels, $272 as compared to $112; pipe and tubing, $448 as compared to $148; wire nails, $764 compared to $139; and then down at the bottom, sheet and strip, $240 as compared to $163. These are in dollars per ton at points of export.

Mr. LEDERER. Yes.

Chairman DOUGLAS. Can you explain why the differences should be so small on these first two products and so great on the subsequent products?

Mr. LEDERER. I believe, but we will still have to check that, that the imports of steel ingots are primarily coming from Canada across the lakes to be rolled here, and they are exported again as finished products. That, I believe, is the major part of these imports.

Chairman DOUGLAS. You mean the first two items, ingots, blooms, billets, and skelp come from Canada?

Mr. LEDERER. I believe the major part of that does, but we will still have to check that.

Chairman DOUGLAS. Not from Europe?

Mr. LEDERER. No.

Chairman DOUGLAS. Not from Japan?

Mr. LEDERER. No. Now, the next table——

Senator PROXMIRE. Could I ask, on this table, Mr. Chairman, just one question?

Chairman DOUGLAS. Surely.

Senator PROXMIRE. Could it be that the higher value per ton for the exports—that is, what we produce and sell abroad—and the imports—what they produce and sell here—is because—this seems contradictory—these exports may be of a higher value per ton because there is more labor cost involved in them?

Is this because our labor is more efficient and our labor cost is lower, that we are able to take products which require a greater degree of labor and sell them abroad in competition, whereas imports that have a lower labor content come from abroad?

What is the reason that there is this difference?

Mr. LEDERER. I will come to that.

Senator PROXMIRE. You will?

Mr. LEDERER. Yes.

Senator PROXMIRE. What I suggest would not be the case, I take it?

Mr. LEDERER. I would not know. I would not know how much labor goes into this.

Chairman DOUGLAS. The Senator from Wisconsin is raising a very important point. It is is: On some of these items the exports are fairly considerable.

Mr. LEDERER. Yes.

Chairman DOUGLAS. How is it we can export and sell in Europe when our prices are apparently so much higher than European prices?

Mr. LEDERER. I will come to this.

Chairman DOUGLAS. I hope you do.

Mr. LEDERER. What I said before is nearly right. Out of a total of 171,000 tons of ingot imports, 159,000 came from Canada. That was in 1962.

Chairman DOUGLAS. Thank you very much.

Mr. LEDERER. And this is merely brought in for rerolling and then goes out again.

In the next table 8–a we have made an attempt to get data on prices for reasonably comparable products, reasonably comparable, I mean, in terms of quality.

TABLE 8–a.—*Domestic base prices of steel products,*[1] *November 1962 (United Kingdom, March 1962)*

[Dollars per short ton]

| Product | United States | | Belgium | France (Free on board Rotterdam) | Netherlands (Free on board Rotterdam) | West Germany | United Kingdom (Free on board United Kingdom ports) | Japan (Free on board Japanese ports) |
|---|---|---|---|---|---|---|---|---|
| | Free alongside ship, Atlantic ports | Free on board mills | | | | | | |
| Merchant bars | 121.80 | 113.50 | 110.58 | 112.35 | 119.42 | 113.86 | 106.46 | [2] 90.72<br>[2] 76.20 |
| Shapes | 114.60 | 110.00 | 106.04 | 110.08 | ---------- | 108.06 | 100.00 | 72.58<br>[2] 90.72<br>[2] 99.79 |
| Strip, hot rolled | 104.00 | 102.00 | 128.25 | 119.17 | 118.91 | 122.70 | ---------- | ---------- |
| Plates | 107.60 | 106.00 | 115.38 | 125.23 | 116.89 | 124.47 | 105.00 | 95.44 |
| Sheets, hot rolled | 103.60 | 102.00 | 148.20 | 141.13 | 138.86 | 145.42 | ---------- | ---------- |
| Sheets, cold rolled | 127.20 | 125.50 | [3] 158.05 | [3] 151.23 | 154.51 | [3] 157.29 | [3] 133.36 | ---------- |
| Concrete reinforcing bars | (4) | 116.82 | 92.67 | 102.26 | 102.77 | 101.00 | ---------- | ---------- |
| Wire rods | 132.60 | 128.00 | 104.49 | 111.81 | 116.86 | 115.85 | ---------- | 83.46 |

[1] Open hearth quality.
[2] Quotations for different diameters.
[3] Quality not shown.
[4] Not available.

Sources: United States f.o.b. mills, Steel magazine; f.a.s, American Metal Market; foreign prices, various sources.

Mr. LEDERER. All these data presented in that table are prices for open-hearth quality steel in various European countries and in Japan, compared with prices in the United States.

You may notice here that these price figures are not terribly much different abroad than here, with the possible exception of the Japanese figures, and, in many instances, you will find that the European figures are substantially higher than our own.

I want to add here, however, a word of caution. These figures are quoted-price figures, and that does not mean that the actual sales are taking place at these prices. These are quoted figures. The actual sales price may very well be lower, and in many instances probably are.

Chairman DOUGLAS. Before you go on, Mr. Lederer, I wonder if you would point out some of these comparisons to which you have referred in general terms.

So far as merchant bars are concerned, the f.o.b. in the United States is $113.5; in France, $112.35; Belgium, $110.6; West Germany, $113.9; United Kingdom, $106.5; Japan, $90.7, is that right?

Mr. LEDERER. Yes.

Chairman DOUGLAS. But here our prices seem to be slightly higher than the European prices, and appreciably higher than the Japanese prices?

Mr. LEDERER. Yes, but not enough higher to compensate, probably, for the freight costs and tariffs and so on.

Chairman DOUGLAS. That is not enough to compensate for shipping costs?

Mr. LEDERER. That is right.

Chairman DOUGLAS. All right.

Now, you take shapes, strip, plates, hot-rolled sheets and cold-rolled sheets. On shapes they seem to be approximately the same, except we are 10 percent above the United Kingdom, 10 percent and $10; and $20 above Japan, is that not right?

Mr. LEDERER. That is right.

Chairman DOUGLAS. But on hot-rolled strip, plates, hot-rolled sheets, cold-rolled sheets, we seem to be below Belgium, appreciably below Belgium, below France, below the Netherlands, below West Germany, about the same as in the United Kingdom, about 10 percent above Japan.

Mr. LEDERER. Yes.

Chairman DOUGLAS. And that we are below Belgium, France, Netherlands, and West Germany by from 10, 15, 20 percent, and in the case of cold-rolled sheets, somewhere around 30 points below.

Mr. LEDERER. Yes.

Chairman DOUGLAS. Twenty percent, is that correct?

Mr. LEDERER. Yes.

The only items where we seem to be higher, consistently higher, are concrete reinforcing bars and wire rods.

Chairman DOUGLAS. But we are, throughout, much higher than Japanese?

Mr. LEDERER. Yes.

As I mentioned before, however, these quotations are supposed to be prices for similar-quality goods, for open-hearth-quality goods, and they are only list prices. They are quoted prices. They are not necessarily the prices which are actually paid.

On the following page, table 8–a, you have a different set of prices.

Senator PROXMIRE. Eight–a or eight–b?

Mr. LEDERER. Eight–b, yes.

These prices here, for continental Europe in particular, all the way through in all of these categories, are prices for Thomas-type or Bessemer-type steel, which is, so I was told, of a lower quality than the open-hearth quality.

These are prices that are quoted on the Brussels Metal Exchange, and you can see that these prices are very substantially lower than the ones on the previous table.

I might also add that these prices more or less conform to the unit values in our actual imports.

If you compare these prices here on reinforcing bars, for instance, from continental Europe, and you look back on table 7 under concrete reinforcing bars, you find there $73 as a price per ton. This was for 1962.

And if you look at table 8–b for 1962, you find a rather similar figure, $72 for most of the year, $74 at the end, somewhere in that same neighborhood.

That indicates, I think, perhaps, one of the major problems in that situation, and that is that on the higher quality goods, the foreign prices are, perhaps, as high or higher than ours.

But where they compete with us is on the lower quality goods, which we do not produce. In other words, we do not have in this country Bessemer furnaces, and we do not produce that kind of commodity.

The European production, to a large extent, is of the Bessemer type, and the output is probably inferior, but, in any case, much cheaper, very much cheaper, than the high-quality goods.

It turns out that the import values, the average import values, seem to confirm that what we are actually importing here from Europe, at least, is, all in all, the lower quality goods, while the higher quality goods they keep at home or they use at home. That seems to be the major problem, and, again, it is not a unique problem in our trade. We have that in other areas, too; that is, where we import, very often, lower quality goods, which, for some reason or other, still meet a certain type of demand.

In other words, there must be people, apparently, who are perfectly satisfied to use, for certain purposes, these lower quality goods which they cannot get here.

Now, this does not entirely apply to Japan. The Japanese steel, I understand, is of the high-quality type, and they can export at lower prices, perhaps because they have lower costs.

But, with the European situation it is different.

Senator PROXMIRE. What do you mean by "quality"? You say "lower quality."

Mr. LEDERER. The information I got, mind you, I am not a steel man, so I have to rely on other people—maybe there is somebody here, or Meyer Bernstein will know. The open-hearth steel production is supposed to be a higher quality steel. It is harder; it has more tensile strength; and it is made out of better iron ore.

TABLE 8-b.—*Miscellaneous foreign export prices*

[Dollars per metric ton [1]]

| Period | Concrete reinforcing bars | | Merchant bars | | | Hot rolled strip | | Plates | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Continental Europe | United Kingdom | Continental Europe | United Kingdom | Japan | Continental Europe | Japan | Continental Europe | United Kingdom | Japan |
| 1959—January | 77.00 | 108.71 | 83.00 | 111.89 | --- | 97.00 | --- | 86.00 | 116.02 | --- |
| April | 88.50 | 108.71 | 90.00 | 111.89 | --- | 93.00 | --- | 92.50 | 116.02 | --- |
| July | 99.00 | 111.61 | 104.50 | 114.72 | --- | 98.50 | --- | 99.00 | 116.02 | --- |
| October | 104.50 | 111.61 | 111.00 | 114.72 | --- | 107.00 | --- | 104.00 | 116.02 | --- |
| 1960—January | 109.00 | 111.61 | 112.00 | 114.72 | 112.00 | 111.00 | 125.00 | 111.00 | 116.02 | 115.00 |
| April | 98.50 | 111.61 | 104.00 | 114.72 | 109.00 | 112.00 | 130.00 | 102.00 | 114.70 | 112.00 |
| July | 101.00 | 111.61 | 104.00 | 114.72 | 107.00 | 111.50 | 130.00 | 105.00 | 114.70 | 110.00 |
| October | 94.50 | 111.61 | 101.00 | 114.72 | 104.00 | 111.00 | 119.00 | 102.00 | 114.70 | 110.00 |
| 1961—January | ([2]) | 111.61 | 100.00 | 114.72 | 103.00 | 110.00 | 118.00 | 99.50 | 114.70 | 110.00 |
| April | 91.00 | 111.61 | 100.00 | 114.72 | 102.00 | 106.50 | 112.00 | 99.00 | 114.70 | 108.00 |
| July | 89.50 | 111.61 | 99.50 | 114.72 | 105.00 | 104.00 | 112.00 | 95.00 | 114.70 | 108.00 |
| October | 78.50 | 111.61 | 92.50 | 114.72 | 105.00 | 99.00 | 112.00 | 89.00 | 114.70 | 106.00 |
| 1962—January | 83.00 | 111.61 | 95.00 | 114.72 | 94.00 | 93.00 | 112.00 | 91.00 | 114.70 | 100.00 |
| April | 72.50 | --- | 89.50 | --- | --- | --- | --- | 89.50 | --- | --- |
| May | 72.00 | --- | 87.00 | --- | 86.00 | 93.50 | 112.00 | 95.00 | --- | 108.20 |
| June | --- | --- | --- | --- | 79.00 | --- | 115.00 | --- | --- | 100.20 |
| December | 74.50 | --- | 81.50 | --- | 82.00 | 94.50 | --- | 95.00 | --- | --- |
| 1963—April | 74.50 | --- | 78.00 | --- | 84.00 | 94.50 | --- | 86.00 | --- | --- |

[1] Continental European producers, basic Bessemer quality; United Kingdom and Japan, open hearth quality.
[2] Up to $96.

Source: L'Industrie Siderurgique 1961, published by OECD and American Metal Market.

The European production, not all European production but what we are importing now, is made in Bessemer furnaces or Bessemer-type furnaces, which use an iron ore with a high phosphorous content, and, apparently, is not as good.

The other factor that is, perhaps, important here is that the Europeans, too, are switching their demand and their industry to the higher quality type of steel, either open-hearth or the new oxygen furnaces. The older type of equipment may at this time be very well written off, and so they can sell this steel for whatever they get above the current costs and still make money.

We do not have the same kind of equipment, but it is a phenomenon which one probably can observe in many industries.

Chairman DOUGLAS. Dr. Lederer, do you have information on the freight rates from Japan to Pacific ports of San Francisco and Seattle and the West?

Mr. LEDERER. Yes, I will come to that. I have it; yes.

In the next table which I have here, we compare the changes in the prices of steel products in various countries with our imports.

There is a very interesting relationship. In the countries where the prices from 1960 to 1962 declined—prices are indicated in red—in Japan and in Belgium, these are the countries from which we increased our imports. Those countries where the prices increased, France and West Germany, are the countries from which we reduced our imports. So the price movement does have some influence on our trade, both in the geographic direction and also in quality.

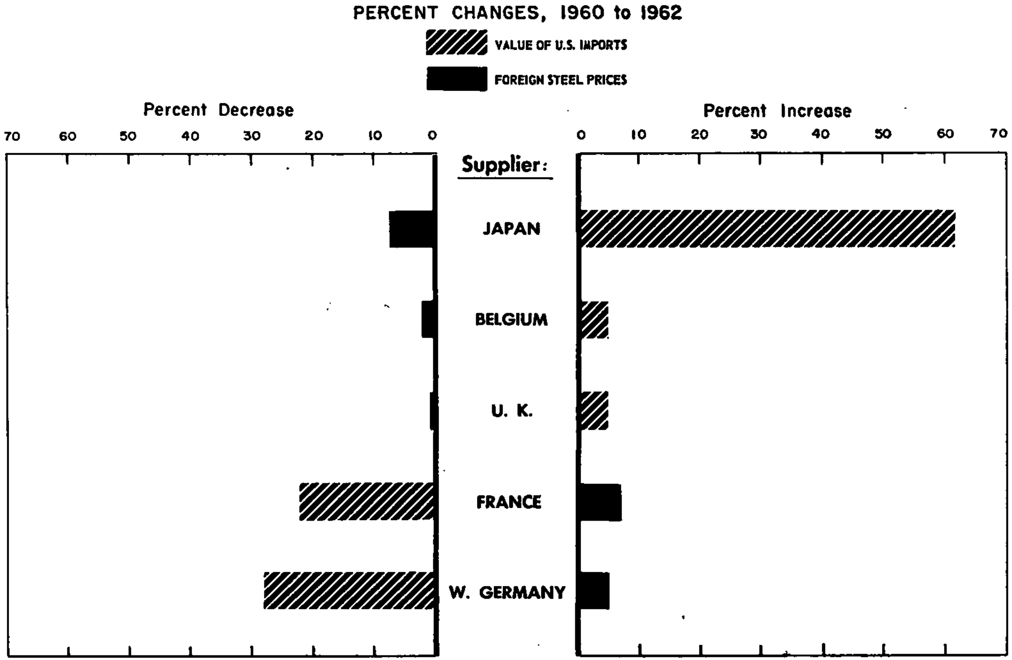
TABLE 9.—*Percent change in U.S. imports of steel and in wholesale steel prices in foreign supplier countries*

| | Percent changes, 1962 as compared to 1960 | |
|---|---|---|
| | Value of U.S. steel imports from specified countries | Index of steel prices in specified countries |
| Japan | +61.7 | −7.3 |
| Belgium | +4.6 | −1.8 |
| United Kingdom | +4.6 | −0.2 |
| France | −22.1 | +7.1 |
| Germany | −27.7 | [1] +5.0 |

[1] Revised.

Sources: (a) Imports, Bureau of Census; (b) Wholesale price indexes, U.S. Bureau of Labor Statistics; other countries, United Nations Monthly Bulletin of Statistics.

**U.S. Imports of Steel React to Changes in Foreign Supplier Prices**




Source: Imports, Bureau of Census; wholesale price indexes: U.S. - Bureau of Labor Statistics; other countries - United Nations Monthly Bulletin of Statistics.

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Senator MILLER. May I ask a question at that point?

Chairman DOUGLAS. Certainly.

Senator MILLER. Mr. Lederer, what about the recent price increases that the steel industry here in the United States has put into effect? Can you give us any idea on how much of an impact this would appear to have, in view of the implications which you have just stated, with that chart?

Mr. LEDERER. There, I really am on rather shaky ground. I do not know whether anybody can say for sure, but what apparently has been happening over the last years, at least in Europe, is that the steel mill capacity, the high-grade steel mill capacity, has been built up gradually, and this may be a major factor in the decline in the exports of steel sheet.

The steel sheet capacity was a rather neglected part of the steel industry up until relatively recently, because the European steel industry seemed to have specialized more in structural steel. They did not need the sheet capacity because the demand for automobiles and other consumer goods was relatively small until recently.

But with the demand rising, they have built it up.

And there is now a good possibility that gradually their demands can be met from internal sources. They would not have to rely on imports from the United States.

It meant this:

That in the past we had sort of a quasi-monopolistic situation. The demand for steel, for steel sheet, of that type and quality, exceeded the capacity, and they had to come here to meet it.

Now, of course, from now on, we will have to compete with their own steel capacity or steel sheet capacity, and I do not know, I just cannot answer that question, whether that competition is now entirely a price competition or whether there are not other factors which play into the situation.

I have heard, but, mind you, this is pure hearsay from people who supposedly know the steel industry, that the users of steel sheet, particularly in the mass production industry, want to have their supplies relatively close by, because they do not want to stockpile. They want to get the supplies as they use them.

And so, if they have a choice, they will tend to give their business to a mill which is relatively close to the consuming centers.

If that is the case, then, presumably, the European producers would prefer to get their sheets from the mills in their own neighborhoods, rather than to import it. That would be one factor.

Now, the other factor in connection with all of these price discussions is what I mentioned before:

That the steel quotations, the price quotations, are not necessarily the prices at which the contracts are actually made. The European Steel Community, if I understand right, requires each producer to post his prices. He can sell, however, at lower prices, provided he can prove that somebody else sells at lower prices in his territory.

In other words, he is permitted to meet competition, and that makes possible, for instance, that steel prices charged by France at the moment are substantially lower than, say, German posted prices. But the German producers are permitted to go down to meet French competition. They are also permitted to go down to meet import competition.

That means, then, that if we actually could, say, hypothetically, deliver steel at lower prices than their posted prices, it still does not mean that we could actually sell it, because they could go down to meet our competition, and, generally speaking, you saw there in table 8–b this is a characteristic of the European steel producers. Somehow or other, in their export business at least, they are rather flexible in their price policies.

Senator PROXMIRE. Do you have any statistics on the trend of steel prices in Western Europe; that is, whether they have gone up, whether they have gone down; and, if so, how much?

Mr. LEDERER. We have here a table which was put together by the Bureau of Labor Statistics from United Nations figures, and that indicates that with a base of 1952 equaling 100, the prices in Belgium are about 124 in 1962.

Senator PROXMIRE. Has it been a steady increase or has it been fluctuating?

Mr. LEDERER. It is a rather steady increase up to about—well, it varies. In Belgium it was a steady increase up to about 1958, and then it flattened out. In France it was rather flat up to about 1959, and it rose since then. In Germany it rose up to 1958 and has been rather flat since 1958.

So these figures vary.

In Japan—this is an interesting thing—the prices went down quite substantially.

Senator PROXMIRE. Anyway, it looks like genuine price competition in Europe, in view of the fact that there is no concerted movement in these countries, in spite of the Common Market arrangement and so forth. It is genuine competition between Germany, France, and presumably Italy.

Mr. LEDERER. A good deal. Of course, do not forget, too, that the steel-producing areas of these countries are in a relatively close neighborhood. They are in the eastern part of France and the western part of Germany, in Belgium, in Luxembourg, so that there has to be competition, if there are no trade barriers.

Table 10 shows our exports to various areas, or changes in our exports to various areas. You can see this bar here shows the decline in our exports, the overall decline from the average 1954–56 to 1961, nearly $160 million. You can see how that amount is split up.

Mr. LEDERER. A major part of the decline in our steel exports was to Canada, and the reason for that is that the Canadians built up their own steel capacity. This probably is not a question of important differences in costs of production. They use the same material, essentially, as we do. There might be slightly higher wage rates here, but I do not know whether this is a decisive element. .

Now, of course, Canadian industry is protected by rather substantial tariffs.

There was a decline in our exports to Latin America, and there are several factors here. For one thing, there has been some increase in Latin American steelmaking capacity, but in these years 1954–56, which are the base of that chart, we had rather large petroleum investments in Venezuela which required large steel exports, and also large investments in the mining industry there.

So it might just be that a part of that decline is due to the decline in our investments, perhaps, rather than the competition from these countries, themselves, but we will come back to that.

This is the decline in Western Europe, and you can see it is only a part of the total decline. It is not the major part of it.

There was an increase in exports to all other countries. This might be noted. A good part of that increase here represents exports under AID programs, however.

Senator JORDAN. Mr. Chairman, may I inquire?

Chairman DOUGLAS. Certainly.

Senator JORDAN. You did not say anything about Japan, Mr. Lederer. The table indicates that the exports of steel to Japan increased from $16 million in 1954 to 1956 to $40 million in 1961.

Mr. LEDERER. Yes.

Senator JORDAN. From previous tables we learn that Japan's prices in every category were lower than they were in the United States. How do you explain this increase?

Mr. LEDERER. I will have to see what it is. It is probably some kind of specialty item. It is not a very big figure, as you can see here. Some ingots we shipped and a major part of the rise was tin plate, and that was seconds in tin plate, not the first-quality tin plate, but apparently some sort of a second-quality tin plate.

Senator JORDAN. That is an unusual situation. I cannot understand it, in view of the statistics you provided in an earlier table.

Mr. LEDERER. That must have been the kind of product which may not have been used and sold here ordinarily. The Japanese, apparently, were willing to buy it. I would think that, all in all, this is a special case.

TABLE 10.—*Value of U.S. exports of steel mill products[1] to major world areas*

[In millions of dollars]

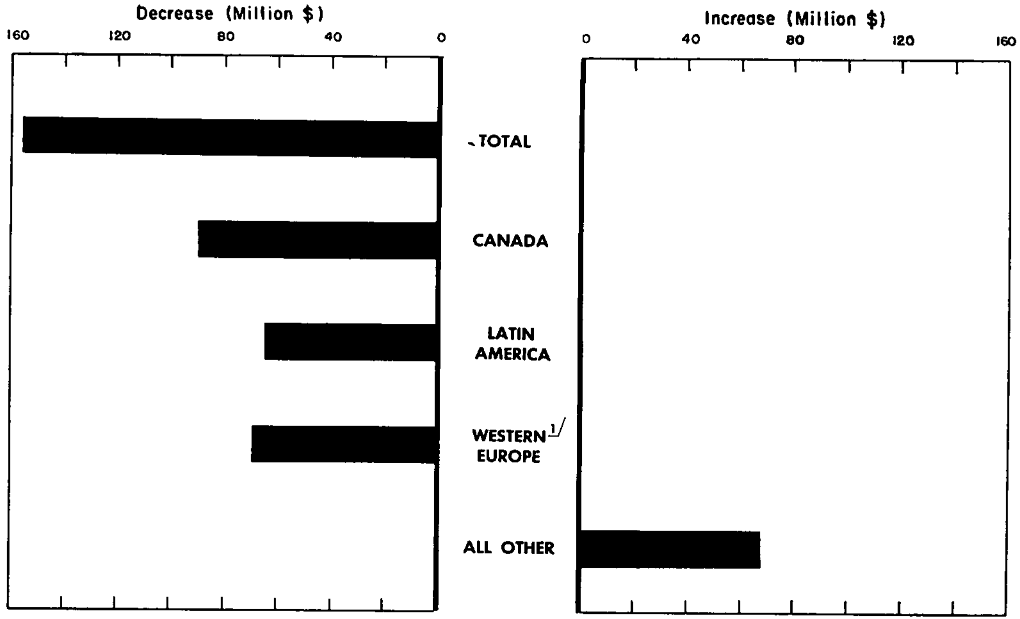
| | Average 1954–56 | 1961 |
|---|---|---|
| Total | 665 | 509 |
| Canada | 208 | 118 |
| Latin America | 178 | 113 |
| OECD-Europe[2] | 159 | 90 |
| Japan | 16 | 40 |
| All other areas | 104 | 148 |
| Africa | 19 | 10 |
| Near East | 16 | 20 |
| Far East, except Japan | 44 | 97 |
| Australia and Oceania | 14 | 8 |
| Other | 11 | 13 |

[1] Steel mill products as classified according to United Nations SITC foreign trade classification.
[2] Western Europe, excluding Finland and Yugoslavia.

Source: International Trade Analysis Division, Bureau of International Commerce, U.S. Department of Commerce, based on United Nations data.

Senator MILLER. Mr. Lederer, you stated that some of the increase, or a good portion of the increase, to all others was under the AID program. Would you explain that statement a little, please?

**Changes in U.S. Exports of Steel—By Destination From 1954-56 Average to 1961**




1/ OECD - Europe

Source: International Trade Analysis Division, Bureau of International Commerce of U.S. Department of Commerce, based on United Nations' data.

U. S. Department of Commerce, Office of Business Economics

Mr. LEDERER. We had AID exports, fairly large exports, to the Far Eastern countries. You can find that in table 10. You see there the figure "Far East, except Japan," an increase from $44 to $97 million, and a good part of that must have been, or, was, to India and Pakistan.

Senator MILLER. Is this under the requirement in the AID program that such items be purchased in the United States?

Mr. LEDERER. I cannot tell you now whether the obligations for this particular item were made prior or after that regulation was issued.

Senator MILLER. I wonder if you could check that and supply that information for the record?

Mr. LEDERER. I could try.

AID EXPENDITURES FOR IRON AND STEEL MILL PRODUCTS

The shift away from a free-world-wide procurement policy to more restrictive policies favoring U.S. suppliers, which AID's two predecessor agencies initiated in October 1959 (for DLF) and December 1960 (for ICA), is clearly evident in the statistics on AID expenditures for iron and steel mill products.

During fiscal year 1960, for example, the shift in policy which already was being applied to new commitments had not yet shown up in recorded expenditures. In that year, ICA and DLF together paid out $129.5 million for iron and steel mill products, of which only $13.8 million, or 11 percent came from the United States. The amounts purchased in the United States increased in fiscal year 1961 to $35.1 million, or 22 percent of the total purchases of $157.9 million, but large payments still were being made against old commitments predating the change in policy.

By fiscal year 1962 the proportion originating in the United States was up sharply, as expenditures against new policy developing loan authorizations and other AID obligations began to dominate the picture. U.S. suppliers provided $89.3 million, or 70 percent, of the AID-financed total, with $60.4 million alone going to Pakistan and India. Data for the first 6 months of fiscal year 1963 reflect the still greater trend toward U.S. source, with American suppliers receiving $72.4 million, or 88 percent, of the $82.4 million in AID funds paid out for iron and steel, with only half the year gone.

The trend of expenditures in the United States is up sharply over the period shown, as the expenditures under the new more restrictive procurement policies have assumed greater weight in the series. However, there would still be some portion of our expenditures, even in fiscal year 1963 which would be against obligations or development loans authorized prior to the adoption of the new policies. The amounts of iron and steel which could still be financed under these balances undoubtedly is small in relation to exports under more recent commitments. It would be impossible to even estimate the amounts without a very detailed and time-consuming examination of all of the separate older commitments still on the books, which we are not in position to do at this time.

*AID expenditures for iron and steel mill products, fiscal year 1960 through 1963 (first 6 months)*

[In millions of dollars]

| Source of purchase | Fiscal year 1960 | 1961 | 1962 | 1963 (1st 6 months) |
|---|---|---|---|---|
| Total AID expenditures for iron and steel mill products | $129.5 | $157.9 | $127.3 | $82.4 |
| Purchased in the United States | $13.8 | $35.1 | $89.4 | $72.4 |
| Percent of AID total | 11 | 22 | 70 | 88 |
| Purchased in 19 developed countries | $113.1 | $120.1 | $22.3 | $6.5 |
| Percent of AID total | 87 | 76 | 18 | 8 |
| Purchased in developing countries | $2.6 | $2.7 | $15.6 | $3.6 |
| Percent of AID total | 2 | 2 | 12 | 4 |
| AID PURCHASES IN UNITED STATES FOR INDIA AND PAKISTAN | | | | |
| Total for India and Pakistan | $6.0 | $15.6 | $60.4 | $56.1 |
| India | 3.5 | 6.6 | 14.0 | 13.8 |
| Pakistan | 2.5 | 9.0 | 46.4 | 42.3 |

Mr. LEDERER. On table 11, we show some figures comparing our trade with various areas with the trade of other areas. What you see here are our exports, the exports from Western Europe, and the exports from Japan, to the identical area—here, Canada—and you can see that our exports dropped to Canada from 1954–56 to 1961, while the imports by Canada from Europe were about the same, and the imports from Japan remained rather small.

Mr. LEDERER. Our exports to Latin America fell off, while the European exports to Latin America increased somewhat. The exports from Japan to Latin America also dropped a little.

In the trade with the Soviet bloc, and you can see the very big increase from Europe to the Soviet bloc, and the very small increase from Japan; of course, nothing from us.

And, in the trade with the other countries in Africa and Asia, you see the small increase in exports from the United States and, again, I think most of this is accounted for by the AID program. You see the large increase from Europe, and some increase from Japan.

If you take the trade of these countries or areas to the United States, this would be our imports; you may notice the increase from Europe and the increase from Japan.

For shipments to Europe we have gone down, as you can see. The Japanese have gone up. These figures are for 1961. I am reasonably sure that 1962 will be higher for Japan.

In shipments to Japan, we have gone up a little, and the Europeans have gone up a little, but, all in all, this trade is rather small.

Representative REUSS. A question on U.S. steel exports to the Soviet bloc. Does the fact that there were no steel exports to the Soviet bloc from the United States in the base 1954–55 period and that there are none today indicate that our strategic materials embargo policy was operating in those periods?

TABLE 11.—*Value of steel exports from the United States, OECD Europe, and Japan to the major world areas, 1954–56 and 1961*

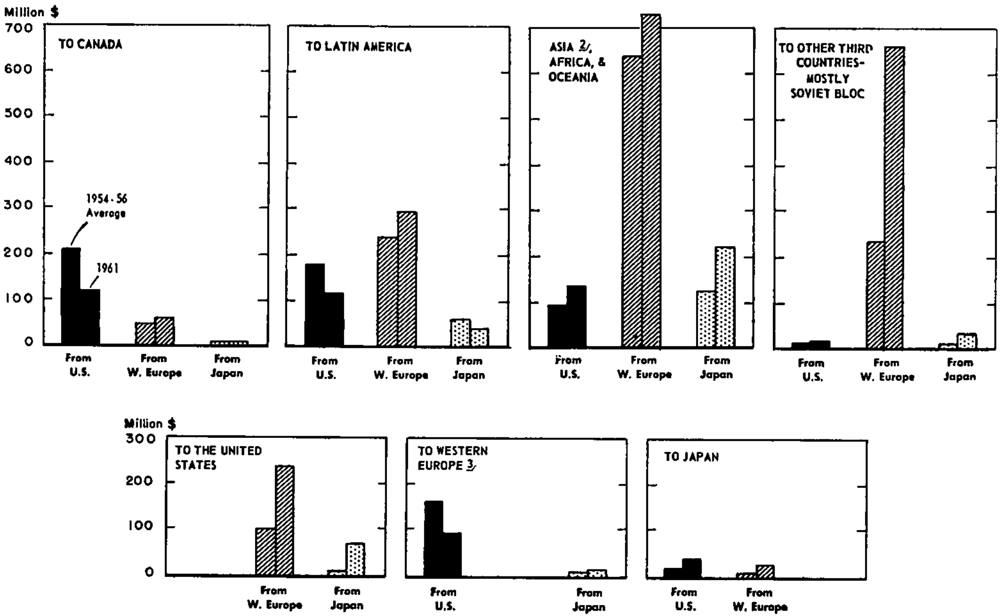
| Destination | Total from United States, OECD Europe, and Japan | | From United States | | From Common Market | | From United Kingdom | | From other OECD Europe[1] | | From Japan | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Million dollars | Percent | Million dollars | Percent | Million dollars | Percent | Million dollars | Percent | Million dollars | Percent | Million dollars | Percent |
| World outside United States: | | | | | | | | | | | | |
| 1954–56 average | 3,327 | 100 | 665 | 20.0 | 1,792 | 53.9 | 424 | 12.7 | 240 | 7.2 | 206 | 6.2 |
| 1961 | 5,040 | 100 | 509 | 10.1 | 3,150 | 62.5 | 567 | 11.3 | 504 | 9.9 | 310 | 6.2 |
| Canada: | | | | | | | | | | | | |
| 1954–56 average | 266 | 100 | 208 | 78.0 | 19 | 7.1 | 31 | 11.7 | 1 | 0.6 | 7 | 2.6 |
| 1961 | 181 | 100 | 118 | 64.8 | 29 | 16.0 | 25 | 13.8 | 2 | 1.5 | 7 | 3.9 |
| Latin America: | | | | | | | | | | | | |
| 1954–56 average | 474 | 100 | 178 | 37.6 | 189 | 39.9 | 31 | 6.5 | 16 | 3.3 | 60 | 12.7 |
| 1961 | 443 | 100 | 113 | 25.4 | 226 | 51.0 | 47 | 10.6 | 18 | 4.2 | 39 | 8.8 |
| OECD Europe:[2] | | | | | | | | | | | | |
| 1954–56 average | 1,457 | 100 | 159 | 11.0 | 1,028 | 70.6 | 87 | 6.0 | 175 | 11.9 | 8 | 0.5 |
| 1961 | 2,562 | 100 | 90 | 3.5 | 1,955 | 76.3 | 167 | 6.5 | 337 | 13.2 | 13 | 0.5 |
| Japan: | | | | | | | | | | | | |
| 1954–56 average | 24 | 100 | 16 | 66.9 | 6 | 25.0 | 1 | 4.2 | 1 | 3.9 | ---- | ---- |
| 1961 | 67 | 100 | 40 | 59.6 | 9 | 13.4 | 12 | 17.9 | 6 | 9.1 | ---- | ---- |
| Other Asia,[3] Africa, and Oceania: | | | | | | | | | | | | |
| 1954–56 average | 852 | 100 | 93 | 10.9 | 387 | 45.4 | 235 | 27.6 | 13 | 1.5 | 124 | 14.6 |
| 1961 | 1,081 | 100 | 135 | 12.5 | 469 | 43.4 | 234 | 21.6 | 24 | 2.2 | 219 | 20.3 |
| All other (mostly Communist bloc): | | | | | | | | | | | | |
| 1954–56 average | 254 | 100 | 11 | 4.3 | 163 | 64.2 | 39 | 15.3 | 34 | 13.4 | 7 | 2.8 |
| 1961 | 706 | 100 | 13 | 1.9 | 462 | 65.4 | 82 | 11.6 | 117 | 16.6 | 32 | 4.5 |

[1] Sweden, Denmark, Norway, Portugal, Greece, Austria, and Turkey.
[2] Western Europe, excluding Finland and Yugoslavia.
[3] Excluding Japan.

Source: International Trade Analysis Division, Bureau of International Commerce, based on United Nations data.

CHART—11

## Steel Exports From United States, Western Europe[1] and Japan to Major World Destinations; Average 1954-56 Compared to 1961




1/ Represents OECD-Europe less Iceland, Ireland, Switzerland and Spain.
2/ Excluding Japan.
3/ Represents OECD-Europe (Western Europe excluding Finland and Yugoslavia).
Source: International Trade Analysis Division, Bureau of International Commerce of U.S. Department of Commerce, based on United Nations' data.
U.S. Department of Commerce, Office of Business Economics

Mr. LEDERER. I suppose that is a factor, but it may not be the only factor. Price differentials could also be a factor.

Representative REUSS. But what has our strategic materials export control policy been? Are not almost all steel products on the critical list, and have they not, therefore, been embargoed?

Mr. LEDERER. I would have to find out about that.

Representative REUSS. Does your associate know?

Mr. LEDERER. I am told that there have been opportunities to sell steel to Russia, but the export control authorities turned it down.

Representative REUSS. I think there are some ironic conclusions to be drawn from your chart there, because it shows that Western Europe was selling a lot of steel to the Soviet bloc in 1954–55, and it is selling more than twice as much today.

Mr. LEDERER. Yes.

Representative REUSS. Indicating that our critical materials policy, at least as far as steel goes, is a matter of our taking the lumps, but Russia getting the steel from Western Europe.

Senator JAVITS. Would the Congressman yield at that point?

Representative REUSS. Yes.

Senator JAVITS. I wonder if the Congressman could, either now or at the appropriate point in the record, relate what he has testified to in regard to the U.S. strategic materials policy under the Battle Act which is the subject of agreement in the COCOM, I think it is called, between the European countries and ourselves, and whether or not it is claimed that those figures reflect any violations of that agreement. That is point 1.

The other point that I think would be important is this:

The agreement has, from time to time, been changed, and the strategic materials list relaxed, and, perhaps, the relaxations of that list should be related to the increase in trade, if there is any relationship.

Finally, I would think that we ought to know how much of that trade is represented by trade between West Germany and East Germany or between West Germany and the Eastern bloc, and there is a rather unique trade situation, including credits and trade agreements, which exists between both of those elements.

If we could have that information, I think it would be very helpful to us, not only in this particular inquiry, but in the general economic posture of the United States with reference to exports and doing business with the Communist bloc.

I thank you.

*Value of steel exports[1] from West Germany to U.S.S.R. and to other Soviet bloc countries in Europe*

[In millions of dollars]

| | To U.S.S.R. | To other Soviet bloc countries in Europe[2] |
|---|---|---|
| 1954–56 average | 7 | 23 |
| 1961 | [3] 65 | 82 |

[1] Steel mill products as classified according to United Nations SITC foreign trade classification.
[2] There were no shipments to East Germany during either of the periods shown.
[3] Of this amount, $55 million was classified as "tubes and pipes."

Source: Organization for European Economic Cooperation, foreign trade statistical bulletins.

(The following was later received for the record:)

DEPARTMENT OF STATE,
*Washington, May 10, 1963.*

Mr. JAMES W. KNOWLES,
*Executive Director, Joint Economic Committee, Congress of the United States, Washington, D.C.*

DEAR MR. KNOWLES: In accordance with the request made in your letter of May 3, 1963, to Mr. Robert B. Wright, I enclose a statement relating to controls applicable to exports of iron and steel mill products to the Soviet bloc for inclusion in the record of the May 2 hearing of the Joint Economic Committee. I trust that this statement answers the questions of concern to the committee.

If I can be of further assistance please do not hesitate to let me know.

Sincerely yours,

FREDERICK G. DUTTON,
*Assistant Secretary.*

COCOM AND BATTLE ACT CONTROLS

The only iron and steel mill products presently subject to Cocom or Battle Act controls are steel alloys and magnetic metals meeting certain specifications. The Cocom member countries and the U.S.-aid recipient countries maintain embargo controls over the export of these items to the Sino-Soviet bloc.

A few other products; viz, railway rails, steel line pipe and drill pipe, condenser tubes, were at one time subject to Cocom and Battle Act controls, but were removed from such controls between 1953 and 1958. However, the NATO countries are presently refraining from taking new orders for large diameter pipeline for the European Soviet bloc, although there are reports that a British firm is negotiating for sale of such pipe to the U.S.S.R.

Other products, such as ingots, slabs, plate, skelp, rods, reinforcing bars, structural shapes, wire, sheet, strip, and tin mill products, which constitute the bulk of trade in iron and steel mill products, have never been subject to Cocom or Battle Act controls.

The Western European exports of iron and steel mill products to the Sino-Soviet bloc therefore neither violate the Cocom agreement nor the provisions of the Mutual Defense Assistance Control Act (Battle Act).

U.S EXPORT CONTROLS

Any firm wishing to export iron and steel mill products from the United States to the European Soviet bloc must, with few minor exceptions, apply to the Department of Commerce for a validated licnse. Such a license may or may not be granted. For example, licenses have been denied for plate to produce large diameter pipe. Licenses would similarly be denied for large diameter pipe itself, for special steels, and other iron and steel mill products of strategic signficance. On the other hand, licenses have been issued for nonstrategic products, particularly carbon steel sheet for automobile bodies, refrigerators, etc.

EXPORTS STATISTICS

Exports of iron and steel mill products from the United States and from European Cocom countries to the Sino-Soviet bloc during the period 1954–61 have been as follows:

[Thousands of dollars]

| | From United States [1] | From European Cocom countries [2] |
|---|---|---|
| 1954 | 0 | 69,000 |
| 1955 | 10 | 63,300 |
| 1956 | 360 | 154,300 |
| 1957 | 4,813 | 236,200 |
| 1958 | 6,197 | 395,900 |
| 1959 | 2,730 | 385,495 |
| 1960 | 15,788 | 541,916 |
| 1961 | 2,255 | 431,860 |

[1] Source: Department of Commerce Quarterly Report on Export Control.
[2] Source: International Trade Analysis Division, Bureau of International Commerce, Department of Commerce.

Representative REUSS. One more question.

In terms of value, I see that the exports from Western Europe to the Soviet bloc come to something in excess of $500 million a year.

Mr. LEDERER. Yes.

Representative REUSS. That is more than our total steel exports currently, is it not?

Mr. LEDERER. Yes.

Representative REUSS. So that this item of our own export control policy is of overwhelming significance in considering the alleged competitive performance of American steel abroad, is it not?

Mr. LEDERER. On the next table, table 12, we have tried to put together the geographic areas where our steel imports are coming in, and we show it here on that chart with bars.

TABLE 12.—*U.S. imports of steel, by major ports of entry*

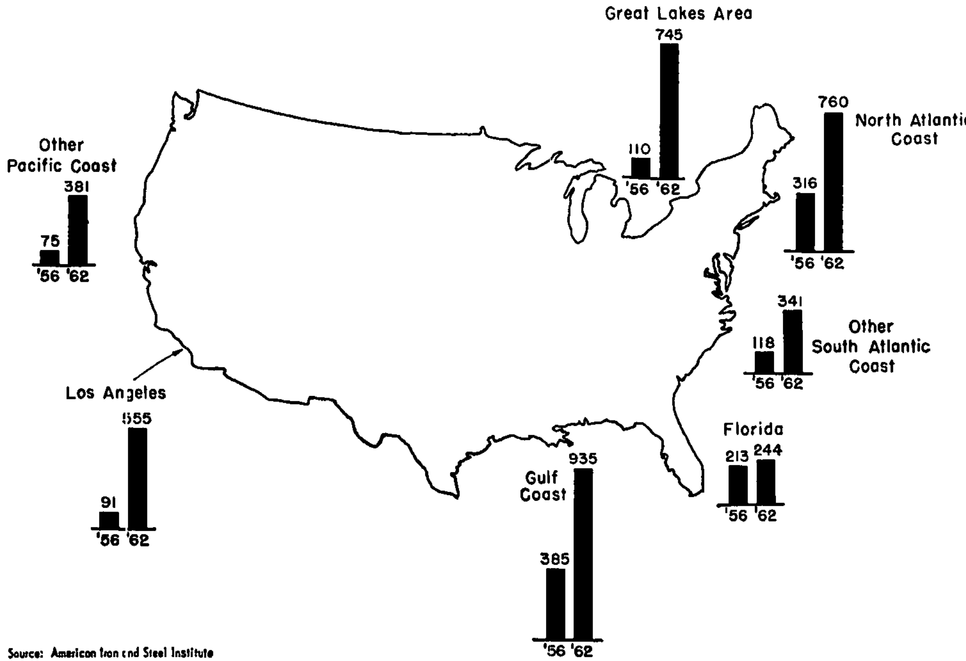
| | 1956 | | 1962 | |
|---|---|---|---|---|
| | Thousand short tons | Percent of total | Thousand short tons | Percent of total |
| North Atlantic coast | 316 | 23.7 | 760 | 18.5 |
| New York | 203 | 15.2 | 475 | 11.6 |
| Philadelphia | 55 | 4.1 | 123 | 3.0 |
| Massachusetts | 57 | 4.3 | 136 | 3.3 |
| South Atlantic coast | 331 | 24.8 | 585 | 14.3 |
| Florida | 213 | 16.0 | 244 | 6.0 |
| Maryland (mostly Baltimore) | 52 | 3.9 | 136 | 3.3 |
| North and South Carolina | 38 | 2.8 | 125 | 3.0 |
| Gulf coast | 385 | 28.9 | 935 | 22.8 |
| Galveston | 286 | 21.4 | 569 | 13.9 |
| New Orleans | 69 | 5.1 | 224 | 5.5 |
| Pacific coast | 166 | 12.5 | 936 | 22.8 |
| Los Angeles | 91 | 6.8 | 555 | 13.5 |
| San Francisco | 46 | 3.5 | 197 | 4.8 |
| Oregon and Washington | 28 | 2.1 | 178 | 4.3 |
| Canadian border and seaway | 110 | 8.2 | 745 | 18.2 |
| Michigan | 64 | 4.8 | 352 | 8.6 |
| Chicago | 16 | 1.2 | 147 | 3.6 |
| Ohio | 7 | 0.5 | 108 | 2.6 |
| Offshore United States [1] (mostly Puerto Rico) | 26 | 1.9 | 139 | 3.4 |
| Total | 1,334 | 100.0 | 4,100 | 100.0 |

[1] Includes Puerto Rico, Hawaii, and Alaska.

Source: American Iron & Steel Institute.

## U.S. Imports of Steel by Major Customs Areas 1956 and 1962

(Thousand Short Tons)




Source: American Iron and Steel Institute
U.S. Department of Commerce, Office of Business Economics

Mr. LEDERER. Again, 1956 is the first bar and 1962 is the second.

One observation one can make, perhaps, is that a very large part of our steel imports comes in in areas which are relatively far away from the main producing centers in the United States.

In other words, Los Angeles, the Pacific coast, the gulf coast, the Florida or the southern Atlantic coast.

There has also been a very big increase here in the Great Lakes, and part of it is the increase of ingot shipments from Canada for rerolling, but those do not explain the entire increase. There is also a good amount of steel coming in from Europe.

Senator PROXMIRE. Also the St. Lawrence Seaway?

Mr. LEDERER. Yes, through the seaway.

Senator PROXMIRE. Which, between this period—what is it, 1956 and 1962—has been opened up?

Mr. LEDERER. Yes. But much of it is the rerolling of the steel from Canada.

Senator PROXMIRE. Would it not seem logical that the Great Lakes should expand now that the seaway is a reality, in view of the fact that so much of the production facilities is located and concentrated in this area?

Mr. LEDERER. Yes.

Senator PROXMIRE. Ohio, Chicago?

Mr. LEDERER. That is true.

A factor in these imports are clearly also price differentials between the main producing centers and these outlying areas. It was not possible for me to get actual prices that show that difference, but mill prices, for instance, in Houston, on some commodities, some standard commodities, are something like $5, $5 to $6 higher than Pittsburgh, and $5 or $6 on a commodity that is somewhere around, say, $100 to $150 is a considerable amount.

Now, in the next table, table 13——

Senator MILLER. Pardon me.

Before you leave this table, I want to make sure that I understand the chart. The black graphs that you have there represent increases, represent tonnages, but from the chart, table 12, or from the figures on table 12, it looks to me as though, if you had a similar set of figures for trade on your chart showing percentages, that we would see an entirely different picture; that is, percentages of total; because, for example, on the gulf coast, I note that, while the tonnages went from 385 to 935 in 1956 to 1962, the percent of total went from 28.9 percent in 1956 down to 22.8 percent in 1962.

So we actually have a reversal of the trend, if you look at the percentages of the total, rather than just tonnages, would we not?

Mr. LEDERER. That is true, but that is the result of the big increases in other areas, particularly along the Pacific coast, and these are probably, to a large extent, Japanese imports.

The big increase here, of course, would reduce the percentage in the other areas, and the big increase along the Great Lakes would have the same effect.

Senator MILLER. I wonder which is more important for us to consider here: Is it more important to consider the percent or is it more important to consider the totals; that is, the tonnage?

Mr. LEDERER. Well, it would depend upon the problem, but, offhand, I would rather look at the tonnage than the percent, but there are different problems.

Senator MILLER. Let me follow up that question with respect to the west coast.

From what you have said here, it seems to me that there can be differences in policy between our steel people on the west coast and the steel people on the east coast.

I recall in previous years, when there have been steel price increases, that one or two of the major companies in the West did not increase. My understanding is that there has been some decrease or some leveling off or perhaps there was not even an entry into this recent steel price increase on the part of west coast or western area steel mills.

Would this be attributable to the fact that they have a different competitive situation due to the nearness to Japan than the other mills do?

Mr. LEDERER. I suppose that might have been an influence on their part.

Senator MILLER. Pardon me?

Mr. LEDERER. I suppose that might have been an influence on their policy. At least, that is what they announced.

Senator PROXMIRE. Could we have, later, a breakdown on this Great Lakes shipping, so that we can see what involves transshipment from Canada, what is legitimate and genuine importing into the United States?

Mr. LEDERER. Yes.

(The following table was subsequently furnished:)

*Imports of steel into the Canadian border and seaway region of the United States, 1962*

[In thousands of short tons]

| | Total | Imports of ingots, blooms, slabs, and billets from Canada | Total excluding imports of ingots, blooms, slabs, and billets from Canada |
|---|---|---|---|
| Total, Canadian border and seaway | 745 | 159 | 586 |
| Michigan | 352 | 149 | 203 |
| Chicago | 147 | (1) | 147 |
| Ohio | 108 | (1) | 108 |
| Other | 138 | 10 | 128 |

1 Less than 500 short tons.

Source: American Iron & Steel Institute.

Senator PROXMIRE. I assume this transshipment is included here.

Mr. LEDERER. That is right.

Senator PROXMIRE. Then the other thing that I think would be very helpful, if, eventually, we could get it, would be a similar chart, because this is very interesting, showing U.S. exports of steel by ports in the same period.

Mr. LEDERER. We will try.

Senator PROXMIRE. Well, if you can get it, I would appreciate it.

Mr. LEDERER. Yes.

(The following table was subsequently furnished:)

*U.S. exports of steel by customs port of departure, 1962*

[In thousands of short tons]

| | |
|---|---|
| Ports of departure: | |
| North Atlantic coast | 538 |
| New York | 446 |
| Philadelphia | 91 |
| South Atlantic coast | 587 |
| Maryland | 551 |
| Virginia | 22 |
| Gulf coast | 360 |
| Galveston | 29 |
| New Orleans | 197 |
| Pacific coast | 93 |
| Los Angeles | 72 |
| San Francisco | 17 |
| Oregon and Washington | 4 |
| Canadian border and seaway | 476 |
| Offshore United States (mostly Puerto Rico) | 1 |
| Other | 37 |
| Total | 2,092 |

Source: Office of Business Economics, Department of Commerce, from basic data of Bureau of Census.

Mr. LEDERER. Now, on the next table you find freight rates between the United States and foreign ports.

What I have here on that table are conference rates, liner conference rates, and you can see here that almost throughout these cases which are shown here that the freight rates from the United States to foreign ports are substantially higher than the freight from foreign ports to the United States, and, in some instances, are 50 percent or more higher.

TABLE 13.—*Comparison of conference ocean freight rates effective March 1962 on iron and steel products for 3 U.S. foreign trade routes*

[Amounts in dollars]

| Commodity | U.S. North Atlantic ports and Western Germany [1] | | U.S. gulf ports and North Atlantic French ports [2] | | U.S. Pacific ports and Japan [3] | |
|---|---|---|---|---|---|---|
| | Freight rate on U.S. exports | Freight rate on U.S. imports | Freight rate on U.S. exports | Freight rate on U.S. imports | Freight rate on U.S. exports | Freight rate on U.S. imports |
| Angles, beams, girders (structurals) | 31.25 | 19.75 | 28.50 | 17.00 | 28.10 | 15.50 |
| Bolts | 31.25 | 24.00 | 28.50 | 20.50 | (4) | (4) |
| Castings and forgings | 44.25 | 29.25 | 40.25 | 34.00 | (4) | (4) |
| Billets and blooms | (4) | (4) | 13.25 | 17.00 | 30.35 | 15.50 |
| Rails | 36.75 | 19.75 | 33.50 | 17.00 | (5) | (5) |
| Rods, wire, plain | 29.50 | 18.25 | (5) | (5) | 28.25 | 15.50 |
| Screws | 46.00 | 24.00 | (5) | (5) | (5) | (5) |
| Pipes, iron and steel, 6-inch diameter | (4) | (4) | (4) | (4) | 30.35 | 21.00 |
| Wire, barbed | 28.50 | 23.00 | 28.50 | 19.00 | (4) | (4) |
| Bars, reinforcing up to 40 feet | (4) | 19.75 | (4) | (4) | 28.10 | (4) |
| Oilwell casings | (4) | (4) | (4) | (4) | 33.60 | 21.00 |
| Shapes, plain, not fabricated | (4) | (4) | (4) | (4) | 28.10 | (4) |
| Rods | (4) | (4) | (4) | (4) | 28.25 | 15.50 |

[1] North Atlantic Continental Freight Conference tariffs.
[2] Gulf-French Atlantic Hamburg Range Conference—Continental U.S.A. Gulf Westbound Conference.
[3] Pacific Westbound Conference and Trans-Pacific Freight Conference of Japan.
[4] Freight rate is either not available or the commodities are included in another class.
[5] Not available.

NOTE.—Freight on exports on ton basis: 2,240 pounds; freight on imports on ton basis: 1,000 kilos=2,204.6 pounds (except Japan where import freight is on the long-ton basis: 2,240 pounds).

Source: U.S. Federal Maritime Commission, Division of Foreign Tariffs.

Representative REUSS. These figures are by tons, are they?

Mr. LEDERER. These are by tons, that is right.

Representative REUSS. Let us just take any one of these. On the North Atlantic Conference schedule, the freight rate on our exports of rails to Europe is $36.75 a ton. The freight rate on European exports to the United States is $19.75 a ton, just about half.

What does a ton of rails cost, free, along ship, either place?

Mr. LEDERER. We have got that here somewhere. The export unit value is about $152. The freight is a substantial percentage.

Representative REUSS. There is about 10 percent here?

Mr. LEDERER. Yes, and on the less fabricated items the freight is perhaps as high as 20 percent. However, there is some qualification with these figures, too.

In the first place, I was told that the liner charges on imports are generally 10 percent lower than the conference rates.

The second qualification is that, apparently, a good part of the steel imports come in here by tramp. These are ships that come into the U.S. ports to carry out bulk cargo such as grain or coal or scrap, and sometimes ships that come into our neighborhood, say, into the Caribbean, to carry back sugar. On the way toward us they ordinarily would run empty, and they do now take steel items along.

Representative REUSS. I should have thought that the tramp trade would work both ways; however, since we are exporting $20 billion worth of goods a year and importing only 15, I realize that there would be more empty tramps coming our way than going away from us.

Mr. LEDERER. I inquired as to what these tramp rates might possibly be, and from an actual contract just a few days ago I learned that if you have a whole shipload of steel items, it would cost something like $3 to bring them in from Europe, $3 a ton.

If you do not have a whole shipload full, of course, it is more expensive. But you can see that $3 may, perhaps, be a minimum and not very often achieved, but, say, $5 or $6 might be a figure that can be more generally obtained. That means that for a good part of the imports, you can have freight rates, say, under $10, but on the exports you have freight rates over $30.

Senator PROXMIRE. This is the price we have to pay, then, for a heavily favorable balance of trade, is that correct?

In other words, because on all commodities we are exporting more, substantially more, than we import?

Mr. LEDERER. That is part of it. Of course, the tramp situation is a result of a peculiar type of trade. In other words, it is the bulk commodity, the commodity which can be shipped out in bulk, which brings these tramps in. Now, these are not too many commodities. They are only a few. But grain, coal, and scrap are among the most important ones. And I understand that sugar is also going out in tramps, but, of course, not from us, but from the Caribbean area.

Senator PROXMIRE. Then, to refine it, this is the price we have to pay for shipping out an excess of bulk freight?

Mr. LEDERER. Yes.

Chairman DOUGLAS. Is it only that?

Mr. LEDERER. Well, not entirely, because there are also differences in the liner rates.

Chairman DOUGLAS. This is a parallel situation to what we once had inside the United States. A number of southern organizations, led by former Governor Arnell of Georgia, pointed out that the freight rates from southern cities to specific northern and western cities on given commodities were higher than the freight rates on those same commodities from the identical northern and western cities into the identical southern cities.

While there were various arguments made to rationalize this on the basis of balance of exports and imports, regional exports and imports, I gained from it the conclusion that there were differential rates, really differential rates, and that the South was being unjustly penalized.

So on that issue I have always sided with the South, and this has been partially corrected since by the Interstate Commerce Commission.

I do not know if the case is clear because of the fact, which has been stressed by both the Senator and Congressman from Wisconsin, but it certainly looks as though one of the factors which holds back the sale of American exported steel products is the higher ocean freight rates which they have to pay to get to their destination.

Does this not put the American steel industry at a great disadvantage as compared with the foreign steel industry?

Mr. LEDERER. That is the way it looks.

Chairman DOUGLAS. Has the steel industry taken any steps to get a reduction of ocean freight rates?

Mr. LEDERER. I could not answer that question.

Chairman DOUGLAS. Has the Government taken any steps to get lower ocean freight rates?

Mr. LEDERER. That I cannot answer either.

Chairman DOUGLAS. Well, who approves these conference rates? Who approves the conference shipping rates?

Mr. LEDERER. Their rates are arranged by the steamship companies running over a certain route.

Chairman DOUGLAS. Well, we give subsidies to our ships, do we not?

Mr. LEDERER. Yes.

Chairman DOUGLAS. For the operation of these ships. Do we simply accept, allow them to accept the decision of the conference without making any attempt to readjust these rates?

Mr. LEDERER. I cannot answer that question.

Chairman DOUGLAS. Is there anyone who can answer it? I wish the Assistant Secretary Holton had appeared with you. This is a very grave matter. It may be that we could readjust freight rates, that we could get an expansion of export of American basic iron and steel products.

Representative REUSS. I would suggest this, Mr. Chairman: That we certainly have the physical power to affect the international cartel which runs these freight rates. They use our ports, and, if there are not now laws on the books which allow us to regulate their rates and see that they are equitable, they certainly could be put on the books.

Chairman DOUGLAS. Do I understand that there is an Under Secretary in the Department of Commerce specifically in charge of mercantile marine matters?

Mr. LEDERER. Yes; there is an Under Secretary for Transportation.

Chairman DOUGLAS. What is his name?

Mr. LEDERER. Martin.

Chairman DOUGLAS. I am going to ask the Director, unless there is disapproval from the committee, to telephone down to the Department of Commerce and ask the Under Secretary to appear here at 2:30 this afternoon, unless there is objection.

Senator JORDAN. I think it is important.

Senator PROXMIRE. May I ask you, do you have figures on comparative rates to third markets; that is, from the United States to, say, Africa and from Europe, and so forth?

Mr. LEDERER. We have tried to get them.

Senator PROXMIRE. On a mileage basis?

Mr. LEDERER. Yes.

This is somewhat difficult to get here in the United States. But I have the impression—and we will have to confirm that with more definite figures—that the rates from the United States, for instance, to the north coast of South America, an area relatively close to our shores are considerably higher than the rate from Europe to the same place.

(The information requested is as follows:)

No official figures on ocean freight rates between Europe and South America are available in the United States but we are told that it is common knowledge that the rates from Europe are substantially lower than from the United States to South America.

Senator PROXMIRE. This is another element along the same line.

I have just one more question on that. Do you have any figures, or could you get any figures on other commodities, to find out if this is commonplace for all American trade or if it is confined largely to steel.

Mr. LEDERER. It is my understanding that this is rather common; not limited to steel. This is a common situation, that the rates on ships going out from the United States are higher than those for ships coming back.

Senator PROXMIRE. Could you get us the figures so we can compare and find out how much higher they are?

Mr. LEDERER. We would have to get them on a comparable basis, I mean for cubic feet.

Senator PROXMIRE. Whatever you can do.

Senator MILLER. Do you have charts like this for each of the last several years?

Mr. LEDERER. Which, sir?

Senator MILLER. As I read this chart, this shows a comparison of rates effective March 1962.

Mr. LEDERER. Yes.

Senator MILLER. Now, I am wondering if you have one for March 1961, and 1960, say, for the last 6 or 7 years?

Mr. LEDERER. I have the same data for the last 3 years. I did not reproduce them here. But they all show the same difference.

Senator MILLER. In other words, there has not been a differential any greater or less than shown here for the last several years?

Mr. LEDERER. No, apparently not.

There are changes in one item or another, but, all in all, these rates seem to be rather stable.

Senator MILLER. I wonder how far back it has been that way.

Mr. LEDERER. The difference between the inbound and outbound freight?

Senator MILLER. As I understand your response to my question, if we went back 3 years on angles, beams, and girders, structural, we would find that the difference is about $11.50 a ton between the imports, it is less on the imports than on the exports, for U.S. gulf ports and North Atlantic ports, and that if we went back about 3 years, we would find about the same differential?

Mr. LEDERER. That is correct.

Senator MILLER. What about going back 8 years or 10 years?

Mr. LEDERER. My understanding is that that difference between import and export rates dates back to well before the war, and, in fact, it may have had its origin before the war, because at that time our export trade to Europe, at least, was much heavier than our import trade from Europe, and that, consequently, on the export side you had to pay a relatively high rate because that is where the shipping capacity was needed, while on the import side, where we had excess capacity, the rates could probably be much lower.

Senator MILLER. So it is your understanding that this came on during the wartime situation?

Mr. LEDERER. No, before the war.

Senator MILLER. Before the war?

Mr. LEDERER. Yes.

Senator MILLER. And that it continued that way through the war and has continued that way up to the present day?

Mr. LEDERER. Well, I cannot tell you about the years during the war, but it continued that way after the war.

Senator MILLER. Thank you.

Senator PELL. Mr. Chairman?

Chairman DOUGLAS. Senator Pell.

Senator PELL. Since our merchant marine operates at a loss anyway and the difference is picked up by the Government with a view to keeping the merchant marine at a certain size for reasons of national interest, would it not mean, if the rates were cut, that the unfortunate taxpayer, from an economic viewpoint, would have to pick up the tab anyway, in order to keep the same number of merchant ships in operation, by an increased subsidy?

Mr. LEDERER. I do not know what the elasticity is. I mean, if we shipped more, it might compensate somewhat for the cut in rates.

But the important thing here is that of all our trade, only a relatively small part is carried in our own ships. Most of it, after all, is carried in foreign ships.

Chairman DOUGLAS. Congressman Reuss?

Representative REUSS. This has been an exceptionally interesting hearing, Mr. Chairman, to wind up the series which we have been conducting.

I must say, the testimony of Mr. Lederer has changed my mind a little bit. It has generally been understood by the press and public in recent years that our steel exports have been falling off and our steel imports have been increasing. There have been many alarmist stories about barbed wire in Duluth and so on and so on, and the blame has tended to be dished out in about equal proportions to management and labor in the steel industry.

I am wondering if, in the light of this morning's testimony, a large share of the responsibility should not really rest on the shoulders of the U.S. Government, both the legislative and the executive branches.

The three pieces of testimony this morning which I find the most striking are the following:

One, the tariffs of the Common Market countries on steel are about double our tariffs on steel. This suggests that we have not been doing a particularly good job of tariff bargaining, particularly in a period when we have serious balance-of-payments difficulties.

Second, we are shown that the United States has a strategic materials policy of seeing that no steel gets to the Soviet bloc. However, our good friends and allies, the West Germans, the French, the Belgians, the British, and others seem to be selling the Soviet bloc an increasing amount—last year at the rate of about a half billion dollars a year, in excess of our total steel exports to the entire world. One might ask whether our Government's policy is really achieving its assumed aim of denying strategic steel to the Soviet bloc, or whether we are not merely giving a wonderful competitive advantage to our good friends and allies, the West Germans, the French, the Belgians, the British, and so forth.

Third, it looks as if the international cartels which control the carriers of the world have rigged their rates so that our exports take it on the chin, and that as much as a 10-percent differential in the laid-down cost of steel is due to discriminatory freight rates, again, a matter for Government action.

So I am wondering if, somewhat to my embarrassment, this investigation does not end up pointing at ourselves.

Chairman DOUGLAS. Well, now, wait a minute.

Take the question of the tariff. In order to get a reduction in European tariffs, we have to have two to make a bargain. It may well be that our State Department is trying to get European tariffs down and have met with very stern resistance. That is No. 1.

No. 2, so far as trade with the Soviet Union is concerned, we have followed the policy of not wishing to strengthen the military potential of the Soviet Union. I think that is correct. Now, it is sometimes difficult to get our allies to pursue the same end, with the same vigor, and, while we are about this, I think the points you raised about West Germany and East Germany are very appropriate.

West Germany is opposed to our even recognizing the practical existence of East Germany but West Germany negotiates trade agreements with East Germany and exports to them, as I understand it, about half a billion dollars worth of goods each year. In other words, West Germany is doing to East Germany what she would get highly indignant against the United States if it were proposed that we do it.

And, finally, on these international shipping cartels, I am glad we have gotten into that. We have to face the question, Will we try to break the cartels, so far as our own ships are concerned, or will we go along with them?

Representative REUSS. Or will we, on threat of doing something, get them to change their discriminatory freight rates.

Chairman DOUGLAS. I am simply trying to say that I think we have unearthed or we have turned over a number of logs and found rather crawling creatures underneath them, but what the immediate remedy is, I am not certain, except that I do feel—I think you are right—that we should show much more steel.

Senator JORDAN. Mr. Chairman, I am very much interested in Congressman Reuss' summary.

I am quite in agreement with him.

It seems to me that if we are to explore the differences in freight rates with the man coming this afternoon from the Department of Commerce, would it not be a good chance to pursue, also, the differences in tariff schedules that account for a substantial difference in the relative advantages?

Chairman DOUGLAS. It has been suggested that we get another Assistant Secretary of Commerce, either Mr. Holton or someone who will answer that question.

Would Mr. Holton be the appropriate man?

Mr. LEDERER. I do not know whether he can get that information in that short a time.

Chairman DOUGLAS. Suppose we suggest to the Department of Commerce that they send up someone this afternoon at 2:30 who is competent to discuss the question of comparative tariffs and tariff schedules. Now, I suppose, if we asked for Commerce, we will have to ask for the State Department because there is always great jealously between those two departments as to which is more competent to discuss these subjects.

I frequently find the figures one gets from one department are immediately controverted by figures from the other.

Representative REUSS. I am not sure there would be any competition this afternoon.

Chairman DOUGLAS. Let us invite representatives of both State and Commerce to come.

Senator PELL. Perhaps the representative—is there not a man appointed to do just this in the State Department, the negotiator, perhaps he could come along?

Chairman DOUGLAS. We have now reached the hour of 12. I had thought that we would probably close the hearings this noon, but it now looks as though we will convene again at 2:30. Is there objection to our recessing in just a few minutes and convening again at 2:30? That will be understood.

Now, Mr. Bernstein has asked permission to make a brief statement, and to offer something for the record.

I extend that invitation to him, but it is understood that an equal invitation is extended to any representatives of the management and ownership group of the steel industry that may be here.

Senator MILLER. Mr. Chairman, could I say this: Were we going to have Mr. Lederer here this afternoon?

Chairman DOUGLAS. I think it would be helpful if Mr. Lederer and his associates were to remain here.

Senator MILLER. Because I had two or three questions I wanted to ask him, and we might have some more. I would hope that he could be here.

Chairman DOUGLAS. Would you come back with your associates this afternoon?

Mr. LEDERER. Surely.

Senator MILLER. And may I say to the chairman I was going to—I did not know what his plans were—I was going to make the request, or express the hope, that, not only the steelworkers, but any of the steel companies or groups of them, or the iron and steel people, or anyone in that area, would make a statement commenting, if they wished, on whatever has come out in the record to date, including what will come out this afternoon, and I was wondering if we might hold the matter open so that they would have some time?

Chairman DOUGLAS. I have extended such an invitation at each and every meeting of this committee, and we have had no response.

I extend it again.

I will simply say this: That, in my judgment, any additional material filed today by any party, Government witnesses or the opposing parties, should have the right of rebuttal.

Senator MILLER. And could I ask the chairman whether we might extend the period to, I will say, a week or so?

Chairman DOUGLAS. No, I would not like to consent to that. The original telegram which I sent to both parties stated that we extended an invitation to them to be present. I made it clear that we were not going to use the power of subpena. At each meeting we have asked testimony. Both sides have known that they are free to come in.

Mr. Bernstein has made occasional entries. No representative of management has made any entry. I do not believe we should hold the record open indefinitely for people who will not come in or who do not choose to come in and testify in time. They will be welcome to testify now; they will be welcome to testify this afternoon; but I do not think I shall permit Mr. Bernstein, nor anyone else, to have indefinite right to submit material when they have not appeared before the committee as such.

Senator MILLER. May I say to the chairman, I agree we should not have an indefinite period on this, but I do think it would be impossible for one to analyze what we have just now received and what we do not even know yet what we will receive this afternoon.

I would like to suggest that the chairman might give these people at least a week to come in with their statement, and I think we would have a better one if we gave them this time.

Chairman DOUGLAS. In order to lean over backward, I will say I will be willing to have the record kept open until next Wednesday.

Mr. Bernstein, do you wish to make a statement?

## STATEMENT OF MEYER BERNSTEIN, INTERNATIONAL AFFAIRS DIRECTOR, U.S. STEELWORKERS OF AMERICA

Mr. BERNSTEIN. Mr. Chairman, on this point I am not sure we will be able to complete our analysis of Mr. Greenberg's testimony. You will recall this dealt with the changes in productivity, and that requires a rather intensive study of the data which he used. We are doing that.

Chairman DOUGLAS. Mr. Bernstein, you have been very obliging, but I addressed the telegram to the president of your union, Mr. Macdonald, offering him the same invitation, which he, so far as the central office of your union is concerned, refused. He said he did not want to offer any testimony.

Now you have been very helpful in your own individual capacity, and we appreciate this very much, but I cannot keep the record open for you anymore than I can keep it open for the Iron & Steel Institute. We must have impartial action for both parties.

I shall therefore have to say the record will close next Wednesday evening. You can't back and fill on this business. You can't say one time: "We are not going to submit evidence," and then come and say: "We should have an indefinite opportunity to submit evidence."

Now you have come forward much more than the Iron & Steel Institute has. I am not passing any judgment on either of you. But I cannot give you special privileges——

Mr. BERNSTEIN. I don't want any special privileges.

Chairman DOUGLAS (continuing). Which I don't give the Iron & Steel Institute.

Senator MILLER. Mr. Chairman, may I say in my request I did not know how much time Mr. Bernstein would want, but I do know that if

I myself were to take what we received this morning back to my office and research it to come up with some comments on it, just on this one thing alone, I can see where I would have to work all Saturday and Sunday and probably a couple or 3 days next week, and even then I might not have what you would like, and then we don't know yet what we are going to have this afternoon.

This afternoon could be one of the most important hearings we have had—that is, sessions we have had—throughout these hearings.

Chairman DOUGLAS. I will extend it to next Friday.

Senator MILLER. I think that would be more fair, Mr. Chairman.

Chairman DOUGLAS. Very good, but we still don't know whether the iron and steel industry wants to testify at all, and I would appreciate it if they would make any statement that they may care to make now. I want to say that we are not seeking the power of subpena. We simply extend to them a cordial invitation to testify as they wish, as we have done at each and every session.

Senator MILLER. Will that help you a little bit, Mr. Bernstein, to have a couple of extra days?

Mr. BERNSTEIN. Yes.

Chairman DOUGLAS. I take it there is no response from the Iron & Steel Institute.

Mr. ALLEN. Senator, of course we have come down here as observers only. I think this was made clear to you in the telegram that was sent to you in the beginning.

Chairman DOUGLAS. That is correct.

Mr. ALLEN. I have no authority to speak for the American iron and steel industry or any of its member companies. I would be very happy to communicate this back to the American Iron & Steel Institute, and to the companies, that they have until next Friday to make a statement, but I think, right or wrong, it has been made clear that I am a reporter or observer, and I have no authority or authorization to speak for the institute or for the steel industry.

Chairman DOUGLAS. I think you have made it clear, just as Mr. Macdonald made it clear, that he did not wish to submit any material; but Mr. Bernstein from time to time, in his desire to be helpful, has submitted material, and therefore, to play square, I have got to extend it each time, not to humiliate you, but to extend to you the same privilege. The Senator from Iowa very properly was saying that he wanted an invitation extended to you, and at his insistence I did this again, not to put you on the spot, but simply so that you could know that you are welcome to testify, and also, I may say, to build up a defense for myself, lest I be accused of permitting the iron and steel workers to produce additional testimony, but do not similarly permit the employer and owning group.

Senator MILLER. May I say, Mr. Chairman, I believe the first day I expressed the thought that this ought to be an across-the-board thing. Whatever is fair for one is fair for the other. And so that there is only one thing that I am still not sure on: Could we make this, say, 6 o'clock next Friday so that they will know the deadline?

Chairman DOUGLAS. Six p.m., daylight saving time. Go ahead, Mr. Bernstein.

Mr. BERNSTEIN. Mr. Chairman, foreign competition to the American steel industry comes not from foreign countries but from foreign companies. It is the individual steel company abroad which sells steel to the United States or tries to take away our customers in foreign countries.

It was with this thought in mind that I, in 1956, began a study of the largest steel companies in the free world, to make a comparison among them to show, to try to find out what it was that one company had that another company did not have, what advantages one company had against another, and particularly to analyze the cost structure of those individual companies.

I discovered at that time that if I took every company with a steel production of 300,000 metric tons, that I then came out with a total of exactly 100 steel companies; 27 of those were in the United States, 15 were in Germany, 10 were in Great Britain, 10 were in France, 5 in Belgium, 5 in Holland, and the others, the other countries had smaller numbers of steel companies.

Since that time, the International Metal Workers Federation, a trade association with which the United Steel Workers are affiliated, has, in cooperation with myself, continued this study. We have brought it up to date.

The last report we have made has been published in a book form, and I have copies of it here for members of the committee.

Chairman DOUGLAS. Thank you very much.

Mr. BERNSTEIN. In this study we have investigated many of the factors, many of the questions which were raised this morning, and then we tried to make a tabular summary of the whole picture, and you will find this on page 23.

Now we have 118 steel companies scattered throughout the whole free world. This includes every significant steel company outside the Soviet orbit, with a production of over 250,000 metric tons. There are now 29 American companies.

We have listed them by order of their size; that is, their crude steel production in 1960, starting with the United States Steel Corp. with 24,766,000 tons, and going down by size to the smallest.

You will notice that the first five companies are American companies, the 6th company is Japanese; the 7th, 8th, and 9th are American; the 10th is Australian; the 11th is Japanese; 12th, British; 13th, Luxembourg; the 14th, Germany; and so on.

In this tabular summary we have shown not only the crude steel production, but also the number employed, the sales, translating it into Swiss fancs for comparative purposes, the total labor costs, the labor costs as a percentage of sales, the net profits, the dividends, the depreciation, and then the cash flow, that is, depreciation and net profits as a percentage of sales.

In addition to this tabular summary, we have in each country section broken down this, and a great deal of additional information.

We have included, for example, taxation, the question which was raised earlier this morning. We have included interest, we have included the number of shareholders, we have included the management control, materials costs, the returns to management, that is the top management, the individual salaries and the like.

I submit this information to the committee in order that it may have before it a broken down study of every individual steel company that sells steel to the United States. This will enable the committee to compare the profitability of the foreign countries with ours, the labor costs of the foreign companies with ours, and see what it is in individual cases which enables an individual foreign company to compete against American steel companies here in the United States or abroad.

Chairman DOUGLAS. Have you got some generalizations yourself?

Mr. BERNSTEIN. Yes; I have.

Chairman DOUGLAS. This is a rather bulky volume of 373 pages. It is somewhat hard for us inexperienced gentlemen to draw conclusions from this.

Mr. BERNSTEIN. The first important generalization is that the U.S. steel companies are head and shoulders above those of the rest of the world in productivity. As a matter of fact, there is one American steel company which has labor costs as low as those of the Japanese, because of the productivity.

Chairman DOUGLAS. You mean labor costs per ton?

Mr. BERNSTEIN. Labor costs per unit, yes; or labor costs as a percentage of sales.

I might say that neither the American steel companies nor the foreign companies give us any sufficiently reliable data to base a study of labor costs per unit of product. Therefore, we must rely on other information, and the best source is a comparison of labor costs as a percentage of sales.

Chairman DOUGLAS. Does this include salaries as well?

Mr. BERNSTEIN. Oh, yes. This, of course, is again inflated. This is our problem, that in the United States we have a much larger percentage of the labor costs going to top management than we do have in other countries.

There was a study made by the European Coal and Steel Community in the United States showing that the percentage of foremen to workers, the ratio of foremen to workers in the United States, the ratio of supervisory employees, top management to workers in the United States was several times higher than that of similar companies in Europe.

Chairman DOUGLAS. I don't know whether you are referring to the same study or not. I hold in my hand, as was once remarked, a volume under the imprint "European Coal and Steel Community of Management Organization Methods of the American Iron and Steel Industry," as of March and April 1957, and on page 264 of that report, the ratio of management per 1,000 employed in the European group of seven plants was 55, American average in a group of six plants was 90, or the management ratio in the six American plants as compared to the seven European plants was 164 to 100, whereas the ratio of workers, wage workers, was 96.5 per hundred or a ratio of 830 Europeans as opposed to 800 Americans.

Mr. BERNSTEIN. I refer to the same document. If you go further in the document, you will see comparisons by individual plants.

For example, you will discover that the Fairless plant in the United States has a much higher ratio, a several times higher ratio of foremen to that of the European companies. There are numerous tables in that report which are most significant on this score.

The first point is that the U.S. coal activity is much, much higher than that of the rest of the world, any other steel company in the rest of the world. The second point——

Chairman DOUGLAS. You mean productivity per worker?

Mr. BERNSTEIN. Productivity per worker, yes.

Chairman DOUGLAS. On page 263 of this same report which I have quoted, the ratio of productivity per person employed in terms of net tons, the European group was 124 tons per person, the Fairless plant 355, the Bethlehem plant, I don't know, yes, Bethlehem plant in a whole city, 164, Lackawanna plant 290, Sparrows Point, which I believe is also owned by Bethlehem——

Mr. BERNSTEIN (interrupting). Yes.

Chairman DOUGLAS (continuing). 210. Inland Steel in Indiana Harbor 280, Lukens Steel 132, so that in each case the productivity per person is greater in the United States, and this difference was most marked in connection with Fairless, Lackawanna, Sparrows Point, Inland Steel, and the least amount in the case of Lukens.

Mr. BERNSTEIN. Secondly, that labor costs as a percentage of sales do not reflect the same difference between hourly earnings or hourly costs, hourly employment costs in the United States as compared with those of our foreign competitors.

If you take the hourly employment costs, you will find that the U.S. rate is from 3 to 7 times as high as Europe and Japan. That is per worker on an hourly basis.

Because of the differences in productivity, the labor costs as a percentage of sales are only fractionally higher in the United States than they are abroad.

Chairman DOUGLAS. Is that covered in this volume of yours?

Mr. BERNSTEIN. Yes, it is.

Chairman DOUGLAS. On what page?

Mr. BERNSTEIN. It is best shown in the table beginning on page 22, I think, or rather, 23.

Chairman DOUGLAS. That is very voluminous testimony.

Mr. BERNSTEIN. If you look, for example, on the sixth column, you will see labor costs as a percentage of sales.

Chairman DOUGLAS. That is for each one of the 118 companies.

Mr. BERNSTEIN. Yes. Now we have summarized it for each company, giving the weighted average for each country, and we find that the U.S. labor costs as a percentage of sales in 1960 amounted to 39.6, in Canada 33.8.

Chairman DOUGLAS. What page are you reading from?

Mr. BERNSTEIN. I am now reading from a summary I made up.

Chairman DOUGLAS. Is it printed?

Mr. BERNSTEIN. Yes.

Chairman DOUGLAS. What page?

Mr. BERNSTEIN. I will have to find it. It is on page 43.

Chairman DOUGLAS. Go ahead.

Mr. BERNSTEIN. Belgium 31.2. I might point out that Belgium is our biggest European competitor.

South Africa 26.5, Great Britain 23.2, Italy 22.6, West Germany 21.6, France 21.3, Sweden 21.3, Norway 20.3, Austria 19.5, Luxembourg 19.5, Mexico 16.4, Japan 12.7, Holland 12.0.

Chairman DOUGLAS. Mr. Bernstein, you have been going so rapidly I seem to be lost. What page is this on did you say?

Mr. BERNSTEIN. Page 43.

Chairman DOUGLAS. Which column are you reading from?

Mr. BERNSTEIN. I was reading from a summary I had made separately, the same figures.

Chairman DOUGLAS. Is this the third column?

Mr. BERNSTEIN. Yes.

Chairman DOUGLAS. You did not read them in the sequence?

Mr. BERNSTEIN. The sequence is different, that is right, but they are the same figures.

Chairman DOUGLAS. What is the conclusion you draw?

Mr. BERNSTEIN. The conclusion I draw is that in spite of the several times higher employment costs per hour, including all fringe benefits, the labor costs as a percentage of sales is only fractionally higher in the United States than it is among our competitors.

Chairman DOUGLAS. Is that really true, from the third column? Am I reading properly?

Mr. BERNSTEIN. Yes.

Chairman DOUGLAS. 39.6 in the United States, 33.8 in Canada. That is a difference of nearly 6 percent. Great Britain 23.2. That is a difference of 16 percent.

Mr. BERNSTEIN. Yes.

Chiarman DOUGLAS. German Federal Republic 21.6.

Mr. BERNSTEIN. Yes.

Chairman DOUGLAS. That is a difference of 18 percent.

Mr. BERNSTEIN. That is right.

Chairman DOUGLAS. France 21.3.

Mr. BERNSTEIN. On the average it is about 50 percent higher in the United States as compared with three to seven times as high on the employment costs per hour.

Chairman DOUGLAS. I understand. But still there is quite a difference.

Mr. BERNSTEIN. Yes.

Chairman DOUGLAS. When you say only fractionally higher, 99.9 percent would be only fractionally higher.

Mr. BERNSTEIN. Oh, no, I don't mean that.

Chairman DOUGLAS. But apparently you had a figure which is 50 percent higher.

Mr. BERNSTEIN. That is right.

Chairman DOUGLAS. Well, I would say that is a considerable fraction, Mr. Bernstein.

Mr. BERNSTEIN. By a considerable fraction higher.

Chairman DOUGLAS. All right, good.

Senator JORDAN. Mr. Chairman, let's look down that table just a little farther. Let's see here now. Japan 12.7. I would say the United States is more than three times as high. That is quite substantial.

Chairman DOUGLAS. It all depends what you take as a base.

Mr. BERNSTEIN. But you see the difference in wages or labor costs per hour, which is the figure which has been mostly brooded about. It is seven times as high, that the American labor costs per hour are seven times as high as the labor costs per hour in Japan.

Senator JORDAN. This figure is something over three times as high.

Mr. BERNSTEIN. That is right, just about that, yes.

Then following your example of Japan, the third important point is that materials cost in the United States—what word shall I use—are substantially lower than materials cost in the other countries. Take, for example, Japan. Materials cost in Japan, as a percentage of sales, represent 58.3 percent, and in the United States they represent 38.6 percent.

Chairman DOUGLAS. Put the other figures in, too.

Mr. BERNSTEIN. I beg your pardon?

Chairman DOUGLAS. Put the other figures in for Canada.

Mr. BERNSTEIN. Canada 50.8 percent, Great Britain 47.2 percent, France 44.7 percent.

Chairman DOUGLAS. You don't have any figures for the German Federal Republic?

Mr. BERNSTEIN. Not on an average.

Chairman DOUGLAS. But the figures on coal would indicate a very much higher cost of coal in Germany.

Mr. BERNSTEIN. That is right.

Chairman DOUGLAS. Because when I was in Germany in 1957, I found that had it not been for the quota, that in the absence of tariffs, American coal could have been shipped across the Atlantic even with heavy tonnage freight rates, and laid down in the lower Rhine at prices appreciably below German prices.

Mr. BERNSTEIN. It is being done today.

Chairman DOUGLAS. Yes, but Germany limits the importation of American coal to 5 million tons a year.

Mr. BERNSTEIN. It puts a tax of $5 a ton on the surplus.

Chairman DOUGLAS. And there is a quota in addition?

Mr. BERNSTEIN. No, it is a tax.

Chairman DOUGLAS. When I was there it was a quota.

Mr. BERNSTEIN. A tax.

Chairman DOUGLAS. Have they shifted from quota to tax?

Mr. BERNSTEIN. They have a tariff fee quota, but we can mine our coal in West Virginia, ship it by freight car to Hampton Roads, transfer it to freighter to Rotterdam, transfer it again to barge, ship it up the Rhine to Duisburg, and unload it there at a cost including this $5 surplus tax, the total then amounts to about $16, this cost is lower than it costs to mine the coal right up under the Rhine River where the American coal is unloaded.

Chairman DOUGLAS. So you would say if we could get a figure on material costs in Germany, in all probability those would be much higher than 38.6 percent.

Mr. BERNSTEIN. Yes, we know that.

Chairman DOUGLAS. Now I think it should be said that the National Industrial Conference Board I believe, was the first organization to point this out in the summer of 1961. They published a very able study on this.

Mr. BERNSTEIN. Yes.

Chairman DOUGLAS. Pointing out that raw material costs in the United States were very much greater than raw material costs in Europe—pardon me, very much lower.

Mr. BERNSTEIN. Lower.

Chairman DOUGLAS. Lower than raw material costs in Europe.

Mr. BERNSTEIN. I might point out that we are blessed with raw materials in the United States, coal, power, and even iron ore, and where we don't have our own, we have cheap sources of iron ore exploited by American companies. In Europe most of the companies do not have their own sources of cheap raw materials. They have their own raw materials which they are required to mine, but the requirements are such, and the geological conditions are such, that the cost becomes astronomical.

For example, the iron ore in Germany, which is of very low quality, and which requires a great deal of work to beneficiate.

Chairman DOUGLAS. Senator Proxmire.

Senator PROXMIRE. I think that is the difficulty. I think you can make a strong case that materials may be lower cost in the United States, but it seems to me that is not the way to do it, because if you take labor costs, refine it as a percentage of sales that they are higher, then obviously other costs as a percentage of sales are likely to be lower. In fact, they almost have to be lower by definition.

What are the ingredients of sales? They are labor costs, other costs, and profits. The fact is that the profitability, with the exception of the German Republic, the profitability is lower in the United States than elsewhere. But it seems to me if you are going to argue that these other material costs are less, then that has to be adduced by specific statistical evidence of the ore and the coke and all the other things that go into making steel.

Mr. BERNSTEIN. Yes.

Senator PROXMIRE. Rather than the way you are doing it, because by definition you obviously arrive at a position where these other costs are lower.

Mr. BERNSTEIN. Not necessarily so, because one of the factors is that in the United States the Consolidated Steel Co. owns its own iron ore mines, and its own coal mines, and therefore the cost of producing this iron ore and coal is included in labor costs. That is why it is so high.

Not only the high rate but the fact, for example, that the United States Steel Corp. has an iron ore mine in Venezuela, and that iron ore mine in Venezuela, the Orinoco Mining Co., has miners, and those miners are paid and their salaries are included, their wages are included in the labor costs here.

So that what I am saying is that if you would take out that, if you could make a comparison of just the steel, the individual steel company costs, you would find that then my reference to the words "fractionally higher" would be much, much more accurate, very definitely.

Senator PROXMIRE. Yes, but even accepting that, all you are doing is saying that any alternative method of trying to arrive at cost is also unsatisfactory.

But I don't know what you have done, which is to take labor costs and say, "Yes, they are higher, but other costs are lower," means anything at all, because what you are doing is you are dealing with 100 percent.

You are saying labor costs represent 39 percent for the United States. Therefore, of course, the converse is going to be lower for the United States.

Mr. BERNSTEIN. That doesn't follow.

Senator PROXMIRE. Well, it certainly does, because if you include profitability, too, those are the three elements, are they not?

Mr. BERNSTEIN. Senator, the tendency in the public press has been to single out labor, to compare hourly labor costs. Now we all admit——

Senator PROXMIRE. I agree with you, and I think you are making an excellent point today, and I think it should be made over and over again, that the fact is that our efficiency is much greater, our productivity is greater, and therefore our labor costs per unit of output are not as much greater as it has been alleged.

I think this is a fine correction to make. At the same time, I don't think you can go on from there to argue on this analysis that you have here and that therefore the total costs for American steel producers are less than they are abroad.

Mr. BERNSTEIN. Take the case of Japan. The Japanese companies for the most part do not have their iron ore, their own iron ore, or their own coal. As a matter of fact, they get a considerable amount of iron ore from us and they get a high percentage of their coal from the United States.

Therefore, their labor costs appear to be low, because we are comparing only a steel mill in Japan against a whole complex of steel mills, iron mines, coal mines, limestone mines, everything in the United States.

Therefore, you can't simply draw the conclusion that the labor costs in Japan are so much lower than they are in the United States.

Senator PROXMIRE. I think that is a good point. I tried to make that point myself during the hearings, as you may recall, 3 or 4 days ago.

Mr. BERNSTEIN. Yes.

Senator PROXMIRE. Pointing out that these vertically integrated operations where they employ people to mine the ore and they sometimes own the ships themselves, that, of course, their labor content, their labor costs, are going to be higher, and the comparison is not very satisfactory.

Mr. BERNSTEIN. But, even the point that you make, which is well taken, even if we consider that alone and just study the cost of the materials, you will find that in here . We have done that. You will find where the companies make that information available, the actual cost of materials, not in percentages, you can divide this into the tonnage and find out how much it costs per ton, and you will come out with exactly the same conclusion: That the materials costs abroad for practically all companies are substantially lower than materials costs for the United States.

Chairman DOUGLAS. No, you mean just the opposite.

Mr. BERNSTEIN. Materials costs abroad are substantially higher than they are in the United States. These details are here.

You will find them in the individual company section.

Chairman DOUGLAS. I think if you could put those figures in tonnage costs, it would be better than in percentage terms of sales price. Could you put them in tonnage costs?

Mr. BERNSTEIN. You are giving me an awfully large order.

Chairman DOUGLAS. I think that is what is really needed.

Senator PROXMIRE. The difficulty is, otherwise, where our prices are higher, if you put them in percentage of sales, then the cost comparison does not mean anything.

Mr. BERNSTEIN. Yes.

Senator PROXMIRE. Put them in tonnage costs and you will eliminate that.

Mr. BERNSTEIN. I do not agree with you all the way there.

Senator PROXMIRE. It does not mean as much.

Mr. BERNSTEIN. I do agree with you that the materials cost figures are better if you had them on an individual production basis, if they were related to production. It can be done from this here; yes.

Chairman DOUGLAS. The National Industrial Conference Board, which is an employers' organization, deserves a lot of credit for pointing this out. They not only admitted it, they asserted it: That raw material costs were much higher abroad than here. I think this was a very real contribution.

Forty years ago I was very critical of the National Industrial Conference Board. I think that, perhaps, after 40 years, I should pay a tribute to them for the excellent work.

Mr. BERNSTEIN. Here, for example, on page 117, you will find in the case of the United Steel Co., Ltd.——

Senator PROXMIRE. Seventeen, is that?

Mr. BERNSTEIN. Page 117.

You will find the cost of materials in British pounds and Swiss frances, and then, if you will look back on page 115, you will find the crude steel production of the United Steel Cos.

Chairman DOUGLAS. And if you divided the first into the second?

Mr. BERNSTEIN. You can divide them in.

Chairman DOUGLAS. Have you done it?

Mr. BERNSTEIN. I have not done it yet; no. I did not bring my slipstick with me.

Chairman DOUGLAS. I think this is a capital job for the Department of Commerce.

Mr. BERNSTEIN. Let them do it.

Another point is that there are many American companies which have lower labor costs than individual companies abroad. For example, one of the companies that has the highest labor costs is a Belgian company.

Chairman DOUGLAS. Belgium?

Mr. BERNSTEIN. Belgium, Cockerell-Ougree, and the labor costs of this company are higher than that of most American companies. Yet, this company is one of the chief exporters to the United States.

Chairman DOUGLAS. How do you explain that?

Mr. BERNSTEIN. I think Mr. Lederer gave us a good deal of information on that point.

Chairman DOUGLAS. If he did do it, I have forgetten what he said.

Mr. BERNSTEIN. They have other advantages.

Chairman DOUGLAS. What?

Mr. BERNSTEIN. They have other advantages.

Chairman DOUGLAS. You mean shipping?

Mr. BERNSTEIN. Which compensate, and they are willing to accept, for example, a lower profit margin, if necessary. They have the problems in Belgium, as in most European countries, they cannot lay off workers during periods of recessions. Therefore, since most of their products, most of their equipment is already depreciated, written off, they find that they can take advantage of a special circumstance and sell at a lower rate than they would to their customers normally.

Furthermore, the point which Mr. Lederer did not make, sales to third countries, that is, sales outside of the Community, are not controlled by the European Coal and Steel Community. They can set whatever price they want. There is a cartel in Brussels which generally controls such matters, but this is run by the individual exporting companies, so that they can adjust themselves to special situations to meet any price.

Chairman DOUGLAS. Now, Mr. Bernstein, do you charge, therefore, that the European steel companies are dumping steel products in the United States?

Mr. BERNSTEIN. That is going to be investigated by the U.S. Tariff Commission, and hearings are set for, I believe, next week, and I would rather that all of the evidence on that score be presented to the body which is going to pass judgment on it.

Chairman DOUGLAS. I think that is appropriate. Go ahead.

Mr. BERNSTEIN. I am simply stating a fact.

Chairman DOUGLAS. Can you wind up in about 10 minutes more?

Mr. BERNSTEIN. I can wind up now. I think I have made my point.

Chairman DOUGLAS. Thank you very much.

Mr. BERNSTEIN. Oh, one more thing. The question has been raised concerning the individual costs. I have presented to the House Ways and Means Committee a study of employment costs in foreign trade in which I have gone into the labor aspect much more deeply than we do here.

Chairman DOUGLAS. Per ton?

Mr. BERNSTEIN. We cannot do it on a per-tonnage basis because neither the U.S. companies nor the European companies will release any of this information.

I should like to submit this.

(The document referred to follows:)

STATEMENT BY MEYER BERNSTEIN, INTERNATIONAL AFFAIRS DIRECTOR, UNITED STEELWORKERS OF AMERICA, ON EMPLOYMENT COSTS AND FOREIGN TRADE

My name is Meyer Bernstein. I am international affairs director of the United Steelworkers of America. I am glad to have this opportunity to appear before this committee because our organization has always supported trade liberalization within the free world, and we now wholeheartedly support H.R. 9900.

In February of 1950 I went to Germany on loan from my union to the State Department to serve as labor liaison officer in the Ruhr. I remained in Germany until September of 1952. In June of 1953 I returned to Europe, this time in behalf of the United Steelworkers of America to serve as our representative to the European Coal & Steel Community and the unions associated with that organization. I remained in Luxembourg until December of 1955 when I was transferred to Geneva to serve for a year as assistant to the president of the International Metalworkers' Federation, a trade secretariat to which my union is affiliated.

You will note that after the completion of my Government duty, I returned to Europe for an additional period of 3½ years in an official capacity for my own union. Our purpose was threefold: First, to encourage and assist wage policies and programs which would help raise living standards of metalworkers in

Europe. Secondly, to study foreign industry conditions, particularly within the European Coal & Steel Community, and to ascertain the effect upon our own steel industry in the United States. And, thirdly, to help strengthen the democratic labor union movements abroad and their ties with the United States.

### PROBLEM OF INTERNATIONAL LABOR COST COMPARISONS

It is out of this experience and the continuing exchange of information from the sources I developed in Europe during that period and in Asia and Latin America subsequently that I wish to discuss the question of international labor costs comparisons as a factor in foreign competition.

There is probably no aspect of H.R. 9900 which is so little understood and concerning which there is so much eloquent confusion. I can speak with some confidence on the matter, for my indoctrination began with the same set of false notions and half-truths. At the outset I too made the standardized hourly comparisons and drew hasty provisional conclusions. But as I dug more deeply into the whole body of facts, I realized how erroneous surface indications were. Let me share with you my findings.

I was chiefly interested in two prime questions: First, how did the average foreign worker fare in comparison with his American counterpart—i.e., what were his earnings and benefits with respect to ours?

Because of the wide disparity in workweeks and employment stability, hourly comparisons taken alone were misleading. Information on the relative purchasing powers of the respective national currencies on the basis of both our market baskets and theirs, plus data on significant social legislation, would also be necessary to provide worthwhile international standard of living comparisons.

### STEEL WAGES AND FOREIGN COMPETITION

The second question was of equal concern to my organization. What were employment costs to the employer and what effect did they have on his competitive position?

In a sense, this question also dealt with earnings and benefits, but from an entirely different standpoint. Obviously, hourly earnings—that is, the wage rate plus shift and weekend premiums, overtime, and the like—or even hourly employment costs, that is the foregoing plus the cost of all other fringe benefits such as vacations, hospitalization, pensions, and so forth calculated on an hourly basis, tell little in themselves, not only because of differences in productivity (i.e., number of hours of work necessary to produce the same unit of product) but also because of differences in workweeks, differences in hours paid for but not worked, etc.

International differences in wages or employment costs then have an effect on relative competition positions only when taken together with the relative number of hours worked or paid for per unit of product. A low hourly wage or employment cost producer has no labor cost advantage over a high wage or employment cost producer if his productivity is proportionally lower. That is the low wage producer gains in hourly costs; but he loses this advantage in having to pay for more hours. The two elements must be taken in conjunction. Furthermore, other cost factors must also be compared. And finally the comparison must be made on a company-by-company basis, for it is the individual producer that is the competitor, not the country.

It was with these thoughts in mind that I inaugurated in 1956 a comparative and comprehensive study of the hundred largest steel companies of the free world. These companies accounted for 85 percent of the total steel produced outside of the Soviet orbit. I prepared this study for a conference of the iron and steel department of the International Metalworkers' Federation. For the first time we now had detailed information on every major steel company in the free world, from which could be made comparisons of all the financial items which entered into the relative competitive position of each company. The basic information was the kind which we in the United States normally prepare for our negotiations with employers.

The IMF has since that time held another conference of its iron and steel department in 1959, and has one scheduled for May of this year. This same study has been enlarged and brought up to date for each meeting by the economist of the IMF headquarters at Geneva, Mr. Carl Casserini, with assistance from myself.

I should like to summarize the main conclusions of these studies:

(1) The United States is head and shoulders over the rest of the world in productivity and in hourly earnings and hourly employment costs. Combined these result in total employment or labor costs which are only marginally lower in other countries than they are in the United States.

(2) The profit ratio of the American companies with respect to both net worth and sales was generally higher than that of foreigners. (This is particularly true in the case of a nonrecession year.)

(3) Cost of materials was substantially higher abroad than in the United States. (This applies to all of the main raw materials: coal, iron ore, power, and transportation.)

(4) A major consideration in pricing policy in foreign lands is the maintenance of full employment; an objective which has not entered American pricing determinations.

STATISTICAL SHORTCOMINGS

The best measurement for point (1) above would, of course, have been labor costs per unit, which would be expressed in terms of hours per unit of product times average employment costs per hour. We know the total hours worked in the steel industries of most countries, including our own, but these total hours data are in themselves inadequate without information on the product mix and the types of steel produced in the different countries, which vary considerably. We produce more high quality steel proportionately than other countries; cold rolled sheets are major American export items. Man-hours going into these valuable products therefore cannot reasonably be equated with man-hours going into concrete reinforcement bars, a large import item. Furthermore, man-hours going into alloy steels cannot be put on a par with man-hours going into Thomas steel, a cheap method not used in the United States, or other inexpensive steels. For a meaningful comparison we must therefore also have a breakdown product by product and process by process. Unfortunately, such information is not reliably available any place, not even in the United States. Furthermore, as will be explained later, the European steel industry pays for vastly more hours not worked, and therefore not included in the statistics cited below, than we do.

There are other shortcomings, again tending to upgrade the appearances of foreign productivity and downgrade ours. Our definition of the steel industry is more comprehensive than Europe's. Our steel plants begin the manufacturing stage at an earlier process than is common abroad. Coke works are almost always in the steel plant here, and thus included in steel industry total hours; whereas in Europe such works are generally located at the coal mines, and the hours worked are accounted for in that industry. Then, too, we include more finishing operations in steel than do the Europeans. Nevertheless, a comparison of average hours per ton of product would give a general indication of the advantage we enjoy.

In 1960, the six members of the European Coal and Steel Community produced 50,770,000 metric tons of steel products, requiring 1,007,900,000 man-hours of labor or 20.2 per metric ton. During the same year we produced 64,545,503 metric tons of steel products, requiring 862,665,000 man-hours, or 13.4 per metric ton. And curiously enough, the biggest exporter to the United States—Belgium—had the highest manhours per ton, 23. Belgian employment costs are among the highest in the world, even higher than those of many companies in the United States.

Another useful measurement, which is enhanced in value because it is available with respect to most individual steel companies of the free world, is labor costs as a percentage of sales. For this we find the following national averages for 1960:

| | *Percent* | | *Percent* |
|---|---|---|---|
| United States | 39.6 | Sweden | 21.3 |
| Canada | 33.8 | Norway | 20.3 |
| Belgium | 31.2 | Austria | 19.5 |
| South Africa | 26.5 | Luxembourg | 19.5 |
| Great Britain | 23.2 | Mexico | 16.4 |
| Italy | 22.6 | Japan | 12.7 |
| West Germany | 21.6 | Holland | 12.0 |
| France | 21.3 | | |

Even this measurement, however, leaves much to be desired. The employment costs, of course, include all employees in all operations for all levels, right up to the president or chairman of the board. Other shortcomings of this measurement are as follows:

(*a*) The American companies are generally more integrated—that is, they have more operations and therefore more employees included in the consolidated statement, thus adding to labor costs here.

(*b*) American industry includes all fringes. In Europe, many fringes are not included because of pecularities in their financing. Housing, for example, is in large measure paid for out of taxes or tax benefits, which are not reflected in labor costs there.

(*c*) During the periods covered in our latest report, the American mills were operating at recession levels while the Europeans and Japanese were going at optimum rates.

All these factors had the effect of raising the American percentage while reducing the foreign, but even so, the differences in labor costs among American companies were almost as much as the differences between the American national average and the foreign national averages. Furthermore, a number of American companies, some fully integrated, had lower labor costs than their European competitors. Differences in labor costs, then, were not nearly as significant as claimed.

On balance, then, steel from the United States is, or, at the discretion of our producers, can be, competitive with that of foreign countries. There is a small employment cost advantage abroad which is more than counterbalanced by a materials cost disadvantage. Greater pricing flexibility practiced abroad is motivated largely by social and legal considerations which are absent here.

### EMPHASIS ON FRINGE BENEFITS ABROAD

The disparity in hourly earnings averages is indeed substantial. The average European's hourly income is normally one-third to one-fourth that of an American worker. The Europeans, however, work more hours per week. But a more important difference is to be found in the multitude and extent of fringe benefits provided for aboard by law or collective bargaining agreement. Social security in other industrialized countries is more widespread than here, and contain programs unknown in the United States.

### FAMILY AND HOUSING ALLOWANCES

France and Italy, for example, are leaders in the field of family allowances. There the state imposes a tax of approximately 15 percent of the total wage bill of each employer and then reallocates this money among married employees on the basis of the size of their families. It is perfectly possible to have two workers, one a married man with a large family and the other single, employed side by side, both with the same seniority, doing exactly the same job at the same rate, and receiving the same wages directly from the employer. In the case of the single worker his wages would constitute his total income, whereas the married man working beside him would receive a supplemental check from the family allowance fund administered by the Government. This check could be just as large as his direct wages from the company. Furthermore, if the latter worker were laid off or ill, his family allowance would continue. In other words, a nonworking family man could have a bigger income than a single man remaining on the same job.

Housing allowances under law, and housing construction under company policy, for which tax credits are given, are also common abroad. Furthermore, supranational agencies like the Coal and Steel Community have vast housing programs. Social security abroad also includes medical care and hospitalization, again with more comprehensive coverage than in the United States.

It may be said that the European percentages are higher because the base is lower and that the absolute figures for the United States are really higher. In general, that is true. But also true is the fact that the European benefits to the worker are much greater than our own. Let me explain.

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### MEDICAL CARE

Under our Steelworkers' contracts, the steel companies must provide the full cost of a medical program which they estimate costs more than 15 cents an hour. This program, though expensive, is still inadequate. And any steelworker taken seriously ill must put out of his own pocket a large share of the hospital costs. Hospitalization under our contract is limited to 120 days with a $300 maximum surgical schedule. A man with a major illness would therefore get little comfort from such a program.

In Europe, where the companies undertake full medical care irrespective of cost, the benefits for the worker are infinitely greater. Consider, for example, the case of the Fiat steel and auto plant in Italy. There, the company under a private equivalent of the social security requirement makes available to its employees comprehensive medical care. Fiat has its own hospitals and clinics and its own staff of 600 doctors to look after the 188,000 employees and dependents included in their program. Coverage is complete for everything from first aid for a cut finger to cancer.

I have myself visited the Fiat medical facilities, and at my request was given a case study involving what we describe as a catastrophic illness. I wanted this information to make a comparison of benefits at Fiat as compared to those in the United States, since in the United States the cost of catastrophic illness is one of our chief problems. The case study given to me was the complete record of a worker who was originally employed by Fiat in 1949. From that time up to the fall of 1961 he was ill a total of more than 1,400 of 4,380 days in the elapsed period.

He spent a total of 570 days in the hospital on 14 separate visits. He spent 277 days during 10 convalescent periods in a convalescent hospital maintained by the company. He spent 120 days at a clinic for hydrotherapy during a total of eight treatment periods. He spent 194 days in additional convalescence away from home. He spent 15 days in a company rest home in the mountains and he spent 312 days at home. In other words, he was under medical care or convalescent for 4 solid years out of the 12 he has been on the company's payroll, and all of this treatment and care was made available to him free by the company.

Under the labor agreement, full salary is paid up to the first 4 months of illness and after that half salary for the remaining months.

Fiat illustrates too a number of other benefits which a company càn make available to workers on a really lavish scale without prohibitive costs. For example, Fiat has vacation facilities in the mountains and at the seashore for the children of employees. Equivalent accommodiations in the United States are so expensive as to be practically prohibitive for workers. Fiat also maintains an old folks' home and five children's nurseries in the city of Turin. In addition, Fiat has an extensive housing program, a sports program, and other recreational benefits.

### SOCIAL WAGE SYSTEM IN JAPAN

The same type of extensive welfare program is to be found in Japan, where it is the practice of the large steel companies to provide hospitals and health centers for the care of the workers and their dependents; to provide houses and apartments for employees; to establish cooperative department and food stores, offering commodities at large discounts; to provide commuting allowances for workers from their homes to the plants and back; to provide rest homes, vacation resorts, and other recreational facilities. All of these services and benefits are offered either free or at nominal charge.

For example, a typical Japanese steelworker lives in a company apartment of moderate size with all conveniences, including bathroom, veranda, etc. It is well furnished, with refrigerator, washer, TV. His basic rent is approximately $6 per month and in addition he pays some 66 cents a month for water, a little less than $3 for gas, and a maximum of $2 a month for electricity.

The wage system in effect in Japan could be called a social wage—that is, additional earnings are provided to workers based on service with the company, family status, dependents, etc. A young unmarried man entering the Japanese steel industry is paid a relatively low starting rate, with this amount being increased yearly based on the factors mentioned above plus yearly negotiated increases until at the time of retirement at age 55 the worker may earn in excess of $200 a month. Upon retirement, a worker at Yawata Steel Co., the largest in Japan, for example, receives a lump sum payment equivalent to 83 times his monthly pay at the time of retirement.

But most important, the Japanese steelworker having permanent status, unlike his U.S. counterpart, is not subject to layoff, short workweeks, or reduced hours, but is guaranteed full employment 52 weeks a year, giving the worker a sense of real economic security.

In most European countries paid vacations are longer and paid holidays more numerous than in the United States. In France the minimum legal vacation period is 3 weeks. In Belgium it is 12 days, with double pay for the last 9; i.e., the Belgian worker gets 12 days vacation each year, but is paid for 21 days. In Luxembourg, Germany, Belgium, and Italy paid holidays range from 10 to 17 days per year. Almost all European countries provide for what is called compassionate leave—that is, time off for marriages, births, or deaths.

### EMPLOYMENT SECURITY AND CODETERMINATION

Much more significant, however, than these benefits is employment security as practiced in Europe under law, custom, and collective bargaining agreement. Layoffs are unusual in countries where the welfare state has been established. Germany, France, Italy, and other countries have laws limiting the power of an employer to lay off workers even in the case of reduced operations.

Take Germany, for instance. Before an employer may lay off more than 49 persons during the course of a month, he must file a petition with the state labor office explaining the need for such a reduction in forces and at the same time he must file a statement by the works council, a sort of European equivalent of our local union, setting forth the position of labor with respect to this proposed move.

It is true that the purpose of this law is simply to delay layoffs and that eventually the employer could bring about the desired layoffs. In practice, however, this occurs only rarely. One of the reasons for this is that other laws in Germany—and to a limited extent elsewhere—give labor a very large role in establishing management-employment policy. Most outstanding in this field is the principle of codetermination in effect in Germany under which in all large enterprises labor has at least one-third representation on the company board of directors and in the steel and coal industries plus certain other government owned or controlled enterprises labor has a share of power as large as that of the owners or managers.

In every steel and coal company half of the membership of the boards of directors are named by labor. In a number of steel companies a labor man is in fact chairman of the board of directors. In return for this, however, management has a slight majority in membership. In other companies, an employer representative would be chairman of the board, but then labor would have the majority.

The management board—that is, the officers—consists normally of only three to five persons of coequal rank and in each case the top officer in charge of labor relations (the arbeitsdirektor) is a union man named by the union. He has management authority greater than that of a vice president in charge of labor relations in a U.S. company for he also takes part in decisions passed on by the whole board in other matters as well.

For example, the president of the metalworkers' union of Germany is vice chairman of the board of directors of the Krupp-owned Rheinhausen Steel Co., and a former union district director is arbeitsdirektor. In such a setup we can well understand why the companies practice moderation in layoff.

In preparation for a study I made, I wanted to obtain an actual case of a layoff with its petition to the state labor office. I had a difficult time. Most of the arbeitsdirektoren told me that they didn't even ask for permission to lay off. During the recessions and they have had them in Germany just as in the United States but on a much smaller scale—they simply transferred workers around, using them in construction or for other internal improvements.

In February of this year, the Salzgitter Co. announced that as a result of its modernization program and other changes a number of workers had become superfluous. But it said nobody would be laid off. In order to take up this slack, the company would depend on attrition alone, that is, workers who retire or quit or die would not be replaced.

### AMERICAN STEEL COMPANIES UNDER FOREIGN LABOR CONDITIONS

Let me close by referring once more to the concept of a real wage or employment cost comparison and what we as a labor union are doing about it.

All of the major American steel corporations have opened iron ore operations abroad. These same companies continue to operate their iron ore mines in the United States. This provides us with a wonderful opportunity to use actual examples of labor costs for the same operations for the same company in the United States and abroad. The results are most interesting when we consider the levity with which these same companies make use of the international hourly wage or employment cost comparison.

The United States Steel Corp. and the Bethlehem Steel Corp. both have subsidiaries in Venezuela, both are under collective-bargaining agreement with the mine workers' union there. Both these companies have similar mines in the United States, which are under collective-bargaining agreement with my union. In the U.S. mines, the minimum wage is $2.285 an hour compared with the minimum of 77.6 cents an hour in Venezuela. The maximum in the United States is $3.825 an hour compared with $1.847 in Venezuela. So far, there would seem to be some truth in the hourly wage comparison, but now look at the hours paid for. The American worker works a 5-day week and, assuming the best of all possible conditions, he would therefore be on the job 49 weeks, on vacation an average of 2 weeks and on holiday a total of 7 days. He therefore would be paid for 262 days per year, that is, 51 weeks at 5 days each plus 7 holidays.

The Venezuelan miner working for the same company has recently been put on an alternate 5- and 6-day workweek—that is, one week, he works 5 days and the other week he works 6 days. But in both cases the pay is the same—that is, he is paid for 6 days. In addition, Venezuelan law and the American companies' collective-bargaining agreements provide for full pay for Sundays not worked 52 weeks a year. In other words, these American steel companies pay their miners in Venezuela for 365 days a year at full rates although the miner works a total of only 249 days, that is, 26 weeks at 5 days and 26 weeks at 6 days less 30 days vacation and 7 holidays for everyone.

Nor is this all. Again under law and collective-bargaining agreement, the American steel companies pay a profit-sharing bonus of 60 full days' pay per year.

Summing up, then, an American miner gets a higher wage per hour but only for 262 days per year. The Venezuelan worker gets a lower wage per hour but for 225 days per year.

Actually, because of additional time off with pay for compassionate leave and for other causes, the Venezuelan miner works no more days in the course of a year than his American counterpart employed by the same company but he gets paid for over 60 percent more days in the course of the year.

Furthermore, it is only the American miner with the highest seniority who gets full time employment in the American mines. For the last 3 years we have been in a recession, and the mines have been operating only part time with most of the miners on short workweeks. In Venezuela, on the other hand, the employers are not permitted to reduce the workweek or to lay off workers in spite of the fact that production, as at home, dropped considerably. To be exact, iron ore produced in Venezuela was reduced by 25.27 percent in 1961 as compared with 1960. The United States Steel Corp. down there attempted to readjust its working force to meet this lower demand, but Venezuela had laws governing such things. Furthermore, the collective bargaining agreement had a clause guaranteeing work stability. The result was that the secretary of labor forbade the company to make the changes. In spite, therefore, of production reduced by a quarter, United States Steel in Venezuela was required to maintain the same work force, all continuing to receive 7 full days' pay each week for 52 weeks.

This is without doubt an unusual case, but it does illustrate that care must be used in making hourly wage cost comparisons.

### A LABOR POINT 4 PROGRAM

Nevertheless, we as a union are aware that earnings of workers abroad generally are not as high as they could be. This affects the competitive status of their employers only to a limited degree because of the lower productivity abroad. But productivity is increasing all over the world, and it is our purpose to help our sister labor organizations in other countries not only maintain their pace but to catch up with us.

Let me give you one simple example; namely, Japan. In times past, the Japanese steelworkers' union was limited in its effectiveness, one, because it was highly political in its objectives and two, because it did not make full use of its economic strength. One of the reasons it did not bargain with full vigor was that it had been persuaded that it was impossible to strike a steel mill for extended periods of time without doing so much damage to continuous equipment that it would take 6 months or more to resume full operations after settlement of a strike.

This was their belief. But when they observed right after our strike of 116 days in 1959 that we were able to resume a high rate of operations within a matter of 2 weeks and that no appreciable damage to our equipment had been suffered, the Japanese steelworkers' union realized that they had been laboring under a misapprehension. Accordingly, they addressed a request to our union through the International Metalworkers' Federation. They wanted us to send them two experts who could explain how to shut down a steel mill in a strike without damaging the equipment and permit a resumption of work immediately after settlement.

We were more than happy to comply, and we sent two of the best experts in the field. These two Americans made a tour of the Japanese steel plants with the Japanese steelworkers' union and they explained how we did such things at home. This was a kind of private point 4 program.

This was in 1960. The results were obviously most worthwhile for the union can now bargain from a much stronger position. Previously the companies only had to fear a token strike of a few hours. Now they could be faced with a real shutdown. Following up on this advantage just a few months ago, the Japanese steelworkers' union addressed another request to us. Their new collective bargaining was just getting underway and they had been informed that the companies would propose an American-type job evaluation program, so again the Japanese asked for our help. They wanted a job evaluation expert who would teach them how to protect their interests. Furthermore, they wanted another American who could advise them on negotiating strategy. We were happy to comply with both requests, and two associates of mine left for Japan on the day that we began our own negotiations in Pittsburgh. The Japanese union was happy to make full use not only of the talents but also of the publicity value of these two men.

We have received a warm letter of thanks from the president of the Japanese union extolling the value of this visit.

### A FAIR INTERNATIONAL LABOR STANDARDS PROGRAM

I could cite many other examples of the kind of cooperation my union has offered to other labor organizations abroad. In our own program of internatinal upward harmonization of wages, hours, and working conditions, it is our purpose to eliminate differences in labor costs as a factor in international competition. The International Metalworkers' Federation has been much concerned with this subject also, and we have over the course of the past few years drawn up a program which we think will deal adequately with the unusual case of unfair competition based on labor. The essential element is that we could use a proposition of the General Agreement on Trade and Tariffs which is known as the Havana Charter. This provides that member states will undertake an obligation to achieve and maintain full and productive employment and to eliminate unfair labor conditions which substantially disrupt international trade.

The heart of the I.M.F. proposal is to the effect that we would propose machinery be created to provide for a complaint procedure on allegations that a given country is not complying with fair international labor standards.

It is proposed that a basis of complaint be established if both hourly and unit labor costs in exporting firms are unjustifiably below those in the same industry in the complaining country.

If such a charge should be made, there would be a confrontation between the domestic producer claiming he is hurt by low wage foreign competition and the exporting producer. Both would be required to furnish data necessary to sustain or disprove the allegation. We would hope thereby to take labor cost comparisons out of the hands of the propagandists and put them into the sphere of serious and factual study, which is where the subject belongs.

Senator PROXMIRE. Let me ask you one question, because this is extraordinarily interesting. You have implied this. A major consideration in pricing policy in foreign countries is the maintenance of full employment, an objective which has not entered into American price determination.

Does this mean that there is governmental action that requires them, just as you alluded to the Belgian situation where they cannot lay people off——

Mr. BERNSTEIN. Yes.

Senator PROXMIRE (continuing). Which, therefore, requires them to keep their employees at work?

Therefore, they will be willing, sometimes, to sell, perhaps, below cost, just for this particular, specific purpose, and how common is this?

You have mentioned Belgium. Is it true in Germany and France?

Mr. BERNSTEIN. Yes, this is true of Germany, of France; true of Italy, true of most other countries.

Senator PROXMIRE. England?

Mr. BERNSTEIN. Let us take Germany, which is perhaps as important as any other. In Germany the law provides that no company may lay off more than 49 workers during the course of 1 month without first filing an application with the state labor office. This application must include a statement of position by the works council or what we would call the local union. So what happens in Germany is an employer feels business is down; he has to reduce his work staff by more than 49. The actual figure is 10 percent, with a maximum of 49. He wants to do that. He then has to go to the local union and say, "Gee, it looks as if we are going to have to lay off some of your associates. These are the reasons for it," and he has to go into great detail.

"Will you please give me a statement as to your position on it? Are you in agreement or against it?"

And the local union will have to decide and write out a statement, turn it over to him. Then he takes this statement, plus his own application, to the state labor office, and requests their permission to lay them off. If he gets no answer within 2 months, he then can do it anyhow. After 2 months he can lay them off. But he must have this delay. It is at least a 60-day delay, a 2-month delay, with a statement by the local union.

In Italy you cannot even do it that way. It is, for all practical purposes, almost impossible to lay anybody off.

Furthermore, in Germany in the steel industry—and that is what we are concerned with—the vice president in charge of labor relations, a man who holds a much higher position in Germany than the equivalent in the United States, this man is named by the union. He is a union man.

Chairman DOUGLAS. You mean the equivalent of this would be if you named the personnel manager for United States Steel?

Mr. BERNSTEIN. Yes, yes, and he remains a member of the union. He is a member of the union.

Now, in most cases he was formerly the district director of the union.

Chairman DOUGLAS. You have got a long way to go in your bargaining, I would say.

Mr. BERNSTEIN. There is much more than that, Mr. Chairman, because the board of directors consists half of union men and half of company men. For example, the president of the metal workers union of Germany is vice chairman of the board of directors of the Krupp Steel Co.

Chairman DOUGLAS. Now, just a minute. It is a matter of historical record, I think, that for many years wages in the iron and steel industry in Germany did not go forward very rapidly, although production was going up.

Now, was this a consequence of union-management cooperation and unions being members of the board of directors and vice presidents of the companies?

Mr. BERNSTEIN. Since, Mr. Chairman, we belong to the same International Trade Secretariat, I would rather not go into all of the aspects of that except to mention this one point: That when the vice president of the company in charge of labor relations, actually he is more than a vice president because there are only three to five top management people, and he is one of these three to five; in the smaller companies it is three; in the larger companies it is five; and he has equal rights with the other two or other four, as the case may be.

But, because of the fact that he is right up there on top and he makes the decision and because he is a former union officer and because he was named by the union to his position and because he still maintains an intimate relationship with the union, carrying on a series of conferences with the union, because of all that, he is reluctant to lay his fellow workers off, so he does not.

Chairman DOUGLAS. Yes.

But is it not also true that, so far as wage rates are concerned, that, instead of the union infiltrating the management, management is infiltrating the union?

Mr. BERNSTEIN. I will not argue with you.

Chairman DOUGLAS. Yes or no?

Mr. BERNSTEIN. Argue that——

Chairman DOUGLAS. Yes or no?

Mr. BERNSTEIN. Let me put it this way. I have argued that point privately. I would rather not argue that with you here.

Chairman DOUGLAS. You mean with the reporters here?

Mr. BERNSTEIN. Or with the reporters here. We do not believe in codetermination in the United States.

Senator PROXMIRE. Let me just say this: I do not want to prolong this hearing, I think this is very interesting. But I do think that this really has not had very much effect in a country like Germany where you have maximum employment, and where you have not had layoffs and you have not had this problem that we have in this country of operating so far below capacity, so that where you have them operating near capacity, pressing capacity, desperately trying almost to pirate workers from one company to another, this point that you make really has not been tested.

If they go through a period of layoffs and unemployment, it might be.

Mr. BERNSTEIN. They have had two recessions. They had recessions in Germany, too.

Senator PROXMIRE. But they were not the kind of recessions which resulted in very much unemployment or surplus labor.

Mr. BERNSTEIN. The reason there has not been unemployment is because of the reluctance of the companies to lay people off. There has been, for example, considerable use of manpower on other jobs which we are now beginning to do at Kaiser, as a result of our savings-sharing program, but we have not done that any place else.

Referring back to your criticism of codetermining there are many—codetermination—there are many criticisms that can be made. But one thing that can be said is that you do not lay people off in a codeterminated plant nearly to the extent that you would at another. There are, obviously, many disadvantages, and the infiltration that you mentioned is obviously a danger, and there has been, of course, examples of that.

Chairman DOUGLAS. Any further questions?

Senator JORDAN. No, just one observation, Mr. Bernstein. I have done a little arithmetic here on your table 3, and I wish you would check me to see if I am wrong.

Mr. BERNSTEIN. Which one is that?

Senator JORDAN. This is page 43, where he is talking about labor costs and material costs and percentages, comparing several countries. In the six countries that you have used for labor costs and material costs, I have averaged those, and I arrive at this conclusion, and check me if I am wrong:

U.S. labor costs are 40 percent higher than the average; U.S. material costs are 20 percent lower than the average.

Mr. BERNSTEIN. Well, you are not making the comparison with the same things, I think. Use points. Use it on the basis of points.

Senator JORDAN. I am using the figures in your table.

Mr. BERNSTEIN. Labor costs in the United States are so many points higher than the average, and materials costs are so many points lower.

Chairman DOUGLAS. I think you may be forced to take up Senator Proxmire's point now in self-defense.

Mr. BERNSTEIN. With the antidumping hearings coming up, I would rather not undertake such a project. But surely the committee has economists or statisticians who can use these figures.

Chairman DOUGLAS. I think you have done amazingly well, but I would say that there are still a lot of points to be cleaned up.

Mr. BERNSTEIN. Yes, yes, of course.

This requires a great deal of study. But the important point from my side here is simply to make available to you the data from which you can draw your own conclusions.

Chairman DOUGLAS. Any further questions?

## STATEMENT OF KENNETH C. ALLEN, STAFF REPRESENTATIVE, AMERICAN IRON & STEEL INSTITUTE

Mr. ALLEN. Mr. Chairman, I wonder if I could make a clarification?

Chairman DOUGLAS. Ah, we are very glad to emerge now from the cave of silence and come into the full sunlight of day. Would you give your name for the record and the organization which you represent?

Mr. ALLEN. Yes.

My name is Kenneth C. Allen, and I am a staff representative of the American Iron & Steel Institute, which, by the way, is not a management group. It does not represent the steel companies in matters other than in collection of statistics, the promotion of steel products and research of a common interest.

As you very well know, the United Steelworkers, of course, does represent the employees. We, however, do not represent companies in the matter of prices or in the matter of labor negotiations. We are not a management group. As a matter of fact, I am sure you recognize that it would be against the law for any group of companies to have one management group.

Now, I do not know whether this clarifies why Mr. Bernstein can speak and I cannot, but I think it will shed a little bit of light on that subject. Thank you.

Chairman DOUGLAS. We have never judged you as to whether your reasons for not testifying were good or bad. We have made no value judgment on this at all.

We have not attempted to influence public opinion in the slightest.

We are very glad to have you make this statement as a justification for staying in the cave.

Mr. ALLEN. Right.

I just wanted to make sure that it was understood that the American Iron & Steel Institute is not a management group.

Chairman DOUGLAS. Is there anyone who can speak for the iron and steel companies, the so-called industry?

Mr. ALLEN. I could not answer that question, Senator. I do know, of course, that, particularly in the area of prices, the American Iron & Steel Institute does not speak. I think there may have been some confusion as to whether the steel companies were ever invited into these hearings. This is only my personal opinion. I am not expressing this as a member of——

Chairman DOUGLAS. Just a minute. Since you have raised the question as to whether the iron and steel companies were invited, I think in the telegram which I sent to the head of the Iron & Steel Institute I suggested that companies were also invited.

I presume that communications were not broken between the Iron & Steel Institute and the companies which composed them or are members, and I may say we have had numerous telephone calls from individual companies in which they were invited. We made it clear that we did not plan to issue subpenas because we remembered the fate which Senator Kefauver had when he tried to issue subpenas.

But we told each and every one to telephone, and I think we have a record of some of those who telephoned.

So please do not charge us with not extending an invitation to the iron and steel industry.

Mr. ALLEN. Senator, I said I thought this was my personal opinion.

Chairman DOUGLAS. Yes.

Mr. ALLEN. Of course, even the American Iron & Steel Institute would not even invite companies to this hearing, because, of course, it would have no jurisdiction. It would have no authorization to invite companies to take part in these hearings.

Chairman DOUGLAS. May I say that when individual inquiries were made to us, we assured them that they would be welcome. But that it was not compulsory. We had no intention of laying ourselves open to the charge that we were interfering with the free operation of——

Mr. ALLEN. I gave that as a personal opinion, sir.

Chairman DOUGLAS. I think your personal opinion ought to be based on facts and not on surmise.

Unless there are other matters we will recess until 2:30.

(Whereupon, at 12:55 p.m., the hearing was adjourned, to reconvene at 2:30 p.m. of the same day.)

AFTERNOON SESSION

Chairman DOUGLAS. With reference to the question which was raised at the conclusion of the session this morning, the record for the first day of the hearings at page 86 of the transcript states in response to a question raised by Senator Miller:

> I thought that is the ruling I made. I said that similar privileges should be accorded either to the Iron & Steel Institute or to a representative of the steel companies. They may choose to speak for the steel companies if they do not choose to speak for the Iron & Steel Institute.

In telephonic conversation we have a record of invitations being informally extended to the United States Steel Corp., and to the Bethlehem Steel Corp., and we believe also to the Kaiser Co. There were certain others, but we don't have a clear memorandum on those points.

If there is any doubt on this matter, let me say that we will be delighted to welcome any company which wishes to come in, make a statement, and we will hold a special meeting to accommodate it.

Now I wonder if you gentlemen will identify yourselves in sequence, beginning at my left.

## STATEMENTS OF LLOYD TIBBOTT, DIRECTOR, OFFICE OF INTERNATIONAL AFFAIRS, FEDERAL MARITIME COMMISSION; WILLIAM A. STIGLER, DIRECTOR, BUREAU OF FOREIGN REGULATION, FEDERAL MARITIME COMMISSION; OTTO J. KIRSE, CHIEF, DIVISION OF FOREIGN TARIFFS, BUREAU OF FOREIGN REGULATION, FEDERAL MARITIME COMMISSION; AND LEROY F. FULLER, ASSOCIATE DIRECTOR, BUREAU OF FOREIGN REGULATION, FEDERAL MARITIME COMMISSION

Mr. KIRSE. Otto J. Kirse, Chief, Division of Foreign Tariffs, Bureau of Foreign Regulation, Federal Maritime Commission.

Mr. TIBBOTT. Lloyd Tibbott, Director, Office of International Affairs, Federal Maritime Commission.

Mr. STIGLER. I am William Stigler, Director of the Bureau of Foreign Regulation, Federal Maritime Commission.

Mr. FULLER. I am Leroy F. Fuller, Associate Director, Bureau of Foreign Regulation, Federal Maritime Commission.

Chairman DOUGLAS. Thank you, gentlemen, for coming.

Now this morning there was introduced in evidence table 13 by Mr. Lederer of your Department. Do you have a copy of that before you? Will you turn to table 13, gentlemen?

Mr. TIBBOTT. I presume this is a copy of the table. We received it about 10 or 15 minutes ago. We haven't had a chance to study or look at it.

Chairman DOUGLAS. Will you look at it now, please? This table apparently shows that ocean freight rates are very much higher on exports from a given port in the United States to a European port than tonnage rates on identical items from the same European ports to a given American port.

In order that this may be in the record, we take West Germany and we have West Germany angles and beams, freight rate on U.S. exports $31.25 a ton, freight rate on U.S. imports $19.75. Both $31.25 as compared to $24. Castings and forgings $44.25 as compared to $29.25.

Then rails $36.75 as compared to $19.75, almost twice the rate. Rods $29.50 as compared to $18.25. Screws $46 as compared to $24, again almost twice this. Barbed wire $28.50 as compared to $23.

The comparison between U.S. gulf ports and North Atlantic and French ports, French rate on U.S. exports per ton, angles and beams, $28.50, the same item on imports from the identical places, $17. Both $28.50 as compared to $20.50. Castings and forgings $40.25 as compared to $34.

Billets and blooms—this seems to be the one exception— $13.25 as compared with $17. Rods, wire, plain—pardon me, rails $33.50 as compared to $17, again almost twice. Barbed wire $28.50 as compared to $19.

And on Pacific ports, Japan freight rates U.S. exports $28.10, freight rate on U.S. imports $15.50, that is for angles and beams. Castings and forgings $35 on exports compared to $15.50 on imports from Japan to the U.S. Pacific coast ports. Rods $28.25 as compared to $15.50. Pipes iron and steel 5 inches diameter $30.35 as compared to $21. Oil well casings $33.60 as compared to $21. Rods $28.25 as compared to $15.50.

We heard testimony that tramp steamers coming in frequently show these rates still lower, adding to the differential. Now these are very serious differentials, operating adversely against American exporters.

I wonder if you would give an explanation as to why, in your judgment, they exist. Who is speaking for you? Mr. Tibbott?

Mr. TIBBOTT. Yes. You ask me to give a justification of rates which frankly are very difficult to justify.

Chairman DOUGLAS. I didn't say you were to give a justification. I said give an explanation.

Mr. TIBBOTT. The factors that go into ratemaking, of course, depend a great deal on the volume of the trade and the characteristic of the trade, the need for tonnage in both directions, the need for particular types of tonnage, and I cannot explain these.

As a matter of fact, I notice that these rates were made in March 1962, and we have only had a few minutes to take a look at the statement, and I am under the impression that there may be some changes in these rates.

Chairman DOUGLAS. May I ask this: Who deals with this specific question of rates amongst you?

Mr. TIBBOTT. The rates are established in the foreign trade by the steamship lines themselves. They are not subject to control as to the measure of the rate, the reasonableness of the rate, by anybody. They are established by the conference.

Chairman DOUGLAS. Have you ever made a protest on these rates?

Mr. TIBBOTT. As far as I know, we have never even received a protest on these rates.

Chairman DOUGLAS. Have you ever thought it was part of your job to see that there was not discrimination against American exports?

Mr. TIBBOTT. As to that, Mr. Chairman, for some time the Maritime Commission and its predecessor agency has been concerned over this problem. It was brought to their attention by Mr. Celler in his investigation.

Chairman DOUGLAS. What have you done about it?

Mr. TIBBOTT. The Commission is still trying to get the staff to undertake it. They are looking for a staff. They are still understaffed.

Chairman DOUGLAS. Do you deny that these statements are accurate?

Mr. TIBBOTT. No, sir; I do not deny that they are accurate. I presume that they were accurate at the time they were made. I do not know whether they are the same rates today or not. That would require some check and study.

Chairman DOUGLAS. Let me ask you this: Did you do anything after March 1962 to try to correct them? These figures are correct as of March 1962.

Mr. TIBBOTT. This is the first time I have seen it.

Chairman DOUGLAS. But you deal with these matters. Is this a completely new thing for you? Is this the first time you ever knew that rates on our exports were higher than rates on our imports?

Mr. TIBBOTT. There are many instances, there are instances where rates are higher on imports than they are on exports.

Chairman DOUGLAS. I understand. That is where we export more than we import, and where on the return voyage there is idle space, this will be used to justify a lower rate in order to attract the business. I understand that.

Mr. TIBBOTT. The problem here, if I may say, is that we do not have a control over the reasonableness of these rates.

Chairman DOUGLAS. Have you ever tried to exercise control?

Mr. TIBBOTT. I would like to draw attention, and perhaps it would be useful to the steel industry, to a provision that has been written into the law, in to Public Law 87–346, which in effect requires a steamship conference to maintain a procedure for receiving shipper complaints and protests, and for early hearing in considering requests and complaints there. It is written in the amendment to section 15, Public Law 87–346. It says:

> The Commission shall disapprove any such agreement after notice and hearing on the finding of inadequacy policing of the obligations under it, or of failure or refusal to adopt and maintain reasonable procedures for promptly and fairly hearing in considering shippers' requests and complaints.

Chairman DOUGLAS. Then do I understand that you said that if you received complaints, you would have the power to act upon them?

Mr. TIBBOTT. This section requires that the conferences themselves who establish the rates establish and maintain satisfactory procedures for shippers to come to them and protest and complain.

Chairman DOUGLAS. Are the conference decisions filed with U.S. authorities?

Mr. TIBBOTT. The conference minutes and records of their meetings and their tariffs are filed.

Chairman DOUGLAS. So you have them?

Mr. TIBBOTT. And we have no knowledge at this stage of any protest, we have not received any complaint or protest from any steel shipper.

Chairman DOUGLAS. Do you have any representatives at the negotiations of the conference?

Mr. TIBBOTT. No, sir, we do not.

Chairman DOUGLAS. Do you have any observers?

Mr. TIBBOTT. No, sir.

Chairman DOUGLAS. Do you give treaty approval to the results, or legal approval?

Mr. TIBBOTT. We don't give any approval. What we can do is to step in and disapprove an agreement which is unfair or detrimental to the commerce of the United States, but that must be done——

Chairman DOUGLAS. Then you would have the power to disapprove?

Mr. TIBBOTT. That could be done after a hearing.

Chairman DOUGLAS. Why don't you hold a hearing?

Mr. TIBBOTT. At the moment we have had no petition, no requests for a hearing, sir.

Chairman DOUGLAS. Is it your position that you can act only if there is complaint, but you cannot act on your own initiative?

Mr. TIBBOTT. I think that the Commission has acted on its own initiative on a number of occasions, but in a situation such as this, where as a matter of fact this was a study that was made by somebody else, it was not brought to the Commission's attention, we don't know——

Chairman DOUGLAS. Shouldn't you be making these studies yourself? Do you depend solely upon information that blows in upon you from outside?

Mr. TIBBOTT. Mr. Chairman, there are 20,000 or more rate changes—I will have to check with Mr. Kirse as to the precise number. What is the latest?

Mr. KIRSE. Last week we were running close to 700 tariff filings a day on which an average of at least two to two and a half changes were made on each filing.

Chairman DOUGLAS. I would like to call your attention to the footnote at the bottom of table 13:

Source: U.S. Federal Maritime Commission, Division of Foreign Tariffs.

Mr. KIRSE. Yes.

Chairman DOUGLAS. Now if it is possible for other agencies in the Department of Commerce to gather this stuff together and present it, is it not possible for the agency which collects this material to gather it together?

Mr. TIBBOTT. It certainly is.

Chairman DOUGLAS. Well, why didn't you do it?

Mr. TIBBOTT. As I said before, the Commission has desired to have a staff to make such a study.

Chairman DOUGLAS. You don't have a staff?

Mr. TIBBOTT. At the moment they are falling behind in their current work.

Chairman DOUGLAS. It is more important to do other things than to try to take action to protect the interests of the United States? Here we are having a steel industry saying that it is crippled, and I think there is some evidence to that effect, by foreign competition. Upon investigation we find that there is a differential of from $10 to $15 a ton which is given to imports into the United States as compared to exports from the United States.

This looks as though it is a very serious barrier. Apparently they have not, according to your statement, protested. I am sorry that they haven't. I hope that they will. But it is well-established in utility law that the utility commissions have the right to initiate action to defend the consumers. This was put into the New York utility law. I put it into the Illinois law. This is a well-established principle.

If you sit back and wait for complaints, don't assemble evidence, you seemingly didn't know whether these figures were correct, although they came from your own records, don't you have a responsibility to protect the legitimate interests of American industry, which is discriminated against by much higher rates on our exports than on our imports?

Now we all know about this shipping cartel. Have you ever taken any steps to try to get American shipping to move independently of the cartel?

Mr. TIBBOTT. Not that I know of, sir.

Senator MILLER. Mr. Chairman?

Chairman DOUGLAS. I would like to finish this if I may. May I say in all kindness, and I don't believe in congressional committees abusing witnesses, because in a sense we dwell in a castle. We can talk to you and you can't talk back to us.

Nevetheless, I want to say I think this is a grave dereliction of duty on the part of the Federal Maritime Commission, and I hope it will be rectified immediately.

Senator Miller?

Senator MILLER. Just following along Senator Douglas' questioning, is it your position that you do not have the proper jurisdiction to do anything about this or to make any recommendations about it, or do you think that some other agencies, such as the State Department or the Commerce Department, is the agency from which the initiative should arise?

Mr. TIBBOTT. No, sir. I believe that if the situation exists which is detrimental or harmful in any way to the American shipper, that he should make known the situation to the Federal Maritime Commission, if it concerns shipping rates or shipping practices.

I think that unless that is done, with the literally thousands and tens of thousands of rates that exist, with the Commission's rather small staff it is like looking for a needle in a haystack.

Senator MILLER. May I ask this—would it be your thought that since the Department of Commerce has as one of its functions as I understand it the improvement of our exports, that they also have jurisdiction to take the initiative in this area?

Mr. TIBBOTT. I am sure that the Commission would welcome their assistance in the matter.

Senator MILLER. Do you think that they have jurisdiction to take initiative, to come to you, for example, or to go to the shipping industry to try to work with them in helping to further the export business?

Mr. TIBBOTT. I think they certainly could come to the Federal Maritime Commission. I think anyone can go to the industry, and there are many occasions, as Mr. Stigler reminds me, on which shippers and export associations have come to the Maritime Commission, and presented their problems.

Senator MILLER. Has the Commerce Department ever come to you on this point?

Mr. STIGLER. If I may address myself to that, sir, the Commerce Department has come to us on occasions when it was felt that other industries were impeded by the rate structure.

Senator MILLER. And what has been the result of those meetings?

Mr. STIGLER. The result of those meetings has been the Maritime Commission has called the situation to the attention of the appropriate steamship line or steamship conference and has recommended that consideration be given to an adjustment of the rate level.

Senator MILLER. And what has been the result?

Mr. STIGLER. In some instances the result has been a reduction in the rate level. In other instances we have not been fortunate in that respect.

Senator MILLER. In other words, the Commerce Department has come to you. They have exercised some initiative. They have come to you as the agency with primary jurisdiction over the contact with the shipping industry, to see what can be done about this problem.

Mr. STIGLER. That is correct, sir. I think that most businessmen or I should say a large segment of industry feels that the Commerce Department is the place to take their complaints about matters that militate against their foreign commerce. When it is a rate matter in ocean commerce, the Commerce Department usually refers them to us.

Senator MILLER. Thank you.

Chairman DOUGLAS. Mr. Tibbott, I hold here in my hand a report on the ocean freight industry which is from the Antitrust Subcommittee of the House Committee on the Judiciary. It is under date of March 12, 1962. On page 395, the top of the page, the following statement is made:

> Evidence adduced at the hearings before this subcommittee indicates that in many instances rates have been set and maintained by conferences at a level which has caused injury and loss of business to American industry, have discriminated against U.S. waterborne export commerce and has caused many import prices to be unreasonably inflated. History has shown, too, that the entry of an independent competitor into a trade has frequently resulted in a reduction in the rate level on important commodities in that trade without bringing them below compensatory levels. If a moderating effect presently offered by potential active nonconference competition were eliminated, the harmful effects of conference ratemaking would be greatly magnified.

Were you aware of this report by the Celler committee?

Mr. TIBBOTT. Yes, sir; that was the report I was referring to earlier when I mentioned——

Chairman DOUGLAS. Did you notice this statement at the top of page 395?

Mr. TIBBOTT. I don't have the report with me.

Chairman DOUGLAS. Have you known of that statement?

Mr. TIBBOTT. Yes, sir. That is the reference that I was referring to earlier.

Chairman DOUGLAS. Why didn't you take some action? Here is a committee of Congress which called it to your attention.

Mr. TIBBOTT. As to that sir I can only say that the Commission has been seeking adequate staff to undertake such a study. They are understaffed at the moment. They still have not been able to build up a sufficient staff. That is the only answer that I can give you sir.

Chairman DOUGLAS. Here a subdivision of the Department of Commerce takes this material, presents a table. You couldn't do that yourself?

Can you plead ignorance in such matters as this? Can you really plead ignorance over an industry which you are supposed to regulate?

Mr. STIGLER. Mr. Chairman, if I may speak to that, sir.

Chairman DOUGLAS. Yes.

Mr. STIGLER. We are chargeable with knowledge of everything that is in our files.

Chairman DOUGLAS. Pardon?

Mr. STIGLER. We are chargeable with knowledge of everything that is in our files, and we can't plead ignorance to it, nor could the Librarian of Congress plead ignorance, I respectfully say, sir, to constructive knowledge of the many volumes in the Library.

Chairman DOUGLAS. There are 16 million books in the Library of Congress. I would not say that he is expected to know the contents of each and every one that he shouldn't know what is on page 969 of volume 14 of the Encyclopedia Britannica, but I would think he would know what the rates are on such an important matter as this.

Very frankly it is hard for me to believe you don't know. Is it not a matter of general knowledge, we will put it that way, isn't it a matter of general knowledge that rates on exports from a given port in the United States to a given European port are higher than rates on imports from the given European port to the given American port? Isn't that a matter of general knowledge?

Mr. STIGLER. Yes, sir, I think that is a matter of general knowledge.

Chairman DOUGLAS. Well, if it is a matter of general knowledge, if what you know as men, if you know it as men, how can you pretend to be ignorant of it as Commissioners?

Mr. STIGLER. May I say, sir, that there have been cases in which we have endeavored to work on this matter. I have particular reference to an instance called to our attention involving the rates on baby carriages.

That matter was brought to our attention by a representative of the industry in this country. We have taken this up with the carriers.

We have found that actually it is what is called a paper rate as far as the rate on baby carriages from here to Europe because it has been a long, long time since anything has moved under that rate.

Chairman DOUGLAS. Now, may I say this: that for you to say that you have been alert to the public interest because you have gone into baby carriages but haven't gone into steel is to my mind an "infantile" argument.

Mr. STIGLER. I think the Senator will recognize that I merely use it as an illustration of the problem involved.

Mr. KIRSE. There is one thing here we are conerned, Senator, with—the rates, with the level of rates. It is recognized that the outbound rates are higher than the inbound rates.

Chairman DOUGLAS. That is admitted.

Mr. KIRSE. There are many factors that go into ratemaking that have not been brought out here. There are circumstances that have not been brought out.

The question that you raised before with respect to rates from the United States to Germany and from Germany to the United States is interesting to this degree: Germany is a steel-producing nation.

Chairman DOUGLAS. So are we.

Mr. KIRSE. Granted, sir, and, as a patriotic American, I am all for it, 100 percent.

But the cost of production in Germany is lower than it is in this country. They are producing steel in Germany. Can we even ship steel to Germany? That again, as Mr. Stigler brings out, this is a paper rate.

Chairman DOUGLAS. But that is beside the point. The question is: Should the German exporters of steel get lower freight rates on a ton of identical steel than American exporters have to pay? That is the question.

Mr. KIRSE. There are factors in ratemaking. The cost of loading and discharging, the value of the steel, the volume that moves——

Chairman DOUGLAS. Every ton of steel which is loaded onto a ship in Hamburg would have to be unloaded from a ship into Hamburg.

Mr. KIRSE. Discharging costs and loading costs are not the same in either country.

Chairman DOUGLAS. I can't believe that they are so significantly different as to justify these rates. If anything, it might accentuate the difference.

Mr. KIRSE. We checked this out, I hate to say it, the baby carriage case, and we found out that the loading of the baby carriages in the United Kingdom was fantastically low.

Chairman DOUGLAS. So you have spent your great efforts and zeal on the comparative costs of loading and unloading baby carriages, and have neglected the question of steel.

Mr. KIRSE. The baby carriage matter was brought to our attention.

Chairman DOUGLAS. Do you have to have these things brought to your attention? Let me say that although I am not a party of interest, I give notice that I will enter the list in defense of the U.S. steel industry, and appear and ask you to reduce the export rates on steel. I will come in as a friend of the court, even though the Iron & Steel Institute may not be willing to recognize me, I will appear as their voluntary defender.

Mr. STIGLER. Senator, let me call your attention, sir, to the limitations on the jurisdiction of this Commission with respect to the level of rates in the foreign trades. A rate can be disapproved by this Commission only when, after notice and hearing——

Chairman DOUGLAS. By whom?

Mr. STIGLER. By this Commission, the Federal Maritime Commission, only when after notice and hearing it is found to be so unreasonably high or unreasonably low as to be detrimental to the foreign commerce of the United States.

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Chairman DOUGLAS. What do you think of some of these comparisons? For instance, on rails $36.75 out of the United States to Germany, $19.75 into the United States, and there are similar differences.

Mr. STIGLER. That may be an unreasonable disparity, sir, but it has to be established after notice and hearing.

Chairman DOUGLAS. Why don't you start holding a hearing on this?

Mr. STIGLER. I fail to understand why the industry has not brought their problem to us if it is such a problem.

Chairman DOUGLAS. That puzzles me too, but nevertheless I never believed just because people sleep on their rights, that those rights should necessarily be neglected.

Mr. STIGLER. I quite agree with you.

Chairman DOUGLAS. I think that you should be the sword of justice and not merely sit in a handsome building waiting for litigants to come to you.

Mr. STIGLER. Senator, believe me, we would love to. If we had enough people to do it we would.

Senator PROXMIRE. Mr. Chairman.

Chairman DOUGLAS. Senator Proxmire.

Senator PROXMIRE. Mr. Kirse, you said something about the justification for these differences. I wonder if you or any of the other three gentlemen who are here could give us any other justification and the notion that as I understood you to say that loading cost is a great deal—loading or unloading cost is a great deal—less in European countries than in this country.

It seems to me it would not matter because you have to load and unload at both ends anyway.

Mr. KIRSE. Ordinarily in words this seems to be true, but it is not. You can discharge a vessel faster than you can load it. Now the loading costs in this country are always higher.

Senator PROXMIRE. Wait a minute, now; you can discharge a vessel——

Mr. KIRSE. Faster than you can load it.

Senator PROXMIRE. Therefore it would seem to me that the exports from the United States would be less than the imports.

Mr. KIRSE. Let's take it in stages.

Senator PROXMIRE. All right; fine.

Mr. KIRSE. Loading in this country is high, discharging is low. The same things are true on the other side, except that their loading costs are much lower than our loading costs here. Are you with me?

So that their loading costs being lower, and our discharging costs being lower, to bring a commodity from A to B, from the United States to Germany, just consider nothing else but loading and discharging, to handle the cargo will be more to take it from this country and discharge it over there than it will be to take it from Germany over here and discharge it.

Senator PROXMIRE. Of course you can't offhand give me the specific figures on an example or a specific example, but this will be very helpful if you could provide this for the record. We have until Friday before we close the record. (See letter, p. 552.)

Chairman DOUGLAS. A week from Friday.

Senator PROXMIRE. It is awfully hard for me to believe that this could double. Our discussion here indicates that it is double. As the chairman has said, it is $36.75 compared to $19.75 on rails.

Mr. KIRSE. We merely said that this is a major contributing factor. Many things are involved.

Senator PROXMIRE. What else is there?

Mr. KIRSE. The value of the commodity, and I cannot address myself to this problem since I have not the slightest idea as to the value of the commodity.

Senator PROXMIRE. These are the same products that are being compared. We aren't comparing different things.

Mr. KIRSE. Yes, they are, but the value may be very different when you consider what it costs to produce it in one country and the cost of production here. The value may vary.

Senator PROXMIRE. That is one of the things we have been going over, and the costs are very comparable. There isn't a great difference.

Mr. KIRSE. Stowage factors.

Senator PROXMIRE. One of the biggest elements and the difference could be cost of transportation.

Mr. KIRSE. Stowage factors. Here the stowage factor would be the same, but what commodities are moving in a given trade? Do carriers need particular commodities?

Chairman DOUGLAS. We have taken identical commodities and shown even on the basis of identical commodities the import rates from port A in Germany to port A in the United States are lower than the export rates from American port A to the German port A.

Senator PROXMIRE. Just one other question.

Chairman DOUGLAS. I shouldn't monopolize the questioning.

Senator PROXMIRE. The other question I wanted to ask is this. You said the main difficulty is that there has been no initiative taken because of your lack of staff. How much of an additional staff will you say will be needed for this kind of an inquiry? Mr. Stigler?

Mr. STIGLER. I would be happy to provide that for the record, Senator, if I may.

Senator PROXMIRE. This wouldn't be a great number of people?

Mr. STIGLER. We are an agency now of some 240 or 250 people. It would not be a vast increase in numbers, but I do think that your record should show something about the size of our agency.

Senator PROXMIRE. Will you provide for the record the specific request that you gentlemen have made for more staff?

Mr. STIGLER. Yes, sir.

Senator PROXMIRE. The number you have requested and the action that has been taken by the Congress or taken by your superiors in this matter.

Mr. STIGLER. We will be glad to, sir. (See letter, p. 552.)

Senator PROXMIRE. Thank you. Thank you, Mr. Chairman.

Chairman DOUGLAS. Senator Miller?

Senator MILLER. Along the same point, have you asked for an increase in staff in previous years for this purpose?

Mr. STIGLER. We have asked for an increase of staff for various purposes, Senator. I can't say specifically for the purpose of making rate comparisons. I don't know whether we have or not. I doubt that we have.

Senator MILLER. If you have, might we have you indicate that point too when you submit this for the record?

Mr. STIGLER. We will be glad to do so.

Chairman DOUGLAS. May I say, Senator, every time we ask a Government agency to do something, find out something to protect the public, they will say they need more staff in order to do it.

Senator PROXMIRE. If the Senator would yield there, it seems to me that your last answer to Senator Miller was very significant. You said that you had never requested additional staff for the purpose of making rate comparisons.

Mr. STIGLER. Pardon me, sir. I said I didn't know that we had.

Senator PROXMIRE. You don't know, you have no knowledge of ever having made a request for this purpose?

Mr. STIGLER. I can't say that we have or that we have not, Senator.

Senator PROXMIRE. You have no knowledge of it. You will tell the committee before we close the record whether such a request has been made?

Mr. STIGLER. Yes, sir; I will. The Senator will keep in mind that our agency was only established less than 2 years ago, and that we have been implementing a new statute that has gone far beyond anything that this Nation or any other nation has ever endeavored to do in the way of regulation or control of the practices of carriers in international oceanborne commerce. (See letter, p. 552.)

Senator MILLER. Before this function was transferred to you, who had the jurisdiction over the matter of rates?

Mr. STIGLER. Regulatory matters of this nature were vested in the Federal Maritime Board, Senator, which at that time was a companion agency of the Maritime Administration, and headed by a common chairman-administrator, and the people discharging the regulatory responsibility never numbered more than about 40.

Senator MILLER. I presume then that the Commerce Department would have come to the Board, just like you say they have come to you on matters like this.

Mr. STIGLER. Yes, sir; that is correct.

Senator MILLER. Who in the Commerce Department has come to you?

Mr. STIGLER. People in the Bureau of International Commerce. I think they have been reorganized, the Bureau of Foreign Commerce.

Senator MILLER. Anyone in particular, any individual in particular?

Mr. STIGLER. Let me speak to Mr. Kirse.

Mr. KIRSE. May I address myself to this question, Senator. We have people coming in frequently from Government agencies, daily almost to inspect our records. We don't keep any log of the number of people that come to the agency to inspect the tariffs to make rate checks.

We do have someone in—we did have someone in within the past month from the Department of Commerce to check tariffs, and we accord them the same privilege and facilities and assistance that we would accord anyone else.

Senator MILLER. Perhaps my question wasn't clear. I understood from previous testimony here that there have been occasions when someone from the Commerce Department has come to you to ask you to intercede with respect to getting a better rate before these conferences, that in some cases you have succeeded, that in others you haven't.

Now I got the impression that this didn't happen very often, and I am referring to those types of cases. Who in the Commerce Department has come over to see you to try to have you intervene with respect to these particular rate matters in these conferences?

Mr. STIGLER. Mr. Fuller has just reminded me that Mr. Sachs of the Department of Commerce has been in touch with us, and only a few days ago we have been working with him over the language of sort of a form letter that could be used by his agency in advising exporters of how they might go about the matter of seeking a rate reduction.

Chairman DOUGLAS. Do you maintain that you could act only if complaints are made to you?

Mr. STIGLER. No, sir.

Chairman DOUGLAS. But you have no more of initiating action?

Mr. STIGLER. No, Senator, we do not.

Chairman DOUGLAS. You have no power to——

Mr. STIGLER. I say that is not our position.

Chairman DOUGLAS. Can you give me the fundamental statute on this matter? Oh, you do have power to act?

Mr. STIGLER. We do have power to act. I said no, that is not our position.

Chairman DOUGLAS. Is it your position that you do have the power to act independently?

Mr. STIGLER. Yes, sir.

Chairman DOUGLAS. Well, why haven't you done so?

Mr. STIGLER. Just the old adage of the squeaking wheel getting the grease, Senator, there is so little grease to go around.

Chairman DOUGLAS. It seems to me there is a lot of grease for somebody. Now have you ever called this matter of differential rates to the attention of the Commerce Department?

Mr. STIGLER. No, sir.

Chairman DOUGLAS. Have you ever called it to the attention of the President?

Mr. STIGLER. No, sir. We don't make a study to determine if there is such a differential.

Chairman DOUGLAS. You neither will study to determine whether there is a differential, therefore you say you do not know, you will not act though you have the power of initiating action.

Who then protects the public? Who protects the exporter? Who protects American industry? Would you answer that?

Mr. STIGLER. I don't think it is unique, Senator, that an agency struggling to do its best with the people it has got is preoccupied with the problems that come to it as immediate problems, rather than with making studies to determine if problems may exist that have not been called to us.

Chairman DOUGLAS. But you have testified that you knew about this. You have said that these differentials were a matter of common knowledge.

Look, this committee has only the most fleeting and glancing relationship to this whole matter. Our technical staff consists of five people who are busy on other matters. This is not the primary concern of the balance-of-payments division of your own department.

If they and we, overtaxed as we are, can bring this up and consider it and produce this evidence which seems to be strange to you, why can't you do it when you are charged with the specific responsibility?

Mr. STIGLER. We could do it, Senator.

Chairman DOUGLAS. Well, will you do it?

Mr. STIGLER. We will be glad to do whatever the committee requests of us.

Chairman DOUGLAS. Let me say that if the steel industry doesn't come in and ask for a reduction in rates, I will present myself and ask for a reduction in their rates. Would you recognize me as a friend of the Commission, amicus curiae?

Mr. STIGLER. We certainly would, sir.

Chairman DOUGLAS. I serve notice if the steel industry does not come in in a space of 2 or 3 weeks, I will come in, and you could do it yourself.

Senator MILLER. I would like to ask Mr. Kirse a question. I have heard—I have no factual basis for this, I have merely heard—that with respect to shipments coming in to some of the Latin American countries, that there is a differential or a difference in treatment between the exports from the United States and the exports from some other competitors, particularly the European nations. Do you know anything about that?

Mr. TIBBOTT. I have never heard that, Senator.

Senator MILLER. Let me ask you this: Do you know of any country to which we are shipping exports which discriminate against us as against other nations, with respect to these discharging costs or any other costs around the port area?

Mr. KIRSE. No, sir, I have heard no complaint of that nature.

Senator MILLER. Do any of you gentlemen know about this?

Mr. TIBBOTT. No, sir. There are instances where there are discriminations in favor of imports that come in on the national flag vessels of that country as against the vessels of other countries, but that has no relationship to where the imports originate.

In some cases the port charges are either excused or are less on a ship owned by a South American country than they are for a ship owned and operated under the flags of Great Britain, Norway, Sweden, the United States, and any of them.

Senator MILLER. Well, where this has occurred, would this not show or could this not show up in a differential, in a greater differential in rates in exports of steel from the United States to one of these countries under a certain flag, and in exports from West Germany, let's say, of the same type of steel into the same country under another flag?

Could this not end up in giving us—well, I recognize it might work both ways, but could this not account for a differential also?

Mr. TIBBOTT. You are speaking I believe now of a situation where the freight rate would be higher say from the United States to a South American port?

Senator MILLER. No, I am sorry; I did not mean that at all. I am talking about, following on with your comment just a moment ago, I am talking about the port costs, the discharging rates, which you indicated would be different or can be different according to the flag of the ship which is in the port.

Now I am merely trying to point this up this way by stressing—by suggesting—that we might have shipments of steel from the United States in a ship under one flag which goes to this country and has a higher port cost and a higher discharge cost than would shipments from West Germany of the same type of steel under another flag.

Mr. TIBBOTT. That is not usual. Of course, the rates that they are referring to here are all conference rates, and they are the same for all carriers.

There are, of course, charter steamers and tramp steamers that carry this cargo at negotiated rates, and those rates, the tramp rates are not subject to our control, nor are they subject to our jurisdiction nor do we know what they are.

Senator MILLER. Are the tramp rates included in conference figures?

Mr. TIBBOTT. No, sir.

Senator MILLER. Is there anybody that knows anything about the volume of exports and imports on tramp steamers? We have some figures here. How much export and import volume of steel do these figures represent, have you any idea?

Mr. TIBBOTT. I do not know, sir.

Chairman DOUGLAS. Who composes this international conference or cartel?

Mr. TIBBOTT. It is made up of the steamship lines operating in the trade under various flags, and it is a voluntary association. Membership is voluntary. It is not required.

Chairman DOUGLAS. Does each line have one vote?

Mr. TIBBOTT. I can't think of any conference where a line has more than one vote. I believe that is correct. That would be pursuant to the conference regulations, but I don't recall any——

Chairman DOUGLAS. At one time the Isbrandtsen Line was not in the conference, is that true, at one time?

Mr. TIBBOTT. At one time, that is correct.

Chairman DOUGLAS. Are they now in the conference?

Mr. TIBBOTT. There are various conferences. They have joined some conferences, yes, sir.

Chairman DOUGLAS. Are there any significant shipping lines which are not in the conference?

Mr. TIBBOTT. Yes, sir.

Chairman DOUGLAS. Which ones?

Mr. TIBBOTT. A great many.

Chairman DOUGLAS. Which ones?

Mr. TIBBOTT. The transatlantic trade, for example, there is the Meyer Line, which is a Norwegian line, which is outside the conference.

Chairman DOUGLAS. What percentage of the shipping is inside the conference to the Atlantic and what percentage outside?

Mr. TIBBOTT. I would not know. I have heard figures that indicate that there was as much as 30 or 40 percent outside of the conference in the transatlantic trade.

Chairman DOUGLAS. Can you verify that in tonnage of ships?

Mr. TIBBOTT. We can not verify that estimate that has been given by lines in the trade. They are not figures that we have in our possession. (See letter, p. 552.)

Chairman DOUGLAS. But there are differential rates on tramps, of course, as well as ships under the conference?

Mr. TIBBOTT. That is correct.

Chairman DOUGLAS. Now let me ask you this: Is there any control that anyone could exercise over these conference rates, international conference rates?

Mr. TIBBOTT. Control would be by, one, disapproval of a conference agreement.

Chairman DOUGLAS. By whom?

Mr. TIBBOTT. By the Federal Maritime Commission.

Chairman DOUGLAS. You have the power of disapproval?

Mr. TIBBOTT. Yes, sir.

Chairman DOUGLAS. Have you ever disapproved a rate?

Mr. TIBBOTT. We have authority to disapprove a conference agreement. They could continue to charge the same rate after disapproval of the conference agreement, but they could not act collectively. They would have to act individually.

Chairman DOUGLAS. If they all acted individually as they agreed collectively, what is the difference?

Mr. TIBBOTT. The difference is that if they do not have an agreement to act collectively, one sooner or later breaks the rate and the rates begin to go down.

Chairman DOUGLAS. The only conclusion I can draw is that you have been very lax in dealing with these conference rates and have really not acted to protect the interests of the American exporters.

Now let me ask you this. Complaints are being made we are suffering from importation of textiles. Have you gone into the export rates on textiles coming from the United States as compared with textile rates coming into the United States?

Mr. KIRSE. Senator, may I say something before I answer your question? The Public Law 87–346 approved by Congress on October 3, 1961; in that law we find section 18(b). Section 18(b) sets forth the requirements for the filing of rates in the foreign commerce of the United States both inbound and outbound. This is a new statute, a new part of the Shipping Act. It is new to the Commission, so to speak, and it is new to the industry.

It has taken a considerable length of time to indoctrinate and to render some assistance to the carriers to get them to file their rates properly pursuant to the requirement——

Chairman DOUGLAS. Was that last October?

Mr. KIRSE. October 1961.

Chairman DOUGLAS. 1961?

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. You have had a year and a half.

Mr. KIRSE. Yes, sir, but you will remember we are dealing with shipping worldwide, not domestic shipping, and it takes some time to get a point across to people. We have a large barrier.

Chairman DOUGLAS. You don't go out on the high seas and lasso them. You can deal with their home offices.

Mr. KIRSE. Here is what I am bringing out, Senator. We receive some 600 tariffs filings, or rather, last week we were receiving 6 to 700 a day. We have been running at least 6,000 a month since the new statute was enacted.

Now just to examine these tariffs filings is a tremendous job to see that they are filed pursuant to the statute, that they meet the requirements at law. To go into other areas is a tremendous job, and at the present time almost an impossibility with the limited staff that we have.

Chairman DOUGLAS. Let me ask you this. Where does the international conference meet?

Mr. KIRSE. Where does the international conference meet?

Chairman DOUGLAS. Yes.

Mr. KIRSE. There are a number of conferences, Senator. I am not charged with the conferences.

Chairman DOUGLAS. Where does the Atlantic Conference meet?

Mr. KIRSE. There is one conference, the North Atlantic Continental Conference, the Continental North Atlantic, this is a foreign conference.

Chairman DOUGLAS. Where is this?

Mr. KIRSE. This would be, I think, either France or Belgium. Brussels.

Chairman DOUGLAS. Where does the South Atlantic Conference meet?

Mr. KIRSE. I don't know whether you mean inbound or outbound.

Chairman DOUGLAS. Both.

Mr. KIRSE. One would be in this country and one would be in the appropriate foreign country.

Chairman DOUGLAS. Where does the Pacific Conference meet?

Mr. KIRSE. Inbound and outbound. We have a conference in Japan that deals with the inbound trade, and we have one in California that deals with the westbound trade.

Chairman DOUGLAS. Are the minutes of these conferences public?

Mr. KIRSE. Are they public?

Chairman DOUGLAS. Yes.

Mr. KIRSE. They are filed with the Federal Maritime Commission.

Chairman DOUGLAS. I should think therefore you would have an automatic registration. For how long have they been filed with the Federal Maritime Commission?

Mr. KIRSE. I cannot say how long they have been filed.

Chairman DOUGLAS. Were they filed in 1960?

Mr. KIRSE. 1916?

Chairman DOUGLAS. 1-9-6-0.

Mr. KIRSE. Yes, sir. They were.

Chairman DOUGLAS. 1-9-5-9.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-5-8.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-5-7.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-5-6.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-5-5.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-5-4.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-5-3.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-5-2.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-5-1.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-5-0.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-4-9.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-4-8.

Mr. KIRSE. Yes, sir.

Chairman DOUGLAS. 1-9-4-7.

Mr. KIRSE. Now wait.

Chairman DOUGLAS. We have established they have been filed for 16 years.

Mr. KIRSE. Wait.

Chairman DOUGLAS. I won't ask you to answer 1947, but for 16 years they have been filed.

Mr. KIRSE. I would say for 16 years.

Chairman DOUGLAS. Yes. Now then, have you ever made any study as to what these minutes provide, what the rates adopted consist of?

Mr. KIRSE. This is not now in my province, the examination of minutes.

Chairman DOUGLAS. In whose province is it?

Mr. KIRSE. They are examined——

Mr. STIGLER. Let me speak to that.

Chairman DOUGLAS. Let me ask the direct question. Have you ever made any investigation of, have you ever read these minutes?

Mr. STIGLER. Yes.

Chairman DOUGLAS. You have read the minutes. Haven't you been aware of the fact that export shipping rates from America were much higher than import shipping rates coming to America?

Mr. KIRSE. I believe I testified earlier that is a matter of general——

Chairman DOUGLAS. You have known it or the agency has known it for at least 16 years. What have you done about it?

Mr. STIGLER. Let me say that——

Chairman DOUGLAS. First answer the question. What have you done about it, except in the case of baby carriages?

Mr. STIGLER. We have done a whole lot about it. We have on many occasions corresponded with conferences concerning the level of their rates. Never until a year and a half ago did this Commission have any authority to disapprove a rate.

Chairman DOUGLAS. Did you ever make any report on this, calling attention to the situation?

Mr. STIGLER. I don't know that the question was ever raised by the Congress, Senator.

Chairman DOUGLAS. Did you ever raise the question? Of course the conference wouldn't ask you to disapprove their rates, but have you ever made suggestions about dealing with these rates?

Mr. STIGLER. I can't say that we have, Senator, but I do want to re-emphasize the fact that our present regulatory statute, which was enacted a year and a half ago, drastically changed the entire regulatory program which was based on the 1916 act. Mr. Kirse was——

Chairman DOUGLAS. The Jones Act?

Mr. STIGLER. No, sir, the act that was passed as a result of the work of the Alexander committee. It was confusion between 1916 and 1960 that was responsible for Mr. Kirse's question.

Chairman DOUGLAS. That is why I corrected it to make it 1960.

Mr. STIGLER. Yes, sir. That basic statute was drastically amended a year and a half ago to provide additional responsibility to the Commission.

Now dealing with the filing of tariffs, dealing with complaints, dealing with the agreements under which these conferences operate all comes within my jurisdiction, Senator, and to discharge this entire responsibility I have less than 60 people.

Chairman DOUGLAS. Less than 60?

Mr. STIGLER. Yes, sir.

Chairman DOUGLAS. Why, that is an army; that is an army. This committee has only five, and they are busy on other things. Why, you just have superabundance of staff.

Mr. STIGLER. Mr. Kirse, who is responsible for filing these thousands of tariffs we receive weekly, doesn't agree.

Chairman DOUGLAS. You have file clerks doing that. What is the use of filing this stuff if you never know what is in them or never take any action about them? The filing of material is not an end in itself. The shuffling of papers is not the be-all and end-all of Government work.

Well, now, I don't wish to bedevil you fellows any more. Mrs. Griffiths is much more of a lady than I am of a gentleman, so you are going to be in for much softer treatment, but her questions I think will be rather incisive.

Representative GRIFFITHS. I would like to ask you if you know, and if I am not repeating the information that has been given before on this, how much American steel is shipped abroad annually.

Mr. STIGLER. We have no way of knowing that.

Representative GRIFFITHS. You do not know that. Nor do you know how much European steel or Japanese steel is coming into this country?

Mr. STIGLER. No, we do not.

Representative GRIFFITHS. Then, may I ask you, when the baby carriage manufacturer complained to you, will you explain to me what you did?

Mr. STIGLER. First I think I should say that at that time we did not have the present authority.

Representative GRIFFITHS. How long have you had that?

Mr. STIGLER. We have had this present authority since October of 1961. What we did when the baby carriage manufacturer complained was to take the matter up with the conference, asked that they consider his complaint. We received the remarks that they had to make in reply, the details of which I don't recall at the moment. We discussed that with the man who had complained. We, again, went back to the conference and called his arguments to their attention. There was an exchange of correspondence between us several times. We were not successful in getting a reduction of the rate.

Representative GRIFFITHS. Now, is there any further recourse? Is there anyone else to whom the baby carriage manufacturer could have applied? Could he have gone to the State Department? Could he now go to Mr. Herter?

Mr. STIGLER. I think that their efforts to help him would depend largely on their powers of persuasion. They would have no statutory authority to give him any relief. The only statutory authority to give him relief would rest now with us under this new legislation, which, as I testified a few moments ago, permits our Commission, after notice and hearing, to disapprove a rate if it is found to be so unreasonably high or unreasonably low as to be detrimental to our foreign commerce.

Representative GRIFFITHS. Who had this power before you?

Mr. STIGLER. There was no such power.

Representative GRIFFITHS. There was no such power at all? It can be assumed that the steel companies of the United States are aware of the discrepancies in the rates, can't it?

Mr. STIGLER. I would think so.

Representative GRIFFITHS. They are chargeable with that knowledge, aren't they?

Mr. STIGLER. That is their business.

Representative GRIFFITHS. They are also chargeable with the knowledge that they have a right to complain to you?

Mr. STIGLER. I think so.

Representative GRIFFITHS. How many rates have you ever been successful in reducing?

Mr. STIGLER. We do not have a test case as yet under this statute in compelling reduction. By persuasion, we have been successful in having a number of rates reduced. I am not able to say how many.

Representative GRIFFITHS. That would be available knowledge to the steel companies, would it not?

Mr. STIGLER. I would think so.

Representative GRIFFITHS. So that if they have never complained to you, then it is either because they are satisfied with their share of the world market or they don't have confidence that you can do anything about it. Would there not be something to that?

Mr. STIGLER. I think either of those reasons could apply. I would rather not try to speculate as to why they don't complain.

Representative GRIFFITHS. But it is possible that this is the reason?

Mr. STIGLER. It is possible; yes.

Representative GRIFFITHS. That one of the real answers that we are not selling things abroad is that we are not trying to sell things abroad. Business isn't really pushing these sales abroad as they should be pushing them. And while Senator Douglas comes in and insists, and I agree you ought to try to do something about it, I don't think the steel companies are blameless. I think first they ought to try for a bigger part of the market and I think they have sense enough to know they ought to come before you and ask you to reduce the rates.

Chairman DOUGLAS. I wonder if you gentlemen, building on the table which has been submitted, table 13, would not submit in the next few days comparative freight rates on manufactured steel products, steel fabricating products.

Mr. STIGLER. Could you be a little more specific, please, Seantor?

Chairman DOUGLAS. Yes, bulldozers, automobiles, electrical machinery, machine tools, farm tractors, and so forth.

Mr. BERNSTEIN. And we could use the official list of the American Iron & Steel Institute for steel products themselves.

Chairman DOUGLAS. Yes, I would suggest that.

Mr. ALLEN. We can furnish it. (See letter, p. 552.)

Mr. Stigler. In what trade, Senator?

Chairman Douglas. The manufactured——

Mr. Stigler. Between what points, I mean.

Chairman Douglas. These three comparisons, United States and North Atlantic ports, and West Germany, United States gulf ports and North Atlantic ports and United States and Japan, the same comparisons that your sister organization produced this morning.

Senator Proxmire. Mr. Chairman?

Chairman Douglas. Yes.

Senator Proxmire. Mr. Chairman, I am very concerned and disturbed about the effect of this whole situation, of course, on our balance of payments. Our balance-of-payments situation is extremely grave and serious, and it seems to me that we should do this. I am going to move, Mr. Chairman, that you write a letter to the President of the United States pointing to the testimony that we had this morning, which provoked this hearing this afternoon, and the testimony this afternoon, and the lack of any action on the part of the Maritime Commission in this situation, because I think it should be called to his attention, and I think it is the duty and the function of this commttee to do so.

Chairman Douglas. Is there a second?

Senator Miller. Would the Senator yield?

Senator Proxmire. I am happy to yield.

Senator Miller. I wonder if in that letter we could also point out that we have not had brought to our attention any particular activity on the part of the Commerce Department to relieve this situation, too.

Chairman Douglas. I think that is true, although I think it should be noted that it was a branch of the Commerce Department which called attention to it this morning, and we probably would not have stumbled upon it if they had not.

Senator Proxmire. I think that is only fair that we should call attention to the fact that Mr. Lederer, the Chief of the Balance of Payments Division, called this to our attention this morning, and the Commerce Department has not acted.

Senator Miller. We could pinpoint the Commerce Department, but using the Division which you referred to, the international export—the part of the Department of Commerce that has to do with international export and trade. I would think that would be an excellent idea, Mr. Chairman.

Chairman Douglas. I think the general language of that nature should be included. Is there a second to the motion?

Senator Jordan. I will second the motion.

Chairman Douglas. Mrs. Griffiths?

Representative Griffiths. I second it.

Chairman Douglas. We will put the motion.

Those in favor signify by saying aye.

(Chorus of ayes.)

Chairman Douglas. Contrary minded?

(No response.)

Chairman Douglas. It is done.

Senator Proxmire. When I was talking to Mr. Kirse earlier I asked him to provide the details on the difference in loading that might affect these rates.

I would like to ask you, also, if you would provide, to the extent that you can, and I don't mean that this be a big document, but that you provide in a relatively limited space and time all the factors quantitatively appraised that might affect this difference.

Mr. KIRSE. I cannot——

Senator PROXMIRE. Not all the factors, but the major factors. Let's say most of the major factors.

Mr. KIRSE. I cannot guarantee, Senator, that I can get the loading and discharging costs. I will make every attempt to. This may take more time than between now and—when did you want it?

Senator PROXMIRE. A week from Friday.

Mr. STIGLER. Senator, if I correctly understand your question you are not asking for dollar figures. You are asking for a statement of the factors that go into these expenses?

Senator PROXMIRE. No; I don't want that alone, because, after all, I am a layman in this area and so are the members of the committee, and our staff. I want to have you who are experts in this area give us a notion of the degree to which each of these factors might explain this difference in rates. I don't want to pin you down. You could list a whole series of factors and it wouldn't mean anything unless you gave me some quantitative appraisal.

Mr. STIGLER. I think I know what you want, Senator. We will give you that. We are not going to be able to give you dollars and cents costs of loading or discharging.

Senator PROXMIRE. Maybe it would be simpler if you took three or four of these items or two or three of these items like rails, angles, beams, girders, and maybe castings, and forgings, something of that kind.

Mr. STIGLER. We will do our best with it, Senator.

Senator PROXMIRE. Do the best you can on that.

Mr. STIGLER. Yes, sir.

(See letter, p. 552.)

Senator PROXMIRE. Thank you.

Chairman DOUGLAS. Senator Jordan?

Senator JORDAN. Mr. Chairman, there is one point that I would like cleared up here.

Reference has been made to tramp carriers and tramp rates and so on. Am I right in assuming that a tramp carrier is any nonconference carrier?

Mr. STIGLER. No, sir; a nonconference carrier is known as an independent.

Senator JORDAN. An independent?

Mr. STIGLER. A tramp is ordinarily a bulk carrier.

Senator JORDAN. A tramp carrier is a bulk carrier. A tramp carrier is in no sense regulated. It is only a bargain struck between the shipper and the carrier and no other regulation?

Mr. STIGLER. That is correct, sir.

Senator JORDAN. Is it possible to get data for this committee on the percent of tonnage that is carried by independents and by tramps?

Mr. STIGLER. We would not have that data, Senator.

Senator JORDAN. Is it available?

Mr. STIGLER. Not as such. The Maritime Administration of the Department of Commerce maintains figures concerning the quantities of tonnage discharged by various ships, but I don't think they maintain it by category of ships, whereby you could break out that carried by tramps.

Senator JORDAN. You would have your conference membership percent, your independent percent, and your tramp carriers?

Mr. STIGLER. Yes, sir.

Senator JORDAN. Three categories, but as far as you know there is no breakdown as to the relative tonnage carried by each?

Mr. STIGLER. I don't think such data are available anywhere, Senator.

Chairman DOUGLAS. If the Maritime Commission cannot supply this, may I request the Commerce Department, possibly, to supply it?

(The following table was furnished:)

*Steel mill products moving by ocean vessels between United States/Western Europe and Japan, calendar year 1961*

[Tons of 2,240 pounds]

| | Exports | | | Imports | | |
|---|---|---|---|---|---|---|
| | Value (1,000 dollars) | 1,000 tons | Average value per ton | Value (1,000 dollars) | 1,000 tons | Average value per ton |
| Liner vessels, all flags: [1] | | | | | | |
| Western Europe (including United Kingdom) | 73,255 | 232 | $316 | 236,292 | 1,665 | $142 |
| Japan | 5,857 | 32 | 183 | 64,832 | 441 | 147 |
| Total | 79,112 | 264 | 300 | 301,124 | 2,106 | 143 |
| Tramp and industrial vessels, all flags: | | | | | | |
| Western Europe (including United Kingdom) | ([2]) | ([2]) | | 31,094 | 264 | 118 |
| Japan | [3] 3,853 | [3] 48 | 80 | 3,480 | 25 | 139 |
| Total | 3,853 | 48 | 80 | 34,574 | 289 | 120 |
| Total, all vessels | 82,965 | 312 | 266 | 335,698 | 2,395 | 140 |

[1] Includes both conference liners and independent nonconference liners.
[2] Less than 1,000 tons.
[3] May include scrap or rejects.

Source: U.S. Department of Commerce, Maritime Administration, Office of Statistics.

Senator MILLER. Mr. Chairman?

Chairman DOUGLAS. Senator Miller.

Senator MILLER. I wonder, Mr. Tibbott, if you have some way of providing us with some data showing the differentials with respect to the flags of various ships. I don't mean a worldwide survey, but I would like to see maybe 10 or 15 good examples of where these differentials occur, in what ports, for example, or by what country.

Mr. TIBBOTT. Are you referring to the discriminatory port charges?

Senator MILLER. That is correct, and if you could give us an idea of how much the differential is.

Mr. TIBBOTT. Yes, sir; we will endeavor to do that.

Senator MILLER. I am not asking for an exhaustive survey, but I would like something to give us an indication of what—in dollars and cents—what you and I were talking about.

Mr. TIBBOTT. But that will not affect the freight rates under the conference. Most of these national-flag lines are conference members and observe the same rates as the other conference members.

Senator MILLER. Since there appears to be a substantial number of these lines, ships that are not members of the conference, and since there apparently is a substantial volume among the tramp shippers, I think this might be helpful.

If you can get some examples for us, I would appreciate it very much.

(See letter, below.)

Mr. TIBBOTT. I think I may have unintentionally misled you. These national-flag vessels to which I referred, are almost invariably liners and are almost invariably—I don't recall an instance, certainly not in the South American trade, where they are not conference members, and, therefore, they charge the same rates as others. This fact would not have an influence on the rates that they charge. It is a cost factor that is a saving to the national-flag vessel. It is not reflected in the rate.

Senator MILLER. Then do I understand that there are no situations which might involve the discharge of steel products in which there would be a differential at the port charges, in the discharge costs according to the flag of the respective ships?

Mr. TIBBOTT. Unless that was carried by a nonconference ship it would not be reflected in the cost or in the freight rate.

Senator MILLER. But if carried by a nonconference or an independent, it would be?

Mr. TIBBOTT. It could be, yes, sir.

Senator MILLER. If you could get us some examples of those differentials involving the independents, I would appreciate it.

Mr. TIBBOTT. I will endeavor to do so. At the moment I can't think of any national-flag independent that enjoys this privilege. The national-flag lines, as I said, are observing the same rates as the other lines. It is merely a cost advantage to them. But if I can locate any national-flag independent that would enjoy this benefit where it would be on a nonconference basis, I will do so, but at the moment I don't recall any.

Senator MILLER. Might I suggest if you would look particularly at Latin American countries on this, I would appreciate it.

(See letter, below.)

Mr. TIBBOTT. Yes, sir.

Chairman DOUGLAS. Thank you very much, gentlemen.

Mr. STIGLER. Senator, may I have one more word, sir?

Chairman DOUGLAS. Certainly.

Mr. STIGLER. I do think that for the benefit of the record I should state that we don't just file tariffs willy-nilly. Tariff filing has to conform to certain requirements of law and to certain requirements of rule and regulation, and every tariff filing we receive is examined to see to it that it does conform to those requirements.

Chairman DOUGLAS. And you never do anything about them except in the case of baby carriages.

Thank you very much, gentlemen.

(The following was later received for the record:)

FEDERAL MARITIME COMMISSION,
*Washington, D.C.*

MR. JAMES W. KNOWLES,
*Executive Director, Joint Economic Committee, Room G-133, New Senate Office Building, Washington, D.C.*

DEAR MR. KNOWLES: On Thursday, May 2, 1963, during their appearance before the Joint Economic Committee, members of the staff of this Commission were asked to provide for the record information on the following subjects:

(1) Any data indicating requests for additional personnel above the level authorized, with particular emphasis on any references to the subject comparative rate studies or rate analyses.

(2) Comparative freight rates on certain manufactured steel products, including bulldozers, automobiles, electrical machinery, machine tools, farm tractors, building on the listings in table 13 of the Department of Commerce's exhibit. See attached schedules:

Schedule (a): Commerce Department's table 13 brought up to date as of May 1, 1963.

Schedule (b): Comparative rates on items mentioned by Senator Douglas.

Schedule (c): Comparative rates on other selected items taken from American Iron & Steel Institute list.

(3) Factors which might affect the inbound and outbound rate differential, with specific reference to loading and discharging costs of steel.

(4) Data concerning discriminatory port and other charges favoring national-flag vessels, particularly in Latin America.

Such data as we have been able to assemble is attached hereto.

If we can be of further assistance to you please do not hesitate to call upon us.

Sincerely yours,

ELMER E. METZ, *Managing Director.*

1. Funds for regulatory activities in 1962 were budgeted by and appropriated to the Federal Maritime Board/Maritime Administration.

2. Subsequently, Reorganization Plan No. 7 created the Federal Maritime Commission, effective August 12, 1961, and provided that funds were to be made available by transfer from the Maritime Administration.

3. A total of $1,266,000 was then transferred to FMC from MA. This amount was not determined by the fiscal needs for adequate implementation of the intent and purpose of Reorganization Plan No. 7. Rather, it was the amount included in MA's budget for business as usual on the old standards of regulatory activity.

4. A supplemental appropriation of $40,000 was granted to cover the added cost of two Commissioners. This was because the FMC was constituted as a five-man Commission instead of the three-man Board in effect in the FMB/MA.

5. In the early part of fiscal 1962 it was estimated that the total funds available ($1,306,000) would support 125 man-years of employment, and permit reaching a total complement of 153 employees about midway in the fiscal year.

6. Subsequent to the reorganization, new legislation was enacted in the form of Public Laws 87–254 and 87–346, approved, respectively, on September 19, 1961, and October 3, 1961.

7. The Commission evaluated its program responsibilities, designed an organizational structure to best meet those responsibilities, and estimated the staffing needed to properly administer the revised statutes and to strengthen the performance of regulatory functions as intended by the reorganization.

8. As a result of this appraisal, the Commission estimated that a total staff of 306 would be needed just as soon as could be reasonably recruited and absorbed into our organization.

9. On October 31, 1961, the Commission submitted, to the Bureau of the Budget, justification for the additional personnel. We had funds in 1962 for 153 positions. The justification provided for increasing the staff to 281 during 1962 and requested 25 more in 1963 to bring the total to 306.

10. The Bureau of the Budget approved the supplemental request for an additional 128 positions and 22 man-years, and authorized the 306 positions in 1963 at 284 man-years. We then sent our request to Congress.

11. On March 20, 1962, we appeared before the House subcommittee in support of our request for a supplemental for 1962 in the amount of $330,000. We spelled out the magnitude of the additional workload created by the new legislation; its nature; the fact that it was not deferrable due to statutory deadlines; and, the inability of the present staff to meet its responsibilities under the new legislation. The House subcommittee denied our request on the grounds that most of the functions were transferred to the Maritime Administration. This was refuted to no avail.

12. When the bill came up on the floor of the House on April 4, 1962, Congressmen Celler, Bonner, and Tollefson gave strong support to the supplemental request based on their personal knowledge of the legislation, its historical background, the years of study and hearings which culminated in the new legislation, the demands placed upon the new Commission, and the logical assumption that if Congress expects FMC to do its job it should grant the tools with which to

do it. Congressman Thomas agreed to cooperate but requested that the bill not be amended on the floor. He indicated that something would be worked out in conference.

13. On April 6, 1962, we appeared before the Senate subcommittee in support of our request for the supplemental in 1962. Bearing in mind that we had started back in October to seek the additional funds and that we were now in April, we reduced our request to $175,000 for the same number of positions (128) but with fewer man-years. Congressman Celler addressed a letter to the Senate subcommittee in behalf of the supplemental. This letter, along with similar letters from Senators Bartlett and Long were incorporated in the hearing record. The Senate allowed our request for $175,000 and 128 positions. However, the conferees did not meet on the bill and consequently no supplemental was granted for 1962.

14. On March 28, 1962, we appeared before the House subcommittee in support of our 1963 budget request. In delineating our need for 306 positions in 1963, we indicated that we had funds in 1962 for 153; were seeking a supplemental for 128 more in 1962; and, were asking for an additional 25 in 1963. In spite of detailed justification of the workload imposed by existing legislation, we were told that if the additional positions were not granted in 1962, we could not expect to get them in 1963. The House reduced our request by $800,000, from $2,900,000 to $2,100,000, allowing approximately 215 positions instead of 306.

15. In late July of 1962 we appeared before the Senate subcommittee in support of our 1963 budget request. At that time we reduced our request from $2,900,000 to $2,700,000 and requested restoration of $600,000 of the amount cut by the House. The revised request included funds for 300 positions but fewer man-years due to failure to get the supplemental and delay in the 1963 appropriation. The Senate allowed the revised request in the amount of $2,700,000 and for 300 positions. The conferees in acting on the House bill for $2,100,000 and the Senate bill for $2,700,000 agreed on an appropriation of $2,300,000 for 1963. The appropriation was enacted in October 1962.

16. From October of 1961, when we first requested additional funds, until October of 1962 when the 1963 appropriation was enacted, the Federal Maritime Commission, although seriously understaffed, made every possible effort to meet its greatly increased workload and responsibilities. The existing staff was originally justified and approved by Congress in 1961 as being needed to accomplish a program which did not anticipate the expanded regulatory effort desired by the reorganization; nor did it anticipate the workload imposed by subsequent legislation pertaining to dual rates, agreements, and freight forwarders; and it was without regard to the Celler committee report of March 1962 which made specific recommendations as to comprehensive studies and investigations which should be made by the new Commission. Obviously, we could only scratch the surface; juggle priorities on a day-to-day basis; make every effort to keep things moving to the best of our ability; and plan ahead for the day when we could be adequately staffed to do the job we are expected to do.

17. We were able to obtain 125 man-years of employment in 1962, as originally anticipated. However, by reason of indecision as to the ultimate outcome of our supplemental request, there was a lag in recruitment, and we exercised selectivity of appointments to meet the greatest needs. Consequently, we were able to exceed the estimate of 153 positions by employment late in the year to reach a total of 176 by June 3, 1962.

18. It is estimated that we can reach a total of 251 employees by June 30, 1963, within the funds appropriated for 1963 in spite of the fact that we had to absorb the cost of the pay raise in 1963. This is being accomplished by judiciously phasing out recruitment over the year and it contemplates approximately 212 man-years of employment.

19. Our request to the Bureau of the Budget for 1964 was granted in the amount of $2,898,000 and provided for 300 positions and 282 man-years. In that request we reiterated our need for a total staff of 300, and specifically referred to the necessity for overall studies and investigations of ocean freight rates and conference structures.

20. On May 2, 1963, we appeared before the House subcommittee in support of our budget request for 1964. Again we emphasized our inability to comply with our statutory responsibilities unless we are provided with adequate staffing. We specifically stated that deferral of adequate staffing will preclude initiation of overall investigations and studies which should be made in the interest of the general public and the steamship industry. Although the subcommittee has not yet reported its bill, the atmosphere of the hearing left little hope for relief in 1964.

Comparision of Conference Ocean Freight Rates Effective May 1963 on Iron and Steel Products for Three United States Foreign Trade Routes

Iron and Steel Articles Listed in Table 13 of Statement By Walther Lederer, Chief, Balance of Payments Division Before the Joint Economic Committee Hearings on Steel on Thursday, May 2, 1963

(Amounts in dollars)

| | U. S. North Atlantic Ports & W. Germany 1/ | | | | U. S. Gulf Ports & North Atlantic French Ports 2/ | | |
|---|---|---|---|---|---|---|---|
| | Freight Rates on U. S. Exports | | | Freight Rates on U. S. Imports | Freight Rates on U. S. Exports | | Freight Rates on U. S. Imports |
| Commodity | Area | Contract | Non-Contract | | Contract | Non-Contract | |
| Angles, beams, girders (structural) up to 30 ft in length | A/R/A | 25.75W | 28.50W | | 28.50 | 33.50W | 13.50W |
| | H/B/B | 28.50W | 31.25W | 17.75W | | | |
| Bolts and nuts | A/R/A | 25.75W | 28.50W | | | | |
| | H/B/B | 28.50W | 31.25W | 16.25W | 28.50W | 33.50W | 17.00W |
| Castings & Forgings, unfinished | A/R/A | 36.25W/M | 40.25W/M | | | | |
| | H/B/B | 40.00W/M | 44.75W/M | 26.25W | 40.25W/M | 47.35W/M | 34.00W |
| Billets & blooms up to 2 tons | A/R/A | Open<br>13.25W min | Open<br>13.25W min | | | | |
| | H/B/B | Open<br>13.25W min | Open<br>13.25W min | 17.25W | 13.25W | 15.55W | 13.50W |
| Rails | A/R/A | 30.25W | 33.50W | | | | |
| | H/B/B | 33.25W | 37.00W | 17.75W | 33.50W | 39.40W | 13.50W |
| Rods, Wire, Plain | A/R/A | 21.00W | 23.25W | | | | |
| | H/B/B | 23.00W | 25.50W | 16.50W | 26.75W | 31.45W | 13.50W |
| Screws | A/R/A | 37.50W | 41.75W | | | | |
| | H/B/B | 41.25W | 45.75W | 21.50W | 41.75W | 49.10W | 17.00W |

| Commodity | U. S. North Atlantic Ports & W. Germany 1/ — Freight Rates on U. S. Exports: Area | Contract | Non-Contract | Freight Rates on U. S. Imports | U. S. Gulf Ports & North Atlantic French Ports 2/ — Freight Rates on U. S. Exports: Contract | Non-Contract | Freight Rates on U. S. Imports |
|---|---|---|---|---|---|---|---|
| Pipes, iron & steel, (over 8" up to 12" inside diamter) | A/R/A | 46.25W | 51.25W | | | | |
| | H/B/B | 51.00W | 56.75W | 18.75W | 51.25W | 60.25W | 14.50W* |
| Wire, barbed | A/R/A | 25.75W | 28.50W | | | | |
| | H/B/B | 28.50W | 31.25W | 16.25W | 28.50W | 33.50W | 17.00W |
| Bars, reinforcing, up to 30 ft | A/R/A | Open 13.25W min | Open 13.25W min | # | 33.00W | 38.80W | # |
| | H/B/B | Open 13.25W min | Open 13.25W min | | | | |
| Oil well casings | A/R/A | # | # | | | | |
| | H/B/B | # | # | # | # | # | # |
| Shapes, plain, not fabricated | A/R/A | Open 13.25W min | Open 13.25W min | | | | |
| | H/B/B | Open 13.25W min | Open 13.25W min | # | # | # | # |
| Rods | A/R/A | # | # | | | | |
| | H/B/B | # | # | # | # | # | # |

1/ North Atlantic Continental Freight Tariffs
Exports: W = 2240 lbs. M= 40 cu ft
Imports: W = 1000 kilos (2204.6 lbs)
M = per cubic meter (35.315 cu ft)

A/R/A = Antwerp, Rotterdam and Amsterdam
H/B/B = Hamburg, Bremen and Bremerhaven

2/ Exports : Gulf-French Atlantic Hamburg Range Conference W= 2240 lbs. M = 40 cu ft
Imports : Continental-USA Gulf Westbound Conference disbanded. Rates shown for Lykes Bros. Steamship Co., Inc. and Armement Deppe, S. A., former conference members, such rates being identical
W = 1000 kilos (2204.6 lbs) M = per cubic meter (35.315 cu ft)

* On shipments measuring up to 2.5 cubic meters per 1000 kilos - subject to additional charges exceeding such factors

\# Commodity not named

U. S. Pacific Ports and Japan 3/

| Commodity | Freight Rates on U. S. Exports: Contract | Freight Rates on U. S. Exports: Non-Contract | Freight Rates on U. S. Imports |
|---|---|---|---|
| Angles, beams, girders (structural) | 28.10 W/M | 31.10 W/M | 15.50 W/M ø |
| Bolts | 30.35 W/M | 33.35 W/M | 25.25 W/M + |
| Castings | 55.50 W/M | 58.50 W/M | * |
| Forgings | 54.50 W/M | 57.50 W/M | * |
| Billets and blooms | 30.35 W/M | 33.35 W/M | 15.50 W/M ø |
| Rails | 36.35 W/M | 39.35 W/M | 15.50 W/M ø |
| Rods, wire, plain | 30.35 W | 33.35 W | 15.50 W ø |
| Screws | 30.35 W/M | 33.35 W/M | 23.75 W/M + |
| Pipes, iron and steel 6" diameter | 30.35 W | 33.35 W | 18.00 W/M ø |
| Wire, barbed | 33.60 W/M | 36.60 W/M | 18.75 W ø |
| Bars, reinforcing up to 35 feet | 28.10 W/M | 31.10 W/M | 15.50 W/M ø |
| Oil well casings | 33.60 W/M | 36.60 W/M | 18.00 W/M ø |
| Shapes, plain not fabricated | 28.10 W | 31.10 W | * |
| Rods | 42.85 W/M | 45.85 W/M | 15.50 W/M ø |

3/ Pacific Westbound Conference and Trans Pacific Freight Conference of Japan
Imports: ø = 2240 lbs W   + = 2000 lbs W   M = 40 cu ft
Exports: W = 2240 lbs   M = 40 cu ft

* Freight rate is either not available or the commodities are included in another class

Comparative Conference Ocean Freight Rates Effective May, 1963, for three U. S. Foreign Trade Routes on Manufactured and Fabricated Steel Products as requested by Chairman Douglas of the Joint Economic Committee.

(Amounts in Dollars)

| Commodity | Area | U.S. North Atlantic Ports & West Germany 1/ — Freight Rates on U.S. Exports: Contract | Non-Contract | Freight Rates on U.S. Imports | U.S. Gulf Ports & North Atlantic French Ports 2/ — Freight Rates on U.S. Exports: Contract | Non-Contract | Freight Rates on U.S. Imports: Lykes Bros. SSCo. | Armement Deppe, S.A. |
|---|---|---|---|---|---|---|---|---|
| Automobiles(new), boxed | A/R/A<br>H/B/B | Open<br>Open | (Min.15.00W/M)<br>(Min.16.50W/M) | 13.00cu.meter | 19.75W/M | 23.20W/M | 14.50W/M | 14.50W/M<br>applies to other than specifically identified automobiles. |
| Automobiles(new), unboxed | A/R/A<br>H/B/B | Open<br>Open | (Min.20.00W/M)<br>(Min.22.00W/M) | 13.00cu.meter | 28.75W/M | 33.80W/M | | |
| Automobile, parts, boxed | A/R/A<br>H/B/B | Open<br>Open | (Min.15.00W/M)<br>(Min.16.50W/M) | 14.00W/M | 19.75W/M | 23.20W/M | 37.00W/M | 18.75W/M |
| Trucks(new), boxed - | A/R/A<br>H/B/B | Open<br>Open | (Min.15.00W/M)<br>(Min.16.50W/M)<br>Up to 4 tons-<br>Above 4 tons heavy lift charges apply | 27.50W/M<br>Up to 3 tons-<br>Over 3 tons heavy lift charges apply | 19.75W/M | 23.20W/M | 14.50W/M | 14.50W/M<br>applies to other than specifically identified trucks |
| Trucks(new), unboxed | A/R/A<br>H/B/B | Open<br>Open | (Min.20.00W/M)<br>(Min.22.00W/M)<br>Up to 4 tons-<br>Above 4 tons heavy lift charges apply | 24.00-43.00W/M<br>Specific rate dependent on value & weight | 28.75W/M | 33.80W/M | 14.50W/M | 14.50W/M<br>applies to other than specifically identified trucks |
| Bulldozers, unpacked (Roadbuilding) | A/R/A<br>H/B/B | 20.00W/M<br>22.00W/M<br>Over 4 tons heavy lift charges apply | 22.25W/M<br>24.50W/M | # | 27.25W/M<br>Over 4 tons heavy lift charges apply | 32.05W/M | # | # |

| Commodity | Area | U.S. North Atlantic Ports & West Germany 1/ — Freight Rates on U.S. Exports: Contract | Non-Contract | Freight Rates on U.S. Imports | U.S. Gulf Ports & North Atlantic French Ports 2/ — Freight Rates on U.S. Exports: Contract | Non-Contract | Freight Rates on U.S. Imports: Lykes Bros. SSCo. | Armement Deppe S.A. |
|---|---|---|---|---|---|---|---|---|
| Generators (except automobile and bicycle) | A/R/A | 33.00W/M | 36.75W/M | 42.50W/M | 1.75cuft | 2.05cuft | # | # |
| | H/B/B | 36.25W/M | 40.25W/M | | 3.15-100# | 3.65-100# | | |
| Electric Motors | A/R/A | 57.25W/M | 63.50W/M | 24.00W/M | 1.75cuft | 2.05cuft | # | # |
| | H/B/B | 63.00W/M | 70.00W/M | | 3.15-100# | 3.65-100# | | |
| Hardware, general | A/R/A | 38.25W/M | 42.50W/M | 21.00W/M | 1.75cuft | 2.05cuft | 28.00W/M | 28.00W/M |
| | H/B/B | 42.00W/M | 46.75W/M | | 3.15-100# | 3.65-100# | | |
| Machine Tools | A/R/A | 33.00W/M | 36.75W/M | 42.50W/M | 34.50W/M | 40.65W/M | 44.50W/M | 42.50W/M |
| | H/B/B | 36.25W/M | 40.25W/M | | | | | |
| Machines & Machinery | | | | | | | | |
| Agricultural & parts | A/R/A | 20.00W/M | 22.25W/M | 23.25W/M | 20.25W/M | 23.80W/M | 36.00W/M | 34.50W/M |
| | H/B/B | 22.00W/M | 24.50W/M | | | | Items do not include parts. | |
| N.O.S. | A/R/A | 33.00W/M | 36.75W/M | 28.75W/M | 1.75cuft | 2.05cuft | 44.50W/M | 42.50W/M |
| | H/B/B | 36.25W/M | 40.25W/M | | 3.15-100# | 3.65-100# | | |
| Road Building | A/R/A | 20.00W/M | 22.25W/M | # | 27.25W/M | 32.05W/M | # | # |
| | H/B/B | 22.00W/M | 24.50W/M | | Over 4 tons heavy lift charges apply | | | |
| Textile & parts | A/R/A | 19.75W/M | 22.00W/M | 21.00W/M | | | | |
| | H/B/B | 21.75W/M | 21.75W/M | | 1.60cuft | 1.35cuft | # | # |
| | | | | | 2.85-100# | 3.30-100# | | |

| Commodity | Area | U.S. North Atlantic Ports & West Germany 1/ — Freight Rates on U.S. Exports: Contract | Non-Contract | Freight Rates on U.S. Imports | U.S. Gulf Ports & North Atlantic French Ports 2/ — Freight Rates on U.S. Exports: Contract | Non-Contract | Freight Rates on U.S. Imports: Lykes Bros. SSCo. | Armement Deppe S.A. |
|---|---|---|---|---|---|---|---|---|
| Tractors, unboxed | A/R/A | 20.00W/M | 22.25W/M | 20.00W/M | 27.25W/M | 32.05W/M | 27.75W/M | 27.75W/M |
| | H/B/B | 22.00W/M | 24.50W/M | | | | | |
| Tractors, boxed | A/R/A | 15.00W/M | 16.75W/M | 20.00W/M | 19.00W/M | 22.35W/M | 27.75W/M | 27.75W/M |
| | H/B/B | 16.00W/M | 17.75W/M | | | | | |

1/ North Atlantic Continental Freight Tariffs
Exports: W=2240 lbs. M=40 cu ft
Imports: W=1000 kilos (2204.6 lbs)
M=per cubic meter (35.315 cu ft)

A/R/A = Antwerp, Rotterdam and Amsterdam
H/B/B - Hamburg, Bremen and Bremerhaven

2/ Exports: Gulf-French Atlantic Hamburg Range Freight Conference. W=2240 lbs. M=40 cu ft
Imports: Continental-USA Gulf Westbound Conference disbanded. Rates shown for Lykes Bros. Steamship Co., Inc. and Armement Deppe, S.A. former conference members.
W=1000 kilos (2204.6 lbs) M=per cubic meter (35.315 cu ft)

\# Commodity not named

U. S. Pacific Ports and Japan 3/

| Commodity | Freight Rates on U. S. Exports: Contract | Freight Rates on U. S. Exports: Non-Contract | Freight Rates on U. S. Imports |
|---|---|---|---|
| Automobiles, new, boxed | 37.75W/M | 40.75W/M | 23.00W/M |
| Automobiles, new, unboxed | 47.75 M | 50.75 M | 23.00W/M |
| Bulldozers | 56.50W/M | 59.50W/M | 50.25W/M |
| Generators | 56.75W/M | 59.75W/M | 33.25W/M value not exceeding $500 per 40 cu ft<br>43.50W/M value exceeding $500 per 40 cu ft |
| Electric motors | 56.75W/M | 59.75W/M | 33.25W/M |
| Hardware, general | # | # | 24.00W/M |
| Machine tools(excluding electric) | 73.50W/M | 76.50W/M | 45.50W/M |
| Machines and Machinery, Agricultural and parts | # | # | 33.00W/M |
| Machines and Machinery, NOS and parts | 56.75W/M | 59.75W/M | 33.00W/M |
| Machines and Machinery, Road building | 56.50W/M | 59.50W/M | 50.25W/M |
| Machines and Machinery, Textile and parts | # | # | # |
| Tractors, boxed | 45.00W/M | 48.00W/M | # |
| Tractors, unboxed | 56.75W/M | 59.75W/M | # |

U. S. Pacific Ports and Japan 3/

| Commodity | Freight Rates on U. S. Exports: Contract | Freight Rates on U. S. Exports: Non-Contract | Freight Rates on U. S. Imports |
|---|---|---|---|
| Trucks, boxed | 37.75W/M | 40.75W/M | 23.00W/M |
| Trucks, unboxed | 47.75 M | 50.75 M | 23.00W/M |
| Automobile parts | 37.75W/M | 40.75W/M | 24.75W/M |

3/ Pacific Westbound Conference and Trans Pacific Freight Conference of Japan
Exports: W=2240 lbs M=40 cu ft
Imports: W=2000 lbs M=40 cu ft

\# Freight rate is either not available or the commodities are included in another class

Comparison of Conference Ocean Freight Rates Effective May 1963 on Iron and Steel Products for Three United States Foreign Trade Routes

Additional Iron and Steel Articles Taken From American Iron and Steel Institute List

| Commodity | U. S. North Atlantic Ports & W. Germany 1/ | | | | U. S. Gulf Ports & North Atlantic French Ports 2/ | | |
|---|---|---|---|---|---|---|---|
| | Freight Rates on U. S. Exports | | | Freight Rates on U. S. Imports | Freight Rates on U. S. Exports | | Freight Rates on U. S. Imports |
| | Area | Contract | Non-Contract | | Contract | Non-Contract | |
| Plates | | 15.25W | 15.25W | 20.00W | 13.25W | 15.55W | 13.50W |
| Bars | | 13.25W | 13.25W | 17.75W (to 40 ft) | 27.50W | 32.35W | 31.00W |
| shapes (under 3") | | | | | | | |
| carbon | | | | | | | |
| alloy | | | | | | | |
| cold finished (carbon & alloy) | | | | | | | |
| hollow & drill steel | | | | | | | |
| Wire | A/R/A | 24.75W | 27.50W | 15.75W | | | |
| | H/B/B | 27.25W | 30.25W | (other than bale ties & galvanized fence) See Note | 25.00W | 29.40W | 15.00W |
| round steel | | | | | | | |
| baling | | | | | | | |
| bale ties | | | | | | | |
| galvanized fence | | | | | | | |
| telephone & telegraph | | | | | | | |

Note - bale ties - 19.75W
galvanized fence - 20.25W

| Commodity | | U. S. North Atlantic Ports & W. Germany 1/ | | | | U. S. Gulf Ports & North Atlantic French Ports 2/ | | |
|---|---|---|---|---|---|---|---|---|
| | | Freight Rates on U. S. Exports | | | Freight Rates on U. S. Imports | Freight Rates on U. S. Exports | | Freight Rates on U. S. Imports |
| | | Area | Contract | Non-Contract | | Contract | Non-Contract | |
| Plates | | | 14.50W | 14.50W | 20.00W | 13.25W | 15.55W | 13.50W |
| black | | | | | | | | |
| terne | | | | | | | | |
| tin | | | | | | | | |
| Sheets | A/R/A- | H/B/B | 13.25W | 13.25W | 20.00W | 13.25W | 15.55W | 13.50W |
| hot rolled | | | | | | | | |
| galvanized | | | | | | | | |
| cold rolled | | | | | | | | |
| Strip | A/R/A- | H/B/B | 13.25W | 13.25W | 24.25W/M | # | # | # |
| Structural shapes | | A/R/A | 27.75W | 28.50W | | | | |
| fabricated | | H/B/B | 28.50W | 31.25W | # | 28.50W | 33.50W | 13.50W |
| Wire | | A/R/A | 40.50W | 45.00W | | | | |
| | | H/B/B | 44.50W | 49.50W | 20.25W | 45.00W (rope only) | 52.90W (rope only) | 42.00W/M (rope only) |
| rope | | | | | | | | |
| strand | | | | | | | | |
| Grinding balls | | A/R/A | 34.50W | 38.00W | 21.50-61.00W | | | |
| | | H/B/B | 38.25W | 42.25W | 21.50-61.00W (dependent upon value) | # | # | 29.75W |

| Commodity | U. S. North Atlantic Ports & W. Germany 1/ | | | | U. S. Gulf Ports & North Atlantic French Ports 2/ | | |
|---|---|---|---|---|---|---|---|
| | Freight Rates On U. S. Exports | | | Freight Rates on U. S. Imports | Freight Rates on U. S. Exports | | Freight Rates on U. S. Imports |
| | Area | Contract | Non-Contract | | Contract | Non-Contract | |
| Pig Iron | A/R/A | 22.50W | 25.00W | # | | | |
| | H/B/B | 24.75W | 27.50W | # | 25.00W | 29.40W | 13.50W |
| Iron & Steel Scrap | A/R/A | 24.25W | 24.25W | | | | |
| | H/B/B | 26.75W | 26.75W | 24.75W | 32.25W | 37.90W | 25.75W |

1/ North Atlantic Continental Freight Tariffs
Exports: W = 2240 lbs.
Imports: W = 1000 kilos (2204.6 lbs)

A/R/A Antwerp, Rotterdam, Amsterdam
H/B/B Hamburg, Bremen, Bremerhaven
M = Per cubic meter (35.315 cu ft)

2/ Exports: Gulf-French Atlantic Hamburg Range Conference W = 2240 lbs. M = 40 cu ft
Imports: Continental-USA Gulf Westbound Conference disbanded. Rates shown for Lykes Bros. Steamship Co., Inc. and Armement Deppe, S. A., former conference members.
W = 1000 kilos (2204.6 lbs) M = per cubic meter (35.315 cu ft)

# Commodity not named

U. S. Pacific Ports and Japan 3/

| | Freight Rates on U. S. Exports | | Freight Rates on U. S. Imports |
|---|---|---|---|
| Commodity | Contract | Non-Contract | |
| Plates | 24.10W/M | 27.10W/M | 15.50W/M |
| Bars | 28.10W/M | 31.10W/M | 15.50W/M |
| Shapes, under 3" | | | |
| Carbon | | | |
| Alloy | | | |
| Cold finished, carbon alloy | | | |
| Hollow bars and drill steel | | | |
| Wire | 30.35W/M | 33.35W/M | 22.75 W |
| Round steel | | | |
| Baling | | | |
| Bale ties | | | |
| Galvanized fence | | | |
| Telephone and telegraph | | | |
| Plates, iron and steel | 19.15W/M | 22.15W/M | 15.50W/M |
| Black | | | |
| Tin | | | |
| Terne | | | |
| Sheets | Not shown | Not shown | 15.50W/M |
| Hot rolled | | | |
| Cold rolled | | | |
| Galvanized | | | |
| Strip | 30.35W/M | 33.35W/M | Not shown |
| Hot rolled | | | |
| Cold rolled | | | |
| Structural shapes fabricated | Not shown | Not shown | 22.75W |

U. S. Pacific Ports and Japan 3/

| Commodity | Freight Rates on U. S. Exports: Contract | Freight Rates on U. S. Exports: Non-Contract | Freight Rates on U. S. Imports |
|---|---|---|---|
| Wire rope | 35.85W/M | 38.85W/M | @25.25W/M |
| Wire strand | 35.85W/M | 38.85W/M | @25.25W/M |
| Grinding Balls | 32.00W/M | 35.00W/M | Not shown |
| Pig Iron | Open | Open | Open |
| Sponge Iron | 40.00W/M | 43.00W/M | Not shown |
| Iron & Steel Scrap | --- | 41.60W/M | 21.00 W |

3/ Pacific Westbound Conference and Trans Pacific Freight Conference of Japan
W=2240 lbs
M=40 cu ft
@ 2000 lbs W.

Although carriers have historically defended the commonly accepted excess of export freight rates over import rates on the same commodities by attributing such disparity to natural factors, including the admittedly higher hourly rates for longshore labor and other loading expenses in U.S. ports; and to the fact that vessels traveling to the United States are competing for a smaller overall volume of cargo, relying primarily on outbound cargoes for their principal revenues, we are by no means convinced that disparity in rates can be justified on the basis of these factors.

The burden of establishing such justification has not, to our minds, been satisfactorily met by the carriers.

On the basis of the best information available to this Commission and in the experience of seasoned freight men on the staff, the principal factors entering into the fixing of a freight rate are necessarily the same on given commodities, both outbound and inbound. These factors include but are not limited to—

1. The value of the merchandise.
2. Stowage and handling characteristics of the merchandise.
3. Volume in which such merchandise moves.
4. Claim experience.
5. Port conditions.
6. Value of the service to the shipper.
7. Operating costs.
8. Amortization of vessels.

In spite of all these factors, we are convinced that the primary consideration of the average carrier as a practical businessman is that the results of his voyage show a profit. Obviously, unless he recoups in freight revenues a sum in excess of loading and discharging costs of an individual shipment, that individual shipment is not adding to his profits; he accordingly has no inducement to transport it under those circumstances unless he does so in the hope of creating a market which will lead to profitable future results. What we mean to say is that any or all of the factors mentioned above as entering into ratemaking may be junked in favor of the final consideration, that of adding to the net revenue of the voyage. As long as the carrier conforms to existing laws and regulations concerning filing of tariffs, it is possible that he may at any given time establish any rate which may contribute to his net revenues.

An exception, however, is the state-owned carrier, who operates, primarily, not to earn a profit, but to further the national policy of his government, to earn foreign exchange, and for other reasons.

With reference to item 2 above, we have conducted a preliminary study which shows, as respects iron and steel products, that loading and discharge costs in the United States are somewhat higher than in Western Europe. Such differential, however, does not appear to be of sufficient magnitude to justify, alone, the disparity between import and export rates.

The following information on port dues and charges in Latin America is submitted below:

*Colombia.*—Flota Mercante Grancolombiana, the Colombian national shipping line, had for several years refused to pay port dues and charges in Colombia on the basis that it was a national entity. This dispute was referred to the Council of State for decision.

On February 7, 1963, the Empresa Puertos de Colombia (Colombian Port Authority) issued Resolution 001 which established tariffs and charges for operation and use of ports at Barranquilla, Cartagena, Buenaventura, Santa Marta, and Tumaco. The new port charges are nondiscriminatory and do not favor the national line.

*Ecuador.*—Ecuadorian Decree 240 of March 31, 1937, as amended on January 1, 1957, and Decree 750 of December 2, 1946, discriminated against foreign-flag shipping in the matter of port dues and charges.

The new port regulations which were issued at the time of the opening of the new port at Guayaquil on February 1, 1963, removed the discriminations mentioned in the preceding paragraph.

*Uruguay.*—Law No. 16293 of December 1, 1961, and Circular 1730 of October 31, 1962, establishes welfare and pension taxes which do not have to be paid by the Uruguayan national shipping line. (However, at the present time this line operates only one ship to the United States.)

The law of December 7, 1961, covers light dues. Paragraph C of this law exempts national ships from the payment of these dues. These problems, even though small, are being discussed with the Uruguayan Government.

These port dues and charges are assessed against the ship and not against the cargo. National-flag lines of these countries observe the same rates as U.S.-flag and other steamship lines operating in the trades between the United States and these countries; consequently, these preferences have resulted in some saving in operating costs to these national-flag lines but have had no effect upon the routing of cargo or upon the charges for transportation.

The only country in which these discriminatory practices continue in effect is Uruguay and discussions looking toward their elimination are now underway.

(This material was inserted in the record after the hearing at the request of Senator Jordan:)

[From the American Metal Market, May 3, 1963]

CONGRESSIONAL CONFUSION: STEEL SHIPPING "INEQUITIES" HIT BY DOUGLAS

METAL MARKET ROUNDUP

A minor furor was stirred up at the Senate-House Economic Committee's hearing on steel prices in Washington yesterday, when charts were produced showing that ocean freight rates on exports of steel products are as much as twice the rates on imported steel.

Senator Paul Douglas, chairman of the committee, urged the American steel industry to take immediate action to protest the inequities in shipping rates.

The excitement in Washington, however, was not matched by any apparent concern among U.S. steel exporters and importers contacted by Metal Market in New York.

Published conference rates for ocean shipping of steel, such as the ones presented at the Washington hearing yesterday, mean very little unless there is active trade in the product involved, according to one specialist in steel shipping rates.

A large part of U.S. export business in steel is concentrated in sheets and rates paid by American steel exporters apparently compare very favorably with those paid by European mills shipping to the U.S. market.

The conference rate on steel sheets from the United States to ports in Belgium, France, Holland, and Germany is $13.25 a gross ton.

European exports of sheet to the United States are not as active as other types of steel trade. The shipping rate from north European ports to U.S. ports north of Cape Hatteras on steel sheet is $18.04 a ton. To gulf ports, the rate is $13.72. The rates from France are in the $19–$20 range.

"Lots of shipping rates that appear on paper have been unchanged for years and years because there has been no active business in the products involved," noted one steel exporter.

At the Douglas hearings in Washington yesterday, a Commerce Department official presented a chart showing that the rate on structurals from north European ports to the United States is $19.75 a ton, while exports from the United States to Europe on the same structurals cost $31.25 a ton.

But one steel exporter in New York noted that there is very little business done in structural exports from the United States.

"If there were a chance of active market penetration by the United States in Europe in structurals, we would go to the shipping conference and bargain for far lower rates," he noted. "But there just isn't enough interest to justify it."

One business official referred to the evidence at the Douglas hearings as "ivory tower stuff."

A big part of American steel exports go to a few foreign nations whose purchases are financed by AID funds. In such deals, the foreign nations are required to purchase American-produced steel, so that American mills are not competing for the business with United States and Japanese mills. This steel must also be shipped in American vessels where higher shipping rates prevail.

In some instances, Japanese steel exporters can obtain highly favorable rates in world steel trade, according to a steel official in New York. This arises from the fact that Japan is a large importer of bulk cargoes. Vessels leaving Japan frequently find it difficult to obtain cargoes, and shipping rates, particularly to Latin America, are low.

WASHINGTON FUROR

At the Douglas hearing yesterday, Maritime Commission officials were called in to explain the apparent disparity in ocean shipping rates between steel exports and imports.

The officials, called in suddenly late yesterday afternoon, told the Economic Committee they did not know why most export freight rates on steel products were so much higher than on similar items being brought in from either Western European or Japanese sources.

"I think the steel industry should protest these rates, which obviously give importers a great advantage over American steel producers, and I urge them to take action at once," Senator Douglas said.

What started the donnybrook was a table submitted by the Commerce Department's Office of Business Economics which showed the following disproportionate freight rates:

1. Structurals: From West Germany and North Atlantic ports to the United States, imports cost $19.75 per ton; exports from the United States to the same ports on the same structurals cost $31.25.
2. Castings and forgings: Export rates to North Atlantic, $44.25 a ton; imports, $29.25.
3. Screws: To North Atlantic, exports, $46 per ton; imports, $24.
4. Barbed wire: To North Atlantic ports, $28.50; imports of same, $23.
5. Structurals: From United States to Japan, $28.10; from Japan to the United States, $15.50.
6. Rods, wire, plain: From United States to North Atlantic ports, $29.50; from those ports to the United States, $18.25; from United States to Japan on this wire rod, $28.25; from Japan to the United States, $15.50.

Chairman Douglas called these "very serious differentials" and demanded the Maritime Commission explain why no protest had ever been filed against this evident advantage.

The Maritime Commission spokesmen told the committee a study group had been set up on paper to examine these differences but had not been put into operation as yet since there was no staff to handle the study.

Chairman Douglas chastised the Federal agency for not having initiated the study when the differences in ocean freight rates first were disclosed.

The Maritime Commission spokesman pointed out that volume carried each way, average tonnages and other factors entered into the setting of freight rates.

At the same time that Senator Douglas was closing down his 2-week inquiry into the steel situation, he told Metal Market that the steel industry could file statements of their views—or that he could call a special 1-day meeting if the steel industry wished to testify orally.

Walther Lederer of the Commerce Department's Office of Business Economics told the committee that foreign steelworkers will create "increasingly intense competition" for the American steel industry when they get into production with their greater capacity of high quality steel sheets.

Imports of steel into the United States mainly are concentrated in concrete reinforcing bars, wire rods and pipe, and tubing while exports from the United States are mainly in sheets and strip.

The value in 1962 of exports was about twice as high as the value of imports, Mr. Lederer said. Comparisons of prices are admittedly difficult because export-import factors, such as transportation, are hard to gage.

Imports have risen steadily since 1952 when they averaged 1.8 percent of the total domestic new supply of steel. But in 1962 total imports had taken over 5.6 percent of the domestic new supply.

Senator DOUGLAS. I am going to ask Mr. James H. Lewis, Chief of the Trade Agreements Division of the State Department, to take the stand.

## STATEMENT OF JAMES H. LEWIS, CHIEF, TRADE AGREEMENTS DIVISION, DEPARTMENT OF STATE

Chairman DOUGLAS. I am going to let Senator Proxmire start off with the cross-examination.

Senator PROXMIRE. I am going to ask, Mr. Lederer: Will you put on the board here the chart that you had showing the exports of this country to various countries and the Western European exports to Russia and the Communist bloc?

Mr. Lewis, we were very concerned about this chart this morning. This chart obviously shows, particularly the third panel of the chart, to the Soviet bloc, is that our Battie Act has worked with complete effectiveness in eliminating our exports to the Soviet bloc of steel as a strategic material, but not only is Western Europe exporting a large amount, and it is a very large amount now, it is over $500 million, but it has more than doubled in the period represented. Now, what is the period again, Mr. Lederer?

Mr. LEDERER. This was the average 1954 to 1956.

Senator PROXMIRE. And the last figure is 1962?

Mr. LEDERER. It is 1961.

Senator PROXMIRE. We are most concerned about this, and it seemed to some of us that this represented almost a frustration of our objective which was to, of course, keep the free world from building up in military power and potential of the Soviet bloc. I want to ask you what representations has the State Department made, what efforts have we made, what success are we going to have, if any, in persuading Western Europe to recognize that this is the free world's future that is at stake?

Mr. LEWIS. Senator, I am sorry to say that this is not part of my responsibility. I didn't expect to be asked about this. It does belong in another section of the Bureau of Economic Affairs. I understood I was asked to answer some questions about comparative tariff levels.

Senator PROXMIRE. I will ask you about that. I apologize. I had hoped that we would be able to get some answers on the Battle Act, too.

Chairman DOUGLAS. Which section of the State Department deals with the matters that the Senator from Wisconsin has questioned you about?

Mr. LEWIS. We have an economic defense staff in the Bureau of Economic Affairs.

Chairman DOUGLAS. Headed by whom?

Mr. LEWIS. Robert Wright.

Chairman DOUGLAS. I suggest that he either be invited to testify or invited to offer explanation.

Senator PROXMIRE. Fine.

Now, it also came to our attention, and we are very concerned about it, that just as there is this discrimnation you have been listening to this afternoon in freight rates, there is a comparable discrimination in tariffs. That is the tariff on iron and steel products being shipped into European countries and elsewhere in the world, particularly European countries, is far higher, in some cases twice as high as the tariff which we have against iron and steel products coming into this country. I have the specific figures in front of me, but I wondered if you can give me an explanation of it and answer what progress we are making along this line.

Mr. LEWIS. Well, Senator, I don't know what figures you have. The figures that I have available, which are average tariff levels for various groups of products, don't indicate that there is a great deal of difference between the relative levels.

Senator PROXMIRE. The table I happen to have in front of me now is from this committtee, the Joint Economic Committee. It is on page 8 of the trade restraints in the Western community with tariff comparisons and selected statistical tables pertinent to foreign economic policies. This was a publication of this committee in 1961.

It points out that, for example, the U.S. tariff on iron and steel manufactures is 8 percent, whereas the Japanese tariff is 15 percent, Canadian tariff is 22 percent, the Italian tariff is 17 percent, the EEC is higher, it is 20 percent higher. It is not as exaggerated as the others. It is 10 percent. The United Kingdom is 14 percent, Austria 24 percent, Germany 10 percent, France 12, Benelux 13. In every case, it is higher and substantially higher.

Mr. LEWIS. There is one basic comment I would like to make. First, that these are weighted averages, which, as you know, understate the restrictive effect of high tariffs. The weighted average——

Senator PROXMIRE. That understates the restrictive effect?

Mr. LEWIS. The weighted average conceals prohibitive rates in that it is based on the amount of trade which flows, so that if a tariff keeps trade out, the average, in effect, conceals the prohibitive rate. But the other way of measuring them, of course, is to use unweighted averages, merely an arithmetical average of the various rates.

This, on the other hand, doesn't give any weight to how much trade is actually flowing at a particular rate. However, just to show the difference, a comparison made by PEP, the British research organization, Political and Economic Planning, shows that the unweighted average for U.S. tariffs on all iron and steel products, is 13 percent, whereas for the EEC it is 10 percent, and for the United Kingdom it is 14 percent.

Senator PROXMIRE. What does the unweighted average mean, though? Unweighted average doesn't have any real significance, though?

Mr. LEWIS. It has as much probably as the weighted average. Neither of them has a great deal of significance. The important thing really is the individual rates on individual products.

Senator PROXMIRE. How can we get at this? The statistics we have, which we have put in—this is a responsible and very careful committee—that we put in here haven't been challenged before, and it would seem to me, since it is iron and steel manufactures, and the rate is accurate, what you are telling us then is that this don't mean anything until you get down to the particular product, is that it?

Mr. LEWIS. That is it, or significant small groups of products——

Senator PROXMIRE. That you have to take rails or you have to take forges, you have to take beams, and then compare those?

Mr. LEWIS. Yes, sir; I think that is generally true.

Senator PROXMIRE. Have you made a study of any of these products?

Mr. LEWIS. Well, we have all the rates available, or they could be obtained. A table could be given to you, for instance, which showed you the rates on particular products. This would be much more significant in deciding——

Senator PROXMIRE. Does anybody in your Department make a systematic study of this kind?

Mr. LEWIS. No. This is really the responsibility of the Department of Commerce, which compiles tariff data for all countries and is responsible for disseminating it.

Senator PROXMIRE. And what agency of the Department of Commerce is this?

Mr. LEWIS. The Bureau of Regional—I am not sure of the name of it at the moment, but there are regional staffs in the Department which are responsible for each country and compile tariff information for each country, and they could certainly have——

Senator PROXMIRE. Then, Mr. Lewis, what you are telling us is that you don't have a study that would give us real information on whether or not there was in fact a discrimination against our exports and in favor of European exports, and that in order to get it, we have to go to another agency in the Commerce Department, is that correct?

Mr. LEWIS. Yes, sir, except that I could say that these weighted averages which you mentioned and the unweighted averages which I mentioned do indicate that there is a difference, that in some cases the average of the European rates is higher and in some cases lower. Then in the case of individual rates, which I have examples of here, there are certainty many rates which are higher in Europe than here, and vice versa. The significance of this is another question, though, and the reasons for the difference in rates.

As you know, the rates in the beginning were not based necessarily on any kind of scientific formula. Our Tariff Act of 1930, for instance, was certainly not a scientific operation. The rates that were established on many products were the results of pressures or lack of pressures, and in the case of iron and steel they were comparatively low because probably there wasn't much pressure for high rates.

Now these have been reduced gradually in tariff negotiations, so that our average has come down considerably from 1930, and there are two reasons for this, I think. The tariffs were reduced by the President in trade agreements on the basis of advice by the U.S. Tariff Commission, and tariffs were, in general, only reduced when the Tariff Commission advised that this could be done satisfactorily.

Secondly, reductions were made because other countries in trade agreements negotiations asked for concessions on particular products. So that, as a result, the levels of various rates were not reduced by any kind of plan. Some rates were reduced, some weren't.

And, as a result, what remains now is not necessarily on any kind of logical, economic basis.

Senator PROXMIRE. When you try to apply logic and economics to this, however, you must come up with something like that because if you do not weight your tariff—that is, if you do not take your rates and multiply it by the amount of the commodity that is being traded—it seems to me that it really does not mean anything.

And when we try to apply that, we come up with this table.

Mr. LEWIS. Yes.

Senator PROXMIRE. And this table indicates that the discrimination is sharp and serious and clear.

Mr. LEWIS. I do not think it is right to call it discrimination. There is this difference, but what its effect is, is another question. A 10-percent rate in the United States may be more prohibitive than the higher rate abroad or vice versa. It depends on the competitive situation and various other factors.

Senator PROXMIRE. Good, all right.

Well, now, that may be true, but the fact is that this is one of the ingredients; shipping costs is another ingredient.

Mr. LEWIS. That is right.

Senator PROXMIRE. Labor cost is another ingredient in it, and what this committee is trying to do is to explore all of these things, and it would seem to us that, in all equity and fairness in the free world, if we believe in achieving greater efficiency through the division of labor, we ought to have equality as much as possible on tariffs, and then let the economic factors determine who is going to do the production and who is going to get the benefit, have the efficiency factor enter into it.

What you do, when you discriminate on tariff rates, and we do not like the word "discriminate," but when you have different tariffs of this sort, it results in unduly, it seems to me, encouraging the production and sale of steel from Europe and discouraging from this country; is that not correct?

Mr. LEWIS. Well, there is a great deal of truth in what you say. The other side of this coin, though, is something we have to think about, and that is that, on the average, in the case of iron and steel, European rates may be higher than ours, but on many other commodities our rates are higher than theirs.

We are not necessarily interested in equalizing these rates. What we have been trying to do in trade agreement negotiations is to bring all rates down on both sides rather than to equalize rates.

We have tried to increase the flow of trade by reducing barriers, and not by reaching some kind of equality of treatment.

Senator PROXMIRE. Well, good. I think that is probably an accurate statement of our problem here. Here we have in the steel industry an industry that has very serious problems of unemployment. It has very great excess capacity. We have every argument, it seems to me, economic argument, for stimulating industry in this country. What do you have abroad? Abroad you have a situation where, by and large, they are operating close to capacity, almost no unemployment, a shortage of labor.

Now, if we follow a policy which will result in this particular commodity in this particular area in having lower tariffs here and higher tariffs abroad, it seems to me the economic consequences are unfortunate and illogical.

I understand your problem. You cannot equalize it in steel without recognizing that you have to take other steps elsewhere, but it would seem that, certainly, an objective of our tariff policy would be this equality I am talking about. If they are lower abroad, maybe, on automobiles or on some other commodity than they are in this country, then you can argue for equality there, and equality for the steel industry, so you have a neutralization, with the result that you have production in that country where you can produce most efficiently at lowest cost.

Mr. LEWIS. Well, I would not disagree with you that what we ought to do is to bring down the level of European tariffs. That is what we are consistently trying to do in our negotiations and what we hope to do in the forthcoming negotiations under the Trade Expansion Act.

Senator PROXMIRE. Here is where you have the argument: that is, where their tariff is higher, on a weighted-average basis it is higher than it is here, in significant country after country.

Do you have any questions, Senator Miller?

Senator MILLER. I have no particular questions for the witness, but I did want to ask Mr. Lederer about three questions.

Senator PROXMIRE. Why do we not see if Senator Jordon or Mrs. Griffiths has a question for Mr. Lewis, if that is all right with you.

Mrs. Griffiths?

Representative GRIFFITHS. Are you the person who conducts the negotiations?

Mr. LEWIS. No. I have participated in negotiations as a negotiator with various countries, but I have never been in charge of negotiations. We are now not, of course, primarily responsible in the Department for negotiations. This is Mr. Herter's responsibility.

Representative GRIFFITHS. How long has it been since anything has been done on iron and steel, on trying to reduce these particular tariffs?

Mr. LEWIS. We obtained concessions on iron and steel products, I cannot give you the details, they could be obtained, in the last tariff negotiations in 1961, when we negotiated with the EEC and quite a few other countries.

Representative GRIFFITHS. How substantial were the reductions?

Mr. LEWIS. Well, on the average, 20 percent, which was the authority we had to reduce our duties and other countries generally did not make any reductions greater than that.

Representative GRIFFITHS. Thank you.

Senator PROXMIRE. Senator Jordan?

Senator JORDAN. Mr. Lewis, just one or two questions. The objective of your tariff negotiations, I take it, is to strike a balance that is most favorable to the contracting nations, not necessarily for each commodity but over the whole trade program between the countries?

Mr. LEWIS. That is correct, yes.

Senator JORDAN. So you might sacrifice in one instance steel in order to get a more favorable treatment of your exporters in other goods?

Mr. LEWIS. Well, I hope "sacrifice" is not the word, but we might make concessions, yes, sir, on steel products, if the Tariff Commission found that this was possible, gave its advice that this was possible, and in return for this, as part of our total concession package, we got concessions on other products which were considered important for our export trade.

Senator JORDAN. That might explain, then, why there is such a disparity in tariffs on steel, say, or lumber?

Mr. LEWIS. No.

Well, it depends on whether you feel there is a great disparity. I still feel there is some question about this. In the case of lumber, I think, in general, most tariffs are low. Ours are low and so are the British, for example. The British tariff on lumber is lower than ours.

Senator JORDAN. Well, I do know about lumber with respect to Canada and the United States, and there is a great disparity there.

Mr. LEWIS. Canada?

Senator JORDAN. Yes, and it is causing us a good deal of difficulty out in the Northwest. But, with respect to steel, I do not have this information. But I can accept your explanation that if your objective is to equate the overall picture rather than as between each commodity, it would make some sense to me, but not a full explanation either.

Senator PROXMIRE. I would like to call your attention to this chart, Mr. Lewis, and ask you about these figures. Notice 1954–56 the average was around $100 million of imports into the United States from Western Europe, and by 1961 that had risen, more than doubled, gone up to nealy $250 million. Now, at the same time, you have, on the other side, just the opposite: Our exports from the United States to Europe dropped from about $160 million down to around $90 million or so; this very, very sharp drop, compared with this sharp increase.

I am wondering if any judgment can be made at all on the effect of European tariffs in keeping our iron and steel products out of Europe?

Mr. LEWIS. Well, again, I think——

Senator PROXMIRE. That is a tremendously sharp drop, is it not?

Mr. LEWIS. Yes. What years are those?

Senator PROXMIRE. 1954–56 average, I take it, in the first column, and 1961 in the second.

Mr. LEWIS. I do not think there were any striking tariff changes between those 2 years, so I think factors other than tariffs would be the explanation for those changes in trade. But, again, I think I would have to suggest that you ask the experts of the Department of Commerce about this.

Senator PROXMIRE. You see, here is the difficulty. It may be that there were other changes, but the tariff amounting to 6 percent or 10 percent—of course, these European tariffs are more than that in some cases—when there is a slight increase in cost in other areas might just take the whole commodity right out.

That might be the decisive factor that would mean that the price was such that there just would not be any bought.

Mr. LEWIS. It is a possibility; yes, sir.

Senator PROXMIRE. And, in view of this difference, is it not possible that the tariff could make it prohibitive, almost the same as a quota?

Mr. LEWIS. It is always a possibility, yes, sir, but it certainly needs to be looked at in terms of particular commodities.

Senator PROXMIRE. Have you made any study in terms of overall commodities, and just how much U.S. exports are kept out of Europe by high tariffs?

Mr. LEWIS. No, sir.

When we have tariff negotiations, we obtain from the Department of Commerce, for use in the preparations and the negotiations, data on the development of trade, the level of tariffs and the probable significance of these tariffs, and in negotiations we then try to attack the ones where it seems to be the case that the tariff is restricting trade.

But we have no recent general studies of this sort, I think.

Senator PROXMIRE. The injustice here is so striking, because this exact period when we were being excluded from part of this market coincided with the period when in Western Europe they were virtually eliminating their internal tariffs between 1957 and 1962, and it looks as if we are being not only excluded but discriminated against, and that, while none of us are anxious to retaliate against our friends, they are taking advantage of us and our relatively low tariff to double their import into the United States.

Mr. LEWIS. Yes. I should qualify my previous statement by saying that, as the tariffs within the Common Market are eliminated, there is a tendency, of course, for our exports to fall off, at least temporarily, and for trade to increase among the countries of the EEC. To some extent, perhaps, there is some of that, although the tariff changes that have so far taken place are probably not responsible for those large trade changes.

Senator PROXMIRE. Mr. Miller, you wanted to ask questions of Mr. Lederer.

Senator MILLER. My questions have now been reduced to two, Mr. Lederer, and perhaps you can answer them real quickly.

The first one is this: Does our Federal Government buy any foreign steel?

## STATEMENT OF WALTHER LEDERER, CHIEF, BALANCE OF PAYMENTS DIVISION, OFFICE OF BUSINESS ECONOMICS, DEPARTMENT OF COMMERCE; ACCOMPANIED BY MARIE T. BRADSHAW, CHIEF, MERCHANDISE TRADE SECTION, BALANCE OF PAYMENTS DIVISION—Resumed

Mr. LEDERER. To my knowledge, there has been a rather small amount bought some years ago, but there is a rather strict order in the Department of Defense, and that would be the major buying agency, to cut down on these purchases, and I do not think there is much left, if any.

Senator PROXMIRE. If the Senator would yield, would not these purchases have been by our Government overseas?

Mr. LEDERER. No; I mean, now, purchases for the use in the United States. You are talking about imports, I take it?

Senator MILLER. I would like to have you answer it both ways. I would like to know whether our Federal Government is buying any foreign steel anywhere.

Mr. LEDERER. That I cannot tell, altogether. The only thing I can tell is that there are strict orders in the Department of Defense to reduce these purchases abroad, and this applies to all purchases abroad, unless the prices of domestically produced goods are 50 percent more than the prices of goods produced abroad.

Senator MILLER. May I say, Mr. Lederer, I do know that there are policies such as this, but I am still interested in knowing what the product is.

Mr. LEDERER. I cannot tell specifically. We do not have data on the specific items.

Senator MILLER. Could you get it for us?

Mr. LEDERER. I can try, but I do not want to promise.

Senator MILLER. Well, please do.

Mr. LEDERER. Yes.

(The following table was subsequently furnished:)

*Value of imports of steel mill products into the United States by U.S. Government agencies,[1] calendar year 1962*

| Country of origin | Million dollars | Major items reported |
|---|---|---|
| Total[2] | 9.4 | |
| Canada | 4.9 | Forgings. |
| Western Germany | 2.1 | Plate, wire rope. |
| Japan | .8 | Plate. |
| Belgium | .5 | Wire rope. |
| All other | 1.1 | Wire rope, tubes. |

[1] Data represent imports under duty rate 16—dutiable merchandise imported free for U.S. Government.
[2] In terms of quantity, imports of steel by Government agencies amounted to 30,000 short tons, about two-thirds of 1 percent of total U.S. imports of steel mill products.

Source: Office of Business Economics, U.S. Department of Commerce, from basic data of Bureau of the Census.

Senator MILLER. Now, the second question:

Do I understand that the Commerce Department knows or at least can tabulate, the types of steel products that are going to the various countries? In other words, do you have the data which would enable us to know how much tonnage in rails, for example, were going to each country and how much of these other products?

Mr. LEDERER. From the United States?

Senator MILLER. In our exports, yes.

Mr. LEDERER. Yes, I think we do have those figures, yes.

Senator MILLER. And then we also know what our balance-of-payments picture is with respect to these countries, do we not?

Mr. LEDERER. Not entirely; no.

Senator MILLER. Do we not know how much our balance-of-payments picture is with respect to France and Italy? We do not?

Mr. LEDERER. No. We compiled these data by broad areas, and that is compiled on an area basis for each item. So we do not have data on the balance of payments with each of these countries.

Now there are exceptions. We compiled figures with the United Kingdom, with Canada, and now with Japan, but these are the only countries where we have separate information on our balance of payments by country.

Senator MILLER. Then how do we get our balance-of-payments figures?

Mr. LEDERER. We get them on an area basis. You see, a large part of our information is obtained from questionnaires, and we do not ask the respondents to specify each country. That would be too much of a burden on them. Much of it is obtained only in terms of broad areas,

AMERICAN IRON AND STEEL INSTITUTE
150 East Forty-Second Street, New York 17, N. Y.

(REVISED JANUARY 1963)

AIS - EXPORTS 2

# EXPORTS OF IRON AND STEEL PRODUCTS BY COUNTRIES OF DESTINATION

(Net Tons)

YEAR - 1962

Source: United States Department of Commerce

Sheet 2 of 2

| | LINE NO. | West Germany | Italy | TOTAL ECSC | Switzerland | TOTAL EUROPE | Israel | India | Pakistan | Viet Nam | Indonesia | Philippines | Korea Rep. | Hong Kong | Taiwan | Japan | TOTAL ASIA | Australia | TOTAL OCEANIA | Liberia | Rep. So. Africa | TOTAL AFRICA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Steel Mill Products** | | | | | | | | | | | | | | | | | | | | | | |
| Ingots, blooms, billets, etc | 1 | 11 | 341 | 7,239 | 2 | 10,115 | 3 | 1,103 | 193,801 | 8 | | | | | | 37,555 | 232,477 | | 1 | | | 11 |
| Skelp | 2 | | 602 | 602 | | 602 | 10,812 | | | | | | | | | | 10,812 | | | | | |
| Wire rods | 3 | 31 | 1 | 624 | 2 | 1,230 | | 9,993 | 5,186 | | 6 | | 2 | 17 | | 21 | 15,228 | 2 | 3 | | | 41 |
| Structural shapes, not fabricated | 4 | 573 | 840 | 1,842 | | 10,837 | 146 | 861 | 6,684 | 2,208 | 1,074 | 1,647 | 1,436 | | 1,384 | 1,220 | 17,392 | 208 | 233 | 774 | 25 | 1,702 |
| Sheet piling | 5 | | | 1 | | 2,405 | | 303 | | 836 | 170 | 159 | 253 | | | | 1,782 | | | 440 | | 440 |
| Plates, not fabricated | 6 | 3,211 | 1,070 | 4,786 | 4 | 8,371 | 10,775 | 37,245 | 7,286 | 1,178 | 241 | 1,392 | 1,145 | | 663 | 5,050 | 65,421 | 1,057 | 1,094 | 288 | 94 | 546 |
| Rails, over 60 lbs. per yard | 7 | 14 | 37 | 248 | | 466 | | | 32,697 | | | | | | 11 | | 32,720 | 4 | 4 | 26,999 | | 45,007 |
| Rails, 60 lbs. and less per yard | 8 | 178 | 26 | 659 | | 770 | 36 | 6 | 12,542 | | | 12 | 13 | | 9 | | 12,645 | 14 | 66 | 43 | | 58 |
| Splice bars and tie plates | 9 | | 35 | 56 | 8 | 111 | 5 | | 2,165 | | | | 784 | | 43 | | 3,111 | 3 | 3 | 5,842 | 4 | 5,963 |
| Railroad spikes | 10 | | | | | 3 | 2 | | 15 | | | 7 | | | | | 24 | | | 29 | | 29 |
| Car and locomotive wheels and axles | 11 | 89 | | 107 | | 152 | 32 | 3 | 937 | | | 62 | 245 | | 1,026 | | 2,613 | 44 | 44 | 90 | 12 | 135 |
| Hot rolled carbon bars | 12 | 22 | 140 | 1,985 | 250 | 3,211 | 1,164 | 7,071 | 2,849 | 903 | 259 | 362 | 5,680 | 5 | 1,009 | 8 | 20,070 | 197 | 202 | 619 | 1 | 343 |
| Hot rolled alloy bars | 13 | 609 | 350 | 1,418 | 14 | 1,833 | 421 | 3,334 | 325 | | 103 | 115 | 208 | | 912 | 19 | 5,486 | 132 | 132 | | 30 | 37 |
| Concrete reinforcement bars | 14 | 614 | | 996 | | 7,593 | 3 | 363 | 287 | 20 | 1,735 | 82 | | | | | 3,814 | | | 200 | 508 | 2,131 |
| Cold finished bars, carbon and alloy | 15 | 280 | 434 | 1,156 | 110 | 1,447 | 278 | 1,129 | 377 | 2 | 12 | 397 | 26 | 4 | 10 | 30 | 2,327 | 204 | 206 | 20 | 71 | 101 |
| Tool steel, all grades | 16 | 37 | 143 | 285 | 65 | 726 | 5 | 47 | 10 | 1 | 1 | 16 | | | 11 | 8 | 105 | 87 | 87 | 2 | | 2 |
| Black pipe | 17 | 9 | 7 | 44 | | 4,526 | 629 | 1,205 | 2,103 | 348 | 1,069 | 670 | 438 | 13 | 749 | 66 | 8,557 | 77 | 99 | 219 | 28 | 584 |
| Galvanized pipe | 18 | 1 | | 72 | | 531 | 1 | 754 | 6,921 | 51 | 85 | 148 | 1 | | 69 | 13 | 8,401 | | 96 | 158 | 1 | 698 |
| Oil country goods and line pipe | 19 | 34 | 451 | 1,140 | | 2,761 | 21 | 690 | 575 | 228 | 921 | 183 | 968 | | 1,640 | 500 | 14,535 | 1,107 | 1,375 | 198 | 17 | 9,482 |
| Pressure tubing | 20 | 58 | 356 | 599 | | 1,698 | 41 | 88 | 236 | 15 | 296 | 134 | 112 | 7 | 435 | 265 | 1,877 | 241 | 243 | 2 | 23 | 176 |
| Mechanical tubing | 21 | 80 | 191 | 3,210 | | 4,906 | 77 | 45 | 196 | 2 | 43 | 17 | | | 4 | 7 | 486 | 67 | 67 | 1 | 42 | 164 |
| Other pipe and tubing | 22 | 373 | 401 | 1,287 | 40 | 2,936 | 531 | 568 | 125 | 237 | 388 | 222 | 348 | | 215 | 171 | 4,196 | 185 | 213 | 109 | 59 | 956 |
| Plain wire | 23 | 320 | 75 | 552 | 20 | 755 | 108 | 2,121 | 8,184 | 178 | 16 | 221 | 1 | 27 | 11 | 59 | 11,055 | 186 | 187 | 5 | 40 | 88 |
| Galvanized and other coated wire | 24 | 7 | 12 | 128 | 11 | 261 | 16 | 3,347 | 1,790 | 1,143 | 250 | 95 | 114 | 364 | 96 | 369 | 7,755 | 56 | 63 | 111 | 21 | 219 |
| Barbed wire | 25 | | | | | | | 14 | 85 | 12,018 | | | 224 | | | | 12,407 | | | 3 | | 126 |
| Woven wire fencing | 26 | | | 4 | | 17 | | | 203 | 4 | 7 | 7 | 25 | | 5 | 122 | 596 | | | 111 | 27 | 224 |
| Wire nails and staples, etc | 27 | 45 | 32 | 343 | 103 | 568 | 9 | 5 | 181 | 39 | 22 | 30 | 110 | 25 | | 1 | 601 | 70 | 110 | 57 | 48 | 377 |
| Black Plate | 28 | 1,384 | 477 | 3,529 | 11 | 7,533 | 69 | 4,850 | 398 | 63 | 514 | 2,109 | 479 | 13,010 | 594 | 2,194 | 30,147 | 12 | 12 | | 42 | 638 |
| Tin plate, hot dipped and electrolytic | 29 | 132 | 921 | 5,743 | 91 | 22,095 | 322 | 14,998 | 13,252 | 8,324 | 1,882 | 12,030 | 2,917 | 17 | 1,393 | 25 | 58,555 | 235 | 235 | | 135 | 2,696 |
| Tin plate, seconds | 30 | 585 | 12,887 | 14,668 | 15 | 49,834 | 810 | 21,378 | 7,137 | 4,043 | 13,898 | 12,359 | 2,094 | 6,666 | 8,770 | 11,434 | 124,250 | 362 | 362 | | 544 | 5,895 |
| Terne plate | 31 | 8 | 662 | 670 | | 1,275 | 20 | 355 | | 26 | 17 | 36 | | | 23 | | 1,105 | | | | | |
| Sheets, hot rolled | 32 | 3,478 | 2,967 | 10,656 | 212 | 16,947 | 30,511 | 35,291 | 4,935 | 514 | 852 | 128 | 1,068 | 2 | 267 | 66 | 73,798 | 158 | 169 | 40 | 101 | 527 |
| Sheets, cold rolled | 33 | 47,006 | 3,751 | 53,592 | 1,381 | 66,555 | 1,494 | 58,983 | 14,743 | 586 | 96 | 922 | 38 | 1,107 | 136 | 62 | 78,596 | 4,923 | 5,138 | 1 | 263 | 2,723 |
| Galvanized and other coated sheets | 34 | 1,896 | 680 | 4,366 | 493 | 7,950 | 63 | 9,960 | 82,080 | 4,571 | 117 | 656 | 550 | 20 | 14 | 14 | 98,699 | 921 | 1,081 | 76 | 122 | 2,402 |
| Enameling sheets | 35 | 695 | | 1,080 | 3 | 2,992 | 11 | 179 | 179 | | | 493 | | | | 69 | 943 | 402 | 573 | | 24 | 31 |
| Electrical sheet and strip | 36 | 3,609 | 2,711 | 8,034 | 794 | 11,231 | 423 | 10,949 | 1,049 | 32 | | 41 | 2 | | 18 | 2 | 12,725 | 1.147 | 1,434 | | 651 | 703 |
| Strip steel, hot rolled | 37 | 35 | 18 | 1,824 | 15 | 2,767 | 11 | 6,162 | 8,538 | | 8 | 41 | 23 | 7 | 45 | | 14,885 | 33 | 130 | | 25 | 321 |
| Strip steel, cold rolled | 38 | 487 | 798 | 2,693 | 700 | 7,377 | 539 | 7,164 | 155 | 19 | | 691 | 1 | 83 | 34 | 18 | 8,800 | 1,747 | 1,787 | 5 | 100 | 547 |
| Total Steel Mill Products | | 65,911 | 31,416 | 136,238 | 4,344 | 265,387 | 59,388 | 240,564 | 418,226 | 37,597 | 24,082 | 35,484 | 19,305 | 21,374 | 19,596 | 59,368 | 998,996 | 13,882 | 15,449 | 36,478 | [illegible] | 87,022 |
| **Other Steel Products** | | | | | | | | | | | | | | | | | | | | | | |
| Plates, fabricated | 39 | 2 | 10 | 29 | 15 | 7,192 | 3 | 191 | 967 | 93 | 58 | 91 | | | 79 | 1,938 | 3,663 | 129 | 129 | 45 | 44 | 185 |
| Structural shapes, fabricated | 40 | 116 | 1,972 | 2,780 | 34 | 13,692 | 307 | 2,210 | 3,212 | 134 | 2,184 | 931 | 502 | 3 | 2,877 | 2,242 | 20,805 | 90 | 249 | 458 | 32 | 2,884 |
| Bridges, portable and knocked down | 41 | | | | | | | | | | | | | | | | | | | | | |
| Frames and sashes | 42 | | | 29 | 9 | 86 | | | 245 | 1 | | 14 | 16 | | | | 293 | | | | | 32 |
| Rails, relaying | 43 | | | 82 | | 82 | | | 525 | | | | | | | | 525 | | | 323 | | 323 |
| Frogs, switches and trackwork | 44 | 2 | 24 | 42 | | 58 | | | 5,985 | | | 3 | 236 | | | 3 | 6,939 | | | 1,348 | 49 | 1,405 |
| Railroad bolts, nuts and washers | 45 | | | 5 | | 15 | | 1 | 29 | | | 2 | 63 | | 1 | | 120 | | | 100 | | 100 |
| Bolts, nuts, rivets and washers, except RR | 46 | 583 | 131 | 1,100 | 44 | 1,869 | 117 | 63 | 441 | 50 | 102 | 128 | 231 | 12 | 109 | 50 | 1,752 | 98 | 107 | 96 | 200 | 502 |
| Steel fence, posts, gates and fittings | 47 | | | 1 | | 7 | | | 140 | 14,036 | 11 | 3 | 4 | | | | 14,354 | | | 42 | | 337 |
| Welding rods, electric | 48 | 77 | 85 | 300 | 155 | 893 | 33 | 52 | 215 | 49 | 69 | 183 | 65 | 22 | 181 | 75 | 1,600 | 146 | 207 | 130 | 133 | 622 |
| Wire rope and strand | 49 | 7 | 26 | 251 | 7 | 712 | 80 | 754 | 524 | 16 | 48 | 535 | 168 | 2 | 149 | 15 | 2,744 | 80 | 100 | 369 | 17 | 1,137 |
| Other wire and manufactures | 50 | 100 | 37 | 197 | 25 | 345 | 8 | 54 | 110 | 10 | 32 | 92 | 3 | 2 | 23 | 50 | 650 | 22 | 28 | 70 | 21 | 161 |
| Tacks | 51 | | | 2 | | 7 | | | | | | 154 | | 6 | | | 277 | 1 | 1 | | | 5 |
| Tanks, complete and knock'd down | 52 | 14 | 1,357 | 1,385 | 2 | 4,695 | 500 | 460 | 202 | 23 | 833 | 44 | 480 | 26 | 15 | 157 | 3.896 | 60 | 76 | 164 | 2 | 1,452 |
| Cylinders, gas | 53 | 4 | 140 | 249 | 4 | 374 | 33 | 2,145 | 92 | 2 | 2 | 71 | | | 26 | 11 | 2,749 | 304 | 334 | 23 | 172 | 214 |
| Cylinders, other | 54 | 562 | 167 | 1,410 | 8 | 1,624 | 33 | 268 | 11 | | | 11 | | | | 23 | 347 | 10 | 70 | | | 175 |
| Metal lath | 55 | | 8 | 11 | 1 | 17 | 1 | | 93 | | 5 | 19 | 1 | | | | 141 | | 3 | 2 | 2 | 5 |
| Tin and galvanized hollow ware | 56 | 3 | | 3 | | 15 | | | | | 3 | | | | | 4 | 9 | 8 | 11 | 1 | 1 | 4 |
| Tin cans, finished or unfinished | 57 | 16 | 5 | 124 | 2 | 216 | 70 | | | | | 3,055 | | 2 | | 2 | 3,248 | | 120 | | 364 | 415 |
| Wire bed and cushion springs | 58 | 1 | 11 | 13 | | 28 | | 1 | 2 | | 10 | 11 | 22 | 1 | | 9 | 95 | | | 32 | 2 | 39 |
| Cotton bale ties and buckles | 59 | | | 1 | | 1 | | | | | | | | | | | 10 | | | | | |
| Sheets fabricated | 60 | | 15 | 21 | 3 | 545 | 12 | | 809 | 271 | 129 | 155 | 18 | | | 398 | 3,437 | | 1 | 193 | 4 | 441 |
| Steel castings | 61 | 168 | 643 | 1,028 | 16 | 1,406 | | | 5 | | 14 | 157 | 9 | | 2 | 4 | 523 | 2 | | 22 | 4 | 156 |
| Forgings | 62 | 48 | 326 | 1,511 | 4 | 1,806 | 7 | 420 | 4 | | | 509 | | | | 238 | 1,179 | 36 | 36 | 288 | 1 | 609 |
| Sprocket and power transmission chains | 63 | 65 | 77 | 259 | 32 | 463 | 24 | 50 | 2 | | 2 | 91 | 1 | 1 | 7 | 6 | 202 | 49 | 59 | 3 | 141 | 192 |
| Other chains | 64 | 41 | 30 | 118 | 126 | 699 | 7 | 12 | 41 | 28 | 165 | 135 | 21 | | 92 | 3 | 746 | 31 | 33 | 14 | 13 | 133 |
| Total Other Steel Products | | 1,809 | 5,064 | 10,951 | 487 | 36,847 | 1.235 | 6.681 | 13,654 | 14,713 | 3,667 | 6,394 | 1,840 | 77 | 3,561 | 5,228 | 70,304 | 1.066 | 1.571 | 3.727 | 1.287 | 11.860 |
| Total Steel Products | | 67,720 | 36,480 | 147,189 | 4,831 | 302,234 | 60,623 | 247,245 | 431,880 | 52,310 | 27,749 | 41,878 | 21,145 | 21.451 | 23,157 | 64,596 | 1,069,300 | 14.947 | 17.020 | 40.205 | 4.344 | 98 682 |
| **Iron Products and Ferroalloys** | | | | | | | | | | | | | | | | | | | | | | |
| Chilled iron railway car wheels | 65 | | | | | 1 | | | | | | | | | | 6 | 32 | | | 38 | | 38 |
| Cast iron pressure pipe | 66 | | 24 | 24 | | 2,078 | | 56 | 27 | 1,005 | 433 | 112 | 1,165 | | 26 | | 4,971 | 6 | 6 | 68 | | 826 |
| Cast iron soil pipe | 67 | 32 | | 32 | | 53 | 20 | | 26 | | 15 | 24 | | | | | 338 | | 2 | 58 | 1 | 77 |
| Cast and malleable iron pipe fittings | 68 | 32 | 154 | 330 | 1 | 976 | 16 | 73 | 409 | 48 | 142 | 81 | 65 | 1 | 39 | 21 | 1,310 | 32 | 44 | 87 | 41 | 304 |
| Iron castings and ingot molds | 69 | 63 | 1,244 | 1,412 | | 1,996 | 1 | 9 | 3 | | 16 | 53 | 16 | 1 | 1 | 3 | 199 | | 2 | 24 | 2 | 93 |
| Pig iron | 70 | 3,359 | 24,559 | 27,932 | 3.018 | 31,041 | | 108 | 32,048 | 238 | | 330 | | | 3,901 | 84,405 | 121,030 | | | | | 199 |
| Ferroalloys | 71 | 1,571 | 266 | 14,746 | 1,461 | 17,712 | | 16 | 22 | | | 228 | | | | 419 | 687 | 515 | 517 | 1 | 15 | 117 |
| Total Iron Products and Ferroalloys | | 5,057 | 26,249 | 44,476 | 4,480 | 53,857 | 37 | 264 | 32,535 | 1,291 | 606 | 828 | 1,246 | 2 | 3,967 | 84,854 | 128,567 | 553 | 571 | 276 | 59 | 1.654 |
| GRAND TOTAL | | 72,777 | 62,729 | 191,665 | 9,311 | 356,091 | 60,660 | 247,509 | 464,415 | 53,601 | 28,355 | 42,706 | 22.391 | 21,453 | 27,124 | 149,450 | 1,197,867 | 15,500 | 17.591 | 40,481 | 4,403 | 100,536 |
| Iron and steel scrap | 72 | 32,308 | 1,508,824 | 1,573,881 | | 1,693,030 | 2,013 | 4,564 | 89 | | | 127 | 19,999 | 996 | 101,369 | 2,549,882 | 2,687,323 | 22 | | | | 10,225 |

NOTE: Does not include steel in the form of finished commodities such as automobiles, machinery, etc. *Includes Netherlands, Belgium-Luxembourg, France, West Germany and Italy.

AMERICAN IRON AND STEEL INSTITUTE
150 East Forty-Second Street, New York 17, N. Y.

(REVISED JANUARY 1963)

AIS - EXPORTS 2

## EXPORTS OF IRON AND STEEL PRODUCTS BY COUNTRIES OF DESTINATION

(Net Tons)

YEAR - 1962

Sheet 1 of 2

Source: United States Department of Commerce

| | LINE NO. | GRAND TOTAL | Canada | Mexico | Guatemala | El Salvador | Costa Rica | Panama | Dom. Republic | Colombia | Venezuela | Ecuador | Peru | Chile | Brazil | Argentina | TOTAL LATIN AMERICA | Sweden | United Kingdom | Netherlands | Belgium - Luxem. | France |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Steel Mill Products** | | | | | | | | | | | | | | | | | | | | | | |
| Ingots, blooms, billets, etc. | 1 | 252,667 | 5,977 | 830 | | | | 27 | | 1 | 21 | | 5 | 33 | 400 | 2,701 | 4,086 | 53 | 109 | 61 | 258 | 6,568 |
| Skelp | 2 | 11,527 | 113 | | | | | | | | | | | | | | | | | | | |
| Wire rods | 3 | 17,005 | 158 | 10 | | | | | 25 | 14 | 12 | 1 | 16 | | 249 | | 345 | 1 | 279 | 17 | 455 | 120 |
| Structural shapes, not fabricated | 4 | 146,234 | 103,192 | 1,027 | 164 | 63 | 658 | 239 | 200 | 277 | 1,365 | 153 | 1,830 | 1,219 | 265 | 1,768 | 12,878 | | 1,119 | 65 | 167 | 197 |
| Sheet piling | 5 | 13,052 | 3,832 | 19 | | | | | | | 115 | | | 639 | 3,197 | | 4,593 | | | | | |
| Plates, not fabricated | 6 | 119,861 | 26,105 | 563 | 190 | 116 | 223 | 212 | 307 | 2,695 | 2,511 | 18 | 3,015 | 1,676 | 1,455 | 1,533 | 16,324 | 53 | 784 | 123 | 32 | 350 |
| Rails, over 60 lbs. per yard | 7 | 81,044 | 1,136 | 36 | | | | | | | 351 | | 59 | 1,048 | 8 | 10 | 1,711 | 7 | 32 | | 59 | 138 |
| Rails, 60 lbs. and less per yard | 8 | 14,611 | 172 | 63 | 2 | 2 | | 1 | | 2 | 423 | | 52 | 90 | 53 | 39 | 900 | | 95 | 14 | 293 | 148 |
| Splice bars and tie plates | 9 | 13,260 | 1,508 | 199 | | | 12 | 1 | 20 | 13 | 87 | | 20 | 776 | 284 | 19 | 2,564 | | | | 21 | |
| Railroad spikes | 10 | 384 | 36 | 14 | 128 | 27 | 22 | 34 | | | 11 | | 7 | | | | 292 | | | | | |
| Car and locomotive wheels and axles | 11 | 7,360 | 219 | 1,923 | 10 | 17 | 22 | 9 | 28 | 1 | 54 | 32 | 24 | 133 | 1,593 | 172 | 4,197 | | 7 | | 17 | 1 |
| Hot rolled carbon bars | 12 | 52,492 | 17,297 | 2,304 | 35 | 77 | 343 | 82 | 231 | 331 | 591 | 27 | 2,262 | 1,953 | 364 | 1,047 | 10,769 | 19 | 406 | 1,596 | 147 | 80 |
| Hot rolled alloy bars | 13 | 14,882 | 4,902 | 281 | | 2 | 8 | 2 | 3 | 79 | 31 | 1 | 52 | 47 | 746 | 1,167 | 2,492 | 2 | 367 | 58 | 40 | 361 |
| Concrete reinforcement bars | 14 | 22,402 | 177 | 33 | 879 | 252 | 593 | 220 | 1,637 | | 45 | 129 | | | | | 8,687 | | 22 | | 368 | 14 |
| Cold finished bars, carbon and alloy | 15 | 11,188 | 2,284 | 1,822 | 8 | 10 | 5 | 14 | 34 | 83 | 130 | | 114 | 171 | 1,268 | 1,043 | 4,823 | 32 | 86 | 88 | 243 | 111 |
| Tool steel, all grades | 16 | 1,637 | 462 | 28 | 3 | | 2 | 10 | 8 | 9 | 15 | 3 | 50 | 4 | 1 | 7 | 249 | 3 | 145 | 18 | 56 | 31 |
| Black pipe | 17 | 35,040 | 7,715 | 1,737 | 85 | 136 | 79 | 159 | 163 | 1,346 | 3,124 | 188 | 981 | 2,039 | 816 | 470 | 13,559 | 1 | 61 | 3 | 1 | 24 |
| Galvanized pipe | 18 | 12,813 | 264 | 392 | 139 | 38 | 382 | 181 | 114 | 68 | 324 | 143 | 117 | 135 | 39 | 67 | 2,823 | | 11 | 2 | 69 | |
| Oil country goods and line pipe | 19 | 86,091 | 7,567 | 3,953 | 154 | 53 | 652 | 194 | | 8,211 | 24,110 | 2 | 557 | 1,883 | 1,705 | 1,642 | 50,371 | | 113 | 55 | 170 | 430 |
| Pressure tubing | 20 | 10,391 | 3,316 | 529 | 7 | 17 | 12 | 248 | 64 | 226 | 252 | 15 | 205 | 96 | 257 | 946 | 3,081 | 51 | 85 | 134 | 21 | 30 |
| Mechanical tubing | 21 | 24,134 | 15,365 | 423 | 2 | 7 | 4 | 1 | | 51 | 4 | 1 | 326 | 27 | 429 | 772 | 2,146 | 37 | 1,491 | 72 | 65 | 2,802 |
| Other pipe and tubing | 22 | 23,215 | 7,717 | 1,992 | 22 | 214 | 54 | 205 | 30 | 494 | 1,448 | 37 | 484 | 677 | 361 | 282 | 7,197 | 81 | 276 | 162 | 108 | 243 |
| Plain wire | 23 | 16,196 | 2,463 | 559 | 28 | 12 | 78 | 79 | 14 | 103 | 394 | 4 | 32 | 42 | 84 | 43 | 1,628 | 36 | 36 | 22 | 71 | 64 |
| Galvanized and other coated wire | 24 | 12,166 | 1,814 | 226 | 54 | 22 | 136 | 102 | 50 | 189 | 664 | 93 | 81 | 46 | 29 | 11 | 2,054 | 14 | 51 | 1 | 128 | |
| Barbed wire | 25 | 12,894 | 24 | 13 | | 1 | 12 | | 2 | 14 | | 25 | | | | | 337 | | | | | |
| Woven wire fencing | 26 | 1,954 | 292 | 169 | 9 | 57 | 16 | 45 | 55 | | 57 | 3 | 4 | | | | 825 | | | 1 | 1 | 2 |
| Wire nails and staples, etc. | 27 | 4,343 | 696 | 635 | 35 | 18 | 15 | 55 | 14 | 151 | 61 | 101 | 51 | 4 | 1 | 1 | 1,491 | 21 | 52 | 47 | 126 | 93 |
| Black plate | 28 | 39,609 | 10 | 26 | 86 | | | | | 64 | 112 | 17 | 105 | | 407 | 130 | 1,175 | 257 | | 1,322 | 281 | 65 |
| Tin plate, hot dipped and electrolytic | 29 | 141,991 | 1,990 | 4,950 | 1,382 | 1,188 | 436 | 2,702 | 3,559 | 4,934 | 21,432 | 2,549 | 5,494 | 193 | 3,594 | 1,647 | 56,420 | 604 | 35 | 2,353 | 2,337 | 6 |
| Tin plate, seconds | 30 | 207,721 | 198 | 8 | 46 | 55 | 133 | 36 | 237 | 3,343 | 335 | 716 | 2,358 | 88 | 9,774 | 9,602 | 27,182 | 5,435 | | 689 | 501 | |
| Terne plate | 31 | 4,771 | 1,365 | | | | 6 | | | 669 | | 190 | | | 84 | 77 | 1,026 | | | | | |
| Sheets, hot rolled | 32 | 121,952 | 15,911 | 677 | 22 | 60 | 56 | 192 | 135 | 3,492 | 566 | 29 | 530 | 764 | 5,950 | 3,409 | 14,300 | 4,523 | 42 | 1,247 | 876 | 2,588 |
| Sheets, cold rolled | 33 | 204,683 | 18,684 | 2,758 | 355 | 67 | 42 | 89 | 30 | 5,505 | 3,721 | | 591 | 70 | 13,287 | 5,942 | 32,987 | 8,159 | 601 | 996 | 982 | 857 |
| Galvanized and other coated sheets | 34 | 141,376 | 14,627 | 612 | 945 | 710 | 829 | 1,426 | 440 | 1,951 | 4,120 | 23 | 1,308 | 182 | 774 | 1,059 | 16,616 | 29 | 2,510 | 1,587 | 185 | 18 |
| Enameling sheets | 35 | 13,192 | 4,226 | 69 | | | | | | 1,067 | 39 | | 449 | | 2,364 | 122 | 4,427 | 25 | 63 | 127 | 268 | |
| Electrical sheet and strip | 36 | 54,443 | 19,803 | 4,595 | | 1 | | | | 6 | 21 | | 87 | 83 | 3,574 | 169 | 8,547 | 495 | 131 | 1,491 | 80 | 143 |
| Strip steel, hot rolled | 37 | 31,611 | 12,009 | 305 | 25 | 8 | 29 | 48 | 16 | 383 | 142 | 7 | 120 | 66 | 230 | 27 | 1,499 | 149 | 648 | 59 | 1,636 | 76 |
| Strip steel, cold rolled | 38 | 33,210 | 10,389 | 273 | 23 | 70 | 28 | 70 | 36 | 406 | 546 | 52 | 270 | 36 | 1,643 | 478 | 4,310 | 1,500 | 1,329 | 177 | 228 | 1,293 |
| Total Steel Mill Products | | 2,013,102 | 317,335 | 34,077 | 4,838 | 3,300 | 4,895 | 6,669 | 7,452 | 36,178 | 67,234 | 4,558 | 21,657 | 14,192 | 53,485 | 36,402 | 328,913 | 21,581 | 11,596 | 12,578 | 10,270 | 15,063 |
| **Other Steel Products** | | | | | | | | | | | | | | | | | | | | | | |
| Plates, fabricated | 39 | 16,138 | 1,592 | 120 | | 1 | 10 | 1 | 50 | 311 | 405 | 30 | 223 | 159 | 210 | 76 | 3,077 | | 88 | 2 | 15 | |
| Structural shapes, fabricated | 40 | 56,462 | 2,287 | 1,784 | 97 | 217 | 1,164 | 252 | 805 | 2,151 | 1,544 | 15 | 1,576 | 1,514 | 64 | 1,491 | 18,545 | 8 | 262 | 93 | 180 | 419 |
| Bridges, portable and knocked down | 41 | - | | | | | | | | | | | | | | | | | | | | |
| Frames and sashes | 42 | 835 | 376 | 13 | | | | 3 | 2 | 14 | 2 | 1 | | | | | 48 | 1 | 17 | | | 29 |
| Rails, relaying | 43 | 6,536 | 913 | 214 | 7 | 13 | | | 28 | | 14 | | 8 | | 299 | | 4,693 | | | | | 82 |
| Frogs, switches and trackwork | 44 | 10,482 | 1,111 | 112 | 2 | 2 | 22 | 1 | 12 | 103 | 146 | | 148 | 300 | 9 | 9 | 968 | 7 | | | 4 | 12 |
| Railroad bolts, nuts and washers | 45 | 883 | 263 | 283 | 14 | 3 | 12 | 16 | 6 | | 16 | | 3 | 1 | | 3 | 385 | | | | 3 | 2 |
| Bolts, nuts, rivets and washers, except RR | 46 | 15,026 | 7,657 | 432 | 64 | 53 | 53 | 83 | 98 | 329 | 572 | 38 | 238 | 229 | 19 | 201 | 3,139 | 92 | 303 | 79 | 149 | 258 |
| Steel fence, posts, gates and fittings | 47 | 15,017 | 46 | 28 | 30 | | 7 | 8 | 15 | | 9 | | 1 | 56 | | | 273 | | | | | 1 |
| Welding rods, electric | 48 | 10,298 | 2,308 | 916 | 81 | 62 | 136 | 94 | 120 | 190 | 1,078 | 319 | 370 | 152 | 148 | 298 | 4,668 | 1 | 124 | 15 | 21 | 102 |
| Wire rope and strand | 49 | 9,547 | 894 | 155 | 57 | 24 | 82 | 50 | 24 | 106 | 753 | 17 | 447 | 780 | 193 | 240 | 3,960 | 1 | | 20 | 26 | 172 |
| Other wire and manufactures | 50 | 8,286 | 4,742 | 195 | 134 | 11 | 53 | 155 | 27 | 27 | 154 | 3 | 54 | 117 | 11 | 19 | 2,360 | 7 | 63 | 2 | 48 | 10 |
| Tacks | 51 | 696 | 19 | 17 | | 43 | 2 | 20 | 41 | 1 | 240 | | 3 | | | | 387 | | 1 | 1 | | 1 |
| Tanks, complete and knocked down | 52 | 20,280 | 939 | 491 | 16 | 87 | 54 | 1,319 | 150 | 168 | 2,460 | 23 | 572 | 673 | 91 | 239 | 9,222 | 89 | 26 | 2 | 6 | 6 |
| Cylinders, gas | 53 | 7,473 | 857 | 415 | 45 | 18 | 23 | 50 | 129 | 123 | 423 | 5 | 123 | 248 | 200 | 16 | 2,945 | 18 | 67 | 91 | 5 | 9 |
| Cylinders, other | 54 | 4,894 | 1,755 | 425 | | 2 | 4 | | 8 | 3 | 186 | | 2 | 17 | 8 | | 923 | 3 | 275 | 487 | 43 | 151 |
| Metal lath | 55 | 1,214 | 827 | 26 | | | 6 | 26 | | 1 | 66 | 3 | 10 | 14 | | | 220 | | | | | 3 |
| Tin and galvanized hollow ware | 56 | 538 | 317 | 23 | 2 | | 1 | 7 | 2 | | 106 | 1 | 3 | 7 | 2 | | 182 | | 8 | | | |
| Tin cans, finished or unfinished | 57 | 28,588 | 13,334 | 5,005 | 166 | 91 | 193 | 314 | 359 | 13 | 2,445 | 961 | 121 | 274 | | 10 | 11,225 | 19 | 25 | 72 | 16 | 15 |
| Wire bed and cushion springs | 58 | 1,464 | 457 | 79 | 25 | 37 | 14 | 147 | 129 | | 23 | 3 | 4 | | | 1 | 845 | | 15 | | 1 | |
| Cotton bale ties and buckles | 59 | 584 | 1 | 104 | | | | | | 356 | | | 55 | | | | 572 | | | | | 1 |
| Sheets fabricated | 60 | 8,896 | 252 | 116 | 5 | 68 | 25 | 252 | 19 | 126 | 111 | 329 | 359 | 95 | | 18 | 4,220 | 3 | 83 | 1 | | 5 |
| Steel castings | 61 | 9,332 | 2,847 | 93 | | 1 | 1 | | 12 | 327 | 237 | | 3,572 | 72 | 88 | 24 | 4,393 | 274 | 63 | 133 | 29 | 55 |
| Forgings | 62 | 17,474 | 4,976 | 394 | | 50 | | | | 216 | 1,275 | | 4,085 | 1,362 | 154 | 20 | 8,668 | 45 | 124 | 46 | 839 | 252 |
| Sprocket and power transmission chains | 63 | 3,837 | 2,122 | 340 | 1 | 2 | 6 | 2 | 62 | 39 | 79 | | 55 | 30 | 11 | 136 | 810 | 47 | 61 | 8 | 35 | 74 |
| Other chains | 64 | 4,127 | 1,309 | 102 | 14 | 25 | 15 | 47 | 37 | 61 | 143 | 17 | 24 | 265 | 18 | 246 | 1,212 | 120 | 20 | 26 | 12 | 9 |
| Total Other Steel Products | | 260,903 | 52,161 | 11,882 | 765 | 801 | 1,887 | 2,848 | 2,165 | 4,697 | 12,293 | 1,765 | 12,084 | 6,368 | 1,525 | 3,047 | 88,140 | 735 | 1,539 | 1,078 | 1,432 | 1,568 |
| Total Steel Products | | 2,274,005 | 369,516 | 45,959 | 5,603 | 4,100 | 6,782 | 9,537 | 9,617 | 40,875 | 79,527 | 6,323 | 33,741 | 20,560 | 55,010 | 39,449 | 417,053 | 22,316 | 13,135 | 13,656 | 11,702 | 17,631 |
| **Iron Products and Ferroalloys** | | | | | | | | | | | | | | | | | | | | | | |
| Chilled iron railway car wheels | 65 | 5,580 | 56 | 4,097 | 777 | 20 | 122 | 42 | 70 | | | | 3 | | | | 5,453 | | | | | |
| Cast iron pressure pipe | 66 | 20,384 | 281 | 696 | 436 | 252 | 7 | 875 | 3 | 35 | 8,239 | 34 | 152 | 42 | 12 | | 12,222 | | | | | |
| Cast iron soil pipe | 67 | 2,951 | 205 | 46 | 1 | | 66 | 134 | 9 | 18 | 1,191 | 65 | 3 | | | 6 | 2,273 | | | | | |
| Cast and malleable iron pipe fittings | 68 | 9,934 | 2,024 | 299 | 31 | 29 | 42 | 199 | 32 | 162 | 2,938 | 78 | 177 | 223 | 16 | 123 | 5,276 | 10 | 52 | 38 | 18 | 88 |
| Iron castings and ingot molds | 69 | 24,577 | 19,516 | 1,160 | 18 | 1 | 8 | 52 | | 121 | 693 | 1 | 38 | 48 | 78 | 319 | 2,772 | 367 | 189 | 37 | 65 | 3 |
| Pig iron | 70 | 154,380 | 1,845 | 46 | | | | | | | | | | | | | 265 | | 91 | | | 14 |
| Ferroalloys | 71 | 26,308 | 6,334 | 363 | | | | 4 | 5 | 38 | 184 | | 40 | 326 | 302 | 276 | 1,541 | 287 | 1,087 | 4,235 | 8,645 | 27 |
| Total Iron Products and Ferroalloys | | 244,714 | 30,264 | 6,707 | 1,263 | 302 | 245 | 1,306 | 110 | 374 | 13,245 | 178 | 413 | 639 | 408 | 724 | 29,801 | 664 | 1,419 | 4,310 | 8,728 | 132 |
| GRAND TOTAL | | 2,518,719 | 399,780 | 52,666 | 6,866 | 4,402 | 7,025 | 10,843 | 9,736 | 41,249 | 92,772 | 6,501 | 34,154 | 21,199 | 55,418 | 40,173 | 446,854 | 22,980 | 14,554 | 17,966 | 20,430 | 17,763 |
| Iron and steel scrap | 72 | 5,125,144 | 363,501 | 318,553 | 51 | | | | | 467 | 32,781 | | 399 | | 1,283 | 50 | 371,043 | 5,343 | 1,395 | 1,855 | 2,464 | 22,640 |

* NOTE: Does not include steel in the form of finished commodities such as automobiles, machinery, etc. Horizontal details do not necessarily add to totals because of omission of countries.

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and in some areas, for instance, in the shipping industry and in the transportation questionnaires, it would be very difficult for the shippers to tell us precisely how much they earned, say, on shipments to or from France, as distinguished from Holland.

They know the conference. They know the route over which they have gone, but they cannot tell, specifically, the country.

Senator MILLER. You have enlightened me on something I certainly did not know existed.

Then, Mr. Lederer, let me put it this way to you. If we have the data regarding the types of steel exports that are going to the various countries, then we would know whether or not those various countries can or are able to produce similar products to furnish competition for our exports, would we not?

We would know, for example, if we had the volume of exports of rails to, let us say, Brazil, we would know whether or not Brazil has any rail products that they manufacture which would compete with us, do we not?

Mr. LEDERER. There are probably in rails, as in many other things, all sorts of qualities. I do not know now whether Brazil produces rails or not.

Senator MILLER. May I say, I am just using this as an example.

Mr. LEDERER. Yes; this is right. This is an example.

Now one might be able to find out that Brazil produces rails, perhaps, but it does not mean that these are the same kind of rails and in the same quality, for instance, as our rails.

Senator MILLER. Well, then, how would we be able to tell what impact on our export trade a price increase on some steel commodities would have? I believe in your earlier statement you have pointed out that you laid great emphasis, as matter of fact, on the interest in the competitive position of steel, because of its impact on our balance-of-payments problem and on the competitive problem.

Now we hear all kinds of talk when there is another round of wage increases in the steel industry or another round of price increases in the steel industry about how much this is going to affect our balance of payments or our export trade. Who knows? How can we evaluate such a situation?

Mr. LEDERER. Well, very frankly, I have some doubt whether the effect of these changes can be put into any type of quantitative information.

The only thing that one can say is the general direction in which the effects are likely to go, and, as far as the general directions go, I believe it is reasonably certain that an increase in domestic prices is more likely to hurt us in the balance of payments than to help us. How much, precisely, I do not think anybody would be able to tell.

Senator MILLER. If it is a large increase, we could expect the degree to be great. If it is a minor increase, we could expect the degree to be minor, but, nevertheless, we could not measure it?

Mr. LEDERER. We could not measure it; no.

Senator MILLER. Thank you, Mr. Lederer.

Senator PROXMIRE. Senator Jordan, do you have further questions?
Senator JORDAN. No more.
Senator PROXMIRE. I would just like to ask this of Mr. Lewis.
Mr. Lewis, I am very unhappy, as I am sure other members of the committee may be, about the fact that we just cannot seem to get answers on some of these very crucial areas.
Congressman Reuss said this morning very well that in the area of shipping rates, in the area of tariffs, and in the administration of the Battle Act the steel industry seems to be in trouble because of Government action or inaction, and that certainly seems to be true here.
Let me ask you: Do you know of any representation by the steel companies to protest foreign tariffs or the fact that tariffs are higher generally abroad on steel products than they are here on imports of steel products?
Mr. LEWIS. I do not know of any recent representations. Before the 1961 tariff negotiations there were, of course, public hearings, at which the various industries had an opportunity to ask for consideration of concessions from other countries for their benefit. I am sure the steel industry made an appearance and filed briefs and asked for reductions in foreign tariffs. I cannot answer the question, though, whether they called attention to tariff differences and whether they asked for equalization. That could be checked.
Senator PROXMIRE. Did you or did you not—I may have missed it—tell us whether there had been any representations whatsoever by the State Department specifically on steel?
Mr. LEWIS. Oh, yes.
Senator PROXMIRE. To try and persuade countries abroad to reduce their tariffs?
Mr. LEWIS. Yes, indeed. I think in every tariff negotiation we have conducted, including the 1961 negotiations, we asked for and obtained reductions in foreign duties on iron and steel products of various kinds.
Senator PROXMIRE. Do you have the record with you?
Mr. LEWIS. No; I do not, sir.
Senator PROXMIRE. Will you file that record with the committee?
Mr. LEWIS. Yes, sir.
Senator PROXMIRE. In other words, all we want is the date in which you have made the representation, what you asked for, how much you actually achieved, how much the tariff has been reduced, and then the record of any change in our own tariffs during corresponding years.
Mr. LEWIS. Would you like that for all countries or just European countries?
Senator PROXMIRE. Well, I would like that for European countries and Canada and Japan, Norway, Denmark, and Sweden, not that they are not European countries, but including Norway, Denmark, and Sweden.
(The following was later received for the record:)

Principal GATT Tariff Concessions to the United States by Selected Countries on Steel Mill Products

Note: Under the "principal supplier" rule of GATT, concessions are generally granted directly to the country which is principal supplier of a given article, but all supplying countries receive the benefit of all concessions. Thus, the United States benefits indirectly from many concessions granted by other countries which are not shown in this table.

| Country and Description of Article | Duty Rates: Pre-Agreement | Duty Rates: Agreement | Year Negotiated |
|---|---|---|---|
| **Benelux:** | | | |
| Iron & steel sheet and plate, blade | 4%<br>3% | 4%<br>3%<br>(bindings) | 1947 |
| **France:** | | | |
| Glazed iron & steel sheets for automobile bodies | 22% to 25% | 16% | 1947 |
| Iron or steel hoops or strips, hot-rolled | 15% | 12% | 1956 |
| Iron or steel plates or sheets, galvanized or leaded | 18% | 17% | 1956 |
| Alloyed steel sections for construction | 11% | 8% (quota)<br>10% (other) | 1956 |
| Magnetic steel sheets | 22% | 18% | 1956 |
| Alloyed steel strips, simply hot-rolled | 13% | 8% (quota)<br>12% (other) | 1956 |
| **Germany:** | | | |
| Iron or steel plates or sheets simply cold-rolled (certain thicknesses) | 22% | 15% | 1956 |

| | | | |
|---|---|---|---|
| Iron or steel plates or sheets, simply lustered, polished or glazed | 22% | 15% | 1956 |
| Iron or steel plates or sheets, coated with silver, etc. or enameled | 28% | (22%<br>(20% | 1956 |
| Iron or steel plates or sheets, galvanized, leaded or otherwise coated | 20%)<br>18%) | 15% | 1956 |
| Certain magnetic steel sheets | 22% | 18% | 1956 |
| Italy: | | | |
| Iron or steel coils for re-rolling, plated | 15% | 11.5% | 1956 |
| Certain iron or steel sections, hot-rolled or extruded | 22% | (13.5%<br>(18.5% | 1956 |
| Tin-plated iron or steel hoops and strips | 23% | (16.5%<br>(14.5% | 1956 |
| Magnetic steel sheets | 23% | 14% | 1956 |
| Iron or steel plates or sheets, simply hot-rolled | 23% | (14%<br>(15% | 1956 |
| Same, simply cold-rolled | 23% | (14%<br>(15% | 1956 |
| Same, lustered, polished or glazed | 23% | 15% | 1956 |
| Same, tin-plated or galvanized | 23% | 15% | 1956 |
| Same, otherwise finished or worked | 23% | 17% | 1956 |
| High carbon steel plates or sheets, simply hot-rolled | 23% | 15% | 1956 |
| Magnetic steel sheets | 23% | 15% | 1956 |

| | | | |
|---|---|---|---|
| Other alloy steel sheets, (construction sheets, high speed steel, stainless steel, ball bearing steel, tool steel, heat-resisting steel, etc.) | 19%<br>20%<br>23% | 11%<br>12%<br>13%<br>15% | 1956 |
| Iron or steel guard rails | 20% | 14% | 1956 |
| <u>European Economic Community:</u> 1/ | | | |
| Iron & steel tube and pipe fittings | 14% | 11% | 1962 |
| Iron& steel tanks, over 300 liter capacity | 15% | 12% | 1962 |
| Bolts, nuts, screws, rivets, washers and cotter pins of iron or steel | 16¢<br>17% | 13%<br>14% | 1962 |
| Iron & steel springs | 7% | 14% | 1962 |
| <u>United Kingdom:</u> | | | |
| Blast furnace pig iron smelted with coke | 33 1/3% | 25% | 1947 |
| Iron & steel sheets and plates not exceeding 1/8 inch thick | 25% | 20% | 1956 |
| Forged or cast rolls for rolling mills | 25% to<br>33 1/3% | 20% | 1956 |
| Pieces of iron or steel including alloy or high carbon steel, roughly shaped by forging | 17½% | 14% | 1962 |
| Stranded iron or steel wire, cables, etc., not insulated | 25%<br>33 1/3% | 20%<br>25% | 1962 |
| Iron or steel springs and spring leaves | 20%<br>33 1/3% | 25%<br>16% | 1962 |

| | | | |
|---|---|---|---|
| Sweden: | | | |
| Stainless iron & steel in plates or sheets | 7.50 cr. per 100 kg. | same, with 5% ad val ceiling | 1949 |
| Hot-rolled steel plates with minimum thickness of 3 mm. | {3.00 or 3.45 cr. per 100 kg. | same, with 15% ad val ceiling | 1949 |
| Cold-rolled steel plates less than 3 mm. in thickness | {7.00 or 8.05 cr. per 100 kg. | same, with 15% ad val ceiling | 1949 |
| Cold-drawn steel tube with 2 mm. or more wall thickness | 6.00 cr. per 100 kg. | same, with 8% ad val ceiling | 1951 |
| Denmark: | | | |
| Tinplate | Free | Free (binding) | 1951 |
| Dynamo and transformer sheet under 3 mm thick | Free | Free (binding) | 1956 |
| Finland: | | | |
| Tinned iron or steel sheet | 120% of duty on sheet | Free | 1956 |
| Dynamo and transformer sheets of hot-rolled alloy or high carbon steel | 7% | Free | 1962 |
| Japan: | | | |
| Steel plates not over 0.9 mm. in thickness, uncoated, other than alloy steel | 15% | 15% ( binding) | 1955 |
| Steel plates and sheets, tinned | 15% | 15% (binding) | 1955 |
| Steel tubes not coated with metal | 15% | 15% (binding) | 1955 |
| Cast iron pipes | 15% | 15% (binding) | 1955 |

| | | | |
|---|---|---|---|
| Cast iron fittings for pipes and tubes | 20% | 20% (binding) | 1955 |
| Iron & steel cocks and values | 15% | 15% (binding) | 1955 |
| Iron & steel welding rods | 20% | 15% | 1955 |
| Iron & steel rolls and rollers over 1,000 kg. in weight | 15% | 15% (binding) | 1955 |
| Cables and wire, armored | 20% | 18% | 1956 |
| Iron or steel materials for structures other than buildings, electric poles and vessels | 15% | 15% (binding) | 1962 |
| Canada: | | | |
| Welded or woven wire fencing | 30% | 20% | 1947 and 1951 |
| Other fencing of iron or steel | 20% | 15% | 1947 |
| Wire and cable of iron or steel, coated or covered | 30% | 25% | 1951 |
| Baling wire | 15% | Free | 1951 |
| Cast iron or steel moulds for steel production | Free | Free (binding) | 1951 |
| Other iron or steel castings | 7½% | 7½% (binding) | 1951 |
| Iron or steel forgings | 25% | 22½%<br>20%<br>15% | 1951 and 1959 |
| Iron or steel angles, beams, channels, columns, girders, joists, pilings and other shapes or sections, further manufactured than hot or cold-rolled | 30% | 22½% | 1951 and 1959 |

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| | | | |
|---|---|---|---|
| Iron or steel blooms, slabs, billets or sheet bars | $4.00 per ton | 5% | 1959 |
| Iron or steel bars or rods, hot-rolled, plain or deformed | 12½% | 10% | 1959 |
| Iron or steel bars or rods, cold-rolled or cold-drawn, plain or deformed | 20% | 15% | 1959 |
| Iron or steel bars or rods, further processed | 20% | 15% | 1959 |
| Iron or steel angles, beams, channels and other shapes or sections not further manufactured than hot or cold-rolled | ($3.00 or<br>($7.00 per ton | 10% | 1959 |
| Iron or steel plate, not further manufactured than hot-or cold-rolled | 12½% | 10% | 1959 |
| Iron or steel plate, flanged or dished | 22½% | 20% | 1959 |
| Other iron or steel plate | (20%<br>(22½% | 15% | 1959 |
| Iron or steel sheet or strip, hot-rolled | (12½%<br>(20% | 10% | 1959 |
| Iron or steel sheet or strip, cold-rolled or cold-drawn | 20% | 15% | 1959 |
| Iron or steel sheet or strip, coated with lead or an alloy of lead and tin | 10% | Free | 1959 |
| Iron or steel sheet or strip, otherwise coated | (15%<br>(17½% | 15% | 1959 |
| Iron or steel railway rails | 10% | 10% (binding) | 1959 |
| Other iron or steel rails | 12½% | 12½% (binding) | 1959 |

| | | | |
|---|---|---|---|
| Iron or steel fish plates, splice bars, rail joints and tie plates | $7.00 per ton | $7.00 per ton (binding) | 1959 |
| Cast iron pipes or tubes | 12½% | 12½% (binding) | 1959 |
| Iron or steel pipes or tubes, seamless, cold-drawn | 5% | 5% (binding) | 1959 |
| Ironor steel pipes or tubes, for natural gas or oil industry | {10%<br>{15% | {10%<br>{15% (binding) | 1959 |
| Other iron or steel pipes or tubes and fittings, couplings and parts | {20%<br>{22½% | 20% | 1959 |

1/ Concessions were made in the Common External Tariff of the EEC only on iron and steel items not subject to European Coal and Steel Community jurisdiction. In the case of the latter, concessions made by member countries (those listed above) remain in effect.

Principal Steel Mill Products on Which U.S. Has Made Tariff Reductions In GATT Negotiations

| Tariff Paragraph Schedule A No. | Description | Rates of Duty 1945 | Rates of Duty July 1, 1963 | No. of Times Rate Reduced | Countries With Which Negotiated |
|---|---|---|---|---|---|
| (304) | Steel bars | | | | |
| | Concrete reinforcement bars: | | | | |
| 6005 000 ) | | 1/4¢ lb. | 1/5¢ lb. | 1 | Bx |
| 6005 100 ) | | 4/10¢ lb. | 1/5¢ lb. | 1 | Bx |
| 6005 200 ) | | 20% | 8 1/2% | 2 | Gy, Fr, It, Bx |
| 6005 300 ) | Value breakdown | 20% | 8 1/2% | 2 | Gy, Fr, It, Bx |
| 6005 400 ) | | 20% | 12 1/2% | 1 | Sw |
| 6005 500 ) | | 2 1/2¢ lb. | 1 1/4¢ lb. | 1 | Sw |
| 6005 600 ) | | 3 1/2¢ lb. | 1 3/4¢ lb. | 1 | Sw |
| 6005 700 ) | | 20% | 12 1/2% | 2 | Sw |
| (304, 305, 315) | Bars, whether solid or hollow, n.e.s. | | | | |
| 6008 000 ) | | 1/4¢ lb. | 0.1¢ lb. | 2 | EEC |
| 6008 100 ) | | 4/10 ¢ lb. | 0.15¢ lb. | 2 | EEC |
| 6008 200 ) | | 3/8¢ lb. | 0.15¢ lb. | 2 | EEC, Bx |
| 6008 300 ) | Value breakdown | 20% | 7% | 3 | EEC, Gy, Fr, It, Bx |
| 6008 400 ) | | 20% | 7% | 3 | EEC, Gy, Fr, It, Bx |
| 6008 500 ) | | 20% | 10 1/2% | 2 | Gy, Fr, It, Bx, Sw |
| 6008 600 ) | | 2 1/2¢ lb. | 1.05¢ lb. | 2 | Sw |
| 6008 700 ) | | 3 1/2¢ lb. | 1.5¢ lb. | 2 | Sw |
| | Not cold-rolled, cold-drawn, cold-hammered, or polished | | | | |
| 6008 800 | Not alloyed | 20% | 10 1/2% | 3 | Sw |
| 6008 801-805 | Of stainless, high speed tool, or alloy steel | 28% | 14 1/2% | 3 | Sw |
| | Cold-rolled, cold-drawn, cold-hammered, or polished | | | | |
| 6008 810 | Not alloyed | 1/8¢ lb. + 20% | 1/16¢ lb. + 10 1/2% | 3 | Sw |
| 6008 811-815 | Of stainless, high speed tool, or alloy steel | 1/8¢ lb. + 28% | 1/16¢ lb. + 14 1/2% | 3 | Sw |

Note: Certain iron and steel products are subject to additional duty; see last page.

| Tariff Paragraph Schedule A No. | Description | Rates of Duty 1945 | Rates of Duty July 1, 1963 | No. of Times Rate Reduced | Countries With Which Negotiated |
|---|---|---|---|---|---|
| (304) | Hollow bars | | | | |
| 6010 050 ) | | 3/4¢ + 20% | 3/8¢ lb. + 10 1/2% | 3 | Sw, UK |
| 6010 200 ) | Value breakdown | 20% (1 5/8¢ lb. Min.) | 10% (7/8¢ Min.) | 1 | UK |
| 6010 300 ) | | 4 1/4¢ lb. | 1.875¢ lb. | 2 | UK |
| 6010 400 ) | | 3/4¢ + 20% | 3/8¢ lb. + 10 1/2% | 4 | UK, Sw |
| (303) | Bar iron and iron slabs, blooms, or other forms less finished than iron in bars, and more advanced than pig iron except castings | | | | |
| 6022 100 | | 1/4¢ lb. | 1/8¢ lb. | 1 | Bx |
| 6022 200 | | 5/10¢ lb. | 1/4¢ lb. | 1 | Bx |
| 6022 300 | Value breakdown | 5/10¢ lb. | 3/10¢ lb. | 1 | Sw |
| 6022 400 | | 8/10¢ lb. | 4/10¢ lb. | 1 | Sw |
| 6022 500 | | 1¢ lb. | 1/2¢ lb. | 1 | Sw |
| (315) | Wire rods, not smaller than 20/100 inch in diameter, nail rods, and flat rods up to 6 inches in width | | | | |
| 6036 300 ) | Value breakdown | 1/4¢ pt., ) 3/10¢ pt.) | 0.1¢ lb. | 3 | EEC, Sw |
| 6036 700 ) | | 6/10¢ lb. | 0.25¢ lb. | 2 | Gy, Fr, It, Bx |
| 6036 800 | Tempered or treated | 5/10¢ pt. ) 11/20¢ pt.) | 0.2¢ lb. | 3 | EEC, Sw |
| 6036 900 | Tempered or treated | 17/20¢ lb. | 0.375¢ lb. | 1 | Sw |
| (315) | Additional duty for steel bars, bar iron, wire rods etc., cold-rolled, cold-drawn, cold-hammered or polished | 1/8¢ lb. | 1/16¢ lb. | 1 | Sw |

Note: Certain iron and steel products are subject to additional duty; see last page.

| Tariff Paragraph Schedule A No. | Description | Rates of Duty 1945 | Rates of Duty July 1, 1963 | No. of Times Rate Reduced | Countries With Which Negotiated |
|---|---|---|---|---|---|
| (309) | Additional duty for steel bars, bar iron, wire rods etc., galvanized or coated with metal | 2/10¢ lb. | 1/10¢ lb. | 1 | Bx, UK |
| (315)(309) | Additional duty for wire rods, cold-rolled, etc. and galvanized | | 1/10¢ + 1/16¢ lb. | | |
| (307) | Boiler or other plate iron or steel, except crucible and saw-plate steel, not thinner than 109/1000 inch, and skelp | | | | |
| 6038 000 ) | | 35/100¢ | 0.175¢ lb. | 2 | Bx |
| 6038 100-500 ) | Breakdown by dimensions | 20% | 8% | 2 | EEC |
| (315) | Additional duty for cold-hammered, tempered or polished, plate | 2/10¢ add. | 1/10¢ add. | 1 | Sw |
| (309) | Additional duty for galvanized or coated with metal, plate | 2/10¢ add. | 1/10¢ add. | 1 | Bx, UK |
| (309) | Additional duty for cold-rolled, smoothed only, plate | 2/10¢ add. | 1/10¢ add. | 1 | Bx |
| (304) | Steel ingots, cogged ingots, blooms and slabs, billets | | | | |
| 6042 010 ) | | 1/4¢ lb. | 1/8¢ lb. | 1 | UK |
| 6042 050 ) | | 3/8¢ lb. | 3/16¢ lb. | 1 | UK |
| 6042 100 ) | | 4/10¢ lb. | 1/5¢ lb. | 1 | UK |
| 6042 350 ) | | 20% | 8 1/2% | 2 | Can |
| 6042 450 ) | | 20% | 8 1/2% | 2 | Can |
| 6042 550 ) | Value breakdown | 20% | 10 1/2% | 2 | Can |
| 6042 650 ) | | 2 1/2¢ lb. | 1.05¢ lb. | 2 | Can, Sw |
| 6042 750 ) | | 3 1/2¢ lb. | 1.5¢ lb. | 2 | Can |
| 6042 850 ) | | 20% | 10 1/2% | 3 | Can, Sw |

Note: Certain iron and steel products are subject to additional duty; see last page.

| Tariff Paragraph Schedule A No. | Description | Rates of Duty 1945 | July 1, 1963 | No. of Times Rate Reduced | Countries With Which Negotiated |
|---|---|---|---|---|---|
| (304) | Die blocks or blanks; shafting; pressed, sheared or stamped shapes not advanced; hammer molds or swagged steel; gunbarrel molds; steel castings | | | | |
| 6044 000 ) | | 1/4¢ lb. | 1/8¢ lb. | 1 | UK |
| 6044 200 ) | | 4/10¢ lb. | 1/5¢ lb. | 1 | UK |
| 6044 350 ) | | 20% | 10% | 1 | UK |
| 6044 500 ) | Value breakdown | 20% | 12 1/2% | 1 | Sw |
| 6044 600 ) | | 2 1/2¢ lb. | 1 1/4¢ lb. | 1 | Sw |
| 6044 700 ) | | 3 1/2¢ lb. | 1 3/4¢ lb. | 1 | Sw |
| 6044 800 ) | | 20% | 12 1/2% | 2 | Sw |
| (304) | Steel circular saw plates | | | | |
| 6053 000 ) | | 1/2¢ lb. | 1/4¢ lb. | 1 | Sw |
| 6053 100 ) | | 13/20¢ lb. | 13/40¢ lb. | 1 | Sw |
| 6053 200 ) | | 1/4¢ lb. + 20% | 1/8¢ lb. + 10% | 1 | Sw |
| 6053 300 ) | | 1/4¢ lb. + 20% | 1/8¢ lb. + 10% | 1 | Sw |
| 6053 400 ) | Value breakdown | 1/4¢ lb. + 20% | 1/8¢ lb. + 12 1/2% | 1 | Sw |
| 6053 500 ) | | 2 3/4¢ lb. | 1 3/8¢ lb. | 1 | Sw |
| 6053 600 ) | | 3 3/4¢ lb. | 1 7/8¢ lb. | 1 | Sw |
| 6053 700 ) | | 1/4¢ lb. + 20% | 1/8¢ lb. + 12 1/2% | 2 | Sw, UK |
| (308) | Sheets of iron or steel, common or black, and boiler or other plate thinner than 109/1000 inch, and skelp | | | | |
| 6056 000 ) | | 35/100¢ lb. | 0.175¢ lb. | 2 | Bx |
| 6056 100 ) | | 45/100¢ lb. | 0.225¢ lb. | 2 | Bx |
| 6056 200 ) | | 60/100¢ lb. | 30/100¢ lb. | 2 | Bx |
| 6056 300 ) | Value and thickness breakdown | 70/100¢ lb. | 35/100¢ lb. | 2 | Bx |
| 6056 400 ) | | 60/100¢ lb. | 30/100¢ lb. | 2 | Bx |
| 6056 500 ) | | 20% | 10% | 1 | Bx |

Note: Certain iron and steel products are subject to additional duty; see last page.

| Tariff Paragraph Schedule A No. | Description | Rates of Duty 1945 | July 1, 1963 | No. of Times Rate Reduced | Countries With Which Negotiated |
|---|---|---|---|---|---|
| (308) | Sheets of iron or steel -- Con. | | | | |
| 6056 600-800 | Value and thickness breakdown | 20% | 8% | 2 | EEC, Bx |
| (304) | | | | | |
| | Sheets and plates and steel, n.s.p.f. | | | | |
| 6057 000 ) | | 1/4¢ lb. | 1/8¢ lb. | 1 | Bx |
| 6057 100 ) | | 4/10¢ lb. | 1/5¢ lb. | 1 | Bx |
| 6057 200 ) | | 20% | 8% | 2 | Jp, EEC, Bx |
| 6057 300 ) | Value breakdown | 20% | 10% | 2 | Jp, EEC, Sw |
| 6057 400 ) | | 2 1/2¢ lb. | 1.0¢ lb. | 2 | Jp, EEC |
| 6057 500 ) | | 3 1/2¢ lb. | 1.4¢ lb. | 2 | Jp, EEC |
| | Not cold-hammered, etc. nor galvanized nor cold-rolled | | | | |
| 6057 600 | Not alloyed | 20% | 8 1/2% | 4 | Jp, EEC, Sw, UK |
| 6057 601-605 | Of stainless, high speed or alloy steel | 28% | 12 1/2% | 4 | Jp, EEC, Sw, UK |
| (315) | Additional duty for cold-hammered, blued, tempered, etc. | 2/10¢ | 1/10¢ lb. add. | 1 | Sw |
| (309) | Additional duty for galvanized or coated with metal | 2/10¢ lb. add. | 1/10¢ lb. add. | 1 | Bx |
| (309) | Additional duty for cold-rolled, smoothed only | 2/10¢ lb. add. | 1/10¢ lb. add. | 1 | Sw |
| (310) | | | | | |
| 6060 100 | Tin plates and taggers tin | 1¢ lb. | 0.8¢ lb. | 1 | Can, UK |

Note: Certain iron and steel products are subject to additional duty; see last page.

| Tariff Paragraph Schedule A No. | Description | Rates of Duty 1945 | July 1, 1963 | No. of Times Rate Reduced | Countries With Which Negotiated |
|---|---|---|---|---|---|
| (312) | Structural iron and steel: | | | | |
| | Beams, girders, joists, angles, channels, tees, and other structural shapes | | | | |
| 6081 020-040 | Not assembled or advanced | 1/5¢ lb. | 1/10¢ lb. | 2 | Bx |
| 6081 050-060 | Machined, drilled, assembled, fabricated, etc. | 15% | 7 1/2% | 2 | Bx |
| 6081 200 | Sashes and frames | 15% | 10% * | 2 | UK |
| 6081 300 | Sheet piling | 1/5¢ lb. | 0.1¢ lb. | 2 | EEC, Gy, Fr, It, Bx |
| (322) | | | | | |
| 6090 100 | Rails, T-rails, etc. | 1/10¢ lb. | 1/20¢ lb. | 1 | Can |
| 6090 400 | Rail braces and bars for railways | 1/10¢ lb. | 1/20¢ lb. | 1 | Can |
| 6090 500 | Railway fishplates, tie plates | 1/4¢ lb. | 1/8¢ lb. | 1 | Can |
| (327) | | | | | |
| | Pipes and tubes | | | | |
| 6091 020-140 | Cast-iron pipes | 15% | 10% | 1 | Fr |
| (397) | | | | | |
| 6091 200 | Malleable cast-iron pipe fittings, advanced | 45% | 22 1/2% | 1 | UK |
| (328) | Tubes, pipes, flues or stays, lap-welded, butt-welded seamed or jointed, not thinner than 65/1000 inch | | | | |
| 6092 030 ) | Breakdown by dimension | 1 3/4¢ lb. | 7/8¢ lb. | 1 | Bx |
| 6092 050 ) | | 1 1/4¢ lb. | 5/8¢ lb. | 1 | Bx |
| 6092 060-080 ) | | 3/4¢ lb. | 0.3¢ lb. | 2 | Bx |

Note; Certain iron and steel products are subject to additional duty; see last page.

*Effective date January 1964

| Tariff Paragraph Schedule A No. | Description | Rates of Duty 1945 | Rates of Duty July 1, 1963 | No. of Times Rate Reduced | Countries With Which Negotiated |
|---|---|---|---|---|---|
| (328) | Tubes, pipes, -- Con. | | | | |
| 6092 500 | Flexible metal tubing or hose n.s.p.f. | 30% | 20% | 1 | UK |
| | Tubes of iron or steel, n.s.p.f. | | | | |
| 6092 800 | Not alloyed | 25% | 10 1/2% | 2 | Gy, Sw |
| 6092 801-805 | Of stainless, heat resisting or alloy steel | 33% | 14 1/2% | 2 | Gy, Sw |
| 6092 900 | Welded cylindrical furnaces | 25% | 12 1/2% | 1 | Can |
| (397) 6092 950 | Forged steel flanges and steel welding fittings | 45% | 19% | 2 | Can, UK |
| | Wire and manufactures | | | | |
| (316(a), 305) Sec 4541 IRC | Round iron and steel wire smaller than 1/5 inch | | | | |
| 6094 000 ) | | 3/4¢ lb. | 0.3¢ lb. | 2 | Bx |
| 6094 100 ) | | 1 1/4¢ lb. | 0.53¢ lb. | 2 | Bx |
| 6094 200 ) | Value and dimension breakdown | 1 1/2¢ lb. | 0.625¢ lb. | 2 | Bx |
| 6094 300 ) | | 20% | 8 1/2% | 2 | Bx |
| (317) 6094 900 | Baling wire | 1/2¢ lb. | 1/4¢ lb. | 1 | Bx |
| (316(a)(305)(315) (Sec 4541 IRC) | Wire and manufactures | | | | |
| 6095 000 | Telegraph, telephone wire | 35% | 15% | 2 | UK, Can |
| | Flatwire and steel in strips | | | | |
| 6095 100 ) | | 15% | 6% | 2 | Sw |
| 6095 200 ) | | 15% | 6% | 2 | Sw |
| 6095 300 ) | Breakdown by dimension | 20% | 8 1/2% | 2 | Sw |
| 6095 400 ) | | 20% | 8 1/2% | 2 | Sw |
| 6095 500-800 ) | | 25% | 10% | 2 | EEC |

Note: Certain iron and steel products are subject to additional duty; see last page.

| Tariff Paragraph Schedule A No. | Description | Rates of Duty 1945 | Rates of Duty July 1, 1963 | No. of Times Rate Reduced | Countries With Which Negotiated |
|---|---|---|---|---|---|
| (314) | | | | | |
| | Hoop or band iron or steel | | | | |
| 6110 500 | Cotton ties | 2/10¢ lb. | 0.65¢ lb. | 3 | EEC, UK |
| 6110 900 | Other | 2/10¢ lb. | 0.05¢ lb. | 3 | UK |
| (313) | | | | | |
| | Hoop, band or scroll iron or steel | | | | |
| 6111 000 ) | | 25/100¢ lb. | 0.125¢ lb. | 2 | Bx |
| 6111 200 ) | Breakdown by dimension | 35/100¢ lb. | 0,175¢ lb. | 2 | Bx |
| 6111 300 ) | | 55/100¢ lb. | 0.275¢ lb. | 2 | Bx |
| (313) | | | | | |
| | Bands or strips of iron or steel | | | | |
| 6111 400-800 | Of various widths | 25% | 8 1/2% | 3 | EEC, Gy, Fr, It, Px |
| (309) | Additional duty for galvanized or coated hoop or bands | 2/10¢ lb. | 1/10¢ lb. | 1 | |
| 6113 200 | ← Castings, machined or advanced | 10% | 3% | 2 | Can |
| (328) | | | | | |
| 6115 000 | Tanks or vessels | 25% | 10% | 2 | EEC, Greece |

Note: Certain iron and steel products are subject to additional duty; see last page.

| | | Rates of Duty 1945 | Rates of Duty July 1, 1963 | No. of Times Rate Reduced |
|---|---|---|---|---|
| 305(1)(2) | Dutiable excess of alloys: | | | |
| | All steel or iron in the materials and articles described in paragraphs 303, 304, 307, 308, 312, 313, 315, 316, 317, 318, 319, 322, 323, 324, 327 and 328 containing more than 1/10 percent of vanadium, or more than 2/10 percent of tungsten, molybdenum or chromium, or more than 6.10 percent of nickel, cobalt, or any metallic element used in alloying steel or iron, subject to additional duty under paragraph 305. | 4% add. pt.<br>8% add. pt. | 4% add. | pt. not reduced<br>pt. reduced once |
| | (indicated by 4 as the seventh figure of the regular commodity number affected, except where specific classifications have been provided for certain alloyed products in 6008 801 - 6008 815, 6057 601 - 6057 605, 6092 801 - 6092 805, 6094 301 - 6094 305, 6095 101-6095 115, 6095 301 - 6095 315) | | | |
| | And an additional comulative duty on any | | | |
| | Chromium content over 0.2% | 3¢ lb. | 1 1/2¢ lb. | 1 |
| | Molybdenum content over 0.2% | 65¢ lb. | 35¢ lb. | 1 |
| | Tungsten content over 0.2% | 72¢ lb. | 50¢ lb. | 1 |
| | Vanadium content over 0.1% | $1 lb. | 40¢ lb. | 2 |

Abbreviations used in table

Countries:

Bx - Belgium, Luxembourg and The Netherlands
Can - Canada
Fr - France
Gy - Federal Republic of Germany
It - Italy
Sw - Sweden
UK - United Kingdom
EEC - European Economic Community
Jp - Japan

add. - additional
lb. - pound
max. - maximum
min. - minimum
pt. - part

Senator JORDAN. Mr. Chairman, just one more question, if I may. It has only been touched on here, and that is the extent of trade with the Soviet bloc in steel and other commodities. We have not had any witnesses before this committee.

Senator PROXMIRE. That is correct, and I was hoping that Mr. Lewis would be able to give us that information. He is not in that particular agency.

Senator JORDAN. I wonder if the Chair could direct a letter to the agency that is responsible to get some information along this line?

Senator PROXMIRE. It is my understanding that our chief of staff, Mr. Knowles, is already engaged in doing that. He is very alert, since it just came up this afternoon. He has assured me that we will do that. We are going to get a full explanation of the reason for what seems to us to be so tragic in that third panel. (See p. 494.)

Senator JORDAN. I do not know how it operates in steel, but I do know that in lumber, the Canadian lumber that used to go to Great Britain, now finds the Great Britain market getting its lumber from Russia, so Canada puts its lumber into the United States. The effect of it is to cut down the production of our domestic mills, so I wonder if we have the same kind of a chain reaction on this steel situation, as well.

Senator PROXMIRE. Thank you very much.

Mr. BERNSTEIN. Mr. Chairman, might I add just one word about the trade with the Soviet Union?

One of the main articles of trade between Western Europe and the Soviet Union has been steel pipe for oil lines. The NATO Council has been very much concerned about that because Russia. has been carrying a kind of economic war on oil, and they are building oil lines going as far as Siberia to East Germany.

The NATO Council, therefore, has requested—well, there is some question as to whether they put it as a request or an order or some other words, there is doubt about that score, but, nevertheless, they let it be known that they wish the members of NATO to cease and desist from furnishing steel pipe to Russia.

This has become a very hot political issue. The Germans particularly had orders for scores of thousands of tons of steel pipe for Russia. At first the German steel industry said they had these orders; they have already started working on them; they must carry them out. The union took the position also in favor of carrying out the orders and delivering the pipe.

Finally, the Government parties had the matter come before the Bundestag, and through a parliamentary trick—that is, of walking out and leaving the Bundestag without a quorum—the order was sustained that the German companies having such orders to deliver steel pipe to Russia would not be able to fulfill their contracts, and, as a result, I think it is 160,000 tons of steel pipe is not being delivered to Russia as of now, although contracts had been let for them.

The question now arises, what will the Russians do with those orders? They have gone to British firms, apparently. That is not clear just how far they have gone, but the British firms have requested information from the British Government. Will the British Government permit the export of steel pipe to Russia? That matter has not yet been clarified. It is still up in the air, and, as of now, the situation we have is that this 160,000 tons of steel pipe which was to be delivered from Germany will not be rolled in Germany, and, whether it will be rolled in another country remains to be seen. The matter is still open.

Senator PROXMIRE. Thank you very, very much, Mr. Bernstein. Once again, you have given us some very valuable information.

I have just been told that Mr. Ernst of the State Department is here representing and qualified to speak on the maritime interest and responsibility.

Mr. Ernst, I understand you are Chief of the Shipping Division. Will you come forward and take the witness chair just for a very few minutes? It is my understanding you have a statement to make, and I think I have a question or two on your statement.

## STATEMENT OF DAVID H. ERNST, CHIEF, SHIPPING DIVISION, DEPARTMENT OF STATE

Mr. ERNST. I came in response to the request made of Assistant Secretary Johnson this morning, which was made on the question of freight rates. I was here during the time when the questions were asked of the members of the Maritime Commission staff.

Senator PROXMIRE. I think you understand what is bothering the committee.

Mr. ERNST. Yes, indeed.

Senator PROXMIRE. The fact that there is this clear differential between freight charges, what it costs us to ship from our ports to European ports and what it costs them to ship from their ports to our ports.

Mr. ERNST. Yes.

Senator PROXMIRE. We are very concerned about it. We think it is wrong. We think it is discriminatory on its face. We think it hurts American industry. We think it depresses American employment, and we feel that our Government should have been active in protesting it and taking action on it.

Now you feel that there are reasons why our Government could not have been effective, if it had done so, and I think you would like to state them.

Mr. ERNST. As has been brought out, the freight rates which are charged by the conference carriers are set by the conference carriers and not by actions of any governments. The question was asked of me by your counsel as to whether the State Department ever protested to other governments the pattern of rates, and my answer would be "No," because the other governments would merely turn us to the conferences as the agencies which create these rates, which fix these rates.

Senator PROXMIRE. You are not telling us that we are at the mercy of this international cartel?

Mr. ERNST. No; we are not.

Senator PROXMIRE. That whatever they say goes, and if they want to discriminate and ruin the American steel industry as far as the exports are concerned—and it looks as if that is happening—that there is nothing we can do? That we are helpless?

Mr. ERNST. No; not at all.

Senator PROXMIRE. We can protest to the conference. We have real economic power. We have control of our own ports and so forth.

Mr. ERNST. And the most important thing, that our Government has taken powers which no other government has taken in this field in respect to control of freight rates in the ocean freight industry, and that is through the provisions of Public Law 87–346, which was referred to earlier.

Senator PROXMIRE. The Congress has acted, but there is some question as to how firmly that action has been carried out by the executive branch, especially in view of the testimony this afternoon and in view of the record.

Mr. ERNST. The Federal Maritime Commission, which is an independent quasi-judicial agency, is the one charged with this responsibility for carrying out the Shipping Act of 1916, as amended by Public Law 87–346, and is not part of the executive branch.

Senator PROXMIRE. Thank you very much, Mr. Ernst. I think that is very helpful. It is good to have a statement from the Department. The hearings on steel will stand adjourned subject to the call of the Chair.

I presume this will be the last hearing, although we can never be sure. The record will be kept open until a week from Friday.

I want to thank everybody who appeared here today. It was, by far, the most provocative, stimulating, interesting, and, I think, useful hearing we have had, morning and afternoon.

(By direction of the chairman, the following is made a part of the record:)

STATEMENT FOR THE JOINT ECONOMIC COMMITTEE, BY GEORGE A. EDDY ALEXANDRIA, VA.

INTRODUCTION

I appreciate the chairman's permission to submit a volunteered, written, individual statement for the record of these hearings.

Having attended all the six public sessions, I offer a few amendments intended to set in better perspective a few impressions which two or three of the Government witnesses may have given to some listeners or readers, perhaps, inadvertently.

My slight acquaintance with the steel industry comes only from desultory and limited reading during the last 15 to 25 years about a few of the national economic controversies which have been waged concerning it.

The point of view in this statement is that of an objective economist whose chief interest for over 30 years has been that the American economy should operate more creditably, more productively, and more beneficially—especially for Americans with relatively low incomes—in both the short and long run.[1]

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[1] In compliance with the chairman's stipulation that any persons volunteering statements report their personal position, some of their qualifications and experience, and any connections with the steel industry, I aver as follows:

I am an economist now entirely unaffiliated. In the 1930's, after graduate study in business administration and economics, I was employed at the Federal Reserve Bank of New York for an aggregate of about 4 years, and in the 1930's, 1940's, and 1950's at the Treasury Department for a aggregate of about 13½ years. At the latter, following a wartime absence, I was Chief of the Stabilization Fund, Gold and Silver Division in the Office of International Finance. I have written a few articles for economic and business journals, including two on new security issues, in 1929 and in the 1930's, respectively, one on the return on investment in the steel industry (published in 1949), and one on the main cause of inflation since the war.

I have no significant relations with the steel industry. I have no friends or acquaintances among steel management or steel-labor and have not discussed the contents of this statement with anyone. I own some shares in three steel companies—a fact, I believe of educational significance only, the experience having contributed somewhat to my appreciation of the problems of the industry. The stock in one company is an inheritance representing defaulted bonds formerly owned by my grandfather. It rarely pays any dividends. I bought stock in a second minor steel company in 1948 when it was selling at two times its earnings of that year. Nevertheless, this too has been an unrewarding investment, having appreciated since then by less than the decline in the value of money. In 1952 I bought 10 shares of United States Steel in order to receive regularly their informative annual and quarterly reports. I have gone to considerable lengths to obtain publications showing the point of view of steel-labor to balance my reports from steel companies. I should sell all these stocks (except a share or two of the last) if I thought they were causing bias in my judgment. Arguments, however, must be judged on their merits, whether they come from wage earners, union officials, investors, executives, or public officials dependent on the votes of one group or another.

POINTS IN THE PUBLIC TESTIMONY TO BE AMENDED

The general impression left by the material on steel wages and profits presented in these hearings seems on the whole to do the following things:

(1) To neglect the events of the last 6 to 8 months regarding steel company dividends and earnings, so that the recent price increases are left with a misleading background;

(2) To exaggerate the rewards to capital invested in the industry;

(3) To play down the size of the rise in wage rates;

(4) To omit consideration of employment and unemployment in the dustry and the forces influencing it;

(5) To select and present data in such a way that it is difficult to separate cause and effect in key historical developments; and

(6) To make disappointing progress in supplying the public with some information necessary for the formation of valid judgments on desirable policies and changes for the industry and our economy generally.

Time will permit only a few items concerning the above points.

*(1) The neglect of events in the last few months*

Concerning steel company dividends, the Department of Commerce spokesman stated on April 29 (in his prepared text regarding his chart 3 and table 3):

"During the prosperous period of the midfifties, steel companies generally increased their dividend payments, and have since maintained them at the same level despite the fall in profits. * * *"

So far as I recall, no correction of that assertion was made in the hearing.

Actually, of course, most leading steel companies have cut their dividends rather sharply in the last year or before; a number of lesser ones have not been paying any dividends on their common stock for several years; a few have never paid a dividend.

United States Steel on October 30, 1962, cut its common dividend by one-third for the last quarter of the year and has continued it at that reduced level since. Bethlehem followed suit with a 37½-percent cut, from 60 cents each quarter to 37½ cents. Republic had cut its dividend from 75 cents to 50 cents each quarter in August of last year and has held to that reduced rate since. They are the Big Three of the industry, with around half of its total capacity. Some lesser companies have not reduced the dividends they have paid since 1957, but others have cut more than the Big Three. Wheeling, which started the recent price increases (said to amount to about 1 percent for the industry as a whole), paid $3.40 a share in 1957 and is paying at the rate of $1 a year currently. Other steel companies which cut their dividends prior to 1962 include National, Crucible, Lukens, and Acme. Colorado Fuel & Iron paid its last cash dividend in 1957, and Kaiser early in 1959.

Earnings in the last two quarters have been so low as not to warrant long continuance of numerous steel dividends even at the reduced rates cited above. Wheeling earned 26 cents a share in the first quarter of 1963, down from $1.33 a share in the first quarter of 1962; Bethlehem earned 26 cents a common share in the first 1963 quarter, and United States Steel 44 cents—less than the dividend in each case and the lowest first quarter earnings for United States Steel in many years.

In order to avoid misinterpretation, I should perhaps add that I am not implying that failure to maintain or earn any particular rate of dividends is an adequate reason for raising the price of any product. I am only correcting a misstatement about dividends.

*(2) The small rewards to steel capital*

From all the talk in recent years (of which commendably little occurred in these hearings) about the alleged "administered price inflation" in the steel industry and past union accusations of outrageously high steel company profits, the public probably has the impression that the leading steel companies have for decades administered their prices so as to achieve lush bonanzas for their stockholders.

In reality, on the contrary, representative steel companies have not been able to preserve the purchasing power which their plant, equipment, and working capital cost per share up through the 1920's. Furthermore, their aggregate dividends per share since the 1920's has come to a lower rate of return on that investment than would have been paid by good bonds—with no allowance for the reduced purchasing power of the dollar in the 1960's, 1950's, and late 1940's. Moreover, the current rates of dividends on numerous steel company shares have substantially less purchasing power than their dividends in 1929 and 1930.

Hourly wage rates plus fringe benefits in steel companies have risen around sixfold and sevenfold since the 1920's while their per share earnings, including earnings on the very large amounts of earnings retained and reinvested since the war, range between being actually lower—as in the case of United States Steel—to only moderately higher.

For comparisons of this sort, adjustment must be made, of course, for stock dividends such as were declared in the postwar years, while for some companies, reorganizations and other major changes make the long-range comparisons very complex or even unreliable.

Data on earnings and dividends such as were presented to these hearings provide an unsatisfactory comparison, in that they were mostly based on changes since 1940 or some postwar year, which for several reasons give distorted results.

Most steel company shares are now selling in the market at less than their book values, and their book values are probably an undervaluation of their real assets, at current replacement costs.

On any of these bases of measurement, the returns to investors have been so low, on the average, that providing the capacity to produce the country's steel since the 1920's has been an unrewarding undertaking, judging by typical steel companies. Some, however, have been exceptions, though even in the most favored, the reward has been modest.

(3) *The playing down of the rise in wage rates*

In several ways the presentation of steel wage statistics at the opening session, April 23, tended to minimize the actual increases in steel wage rates; 1940 and 1947 are unsatisfactory as base years from which to measure changes, since large wage increases had occurred shortly before those dates to which the steel companies and the rest of the economy had not adjusted quickly. The fact that the American Iron and Steel Institute and steel companies themselves use those years as bases for some of their statistics makes them convenient to use but no less unsatisfactory on economic grounds. The year 1940 was also one of continuing very high unemployment, relatively depressed earnings for a number of steel companies, and rapid economic fluctuations, owing to the outbreak of the war in Europe while substantial portions of the U.S. economy was still suffering from the great depression and the renewed slump of 1937–38. By 1940, steel wage rates were 25 to 33 percent higher than in 1926–30 and around 50 percent higher than in 1932–33, despite the continuing heavy national unemployment, owing to the organization and demands of the Steelworkers Union. As a result, steel wage rates were forced far ahead of the average of rates in other U.S. industries.

Second, use of indexes of wage rates rather than the dollars and cents rates themselves, in that April 23 presentation, created the impression that rates generally increased almost as much as steel wages. Large percentage increases in low wage rates, however, such as for agricultural labor, domestic servants, retail trade, textiles, etc., should not cloak the fact that steel wages have risen to the top of almost all other large groups. So far as an ousider can judge, this seems more a result of union compulsion than of the degree of skills required in steel plants or any scarcity of applicants for steel jobs.

As already stated above, hourly employment costs in steel seem to have increased over sixfold and sevenfold before the great depression.

A third way in which the magnitude of the rise in steel labor costs has been played down will be mentioned in (5) below.

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*(4) The lack of attention to steel unemployment*

I for one regret that the hearings did not go into the question of employment and unemployment in the industry. Of course, to be of value, something much more penetrating than presentation of common employment figures and references to automation and so-called productivity of labor would be necessary.

As one initial observation to be explained, the declining rate of employment in steel, coal, automobiles, and railroads could be cited, along with the fact that maps of depressed areas concentrate attention on areas in which those four industries have dominated in the past. Railroads may differ in part from the other three in that they are suffering from subsidized highway, water, and airway competition. All four, however, seem to be industries in which strong unions have gone to exceptional lengths in imposing strike-enforced increases in employment costs for 25 or more years. The longrun effects of these union policies on mechanization in the industry, and on the size of markets for their products seem to require incisive study.

Owing to the natural superiority of U.S. surface and underground coalbeds, U.S. coal can apparently still undersell foreign producers, but it has been losing ground relatively to other sources of power. In the other three of these industries, American producers and workers are apparently much less competitive internationally.

*(5) Analyzing key historical developments in steel*

Among the many other subjects which the data presented in these hearings failed to analyze with much success, public illumination seems specially needed on the following:

(*a*) What caused the increases in steel wage rates since the 1930's—e.g., was it union compulsion, scarcity of the desired number of skilled employees, or the working of demand-pull through employers, combined with the alleged increase in productivity of labor?

(*b*) Is relative stability of unit wage costs owing to the so-called productivity of labor, when calculated before depreciation, before taxes, and before allowing a normal minimum return on the amounts of capital being employed in an industry, including recognition of replacement costs, prima facie evidence that rising wage costs have no responsibility for rising prices or for squeezing profits?

Reference was made in the hearings to a study reported in the November 1962 Survey of Current Business in which it was shown that since the war, wage costs had remained a relatively stable percentage of corporate gross product—around 64 percent—while depreciation charges and taxes expanded and profits after taxes declined. Two newspaper articles reporting that study, written by two reporters, interpreted the findings as shown by their headlines: "Wages Absolved in Profits Pinch—U.S. Analysis Says Squeeze on Corporate Earnings Not Caused by Labor Cost," and "Profits Squeeze Found No Fault of Labor Cost."

On the contrary, I should say that labor costs were in effect responsible for the squeeze on profits, depreciation of adequate size in the light of replacement costs, and also taxes, both being inescapable costs which should be deducted before reaching the conclusion that labor costs were absolved. Furthermore, account should also be taken of additions to the total of capital used. If more and better capital is employed in manufacturing while the number of workers in manufacturing actually declines, under some circumstances it would be proper to expect that the aggregate return to capital would increase or at least stay the same and the percentage share of gross product going to employees would decrease.

*(6) Policies for the future*

In the time remaining I can mention only one question under this heading: Under present circumstances of the American steel industry, does the so-called wage guidepost of the Council of Economic Advisers calling for annual increases in all wage rates of at least some unstated percentage around 2½, 3, or higher constitute good policy? Or stated differently, should there be any demand by the Steel Union for higher wage rates in view of the high unemployment among former steelworkers, the high absolute level of wages in this industry as compared with others, the continuing loss of steel sales to competing products, the pressure of foreign steel offered for sale at lower prices, and the depressed rate of return being earned by steel capital?

May 10, 1963

The Honorable Paul H. Douglas, Chairman
Joint Economic Committee
Congress of the United States
Washington, D. C.

Dear Senator Douglas:

In the course of the hearings recently conducted by your committee on the subject of the steel industry, you announced that the record would remain open until Friday, May 10, for the submission of a statement or statements by interested parties.

In view of the brief time allowed for this purpose, the undersigned companies retained Dr. Jules Backman, a recognized economist who is also an authority on steel industry problems, to analyse the record of the hearings and report to us with respect to any matters which he felt necessary to clarify or complete the record.

Dr. Backman's report is enclosed and we request that it be accepted for the record. We also enclose a document entitled, "The Competitive Challenge to Steel-1963" published by the American Iron and Steel Institute, which we believe throws light on many of the questions discussed at the hearings. We request that this document also be included in the record.

Very truly yours,

Alan Wood Steel Company
Allegheny Ludlum Steel Corporation
Armco Steel Corporation
Atlantic Steel Company
The Babcock & Wilcox Company
Bethlehem Steel Company
The Carpenter Steel Company
The Cleveland-Cliffs Iron Company
The Colorado Fuel and Iron Corporation
Copperweld Steel Company
Crucible Steel Company of America
Detroit Steel Corporation
Granite City Steel Company
Inland Steel Company
Interlake Iron Corporation
Jones & Laughlin Steel Corporation
Kaiser Steel Corporation
Laclede Steel Company
Lone Star Steel Company
Lukens Steel Company
National Steel Corporation
Pickands Mather & Co.
Pittsburgh Steel Company
Republic Steel Corporation
Sharon Steel Corporation
Shenango Incorporated
United States Steel Corporation
Universal-Cyclops Steel Corporation
Washington Steel Corporation
Wheeling Steel Corporation
Wyckoff Steel Company
The Youngstown Sheet and Tube Company

## REVIEW OF STATEMENTS MADE BEFORE THE JOINT ECONOMIC COMMITTEE HEARINGS ON STEEL, APRIL - MAY 1963

Jules Backman
Research Professor of Economics
New York University

### Summary and Conclusions

My review of the record of the testimony of Messrs. Greenberg, Chase and Paradiso before the Joint Economic (Douglas) Committee together with an examination of supplementary materials included in this report suggest the following conclusions:

1. The selective increase in steel prices will have no measurable direct impact either on the level of wholesale prices or retail prices.

2. The level of profits in the steel industry has declined sharply in both relative and absolute terms.

3. Retained earnings available to the steel industry for investment in plant and equipment have almost disappeared.

4. These changes in steel prices have little or no effect upon volume because the demand for steel is generally quite inelastic.

5. The testimony dealing with output per manhour, prices, and profit rates cannot be compared directly because it covers different and non-comparable universes of data.

6. The index of prices of purchased materials entering into steel making submitted by Mr. Chase covers less than one third of the purchases of materials and services by the steel industry. Mr. Chase recognized that his price index was not necessarily an index of steel costs. Many of the items not covered by his index have risen in price. The analysis of the relative importance of the materials and services to revenues does not confirm the price trends shown by Mr. Chase's Index.

7. The increase in relative importance of non-production workers is not unique to the steel industry. The same trend is found in other industries and for the same reasons. These non-production workers are just as essential to output as production workers and hence output per manhour properly was computed in terms of manhours of all employees.

8. The adequacy of the data presented for output per manhour and the accompanying employment costs per unit of output are open to question. Data published by the Bureau of Labor Statistics as recently as October 1962 and the index of output per manhour of the American Iron and Steel Institute both show smaller increases in output per manhour and hence larger increases in employment costs per unit of output for the past five years and over longer periods of time than do the data presented by Mr. Greenberg. It must also be emphasized that the major factors contributing to higher output per manhour are capital investment which embraces new technology and managerial "know-how."

9. Because declines in steel output have a major effect upon output per manhour, the use of a depressed year like 1958 as a base period yields distorted and meaningless results.

10. During periods of stable volume, an increase in output per manhour finds reflection in a reduced number of manhours. An equivalent increase in employment cost per hour then absorbs all the gains in output per manhour and leaves nothing for other purposes. In periods of expanding volume, on the other hand, an hourly labor cost increase equal in percentage to gains in output per manhour may permit an increase in profits.

11. Data showing cash flow or profits before taxes as a per cent of stockholders' equity yield meaningless statistics and misleading conclusions.

12. There has been an increase in depreciation charges as a result of the expanding volume of plant and equipment and the adoption of more liberal depreciation policies permitted by congressional enactment and revision in policy by the Internal Revenue Service. However, when increases in dollars of depreciation are related to production, to capacity or to capital investment in constant dollars, the magnitude of the rise is exaggerated by a wide margin and the resulting figures have little value. These measures of comparison do not reflect the effects of price inflation as do the depreciation data. When depreciation is related to changes in the actual investment in plant and equipment or to changes in revenues a much smaller relative rise is shown.

13. Depreciation represents a return <u>of</u> capital whereas profits represent a return <u>on</u> capital. Funds equal to depreciation charges should be used to replace plant and equipment and should not be used for payment of dividends. Moreover, the depreciation charges do not provide the funds to finance expansion in total plant and equipment nor are they normally used to build up liquid assets. Retained corporate profits have had to be used in part to compensate for inadequate depreciation charges during a period of inflation. Such earnings also help to finance expansion of plant and equipment.

14. Although it was suggested that dividends have been well sustained, the fact is that dividend rates recently have been cut rather sharply by a number of leading companies.

15. Although steel activity has remained on a plateau during the past five years, this pattern has been significantly influenced by the rates of accumulation and liquidation of inventories and by the bulge in exports of steel in the 1955-57 period. In 1962, steel production was about in line with its long term trend despite the decline from the abnormally high levels of the mid-1950's. Furthermore, there has been marked improvement in the quality of steel so that a ton of steel has greater utility than formerly.

16. Another significant factor influencing steel volume has been the lag in gross private domestic investment in our economy. The recent revisions of depreciation rules by the Internal Revenue Service and the enactment of the investment credit provision in 1962 could act to stimulate activity in this area with beneficial effects to steel production.

## Introduction

The several witnesses from government agencies who have testified before the Douglas Committee have presented in a comprehensive manner a considerable volume of data. In general the data and the testimony of the witnesses are objective and reflect the underlying trends depicted. Hence, there is no need for me to comment on all of the details. However, it does seem desirable to clarify and supplement some of the material presented to make sure that it may not be misinterpreted. In a number of instances my comments will underline the conclusions offered by government witnesses. In other instances, however, the supplementary data contained in this report are intended to shed additional light upon the material presented and to clarify areas in which Committee members have expressed particular interest.

The general method employed in the conduct of the Joint Committee's inquiry was to examine separately several of the elements of the cost of producing steel in an effort to determine their effect on total costs. This appears to be a logical approach, but because of deficiencies in the available data, it is one which may lead to questionable conclusions.

Any analysis of costs, however, should not obscure the crucial point that only the final net result of their interactions on each other determines the economic health of an industry. That result is, of course, expressed as net income after taxes. As the testimony showed, the average net income of the steel companies has declined substantially and continuously in recent years.

In the following pages there will be reviewed first the nature of the universes covered by the available data. This will be followed by a brief examination of the effects of the selective increase in steel prices, the trends of raw material costs and labor costs, the trend of profits, changes in depreciation charges, and the significance of the lagging capital investment sector of the economy to the steel industry. Particular attention will be devoted to supplementing the incomplete record of prices of materials, to output per manhour which has risen less and to unit labor costs which have risen more than indicated by the testimony, and to placing depreciation charges in proper focus.

The Universes of the Data Are Not Comparable

The data presented to the Committee by its several witnesses are not directly comparable because they cover three different universes. This fact has led to some confusion in the record even though each of the witnesses dealt with the data in one particular area on a consistent basis. Nevertheless, because the unit labor cost data, the price data, and the profits data refer to different universes they cannot be compared with each other. The three universes are:

1. Blast furnaces, steel and rolling mills
The Standard Industrial Classification (Code 3312) defines this industry as follows: "Establishments primarily engaged in manufacturing hot metal, pig iron, silvery pig iron and ferroalloys from iron ore and iron and steel scrap; converting pig iron, scrap iron and scrap steel into steel; and in hot rolling iron and steel into basic shapes such as plates, sheets, strips, rods, bars, and tubing. Merchant blast furnaces and byproduct or beehive coke ovens are also included in this industry."

The data used by Mr. Greenberg to measure changes in output per man-hour, unit labor costs and the related data, and by Mr. Chase for steel prices and selected raw material costs are for this universe. The same is true for the data showing steel operations, production, consumption, and shipments utilized by Mr. Paradiso.

2. American Iron and Steel Institute Financial Data
These data are obtained on a company basis and hence reflect the consolidated operations of the companies. The references in the testimony to expenditures for materials as a per cent of revenues relate to this universe and hence include all materials and services purchased for all company operations.

3. Primary iron and steel industry
This classification includes blast furnaces, steel and rolling mills plus steel processing and foundry operations. All of Mr. Paradiso's financial data were based on SEC-FTC data which apply to this universe. Similarly, he used data for this universe for national income originating. Total sales for primary iron and steel aggregated $18.6 billion in 1962 (Paradiso statement, April 29, 1963, Table 1) as compared with $14.0 billion reported by AISI. Thus, in terms of revenues, the primary iron and steel universe was 32.9 per cent greater than the AISI universe which in turn is larger than the blast furnaces, steel, and rolling mills universe.

The data presented by Mr. Chase to represent prices of materials entering into steel production and Mr. Greenberg's estimates of unit labor costs are not comparable with the profits data and hence there has been some confusion in the record when efforts have been made to reconcile the trends shown by these different series.

The relative distributions of the different uses of the revenue dollar (employment costs, material costs, depreciation, taxes and income) can only be obtained from reports either for the primary iron and steel universe or the AISI universe. (See Table 1)

## Selective Increase in Steel Prices Not Inflationary

The rise of about 1% in finished steel prices will have no perceptible direct effect upon the wholesale price index or the consumer price index. As Arnold E. Chase has pointed out, the impact on the wholesale price index "will be less than five hundredths of one per cent. The same is true of the all commodities,wholesale price index." (T. 274) (Note: References to the stenographic Minutes of the Testimony are identified by T.) Similarly, Mr. Chase concluded that "... a direct pass through of this steel price increase would not affect the consumer price index sufficiently so that it would show up in the published indexes. In other words, the effect would be very minor." (T. 275)

There can be little quarrel with the conclusion that the direct effects of the steel price increase will be negligible in terms of the impact on the price level. Will there be any indirect effects which would go significantly beyond these direct effects? In my judgment, the answer is no. However, several statements made by Mr. Chase may leave the impression that the indirect effects might be of some importance. For example, he stated that "... the increase in price of steel has been followed generally by an increase in prices of producer finished goods and some of the consumer durables." (T. 272) However, later in his testimony Mr. Chase stated that producers "might re-examine their entire price and cost structure" in light of the increase in prices of steel. "I would assume that if they do so they will make their decision based not just on the cost of steel alone but their total cost and price structures" (T. 277) This is a sound conclusion because prices are determined by a wide variety of factors. (See Jules Backman, Pricing: Policies and Practices. National Industrial Conference Board, New York, 1961)

Because steel prices and prices of producers' goods both have risen does not indicate that there is a cause and effect relationship between them. Actually, all prices have been influenced by the general price inflation and wage inflation which characterized most of the post World War II period. Moreover, in most of the war and postwar period, there has been little relationship between the magnitude of changes in consumer and wholesale prices on the one hand, and finished steel prices on the other as is shown by the following illustrations.

> Between 1939 and August 1945 although finished steel prices rose only 3.8%, the wholesale price index rose 37.1% and the consumer price index by 30.5%.
>
> Between September 1948 and June 1950 although finished steel prices increased by 6.1%, the wholesale price index fell 5.6% and the consumer price index declined 2.9%.
>
> Between December 1952 and June 1955 although finished steel prices rose 10.9%, wholesale and consumer price indexes increased by only a fraction of 1%.

> Between June 1955 and December 1956 a 16.6% increase in finished steel prices was accompanied by a rise of 5.4% in the wholesale price index and a rise in the consumer price index of 3.1%.

Thus, even though all of these prices were affected by the common pressure of inflation, price increases of varying magnitudes developed.

An examination of Chart 4 accompanying Mr. Chase's testimony of April 26, shows the lack of relationship between specific changes in basic steel products and price changes for selected machinery and other metal goods products. Mr. Chase noted that between 1952 and 1959 the prices of machinery and equipment and metal products rose significantly less than the price of finished steel. ( T. 280)

Mr. Chase also has properly emphasized that the price index is "not a cost index" (T. 284) and illustrated this point by noting that "the user of this tinplate may find his costs are lower per ton of steel, but it will not be reflected in this price index." (T. 285) The disparity between changes in prices and in costs has become increasingly important as new steels have been developed and older ones improved in quality. For example, a new, stronger steel used in a pipeline serving Pittsburgh resulted in a 20 per cent reduction in the tonnage of steel used. The customer saved $4,826 in steel costs per mile of pipeline plus the additional savings in transporting less steel to the pipeline site. This is one of hundreds of examples that could be cited.

Of course, a major factor influencing price changes is the difference in the competitive situation prevailing for each product. Mr. Chase succinctly summarized the reasons for the lack of an automatic relationship between changes in steel prices and other prices as follows:

> "Each final product has its own market. In some market situations, it might be possible to absorb an increase in the cost of steel to a final product. In other markets, market situations, the producer undoubtedly would want to re-examine his whole cost and price structure and might decide to change the price of his final product by either more or less than the increase in the cost of steel to him. In still other situations, he might find the market so competitive that he would even have to reduce prices, in which case he probably would be looking for substitutes for steel because of their added cost. So that in view of these considerations we are not able to estimate the direct impact of a steel price increase on prices of steel using products." (T. 267-68)

Each company will be evaluating its own prices in an economic environment which may include surplus capacity, an intensification of domestic and foreign competition, a lull in general inflationary pressure and in many industries little new wage inflation. Against this background it is probable that many companies will not pass through the steel price increase to their customers. Moreover, there is no economic reason why a selective price increase of the magnitude under consideration should initiate a general price inflation. Price inflations are not created by such price increases for steel or for any other product. Price inflations require monetary and/or fiscal inflation to support them and may be given a big assist from wage inflation. These pressures are less active at present than in former periods and hence I would anticipate little or no indirect price effects accompanying the recent selective increase in steel prices.

There was some question about whether the price of steel influences demand and hence the volume of steel production. Mr. Paradiso on this subject said:

> "All studies that have been made that I know of ... show that demand in steel was inelastic.
>
> "... I want to modify this in this respect: demand is inelastic within the range of price variation that we have experienced. This is not necessarily true, for example, if the price should drop tremendously or if the price should go up way beyond what we have experienced." (T. 328)

Probably the most searching analysis into the elasticity of demand for steel products available was that introduced into the record of the Temporary National Economic Committee as Exhibit No. 1411 in November 1939. The analysis was prepared under the supervision of Theodore O. Yntema who, at that time, was Professor of Statistics at the University of Chicago. As a result of the analysis the mathematical indications were that the elasticity of demand was 0.3 to 0.4. The exhibit concluded, "The evidence and argument adduced in the preceding pages of this paper support the conclusion that such a value--or one even lower--for the elasticity of demand for steel is not a statistical happenstance, but a reality."

## Material Costs Have Not Declined

Arnold E. Chase presented several tables showing price changes for certain materials to indicate the trend of prices for selected purchased steel making materials. (See Tables 6 to 8 of his Statement dated April 24) He also presented a composite index of prices of certain basic steel making materials (see his Table 9),which fell "roughly 8 percent" between 1956 and 1962, to represent the behavior of the prices of purchased materials. In the ensuing discussion there seemed to be considerable confusion concerning the relationship between the changes in Chase's index of basic steel making materials and total costs for material and services. For example, the following exchange took place:

> "Chairman Douglas. And there has been, therefore, a decrease of approximately 8 per cent in material costs since 1956 and in 1961 this composed approximately 42 per cent of total cost, or roughly three-sevenths of total cost."
>
> "Mr. Arnow. That appears to be the case" (T.124) (See also T.125)

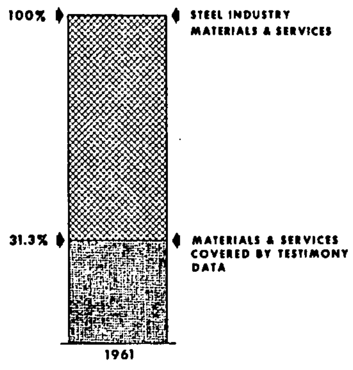
Actually the changes in the Chase index do not provide a reliable measure of the changes in total costs of materials and services and Mr. Chase did not claim that they did.

Mr. Chase confined his price comparisons to a limited group of purchased basic raw materials including such items as steel scrap, zinc slab, ferromanganese, iron ore, coke and pig iron. These materials purchases in 1961 cover less than one-third out of the 41.6 per cent of the sales dollar expended for materials and services. (See Table 1 and Chart 1)

CHART 1

PRICE MOVEMENT
MATERIALS and SERVICES
PORTION MEASURED by TESTIMONY DATA

FOR THE YEAR 1961




Source: Computed from Annual Statistical Report - AISI
and Arnold E. Chase Statement & Testimony of 4/24/63

Among the other elements of cost included in total materials and services bought but largely omitted from Mr. Chase's index are transportation costs, refractories, stores and supply items which include machinery parts, small tools, oils, paints, non-ferrous castings, paper products, electrical goods, building materials, purchased services and many others. The prices of many of these items have increased in recent years. That the price of stores and supplies have risen is suggested by the increase of 4.5 per cent in wholesale industrial prices between 1956 and 1961. Transportation costs, which are almost equal in importance to all the raw materials included by Mr. Chase, also have risen since 1956 as the Interstate Commerce Commission approved an average increase in railroad freight rates of about 5 per cent at the end of 1956 (Ex Parte No. 206), of 2 per cent in 1958 (Ex Parte No. 212), and of 1.5 per cent in 1960 (Ex Parte No. 223).

It is difficult, if not impossible, to determine the precise change in the average price of materials during the past five years or for longer periods because of the changing relative importance of materials used, of quantities used, and because of the introduction of new materials, none of which are included in the fixed (since 1955) mix price index constructed by Mr. Chase. It might be assumed that a substitution of one material for another would not occur unless a cost saving would result. Yet, it should be recognized that a more costly material will be substituted for a less costly one, or an additional amount of a material will be used, if a larger savings will result in another area of costs. This has occurred in the steel industry in recent years and the higher material costs are not reflected in the price index. Examples include the following:

> The use of oxygen in open hearth furnaces has brought about improvements in output per manhour but has resulted in significantly increased material costs - not only for oxygen but in addition for greater usage of pig iron and scrap as the use of oxygen results in somewhat higher process losses.
>
> The use of more costly refractories to reduce the frequency of furnace rebuilding saves labor but with some offset in increased unit material costs.
>
> The replacement of two obsolete structural mills with one modern mill, resulted in significant output per manhour improvements. Higher unit capital costs were involved but part of the labor savings were bought with greater per ton purchases for electricity, fuels, and lubricants among other items.

The decline in the steelmaking materials price index prepared by Mr. Chase is not representative of the costs incurred for those products. This is particularly true for scrap. Thus, the decline in the Chase index was caused primarily by lower prices for steel scrap as he noted. (T.123) Excluding scrap, his materials index dropped only one per cent between 1956 and 1961. Steel companies do not benefit fully from a decline in scrap prices.

There are two broad classes of scrap used by the steel industry - scrap produced by the industry in its steelmaking operations (referred to as home scrap) and scrap purchased from outside sources. Home scrap results from cropping, shearing, and other operations in the transformation of molten metal into finished rolled steel products. It therefore contains significant elements of labor, material and other costs. The trend in the costs of home scrap bears no relationship to the trend in the prices of steel scrap acquired in open-market channels.

During periods of declining steel output the use of purchased scrap falls relatively sharply. This is one of the reasons why scrap prices fluctuate so widely. Because of the decline in purchases in periods of low activity, declining scrap prices are not translated into comparable declines in steelmaking costs. For example, between 1956 and 1962 scrap prices fell by 47%, purchases of scrap declined by 38.9% (from 27.5 million tons to 16.8 million) and use of home produced scrap declined by only 4.0% (from 35.7 million tons to 34.3 million). The steel industry only benefitted partially from this decline in scrap prices and its inclusion in the Chase index tends to exaggerate the effect of the decline for the materials covered.

A rough approximation of the composite effect of changes in prices, quantities, and in the mix of items constituting materials and services may be obtained by relating the total expenditures for materials and services to total revenues. In such a comparison, the percentage is affected by changes in the sales price of finished steel as well as changes in the prices, quantities, and mix of materials and services. The first limitation would not be too significant for the period since 1958 because prices of basic steel products have been fairly steady as shown by the BLS price index.

Steel Product Prices - BLS
(1947-49 = 100)

| | |
|---|---|
| 1956 | 163.3 |
| 1957 | 178.9 |
| 1958 | 185.2 |
| 1959 | 188.1 |
| 1960 | 187.9 |
| 1961 | 187.2 |
| 1962 | 186.7 |
| Mar. 1963 | 186.3 |

Actual realization prices, which enter into revenues, probably fluctuated differently and may have declined moderately during this period. But there are no data available to indicate the magnitude of the change.

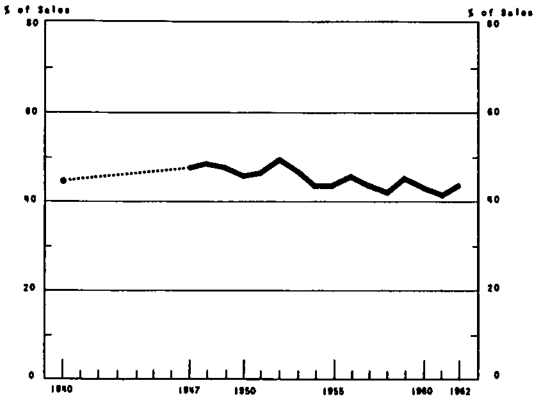
The data which most closely approximate that for the steel industry are the AISI income data for steel producing companies. These data include their non-steel activities. It appears from the employment data, however, that the changes which have taken place in the relative importance of non-steel activities in recent years probably were not of a magnitude to distort the overall results indicated by the distribution of the revenue dollar.

From the above analysis, it appears that for the period from 1958 to 1962, except for the strike year 1959, the AISI data would provide a rough test of the overall impact of the relative costs of materials and services because steel product prices were fairly stable and the changes in the relative importance of non-steel activity do not appear to have been of major significance. The relative share of the revenue dollar expended for materials and services as shown by the AISI data have been as follows: (See Chart 2)

| | Materials & Services As Per Cent of Revenues |
|---|---|
| 1958 | 41.8 |
| 1959 | 45.2 |
| 1960 | 42.3 |
| 1961 | 41.6 |
| 1962 | 43.8 |

CHART 2

MATERIALS and SERVICES BOUGHT
AS A PER CENT OF SALES
STEEL INDUSTRY




Source: Annual Statistical Report - AISI - See Table 1

It will be noted, for example, that between 1958 and 1962, the proportion of the revenue dollar expended for materials and services rose from 41.8 to 43.8. In contrast, Mr. Chase's basic steelmaking materials price index declined from 140.2 in 1958 to 133.2 in 1962 or by 5.0 per cent. The indications from the two sets of data are conflicting rather than confirming.

## Unit Labor Costs Have Been Rising

Leon Greenberg presented comprehensive data for unit labor costs and output per manhour. In his tables he has used all employment costs, that is hourly earnings plus fringes, to reflect labor costs and in most instances all employees rather than production workers alone to measure changes in output per manhour. (T. 19, 20, 27) Conceptually, I agree completely with this broad approach. However, as I will note there is a considerable difference between the results obtained from the data he uses and those obtained by using AISI data or those contained in a BLS study published in October 1962. The AISI results are in line with those in that BLS study. As Mr. Greenberg noted, output per manhour is not productivity. Productivity reflects the relationship between the inputs of all factors of production - labor, materials, capital, and management - and the resulting output. This is a broader and more significant concept than output per manhour. A leading student of productivity, Dr. John W. Kendrick, has pointed out:

> "The key measure in terms of which the outlook may best be discussed is 'total factor productivity' ... Over the business cycle, changes in productivity are affected by changes in rates of utilization of the stocks of human and nonhuman resources. But the trend in productivity over two or more cycles reflects mainly advances in the technology and organization of production, including those induced by increasing scale of output as well as those which are the result of autonomous innovations." (John W. Kendrick, "Productivity Gains: A Range of Possibilities, in American Enterprise: The Next Ten Years edited by Martin R. Gainsbrugh, The Macmillan Company, New York, 1961, p. 312) (Underscoring added)

## Many Factors Influence Productivity

The Bureau of Labor Statistics reviewed a number of technological changes in the steel industry in Manhours Per Unit of Output in the Basic Steel Industry, 1939-55, Bulletin No. 1200 (See pages 12-16). These technological developments have played a key role in the increases in output per manhour experienced in the steel industry. In that same study, BLS noted that

> "Changes in the productivity ratio may reflect the joint effect of a large number of separate, though interrelated, influences, such as technological improvements, the rate of operation, the relative contributions to production of plants at various levels of efficiency, the flow of materials and components, as well as the skill and effort of the work force, the efficiency of management, and the status of labor relations." (Ibid., pp 1-2)

Although gains in productivity arise from the contributions of all of the factors of production, they usually have been stated in terms of output per manhour although recently some estimates have been made on the basis of combined inputs of capital and labor. When total production is divided by total manhours, the resulting figure is "output per manhour." But this measure does not in any way measure labor's efficiency or labor's net contribution to production. All that such a figure shows is the total physical volume of production arising from the combination of manpower, toolpower, materials, etc. as compared with one variable factor, the hours worked or paid for.

A study for the U.S. Department of Labor by Professor E. Robert Livernash underlined the importance of new investments and new processes in the steel industry.

> " ... investment is undertaken for a variety of reasons. Much investment in steel has been undertaken to obtain new sources of ore and to use lower-grade ores. Much investment has gone into improvements in the quality and into diversification and multiplication of steel products. Some improvements in process, however, which have produced substantial increases in output per manhour and promise even greater improvements, have not involved particularly heavy capital outlays." (United States Department of Labor, Collective Bargaining in the Basic Steel Industry, Washington, D.C., January 1961, p. 160)

This analysis concluded: "Productivity changes in steel, as related to steel prices, must encompass all factors of production." (Underscoring added) (Ibid, p. 161)

Dr. Kendrick's studies also show that in industries in which capital has been substituted for labor at a relatively high rate, productivity also has advanced more rapidly. In his words,

> "In several groups ... the substitution of capital for labor exceeded 1 per cent a year, on average - notably in tobacco manufactures, petroleum refining, crude oil and gas production, and natural gas utilities. These are also groups in which productivity gains exceeded the economy average." (John Kendrick, "Productivity Trends: Capital and Labor," Occasional Paper 53, National Bureau of Economic Research, Inc., New York, 1956, p. 10.)

In distributing the gains in output per manhour, the large investment required to introduce these changes must receive compensation. Sometimes the gains reflect the use of additional materials as is true when the oxygen process is used. Under these conditions if all the gains are paid to labor, there is nothing available to pay for these materials. I shall return to this point later.

Importance of Production Workers Has Been Declining

Mr. Greenberg called attention to the decline in the relative importance of production workers in the steel industry between 1940 and 1962 (T. pp. 30-31) and to the smaller increase in employment costs per unit of output for wage employees than for all employees (T. p. 31). Chairman Douglas expressed concern over this pattern and asked

> "Doesn't this also indicate that possibly the increasing emphasis on technical and supervisory employees has not really paid out?" (T. 33; see also T. 76-77)

Rep. Reuss observed in this connection

> "Without being too refined about it, it looks to me as if some explanation is owed the general public as to whether or not the steel industry has not been loading up its overhead with drones, with people who are not bearing their weight." (T. 35).

The trend depicted by Mr. Greenberg is not unique to the steel industry. It is a development found throughout manufacturing industries. The changes for several dates are shown below: (See Chart 3)

Percentage of Production Workers to All Employees

| | All Manufacturing | Blast Furnaces and Basic Steel Products |
|---|---|---|
| 1940 | 81.4% | 88.0% |
| 1950 | 82.2 | 87.0 |
| 1955 | 78.7 | 85.5 |
| 1958 | 75.2 | 80.9 |
| 1960 | 74.9 | 81.1 |
| 1962 | 74.1 | 80.3 |

Sources: U.S. Department of Labor, Bureau of Labor Statistics, "Employment and Earnings Statistics for the United States, 1909-60," Bulletin No. 1312, Washington, D.C., 1961, pp. 29, 30, 95, Employment and Earnings, February 1963, pp. 12, 13.

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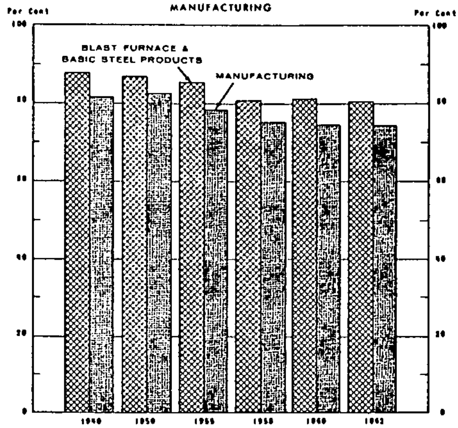
CHART 3

PRODUCTION WORKER EMPLOYMENT AS A
PERCENTAGE OF TOTAL EMPLOYMENT
BLAST FURNACE and BASIC STEEL PRODUCTS vs.
MANUFACTURING




Source: U.S. Department of Labor, Bureau of Labor Statistics, "Employment and Earnings Statistics for the United States, 1909-1960," Bulletin No. 1312 Washington, D.C., 1961, pp. 29,30,93, Employment and Earnings, February 1963, pp. 12, 13.

The trend has been particularly evident since 1950. Between 1950 and 1962, the proportion for all manufacturing fell by 8.1 percentage points or 9.9% as compared with 6.7 percentage points or 7.7% for steel. Clearly, the steel pattern has not been unique.

What has contributed to this trend? A BLS study reviewing the steel experience concluded:

> "The increasing proportion of nonproduction workers in the blast furnaces, steel works, and rolling mills industry is by no means unique: a similar trend can be observed for manufacturing industries as a whole." (Robert M. Shaw, "Recent Employment and Earnings Developments in the Primary Iron and Steel Industry," Employment and Earnings, January 1959, p.v.)

A BLS study of trends for all manufacturing industries drew the following conclusions:

> "The increasing proportion of nonproduction workers in the postwar period can be associated with several factors ... manufacturing industries engaged in large investment expenditures, both for new plant and equipment and for expanded research and development activities. This resulted in a direct increase in nonproduction workers such as engineers, scientists, and other technical workers, as well as employees who were engaged on force-account construction. A great expansion in production became possible with relatively little increase in the numbers of production workers; output by production workers per manhour increased significantly as a result of research developments and the technological advantages of new plants and equipment. Furthermore, a number of overhead functions were introduced or expanded which led to widespread increases in clerical, professional, sales, personnel, and other nonproduction activities...
>
> "Company activities which received comparatively little emphasis only a short time ago have in recent years become commonplace in well-ordered plants. The emphasis on "human relations" has introduced or expanded such functions as employee counseling, safety education, credit unions, suggestion awards, retirement and supplemental unemployment benefit programs, grievance handling, and the broad complex of labor relations. All of these activities have required the addition of factory personnel not directly engaged in production.
>
> "In addition, the systematization of management and production techniques has increased record-keeping activities many fold. The administration of Government programs has required more data from manufacturing concerns for informational, fiscal, and regulatory purposes. In addition, companies have resorted with increasing frequency to personnel testing, job and time studies, and inspection and quality control." (U.S. Department of Labor, Bureau of Labor Statistics, "Nonproduction Workers in Factories, 1919-56", Monthly Labor Review, April 1957, pp. 438-40)

The important point to keep in mind is that now as in the past, the output of any company or industry reflects the teamwork of the total labor force with many and diversified skills as well as the contribution of other factors of production. The composition of employment adjusts in response to economic change as does all other resource inputs in a free society. The men in the office and in the field are just as important as those in the factory. Neither could function effectively without the other. The labor input mix has changed. But it is the entire mix which contributes to the results obtained. That is why all employees is the proper basis for determining and evaluating trends in output per manhour and in unit labor costs.

The Use of 1958 as a Base Yields a Distorted Picture

Leon Greenberg properly has presented his estimates by utilizing several combinations of terminal years. (See his Tables 4 and 6 and Chart 6). However, the use of the period 1958-62 creates special problems because the decline in volume in 1958 led to a decline in output per manhour for all employees and a sharp rise in total employment cost per unit of output. These trends are clearly shown on Greenberg's Table 1 from which the following data are taken

| | Output | Output per All Employee Manhour | Employment Cost Per Manhour | Employment Cost Per Unit of Output |
|---|---|---|---|---|
| | | (1940 = 100) | | |
| 1957 | 181.7 | 155.3 | 358.5 | 230.9 |
| 1958 | 139.1 | 148.1 | 387.0 | 261.2 |
| 1959 | 157.6 | 165.4 | 421.6 | 254.9 |
| 1962 | 161.7 | 173.7 | 458.9 | 264.2 |

Mr. Greenberg recognized that the 1958 recession was a significant factor when he stated "This difference in 1957-62 versus '58-62 is due to a large extent because of the recession year of 1958, which affects production, output per manhour and unit labor cost." (T. 45) (See also T. 71)

• Clearly, as Greenberg recognized, changes in output per manhour or employment costs over short periods of time reflect the peculiarities of the terminal years rather than indicate trends in true productivity.

The effect of these forces on employment costs is also reflected in the revenue and cost data. Thus, for example, employment costs as a per cent of revenues changed as follows in the 1954 and 1958 recessions and ensuing recoveries. (See Table 1)

| | Employment Costs as % of Revenues |
|---|---|
| 1953 | 34.0 |
| 1954 | 36.7 |
| 1955 | 33.5 |
| 1957 | 35.5 |
| 1958 | 38.2 |
| 1959 | 36.1 |

In both recessions, the relative share of the revenue dollar paid for employment costs rose.

The data discussed above indicate that when a recession year is used as a starting date for comparison of output per manhour and unit labor cost data there are bound to be distortions in the results. Accordingly, comparisons based on 1958 are not meaningful as an indication of basic trends in output per manhour and the related data.

The Rise in Output Per Manhour Is Overstated

The estimate of the rise in output per manhour for steel employees contained in Mr. Greenberg's testimony is significantly higher than that reported by BLS as recently as October 1962 (Indexes of Output per Manhour for Selected Industries, 1939 and 1947-61) as well as that shown by the estimates prepared by the AISI. Table 2 and Chart 4 compare the three indexes of output per manhour. (To distinguish between what are two BLS series, the data presented before the Douglas Committee has been labeled the Greenberg estimates.) The Greenberg data are based on his Table 1 converted to 1947=100 and the BLS data are taken from the publication cited above with the 1962 figure calculated by following the BLS procedures.

To clarify the record the three series can be briefly described as follows:

A. The BLS Index of output per manhour is a weighted index which uses manhours paid for. The weights are the manhours required to produce coke, iron and ingots and the increment of manhours beyond ingots to produce each of the products recognized. The series was published through 1959 using the Standard Industrial Classification for the Steel Industry in effect prior to the 1958 Census. The latest series, starting with 1957, adjusts to the 1958 SIC Classification. The differences brought about by this change are minor. The manhours are obtained from the monthly reports.

B. The AISI series shows the relationship between shipments of steel and the actual manhours worked.

C. The Greenberg series uses essentially the same output as BLS but the manhours are a calculated series as will be discussed later.

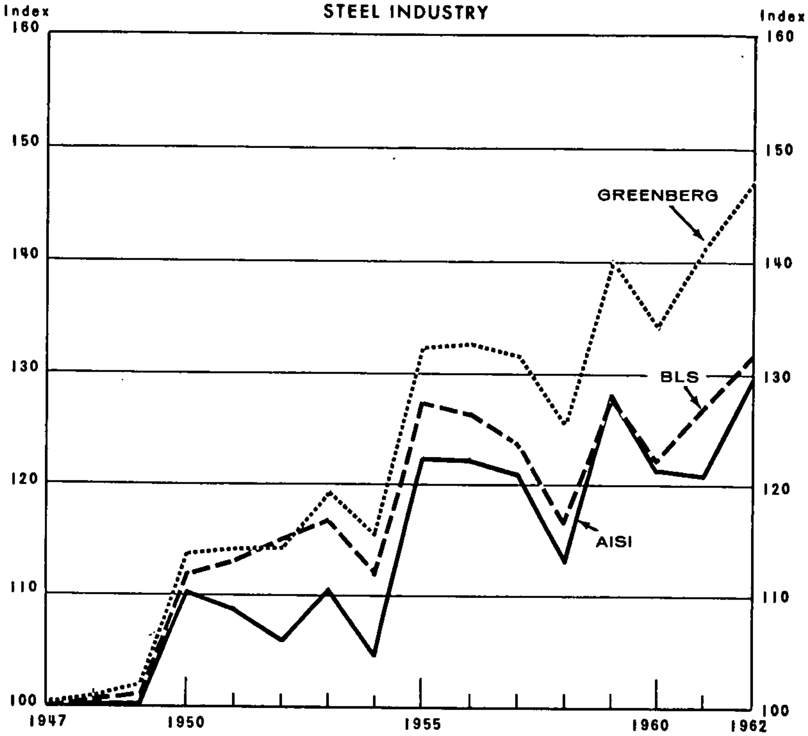
It is evident that the Greenberg data show by far a larger gain in output per manhour for the period since 1947, as well as for shorter periods, than the two other estimates. The BLS and AISI have been fairly close together in their estimates of changes for most years while the Greenberg index shows much larger increases. The changes from 1947 and 1957 were as follows: (See Charts 5 and 6).

| | % Increase | | Average Annual Rate of Change | |
|---|---|---|---|---|
| | 1947-62 | 1957-62 | 1947-62 | 1957-62 |
| AISI | 29.6 | 7.2 | 1.6 | 1.4 |
| BLS | 31.8 | 6.6 | 1.7 | 1.5 |
| Greenberg | 47.2 | 11.9 | 2.5 | 2.5 |

What accounts for these disparate estimates of output per manhour? An examination of Tables 3 and 4 shows that there are differences in the indexes of both manhours and output. The differences among the measures of output per manhour arise principally from the manhours' indexes.

CHART 4

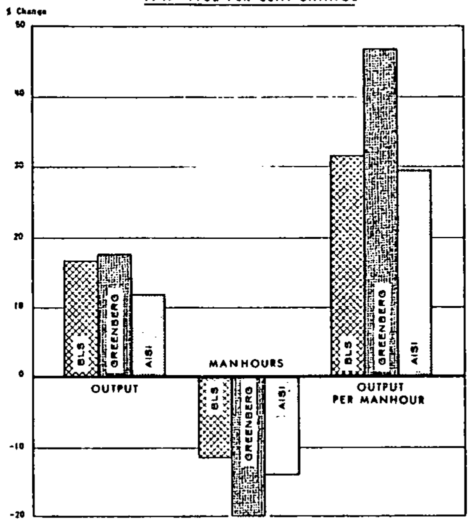
INDEXES OF OUTPUT PER MANHOUR
ALL EMPLOYES
1947 = 100
STEEL INDUSTRY




Note: Greenberg refers to data used in testimony April 23, 1963; BLS refers to Bureau of Labor Statistics publication of October 1962 - Indexes of Output Per Man-Hour For Selected Industries - 1939 and 1947-61 - Table 6A and 6B converted to 1947=100; AISI refers to data computed from Annual Statistical Report - AISI.

CHART 5

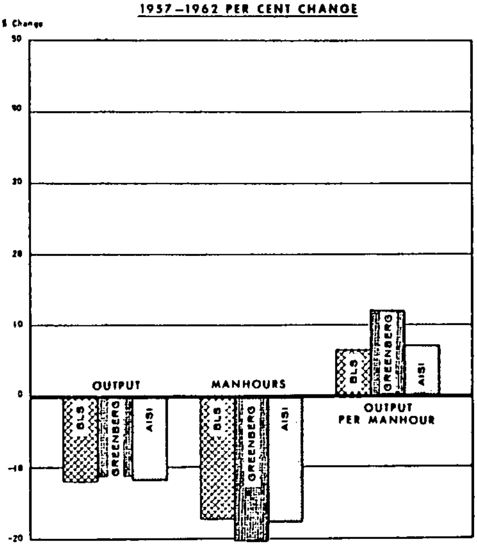
OUTPUT PER MANHOUR
1947–1962 PER CENT CHANGE




Source: AISI, BLS and Testimony of Greenberg 4/23/63

CHART 6

OUTPUT PER MANHOUR
1957–1962 PER CENT CHANGE




Source: AISI, BLS Testimony of Greenberg 4/23/63

The Greenberg estimate of manhours used involves an elaborate procedure. It starts with the number of employees reported by steel producing companies to the AISI. To this has been added an estimate to bring the AISI figure to a so-called 100% coverage. The resulting total is then adjusted downward to the Census reports for 1947 and 1954 and carried forward on the basis of the relationship between the adjusted totals and the Census. This resulting number multiplied by the average hours worked per year, as reported to the AISI, results in a calculated number of manhours worked. Summarized, the results are as follows:

| | Manhours | |
|---|---|---|
| | 1947 | 1961 |
| AISI - Actual Manhours | 1,168 million | 1,103 million |
| Greenberg calculated manhours | 1,110 " | 895 " |

The AISI total is the number of manhours actually worked. It is not a synthetic figure. It is the hours shown on the records of the companies. The distortion introduced by the procedure used can also be shown by comparing employment trends. Between 1958 and 1961 the following changes were recorded:

| | Index of Employees 1947 = 100 | |
|---|---|---|
| | 1958 | 1961 |
| AISI | 91.3 | 91.2 |
| BLS - New Series | 91.7 | 91.5 |
| Census | 90.6 | - |
| Greenberg | 87.6 | 84.7 |

It is evident that the BLS and AISI employment data indicated comparative stability between 1958 and 1961 while the Greenberg data show a decline in employment as well as a lower volume in 1958. A major part of the difference in changes in output per manhour shown by Greenberg and by the AISI results from his understatement of hours actually worked. For the period 1947-1962, some three-fifths of the difference in the magnitude of increase in output per manhour was caused by the difference in manhours while in the 1957-1962 period it was closer to four-fifths.

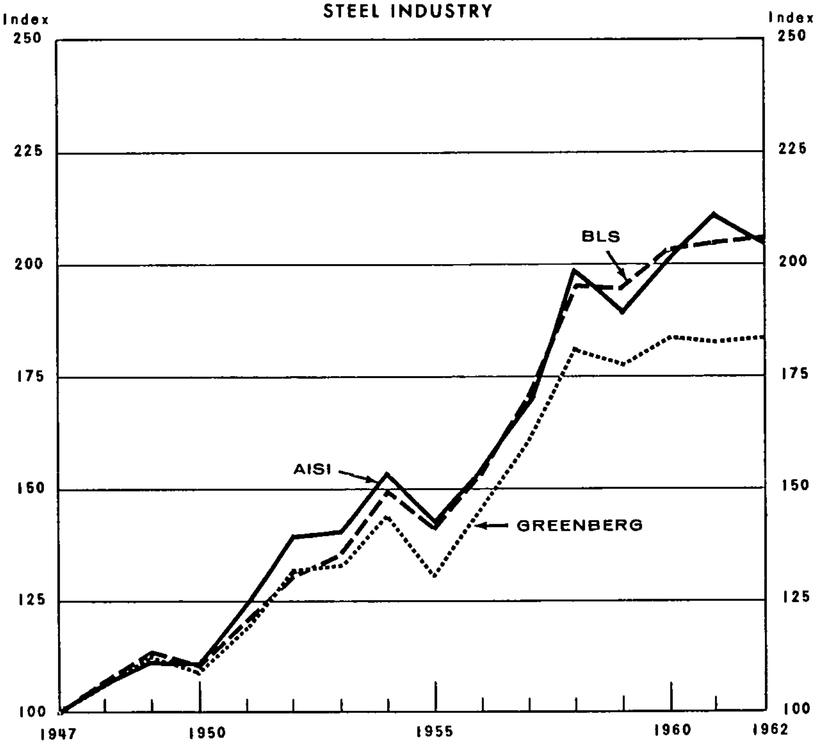
## Rise In Unit Labor Cost Is Understated

Since all three indexes of output per manhour are related to substantially the same employment cost data, the effect of any overstatement of the rise in output per manhour is an understatement of the increase in employment cost per unit of output. Table 5 and Chart 7 show the annual data. It is evident that the result of using either the BLS or AISI estimates of increases in output per manhour is to raise significantly the magnitude of the increase in employment cost per unit of output. This comparison follows:

| Employment Cost Per Unit of Output | | |
|---|---|---|
| | % Change | |
| | 1947-1962 | 1957-1962 |
| AISI | 105.1 | 20.5 |
| BLS | 105.8 | 20.1 |
| Greenberg | 84.4 | 14.5 |

CHART 7

INDEXES OF EMPLOYMENT COST PER UNIT OF OUTPUT
ALL EMPLOYES
1947 = 100
STEEL INDUSTRY




Note: Greenberg refers to data used in testimony April 23, 1963; BLS refers to calculations from BLS data and Greenberg testimony; AISI refers to data computed from Annual Statistical Report - AISI.

The magnitude of increases in employment costs per unit of output are similar for the AISI and BLS data and both are considerably greater than shown by the Greenberg series. The annual rates of change for the combinations of dates used by Mr. Greenberg are shown in the following tabulation.

Employment Costs and Output Per Manhour
Steel Operations
1940-1962
(Average Annual Rates of Change*)

| | 1940-62 | 1947-62 | 1953-62 | 1957-62 | 1958-62 |
|---|---|---|---|---|---|
| Output Per Manhour | | | | | |
| AISI . . . . . . . . . . . . . . . | 1.7 | 1.6 | 1.5 | 1.4 | 2.2 |
| BLS . . . . . . . . . . . . . . . | N.A. | 1.7 | 1.1 | 1.5 | 2.4 |
| Greenberg . . . . . . . . . . . | 2.4 | 2.5 | 2.1 | 2.5 | 3.3 |
| Employment Cost per Manhour# | | | | | |
| AISI . . . . . . . . . . . . . . . | 7.3 | 7.1 | 6.6 | 4.9 | 3.9 |
| Greenberg . . . . . . . . . . . | 7.4 | 7.2 | 6.5 | 4.7 | 3.9 |
| Employment Cost Per Unit of Output | | | | | |
| AISI . . . . . . . . . . . . . . . | 5.6 | 5.4 | 5.0 | 3.4 | 1.7 |
| BLS . . . . . . . . . . . . . . . | N.A. | 5.4 | 5.4 | 3.1 | 1.5 |
| Greenberg . . . . . . . . . . . | 4.9 | 4.6 | 4.3 | 2.1 | 0.6 |

Note - Greenberg refers to data used in testimony April 23, 1963; BLS refers to Bureau of Labor Statistics official data, most recently published October, 1962; AISI refers to data computed from American Iron and Steel Institute Annual Statistical Reports.

* Least Squares Method

\# AISI figure covering Hourly Employment Cost for all employees. This reconstruction closely approximates such a series.

These data underline the fact that unit labor costs have risen more than suggested in the testimony.

Investors Must Share in the Gains of Productivity

It is generally recognized that in principle, the gains in output per manhour may be distributed to workers in the form of higher wages, non-wage benefits, and/or leisure time, to consumers through lower prices or improved quality, and to investors in higher profits. An exchange between Senator Proxmire and Mr. Greenberg emphasized a little realized point, namely, that the amount available to be shared and the manner in which it is shared is significantly influenced by what happens to output. (T. 55-56) To repeat Mr. Greenberg's example, if output per manhour increases by 10 per cent and total output also increases by 10 per cent then a 10 per cent rise in labor costs leaves something for others to share as shown in the following example:

| Output 100 units | | Output 110 units (incl. 10% OPM increase) | |
|---|---|---|---|
| Sales @ $1/unit | $100.00 | Sales @ $1/unit | $110.00 |
| Costs: | | Costs: | |
| Labor @ 30¢/unit | $ 30.00 | Labor @ 27¢/unit (because of OPM increase) | 29.70 |
| | | Labor @ 3¢/unit (because of wage increase) | 3.30 |
| Other @ 60¢/unit | 60.00 | Other @ 60¢/unit | 66.00 |
| Total Costs | $ 90.00 | Total Costs | $ 99.00 |
| Profit | $ 10.00 | Profit | $ 11.00 |

As can be seen, the 10% increase in output per manhour is offset by the wage increase, but an additional $1 in profits may result from the higher volume of output and sales. (If, however, the increased output per manhour developed as a result of an increased cost of materials or facilities, the added profit would be reduced or eliminated.)

On the other hand, if output per manhour increases by 10% and total output remains unchanged, a totally different picture emerges.

| Output 100 units | | Output 100 units (incl. 10% OPM increase) | |
|---|---|---|---|
| Sales @ $1/unit | $100.00 | Sales @ $1/unit | $100.00 |
| Costs: | | Costs: | |
| Labor @ 30¢/unit | $ 30.00 | Labor @ 27¢/unit (because of OPM increase) | 27.00 |
| | | Labor @ 3¢/unit (because of wage increase) | 3.00 |
| Other @ 60¢/unit | 60.00 | Other @ 60¢/unit | 60.00 |
| Total Costs | $ 90.00 | Total Costs | $ 90.00 |
| Profit | $ 10.00 | Profit | $ 10.00 |

All that is changed is a 10% reduction in labor content. With labor costs then increased by the amount of the saving, all of the gains are absorbed and nothing is left to compensate investors for their increased investment. If the increased output per manhour reflects a greater use of materials, as for example in the oxygen process, then their cost reduces profits.

This distinction is particularly important for the steel industry in the past four years. For the years 1959 to 1962, total steel output has remained about unchanged. During the same period, employment costs rose more than output per manhour so that unit labor costs rose on all three bases of calculation cited earlier. Thus, during this period of relatively stable volume more than the gains in output per manhour were paid to labor and nothing was left for the other claimants. The investors who financed new equipment, which played a key role in higher output per manhour, did not participate in the gains at all. In fact, instead of an increase in earnings, a sharp decline was experienced by the steel industry.

Profits Have Been Eroded to a Significant Extent

Louis J. Paradiso has succinctly summarized the steel industry's adverse profit position in his conclusion that:

> "...profits of the industry have shown a sharp decline not only absolutely, but also in relation to profits of all manufacturing industries." (T 303-4)

This trend reflects the fact that:

> "It is an industry beset by severe competition both from domestic sources and from abroad. In addition, less steel is being utilized in many products either because of improved technology or because of changes in tastes and shifting requirements of consumers of steel products." (T 159)

AISI Profits Data

In drawing these conclusions, Mr. Paradiso relied on data covering the broad iron and steel industry which, as noted earlier, embraced many activities other than those carried on by the steel producing companies. However, the same conclusions may be drawn from an analysis of the AISI data which more closely approximate the steel producing industry. To round out the record, there are attached Tables 6 to 8 which merely substitute AISI data for the iron and steel industry data used in Tables 1, 3, and 5 of Mr. Paradiso's statement of April 29, 1963. There is no point in reproducing Tables 2 and 6; the data for Table 4 could not be obtained in the time available.

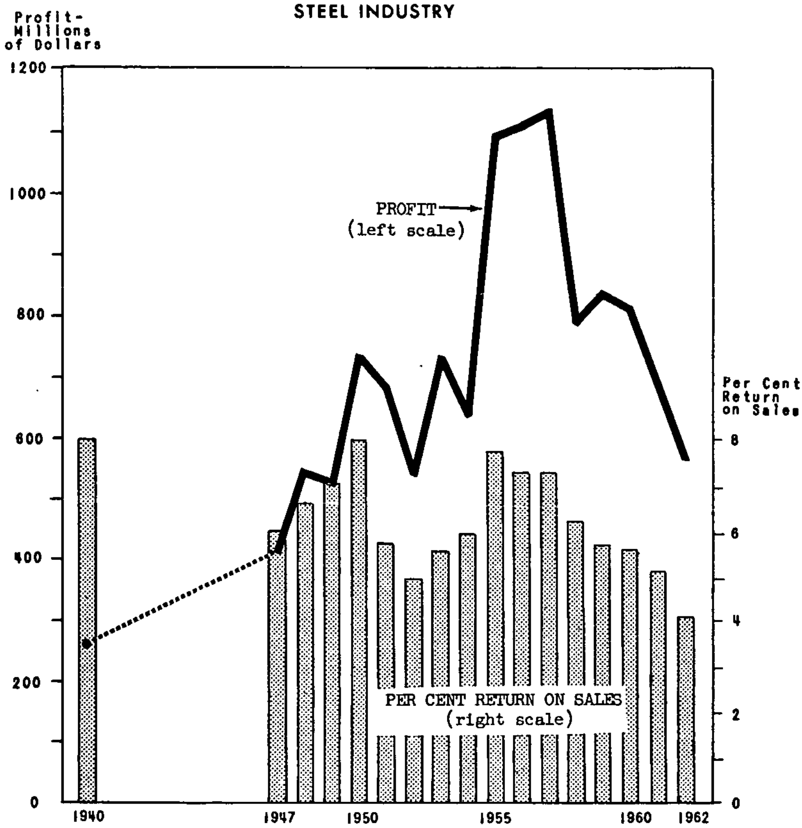
I cannot view as meaningful the ratios of profits before taxes and gross cash flow as a return on equity shown in Paradiso's Table 6. Similarly, the data contained in Paradiso's Table 2 are not meaningful. In that Table, profits before taxes, profits after taxes, and depreciation are related to steel ingot tonnage. The absolute dollars per ton are derived from noncomparable data and hence are too high for every category covered. As was noted earlier, the iron and steel industry sales were about one-third greater than total sales reported by the AISI for steel producing companies. Clearly, the profits per ton and depreciation per ton derived from the data used by Mr. Paradiso are not representative of the actual steel situation. For the balance of this section I will consider these AISI data rather than the figures used by Mr. Paradiso except where noted.

Chart 8 shows the trend of profits after taxes for steel producing companies for 1940 and 1947-62; the proportion of profits as a per cent of sales is shown by the bars in the lower half of the chart. In 1962, dollar profits were about half as large as in 1956 and 1957 although sales had declined only about 10%. The profit margin on sales had fallen to 4.1% or the lowest ratio in the postwar period. It is interesting to note that dollar profits in 1962 were not much different than in 1948 and 1949 although the industry's sales were about 75% higher. The unsatisfactory profit trend in the iron and steel industry which Mr. Paradiso emphasized are also clearly portrayed by the AISI data.

## CHART 8

**PROFIT DOLLARS* and PER CENT RETURN ON SALES**

**STEEL INDUSTRY**




*After Taxes

Source: Annual Statistical Report - AISI

Depreciation Charges Are Return of Capital

In part of his testimony, Mr. Paradiso was concerned with cash flow and presented various estimates in which he combined depreciation with profits before taxes or with profits after taxes. Such data must be handled carefully so that they are not misinterpreted. Depreciation, profits before and profits after taxes are entirely different concepts; they are not interchangeable nor should they be combined for all purposes. Depreciation reflects the using up of plant and equipment and is a cost of production just as is labor and materials. Accordingly, it is permitted as a deductible cost in calculating corporate tax liabilities.

While depreciation charges may be determined on various bases (e.g., straight line, sum-of-the-years digits, declining balance, etc.), all of these methods deal with the timing of the recovery of the original investment rather than with the use of the funds. Under each method, it is expected that funds equal to depreciation charges will be available to acquire new plant and equipment to replace that which is retired.

If price levels remain unchanged, then presumably the accumulated depreciation charges will permit only replacement and not net additions to plant and equipment. (It must be recognized, of course, that the new units may be more efficient than the old ones because of advances in technology). On the other hand, during a period of price inflation such as that experienced in the past quarter of a century, the permitted charges for depreciation will fall far short of the amounts required to replace plant and equipment acquired at lower price level. Under these conditions, companies must use part of their apparent profits after taxes to make up for the deficiency in depreciation. This is the position in which the steel industry has found itself in the postwar years. Only to the extent that profits available after dividends - retained earnings - exceed the amounts required to meet the inflation induced deficiencies in depreciation can a company use them to finance an expansion - in contrast to replacement - of its plant and equipment.

In any event, depreciation represents a return of capital while profits after taxes represents a return on capital. In no sense is depreciation a form of earnings to the stockholder. Thus, there is no significance to the data in Paradiso's Table 6 where he shows gross cash flow (profits after taxes plus depreciation) as a per cent of stockholders' equity. Only profits after taxes represents a return to the stockholder and profits after taxes as a per cent of stockholders' equity has fallen very sharply in the steel industry.

It should be noted that profits before taxes as a per cent of stockholders' equity also is a meaningless concept because about half of the ratio shown represents income taxes paid to the Federal government rather than a return to investors.

The difficulty that may develop in failing to distinguish between depreciation as a cost and profits after taxes as a return on investment is well illustrated on page 358 of the testimony. Senator Douglas noted that the gross cash flow on Paradiso's Table 6 was 13.5% in 1958 and in 1962. Profits after taxes represented a return of 7.1% in 1958 and 5.4% in 1962 or a decline of 1.7 percentage points and depreciation increased by the same number of percentage points.

"Chairman Douglas. So that the decline in profits after taxes as a percentage of stockholders' equity was due to a bookkeeping change increasing the amount of depreciation; is that not true?

"Mr. Paradiso. Yes." (T 358)

Actually, it is not true that the decline in profits was due to a bookkeeping increase in depreciation. Other factors played a more important role. It should be pointed out that profits before taxes fell from 14.0% in 1958 to 10.3% in 1962 or by 3.7 percentage points according to Paradiso's calculation on Table 6 (from 12.2% in 1958 to 7.5% in 1962 or 4.7 percentage points according to AISI data on Table 1) while the depreciation total rose by only 1.7 percentage points (1.4 percentage points in the AISI data on Table 1). Clearly, most of the decline in profits before taxes and in the profit rate was due to factors other than higher depreciation charges.

On Table 9 accompanying his April 25th statement, Mr. Paradiso showed depreciation charges increasing from $203 million in 1947 to $779 million in 1960 and to $872 million in 1962. He then compared these totals for depreciation with capital investment in 1954 dollars, capacity, and production and concluded:

"The more than threefold increase in depreciation in the iron and steel industry far outstrips the rise in stocks, capacity, and production. In these latter measures, expansion from 1947 to the present ranged from a gain of one-sixth in production to a growth of two-thirds of capacity. The swift rise in depreciation costs are set in perspective by the figures in the right portion of Table 9. These express annual depreciation in terms of dollars per unit of capacity, production, and stocks. Each such measure mirrors clearly the step-up in depreciation charges." (T 201)

He then went on to explain that

"A part of the sharp rise in depreciation relative to the other three factors reflects the fact that the latter are expressed in real terms, while depreciation charges include the effect of price changes ... on the additional dollar value of capital investment."

"These price increases are minimized by the use of historical costs rather than replacement costs in calculating depreciation, but there nevertheless is an inflation involved in this part." (T 202)

These relationships have no significance because Mr. Paradiso is comparing apples and pears. The depreciation figures reflect in large measure the effects of inflation while the data with which they are compared do not.

According to the Paradiso tabulation, capital stocks (gross property) in real terms rose 51.7% from 1947 to 1960. However, the actual book value of these assets according to AISI data increased by 180%. The trend thereof from 1947 to 1962 in actual dollars was as follows:

| Year end | Capital Stocks (Gross Property) (millions) |
|---|---|
| 1947 | $ 6,541 |
| 1948 | 7,075 |
| 1949 | 7,468 |
| 1950 | 8,061 |
| 1951 | 9,080 |
| 1952 | 10,375 |
| 1953 | 11,187 |
| 1954 | 11,657 |
| 1955 | 12,255 |
| 1956 | 13,440 |
| 1957 | 15,143 |
| 1958 | 16,190 |
| 1959 | 16,971 |
| 1960 | 18,316 |
| 1961 | 18,976 |
| 1962 | 19,463 |

Similarly, it is more appropriate to compare depreciation with the value of production than with physical tons. This is done in Table 1 and shows that the ratio of depreciation as a per cent of the revenue dollar was 5.4% in 1940, 3.6% in 1947, 4.9% in 1960, and 6.7% in 1962. These changes reflect the liberalization of depreciation much less dramatically, but more realistically, than those shown by Mr. Paradiso.

There appears to be some confusion in one part of the record concerning the utilization made of depreciation particularly as to whether it was used to build up liquid assets. Thus, Senator Douglas stated:

> "...it would be fair to say, would it not, that a considerable proportion of the depreciation funds were not put back in plant and equipment but put into liquid assets, I assume government securities, deposits in banks, and so forth?" (T 361)

Mr. Paradiso responded: "I think that is true" but then he went on to show that the net holdings of governments and cash had actually declined in the 1951-62 period he covered. Senator Douglas then suggested that:

> "a considerable percentage of it (depreciation) was put in liquid form and therefore became an earning asset?" (T 361)

Mr. Paradiso replied "I don't think a considerable percentage was in that form." (T 361-2)

According to Paradiso's Table 4, net working capital increased by $2,988 million for the iron and steel industry in the 1951-62 period. However, inventories accounted for $1,878 million and receivables for $482 million - a combined total of $2,360 million - or 79% of the increase in net working capital. Liquid assets of the type referred to by Senator Douglas declined by $129 million in the same period.

Table 9 shows the annual expenditures for plant and equipment, depreciation charges, and retained earnings for the steel producing companies from 1947 to 1962. For the entire period, plant and equipment expenditures totaled $15,333 million as compared with depreciation charges of $9,208 million. Since total depreciation fell far short of new investment - and in most of this period because of inflation depreciation was significantly less than replacement cost - it may be questioned whether depreciation has contributed much either to working capital or to liquid assets.

A summary of all sources of funds and their disposition for the steel producing companies and all corporations is presented for 1947-62 in Table 10 and on Chart 9. The pattern for the steel industry was similar to that for all corporations with depreciation accounting for a moderately larger share of funds for the steel industry. However, plant and equipment accounted for a larger proportion of the funds expended by the steel industry.

In regard to capital costs in the future, the oxygen steel making process and continuous casting are likely to be compatible production partners, gradually replacing worn-out open hearths and primary rolling mills. The unit capital costs of the new processes promise to be less than would be required for replacement of the present conventional facilities. Although the investment cost will be less than it otherwise would be, it will be considerably greater than the original cost of facilities which may be scheduled for replacement. Thus, the new processes will only act to reduce the magnitude of the increase in unit capital costs that result from past inflation.

A second factor that should be considered is the capital cost of providing facilities that can produce the improved quality demanded by steel users today. A structural mill was recently completed incorporating the latest design features for high quality, efficient production. The new features combined with the effect of inflation, increased the cost of the new mill to eight times that of the obsolete mill it replaced. The reduction in labor costs per unit of output was completely offset by greater capital costs and increased property taxes.

Better quality and improved steels often lead to greater capital costs per unit of output. For example, heat-treating is a process that improves steel's strength and makes steel more competitive with other materials. It is an added operating process that requires sizeable investment. Another competitive innovation of the industry, thin tinplate, likewise requires added processing and added investment. The introduction and success of these products has meant an increase in average unit capital cost. It is quite likely that more such innovations will be made in the future. These changes, coupled with the previously described effect of past inflation, make increases more likely than decreases in future unit capital costs.

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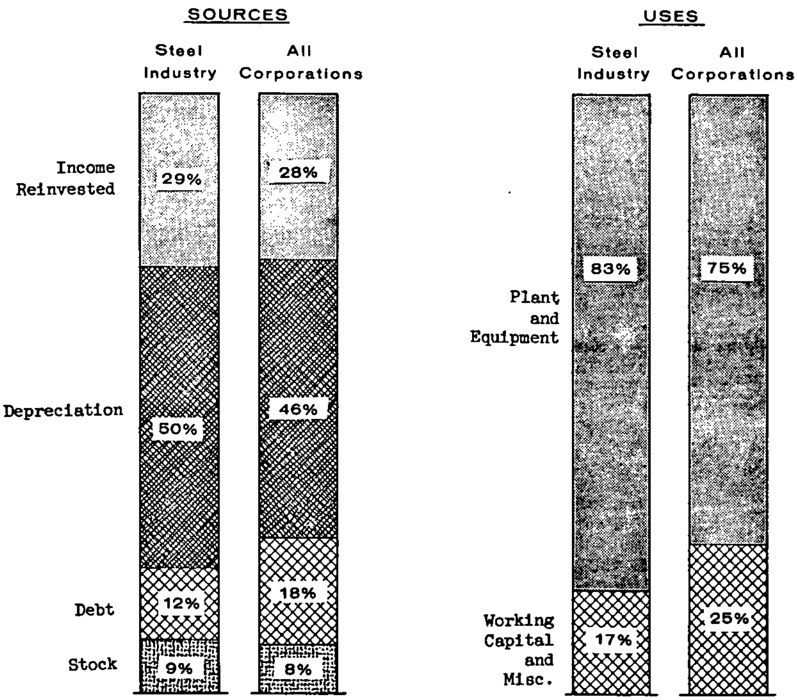
## CHART 9

SOURCE and USE OF FUNDS
STEEL INDUSTRY and ALL NON-FINANCIAL CORPORATIONS

1947—1962




Source: Steel Industry - Annual Statistical Report - AISI

All Corporations - U. S. Department of Commerce - Data for all corporations excluding banks and insurance companies.

Steel Dividends Have Declined

Although Table 3 of his statement showed a decline in dividends on steel stocks from $648 million in 1960 to $574 million in 1962, Mr. Paradiso stated the steel companies had "held the dividends at a rather constant rate." (T. 322 see also T. 313) The AISI data for dividends on Table 11 show a decline from $564 million in 1960 to $508 million in 1962. Dividends were reduced by at least four steel companies in 1962 as follows:

| | | |
|---|---|---|
| U.S. Steel | - from 75¢ to 50¢ | - declared 10/30/62 |
| Bethlehem | - from 60¢ to 37½¢ | - declared 10/25/62 |
| Republic | - from 75¢ to 50¢ | - declared 8/21/62 |
| Wheeling | - from 50¢ to 25¢ | - declared 8/29/62 |

If these new rates had been in effect for the entire year, total industry dividends in 1962 would have been reduced by at least an additional $66 million. If adjustment is made only for these four companies, therefore, the total dividends would be at the annual rate of $442 million instead of $508 million as reported for 1962.

Clearly, dividend rates have not been held "at constant rates." The reason for these cuts in dividends is evident on Table 11 which shows how the sharp decline in profits has placed a squeeze on dividends.

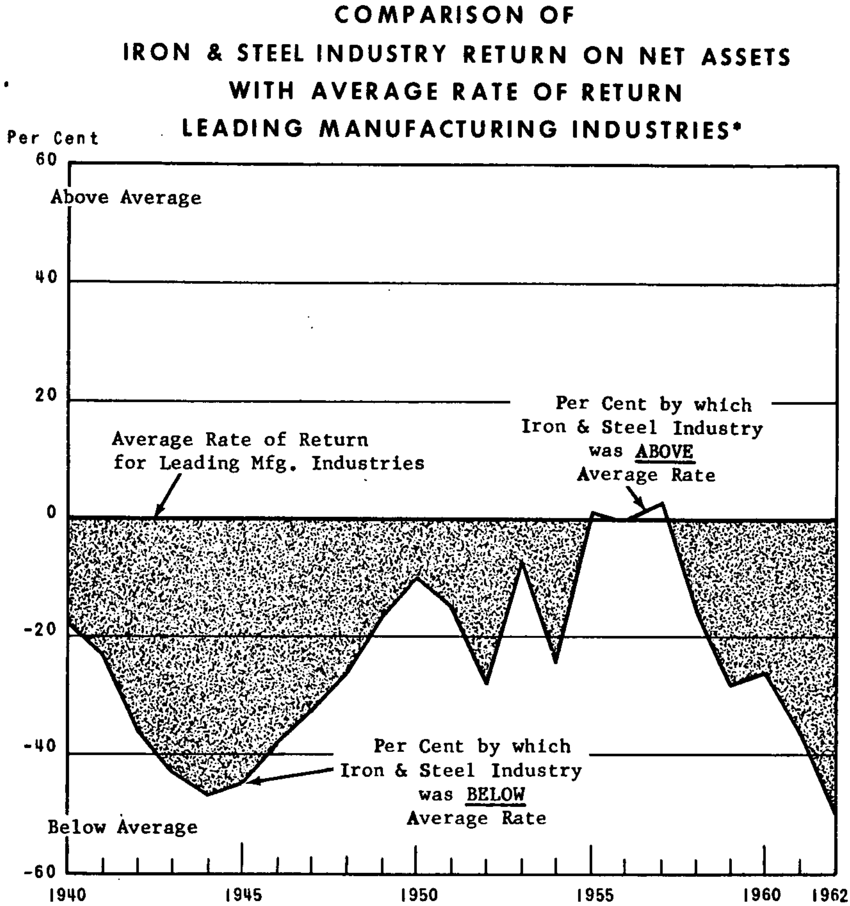
Undistributed Profits Have Almost Disappeared

A major portion of funds to finance expansion for most companies is obtained out of profits. To the extent that profits are not paid out as dividends, they are available for reinvestment. As Mr. Paradiso noted: "...the amount of retained profits has been declining rather sharply." (T.303; see also T. 313). The sharp decline in retained profits is shown on Table 11. In 1962, the total fell to $59 million or less than half the already low amount retained in 1961. In most of the postwar years the amount of profits retained exceeded $250 million. This has been a major source of funds to finance purchases of new plant and equipment and to overcome the inadequacy of depreciation charges to replace retired plants.

Profit Margins Have Been Reduced Sharply

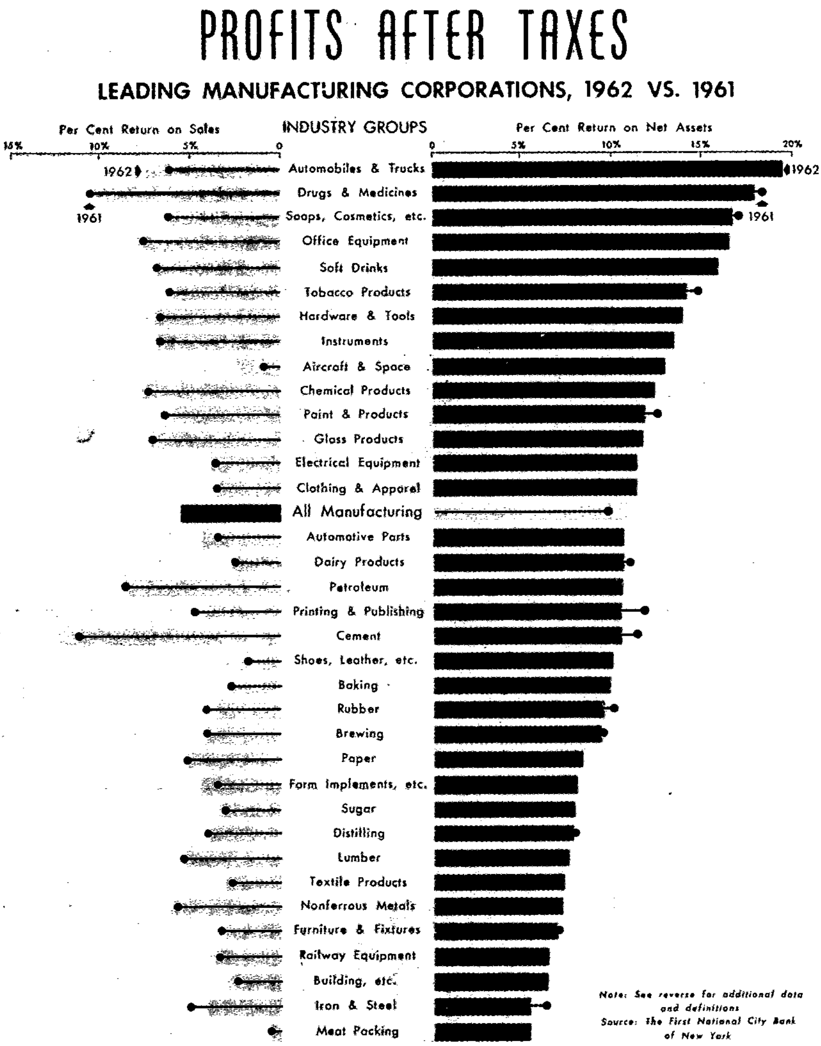
Steel industry profit margins have declined very sharply. Table 12 and Chart 10 compare the level of return on net assets for the iron and steel industry and for all manufacturing industries as reported by the First National City Bank of New York. These returns are based on book assets which do not fully reflect the price inflation of the past two decades. The steel industry return probably has been affected by this factor to a greater extent than most other industries because it is relatively more heavily invested in long lasting assets than are other industries. The steady and marked decline in the average return on net assets stands out on Table 12. As compared with a level in excess of 13% from 1955 to 1957, the ratio for the iron and steel industry has been cut by almost three-fifths to 5.4% in 1962 or the lowest level by far for the postwar period. In 1962, the iron and steel industry ranked lowest among the 41 manufacturing industries for which data were reported (only meat packing was as low as the iron and steel industry). (See Chart 11). As Mr. Paradiso succinctly stated, since 1957 "...the ratios to net worth in the iron and steel industry have consistently been below those enjoyed by all manufacturing companies together. The discrepancy is increasing." (T. 324).

CHART 10




* Computed from First National City Bank, New York. Monthly Economic Letter, April Issue.

CHART 11

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April 26, 1963

## PROFITS AFTER TAXES OF LEADING CORPORATIONS
## 1961 AND 1962

| | Per Cent Return on Net Assets | | Per Cent Return on Sales | |
|---|---|---|---|---|
| | 1962 | 1961 | 1962 | 1961 |
| All Reporting Corporations........ | 9.1 | 8.7 | 5.7 | 5.5 |
| Manufacturing....................... | 10.9 | 9.9 | 5.5 | 5.2 |
| Auto and trucks .................. | 19.4 | 13.2 | 7.5 | 6.1 |
| Drugs and medicines............ | 17.9 | 18.4 | 10.3 | 10.5 |
| Soap, cosmetics, etc............ | 16.7 | 17.2 | 6.1 | 6.2 |
| Office, computing equipment .. | 16.5 | 16.1 | 8.0 | 7.5 |
| Soft drinks......................... | 15.9 | 15.6 | 6.9 | 6.8 |
| Tobacco products................ | 14.1 | 14.8 | 6.0 | 6.1 |
| Hardware and tools.............. | 13.9 | 12.6 | 7.0 | 6.7 |
| Instruments, photo goods, etc. | 13.4 | 12.4 | 6.9 | 6.7 |
| Aircraft and space............... | 12.9 | 4.4 | 2.4 | 0.9 |
| Chemical products............... | 12.3 | 11.8 | 7.6 | 7.3 |
| Paint and allied products....... | 11.8 | 12.5 | 6.0 | 6.4 |
| Glass products .................... | 11.7 | 11.1 | 7.2 | 7.1 |
| Electrical equipment⊙ ......... | 11.3 | 10.0 | 3.8 | 3.6 |
| Clothing and apparel ............ | 11.3 | 10.7 | 3.6 | 3.5 |
| Automotive parts.................. | 10.6 | 6.8 | 4.4 | 3.3 |
| Dairy products..................... | 10.6 | 11.0 | 2.7 | 2.6 |
| Petroleum products▲............ | 10.5 | 10.4 | 8.7 | 8.7 |
| Printing and publishing ......... | 10.4 | 11.9 | 4.3 | 4.7 |
| Cement .............................. | 10.4 | 11.3 | 12.5 | 11.2 |
| Shoes, leather, etc. .............. | 10.0 | 5.4 | 3.1 | 1.8 |
| Baking.............................. | 9.8 | 9.7 | 2.7 | 2.7 |
| Rubber and allied products... | 9.5 | 10.2 | 3.7 | 4.1 |
| Brewing .......................... | 9.3 | 9.5 | 4.1 | 4.1 |
| Paper and allied products .... | 8.3 | 8.1 | 5.2 | 5.2 |
| Farm equipment*............... | 8.1 | 5.8 | 4.4 | 3.4 |
| Sugar.............................. | 7.9 | 6.6 | 3.4 | 3.0 |
| Distilling ........................ | 7.8 | 8.1 | 3.9 | 4.0 |
| Lumber and wood .............. | 7.6 | 6.6 | 5.3 | 5.3 |
| Textile products ................ | 7.3 | 5.8 | 3.1 | 2.7 |
| Nonferrous metals ............. | 7.2 | 6.8 | 6.2 | 5.8 |
| Furniture and fixtures ......... | 6.9 | 7.1 | 3.1 | 3.3 |
| Railway equipment ............ | 6.4 | 5.1 | 3.7 | 3.4 |
| Building + ....................... | 6.3 | 4.6 | 3.0 | 2.4 |
| Iron and steel.................... | 5.4 | 6.4 | 4.1 | 5.1 |
| Meat packing..................... | 5.4 | 4.6 | 0.6 | 0.6 |
| Nonmanufacturing: | | | | |
| Services ......................... | 10.8 | 10.4 | 3.8 | 3.9 |
| Trade ............................ | 10.1 | 10.2 | 1.8 | 1.9 |
| Public utilities.................. | 10.0 | 9.9 | 13.5 | 13.1 |
| Mining............................ | 8.8 | 8.3 | 9.2 | 9.1 |
| Finance .......................... | 5.4 | 6.4 | – | – |
| Transportation.................. | 3.8 | 2.3 | 5.0 | 3.4 |

▲Includes refining ⊙Includes electronics *Includes construction and material handling equipment +Includes heating, plumbing and equipment

Data above are based on published reports of 3,831 leading corporations as shown in The First National City Bank's Monthly Letter of April, 1963. Manufacturing industries, as shown on the chart, account for 2,316 corporations, or 60% of the total number reporting. The data shown are for leading companies; they are normally somewhat higher than the rate of return reported for all United States corporations, manufacturing and nonmanufacturing.

"Book net assets at the beginning of each year are based upon the excess of total balance sheet assets over liabilities; the amounts at which assets are carried on the books are far below present-day values...

"Profit margins computed for all companies publishing sales or gross income figures, which represent about nine-tenths of total number of reporting companies, excluding the finance groups; includes income from investments and other sources as well as from sales."

Source: The First National City Bank of New York

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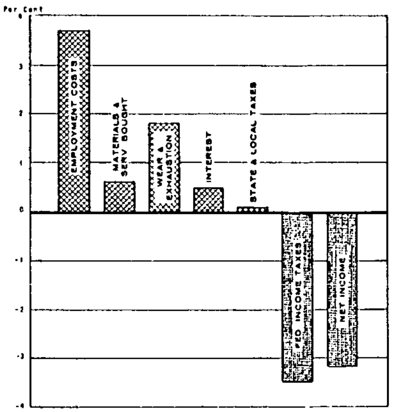
Table 13 and Charts 12 and 13 show the changes in the share of the revenue dollar expended for different purposes from 1957 to 1962 and from 1958 to 1962. Between 1957 and 1962, profits before taxes fell from 14.2% to 7.5% of sales. As against this decline of 6.7 percentage points there were increases of 3.7 percentage points in employment costs, 0.6 percentage points in materials and services bought, 1.8 percentage points in depreciation charges, and 0.5 percentage points in interest and other costs on debt. For that period, therefore, the major factor accounting for the decline in profits was the relative rise in employment costs. The increase in depreciation charges offset about one-fourth of the reduction in profits before taxes.

CHART 12

PERCENTAGE POINT CHANGE IN SHARE OF THE SALES DOLLAR

STEEL INDUSTRY

1962 vs 1957




Source: From AISI Data

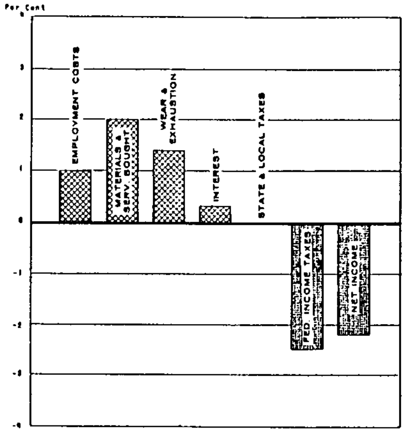
The changes between 1958 and 1962 are shown because of the comments made in the record concerning the impact of depreciation on profits after taxes during that period. (T. 358) Between 1958 and 1962, depreciation charges rose by 1.4 percentage points as against the decline of 4.7 percentage points in profits before taxes. Thus, the increase in depreciation offset less than 30% of the decline in profit margins.

CHART 13

PERCENTAGE POINT CHANGE IN SHARE OF THE SALES DOLLAR

STEEL INDUSTRY

1962 vs 1958




Source: From AISI Data

<u>The Role of Profits</u>

Profits play a key role in our economy. In any society, whether democratic or totalitarian, some mechanism must be devised to allocate resources. In a government-controlled economy, the state or a designated central body determines to what industries savings or resources shall flow. In our society, in contrast, the essential task of allocation is performed by the impersonal profit mechanism and the price system. Profits motivate the myriad decisions that must be made about the use of resources by the multitude of enterprises making up our economy.

Profits provide the primary incentive which has induced the private enterprise economy to yield such productive results in the past. It is the lure of profits that attracts the investment required to organize new companies or to develop new products. Profits provide a main source for financing expansion of existing companies: stockholders forego dividends and the profits are reinvested in the business. A satisfactory rate of profit also makes it possible to attract additional new capital by the sale of securities when the amount generated internally is not sufficient to meet requirements. The decline in profit rates in the economy in recent years has reduced the incentive to undertake new expansion plans and the attractiveness of entering into new lines of business. This has recently been recognized as a very significant factor in the lag in business investment which is discussed below.

Lagging Capital Goods Economy Has Adversely Affected Steel Output

At several points in the hearing, concern was expressed about the growth possibilities of the steel industry. Thus, Representative Reuss suggested that "...the prospects in the steel industry for the future do not seem to me particularly good." (T. 339) and "that this is not a particularly healthy industry." (T. 340). Mr. Paradiso's response was that "...the root problem here is sales. These sales must originate..from increased capital investment by business as a whole...If they can be increased, I think it would go a long way toward helping this industry." (T. 341-42)

The important question is what have been the factors contributing to the recent plateau in steel output? Has there been a fundamental shift in demand from steel to other products or does this situation reflect temporary or cyclical factors? Does the increase in foreign competition - with the accompanying net loss in markets - combined with competition from other materials mark the beginning of stagnation for the steel Industry? Or has the reported pattern of production been affected by inventory changes and to what extent?

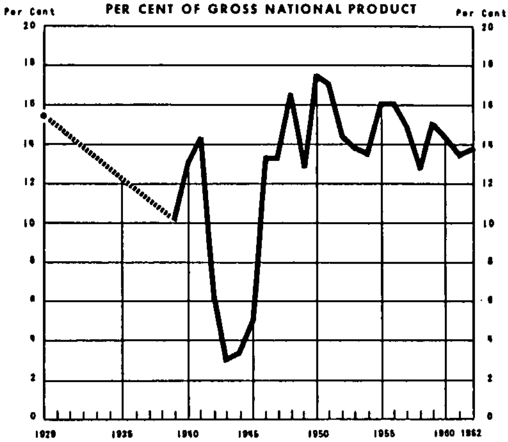
The failure of steel volume to expand has reflected in part the lagging volume of capital goods in recent years and to some extent inventory changes. Louis Paradiso underlined the importance of the investment lag in the following testimony.

> "I think you need a large amount of investment in order for the steel industry to have a greatly stepped-up rate of operation. This is the basic source of their demands, durable goods. If you have a large expansion of durable goods, I just don't see how the steel industry cannot expand its operations...".
>
> "The slow rate of growth in the economy has been attributable, in my judgement, to the fact that plant and equipment spending has been below in the last five years, the long-term trend of the economy. That consumer spending on durable goods has been below the long-term trend of the economy. Even residential construction to some extent has been below." (T. 239)

There is a good deal of evidence to support this interpretation by Mr. Paradiso. Private capital investment has suffered marked attrition despite the continued sharp accelerating expenditures of research and development. In past years of satisfactory economic growth and high employment, investment in new construction (including homes), equipment and inventories has been equal to at least 15% of gross national product. In the catch-up period immediately following World War II such outlays rose to 17% of gross national product. (See Table 14 and Chart 14). In 1955 and 1956 they were in excess of 16%.

CHART 14

GROSS PRIVATE DOMESTIC INVESTMENT AS
PER CENT OF GROSS NATIONAL PRODUCT




Source: Derived from Economic Report of the President, January 1963, p. 171.

In relative terms, similar proportions of annual output were set aside in the United States in the late twenties and earlier periods of economic expansion for additions of new plant and equipment. Thus, in 1929 gross private domestic investment was equal to 15.5% of gross national product, a rate not approached again until nearly two decades later.

In contrast, in the past three years, the rate of private investment has not matched the high rates prevailing in prior years of substantial economic expansion. Thus, in 1961 such investment fell to 13.4% from 14.4% in 1960. After a small rise in 1962, gross private domestic investment fell to 13.3% in the first quarter of 1963.

Gross private domestic investment has failed to expand in the present recovery in the traditional pattern of past business cycles. In the past, as an expansion gained momentum, investment would begin to rise rapidly. Although we are currently well into the third year of recovery, the absolute level of private capital formation still holds at $76 billion where it was in early 1962.

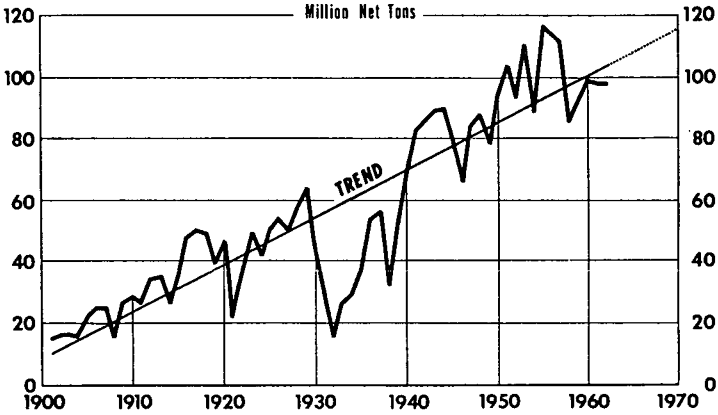
Steel production in the United States has been affected by these trends in private capital investment. Thus, output has not exceeded 100 million ingot tons in any of the past five years, a period of lagging investment. This fact has been pointed to as a cause of the industry's profit problems and as evidence of the industry's ill-health. Certainly, the steel industry would be better off if volume were higher. But the expression of this hope should not ignore the long term relationships of steel to the rest of the economy.

Chart 15 shows the long term trend of steel production. The growth of steel output has exceeded that of the country's population. The Chart also shows a wide year-to-year fluctuation in steel production and a fairly close relationship between recent production levels and the long term trend. The relatively high production levels in the years from the end of the war through 1957 have become the norm against which some persons measure the adequacy of recent production.

The Chart indicates that those years were significantly above the long term trend and this is varified by analysis of the conditions at that time.

CHART 15

# U.S.A. STEEL INGOT PRODUCTION




Source: AISI

The period 1946 to 1957 or thereabouts must be recognized as a "catch-up" period to satisfy postponed domestic demands of the Great Depression, the deferred demand of World War II and the Korean War, and the steel required to rebuild the economies of the war-torn countries. In 1955-57 period production rose to its highest levels. However, production at that time was in excess of consumption in this country. During that period, average net exports were the equivalent of about 3 million ingot tons per year greater than the average in 1953. More important, the equivalent of 4 million ingot tons per year was added to the inventories of steel users in this country.

In 1962 in contrast, inventories were reduced by almost 3 million ingot ton equivalents. Thus, the swing in inventories and the elimination of the unusual volume of exports accounted for a decline in ingot production of about 10 million tons from the 1955-57 average. Production was far above domestic steel consumption in the 1955-57 period while it was less than consumption in 1962; actually the difference in consumption between the periods is the equivalent of only 2 to 3 million ingot tons. Had steel customers maintained unchanged inventories in 1962 and had exports and imports been in balance, steel production would have been close to the trend line for the year. Placed in this perspective, the level of 1962 production cannot be considered as significant evidence of a lagging industry.

Part of the difficulty arises because steel output is related to estimates of capacity. Steel production, until 1960, was reported in terms of a percentage of productive capacity as defined and published by the American Iron and Steel Institute. Capacity data were discontinued in 1960 because of the difficulty of defining it under changing conditions, the impreciseness of its measurement, and its possible misinterpretation, especially over short periods of time. Nonetheless, it has been mentioned frequently during the hearings that current operations are abnormally low in relationship to capacity. In this regard, it is interesting to note that the arithmetic average percentage utilization of so-called capacity for the first sixty years of the century was 72.9%.

This average utilization from 1901-1960 may seem low to those unfamiliar with steel industry history. However, it should be recognized that demand for steel is volatile and seasonal so that it is necessary to have sufficient capacity to meet peak demand; and, of course, in time of war such capacity is a matter of national survival. In the 40 year period ending in 1960, year-to-year changes in ingot production of 40 per cent or more occurred 7 times and of 20 per cent or more 18 times. Such fluctuations in demand are found in only a few industries. Since steel generally is made to order, seasonal products such as steels used in construction and food canning require greater capacity than would be required if demand were level throughout the year. The extent of capacity utilization in many other industries, if measured on the same basis, would be far less than in the steel industry which has continuous operations.

Growth rates greater than that in the steel industry by some competing materials also have been cited as evidence that major inroads have been made into steel's traditional markets. To some extent, this has happened. The American Iron and Steel Institute estimates that the equivalent of nearly 2 million tons of annual steel shipments can be identified as having shifted to other materials in uses which can be measured with reasonable accuracy. This accounts only for the shifts away from steel and does not recognize the shifts toward steel such as, for example, are occurring in home building.

However, it must be kept in mind that some new materials' output is so low that they could show a growth of 50 per cent or more from only a one per cent replacement of steel consumption. Part of the growth in new materials comes from new products they make possible rather than from a substitution for an existing material. In addition, the growth of new materials brings direct benefits to steel since new plants for production of cement, aluminum, plastics or other materials are largely built of steel.

The more rapid growth, as compared to steel, of some steel-using industries can, in part, also be explained by the fact that significantly less steel is needed to do a job today than was needed in prior periods. This greater usefulness of steel results from factors within the steel industry as well as outside of it. Externally, greater production efficiency by steel users has reduced scrap losses in their processes and less steel need be ordered for each part produced. In addition, new design concepts use steel more efficiently and changing consumer tastes for such products as compact automobiles reduce the amount of steel required per auto produced.

Within the steel industry, new steels have been developed and older ones improved. For example, high strength low alloy steels, which are experiencing ever-growing acceptance in construction, can with 66 pounds support the same load that requires 100 pounds of carbon steel. Full alloy steels can do the same job with even less weight. These higher strength steels when used in upper parts of a structure reduce its weight and lead to further steel savings in lower floors and foundations. Thin tin plate is another frequently mentioned steel-saver. In one example, the same weight of the new product provides the material for 40 per cent more cans than the old. Quality steel bars, from which sparkplug shells are now produced, permit the customer to form the shell by a cold extrusion process using only two-thirds of the steel formerly required when such shells were machined. These developments have tended to reduce the amount of steel required to perform a given job.

From the above brief review it appears that the lag in expansion of steel output has been attributable to the lag in the capital goods sector of the economy and to the special circumstances affecting steel rather than to the replacement of steel by other materials. The major exception to this statement has been the increasing competition from foreign steel with its accompanying reduction of exports from this country and the expanding volume of imports into the country.

TABLE 1

SALES, COSTS AND INCOME
STEEL INDUSTRY - ALL OPERATIONS - AS REPORTED BY AISI (a)
FROM 1940 (Excluding 1941-1946) - BY YEARS

(Dollars in Millions)

| Item | | 1940 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | Item |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Products & Services Sold(b) | $ 3,252 | $ 6,705 | $ 8,119 | $ 7,436 | $ 9,535 | $11,845 | $10,858 | $13,156 | $10,593 | $14,049 | $15,272 | $15,592 | $12,551 | $14,233 | $14,221 | $13,295 | $13,977 | 1 |
| | COSTS: | | | | | | | | | | | | | | | | | | |
| 2 | Employment Costs . . . . | 1,167 | 2,464 | 2,832 | 2,601 | 3,151 | 3,829 | 3,789 | 4,477 | 3,888 | 4,709 | 5,082 | 5,528 | 4,792 | 5,140 | 5,536 | 5,352 | 5,479 | 2 |
| 3 | Prod. & Services Bought . | 1,443 | 3,197 | 3,931 | 3,517 | 4,356 | 5,488 | 5,401 | 6,087 | 4,578 | 6,132 | 7,001 | 6,745 | 5,244 | 6,439 | 6,011 | 5,528 | 6,127 | 3 |
| 4 | Wear & Exhaustion of Fac. | 175 | 239 | 302 | 278 | 327 | 374 | 450 | 614 | 670 | 737 | 748 | 766 | 673 | 665 | 698 | 739 | 928 | 4 |
| 5 | Int.& Other Costs on Debt | 40 | 19 | 20 | 21 | 25 | 29 | 43 | 55 | 53 | 53 | 55 | 65 | 79 | 94 | 101 | 122 | 133 | 5 |
| 6 | State,local and misc. . . | 75 | 92 | 104 | 113 | 132 | 164 | 151 | 191 | 174 | 214 | 227 | 275 | 240 | 258 | 292 | 268 | 270 | 6 |
| 7 | Federal Income Taxes . . | 91 | 282 | 389 | 377 | 777 | 1,279 | 483 | 997 | 593 | 1,105 | 1,046 | 1,081 | 735 | 806 | 772 | 596 | 473 | 7 |
| 8 | Total . . . . . . . | $ 2,991 | $ 6,293 | $ 7,578 | $ 6,907 | $ 8,768 | $11,163 | $10,317 | $12,421 | $ 9,956 | $12,950 | $14,159 | $14,460 | $11,763 | $13,402 | $13,410 | $12,605 | $13,410 | 8 |
| 9 | INCOME . . . . . . . . . . | $ 261 | $ 412 | $ 541 | $ 529 | $ 767 | $ 682 | $ 541 | $ 735 | $ 637 | $ 1,099 | $ 1,113 | $ 1,132 | $ 788 | $ 831 | $ 811 | $ 690 | $ 567 | 9 |
| 10 | Products & Services Sold | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 10 |
| | COSTS IN PER CENT OF SALES(c) | | | | | | | | | | | | | | | | | | |
| 11 | Employment Costs . . . | 35.9 | 36.7 | 34.9 | 35.0 | 33.1 | 32.3 | 34.9 | 34.0 | 36.7 | 33.5 | 33.3 | 35.5 | 38.2 | 36.1 | 38.9 | 40.3 | 39.2 | 11 |
| 12 | Prod.& Services Bought. | 44.4 | 47.7 | 48.4 | 47.3 | 45.7 | 46.3 | 49.8 | 46.3 | 43.2 | 43.6 | 45.8 | 43.2 | 41.8 | 45.2 | 42.3 | 41.6 | 43.8 | 12 |
| 13 | Wear & Exhaustion of Fac. | 5.4 | 3.6 | 3.7 | 3.7 | 3.4 | 3.2 | 4.1 | 4.7 | 6.3 | 5.2 | 4.9 | 4.9 | 5.3 | 4.7 | 4.9 | 5.6 | 6.7 | 13 |
| 14 | Int.& Other Costs on Debt | 1.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.6 | 0.7 | 0.7 | 0.9 | 0.9 | 14 |
| 15 | State, local and misc. . | 2.3 | 1.4 | 1.3 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.7 | 1.6 | 1.5 | 1.8 | 1.9 | 1.8 | 2.1 | 2.0 | 1.9 | 15 |
| 16 | Federal Income Taxes . . | 2.8 | 4.2 | 4.8 | 5.1 | 8.1 | 10.8 | 4.4 | 7.6 | 5.6 | 7.9 | 6.8 | 6.9 | 5.9 | 5.7 | 5.4 | 4.5 | 3.4 | 16 |
| 17 | Total . . . . . . . | 92.0 | 93.9 | 93.3 | 92.9 | 92.0 | 94.2 | 95.0 | 94.4 | 94.0 | 92.2 | 92.7 | 92.7 | 93.7 | 94.2 | 94.3 | 94.8 | 95.9 | 17 |
| 18 | INCOME AS A PER CENT OF SALES | 8.0 | 6.1 | 6.7 | 7.1 | 8.0 | 5.8 | 5.0 | 5.6 | 6.0 | 7.8 | 7.3 | 7.3 | 6.3 | 5.8 | 5.7 | 5.2 | 4.1 | 18 |

General Note
Period covered includes recession periods per NBER - peak to trough - Nov. 1948 to Oct. 1949, July 1953 to Aug. 1954, July 1957 to April 1958 and May 1960 to Feb. 1961. General steel strike periods were Oct. 1-Nov. 11, 1949, April 29-May 2, 1952, June 2-July 26, 1952, July 1, 1955, July - Aug. 5, 1956 and July 15-Nov. 7, 1959.

(a) Covering the consolidated statements of the steel companies rendering these data to the AISI. Some of these companies have activities which are not directly concerned with steel making.
(b) Includes interest, dividends and other income.
(c) Per Cents calculated before rounding.

TABLE 2

INDEX OF OUTPUT PER MANHOUR

Steel Operations

1947 = 100

| YEAR | B.L.S.* | GREENBERG | A.I.S.I. |
|---|---|---|---|
| 1947 | 100.0 | 100.0 | 100.0 |
| 1948 | 100.5 | 101.1 | 100.2 |
| 1949 | 101.1 | 101.9 | 100.2 |
| 1950 | 111.6 | 113.9 | 110.2 |
| 1951 | 112.9 | 114.4 | 108.7 |
| 1952 | 114.7 | 114.3 | 105.9 |
| 1953 | 116.8 | 119.3 | 110.4 |
| 1954 | 111.6 | 115.5 | 104.6 |
| 1955 | 127.3 | 132.3 | 122.0 |
| 1956 | 126.4 | 132.7 | 122.2 |
| 1957 | 123.6 | 131.6 | 120.9 |
| 1958 | 116.8 | 125.5 | 113.0 |
| 1959 | 127.8 | 140.2 | 128.1 |
| 1960 | 122.1 | 134.3 | 121.3 |
| 1961 | 127.0 | 141.2 | 120.9 |
| 1962 | 131.8 | 147.2 | 129.6 |

* Output per manhour paid for.

Note: B.L.S. refers to Bureau of Labor Statistics publication of October 1962 - Indexes of Output Per Man-Hour For Selected Industries - 1939 and 1947-61 - Table 6A and 6B converted to 1947=100; Greenberg refers to data used in testimony April 23, 1963; A.I.S.I. refers to data computed from Annual Statistical Report - AISI.

TABLE 3

INDEX OF MANHOURS

Steel Operations

1947 = 100

| YEAR | B.L.S. | GREENBERG | A.I.S.I. |
|---|---|---|---|
| 1947 | 100.0 | 100.0 | 100.0 |
| 1948 | 104.8 | 104.2 | 104.5 |
| 1949 | 91.6 | 90.9 | 91.9 |
| 1950 | 105.1 | 103.0 | 104.0 |
| 1951 | 112.8 | 111.3 | 115.2 |
| 1952 | 97.9 | 98.3 | 101.9 |
| 1953 | 113.0 | 110.7 | 115.1 |
| 1954 | 94.8 | 91.6 | 95.7 |
| 1955 | 109.7 | 105.6 | 110.1 |
| 1956 | 108.8 | 103.6 | 108.0 |
| 1957 | 107.3 | 100.5 | 104.7 |
| 1958 | 86.7 | 80.7 | 84.1 |
| 1959 | 89.4 | 81.9 | 85.9 |
| 1960 | 95.5 | 87.1 | 93.1 |
| 1961 | 89.0 | 80.6 | 86.7 |
| 1962 | 88.7 | 80.0 | 86.3 |

Note: B.L.S. refers to Bureau of Labor Statistics publication of October 1962 - Indexes of Output Per Man-Hour for Selected Industries - 1939 and 1947-61 - Table 6A and 6B converted to 1947=100; Greenberg refers to data computed from testimony April 23, 1963; A.I.S.I. refers to data computed from Annual Statistical Report - AISI.

TABLE 4

INDEX OF OUTPUT

Steel Operations

1947 = 100

| YEAR | B.L.S. | GREENBERG | A.I.S.I. |
|---|---|---|---|
| 1947 | 100.0 | 100.0 | 100.0 |
| 1948 | 105.3 | 105.3 | 104.6 |
| 1949 | 92.6 | 92.6 | 92.1 |
| 1950 | 117.3 | 117.3 | 114.6 |
| 1951 | 127.4 | 127.4 | 125.2 |
| 1952 | 112.3 | 112.3 | 107.8 |
| 1953 | 132.0 | 132.0 | 127.1 |
| 1954 | 105.8 | 105.8 | 100.2 |
| 1955 | 139.6 | 139.6 | 134.3 |
| 1956 | 137.5 | 137.5 | 132.0 |
| 1957 | 132.6 | 132.2 | 126.7 |
| 1958 | 101.3 | 101.2 | 95.0 |
| 1959 | 114.3 | 114.7 | 110.0 |
| 1960 | 116.6 | 117.0 | 112.8 |
| 1961 | 113.1 | 113.8 | 104.9 |
| 1962 | 116.9 | 117.7 | 111.9 |

Note: B.L.S. refers to Bureau of Labor Statistics publication of October 1962 - Indexes of Output Per Man-Hour For Steel Industries - 1939 and 1947-61 - Table 6A and 6B converted to 1947=100; Greenberg refers to data used in testimony April 23, 1963; A.I.S.I refers to data computed from Annual Statistical Report - AISI.

TABLE 5

INDEX OF EMPLOYMENT COST
PER UNIT OF OUTPUT

Steel Operations

1947 = 100

| YEAR | B.L.S. | GREENBERG | A.I.S.I. |
|---|---|---|---|
| 1947 | 100.0 | 100.0 | 100.0 |
| 1948 | 107.4 | 106.9 | 107.2 |
| 1949 | 113.5 | 112.6 | 112.0 |
| 1950 | 110.7 | 108.6 | 110.8 |
| 1951 | 120.7 | 119.1 | 124.5 |
| 1952 | 130.9 | 131.4 | 139.8 |
| 1953 | 135.9 | 133.1 | 141.4 |
| 1954 | 149.5 | 144.5 | 153.6 |
| 1955 | 140.9 | 135.7 | 142.8 |
| 1956 | 153.6 | 146.3 | 154.7 |
| 1957 | 171.4 | 161.1 | 170.2 |
| 1958 | 195.8 | 182.3 | 198.9 |
| 1959 | 195.0 | 177.9 | 189.7 |
| 1960 | 203.0 | 184.7 | 201.5 |
| 1961 | 204.4 | 183.9 | 211.1 |
| 1962 | 205.8 | 184.4 | 205.1 |

Note: B.L.S. refers to calculations from BLS data and Greenberg testimony; Greenberg refers to data used in testimony April 23, 1963; A.I.S.I. refers to data computed from Annual Statistical Report - AISI

TABLE 6

SALES AND PROFITS IN THE STEEL INDUSTRY

| | Sales | Profits Before Taxes | Ratio of Profits Before Taxes To Sales |
|---|---|---|---|
| | (Millions of Dollars) | | (Per Cent) |
| 1947 | $ 6,705 | $ 694 | 10.4% |
| 1948 | 8,119 | 929 | 11.4 |
| 1949 | 7,436 | 906 | 12.2 |
| 1950 | 9,535 | 1,544 | 16.2 |
| 1951 | 11,845 | 1,961 | 16.6 |
| 1952 | 10,858 | 1,024 | 9.4 |
| 1953 | 13,156 | 1,732 | 13.2 |
| 1954 | 10,593 | 1,230 | 11.6 |
| 1955 | 14,049 | 2,204 | 15.7 |
| 1956 | 15,272 | 2,159 | 14.1 |
| 1957 | 15,592 | 2,213 | 14.2 |
| 1958 | 12,551 | 1,523 | 12.1 |
| 1959 | 14,233 | 1,637 | 11.5 |
| 1960 | 14,221 | 1,583 | 11.1 |
| 1961 | 13,295 | 1,286 | 9.7 |
| 1962 | 13,977 | 1,040 | 7.4 |

Source: Annual Statistical Report - AISI.

Note: This table substitutes steel industry data based on AISI data in place of the iron and steel industry data contained in Table 1 of Mr. Louis J. Paradiso's statement of April 29, 1963.

TABLE 7

ELEMENTS OF PROFITS BEFORE TAXES PLUS DEPRECIATION, STEEL INDUSTRY
(Millions of Dollars)

| Year | STEEL INDUSTRY | | | | | ALL CORPORATIONS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Profits Before Taxes Plus Depreciation | Income Taxes | Dividends | Depreciation | Retained Profits | Profits Before Taxes Plus Depreciation | Income Taxes | Dividends | Depreciation | Retained Profits |
| 1947 . . . . . . . | $ 933 | $282 | $184 | $239 | $228 | | | | | |
| 1948 . . . . . . . | 1,231 | 388 | 205 | 302 | 336 | | | | | |
| 1949 . . . . . . . | 1,184 | 377 | 222 | 278 | 307 | $33,593 | $10,375 | $ 7,473 | $ 7,223 | $ 8,522 |
| 1950 . . . . . . . | 1,871 | 777 | 311 | 327 | 456 | 48,532 | 17,865 | 9,208 | 7,904 | 13,555 |
| 1951 . . . . . . . | 2,335 | 1,279 | 312 | 374 | 370 | 51,282 | 22,447 | 9,029 | 9,129 | 10,677 |
| 1952 . . . . . . . | 1,474 | 483 | 316 | 450 | 225 | 47,114 | 19,459 | 8,954 | 10,423 | 8,278 |
| 1953 . . . . . . . | 2,346 | 997 | 324 | 614 | 411 | 50,340 | 20,222 | 9,225 | 12,029 | 8,864 |
| 1954 . . . . . . . | 1,900 | 593 | 343 | 670 | 294 | 47,755 | 17,220 | 9,839 | 13,694 | 7,002 |
| 1955 . . . . . . . | 2,941 | 1,105 | 436 | 737 | 663 | 60,790 | 21,827 | 11,215 | 15,928 | 11,820 |
| 1956 . . . . . . . | 2,907 | 1,046 | 508 | 748 | 605 | 62,171 | 21,227 | 12,132 | 17,488 | 11,324 |
| 1957 . . . . . . . | 2,979 | 1,081 | 566 | 766 | 566 | 62,541 | 20,922 | 12,588 | 19,333 | 9,698 |
| 1958 . . . . . . . | 2,196 | 735 | 540 | 673 | 248 | 57,960 | 18,646 | 12,358 | 20,550 | 6,406 |
| 1959 . . . . . . . | 2,302 | 806 | 553 | 665 | 278 | 69,571 | 23,188 | 13,682 | 21,914 | 10,787 |
| 1960 . . . . . . . | 2,281 | 772 | 564 | 698 | 247 | 68,878 | 22,435 | 14,378 | 23,454 | 8,611 |
| 1961 . . . . . . . | 2,025 | 596 | 557 | 739 | 133 | 70,668 | 22,251 | 15,018 | 25,115 | 8,284 |
| 1962 . . . . . . . | 1,968 | 473 | 508 | 928 | 59 | 77,900 | 25,000 | 15,900 | 26,600 | 10,300 |

Source: Annual Statistical Report - AISI and Department of Commerce.

Note: This table substitutes steel industry data based on AISI data in place of the iron and steel industry data contained in Table 3 of Mr. Louis J. Paradiso's statement of April 29, 1963.

TABLE 8

NET CASH FLOW AND PLANT AND EQUIPMENT SPENDING
STEEL INDUSTRY AND ALL NONFINANCIAL CORPORATIONS

| Year | Steel Industry (Millions of Dollars): Net Cash Flow (1) | Steel Industry (Millions of Dollars): Plant and Equipment Spending | All Nonfinancial Corporations (Billions of Dollars): Net Cash Flow (1) | All Nonfinancial Corporations (Billions of Dollars): Plant and Equipment Spending |
|---|---|---|---|---|
| 1947 | $467 | $554 | | |
| 1948 | 638 | 642 | | |
| 1949 | 585 | 483 | $14.9 | $16.3 |
| 1950 | 783 | 505 | 20.8 | 16.9 |
| 1951 | 744 | 1,051 | 19.0 | 21.6 |
| 1952 | 675 | 1,298 | 17.8 | 22.4 |
| 1953 | 1,025 | 988 | 19.7 | 23.9 |
| 1954 | 964 | 609 | 19.8 | 22.4 |
| 1955 | 1,400 | 714 | 26.6 | 24.2 |
| 1956 | 1,353 | 1,311 | 27.8 | 29.9 |
| 1957 | 1,332 | 1,723 | 28.0 | 32.7 |
| 1958 | 921 | 1,137 | 26.0 | 26.4 |
| 1959 | 943 | 934 | 31.1 | 27.7 |
| 1960 | 945 | 1,521 | 30.4 | 30.8 |
| 1961 | 872 | 959 | 32.0 | 29.6 |
| 1962 | 987 | 904 | 35.3 | 32.3 |

(1) Retained profits plus depreciation, depletion and amortization.

Source: Annual Statistical Report - AISI and Department of Commerce.

Note: This table substitutes steel industry data based on AISI data in place of the iron and steel industry data contained in Table 5 of Mr. Louis J. Paradiso's statement of April 29, 1963.

## TABLE 9

## CAPITAL EXPENDITURES, WEAR AND EXHAUSTION AND RETAINED EARNINGS

## (MILLIONS OF DOLLARS)

## STEEL INDUSTRY

| | Capital Expenditures | Wear and Exhaustion | Difference | Retained Earnings |
|---|---|---|---|---|
| 1947 | $ 554 | $ 239 | $- 315 | $ 228 |
| 1948 | 642 | 302 | - 340 | 336 |
| 1949 | 483 | 278 | - 205 | 307 |
| 1950 | 505 | 327 | - 178 | 456 |
| 1951 | 1,051 | 374 | - 677 | 370 |
| 1952 | 1,298 | 450 | - 848 | 225 |
| 1953 | 988 | 614 | - 374 | 411 |
| 1954 | 609 | 670 | + 61 | 294 |
| 1955 | 714 | 737 | + 23 | 663 |
| 1956 | 1,311 | 748 | - 563 | 605 |
| 1957 | 1,723 | 766 | - 957 | 566 |
| 1958 | 1,137 | 673 | - 464 | 248 |
| 1959 | 934 | 665 | - 269 | 278 |
| 1960 | 1,521 | 698 | - 823 | 247 |
| 1961 | 959 | 739 | - 220 | 133 |
| 1962 | 904 | 928 | + 24 | 59 |
| Total | $15,333 | $9,208 | $-6,125 | $5,426 |

Source - Annual Statistical Report - AISI

TABLE 10

SOURCE AND DISPOSITION OF FUNDS
STEEL INDUSTRY AND ALL NON-FINANCIAL CORPORATIONS

| | Sixteen Year Period - 1947-1962 | | | | |
|---|---|---|---|---|---|
| | Steel Industry | | All Corporations (a) | | |
| | Billion $ | % of Total | Billion $ | % of Total | |
| **Source** | | | | | |
| Profits | $11.9 | 64% | $ 305.7 | 59% | (b) |
| Less Dividends | (6.5) | (35) | (160.1) | 31 | (b) |
| Income Reinvested | $ 5.4 | 29 | $ 145.6 (c) | 28 | |
| Depreciation | 9.2 | 50 | 239.1 | 46 | |
| Long Term Debt | 2.3 | 12 | 93.5 | 18 | |
| Capital Stock | 1.6 | 9 | 43.6 | 8 | |
| Total Sources | $18.5 | 100% | $ 521.8 | 100% | |
| **Disposition** | | | | | |
| Plant & Equipment | $15.3 | 83% | $ 392.9 | 75% | |
| Work Capital & Miscellaneous | 3.2 | 17 | 128.9 | 25 | |
| Total Disposition | $18.5 | 100% | $ 521.8 | 100% | |

Sources: Steel Industry - Annual Statistical Report - AISI
All Corporations - U. S. Department of Commerce

Notes
(a) Data for all corporations excluding banks and insurance companies.
(b) Profits and dividends assumed to be proportional to totals for all private corporations.
(c) Income reinvested for all corporations includes depletion.

TABLE 11

NET INCOME, DIVIDENDS AND INCOME REINVESTED
AMOUNT AND AS A PERCENTAGE OF SALES
STEEL INDUSTRY

| | Net Income | | Dividends | | Income Reinvested | |
|---|---|---|---|---|---|---|
| | Millions | % Of Sales | Millions | % Of Sales | Millions | % Of Sales |
| 1940 | $ 261 | 8.0 | $121 | 3.7 | $140 | 4.3 |
| 1947 | 412 | 6.1 | 184 | 2.7 | 228 | 3.4 |
| 1948 | 541 | 6.7 | 205 | 2.5 | 336 | 4.2 |
| 1949 | 529 | 7.1 | 222 | 3.0 | 307 | 4.1 |
| 1950 | 767 | 8.0 | 311 | 3.3 | 456 | 4.7 |
| 1951 | 682 | 5.8 | 312 | 2.6 | 370 | 3.2 |
| 1952 | 541 | 5.0 | 316 | 2.9 | 225 | 2.1 |
| 1953 | 735 | 5.6 | 324 | 2.5 | 411 | 3.1 |
| 1954 | 637 | 6.0 | 343 | 3.2 | 294 | 2.8 |
| 1955 | 1,099 | 7.8 | 436 | 3.1 | 663 | 4.7 |
| 1956 | 1,113 | 7.3 | 508 | 3.3 | 605 | 4.0 |
| 1957 | 1,132 | 7.3 | 566 | 3.6 | 566 | 3.7 |
| 1958 | 788 | 6.3 | 540 | 4.3 | 248 | 2.0 |
| 1959 | 831 | 5.8 | 553 | 3.9 | 278 | 1.9 |
| 1960 | 811 | 5.7 | 564 | 4.0 | 247 | 1.7 |
| 1961 | 690 | 5.2 | 557 | 4.2 | 133 | 1.0 |
| 1962 | 567 | 4.1 | 508 | 3.6 | 59 | .5 |

Source: Annual Statistical Report - AISI.

TABLE 12

COMPARISON OF IRON & STEEL INDUSTRY RETURN ON NET ASSETS WITH AVERAGE RATE OF RETURN FOR LEADING MANUFACTURING INDUSTRIES*

| Year | Average Return on Net Assets: Iron & Steel Industry | Average Return on Net Assets: Leading Manufacturing Industries | Per Cent by which Iron & Steel Industry Return was ABOVE (+) or BELOW (-) Average Rate of Return for Leading Mfg. Industries | Iron & Steel Industry Ranking Among Leading Manufacturing Industries | Number of Leading Industrial Categories Covered |
|---|---|---|---|---|---|
| 1940 | 8.5% | 10.3% | -18% | 32nd | 45 |
| 1941 | 9.6 | 12.4 | -23 | 40th | 44 |
| 1942 | 6.5 | 10.1 | -36 | 45th | 45 |
| 1943 | 5.6 | 9.9 | -43 | 43rd | 44 |
| 1944 | 5.2 | 9.8 | -47 | 44th | 45 |
| 1945 | 5.0 | 9.1 | -45 | 44th | 45 |
| 1946 | 7.5 | 12.1 | -38 | 41st | 45 |
| 1947 | 11.3 | 17.0 | -33 | 42nd | 45 |
| 1948 | 14.0 | 18.9 | -26 | 38th | 45 |
| 1949 | 11.5 | 13.8 | -17 | 24th | 45 |
| 1950 | 15.3 | 17.1 | -10 | 28th | 45 |
| 1951 | 12.3 | 14.4 | -15 | 25th | 46 |
| 1952 | 8.8 | 12.3 | -28 | 35th | 46 |
| 1953 | 11.6 | 12.5 | - 7 | 21st | 46 |
| 1954 | 9.4 | 12.4 | -24 | 32nd | 46 |
| 1955 | 15.2 | 15.0 | + 1 | 14th | 41 |
| 1956 | 13.9 | 13.9 | 0 | 17th | 41 |
| 1957 | 13.2 | 12.8 | + 3 | 17th | 41 |
| 1958 | 8.2 | 9.8 | -16 | 27th | 41 |
| 1959 | 8.4 | 11.6 | -28 | 35th | 41 |
| 1960 | 7.8 | 10.5 | -26 | 33rd | 41 |
| 1961 | 6.4 | 10.1 | -37 | 33rd | 41 |
| 1962 | 5.4 | 10.9 | -50 | 41st | 41 |

* Computed from The First National City Bank, New York, Monthly Economic Letter, April issue.

TABLE 13

PER CENT OF THE SALES DOLLAR

PERCENTAGE POINT CHANGE

STEEL INDUSTRY

| | Per Cent of Sales Dollar | | | Percentage Point Change | |
|---|---|---|---|---|---|
| | 1957 | 1958 | 1962 | 1962 vs. 1957 | 1962 vs. 1958 |
| Employment Costs . . . . . . . | 35.5 | 38.2 | 39.2 | + 3.7 | + 1.0 |
| Materials & Services Bought | 43.2 | 41.8 | 43.8 | + 0.6 | + 2.0 |
| Wear & Exhaustion . . . . . . . | 4.9 | 5.3 | 6.7 | + 1.8 | + 1.4 |
| Int. and Other Costs on Debt | 0.4 | 0.6 | 0.9 | + 0.5 | + 0.3 |
| State and Local taxes . . . | 1.8 | 1.9 | 1.9 | + 0.1 | - |
| Federal Income Taxes . . . . | 6.9 | 5.9 | 3.4 | - 3.5 | - 2.5 |
| Net Income . . . . . . . . . . | 7.3 | 6.3 | 4.1 | - 3.2 | - 2.2 |

Source - Annual Statistical Report - AISI

TABLE 14

GROSS PRIVATE DOMESTIC INVESTMENT AS PERCENT OF GROSS NATIONAL PRODUCT

| | Total | New Construction | Producers Durable Equipment | Change in Business Inventories |
|---|---|---|---|---|
| 1929 | 15.5% | 8.3% | 5.6% | 1.6% |
| 1939 | 10.2 | 5.2 | 4.6 | 0.4 |
| 1940 | 13.1 | 5.4 | 5.5 | 2.2 |
| 1941 | 14.4 | 5.3 | 5.5 | 3.6 |
| 1942 | 6.2 | 2.3 | 2.7 | 1.1 |
| 1943 | 2.9 | 1.2 | 2.1 | -0.4 |
| 1944 | 3.4 | 1.3 | 2.6 | -0.5 |
| 1945 | 4.9 | 1.8 | 3.6 | -0.5 |
| 1946 | 13.4 | 5.2 | 5.1 | 3.0 |
| 1947 | 13.4 | 6.5 | 7.1 | -0.2 |
| 1948 | 16.6 | 7.5 | 7.3 | 1.8 |
| 1949 | 12.8 | 7.3 | 6.7 | -1.2 |
| 1950 | 17.6 | 8.5 | 6.7 | 2.4 |
| 1951 | 17.1 | 7.5 | 6.5 | 3.1 |
| 1952 | 14.4 | 7.4 | 6.1 | 0.9 |
| 1953 | 13.8 | 7.6 | 6.1 | 0.1 |
| 1954 | 13.5 | 8.2 | 5.7 | -0.5 |
| 1955 | 16.1 | 8.8 | 5.8 | 1.5 |
| 1956 | 16.1 | 8.5 | 6.5 | 1.1 |
| 1957 | 14.9 | 8.1 | 6.4 | 0.4 |
| 1958 | 12.7 | 8.0 | 5.2 | -0.4 |
| 1959 | 15.1 | 8.3 | 5.4 | 1.4 |
| 1960 | 14.4 | 8.1 | 5.5 | 0.8 |
| 1961 | 13.4 | 8.0 | 4.9 | 0.4 |
| 1962 | 13.8 | 8.0 | 5.2 | 0.6 |

Source: Derived from Economic Report of the President, January 1963, p. 171.

Supplementary material submitted by Louis J. Paradiso, Assistant Director-Chief Statistician, Office of Business Economics, U.S. Department of Commerce in reply to some of the points raised by steel producing companies in a report prepared by Dr. Jules Backman in a review of the Joint Economic Committee Hearings on Steel, April-May 1963.

Page 25:
Dr. Backman takes the position that the data compiled by the AISI should be used to measure the steel companies financial position rather than the FTC-SEC materials used in my presentation. There is no basis for this position. First: both series move in practically the same way, so that one gets the same results from either series; and second, the AISI series shows a more favorable profit picture than the FTC-SEC statistics for all years except 1947, 1948, and 1962 and in 1962 both series are identical. Apparently the extra activities included in the FTC-SEC data have lower rates of return than the steel operations included in the AISI figures.

Page 25, 27:
Dr. Backman objects to showing depreciation and gross cash flow as a return to stockholders, and therefore calls table 6 meaningless. In my testimony I pointed out "it would be useful to relate them to a measure of capital employed ... stockholders' equity is used because it is a familiar base for the computation of rates of return and because tests show that the use of alternative bases of total assets or plant and equipment plus inventory would not yield sufficiently different results over time." I clearly stated the purpose and meaning of these ratios in my testimony. Nowhere do I refer to these measures as returns to stockholders, but only as a relation to capital employed. The falling level of steel company profits could have reflected a decline in the volume of capital employed, but the statistics presented in my testimony show that such was not the case.

Page 28:
I believe Dr. Backman is overstating the case when he says these relationships between depreciation and capacity and production have no significance. It is true that there is a judgment to be made about price effect on value data. However, in table 5 of Dr. Backman's submission he shows indexes of employment costs (which are affected by inflation) per unit of output (which is not affected by inflation). Apparently he has no objections to making similar comparisons in his own presentations and deriving conclusions from them. In any event I have noted the legitimate area of non-comparability in my testimony, which is quoted by Dr. Backman, so I don't see any basis for his criticism.

Page 29:
The confusion comes from the time periods considered. Over the entire 1951-62 period, there was a slight decline in liquid assets. Nevertheless there were substantial accumulations in the years 1951, 1955, and 1959. As I pointed out in my prepared testimony "Increases in cash and U.S. Governments have been marked during recovery years, and the balances have been drawn upon subsequently to pay taxes and finance inventory accumulation and some plant and equipment spending."

Page 32:
I don't see that the point I made in my testimony of April 29, "that steel companies had held dividends at a rather constant rate," is invalidated when it took the four steel companies cited by Dr. Backman five years before cutting their dividends, after experiencing a profit decline. Compared with the dividend increases which occurred prior to 1957, the experience since then for all companies has been one of rather relative stability.

Page 38:
Dr. Jules Backman incorporates chart 15, in which he develops a trend of steel ingot production from 1900 through 1962 and states, "The chart also shows...a fairly close relationship between recent production levels and the long-term trend." As is well known, the manner in which a trend is obtained is dependent upon the purpose for which it is to be used. It appears that the trend which Dr. Backman derived represents a least-squares regression using all of the years including the Great Depression and the war years. Because of the prolonged period of low level activity during the depression years, in most of the years in the period since 1900 steel production was above this type of trend line.

However, in order to gauge the recent position of the industry's output in relation to other periods when the recovery of the industry brought steel production back to the position associated with the levels of high activity years, a more meaningful trend would be one based on the production over the peacetime periods of high-level economic activity. When the production data are plotted on a ratio chart and the high level activity years are considered, two distinct long-term growth rates in steel production are evident since the beginning of the century. The growth rate for the high-level activity years from 1900 to 1929 averaged 4 percent per year. This compares with a growth rate in real GNP of 3 percent per year. On the other hand, during the postwar period the growth rate of steel ingot production showed a distinct slowing down from that of the pre-1929 period.

During the high-level activity years of the postwar period, 1948 through 1957, the growth of steel ingot production was around 2-1/2 percent per year; this is in contrast to the growth rate for real GNP of 3-1/2 percent. Steel ingot production since 1957 has been substantially below the growth trend of the high activity years of the postwar period, and, in fact, has failed to show any growth in the last two years.

Reply by Mr. Greenberg to Comments of Mr. Backman

Mr. Backman's statement presents several tables and charts which suggest that the figures presented in my testimony (the "Greenberg" indexes) seriously overstate the trends in output per man-hour, and understate the increases in unit employment costs. He presents two additional series, one labeled "BLS," the other "AISI."

With regard to the output per man-hour indexes, the testimony series is based on hours worked, i.e., excluding vacations, holidays, paid sick leave. The regular BLS series is based on hours paid for, including paid leave time. These latter indexes would be expected to show a smaller increase than the testimony series because of the gradual increase, over the years, of paid leave hours as a proportion of total hours.

The AISI index of output per man-hour differs from the series in my testimony both in terms of output and in terms of man-hours. In the testimony series, output is a weighted production index covering all products from pig iron to finished steel with products such as stainless and alloy being given a higher weight than carbon steel. In Mr. Backman's AISI series, output is based on a straight addition of tons of semifinished and finished steel products shipped. If there has been a shift from low weighted to high weighted products, the index of tonnage will not reflect this shift and will understate the trend in output. In addition, in some years production of pig iron and ingots may move differently from shipments (e.g., because of inventory reduction or increase). As indicated in Mr. Backman's chart 5, the weighted output index did show a greater rise from 1947 to 1962 than the index of shipments.

The man-hours indexes of these two series differ because an attempt was made in the testimony series to develop consistent output and man-hour indexes. The output index is based on essentially complete coverage of the production and shipments of the steel industry adjusted periodically to Census benchmark levels. The corresponding man-hours index, therefore, also had to be adjusted insofar as possible to Census benchmark levels. The published AISI reports also show estimated coverage of the employment figures (they are less than 100 percent and vary somewhat from year to year) so the testimony series makes an adjustment for this undercoverage. 1/

Mr. Backman has apparently used these output per man-hour series to derive "BLS" and "AISI" unit employment cost series which differ substantially from the testimony series.

---

1/ The differences between the man-hour aggregates for the two series are not as great as Mr. Backman indicated. In 1947 the difference was 58 million, as Mr. Backman shows, but in 1961 the AISI figure should be 1,013 million, not 1,103 million. This reduces the trend differential substantially.

It is a little difficult to explain the differences because Mr. Backman does not indicate how the indexes of unit employment costs were derived, particularly the "BLS" indexes. As mentioned earlier, the regular BLS output per man-hour index is based on hours paid. The BLS has not published any measures of total employment cost consistent with these man-hours.

I have tried to reconstruct Mr. Backman's indexes and, if my assumptions about his methods are correct, the differences can be explained.

It appears that Mr. Backman has used the testimony series on employment costs per hour with the BLS series on output per man-hour. But this is an improper statistical procedure. The hourly cost series is based on hours worked, the productivity series is based on hours paid and the two series are incompatible. If compatible productivity and hourly cost series were available, the combination of the two sets of indexes would yield the same measure of unit employment costs.

With regard to the AISI unit employment cost series, this is based on shipments of steel. It has the same defects as described for shipments per man-hour and therefore overstates the trend in unit costs.

# The Competitive Challenge To STEEL

## 1963 EDITION

AMERICAN IRON AND STEEL INSTITUTE



98183 O—63——43

# FOREWORD

America's steel industry today is progressing rapidly. New and more economical production methods, new and better steels, and more intensified marketing programs are all signs of the dynamic new steel industry.

Steel companies in this country continue to face a great competitive challenge, however. Alternate materials and steel produced in foreign mills are invading traditional steel markets.

Steel products are involved in almost every product and service that consumers need and buy. Therefore, recognition of steel's problems and the actions necessary to overcome them should be of concern to all Americans. To provide background information on these developments a factual reference booklet was first prepared in December 1961. This is the second edition of that booklet.

**American Iron and Steel Institute**
**March 1963**

# Introduction

The material in this book describes steel's present competitive situation, how it came about, and the challenge it poses. It also describes efforts made by the companies to meet this challenge and the additional things that must be done. The book deals factually with such pertinent subjects as production trends, employment, "automation," trends in costs, profits, employment costs and many other subjects.

Steel is truly one of America's basic industries, even though less than 2 per cent of Gross National Product is generated in the steel industry. Steel is commonly thought of in terms of big buildings, heavy machinery, and other massive structures and equipment. But it is also essential in many other ways. Steel is involved—directly or indirectly—in almost every product and service that consumers need and buy. Its importance is indicated by the fact that, in the last ten years, the American steel industry has produced about 12,000 pounds of steel for every man, woman and child in this country. Included was steel for such diverse items as bobby pins, sled runners, refrigerators, coat hangers and thousands of other consumer products as well as machine tools, office buildings, railroad cars and highway bridges for a growing America.

***Steel Companies as Purchasers***

But steel is vital to America in other important ways. The steel companies which make up the steel industry are among America's most important customers. Their purchases of materials, supplies, freight and other services for current operations run to nearly $6 billion per year. In addition, their annual expenditures for new plants and equipment and improvements in existing facilities averaged over $1 billion annually during the last decade. Their purchases are made from tens of thousands of suppliers in every state in the nation—suppliers which range in size from the large companies down to the local drug, hardware and grocery stores. More than 90 per cent of the suppliers to steel companies have fewer than 500 employees. The shopping list of the companies includes, of course, large quantities of iron ore, coal, brick, electric power, fuel oil and machinery. It also includes items which appear on the shopping lists of every household—candy and crockery, electric fans and erasers, magazines and matches, rubber bands and rugs, shoes and soap. In fact, steel companies buy many of the same things from the same stores that their employees do.

*Steel Companies as Employers*

Steel is important, too, as one of America's large employers. The steel companies normally employ well over half a million men and women in their steel activities and close to three quarters of a million people in all their operations. This means that families totalling about 2¼ million people receive their principal income from steel companies. Altogether, the steel companies spent nearly $5½ billion in 1961 on wages and contributions to various funds for the benefit of the employees and their families. But employment depending on steel does not stop with the employees of the steel companies. The expenditures made by steel companies contribute to the employment, directly or indirectly, of nearly 2¾ million workers in other industries.

*Steel Companies as Earners*

Steel companies are important sources of income to the more than one million stockholders who receive more than $550 million in dividends and to the holders of long-term bonds who receive more than $100 million in interest each year. They are also important sources of income to the Federal Government and to the states and communities in which they operate. Their Federal income taxes in 1961 were $600 million, and state and local government taxes amounted to nearly $270 million.

*Steel Companies as Suppliers*

In addition to all the people who depend wholly and in part on steel companies as sources of income, there are many more who depend on an adequate supply of the thousands of steel products. It is impossible to make any accurate estimate of the number of people employed by or otherwise dependent on steel-consuming industries, but the industries which use one million or more tons of steel per year will give some indication: construction, contractors' products, automobile manufacturing, fasteners, rail transportation, agriculture, oil and gas, machinery and tools, electrical equipment, household appliances and utensils and containers.

### *Steel Companies and National Defense*

Finally, steel is vital to national defense. Adequate defense requires a steady supply of steel, constant development of new kinds of steel and the assurance that, in case of national emergency, an enormous supply of steel will be available.

### *Importance of a Healthy Steel Industry*

The foregoing makes clear the importance to the nation of a healthy steel industry. Fortunately, the industry is and has been able in spite of difficulties to supply the steel which the American economy has needed to develop to its present size and character. There has, of course, never been a time when the steel companies were not faced with some challenge or other. Most of these have been overcome by facing the challenges and taking the actions necessary to meet them. Today, steel companies are faced with important new challenges. These challenges and the actions necessary to meet them should be clearly recognized by everyone involved.

### *The Basic Needs of the Steel Companies*

The basic need of every steel company, like that of any other company, is to make a profit in the course of serving the market for its products. Only thus can it protect and increase employment and strengthen the economy. This requires that the companies seek constantly to improve their competitive position. Strengthening and improving their ability to compete both here and abroad comes down to improving existing products. developing new products, improving customer service, and — above all — reducing costs. Attainment of those objectives will require an adequate supply of capital, which depends on company earnings; a well-trained and cooperative labor force; and modern and efficient plants. Those objectives cannot be met without the constructive effort of everyone concerned.

## CONTENTS

## CONTENTS (Cont.)

## LIST OF CHARTS AND TEXT TABLES

CHARTS



TEXT TABLES

# I. STEEL'S COMPETITIVE POSITION

Steel companies have always had to compete with producers of other basic materials both here and abroad. As the market for steel developed, new companies emerged to compete with those already in the field. There are now more than 275 individual companies with plants located in 300 communities in 37 states engaged in the production and finishing of iron and steel. About one third of these companies make the raw steel required to produce their finished products. The remainder are engaged in the further finishing of semi-finished steel produced by others. There are, for example, 60 producers of hot rolled bars, 55 producers of wire and wire products, 50 companies that make stainless, 40 that make cold finished bars, 25 cold rolled sheet makers and 20 producers of heavy structural steel.

Competition among the companies in the steel industry is intense — in fact, that competition is the most immediate and vital competition which any steel company faces. The various companies are compelled to meet that competition by improved product quality, new products, improved customer service and competitive prices. The purpose of this chapter, however, is to examine other competitive factors affecting all of the steel companies in the United States rather than to analyze the competition that exists among them.

Over the years markets for steel have changed considerably, and with those changes have come changes in steel products, changes in the geographical distribution of steelmaking capacity and changes in the methods of manufacturing steel. Through all those changes, or because of them, the demand for steel has grown both in absolute terms and relative to population.

During the period since World War II, there have been a number of striking changes in steel markets and in the intensity of the competition which steel companies must meet. Some of those changes are the consequence of developments which have been in the making for a long time. Others are the result of market developments both in the United States and abroad. Whatever their origins, they have an important effect on steel companies and their employees. Added together, these changes require increased emphasis on research, product development and improvement, better customer service and reduction of costs.

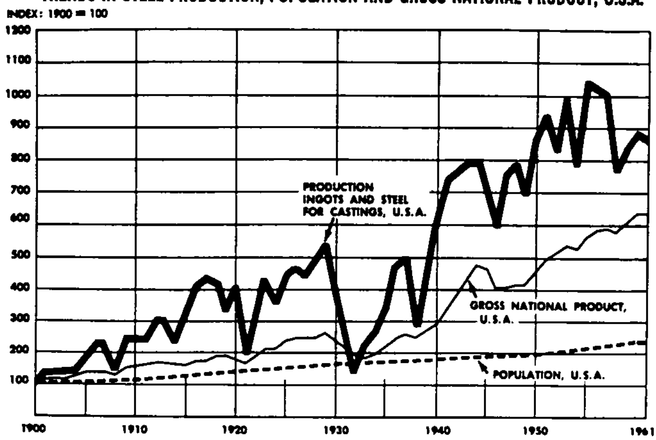
In this chapter the nature of the competitive challenge to the steel companies is presented by showing how the markets for steel over the years have developed and changed, both at home and abroad.

### *Steel and the National Economy Since 1900*

Since the turn of the century, the United States economy has grown to an unprecedented level. Population has grown from about 76 million to about 184 million people in 1961. The total annual product of the economy has increased 6½ times, rising, in terms of 1961 dollars, from just over $80 billion at the beginning of the century to $545 billion in early 1962. From 1900 to 1955 annual production of steel ingots and steel for castings rose from just over 11 million to 117 million tons, and in recent years, annual production has been about 100 million tons — almost 9 times the level at the beginning of the century. Chart 1, on the following page, shows the growth of Gross National Product, population and steel production during this century. An examination of that chart shows that the GNP of the U. S. economy has grown during the twentieth century at a rate of between 3 and 4 per cent per year.

## CHART 1

### TRENDS IN STEEL PRODUCTION, POPULATION AND GROSS NATIONAL PRODUCT, U.S.A.



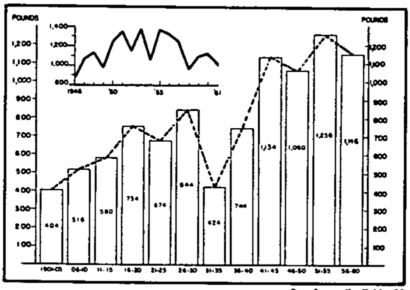

See Appendix Table 1A

Sources: Steel production - Annual Statistical Reports, American Iron and Steel Institute.
Population - Bureau of the Census, U.S. Dept. of Commerce.
Gross National Product in Constant Dollars - Office of Business Economics, U.S. Dept. of Commerce.

Chart 2 shows the relationship between apparent steel consumption (steel ingot production adjusted for the crude steel equivalent of net exports or imports) and population. Except for the insert covering the period 1946-61, the data presented are 5-year averages to reduce the violent annual fluctuations resulting from changes in general business conditions and the accumulation or liquidation of inventories by consuming industries. Ingot production is used in this comparison because it is the only available measure of steel activity which covers the entire period from 1900.

## CHART 2

### APPARENT STEEL CONSUMPTION IN THE UNITED STATES
### Pounds of Ingot Equivalent Per Capita




See Appendix Table 2A

Sources: Annual Statistical Reports, American Iron and Steel Institute
U.S. Bureau of the Census

During this period, of course, there has been a shift from comparatively heavy steels of few grades to lighter steels of many grades. This means that a ton of modern "steel" performs more work for the user than a ton of 1900 "steel." As an example, 40 per cent more 6-ounce citrus juice cans are produced from a ton of the new, thinner tinplate than were produced from a ton of ordinary electrolytic tinplate. Consequently, stating steel output in terms of ingots understates the output in terms of its value to the user.

Per capita steel consumption shows a generally rising tendency during the 61 years covered by Chart 2 if allowance is made for dislocations caused by wars in the five-year periods 1916-20, 1941-45 and 1951-55 and by the great depression (1931-40). Comparisons can be made which seem to indicate a slowing down in the long-term of increase in steel consumption in the period 1955-60. But such comparisons overlook the fact that the years immediately following World War II and the Korean War were years in which there was a great pent-up demand for steel. This pent-up demand had been largely satisfied by about 1955 so that the per capita steel consumption since that time has not been influenced by this factor.

In summary, steel ingot production has grown almost 9 times during this century. Part of this growth, of course, has been a result of our expanding population, but, even on a per capita basis, steel ingot production has approximately tripled in the past 50 or 60 years. This amazing growth has occurred for two basic reasons. First of all, steel emerged as a versatile material, having an unusual combination of physical properties which made it superior to existing materials in many different applications. Its growth came largely because it could compete economically with such things as iron rails, masonry buildings and fabric car tops.

But steel also grew as a result of the emergence of entirely new industries, such as the automotive and appliance industries. At the same time, these industries grew rapidly in part because of the existence of and improvements in steel. Here the effect was double-barrelled as more and more steel was used per unit and the number of units grew in almost geometric proportions in the early years of these industries.

***Changes in Steel Markets Since 1900***

*NOTE: The data contained in Charts 3 and 4, on which the analysis described in this section is based, have been derived from a number of sources. Because of changes in methods and completeness of reporting steel production and shipments over the last 60 years, published data have had to be adjusted considerably to develop a long-term picture of changes in steel demand. The results presented here are preliminary and subject to revision. It is believed, however, that they are sufficiently accurate to support the general conclusions set forth below.*

Chart 3 on page 4 indicates the pattern of demand by the major economic segments which caused the growth of steel consumption during the period 1900-60. It highlights the important shifts within the pattern of distribution among the 6 major consuming industry sectors.

The most significant trends shown on the chart were the following:

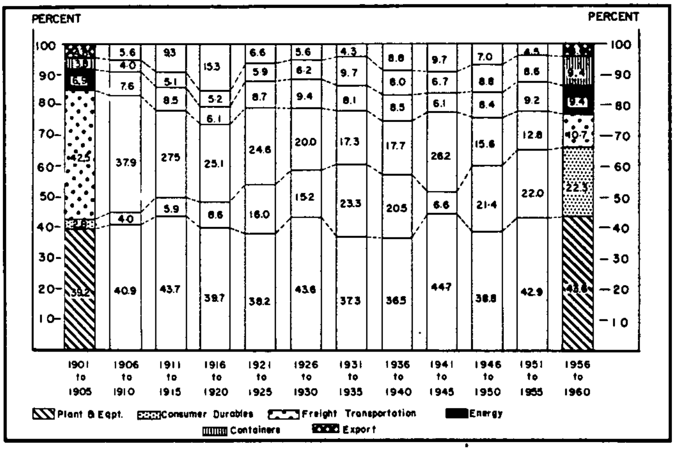
*Transportation* — The transportation industry provides the most dramatic trend throughout the period. As the railroads declined in relative importance in intercity freight traffic, the transportation sector has now only one fourth of its former relative importance as a steel consumer — 10 per cent in 1956-60 as against 40 per cent in 1901-05.

*Consumer Durables* — This sector has had almost a ten-fold increase in relative importance, increasing from a minor position at the beginning of the 1900's to its present status as the second largest consuming sector. This has resulted from advances in the production of flat rolled steel products, the growth of the automotive market, the development of home appliances and increased usage of steel in furniture and furnishings.

*Plant and Equipment, Including Ordnance* — The steady relative performance of the plant and equipment sector is the result of offsetting movements among its principal components. Machinery has become increasingly important— approaching a ten-fold increase in share for the entire period. On the other hand, both agricultural machinery and construction have declined somewhat in relative importance.

As to the other major segments: steel exports have varied widely in relative importance; the energy segment has increased by about 50 per

## CHART 3
## DISTRIBUTION OF STEEL SHIPMENTS BY CONSUMING INDUSTRIES
## 1901 - 1960




cent in relative importance in spite of drastic changes in the principal sources of energy — coal to oil to gas; and containers have increased steadily as a steel market because of greater use of packaging, the population increase and a shift to steel from other materials in many lines.

***Changes in Demand for Steel Products Since 1900***

Chart 4 shows the changing pattern of demand, by product, in the 1900-60 period.* The actual changes in product mix resulted from the developments in the major consuming sectors discussed above. The most important trends within the individual product groups were as follows:

*Rails and Accessories* — The continually declining importance of rails and accessories is a reflection of the gradual completion of our railroad network and substantial improvements in rail quality over the years. This product group is only 10 per cent as important as it was 60 years ago.

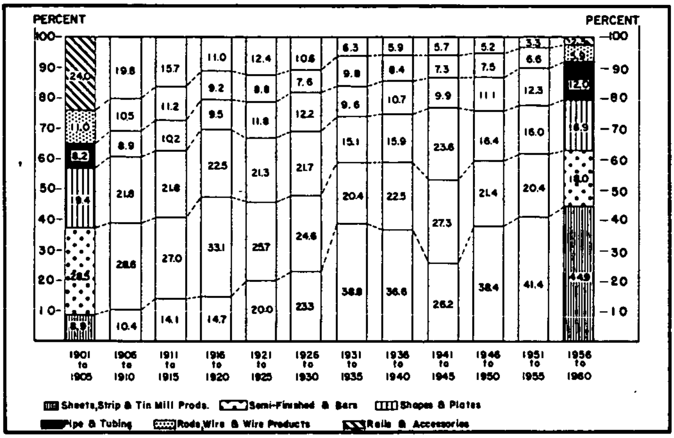
*Sheets, Strip and Tin Mill Products* — This group showed the greatest growth — over five-fold — in relative importance. The container and consumer durables sectors are to a considerable extent responsible for that increase. In addition, light flat-rolled products have found increased usage in construction, transportation and the export market. That has affected the standing of semi-finished products and bars, since products formed from sheets and strip have been substituted for bars in many fields.

The other major product categories have changed less dramatically over the 60-year period. Pipe and tubing have increased in importance, with uses in the oil and gas industries more than offsetting declines in other sectors. The relative importance of shapes and plates has declined slightly, because heavy construction has not grown as rapidly as other steel-using industries and because of the increased use of other materials. Rod, wire and wire products have declined considerably as a consequence of changes in farm and construction technology and increased imports.

The dramatic changes shown in Charts 3 and 4 indicate how the steel companies, by the investment of capital and development of new and improved products, not only facilitated but also responded to the sweeping changes occurring in the American economy.

*See note at the beginning of preceding section.

**CHART 4**
**DISTRIBUTION OF STEEL SHIPMENTS BY PRODUCT**
**1901 - 1960**




### *Steel Demand and the General Economy*

As Chart 2 indicates, sales of steel products did not increase during the period 1956-60.

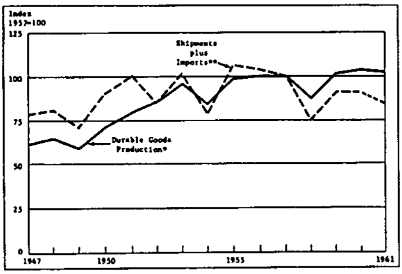
There are several reasons:

1. One is, of course, the increasing competition of other materials and foreign steel. This was intensified by the major strikes suffered by the domestic companies during the period, which caused customers to place orders elsewhere.
2. Another reason is the general slackening in business spending for plant and equipment and consumer spending for durables affecting steel as well as other materials. There has also been a sharp decline in defense requirements for steel since the early 1950's.
3. The United States had a recession in 1958 and another in 1961.
4. There has been an increasing profit squeeze on manufacturers, which has led to intense efforts to cut costs. Steel users have become more "materials conscious," and they have a wider variety of durable materials to choose from. Thus, in recent years there has been a tendency to redesign products in order to attract customers and reduce costs. Requirements of manufacturers are getting tougher as time goes on.
5. Still another reason why steel shipments have leveled off is that, ton for ton, steel is doing an increasingly better job. As previously mentioned, the average ton of steel has greater strength in relation to weight, better resistance to corrosion and so on, than it used to have. That means less steel is needed to serve established markets.

The effects of those factors on steel in its major markets are illustrated by Chart 5 and Appendix Tables 3A to 10A. The importance of these data lies in the general relationship between the measure of activity in the consuming industry and steel shipments to that industry. Steel shipments are also affected by customers' inventory policies and other factors which may not affect the long-term importance of steel as a material. During the past few years there has been a gradual liquidation of steel inventories by companies in the steel consuming industries. This has been a reversal of the gradual build-up of these inventories that occurred in the early 1950's. In fact, as a buyer's market has developed in steel, steel users have come to expect steel mills to carry the inventory in order to supply steel on short notice.

**CHART 5**

**FRB INDEX OF DURABLE GOODS PRODUCTION AND INDEX OF AISI STEEL SHIPMENTS PLUS IMPORTS**




See Appendix Table 3A

Sources: *Federal Reserve Board Bulletin.
**Annual Statistical Reports, American Iron and Steel Institute

The demand for durable materials can be expected to pick up substantially later on in the 1960's as millions of young people, who were born early in the "baby boom" starting in the 1940's, get married and begin buying houses, automobiles, appliances and other durable goods. Also, some of our existing industries in this country can be expected to undertake capital expenditures to meet this demand, while new industries will come into existence.

*Competition From Other Materials*

During recent years there has been considerable growth in the markets for some of the materials which can be used as alternates to steels, in certain uses. Plastics, aluminum and cement are examples. The total growth in the markets for these materials did not, of course, result exclusively, or even primarily, from displacement of steel. In many applications the materials are noncompetitive (aluminum foil, for example) or complementary (reinforcing steel in concrete buildings or highways). However, competition from other materials was one of the factors affecting the market for steel during the last 5 years.

The steel tonnage at stake in the area of competitive materials is substantial. American Iron and Steel Institute and other sources estimated that nearly 2,000,000 tons per year can be identified as having shifted, at least temporarily, to other materials in uses which can be measured with reasonable accuracy. While materials competition is not a one-way street, the following illustrations show the challenge to steel:

*Bridges and Buildings*

Until just a few years ago, concrete was used mainly to build small bridges and buildings only a few stories high. However, the situation has changed dramatically through the development of prestressed concrete and improved reinforcing materials and techniques. As a result, bridges and buildings of sizes formerly requiring use of structural steel now can be built of concrete.

Steel's answer has been to introduce new types of high-strength, lightweight structural sections which permit substantial savings in materials and therefore in costs. But cement producers are also constantly working to improve their product and to find new ways of using it. Competition between steel and concrete will continue to be keen for years to come.

Galvanized steel sheets, and steel sheets with other coatings, compete with aluminum in metal roofing and siding applications for farm buildings and similar structures. Enameled carbon steel and stainless steel compete with aluminum, glass, brick, tile and precast concrete in the curtain-wall field.

*Containers*

Liquid detergent cans were the result of the increasing use of a new type of cleaning agent. Plastic containers have captured a large proportion of this market. Another important market is frozen juice cans, which used to be nearly all steel.

Some packers are now using varying amounts of aluminum cans or a combination can with an aluminum body. In addition, a paper container coated with aluminum foil or polyethylene is also a competitor. Similar competition has developed in the market for oil cans.

*Appliances and Furniture*

In this area, plastics and aluminum have been making headway. For example, plastic sheet is widely used for door liners in refrigerators and freezers. Aluminum is used in various household appliances and is popular in lawn furniture. In refrigeration appliances, a long-range challenge to steel is the development of rigid polyurethene foam insulation using a metal skin for its exterior. This reduces metal requirements.

***Steel's Counter-Offensive***

Steel has made impressive progress in competing with other materials through the research and development activities described in Chapter II. For example, thinner tinplate, lightweight structural sections, expanded steel pipe and special grades of stainless steels are beginning to recover some of the markets temporarily invaded by aluminum, concrete and nonferrous alloys. Materials substitution is not new, nor when it occurs is it necessarily permanent. But competition among materials is more intense than ever before.

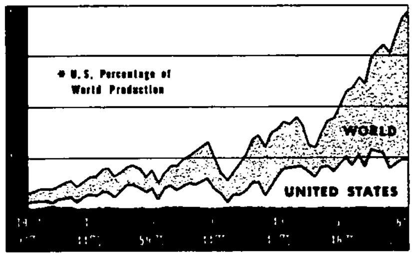
***Increased Competition in World Steel Trade****

The steel industry in the United States accounted for a growing proportion of world ingot production during the first 30 years of this century, reaching a level of more than 50 per cent during the 1920's. Since World War II world steel output has expanded enormously as damaged mills were rebuilt or replaced and facilities were modernized and expanded. Modernization and expansion programs are still in full swing and the announced plans of the various steel producing companies in various countries indicate that they will continue. The United States has shared in this expansion of steel production, but production in other countries, starting from lower levels, has increased even faster. As a result, the United States share of world steel production declined from 46 per cent in 1950 to 25 per cent in 1961. Total world steel ingot production and production in the United States since 1900 are shown in Chart 6.

**CHART 6**

**STEEL INGOT PRODUCTION SINCE 1900**

Millions of Net Tons



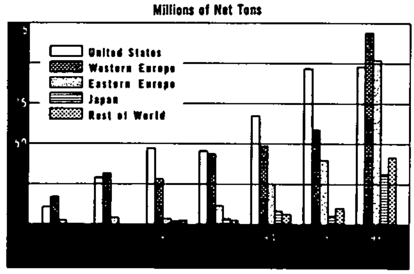

Source: Foreign Trade Trends, 1962 Edition, American Iron and Steel Institute

Output in Eastern Europe has risen very rapidly, as Soviet planners have given high priority to steel expansion. Since World War II production in Japan and in countries which are striving for rapid industrialization has risen more rapidly than production in the United States. Steel production by major areas since 1900 is shown in Chart 7.

**CHART 7**

**WORLD STEEL PRODUCTION - MAJOR AREAS**

Millions of Net Tons




Source: Foreign Trade Trends, 1962 Edition, American Iron and Steel Institute

*For comprehensive statistical data on world steel trade and the export-import situation in the United States, see *Foreign Trade Trends*, 1962 Edition, American Iron and Steel Institute.

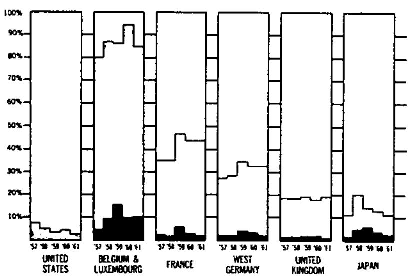
With the rapid rise in steelmaking capacity and the reconstruction in Europe and Japan of buildings and equipment which were damaged by or became obsolete during World War II, substantial quantities of steel have become available for export from Western European countries and Japan. The relative importance of exports to the steel industries of the United States, Belgium-Luxembourg, France, West Germany, the United Kingdom and Japan during the last 5 years is shown in Chart 8. The drive by those countries to expand their steel exports has meant that, while world trade in steel has increased from 11 million tons in 1947 and 16 million tons in 1950 to about 42 million tons in 1961, exports from the United States have not increased proportionately (see Chart 9). The participation of the United States in world steel trade has dropped from about 17 per cent of the total in the early 1950's to an average of less than 6 per cent during the last 3 years.

While the share of the United States in overseas steel markets has declined, there has been a marked rise of imports of steel into this country. In fact, for the first time in more than a half century, the United States became a net importer of steel in 1959, and that situation has continued into 1962.

**CHART 8**

**IMPORTANCE OF EXPORT MARKETS FOR SELECTED COUNTRIES**

**Per cent of Total Shipments**

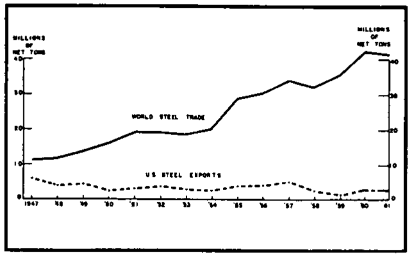



See Appendix Table 11A

Sources: United Nations Economic Commission for Europe
U.S. Department of Commerce

**CHART 9**

**TOTAL WORLD STEEL TRADE AND UNITED STATES STEEL EXPORTS**



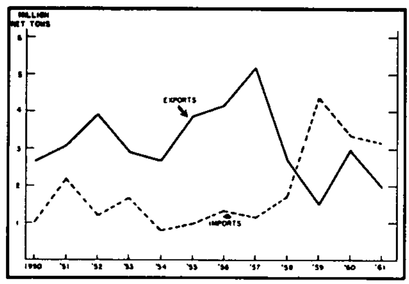

See Appendix Table 12A

Sources: United Nations Economic Commission for Europe
U.S. Department of Commerce

Chart 10 shows the changes which have taken place since 1950 in direct exports and imports. The increase in direct imports and the decline in direct exports between the periods 1954-56 and 1960-61 has meant a net loss of steel shipments averaging nearly 3½ million tons per year. This change has, of course, had an adverse effect on employment.

**CHART 10**

**RELATIVE IMPORTANCE OF DIRECT STEEL EXPORTS & IMPORTS**




See Appendix Table 13A

Source: *Foreign Trade Trends*, 1962 Edition, American Iron and Steel Institute

The impact of changes in the United States foreign trade situation in steel has varied widely among products. Tables 15A to 23A show total shipments, imports and exports of various categories of steel products from 1950 to 1961.* Those tables also show the ratios of imports to total supply and exports to total shipments. It will be seen that substantial changes have taken place in the relative importance of imports and exports in many of these product lines. Semi-finished products, formerly an important export item, are now imported in large quantities, principally wire rods. Similar shifts have taken place in pipe and tubing. Perhaps the most drastic changes have occurred in reinforcing bars and wire and wire products. Neither of these product groups has been a major factor in steel exports since the 1940's. In both cases, however, imports during the past few years have become so large as to affect domestic production seriously.

The situation is also changing in favor of imports in structural shapes and piling. Our important export market for sheets, strip and tin mill products has declined substantially since 1960, as major new strip mills and tin mills have come into production abroad. Increases in capacity for the production of flat rolled products abroad have made imports of sheet, strip and tin mill products a competitive factor.

In the foregoing discussion, exports and imports have been expressed in terms of tonnages, principally so that they can readily be related to data on steel shipments and total steel supply. During most of the period covered, the products which have been predominant in U. S. exports of steel are the more sophisticated types while the products which have been imported most heavily have usually been of a simpler nature. Thus, in terms of dollars the average ton of exports has been worth more than the average ton of imports and the aggregate value of steel exports has exceeded that of imports. However, as Table 14A shows, the margin has been declining because of both the tonnage factor and a change in the product mix of both exports and imports. If the present trend continues, the value of imports will exceed those of exports for 1962 as a whole.

Countries in early stages of industrialization generally have high rates of growth in steel consumption. There are many countries — new and old — which are striving to raise the standard of living of their populations by becoming industrialized. That is especially true of nations in Latin America, Asia and Africa. This suggests that, over the next 10 years, the greatest growth in steel demand will occur in those regions. Many of those countries have steel producing facilities which are being expanded. However, because of their economic situations, domestic supplies may not be able to keep pace with demand in steel products requiring sophisticated technology. This offers a great opportunity for growth to steel industries in highly developed countries. The United States must look abroad for rapidly expanding steel markets. In 1961, for the first time, Asia was our biggest regional market, although Canada and Latin America continued to be important.

Steel companies in the United States have been at a competitive disadvantage in the keen competition for markets in developing countries. One of the disadvantages is the tremendous disparity between hourly employment costs in the American industry and those of their foreign competitors. The steel industries of Western Europe and Japan appear to be expanding too rapidly for their own local requirements. If domestic steel requirements decline in those countries, competition from their steel mills will grow all the more intense, as they seek to sell more steel abroad.

### *Summary*

Steel is facing intensified competition at home from other materials and from foreign steel producers. At the same time it is confronted with increased competition from foreign steel producers in the rapidly expanding markets elsewhere in the world. Some of the traditional domestic steel markets, such as rail transportation, are declining in importance; while others, such as containers are increasing. The American industry has real potential for growth because of increasing population and consumption around the world. But full participation for U. S. companies in this growth is not assured.

*The tables deal with the following product groups: 15A, semi-finished products including wire rods; 16A, structural shapes and piling; 17A, rails and accessories; 18A, reinforcing bars; 19A, other bars and tool steel; 20A, pipe and tubing; 21A, wire and wire products; 22A, tin mill products; and 23A, sheets and strip.

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It depends upon continuing innovation in three important areas: research and development of new and improved products to penetrate new markets, to retain old markets and to anticipate customer needs; research and development to find methods for making steel at lower costs; and development of new and improved techniques of selling. These are matters dealt with in Chapter II.

All this requires continued capital improvements so that American steelmaking facilities will be the most modern in the world. This in turn requires improved profitability through improved performances in all phases of the business. These are matters dealt with in Chapters III and IV.

These things are essential if steel companies are to enlarge their markets at home and to participate in the enlarging markets abroad — and in the process to provide growing employment opportunities in the steel industry — a subject dealt with in Chapter V.

# II. COMPETING THROUGH RESEARCH AND INNOVATION

As indicated at the conclusion of Chapter I, a successful response to the challenges facing the steel companies involves the cooperative efforts of all — managements, employees, customers and the public.

One of the most important responses on the part of the companies is research; research into the basic scientific factors underlying steel production, research in improved production techniques and processes, development of new and better kinds of steel and research as to the best methods of meeting customers' requirements. Those research activities of the steel companies are the subject of this chapter.

Steel is well recognized as the most versatile of all metals. It can be fashioned to fit literally thousands of needs and purposes. It can be made soft enough to be scratched with a penknife, or made so hard that it takes a diamond to scratch it. It can even be so ductile as to permit its being bent double and yet simultaneously be hard enough to scratch glass. It can be formed into virtually any shape. It can be readily joined by welding. It can be inseparably coated with other metals, as witness the "tin" can, or with plastics, as exemplified in attractive steel paneling. It can be made with unique magnetic properties, without which there would be neither the Boy Scout pocket compass nor the world of electric generators and motors. It can be alloyed — combined with small portions of other metals — to acquire hundreds of combinations of specially desired characteristics such as strength, toughness, and durability. For these reasons, and because it is economical, steel has become an indispensable metal in the daily life of everyone. It is no wonder then that the steel industry has flourished and grown until it has become the backbone of American industry, providing employment for hundreds of thousands of people.

But the unique properties of steel do not in themselves guarantee a limitless market. They only provide an opportunity for someone to find a useful application for them. Likewise, the size of the steel industry in America does not in itself guarantee continuing large employment. In fact, mere size never insures progress — or even survival. This was well demonstrated 140 million years ago by the dinosaurs who grew very large but were not fitted to meet changes in climate and other conditions and so became extinct. Survival and growth, whether of dinosaurs or industries, demand great flexibility — a constant adaptation to changing conditions and continual alertness to new opportunities.

This means essentially two things. First, each steel company must have a sound and ever-improving technology to increase efficiency and economy in all operations in the face of rising costs. Second, each company must pursue energetically and imaginatively the development of new or improved products to expand existing markets and to open up new ones. These are the objectives which must be attained if American steel companies are to meet successfully competition from foreign steel or from competitive materials, such as aluminum or plastics. And these must be their aims if they are to continue as a growth industry.

These are formidable challenges but, fortunately, means are available to meet them. One of the most important of these is research. The steel companies recognize this and many of them are expanding their activity in this field. Many steel companies now have, or are building or expanding, research laboratories which have programs covering a wide range of interest. Most firms also supplement their own research through contracts with universities or research institutes. This competitive research activity produces a great diversity of viewpoint and emphasis which aids in speeding technical progress in all areas of the companies' activities — whether they be office routines or production. This competitive research also favors the pursuit of bold new ideas.

The broad range of operations required in the making and shaping of steel creates great opportunities for research The production of one ton of finished steel product requires 3½ tons of raw materials such as iron ore, coal, limestone, and scrap, along with vast quantities of air and water. These basic materials must be assembled, mixed, heated, and stirred, and the resulting iron must be converted into steel which must then be molded, shaped, or otherwise treated to produce the steel product. And all this must be done under controlled conditions to produce products of uniformly high quality.

***Innovation—Raw Materials***

Although iron is the fourth most abundant element in the chemical compounds which make up the earth's crust, relatively little of it occurs in a form which can efficiently be used directly in the blast furnace. This requires that a constant search be made for new deposits of high-grade iron ore and for economical ways to concentrate the leaner iron bearing materials to produce a suitable feed for the blast furnace. The steel companies in this country are active in both these areas. New sources of high-grade iron ore have been discovered and developed, notably in South America, Canada, and Africa. At the same time, a great deal of effort and money have been devoted to the investigation and development of economical ways of concentrating or beneficiating lower grade ores, especially the taconites of the Mesabi range. The development of such processes is expensive, and plants to carry them out on a commercial scale require large investment. This is a man-sized job, but it is being attacked diligently and there is no doubt that the results will be of great benefit to the future of this country.

A great deal of attention is also being given to coal and coke—important materials in the steelmaking process. Improved methods of mining and washing coal are being developed and put to use at many installations. Basic studies of the structure of coal, as seen under the microscope, are providing means for predicting quickly and easily the behavior of a given coal during coking. This aids in producing an improved coke which gives better performance in the blast furnace.

The preparation of ore, coal, and limestone for use in the blast furnace burden has advanced considerably in recent years, but much remains to be done. The widespread adoption of sintering, agglomeration and pelletizing and the use of lime in sinter to yield a self-fluxing material have led to greatly improved furnace performance. The average annual capacity in tons of pig iron per furnace was 29 per cent greater in 1960 than in the period 1947-49.* Although part of this is due to some increase in furnace size, much of it comes from improvement in the charge to the furnace. There has also been a general decrease in the amount of coke required per ton of iron produced. All these have led to greater efficiencies and lower costs—and this is just the beginning.

*Annual Statistical Report, 1961, American Iron and Steel Institute.

***Innovation—Iron and Steelmaking***

The possibility of substituting for part of the coke some other fuel, such as natural gas or heavy fuel oil, is being investigated by many in the industry. The potential savings from this development appear to be attractive in those areas where coke is relatively more expensive than the substitute fuel.

The design of the blast furnace and its auxiliary equipment is under careful scrutiny in order to achieve economies and improve the quality of the product. Automatic stockhouses are already in being. Instruments are being developed to give more information on what goes on inside the furnace. New refractories materials are being investigated. The effect of higher top pressure and higher blast temperatures are being studied. The studies now being made may enable the producer to bring all phases of blast furnace operation under instrumental control. This should lead to more economical production and more uniform products.

Methods of refining iron to steel are also being examined and improved. New designs of the open-hearth furnace are being tested. Some producers have installed facilities for the use of oxygen in the open-hearth to speed the steelmaking process, though the potential seems much greater than has yet been achieved. A relatively young process challenging the open-hearth is the top-blown vessel using oxygen. It has had a substantial growth during the past few years and has not reached full maturity. The contest between these processes is leading to more efficient and economical steelmaking.

The possibility of making steel directly from iron ore, without going through the historical stages of blast furnace and steelmaking process, has long been a challenge. Many techniques for doing this have been proposed, some of them quite imaginative. A few have proved feasible technically, but to date none has been able to beat the costs of more conventional processes. The potential gain from a successful idea is so great, however, that the search continues.

Several steel producers have experimented with processes for treating molten steel to reduce the content of dissolved gases. Several different approaches have been tried in commercial production and have led to improved quality.

***Innovation—Shaping Steel***

The whole technology of shaping steel is undergoing a continuing evolution. In addition to such items as new designs of rolling mills to attain much greater speeds, or to produce wider product, there have been remarkable advances in instrumental controls. Innovations in this line include new means of collecting information which, when fed to a computer, permit rapid recognition of any deviation in the production process. Spotting these irregularities quickly permits the rejection of unsatisfactory material in an early stage, thus saving on cost and improving the quality of the product. The development of instruments to adjust the equipment quickly and automatically, so as to correct any deviation, is proceeding rapidly.

These are some of the ways in which the steel companies are seeking to improve their operations, so as to obtain the necessary increased efficiency and lowered cost in order that existing steel products may be produced and sold more competitively and in higher volume against nonferrous materials. Although each of these changes improves product or efficiency, none of them will make a dramatic or sudden change in the broad spectrum of operations required in production and shaping of steel. Time is required to adopt and adapt the new processes, and large amounts of capital will have to be found.

***Competition for Changing Markets***

But the other, and in many ways more important, aim of all research efforts is to develop new or improved products and new applications for them. For if the companies do not have markets for their steel, if they fail to meet the needs of their customers, no amount of improvement in internal efficiency will keep them healthy. Indeed new products sometimes do not have markets in existence. Markets would have to be created concurrently with the technical development of the envisioned new product if it is to be produced and sold successfully.

This is well illustrated by the situation in the highly competitive business of packaging and containers. This is clearly a growth industry and a growth market for steel and other materials, but it is a market oriented not toward materials but toward functions. Among the more important of these are: protection and preservation of the contents of the package, attracting and pleasing the ultimate user, and facilitation of handling, storage, and transportation. Obviously, all these should be achieved at low cost. The packaging industry is constantly looking for improvements and does not hesitate to switch from one material to another—or one whole packaging system to another—that performs these functions better. And it will switch back again if innovation returns the first material to superiority. The steel companies' stake in this $20 billion-a-year business extends from nails and bolts through steel strapping, cans, pails, and drums to the new field of cargo containers—plus the steel equipment to make and use these products. There is a great potential in this market, but steel will share in it only as it successfully meets the competition of other materials.

While the steel companies are having their successes, this competition is formidable indeed. Aluminum cans are being used now for motor oils, frozen citrus juice concentrates, and beer. Aerosol cans of this metal are on display and babyfood cans are promised. Rigid foil is being used for boxes and food trays. Cartons for soft drinks have been designed and large aluminum containers for cargo are being widely discussed.

Plastics are appearing in varied forms from bottle caps to complete bottles. One-way bottles of glass for beer and soft drinks are being pushed. New adhesive tapes are being designed for use as strapping.

Possibly the greatest long-range competitive challenge to steel is the combination of materials. These are being made with each material performing a particular function which permits them to be tailor-made for a specific purpose or even a specific product. Thus there are fiber drums with plastic linings, fiber cans with aluminum ends, and combinations of paper and metal foil for can bodies.

For many years, steel has been the preferred material in the container market, but the packaging industry is by no means permanently wedded to steel—or any other material. In this, as in other markets, potential growth offers a great opportunity, but the steel companies must be alert, diligent, and aggressive if they are to profit from it. In other words, they must be prepared to meet the demands of the present and of the future with ever improved products.

***Innovation—Improved Products and Applications***

The term "improved products" is subject to a variety of interpretations, and it is worthwhile to look at it in more detail. In a general way, an improved product is one that does a given job significantly better or more economically than its predecessor. Customer costs are determined on the basis of the total job and not on the price per pound or per ton of the material to be used. It often happens that a material of higher unit cost can, because of better properties, be used in smaller quantity with a resultant decrease in total cost.

Since steel is the most versatile of all metals, there are many opportunities for improving its performance. Among these are achieving higher strength, greater ductility, increased resistance to atmospheric corrosion or high temperature oxidation, better machinability, improved weldability, and better magnetic quality. The steel companies are active in all these areas and others as well.

As a matter of fact, it is rather misleading to talk simply about "steel." This term may have been justified in the early days of the industry when plain carbon steel was its chief product, but today there is actually a large family of steels covering a wide variety of useful properties. Many of these steels are tailor-made for a particular application. As one example, silicon steels are specifically designed to allow the maker of electrical machinery to take full advantage of their unique electrical and magnetic qualities. Again, special alloy steels of high toughness at high strength levels have been developed for aircraft landing gear. The stainless steels, which in themselves constitute a sizable branch of the family, provide good corrosion resistance to many environments and are also useful in applications requiring strength at elevated temperatures. And each of these types of steel is constantly being improved.

Carbon steels, "the bread and butter" of the industry, have been improved so that regular grades are now being used for many applications that formerly required alloy steels. Improved axles and transmission shafts for use in automotive, earth-moving and farm implement equipment can now be made of carbon steel instead of the more expensive alloy grades previously employed. Quality steel bars from which spark plug shells are made permit the customer to form a shell by a cold extrusion process using only two thirds of the steel formerly needed when the shells were machined. Today's steel line pipe, because of its greater strength and larger diameter, enables the use of greater pressure to transmit 60 per cent more gas than was possible a decade ago with the same tonnage of pipe. The new A-36 grade of structural carbon steel has a yield point 9 per cent greater than that of the A-7 grade which was the standard for many years. This higher yield point allows an increased design stress of about 10 per cent in both bridges and buildings and will result in significant savings in the cost of fabricated and erected structures. At the same time, the availability of 11 new lightweight wide flange beam sections offers designers additional opportunities to save weight in many types of structure.

A recent application of an improved spot welding technique has permitted the construction for the California wine industry of two large storage tanks that feature an unusual two-layer tank shell. Carbon steel provides support, while stainless steel sheets provide protection against corrosion and contamination.

An excellent example of the diversity in development which is required by today's material requirements is in the field of the familiar galvanized sheets. These zinc-coated sheets have been produced for many years. Today, however, the specialized requirements of the market place have given rise to many developments which have created a family of zinc-coated sheets for many purposes. There are available today, by virtue of these unique customer requirements, the same conventional sheets that have been produced for many years—but in addition, sheets coated differentially, that is to say with a standard coating weight on one side and a thin coating on the other. There are extra heavy coatings and extremely thin coatings to suit specific applications. Recently there have been production runs of sheets coated on one side only. Also, the conventional crystal pattern of the zinc on the sheet surface has been overcome by new techniques of production for painted end products, so as to avoid the familiar "spangle" showing through the decorative outer coating.

Along with improvement of the basic properties of steel, there are important advances in producing steels of closer dimensional tolerances and more uniform quality. The significance of such improvements can be illustrated by two examples. In the can industry, modern can-making machines make bodies at the rate of over 500 a minute. This can be done successfully only if the steel is highly uniform in its "temper." Variations in temper may cause difficulties which require the machines to be shut down—and at this high rate of production, a stoppage of only a few minutes is a significant loss. Another illustration: the missile and rocket industry in designing its "birds" makes a very great effort to minimize the weight of the missile itself, so as to have more weight available for fuel or pay load. Missile engineers therefore design to very close tolerances, and they can do this only when the steel or other material has very close dimensional tolerances and is uniform in its properties.

***Innovation—New Products***

Turning now to new products, these may be defined as materials of a type never produced before or with properties so far superior to existing materials that it is possible to do with them things which could not be done with older products. These range from steels which can be produced in larger sheets through heat-treated constructional steels of higher strength to new types of coated steel products.

One area in which great progress is being made is in new steel products of higher strength—some of the most important of these are in the constructional alloy category. They now include quenched and tempered steels of great strength, good weldability and greater resistance to impact abrasion. Their introduction has led to substantial savings in the construction of structures of various kinds in which they can be used for the most highly stressed members. Stainless alloys which can be formed soft and then strengthened by heat treatment are available in increasing numbers.

This market trend, which requires construction products to do a greater job with less weight of steel product, can be exemplified by the recent additions to the steel product line of quenched and tempered high-strength alloy structural shapes. Thus for the first time, design engineers have available to them companion products to the quenched and tempered plates introduced a few years ago. Most recently there have been studies made indicating the desirability of composite structural beams made up of materials at different strength levels, so that the most efficient use of materials is accomplished in each design situation.

In recent years increasing attention has been given to the storage and shipment of liquefied gases, such as liquefied methane, at temperatures of the order of 320° F below zero. A steel containing 9 per cent nickel has been developed which meets the requirements for such service and is competitive with the aluminum alloys which have been used for this purpose.

The need for an ultra-high-strength steel with adequate ductility and toughness for such critical applications as aircraft landing gears has led to new steels which allow a reduction in weight—a matter of real significance to aircraft designers.

Other steels have been developed specifically to meet the need for air-hardenable materials with good high temperature strength to solve fabricating problems in the missile field. These steels can also be readily welded by conventional means, which is another important factor.

One property which is of interest to many consumers of steel is machinability, that is, the ease with which the metal can be machined. This has an important bearing on the life of cutting tools and, hence, on the cost of machining. To meet this demand, special free-machining steels have been developed. In the development much useful information on the cutting process has been acquired, which will serve as a basis for future improvements.

A number of interesting specialty products is being developed by various steel companies, often in close collaboration with consumers. Among these are: steel cords for truck tires, paper reinforced with steel wires, and cloth made from fine wires of stainless steel.

Combinations of steel with other materials are not being overlooked. Porcelain enameled steel, which is essentially steel coated with glass, has been a staple product for years, but innovation is touching it. A new-type steel has been developed which can be enameled successfully with a single coat of white instead of the multiple coatings required before. This assists steel customers in the enameling industry and in the home appliance field—and by so doing it helps the steel companies stay competitive. Sheets and pipe coated with plastic are now available and are being improved. Materials formed from fine steel wire and plastic are under study.

For the canning industry there is now available a new, thinner tin plate which enables the production of many more cans from a given weight of tin plate than is possible with the conventional product. This is but one part of the efforts to compete with containers made of aluminum, glass, paper and plastics.

*Innovation—Marketing*

It used to be said that, if you made the best mouse trap in the world, people would beat a path to your door, but it is now recognized that this is not true. It is necessary to make certain that the people who are concerned with mouse traps know about the product and are informed as to why it is the best. With this in mind, the steel companies are stepping up efforts to show customers how to make most effective use of steel products. In this activity which is called, rather loosely, applications research and engineering, representatives of steel producers work with customers to study their needs, to recommend the proper type of steel and to show the customer how this steel can be used to best advantage in his products. As examples, teams of company application experts are showing customers and their designers how:

1. To design in steel new shapes and forms of transportation for the future and to redesign present automobile frames and trucks using high-strength steels to reduce weight.
2. To design more steel into modern homes and commercial construction.
3. To design lighter, more efficient office furniture of steel.
4. To design covered hopper cars of new types of stainless steel for transport of bulk foodstuffs and corrosive chemicals.
5. To design three-level railroad cars of steel for transporting automobiles.

This last example demonstrates the effectiveness of this approach. In one instance, when a railroad decided to order more than 100 three-level cars of special design, the original plans called for the extensive use of a material other than steel, with the aim of reducing the dead weight and achieving a low center of gravity. But a team from a steel company redesigned the cars, making extensive use of high-strength steel. The result was that the low center of gravity was achieved and the total weight was only slightly more than the earlier design. When it was thus demonstrated to the railroad that steel was stronger and cost less, the railroad cars were built of steel.

*Steels For the Nuclear Age*

It is not enough, however, to be searching for new products to meet today's demands—or even tomorrow's. One must look ahead toward the demand of the next five or ten years. This is not always easy, but the effort must be made. As an example, it is clear that someday nuclear energy will play a much greater part in power generation than it does today. This "someday" is not easy to spot on the calendar, but it can be defined as the day when nuclear energy becomes cheap enough to compete with conventional fuels. There are a number of reasons for its present high cost, but one of the most significant is the need for expensive materials of construction. Here is an obvious market for steel if it can be used advantageously.

What then prevents its use now? The difficulty lies essentially in two areas about which too little is known. The first is the rate of corrosion of steels in nuclear reactors, where they are exposed to environments, such as liquid sodium or bismuth, with which there has been very little experience—and corrosion testing, which is a slow business at best, is even more difficult when requirements call for a maintenance-free service life of 20 years. The second is that so very little is known of the behavior of steels when exposed to neutron radiation. It is known that long exposure to such radiation does raise the notch-toughness transition temperature of some steels. But this does little more than indicate the existence of a problem. To really do the job requires basic studies of neutron damage, its nature, its causes, and its effects on the bulk properties of steel. Researchers must learn which steels are most susceptible and what may be done to avoid the damage or repair such damage once it occurs. All this takes a lot of manpower and money—but the job must be done to be prepared for the "someday." Much attention is now being given to this subject by scientists in steel companies and other organizations. But much remains to be done—and the makers of other materials are also active.

What other new steel developments does the future hold? The answer lies in a continued search for new knowledge and in the translation of that knowledge into useful steels and products made of steels. Not too many years ago, steels for structural purposes having strength before breaking equal to 50,000 to 60,000 pounds per square inch were commonly used. Today strengths of 80,000 to 100,000 pounds or more are common. For other applications ultra-high-strength steels in the range of 250,000 to 300,000 pounds per square inch tensile strength have been developed and are being used. Fine sized steel wire with strength of 600,000 pounds has been developed and tested in the laboratory and is being commercially evaluated for special purposes. Fundamental research has demonstrated that the theoretical potential strength of steel is well over one million pounds per square inch.

This chapter has described how the steel companies are meeting some of the competitive challenges through research and development. But research alone cannot do the job. It can indicate new directions in which to move. It can show ways to do the job better and to expand or diversify the product lines—but this will not lead to success unless the results of research are put into operation. This is not always as easy as it sounds.

For example, large capital investments may be needed. In addition, everyone in the steel companies must acquire and maintain an open-mindedness about innovation and change—a willingness to try new things and to be alert for opportunities. And there must be recognition and appreciation of the ever-increasing importance of quality—as contrasted with mere tonnage output. Research is an essential part of meeting the competitive challenge.

# III. CAPITAL, PROFITS AND ECONOMIC GROWTH

## CAPITAL

***Capital — Its Role and Sources***

The only way that a new self-sustaining productive job ever comes into existence is by savings being invested in tools of production. This provides the means by which men may make a living by producing goods and services which others want.

In our free enterprise system people make available to businesses some of the savings which they have accumulated by foregoing immediate consumption; quite naturally, people expect to be compensated for the risk and use of these savings. Savings, when made available to businesses for the creation of future goods and services, are generally known as "capital."

All businesses require capital in order to obtain the needed tools of production. Some industries, however, require only relatively small amounts of capital in relation to their sales volume in order to operate successfully, while others require large amounts. The steel companies require more capital invested in longer-lived facilities than do most other companies. Steel production also requires sizable amounts of capital for such things as raw material development and inventories.

If American industry is to modernize and improve, if it is to provide additional goods and services to meet the needs and wants of our expanding population, and if America is to grow as

**TABLE 1**

**STEEL INDUSTRY CASH FLOW — POSTWAR PERIOD 1946-1961 and 1958-1961**

| | 1946-1961 (Billions) | | 1958-1961 (Billions) | |
|---|---|---|---|---|
| Revenues—From the public | | $182.3 | | $ 54.4 |
| Disposed of as follows: | | | | |
| To and for employees | | 65.2 | | 20.8 |
| To suppliers for products and services | | 81.9 | | 23.3 |
| For replacement of worn-out facilities—depreciation | | 8.4 | | 2.8 |
| To government — taxes | | 14.4 | | 4.0 |
| To lenders for savings loaned — interest | | .8 | | .4 |
| Total | | $170.7 | | $ 51.3 |
| Profit | | 11.6 | | 3.1 |
| To stockholders for savings invested — dividends | | 6.1 | | 2.2 |
| Reinvested in business | | $ 5.5 | | $ .9 |
| Spent for new facilities | $ 14.7 | | $ 4.6 | |
| Less depreciation allowed, above | 8.4 | | 2.8 | |
| | $ 6.3 | | $ 1.8 | |
| Miscellaneous investment | .6 | | — | |
| Increased working capital, chiefly inventories | 2.7 | $ 9.6 | .5 | $ 2.3 |
| Deficiency in cash flow met by borrowing and new stock | | $ 4.1 | | $ 1.4 |

Source: **Annual Statistical Reports**, American Iron and Steel Institute in the past, then additional capital will be required. This additional capital will also help American producers and American employees meet the competitive challenge from foreign-produced goods.

***Capital in the Steel Industry***

Additional capital is constantly necessary to achieve modernization, improvement and growth. It is interesting to examine the cash flow in the steel industry since the end of the War to see how this additional capital has been obtained. As indicated in the first column on Table 1, the steel companies received $182.3 billion from the sales of their products during the 16 year period 1946-1961. After deducting all costs of doing business, profits of $11.6 billion remained of which about 48 per cent were reinvested in the business with the other 52 per cent being paid to stockholders as dividends for the use of their savings.

The second column of Table 1, shows the same data for the most recent part of the post-war period, 1958-1961, which might well be termed the "Profit-Squeeze Era," as developed in Chapter IV. During these years, sales revenues totalled $54.4 billion, and, after deducting all costs of doing busi-

**TABLE 2**

**SOURCE AND DISPOSITION OF FUNDS**
**Steel Industry and All Corporations**

| | Sixteen Year Period — 1946-1961 | | | |
|---|---|---|---|---|
| | Steel Industry [a] | | All Corporations [b] | |
| | Billion $ | % of Total | Billion $ | % of Total |
| SOURCE | | | | |
| Profits | $11.6 | 64% | $293.8[c] | 60%[c] |
| Less Dividends | (6.1) | (34) | (150.0)[c] | (30)[c] |
| Income Reinvested | $ 5.5 | 30% | $143.8[d] | 30%[d] |
| Depreciation | 8.4 | 47 | 216.4 | 44 |
| Long Term Debt | 2.5 | 14 | 88.9 | 18 |
| Capital Stock | 1.6 | 9 | 40.5 | 8 |
| Total Sources | $18.0 | 100% | $489.6 | 100% |
| DISPOSITION | | | | |
| Plant & Equipment | $14.7 | 82% | $373.9 | 76% |
| Working Capital & Miscellaneous | 3.3 | 18 | 115.7 | 24 |
| Total Disposition | $18.0 | 100% | $489.6 | 100% |
| | Four Year Period — 1958-1961 | | | |
| SOURCE | | | | |
| Profits | $ 3.1 | 62% | $ 77.5[c] | 49%[c] |
| Less Dividends | (2.2) | (44) | (47.6)[c] | (30)[c] |
| Income Reinvested | $ .9 | 18% | $ 29.9[d] | 19%[d] |
| Depreciation | 2.8 | 54 | 89.1 | 56 |
| Long Term Debt | 1.2 | 23 | 26.2 | 16 |
| Capital Stock | .2 | 5 | 14.8 | 9 |
| Total Sources | $ 5.1 | 100% | $160.0 | 100% |
| DISPOSITION | | | | |
| Plant & Equipment | $ 4.6 | 90% | $115.3 | 72% |
| Working Capital & Miscellaneous | .5 | 10 | 44.7 | 28 |
| Total Disposition | $ 5.1 | 100% | $160.0 | 100% |

Sources: Steel Industry—*Annual Statistical Reports*, American Iron and Steel Institute
All Corporations — U.S. Department of Commerce

**Notes**

(a) Covering the consolidated statements including all the affiliated interests (Fabrication, Transportation, Shipbuilding, Cement, etc.) of the parent companies submitting AIS-11 reports and representing 90.9 to 95.2% of total industry ingot production

(b) Data for all corporations excluding banks and insurance companies

(c) Profits and dividends assumed to be proportional to totals for all private corporations

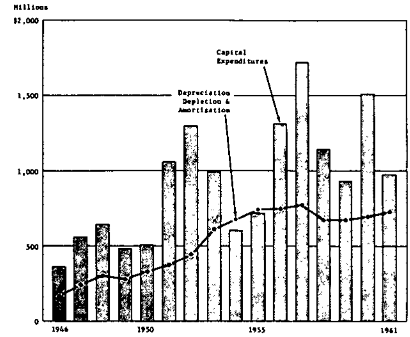
(d) Income reinvested for all corporations includes depletion ness, of $51.3 billion, only $3.1 billion in profit remained. Of this amount, $.9 billion was reinvested by the companies with $2.2 billion being paid as dividends. The squeeze on profits sharply restricted the internal source of capital for reinvestment, despite the necessity for making such expenditures.

During the postwar period (1946-1961), the steel companies spent $14.7 billion for facilities, and an additional $3.3 billion was required for working capital and other investments. Of this amount, $4.1 billion or 23 per cent, came from new issues of long-term debt and capital stock.

In the 1958-1961 period, the steel companies spent $4.6 billions for facilities and required an additional $.5 billion for working capital. Due to the squeeze on profits during this period, a larger part, $1.4 billion, or 28 per cent was provided by new issues of long-term debt and capital stock. Although borrowing and the sale of additional stock are the means of securing external capital, they put additional pressures on future profits because in the long run all money borrowed can be paid back only out of profits and additional profits would be needed to pay dividends on the additional shares of stock.

CHART 11

CAPITAL EXPENDITURES
for ADDITIONS, IMPROVEMENTS & REPLACEMENTS
vs.
DEPRECIATION, DEPLETION & AMORTIZATION
Steel Industry




See Appendix Table 24A

Source: Annual Statistical Reports, American Iron and Steel Institute

*Capital in the Steel Industry vs. All Corporations*

A comparison of the steel industry with all corporations as to the sources and disposition of funds for the 16-year period 1946-1961 and for the 4-year period of 1958-1961 is contained in Table 2.

For the longer period, the most striking conclusion to be drawn from this comparison is the general similarity between the steel industry experience and that of all corporations. In both cases 30 per cent of all new capital obtained during the period was through reinvested income. The ratio between dividends and reinvested income in the steel industry is in line with the same ratio for all corporations. For the last 4 years, the proportion of funds from reinvested income has been squeezed down to 18 per cent.

During the periods 1946-1961 and 1958-1961 the steel companies used 82 per cent and 90 per cent respectively of funds made available for plant and equipment expenditures. The other 18 per cent and 10 per cent respectively were used for increases in working capital and for miscellaneous other investments. These figures compare with 76 and 72 per cent respectively for capital expenditures by all corporations and with 24 per cent and 28 per cent for increases in working capital and miscellaneous by all corporations.

From the information shown in Tables 1 and 2, it can readily be seen that companies have obtained additional capital both internally and externally. Since profits not paid out in dividends are the only internal source of additional capital, there is no internal source of additional capital if there is no profit. Furthermore, without the expectation of future profits, a company cannot hope to obtain funds from external sources, such as from the sale of stocks or bonds, because people will be unwilling to invest or lend their money. Hence, a very simple concept: No profits equals no capital equals no tools equals no jobs.

## PROFITS

***What profits do***

Profits have many functions to perform. Without the expectation of profits, people would not invest their savings in tools of production. Purchase of these tools provides jobs for the individuals who make them, as well as for those who later operate them. Without such tools, industrial job opportunities would not exist. If the profit expectations are realized, the jobs continue and perhaps grow in number. If profits are not realized, the jobs and the companies which offer them eventually disappear.

The role played by the reinvestment of profits is a dual one. Reinvested profits may be the means for expansion and the creation of more jobs; or they may be the means for increasing efficiencies so that high wage levels and jobs may be continued.

The importance of profits to employment has been borne out sharply throughout American history. As indicated by Chart 12, in most of the years since World War II, as profit rates have declined, rates of unemployment have increased.

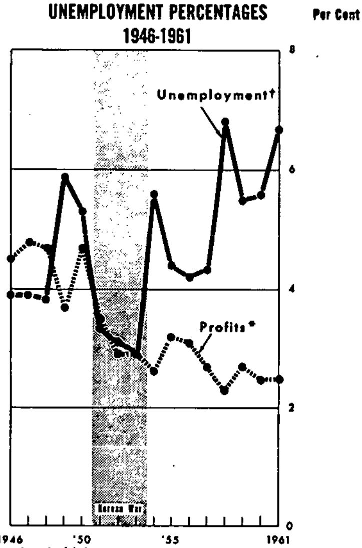
Profits not only benefit employees through continued and improved employment, but benefit the public and investors as well. The public in general benefits from profits earned competitively because of the resulting vast flow of high quality, competitively priced products constantly being improved through research and through investment in modern tools. Moreover, the public benefits from a strong industrial economy, which is vital to our national defense. The investor benefits from profits by receiving a return for the use and risk of his money.

Profits do not represent a hoard of money; they represent for the most part money that has already been spent — money partly paid out to owners for the use and risk of their savings, partly reinvested in the business to buy new job-creating tools of production, partly used to make up for inadequate depreciation allowed for tax purposes, and partly for maintaining inventories and extending credit to customers.

Thus the term "profit" is a tag which is placed on a part of the money which comes into, flows through, and, in large part, passes out of the business as a return to its owners or as an expenditure for tools of production and other assets that are needed to operate the business. Hence profits, including so-called undistributed profits, never represent a pool of idle purchasing power.

**CHART 12**

**CORPORATE PROFITS AND UNEMPLOYMENT PERCENTAGES 1946-1961**




†U.S. Department of Labor: unemployment expressed as a percentage of civilian labor force

*U.S. Department of Commerce: domestic corporate profits, excluding finance, insurance and real estate corporations, expressed as a percentage of total sales

**CORPORATE PROFITS AND UNEMPLOYMENT PERCENTAGES**

| | Per Cent Profits | Per Cent Unemployment |
|---|---|---|
| 1946 | 4.5 | 3.9 |
| 1950 | 4.7 | 5.3 |
| 1955 | 3.2 | 4.4 |
| 1960 | 2.5 | 5.6 |
| 1961 | 2.4 | 6.7 |

### *General Measures of Profits*

The most obvious measure of profitability is the number of dollars of net profit earned. A wide spread misconception is that a "big" profit is unfair. However, the dollar volume of profit is meaningless without a comparison with what it took to earn it.

Two comparative measures of profit are commonly used. One compares the profit with the amount invested and is commonly referred to as "return on investment." The other compares profit with sales and is referred to as "return on sales."

These measures of profitability should not be used without a full understanding of their limitations. Because of the inflation which has taken place, comparisons of current profit dollars with the dollars originally invested in plant and facilities over many prior years are misleading. Such comparisons are like valuing Manhattan Island at its legendary purchase price from the Indians of $24 and then comparing current profits from land ownership on Manhattan with that original investment. Accordingly, to correct the calculation and avoid an "oranges and apples" comparison by recognizing the inflation which has occurred, it is necessary to restate the investment amount in terms of present-day dollars. It is also necessary that depreciation be stated on a current dollar basis in the calculation of profit. When both the investment and the profit have been restated to allow for inflation, one can be divided into the other to find what can be regarded as the "real" return on investment.

The second widely used measure of profitability compares profits with sales. Profit stated as a percentage of sales has the advantage of comparing like kinds of dollars; that is, profits and sales are in dollars of the same value. It should be noted, however, that profits are usually overstated because of the inadequate depreciation allowed for tax purposes on plants and equipment as they wear out. This measurement of profits as a per cent of sales is useful primarily in showing changes over a period of time in the profit-making efficiency of a company.

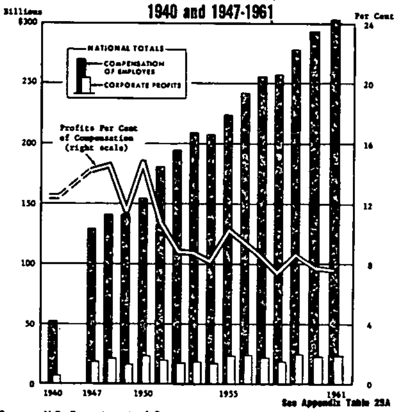
This measurement is not useful and may actually be misleading, however, in comparing one company with another, particularly if the companies are in different industries. Some types of businesses require a relatively small investment for each dollar of sales — as witness the supermarket — whereas other businesses such as steel must invest much more than a dollar to generate annually just one dollar of sales. Furthermore, valid comparisons are difficult among companies in the same industry. Even among steel producing companies there are considerable differences as to the degree of integration, product mix and other factors, and therefore, there are limitations to the value of intercompany comparisons based on profit-sales ratios. For example, one company may simply buy wire rods from another company and process them into finished wire, whereas another company may have production facilities to convert raw materials successively into iron, steel, steel ingots, billets, wire rods and, finally, finished wire. The second company requires substantially more money invested in order to sell approximately the same end product. A company doing more work on what it makes must earn more profit dollars on what it sells in order to earn the same rate of profit on its investment.

### *Profits in the Economy*

Corporate profits in relation to the total Net National Product (GNP less capital consumption) have steadily declined — from 8.2 per cent in 1947 to only 4.9 per cent in 1961. To have kept pace with the rise in employee compensation and other components during this period, profits in 1961 would have had to be about $42 billion instead of the $23 billion actually recorded.

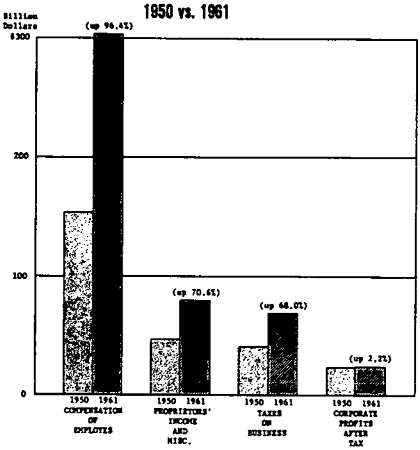
As indicated in Chart 13, profits have also declined in comparison with amounts paid to or for all employees in the nation. Profits in 1947 were equal to more than 14 per cent of employee compensation, whereas by 1961 they had declined to less than 8 per cent. In other words, in 1947 corporate profits were equal to $1 for each $7 paid as employee compensation. By 1961 for each $1 of corporate profits, employees were paid almost $13. This decline is even more startling when it is remembered that during this period industry invested hundreds of billions of dollars in new facilities, but at the same time industry's profit position declined in relative terms. Dividends shrank to about 5 per cent of the nation's compensation to employees.

**CHART 13**
**THE NATION'S WAGES**
**vs.**
**CORPORATE PROFITS**
**1940 and 1947-1961**




Source: U.S. Department of Commerce

**CHART 14**
**COMPONENTS OF NET NATIONAL PRODUCT**
**1950 vs. 1961**




Source: U.S. Department of Commerce

The decline of profits in relation to the other broad components of Net National Product can perhaps be seen even more clearly by comparing the increases in each component since 1950. The compensation of employees increased by 96 per cent from 1950 to 1961; proprietors' income and miscellaneous items increased 70 per cent; taxes on business went up by 68 per cent; profits, however, were up only 2 per cent. (See Chart 14).

*Profits in the Steel Industry*

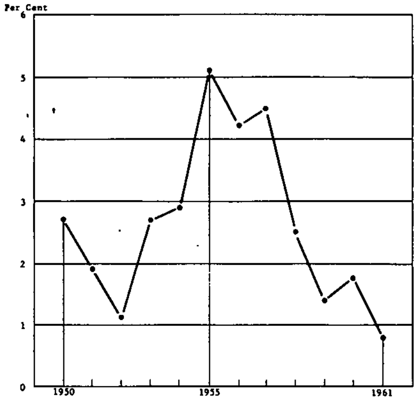
As previously indicated, calculations of return on invested capital to be truly meaningful must be adjusted for the effects of inflation. This applies to the investment as well as to the profit, which is overstated because the present tax law does not permit the recognition of adequate depreciation.

Although such calculations have not been made for the steel industry as a whole, calculations of this type have been made for one major steel company and are indicated on Chart 15. As can be readily seen, in 9 of the 12 years for which data are available, the real rate of return on invested capital was less than 3 per cent, and in only one year was the rate of return over 5 per cent. This real rate of return, which recognizes the effects of inflation, is only a fraction of the published rate of return based on a comparison of current profit dollars versus investment expressed in the more valuable dollars of prior years.

The rate of return on sales is a better measure of the trend of profitability for the steel industry because inflation distorts this measure to a lesser degree. The average profit per dollar of sales for the steel industry in 1940, as indicated on Chart 16, was 8.0 per cent. At no time during the last two decades has it exceeded this amount, and in only one year (1950) has this rate been equalled. The clear conclusion is that the rate of return has not been increasing — even without adjusting the profit figures for the impact of inflation on stated depreciation and in spite of the fact that the industry has averaged a volume of over 100 million ingot tons for the last dozen years.

## CHART 15

### ONE STEEL COMPANY
### PROFIT AS A PER CENT OF INVESTMENT
### Adjusted for Inflation

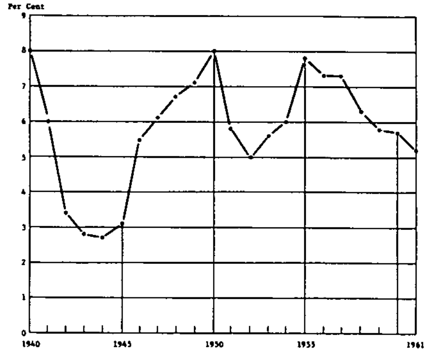



**One Steel Company**
**PROFIT AS A PER CENT OF INVESTMENT**
**Adjusted for Inflation**

| | | | |
|---|---|---|---|
| 1950 | 2.7% | 1956 | 4.2% |
| 1951 | 1.9 | 1957 | 4.5 |
| 1952 | 1.1 | 1958 | 2.5 |
| 1953 | 2.7 | 1959 | 1.4 |
| 1954 | 2.9 | 1960 | 1.8 |
| 1955 | 5.1 | 1961 | 0.8 |

## CHART 16

### STEEL INDUSTRY PROFITS
### PER DOLLAR OF SALES




See Appendix Table 31A

**Steel Industry Profits Per Dollar of Sales**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1940 | 8.0% | 1946 | 5.5% | 1952 | 5.0% | 1958 | 6.3% |
| 1941 | 6.0 | 1947 | 6.1 | 1953 | 5.6 | 1959 | 5.8 |
| 1942 | 3.4 | 1948 | 6.7 | 1954 | 6.0 | 1960 | 5.7 |
| 1943 | 2.8 | 1949 | 7.1 | 1955 | 7.8 | 1961 | 5.2 |
| 1944 | 2.7 | 1950 | 8.0 | 1956 | 7.3 | | |
| 1945 | 3.1 | 1951 | 5.8 | 1957 | 7.3 | | |

Source: Annual Statistical Reports, American Iron and Steel Institute

There is no profit rate that is common to all companies in the steel industry, for profit is the difference between revenues from sales and the total of all costs and expenses. No two companies have total sales or expenses which are identical. There are 85 companies producing steel in the United States and about 275 companies producing steel mill products. If any two of them should have the same percentage profit margin on sales, it would have to be regarded as a mathematical coincidence. The profit percentages of the 30 largest steel producers in terms of ingot capacities are shown on Chart 17. The data are shown for two periods — for the year 1961, which was the most recent full year, and for the average of the years 1957-1960. Profit rates as a per cent of sales in 1961 ranged from a profit of 9.4 per cent to a loss of 12.9 per cent.

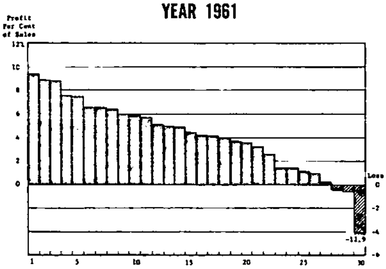
Profit rates of individual companies during the 1957-1960 period ranged from a high of 10.3 per cent to a low of 0.5 per cent of sales.

#### *Profits — Steel Compared with Other Industries*

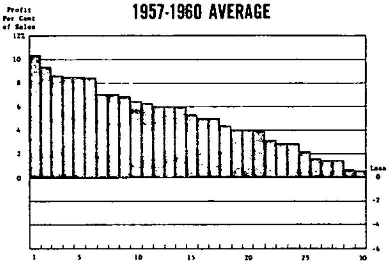
For many years The First National City Bank of New York has regularly compiled data on profit as a per cent of net assets of companies classified by manufacturing industries (currently, 41 categories). Because of inflation, this measurement, as previously explained, tends to overstate the

**CHART 17**

**PROFIT (LOSS) RANGE AS PER CENT OF SALES**
**30 Leading Ingot Producers**
**YEAR 1961**



**PROFIT (LOSS) RANGE AS PER CENT OF SALES**
**30 Leading Ingot Producers**
**1957-1960 AVERAGE**



See Appendix Table 28A

Sources: Financial Analysis of the Steel Industry, Steel Magazine, April 1, 1957; March 31, 1958; March 30, 1959; April 4, 1960; April 3, 1961 and April 2, 1962

profit position of the steel industry as compared with other industries less heavily invested in long-lived properties. As a result, those companies and industries most heavily invested in long-term facilities, and hence most vulnerable to inflation, appear by statistical illusion to be gaining from inflation, when in fact they are the real victims. As indicated on Chart 18, the steel industry's return on net assets has been consistently lower than the average of all manufacturing industries in 18 of the 21 years since 1940. For no year has it ranked higher than 14th among the industries, and in many years it has ranked at or near the bottom of the list of industries. Out of 41 manufacturing industries in 1961, there were 32 industries in which the return on net assets was greater than that for the steel industry. The steel industry was also near the bottom of the list in 1960.

### *Misuse of Profits in Collective Bargaining*

Some contend that profits in the steel industry have been of a magnitude to justify increases in employment costs. In support of such claims, resort has been made to highlighting only the more profitable companies, by comparing the profit results during a period of low production with those during a period of high production or by multiplying the results of an individual high quarter by four to depict an annual result.

There are numerous fallacies in the premise that profits should be used to pay wage demands. For example, should the employees of steel companies having different profit margins be paid correspondingly different wages in the performance of identical tasks? If so, what is the formula for relating the high and low limits of wages and the high and low limits of profits and losses? Oddly enough those who advocate that wages be increased as profits increase have never suggested that wages be reduced in periods of declining profits or of losses.

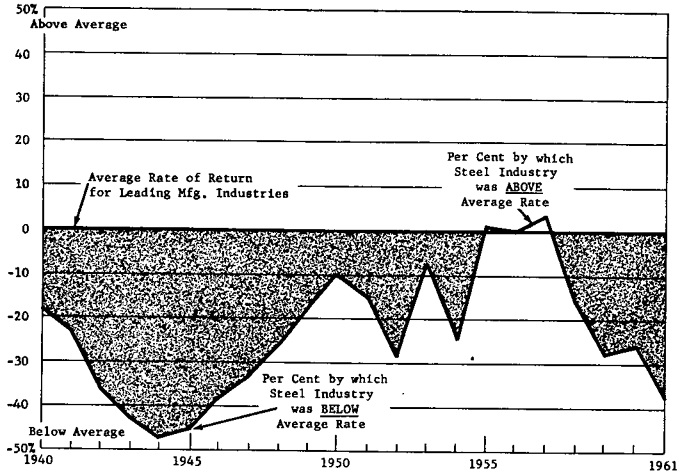
Profits obviously have a vital role to perform and those who would raid profits to increase wages unjustifiably are indulging in "rob Peter to pay Paul" tactics to the ultimate detriment of employee and employer alike.

### *Profits Versus Cash Flow*

During recent years, while industry has generally been experiencing a serious squeeze on profits, there have been attempts to shift attention away from the profit squeeze and onto cash flow, as a source for payment of further cost increases. Cash flow is the sum of profits and the amounts set aside for wear and exhaustion of facilities. Because of additional depreciation, cash flow has had a more favorable trend than profits. It is the contention of some that the profit squeeze is only a myth because businesses are generating sizable amounts of cash which can be used to meet any of a firm's needs.

CHART 18

COMPARISON OF STEEL INDUSTRY RETURN ON NET ASSETS WITH AVERAGE RATE OF RETURN FOR LEADING MANUFACTURING INDUSTRIES*




See Appendix Table 27A

*Computed from First National City Bank, Monthly Letters, April issues.

During periods of generally stable prices if a firm is to stay even with respect to plant and equipment it must spend funds equivalent to its depreciation; during periods of generally rising price levels, such as have been experienced in recent years, it must spend increasing amounts just to "stay even." If these additional funds just to "stay even" are not provided, the company declines and ultimately goes out of business. Depreciation, therefore, cannot be used for other purposes without threatening the existence of the company.

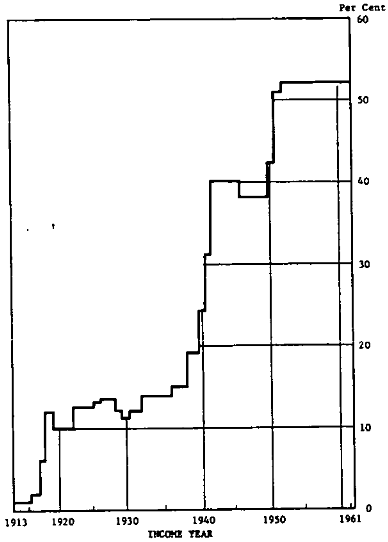
*The Profit Squeeze — Major Causes*

Two major forces have been operative during the past few years in the substantial squeeze on steel industry profits: high government spending resulting in high taxes, and increasing employment costs.

*High Taxes*

One factor which has contributed to the profit squeeze has been the tax structure at local, state and national levels in this country. The most direct tax on corporations is of course the corporate income tax. In former times when the tax rate on corporate income was smaller and inflation was not a big factor, the corporate tax was not a great impediment. Enormous increases have occurred in the tax rate, however, until today it is over 50 per cent — some three times the pre-war rates. The trend in corporate tax rates since the inception of this tax can be seen on Chart 19. In addition to the high corporate tax rates, corporate income is not only taxed as earned but it is also taxed again as dividends to owners. No other form of income is subjected to this double taxation. The save-invest process is seriously impaired by

CHART 19
FEDERAL CORPORATION
INCOME TAX RATES*




See Appendix Table 23A

*Normal plus surtax per cent of taxable income excluding excess profits and other taxes
Source: U.S. Department of the Treasury

this heavy double taxation which reduces the incentive and ability of individuals to save and invest productively.

Steel companies in 1950 paid state, local and miscellaneous taxes of $132 million; by 1961 this tax bill had more than doubled to $267 million.

In the 10 years since 1950 taxes paid by all business to all levels of government increased in total by 68 per cent. The major cause for this general increase in taxes has been the high and increasing amounts of government spending.

*Employment Cost Increases*

Another major factor which has contributed heavily to the profit squeeze has been the wage-push inflation. As is discussed in more detail in Chapter IV, wage-earner employment cost per man-hour worked in the steel industry increased by 341 per cent between 1940 and 1961. This increase is equivalent to 7.3 per cent per year compounded. (It averaged 8 per cent per year in 1940-58, about 3½ to 3¾ per cent in 1959-60 and is approximately 2½ per cent for the first year of the contract currently in effect.)

Increased employment costs have been quite general and persistent throughout most of industry, although the increase in the steel industry by any measure has been above the average for all industry. When reviewing wage trends, it would be expected that the trend would reflect the impact of recessions, wars and the level of employment, as well as other economic factors. From an examination of the trend in employment costs shown in more detail in Chapter IV, it is obvious that wages did not respond to these factors but instead climbed throughout the period. From that employment cost trend, it is difficult to tell when the United States entered World War II, when the war ended, when the reconversion was completed, when the war in Korea took place, when business was good or not so good, when unemployment was high or low.

## ECONOMIC GROWTH

Economic growth is sometimes defined or measured as an expansion in the volume of goods and services available to the people of a country. However, mere growth in terms of just producing an ever bigger pile of goods is unacceptable as an over-riding objective in America. Mere physical growth cannot measure the mounting satisfaction that an economy provides to those living under it — especially if such growth is dictated rather than voluntarily achieved.

*The Role of Government in Economic Growth*

The nation's economic history has been one of substantial economic growth. That growth has been motivated by the incentive for profit rather than by government direction. It should not be assumed, however, that growth is inevitable. On the contrary, it can be impaired all too easily. The part that government can constructively play in promoting the growth process in a free enterprise system is strictly limited. It can regulate or compel the performance of prescribed acts; but it cannot by command render people enterprising and creative in the development of the tools, products and markets that spell progress.

### *Preservation of Free Competitive Enterprise System*

Our nation's past economic growth and present high standard of living have been achieved with and by a free competitive enterprise system. Continuation of this system which is, in essence, the effective use of the checks and balances of competition, requires the recognition by government of the necessity for freedom in business decisions.

### *Avoidance of Inflationary Policies*

Government can seriously impede economic growth by adopting and following inflationary policies. Government can aid economic growth by providing dependable money. Inflation almost always follows deficit spending on the part of government. Deficit financing historically has been resorted to in times of war. Since 1945, however, this nation, in common with many other nations, has been on one of the great inflationary excursions of its history, and as a result, the buying power of the dollar has declined by almost 40 per cent. Since inflation increases economic instability, distorts the save-invest process and undermines the nation's position in international trade, it must be regarded as a detriment to growth.

## TABLE 3
## SUMMARY OF DEPRECIATION PROVISIONS IN CERTAIN FOREIGN COUNTRIES

| Country | Revaluation Factors Applied (1) | Depreciation above Cost (without revaluation or above revalued cost) | Additional write-off in first year (or in first 3-4 years)* (2) | Accelerated rates (above U.S. rates allowed) (3) | Shorter lives | Bracket system (grouping classes of assets as to depreciable lives) (4) |
|---|---|---|---|---|---|---|
| Argentina | X | | X | | | |
| Australia | | | | X | | |
| Belgium | X | X | X* | | | |
| Brazil | X | | | | X | |
| Canada | | | | X | X | X |
| Chile | X | X | | | | |
| Colombia | | | X | | X | |
| Denmark | | | X | | X | |
| France | X | | X | | | |
| West Germany | | | | X | X | |
| Great Britain | | X | X | X | | |
| Holland | | X | X* | X | X | |
| India | | X | X | X | | |
| Italy | X | | X | | | |
| Japan | X | | | | | |
| Mexico | | | | | X | |
| Norway | X | | | | X | |
| Sweden | | | X | X | | |

(1) Inflation coefficients have been applied in order to revalue assets, permitting depreciation to be stated on a more current cost basis. Generally the inflation factor is determined for various periods rather than for individual years; for example, Brazil has applied these revaluation factors by years of acquisition: 1929 and earlier, 13 times original cost; 1949 and 1950, 3.4 times original cost; 1956, 1.3 times original cost.

(2) Most of the countries shown above permit additional allowances in either the year of acquisition or in the first three or four years as an incentive for modernization. In Great Britain, Belgium, Holland and Sweden this amount is between 30 per cent and 33⅓ per cent, and in Argentina is as high as 50 per cent.

(3) With few exceptions the depreciation rates subsequent to the year of acquisition are higher than those allowed in the United States. Holland bases the depreciable period on economic life, not necessarily its technical life, and this is most commonly held around 10 per cent.

(4) Canada uses a bracket system for grouping assets, dividing these into 14 different classes. The rate of depreciation for each class is more liberal than allowed here, and the taxpayer may vary the rate from year to year so long as the maximum limit is observed.

Source: Selected official government references

***Providing Adequate Depreciation Allowances***

A third way the government may foster economic growth is by adequate depreciation allowances in the Federal income tax law. Under the present tax code the depreciation allowable in the calculation of taxable income must be based on the original cost which reflects prices paid years ago.

Illustrative of the seriousness of the resulting deficiency in depreciation are the findings of a Treasury Department survey of a large number of corporations throughout the nation in which twenty steel companies indicated that on the average depreciation deductions for tax purposes were only approximately two-thirds of the amount necessary to maintain their tools of production intact.

A step toward more realistic depreciation appears to have been taken in July 1962 when the Treasury Department issued its new depreciation guidelines and rules. These guidelines permit a business to depreciate its plant and equipment over generally shorter lives than previously permitted, provided its actual retirement and replacement policy is consistent with or is approaching the length of the write-off period. This approach assumes that the business has the necessary additional funds for replacing its plant and equipment upon retirement to compensate for the deficiency that has already occurred due to inflation.

In addition, the Revenue Act of 1962 provides for an investment credit against Federal income tax of up to 7 per cent of the cost of certain depreciable property acquired and placed in service after 1961.

The guideline procedure and the investment credit are recognition of the problems that exist, but they fall short of dealing with the fundamental facility replacement problem arising from inflation.

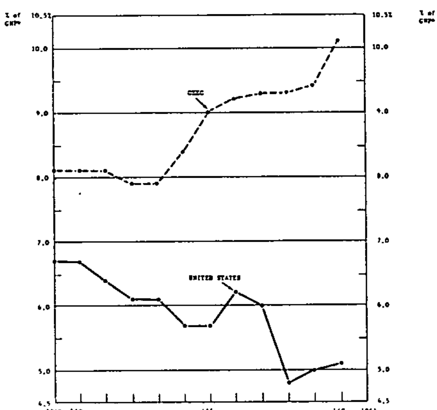
Tax destruction of the flow of dollars that maintains the nation's tools of production in their status quo not only darkens the prospect that new jobs will be created by productive investment; it threatens continuation of existing jobs. It directly handicaps all corporations having depreciable property and especially those corporations heavily invested in long-life facilities. It indirectly handicaps all other enterprises doing business with them, as their capabilities as customer or supplier are undermined.

As indicated in Table 3, virtually every other industrial nation permits greater tax deductions for depreciation than does the United States. Two results of this situation are noteworthy. First, as indicated in Chart 20, expenditures for machinery and equipment as a percentage of this nation's Gross National Product have been gradually declining over the years, despite the vital necessity of plant and equipment expenditures in achieving economic growth. Secondly, as shown by the same chart, these expenditures by members of the Organization for European Economic Cooperation (OEEC) have been gradually increasing over the same period of time, a period of time when economic growth in those countries has substantially exceeded that attained in the United States.

The need for revision of the tax laws as they relate to depreciation is still as vital as ever before if industry is to keep existing facilities efficient and to provide the new job and product-creating facilities so essential to the growth of the nation.

**CHART 20**

**EXPENDITURES FOR MACHINERY AND EQUIPMENT**
**(As Per Cent of Gross National Product at Market Prices)***
**UNITED STATES vs. OEEC COUNTRIES COMBINED****




*Market prices based on 1954 prices and exchange rates
**U.S. data exclude government expenditures for machinery and equipment. OEEC member countries include both "inner six" and "outer seven" countries, except Spain which did not join until 1959.

Sources: **Twelfth Annual Economic Review**, Organization for European Economic Cooperation
**United Nations Yearbook of National Accounts Statistics**

### *How Economic Growth May Be Achieved*

A nation may achieve true economic growth in two ways: by increasing the efficiency with which it utilizes its manpower and all other resources in the satisfaction of human wants, that is, through improving productivity; second, economic growth may be achieved by increasing the resources which are put into the productive process.

### *Economic Growth and the Steel Industry*

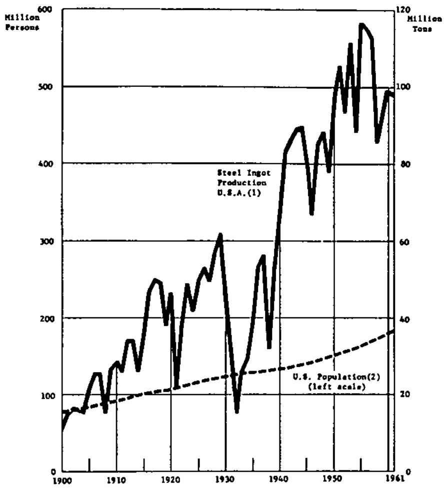
Significant growth is impossible in our modern era without the abundant production and fabrication of steel into thousands of kinds of tools, structures and other useful products. Conversely, without economic growth a major part of the market for steel must wither away. No industry has a greater stake in economic growth than the steel industry or is likely to suffer more widespread injury should national growth falter.

Over 95 per cent of our civilization's metal rerequirements are met by steel. It is out of steel that the tools of production, through which growth is achieved, are fashioned. Steel is embodied in the nation's accumulation of durable wealth. The goods and services we enjoy require the presence and use of steel in mines, farms, forests and factories; in power, transportation, communication systems; and in business, residential and public structures. During this century, as may be noted on Chart 21, there has been an upward sweep in steel production. In recent years production has been almost 9 times what it was at the turn of the century — an average increase of 3½ to 4 per cent per annum compounded. The comparable population growth rate was about 1½ per cent.

As a measure of the increasing economic usage of steel, production figures do not tell the whole story. With the passage of the years and as a result of intensive research, the characteristics of steel have changed and the quality improved substantially. In numerous instances a ton of steel today can and does serve purposes that formerly required more than a ton—in some instances nearly two tons. New steels can and do, moreover, serve useful purposes that neither steel nor other materials formerly could practically serve. Steel's contribution to economic growth has increased more rapidly than registered by the tonnage data because steel quality improvements are not measurable in terms of tonnages.

**CHART 21**

**STEEL INGOT PRODUCTION U. S. A.**
**VS.**
**U. S. POPULATION**




See Appendix Table 29A

Sources: (1) Annual Statistical Reports, American Iron and Steel Institute
(2) U.S. Department of Commerce — Bureau of the Census

### *Economic Growth — Profits and Progress*

Corporations are the major source of employment: they provide about two thirds of all nongovernmental employment and production. Through them the major flows of savings into growth-promoting investments are effected. In the postwar period about two thirds of the new productive investment, through which more than a half-million new nongovernmental jobs per year are created, resulted from reinvested corporate income. Current estimates are that in the period ahead we need to create new jobs at double the rate to avoid serious unemployment. It cannot be done by profit squeezing. It can only be done through profit enlargement. There is ample evidence that companies with profits above the average grow faster than do less profitable companies. These more profitable companies increase their capital faster and thus are able to spend more to purchase the job-creating tools of production. Employment in such companies naturally increases faster than average. Indeed, profits, progress and jobs go hand in hand.

If the nation is to enjoy the economic growth of which it is capable, it is neither necessary nor desirable that profits be subsidized. It is both necessary and desirable that they be not unwarrantably condemned or "squeezed"—as of late—for profits are a major incentive and principal means of achieving economic growth.

## SUMMARY

Although all businesses require capital in order to operate, some industries such as steel require very large amounts of capital invested in long-lived facilities. Additional capital is necessary in a growing America. This capital may be obtained either from internal or external sources, but both sources depend on the existence or prospect of profits.

Profits are the key to economic growth and economic security. Profits make possible more and better tools, increased efficiency, more and better jobs and a higher standard of living. No profits equals no capital equals no tools equals no jobs.

Profits are only a razor-thin slice of national income, and this slice is steadily diminishing. Two of the factors that have contributed to this serious profit squeeze are high taxes and inflationary increases in employment cost.

The part that government can constructively play in promoting the growth process is strictly limited, but the part it can play in preventing growth is virtually unlimited. For example, two ways in which economic growth can be aided by government are by avoiding inflationary policies and by development of realistic depreciation allowances in the Federal income tax law.

Profits and the expectation of future profits are fundamental ingredients in economic growth. Growth may be obtained either by increasing the resources used to produce goods and services or by utilizing these resources more effectively. Profits are necessary to attract the additional capital necessary to increase the amount of resources which a business can use; they are also necessary in attracting capital for making improvements in productive efficiency.

Profits, which in turn make possible economic growth, benefit everyone—the employee, the consumer and the stockholder.

# IV. COSTS, PRODUCTIVITY AND PRICES

## COSTS

An understanding of costs and prices in the national economy is essential in order to comprehend these subjects as they apply specifically to the steel industry or to any other industry.

When the costs up and down the American production lines are consolidated it turns out that employment costs ultimately constitute three quarters or more of all industrial costs. This is not readily apparent, however, in the cost records of any one concern. It is, however, thoroughly understandable in terms of the fact that the prices of things purchased to conduct a business incorporate the accumulated employment costs of the direct suppliers and of their suppliers in turn. Tax costs also incorporate governmental costs of employing people.

This high ratio of employment costs to total costs reflects the basic structure of American industry. With employment costs thus representing the great bulk of all costs throughout the national economy, it is obvious that a rate of employment cost increase in excess of the rate of gain in productive efficiency has forced up the general level of prices.

### *The Contagion of Employment Cost Increases In the National Economy*

Employment cost increases have a tendency to spread both within a business or industry and to other industries. Thus, when powerful union leaders are successful in forcing wage and benefit increases for a large part of a company's employees for whom the union is the exclusive bargaining agent, equity requires that appropriate adjustments be made for other employees.

Once such union leaders have secured gains from one company in an industry, they are in a strong position to demand and secure similar gains from other companies in the same industry and also in other industries where they are the bargaining agents. And so the contagion spreads. It spreads, also, throughout industry to all employees—union as well as non-union. Thus a wage increase initiated anywhere tends to ripple across the land.

Rapidly rising wage rates have been a universal occurrence throughout American industry. Although there is no official U. S. Government series of statistics on base wage rates in various industries, rapidly rising wage rates are apparent in Appendix Table 30A which compares "average hourly earnings" of thirty-four separate industries compiled by the Bureau of Labor Statistics. These reports of "average hourly earnings" include the total payments to employees for each hour paid for, including base rates of pay plus cost-of-living adjustments; incentives and various premiums such as for overtime, Sunday or holiday work. Although the BLS "average hourly earnings" include the pay for vacations and holidays, they are calculated by dividing total pay by hours worked *plus* vacation and holiday time paid for. Therefore, average hourly earnings as calculated by BLS do not show the actual cost per hour worked.

In 1940 average hourly earnings ranged from a low of 41 cents per hour in the men's and boys' shirts and nightwear industry to a high of 98 cents in petroleum refining; wage earners working in the blast furnaces and basic steel products industry (hereafter referred to as the "steel industry") had average hourly earnings of 84 cents, the seventh highest among the thirty industries. By 1961 average hourly earnings ranged from a low of $1.34 per hour in the men's and boys' shirts and nightwear industry to a high of $3.20 in the steel and petroleum refining industries. The increase of $2.36 in average hourly earnings in the steel industry since 1940 was the highest of all thirty industries.

### *Costs in the Steel Industry*

As shown in Table 4, the steel companies in 1961 received approximately $13.4 billion for products and services sold to customers. About $5.4 billion of this amount, or 40.1 per cent, was paid in direct employment costs.

About $5.6 billion or 41.9 per cent was paid for products and services bought; the provision for wear and exhaustion of facilities (sometimes referred to as depreciation) amounted to another $0.7 billion or 5.4 per cent; income and other taxes were $0.9 billion or 6.5 per cent of revenue. These three costs are actually largely employment costs either of suppliers and their suppliers in turn or of various levels of government.

Interest and other costs on debt amounted to \$0.1 billion or 0.9 per cent of sales proceeds. Profit of \$0.7 billion or 5.2 per cent of sales was realized in 1961.

TABLE 4

DISTRIBUTION OF SALES PROCEEDS
Steel Industry 1961

| | Billion Dollars | Per Cent of Sales |
|---|---|---|
| Products and services sold | \$13.4 | 100.0% |
| Costs: | | |
| Employment costs | 5.4 | 40.1 |
| Products and services bought | 5.6 | 41.9 |
| Wear and exhaustion of facilities | .7 | 5.4 |
| Interest and other costs on debt | .1 | .9 |
| Income and other taxes | .9 | 6.5 |
| Total | \$12.7 | 94.8% |
| Profit | .7 | 5.2 |

Source: Annual Statistical Reports, American Iron and Steel Institute

Data similar to that presented above for 1961 are shown in Appendix Table 31A for 1940 and for 1947-1961. It is apparent from the top section of this table that all of these components have increased substantially in dollar amounts since 1940. From the middle section it can be seen that although the relative portion of total revenue paid out for employment costs and for purchased products and services has changed from year to year, these changes have not been of a radical nature. Fully meaningful comparisons of the distribution of revenue among various years should recognize the difference between the years being compared as to such factors as levels of operation, product mix, facilities being operated and availability of raw materials. Generally speaking, employment costs are a larger share of the sales dollar in poor years than in good years. During 1961, the percentage of revenue represented by employment costs was the highest of any year presented.

### *Employment Costs*

Employment costs, which include all payments to and for employees, have increased relentlessly in the steel industry during the last two decades. Since the large majority of employees in the steel industry are hourly workers, perhaps the best indication of this increase can be obtained by comparing hourly employment costs for wage employees engaged in the production and sale of steel products in 1940 with such costs in 1961. In 1940 employment cost for wage employees was 91 cents per hour worked; by 1961 this had increased to \$3.99. The extent of this increase in the full cost of an hour's work is generally ignored by union leaders and not understood by the general public. Public discussion tends to be confined to increases in base wage rates. This may be partly because there are no official government figures which regularly disclose the total employment costs per hour worked.

If the public is to understand the magnitude and significance of hourly employment costs, there must be better communication of the pertinent facts.

### *Components of Employment Costs*

The complete employment cost for employees' work includes payments to employees and payments to provide benefits for employees. Payments to employees include payments for time on the job such as base pay, incentive pay, and cost-of-living adjustment, overtime, and shift, holiday and Sunday premiums. Also included in payments to employees are payments for time not worked, such as for vacations and holidays. Payments to provide benefits for employees include such things as pensions, insurance, Supplemental Unemployment Benefits and social security taxes. The magnitude and growth of these combined costs per man-hour worked since 1940 are summarized in Table 5 and Chart 22.

The basic labor agreements between virtually all of the steel companies and the United Steelworkers of America, which represents over 90 per cent of the wage employees in the steel industry, contain the following major provisions: A minimum job class rate is stipulated, with an increment between each rate of 30 higher job classes. Cost-of-living adjustments are also included as part of the agreements. For hours worked over eight per day or over forty per week, the pay is at 1½ times regular rates; straight-time hours worked on Sundays are paid at 1¼ times regular rates, and, on holidays at 2¼ times regular rates. For hours worked on afternoon and night shifts, premiums of 8 and 12 cents are paid.

In addition, these employees receive off-the-job pay—at rates generally equivalent to on-the-job pay—for seven stipulated holidays and for vacation pay of from 1 to 4 weeks.

### TABLE 5
### TOTAL EMPLOYMENT COST PER HOUR WORKED STEEL INDUSTRY
#### Wage Employees Engaged in Production and Sale of Steel Products

| Employment Cost Component | Dollars Per Hour Worked 1940 | 1961 |
|---|---|---|
| PAYMENTS TO EMPLOYEES | | |
| For hours worked: | | |
| Base rate* | $.836 | $2.558 |
| Incentive pay* | — | .323 |
| Cost-of-living adjustment | — | .173 |
| Total Regular Pay | .836 | 3.054 |
| Premiums for Overtime, Sunday, Holiday and afternoon and night shift work | .007 | .187 |
| Total Payments for Hours Worked | .843 | 3.241 |
| For time not worked: | | |
| Vacations and holidays | .012 | .260 |
| Total Payments to Employees | .855 | 3.501 |
| PAYMENTS FOR EMPLOYEE BENEFITS | | |
| Pensions, insurance, SUB, social security taxes and miscellaneous | .050 | .488 |
| TOTAL EMPLOYMENT COST PER HOUR WORKED | $.905 | $3.989 |

*Note: Base rate for 1940 includes incentives since separate data for incentives in 1940 are not available.
Source: **Annual Statistical Reports**, American Iron and Steel Institute

The companies also, by agreement, make payments to provide for accident and sickness, hospital and surgical service, and life insurance coverage, unemployment benefits and pensions. The companies also pay state and Federal social security taxes for the benefit of employees.

The agreements which were made effective July 1, 1962 covered liberalizing the Supplemental Unemployment Benefits Plan and the vacation and pension programs, as well as adding a new Savings and Vacation Plan.

As of October 1961 the minimum base rate under these agreements was $2.10 per hour, an increase of about $1.48 since 1940. The increment between each higher job class by October 1961 had reached 7.0 cents, thus making the highest basic wage rate $4.20 per hour. The average base wage rate by 1961 had grown an estimated $1.72 since 1940. The rate for the year 1961 was about $2.56 per hour, which included only three months' effect of the October 1961 wage increase. Cost-of-living adjustments of 18½ cents per hour, accumulated since 1956, were carried over into the 1962 agreements. Incentive pay has added an estimated 32 cents per hour and total regular pay has thus increased from 84 cents in 1940 to $3.05 for the year 1961. Overtime, Sunday, holiday and shift premiums averaged 19 cents per hour for each hour on the job in 1961. Thus, combined payments just for time on the job averaged $3.24 per hour for the year 1961, or nearly four times the corresponding average amount in 1940.

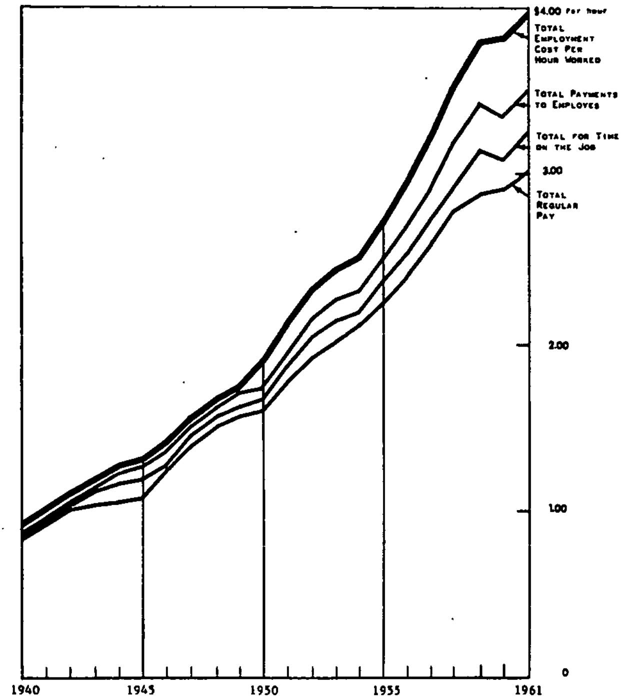
Payments for holidays and vacations averaged 26 cents per hour worked during the year 1961 (versus only 1 cent in 1940), and payments to provide for employee benefits have also progressed far more rapidly than total direct payments to employees, from an estimated 5 cents in 1940 to 49 cents per hour in 1961. Since these payments add to the cost of production, they must be regarded as part of the mounting cost of an hour's work.

#### *Pyramiding of Employment Cost Increases*

Few people seem aware of the extent to which negotiated increases in a labor agreement have multiple cost consequences through automatic interactions of the many employment cost factors. For example, the increases in job class rates and increments which became effective in October 1961, in turn, automatically increase the amounts of incentive pay, overtime premiums, Sunday and holiday work premiums, holiday pay, jury duty pay, vacation pay, pension costs and to a certain extent social security taxes. Direct increases in pension, insurance and Supplemental Unemployment Benefits do not automatically increase the

## CHART 22
## TOTAL EMPLOYMENT COST PER HOUR WORKED

**Steel Industry**
**Wage Employees Engaged in Production and Sale of Iron and Steel Products**




See Appendix Table 32A

| Employment Cost Component | Dollars Per Hour Worked 1940 | Dollars Per Hour Worked 1961 | Percentage of Base Rate 1940 | Percentage of Base Rate 1961 |
|---|---|---|---|---|
| PAYMENTS TO EMPLOYEES | | | | |
| For time on the job: | | | | |
| Base Rate | $.836* | $2.558 | 100.0% | 100.0% |
| Incentive Pay | — | .323 | | 12.6 |
| Cost-of-living adjustment | — | .173 | | 6.8 |
| Total Regular Pay | .836 | 3.054 | 100.0 | 119.4 |
| Premiums for Overtime, Sunday, Holiday and afternoon and night shift work | .007 | .187 | .8 | 7.3 |
| Total Payments for Time on the job | .843 | 3.241 | 100.8 | 126.7 |
| For Time off: | | | | |
| Vacations and Holidays | .012 | .260 | 1.5 | 10.2 |
| Total Payments to Employees | .855 | 3.501 | 102.3 | 136.9 |
| PAYMENTS FOR EMPLOYEE BENEFITS | | | | |
| Pensions, insurance, SUB, social security taxes and miscellaneous | .050 | .488 | 6.0 | 19.1 |
| TOTAL EMPLOYMENT COST PER HOUR WORKED | $.905 | $3.989 | 108.3% | 156.0% |

*Base rate for 1940 includes incentives since separate data for incentives in 1940 are not available
Source: **Annual Statistical Reports**, American Iron and Steel Institute

cost of other pay factors. However, union leaders in the past have not only pushed for increases in basic wage rates, which have automatic pyramiding effects, but have also attempted to force the costs for such things as pensions and insurance upward at an equal or even greater rate than the rate on increase in wages.

Thus employment cost factors interact to pyramid the total employment cost. By piling fringe upon fringe the pyramiding effect has persistently increased. In 1940, for example, an across-the-board raise in basic rates resulted in an additional increase in total employment costs of only about 8 per cent of the wage increase. But by 1961 the additional increase in total employment costs had grown to about 34 per cent of the wage increase. This vertical pyramiding of employment cost adds another dimension to the horizontally contagious inflation of wages in the economy.

### *Total Employment Costs*

The total cost of an hour's work has thus risen from an average of 91 cents in 1940 to $3.99 in 1961 for wage employees, an increase equivalent to nearly 7.3 per cent per year compounded. Extra pay for premiums and cost-of-living, plus payments for time not worked, plus payments to provide for employee benefits—so-called "fringes"—were equivalent in 1961 to 56 per cent of the average job class rate compared with only about 8 per cent in 1940.

As indicated in the following tabulation, in 1961 employment costs per hour worked were more than four times what they were in 1940—an increase of 341 per cent. By way of contrast, the Consumer Price Index had risen by only 113 per cent since 1940. Thus employment costs per hour have increased about three times as much as the cost-of-living.

| | Employment Costs Per Hour | Consumer Price Index (1940 = 100) |
|---|---|---|
| 1940 | $ .905 | 100 |
| 1961 | 3.989 | 213 |
| Total percentage increase | 341% | 113% |

Even these figures for 1961, however, do not fully reflect the total current hourly employment cost because they comprehend only three months of the wage increase which became effective in October 1961. During the first six months of 1962 total employment cost was $4.12 per hour.

In addition, under the terms of the current contract with the union, which took effect July 1, 1962, hourly employment costs will increase about 2½ per cent during the first year of its operation.

### *Inadequacy of Government Data*

The rapid growth of the so-called "fringes" has made average hourly earnings completely inadequate as an indicator of the cost of an hour's work. As indicated in the following tabulation, the average hourly earnings figure of the Bureau of Labor Statistics for the steel industry is substantially less than both wage earner payroll cost per hour worked and wage earner employment cost per hour worked.

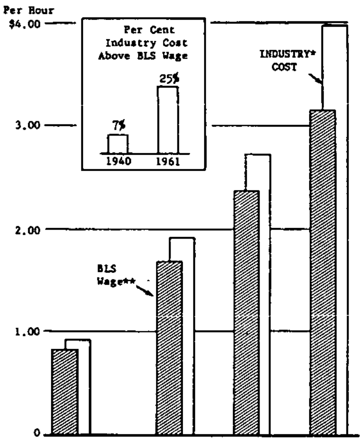
| | |
|---|---|
| Average hourly earnings in 1961—BLS (based on hours paid for) | $3.20 |
| Average payroll cost per hour in 1961—Steel industry, AISI (based on hours worked) | 3.501 |
| Total employment cost per hour in 1961—Steel industry, AISI (based on hours worked) | 3.989 |

These figures can be reconciled by first recognizing that average hourly earnings (BLS) are computed on total payroll divided by hours paid for (whether or not worked). As a result, the cost of any leisure time for such benefits as vacation time or holidays is not reflected in the hourly rate, and therefore the effect of the added costs for time not worked is lost. Average payroll costs per hour are computed on total payroll divided by hours worked. Total employment costs per hour are the sum of total payroll costs plus the cost of employee benefits such as pensions, insurance, Supplemental Unemployment Benefits and social security taxes. As can be seen above, total employment cost in 1961 was 79 cents per hour or about 25 per cent greater than the BLS average hourly earnings of $3.20.

The differences between average hourly earnings (BLS) and total employment cost (AISI) for selected years are indicated in Chart 23. Reflecting the fact that paid-for leisure time as well as payments for employee benefits have risen relatively faster than have payments for hours worked, total employment cost in 1961 was 25 per cent more than average hourly earnings versus only 7 per cent greater in 1940.

Until government data fully recognize all so-called "fringe" costs, their use for measuring the cost of wage settlements or for making inter-industry comparisons may result in misleading conclusions. In spite of their limitations, however, they are the only regularly published basis on which inter-industry comparisons can be made at the present time.

### CHART 23
### STEEL INDUSTRY EMPLOYMENT COST PER HOUR WORKED
### VS.
### BLS STEEL INDUSTRY WAGE SERIES PER HOUR PAID FOR
### Selected Years 1940-1961




See Appendix Tables 32A and 33A

| Year | Employment Cost* | BLS Wage** |
|---|---|---|
| 1940 | $0.905 | $0.84 |
| 1950 | 1.908 | 1.691 |
| 1955 | 2.722 | 2.41 |
| 1961 | 3.989 | 3.20 |

*Total employment cost—per hour worked—for wage employees engaged in production and sale of iron and steel products in the steel industry. **Annual Statistical Reports**, American Iron and Steel Institute

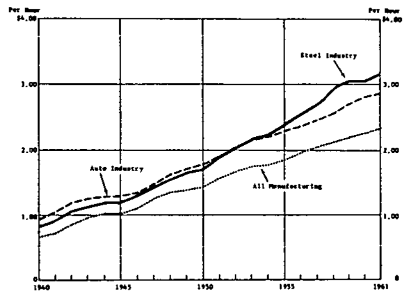
**Average hourly earnings—per hour paid for—for production workers—in blast furnaces, steelworks and rolling mills. U.S. Bureau of Labor Statistics for 1940 — 1950; for 1955 and 1961, use is made of new SIC 3312 (1957): "Blast Furnaces, Steel and Rolling Mills."

***Average Hourly Earnings—Steel vs. Other Industries***

On the basis of the BLS average hourly earnings indicated in Chart 24, steel wage earners are compared below with wage earners in other industries:

| | 1940 | 1961 | Increase |
|---|---|---|---|
| Steel Industry | $.84 | $3.20 | $2.36 |
| Auto Industry | .94 | 2.87 | 1.93 |
| All Manufacturing | .66 | 2.32 | 1.66 |

### CHART 24
### AVERAGE HOURLY EARNINGS PER HOUR PAID FOR (BLS)
### Steel vs. Other Industries




Source: U.S. Bureau of Labor Statistics    See Appendix Table 33A

Thus, steel wage earners in 1940 received about 18 cents more per hour than the average of all manufacturing industries but about 10 cents less per hour than a wage earner in the auto industry. As indicated in Chart 24, the relationship between steel, autos and all manufacturing remained approximately the same until 1950. Since 1950, however, average hourly earnings in steel have climbed more than 40 per cent faster than either those in the auto industry or in all manufacturing. As a result, in 1961 average hourly earnings in steel were 88 cents per hour greater than the average of all manufacturing (versus only 18 cents per hour greater in 1940) and were also 33 cents per hour greater than in the auto industry (versus 10 cents per hour less in 1940). Average hourly earnings are also greater in the steel industry than in virtually all other major industries, including those industries with which steel must compete. Similar data for thirty-four industries are presented in Appendix Table 30A.

### *Employment Costs—American vs. Foreign Steel Industries*

Not only do the steel companies face competition from producers of other products, but they also must compete with foreign steelmakers. Rapidly rising employment costs in the American steel industry make the competition very severe—both in world markets and in domestic markets.

A comparison of the hourly employment costs here versus those in foreign countries is presented in Table 6. Wages alone would make a shocking comparison but are subject to the counter-argument by some that wage supplements, such as social security contributions, pensions, insurance and unemployment compensation in foreign countries are larger in relation to wages than they are in the United States. Since hourly employment costs are more meaningful than wage rates alone, however, these are used for the United States and for various foreign competitors in 1952, the earliest year for which data are available, and in 1961, the latest year for which data are available.

The foreign hourly employment costs shown in Table 6 for the countries in the European Coal and Steel Community, in addition to direct wages, include costs for such benefits as Christmas presents; holidays; contributions to social security including insurance and pensions; expenditures for coal, gas and electricity made available free of charge or at reduced rates; expenditures for housing and free distribution or reduced-price sale of clothing, shoes and drink.

From Table 6, it can be seen that employment costs paid by American steel companies are from about four to six times as great as these costs paid by foreign steelmakers. With foreign steel mills having been rebuilt since the end of the War so that many are now as modern as those in the United States, the advantage in hourly employment costs enjoyed by those mills makes them very formidable competitors.

This challenge to American steelworkers and steel companies has become even more intense during recent years. As indicated in Table 6, although foreign hourly employment costs have increased substantially, such costs in the American steel industry have increased several times as much. As a result, by 1961 hourly employment costs in the United States were $2.52 per hour

**TABLE 6**
**HOURLY EMPLOYMENT COSTS**
**American vs. Foreign Steel Industries**

| Country | Hourly Employment Costs* | | Increase 1961 over 1952 | | Foreign As Per Cent of U.S. | |
|---|---|---|---|---|---|---|
| | 1952 | 1961 | Cents | Per Cent | 1952 | 1961 |
| Luxembourg | $ .98 | $1.47 | $ .49 | 50% | 42% | 37% |
| Belgium | .82 | 1.26 | .44 | 54 | 35 | 32 |
| France | .72 | 1.11 | .39 | 54 | 31 | 28 |
| West Germany | .69 | 1.37 | .68 | 99 | 30 | 34 |
| Italy | .64 | 1.04 | .40 | 63 | 27 | 26 |
| Netherlands | .53 | 1.40 | .87 | 164 | 23 | 35 |
| E.C.S.C. Average | .72 | 1.25 | .53 | 74 | 31 | 31 |
| Japan | .32 | .63 | .31 | 97 | 14 | 16 |
| United States | 2.32 | 3.99 | 1.67 | 72 | 100 | 100 |

*Sources: 1952-1960 data — Information Statistique, 1961 data — Siderurgie, 1962, No. 5/6, European Coal and Steel Community; Japan Iron and Steel Federation; and American Iron and Steel Institute greater than those of the foreign competitor with the highest hourly employment costs (Luxembourg) and $3.36 greater than those of the competitor with the lowest hourly employment costs (Japan).

It has been suggested by some that employment costs abroad may be rising more rapidly than those in the United States, so that ultimately it can be anticipated that foreign employment costs might approach those of the United States. As indicated in Table 6, this has not been the case. In only one foreign country (Netherlands) were hourly employment costs in 1961 significantly higher as a percentage of United States costs than they were in 1952, and even in 1961 hourly employment costs in the Netherlands were only 35 per cent of United States costs.

Even if hourly employment costs in foreign steel industries were rising at as fast a rate as those in the United States, American steel producers would still fall further behind foreign producers in the competitive race for markets. For example, a 4 per cent increase in foreign hourly employment costs of $1.25 would amount to 5 cents per hour; an identical percentage increase in hourly employment costs of $4.00 in the American steel industry would amount to sixteen cents per hour. Hence, hourly employment costs in the American steel industry would be rising 11 cents per year more.

Even if the steel producers in this country were still twice as efficient in their use of manpower as those of Western Europe and Japan, this is not nearly enough to overcome the competitive disadvantage in hourly employment costs of three or four to one. Moreover, whatever our current advantage is in productive efficiency, it is undoubtedly being reduced.

If the hourly employment costs during 1961 of $3.99 in the American steel industry did not increase at all through 1970, the weighted average hourly employment costs in the six European Coal and Steel Community countries listed in Table 6 would have to increase at a compound annual rate of 12 per cent just to catch up with the 1961 hourly employment costs in the American steel industry.

### *Other Costs*

Purchased goods and services, which as previously indicated are primarily employment costs of suppliers and their suppliers in turn, cover such diverse items as coke, cleansers and carbon paper; bricks, bolts and batteries; and tires, tongs and transportation. Prices of purchased goods and services were substantially higher in 1961 than in 1940. For example, the BLS Wholesale Price Index of all commodities other than farm products increased by about 115 per cent between 1940 and 1961; the wholesale price of petroleum products increased by 136 per cent; the price of coke, by 206 per cent; and the price of lumber, by 238 per cent. In spite of these sizable increases in the cost of purchased goods and services, however, there has been no radical change in the percentage of revenue which is needed to purchase goods and services because other cost components have also risen sharply since 1940.

The problem of unrealistic depreciation allowances is also closely related to rising employment costs throughout the economy, because construction costs are composed largely of employment costs. Construction costs have more than tripled since 1940.

Under the Federal income tax law, depreciation allowable in computing taxable income must be based on the original cost which reflects prices paid years ago—often 25 years or more in the case of the steel industry. But amounts so determined cannot at today's inflated prices possibly have buying power equivalent to that originally expended and thus be sufficient to meet current equipment replacement needs—essential if the enterprise is just to "stay even." The deficiency amount which should realistically be regarded as depreciation and a necessary cost of doing business is thus treated as income and, on that pretense, over half of it is taxed away. Depreciation and similar costs, sometimes called "wear and exhaustion," amounted to 5.4 per cent of revenue in the steel industry in 1940 and the same percentage in 1961. This subject was discussed in greater detail in Chapter III.

Income and other taxes paid by the steel companies in 1940 amounted to about $166 million, but by 1961 were more than $0.9 billion. As a percentage of sales those taxes have increased substantially—from 5.1 per cent of revenue in 1940 to 6.5 per cent in 1961. Accordingly, taxes as a per cent of net income rose from 64 per cent in 1940 to 129 per cent in 1961. A major proportion of those taxes represent employment costs of government at local, state and Federal levels.

*Total Costs*

Since 1940, the index of total costs per employee hour in the steel industry has risen almost identically with the index of employment costs (about 7½ per cent per year compounded). With total costs per man-hour increasing at virtually the same rate, prices have been forced upward. Because of gains in productive efficiency, however, and because of competitive factors and the squeeze on profit margins, the general level of steel prices has not risen as fast as costs per man-hour.

In recent years, due in large part to their favorable differential in hourly employment costs, foreign steelmakers have been able to transport their product to this country and compete in domestic markets.

## PRODUCTIVITY

Gains in productive efficiency in steel production have been realized in the steel industry through such things as sound research and development programs; investment of billions of dollars in modern tools and facilities; better methods and processes, and improved human skills. A review of the role productive efficiency plays in the national economy, as well as the various methods used to measure changes in productivity, will assist in gaining an understanding of the importance of productivity.

Everyone has a stake in true productivity increases. The prices consumers must pay and their standard of living are significantly influenced by productivity. The compensation employees receive is influenced by productivity. Citizens contribute to national strength and the country's ability to compete effectively in international trade as productivity increases are realized.

*What Productivity Is*

Despite the importance of improvements in productivity or productive efficiency, much misunderstanding has arisen as to what it is and how it is measured. Perhaps productivity is best described as the efficiency with which resources are converted into the commodities and services that people want.

*Ways of Measuring Productivity*

Productivity for an individual company must recognize the individual contribution of all of the following factors:

- Men, including management
- Plant and equipment used up in production
- Products and services utilized in production
- Government services utilized, as indicated by taxes
- Capital invested

For the total economy, measures of productivity change must recognize the contribution of land, labor and capital. Nevertheless, changes in output per man-hour, which do not include all of these factors, are often loosely referred to as a measure of productivity change. Output per man-hour not only overlooks the contribution of capital and land but also omits the many man-hours incorporated in purchased materials and tools of production. Increases in output per man-hour for an individual company may be offset by the increased cost of machines or materials or any of the other resources that made the higher output possible. The official series of output per man-hour are published by the Bureau of Labor Statistics of the United States Department of Labor. Its Bulletin No. 1249 makes the following statement: "Although the measure relates output to man-hours, it should not be interpreted to represent the unique contribution of labor to production. Rather the measure reflects, in addition to labor effort and skill, the operation of many factors, such as changes in technology, equipment, and other capital investment per worker, utilization of capacity, layout and flow of materials, managerial skill, and labor-management relations. Thus, gains in output per man-hour cannot be ascribed to any one factor, but reflect the interaction of all factors." Gains in output per man-hour may seriously overstate actual over-all productivity gains by disregarding the costs of the other above mentioned input factors.

Measures of gains in productivity for the total economy or for an individual industry should not be regarded as exact in nature, for it is impossible to calculate accurately many of the intangible factors involved in the change. For example, quality of the goods produced has risen enormously, as witness a 1950 television set compared with its counterpart in 1961; shifts in products and product mix are constantly being experienced, and the types and costs of personnel utilized are constantly changing. Such factors have not been precisely measured. When viewing productivity measurements it should be remembered that they are based on factors which are not subject to precise measurement. In spite of these limitations, however, calculations have been made in an attempt to measure productivity changes.

Figures have been published for the economy as a whole, for selected sections of the economy, for specific industries, and even for individual products or product lines. The figures that are calculated for large segments of the total economy using labor, capital and land are less subject to criticism than those derived solely on the basis of output per man-hour or those calculated for a specific industry, product or product line.

### *Productivity Versus Output Per Man-Hour*

In the February 1961 issue of CHALLENGE Magazine, Dr. Solomon Fabricant, Director of Research of the National Bureau of Economic Research states, "Productivity statistics should take account not only of the input of labor in the form of man-hours; they should also take account of the input of other resources, such as tangible capital equipment. Therefore, I would measure productivity by output per unit of total resource input, that is, by output per unit of labor and capital combined in some appropriate way." He further states that over the past 70 years "output per unit of total input has grown on the average of about 1.7 per cent per annum. But in the period since World War I this has been more like 2.1 per cent per annum."

Probably the most widely quoted of all the estimates in this field is the series of output per man-hour data developed by the Bureau of Labor Statistics of the U. S. Department of Labor. Although the measure is derived in quite a simple manner, it is all too often misunderstood or incorrectly used. This BLS measure takes into account only one element of input (labor). In addition to ignoring the changing quality of man-hours (skilled versus unskilled workers), it also ignores such essential factors as capital and land. Since the essential factors of capital and land are not used in the calculation, there is often a tendency to forget them and to assign the credit or cause of the changes in productive efficiency solely to the labor input factor. BLS, as previously quoted, has cautioned that labor is not the only contributor to changes in output per man-hour and has further cautioned that its series of output per man-hour should be used for measuring rates of change over a long period of time and between comparable levels of business activity. Despite these cautions from BLS, some union leaders habitually resort to selecting an output per man-hour series for a particular industry and, by highlighting short-term changes in that particular series, attempt to justify a wage increase that is not really earned.

The fallacies of assuming that output per man-hour and productivity are synonymous can perhaps best be seen most vividly in the steel industry by a practical example. In recent years, oxygen has been added to the open hearth process to increase the speed of reaction and with it the production rate of the furnace, and thus improve the output per man-hour. Although output per man-hour increased substantially, it was only achieved by the expenditure of significant capital, by the basic changes in practices, and by the purchase of material and supplies representing man-hours in other industries not previously used. Without all of this, the improvement in output could not have been accomplished. The net savings from this program, the true increase in productivity, was only a fraction of the value of the labor saved, or as it is called — improved output per man-hour.

### *Uses of Gains in Productivity*

Even the rate of increase in national productivity is not the basis for determining what any particular wage should be. The existence of such gains in national productivity merely means that the general level of all wages and other incomes can rise at a similar rate without forcing increases in the general level of prices in the nation. Conversely, such gains mean that if the level of wages and other incomes remain stable, their buying power will grow at a similar rate as the increases in productivity are competitively translated into gently declining prices of the end products and services produced. However, it does not follow that within any one industry or company prices will be stable for the goods and services they produce if wages are increased at a rate to match the increase in national productivity.

For example, if a company has a rate of productivity increase less than the national rate but increases wages based on the rate of increase in national productivity, it must ultimately increase the price for its products if it is to continue in business. Conversely, if a company with a rate of productivity increase greater than the national rate increases wages at a rate equal to the increase in national productivity, then the greater productivity can be translated into lower prices for the goods or services produced. Thus if wages and other incomes in the nation were to increase at a rate equal to the rate of increase in national productivity, the prices of certain products would increase while others would decrease — but the general level of prices for the nation would tend to be virtually unchanged.

In the long run, if the employment cost increases in the nation are greater than the nation's productivity increase, as has been the case, then there will inevitably be a rise in the general price level.

### *Shipments Per Man-Hour in the Steel Industry*

Today many union leaders are saying much about sharing in the "fruits" of improvements in productive efficiency. However, historically union leaders have erroneously cited improvements in shipments per man-hour as synonymous with productivity gains. Further they have based claims of the existence of such gains on short-term periods and compounded the distortion by limiting the measure to wage employees only. Short-term comparisons for the steel industry, with its inherent wide fluctuations in operating activities, are particularly hazardous and meaningless as a basis of measuring a rate of change that can be sustained over a long period of time. Therefore, using short-term comparisons ignores the valid long-term trend of shipments per man-hour, and using data for wage employees' hours only, ignores the substantial and growing contributions made by research scientists, engineers, accountants, mathematicians and the myriad of other management jobs so essential in achieving gains in shipments.

Before looking at the record to see how these gains have been "shared" in the past in the steel industry, it must be remembered that about two of every three steelworkers are covered by some type of an incentive program which directly compensates them for their contribution to increased shipments. An historical comparison of productivity changes in the economy and shipments of steel products per man-hour with hourly wage rates of steelworkers vividly illustrates that the Union leaders have forced wage increases at a rate far greater than the gains either in national productivity or in shipments per man-hour. Although figures are available for national productivity increases, comparable figures are not available for the steel industry. Measurements in the steel industry are limited to changes in shipments per man-hour, which fail to consider the billions of dollars that have been invested in modern tools in order to achieve the increased output. Obviously gains in shipments per man-hour overstate the actual gains in productivity that have been achieved in the steel industry.

As indicated in Table 7, hourly employment cost per man-hour worked in the steel industry has risen at an annual rate more than three times faster than either the long-term trend of steel shipments per man-hour worked or the rate of increase in national total factor productivity. Also the rate of increase in shipments per man-hour in steel has been below the rate of increase in output per man-hour for the total private economy,

**TABLE 7**

**LONG-TERM TRENDS IN PRODUCTIVITY, OUTPUT PER MAN-HOUR AND HOURLY EMPLOYMENT COSTS**

| | Annual Compound Rate of Increase | |
|---|---|---|
| Total Factor Productivity in | | |
| Private Domestic Economy 1940-1960 | 2.2% | (1) |
| Output Per Man-Hour Paid for (BLS) | | |
| Total Private Economy 1940-1961 | 3.0% | |
| Shipments of Finished Steel Mill | | |
| Products Per Man-Hour Worked (2) | | |
| 1940-1961 | 1.8% | (1) |
| 1940-1957 | 2.0% | |
| Hourly Employment Costs—Steel (AISI) | | |
| 1940-1961 | 7.3% | (1) |

(1) Appendix Table 34A

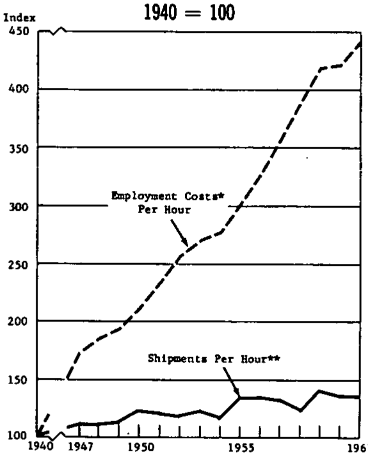
(2) Comprehends companies reporting both shipments and man-hours to American Iron and Steel Institute.

but as was shown earlier, the average hourly earnings for the steel industry have risen faster than the average for all manufacturing. As shown on Charts 25 and 26 the steel companies' hourly employment costs in 1961 were 341 per cent higher than corresponding employment costs of 1940. Steel shipments per man-hour worked in 1961 were only 39 per cent higher than the 1940 level. Charts 25 and 26 are a picture of wage-push inflation. Since 1940 increases in hourly employment costs have exceeded increases in output per man-hour worked, thus forcing cost-covering price increases to the competitive detriment of the steel industry and its employees.

**CHART 25**

**STEEL INDUSTRY EMPLOYMENT COSTS and SHIPMENTS OF STEEL PRODUCTS Per Hour Worked**

1940 = 100




See Appendix Table 34A

*Wage employees engaged in the production and sale of iron and steel products

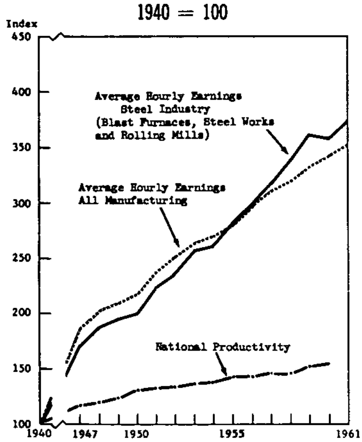
**Hourly and salaried employees engaged in steel producing; does not represent productivity, since this factor is only one component of productivity and percentage-wise usually rises faster than the total

Source: Annual Statistical Reports, American Iron and Steel Institute

**CHART 26**

**BLS AVERAGE HOURLY EARNINGS PER HOUR PAID FOR vs. NATIONAL PRODUCTIVITY**

1940 = 100




See Appendix Table 34A

Sources: National Productivity (output per unit of total input), private domestic economy, Dr. John W. Kendrick, *Productivity Trends in the United States*, Princeton University Press, for 1940-1953. For 1954-1960 from 42nd Annual Report, National Bureau of Economic Research 1962

## PRICES

When viewing a rise of steel prices over a period of years it should be remembered that a ton of steel today, while weighing the same number of pounds as before, is steel of much better quality. Standards have risen enormously but unfortunately the increase in quality cannot be adequately measured by the official BLS index of steel prices. Therefore, to the extent of the added utility brought about through increased quality, the indicated rise in steel prices is overstated.

In the past when competitive conditions have permitted, price increases have been necessary to partially bridge the gap between rapidly rising costs and slowly rising output. Finished steel prices, as measured by the BLS index, have in-

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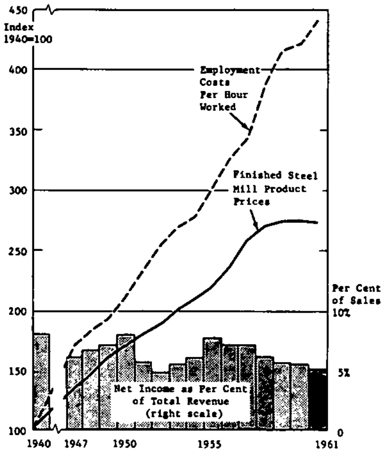
creased since 1940 at a rate equivalent to approximately 5 per cent annually, but since 1958, have actually declined slightly on balance.

Since 1940 hourly employment costs in the steel industry have increased 341 per cent and total costs per man-hour have risen 290 per cent. During the same period finished steel mill product prices have risen only 173 per cent. During the same period profit rates as a per cent of the sales dollar in only one year even attained the level of 8.0 per cent in 1940. In 1955 the rate was 7.8 per cent and has declined steadily to a level of 5.2 per cent return on sales in the recession year of 1961.

It is obvious, therefore, how profits have been —and are being—severely squeezed by increasing employment costs which are set in a non-competitive market, while prices are held down—and even lowered—in a competitive market.

**CHART 27**

**EMPLOYMENT COSTS, PRICES AND NET INCOME**
**Steel Industry**




See Appendix Table 33A

Sources: Annual Statistical Reports, American Iron and Steel Institute
U.S. Bureau of Labor Statistics

## SUMMARY

The experience of the steel companies illustrates in particular the general relationships between wages, costs, productivity and prices in the economy. The rising hourly employment cost for steelworkers has been roughly paralleled by increases in other costs incurred by the steel companies, and since such other cost increases in turn are also comprised chiefly of employment costs, the nationwide nature of cost-push inflation can readily be observed.

The long-term trend in hourly employment costs for steelworkers, as well as total costs for the steel companies, has been upward for two decades at an average rate of about 7.3 per cent per year compounded. The long-term increase in shipments per man-hour has been equivalent to slightly less than 2 per cent per annum. Increases in prices have not bridged the gap between those two rates. Finished steel prices, as measured by the official BLS Wholesale Price Index, have increased since 1940 at a rate equivalent to approximately 5 per cent per annum.

The review of the relationships of employment cost increases (either direct or indirect), productivity and prices compels the conclusion that, if employment cost increases consistently outstrip gains in national productivity, spiraling prices are a natural consequence.

# V. EMPLOYMENT AND UNEMPLOYMENT

***Introduction***

Everyone hopes that with the passage of time there will be a general improvement in standards of living. This hope simply cannot be realized unless there is a continuing improvement in the quantity and quality of goods and services produced in relation to a given quantity of human effort.

This means that the amount of time required of people—in other words, the man-hours required to produce a unit of product, whether it be steel or candy bars—must continue to decline if the objective of a higher standard of living is to be attained.

And achievement of improved efficiency in turn means that, unless customers can be found to buy increasing amounts of the products made in any company or industry, the total employment in such company or industry will inevitably decline.

Conversely, if the product market can be enlarged for any company or industry, then its employment can be maintained or can grow.

In a free society no customer has the obligation to buy the products of any producer. Thus, no producer can undertake to provide any particular level of employment.

While what may happen to employment in any particular company or industry, in terms either of growth or of shrinkage, may have little significance in terms of overall national growth or shrinkage in employment, it is nevertheless a matter of deep concern to all those affected.

Every producer of goods or services hopes that he may succeed in enlarging the market for what he has to sell—and therefore hopes to be able to provide enlarging opportunities for employment. But in this effort he must be able to compete with increasing effectiveness, for otherwise his hopes as well as those of his employees are doomed to disappointment.

Earlier chapters have dealt with the challenges and the opportunities which face steel producers in their efforts to enlarge their markets, as they expect to do—and as they must do—if the steel industry is to continue to grow. If efforts to retain and expand existing markets and to develop new markets are successful, steel companies will continue to grow and continue to provide large numbers of good jobs, as they have in the past. This growth will be to the benefit of the companies and their employees.

The competitive challenge to steel has affected employment in the industry during the past few years. But in addition to this long-range factor, employment in steel varies with shorter-term changes in the demand for steel. Orders for steel products can fluctuate widely over the course of the business cycle. When steel users are confident and expect rising demand, they stock up with steel inventories. When demand for durable goods falls off, steel users begin to work off inventories and eliminate or reduce their new orders for steel.

The figures on employment, shipments and production in Appendix Table 36A, and year-to-year changes in ingot production and man-hours worked in Chart 28 show the close relationship between employment and demand for steel.

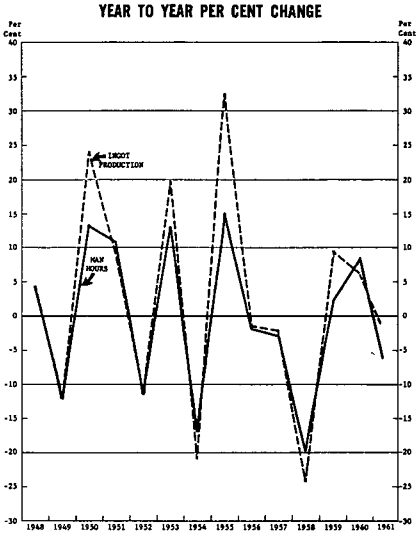
It is readily apparent from Chart 28 that steel industry man-hours and ingot production move consistently in the same direction, a demonstration of cyclical impact on man-hours employed in the steel industry.

In the recent past cyclical swings have been exaggerated by the effects of the 1959 steel strike. Because of the steel strike there was a bulge in demand late in 1959 and early in 1960. To meet this demand, during the four months beginning with December 1959, the steel companies hired thousands of new employees. The result was that as the bulge became a dip, more people became counted as unemployed from the steel industry than would otherwise have been the case.

The change in the competitive situation, which

**CHART 28**

**STEEL INDUSTRY INGOT PRODUCTION AND MAN-HOURS**
**YEAR TO YEAR PER CENT CHANGE**

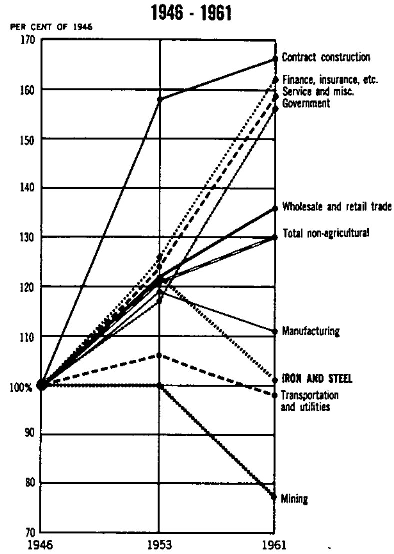



See Appendix Table 36A

Source: **Annual Statistical Reports**, American Iron and Steel Institute
Man-hours are for total wage and salaried employees engaged in the production and sale of iron and steel products.

**CHART 29**

**CHANGES IN NONAGRICULTURAL EMPLOYMENT**
**1946 - 1961**




Source: BLS Employment and Earnings Statistics

is discussed in Chapter I, can be seen in the production and employment figures set forth in Table 36A and in the behavior of the lines in Chart 28 after 1956 as compared with earlier periods. This has intensified the effect on steel employment of the general business recessions in 1958 and 1961.

### *Postwar Employment Trends*

Although there has been a great increase in employment in the United States during the postwar period, this increase has slowed up considerably in the last few years. During the second half of the period, from 1953 through 1961, employment in manufacturing has actually declined. Chart 29 and Table 8 show the changes in employment in the major nonagricultural sectors of the economy from 1946 to 1961.

Table 9 shows what has been happening within the manufacturing sector. Employment in the industries producing durable goods rose much faster in the first half of the postwar period than did employment in the non-durable goods industries. The decline of employment since 1953 has also been greater in the durable-goods industries.

The increase in steel employment from 1946 to 1953 was slightly more than the increase in manufacturing as a whole but considerably less than the increase in durable goods, of which steel is a component. The percentage of decline in steel employment from 1953 to 1961, which resulted from the substantial decline in the demand for steel, was equal to the decline in primary metals generally, considerably less than the decline in lumber products and transportation equipment but somewhat more than the decline in durable goods as a whole.

At the end of the 1946-1961 period, steel employment was slightly higher than it had been at the beginning.

Whether steel employment will expand in the future, and the rate of such possible expansion, depends to a large degree on the steel companies' success in developing broader markets for steel products—at home and abroad— and on their ability to meet the challenges mentioned in prior chapters, thus enabling them to compete effectively in those markets.

***Trends in Composition of Work Force***

Any attempt to measure employment trends, whether in a company, in an industry or otherwise, must ultimately be in terms of total employment, that is, in terms of a total number of all employees—whether management or non-management, whether paid wages or salaries, whether paid by the hour or by the job, and whether represented by unions or not. Any other kind of analysis deals not with employment but with characteristics of the work force.

In recent years, salaried employees have become a larger percentage of the work force in practically every industry, including steel. This trend is readily discernible in Table 10. There have been many reasons for this trend. The requirements for supervision, research, engineering and for operating and financial analysis, all of which assist in product and method improvement and cost and quality control, have been enlarged notably. Furthermore, competition for old markets being threatened by other materials and competition for new markets have led to larger sales staffs adaptable to new marketing approaches. All these groups of salaried employees have been added or enlarged because they have been found necessary and appropriate to the best competitive efforts of the respective companies.

The shift of employment in the direction of salaried personnel emphasizes that any proper measure of *employment* in any company or industry can only be in terms of total employment of all categories of employees. All of them are needed to round out the function which an enterprise is in business to perform.

***Average Weekly Hours in Steel and Other Industries***

Just as employment trends in the steel industry generally resemble trends in other manufacturing industries, so also do the number of hours per week. In attempting to judge how fully people are employed, it is necessary to consider the number of hours per week.

**TABLE 8**

**NONAGRICULTURAL EMPLOYMENT IN THE MAJOR INDUSTRY GROUPS 1946 - 1961**

**(in thousands)**

| | 1946 | 1953 | 1961 | Per Cent Change 1946-53 | Per Cent Change 1953-61 |
|---|---|---|---|---|---|
| Total Nonagricultural | 41,674 | 50,232 | 54,077 | 21% | 8% |
| Mining | 862 | 866 | 666 | — | —23 |
| Contract Construction | 1,661 | 2,623 | 2,760 | 58 | 5 |
| Manufacturing | 14,703 | 17,549 | 16,267 | 19 | — 7 |
| Transportation and Utilities | 4,061 | 4,290 | 3,923 | 6 | — 9 |
| Wholesale and Retail Trade | 8,376 | 10,247 | 11,368 | 22 | 11 |
| Finance, Insurance and Real Estate | 1,697 | 2,146 | 2,748 | 26 | 28 |
| Service and Miscellaneous | 4,719 | 5,867 | 7,516 | 24 | 28 |
| Government | 5,595 | 6,645 | 8,828 | 17 | 33 |
| Iron and Steel | 593 | 726 | 600 | 22 | —17 |

Source: BLS Employment and Earnings Statistics

**TABLE 9**

**MANUFACTURING EMPLOYMENT IN SELECTED INDUSTRIES 1946 - 61**

**(In thousands)**

| | 1946 | 1953 | 1961 | 1946-53 | 1953-61 |
|---|---|---|---|---|---|
| Total Manufacturing | 14,703 | 17,549 | 16,267 | 19% | — 7% |
| Durable Goods | 7,742 | 10,110 | 9,042 | 31 | —11 |
| Lumber | N.A. | 771 | 601 | N.A. | —22 |
| Stone, Clay and Glass | 498 | 581 | 567 | 17 | — 2 |
| Primary Metals | N.A. | 1,383 | 1,142 | N.A. | —17 |
| Iron and Steel | 593 | 726 | 600 | 22 | —17 |
| Fabricated Metals | N.A. | 937 | 1,076 | N.A. | 15 |
| Machinery | 1,255 | 1,554 | 1,401 | 24 | —10 |
| Electrical Equipment | 919 | 1,333 | 1,436 | 45 | 8 |
| Transportation Equip. | 1,250 | 1,969 | 1,523 | 58 | —23 |
| Motor Vehicles | 655 | 917 | 648 | 40 | —29 |
| Non-durable Goods | 6,962 | 7,438 | 7,225 | 7 | — 3 |
| Food | 1,767 | 1,839 | 1,780 | 4 | — 3 |
| Textiles | 1,264 | 1,155 | 880 | — 9 | —24 |
| Apparel | 1,146 | 1,248 | 1,200 | 9 | — 4 |
| Paper | 447 | 530 | 590 | 19 | 11 |
| Printing | 669 | 803 | 926 | 20 | 15 |
| Chemicals | 633 | 768 | 830 | 21 | 8 |
| Petroleum | 208 | 241 | 203 | 16 | —16 |
| Rubber and Plastics | 317 | 361 | 365 | 14 | 1 |

Source: BLS Employment and Earnings Statistics
N.A. — Not Available

**TABLE 10**

**PRODUCTION WORKER EMPLOYMENT AS A PERCENTAGE OF TOTAL EMPLOYMENT IN MANUFACTURING 1946 - 1961**

**(In thousands)**

| | 1946 | | 1961 | |
|---|---|---|---|---|
| | Number | Per Cent Total | Number | Per Cent Total |
| Total Manufacturing | 12,274 | 83.5% | 12,044 | 74.0% |
| Durable Goods | 6,412 | 82.8 | 6,613 | 73.1 |
| Lumber | N.A. | N.A. | 535 | 89.0 |
| Stone, Clay and Glass | 437 | 87.7 | 455 | 80.2 |
| Primary Metals | N.A. | N.A. | 915 | 80.1 |
| Iron and Steel | 517 | 87.2 | 482 | 80.3 |
| Fabricated Metals | N.A. | N.A. | 820 | 76.2 |
| Machinery | 971 | 77.4 | 965 | 68.9 |
| Electrical Equipment | 704 | 76.6 | 963 | 67.1 |
| Transportation Equipment | 1,000 | 80.0 | 1,035 | 68.0 |
| Motor Vehicles | 525 | 80.2 | 492 | 75.9 |
| Non-durable Goods | 5,862 | 84.2 | 5,431 | 75.2 |
| Food | 1,415 | 80.1 | 1,191 | 66.9 |
| Textiles | 1,190 | 94.1 | 793 | 90.1 |
| Apparel | 1,047 | 91.4 | 1,067 | 88.9 |
| Paper | 393 | 87.9 | 470 | 79.7 |
| Printing | 445 | 66.5 | 596 | 64.4 |
| Chemicals | 482 | 76.1 | 506 | 60.9 |
| Petroleum | 161 | 77.4 | 131 | 64.5 |
| Rubber | 260 | 82.0 | 280 | 76.7 |

Source: BLS Employment and Earnings Statistics
N.A. — Not Available

BLS publishes data showing the average number of weekly hours paid for in manufacturing industries for production and related workers. Those data are reproduced for the years 1947-1961, inclusive, in Appendix Table 37A. The figures must be used with some caution. Because they represent hours paid for rather than hours worked, they include time off with pay for such items as vacations, holidays, etc. Practices as to time off with pay vary from industry to industry and from time to time. In addition, the general organization of plants in an industry affects working schedules. For example, in the automobile industry temporary high levels of production are commonly met by working overtime—6 days per week rather than 5, a situation which is reversed when production falls. In steel, however, increases in production are usually accomplished mainly by increasing the number of units in operation, with the workweek generally remaining at the standard 40 hours. A 20 per cent increase in the number of automobiles assembled is likely to mean an increase in weekly hours from 40 to 48. In steelmaking, a similar increase in production ordinarily would not have a comparable effect.

An examination of the figures in Appendix Table 37A shows that the variation in average hours paid for per week has been remarkably small. In steel, the range is from a low of 37.3 in 1958 to a high of 40.8 in 1951. The range in manufacturing as a whole, 39.1 to 40.7, is of course less because of averaging of many industries. The range in durable goods manufacturing is from 39.4 to 41.5. The range in automobile manufacturing is somewhat greater than steel—from a low of 39.2 in 1948 to a high of 43.6 in 1955.

Thus, there is nothing unique about the number of hours paid for per week in the steel industry as compared with all manufacturing. With the exception of recession periods, the 40-hour week has been the prevailing pattern in the steel industry.

From time to time, the argument has been made that production workers in steel rarely work a full week. The figures used to support that argument are those published by American Iron and Steel Institute for average hours *worked* per week. Unlike the figures in Table 37A, those figures do not include time paid for but *not worked*. Consequently, employees working full time would be credited for only 32 hours worked in a week which included a paid holiday. The BLS average hours *paid for* would show 40 hours for the same people in that week. AISI figures are similarly affected by other absences which are paid for—vacations and jury duty. Thus, the annual average of hours *worked* per week can equal 40 only if substantial amounts of overtime are worked during the period. This can readily be shown by a simple example.

| | |
|---|---|
| 52 weeks x 40 hours | 2,080 hours |
| Less: | |
| Paid holidays 3½ days x 8 hours* | 28 |
| Paid vacations 2½ weeks x 40 hours** | 100 |
| Maximum possible hours worked on a 40-hour per week schedule | 1,952 hours |
| Annual average of hours **worked** per week | 37.5 |
| Annual average of hours **paid** per week | 40.0 |

Variations in average hours worked between years of low and high production are accentuated by the tendency in very good years to schedule work on holidays and to permit some employees to take pay in lieu of vacation. In years of low operations, the reverse is true; holidays are more likely to be observed and nearly all employees take their vacations. That difference can be quite large. For example, there are seven paid holidays in steel and the average vacation is about 2½ weeks.** If an employee worked 40 hours in each week of the year, his average hours per week would, of course, be 40. But if he did not work on any of the seven holidays and took his vacation, his average hours *worked* per week would be 37½, although his average hours *paid for* would be 40.

Appendix Table 38A reconciles the average hours *worked* per week by wage employees as reported by AISI, with average weekly hours of production and related workers *paid for* as reported by BLS for the years 1950 to 1961, inclusive.

***Mechanization and Automation in Steel***

A great deal has been said about the effects of "automation" on employment, not only in steel but also in other industries. The term "automation" does not have any commonly accepted meaning and, in fact, has been used to cover everything from the most common forms of mechanization to systems which control their own operations through self-regulation. In the former sense "automation" has

*About one half the force in steel normally works on holidays.
**Beginning in 1963, increases in the amount of regular vacations and supplemental vacations provided under the new Savings and Vacation Plan will raise this figure.

been going on in the steel industry since the application of water and steam power to its operations; in other words, since its beginning as a modern industry. In the latter sense, there is comparatively little "automation" of production processes in steel.

In either sense, however, "automation" (or mechanization) usually means substituting nonhuman for human energy and that process underlies all of modern industrial society. Without constantly increasing mechanization, American society as we know it would not exist. Better technology forms the foundation for the high and rising standard of living in the United States. One of the by-products of advancing technology is the changing composition of jobs. That type of change does not necessarily or even usually mean a reduction in employment. On the contrary, over the years, advancing technology has meant shipments of more and better finished steel rather than unemployment. It has also meant better jobs. Since the establishment of the program of job evaluation in 1947, the average job class of wage employees has risen slowly but steadily from just under 8 to just over 8.7.

Technological change is, of course, uneven and so are its effects on jobs. The installation of continuous hot strip mills during the middle and late 1920's and 1930's had a profound effect on the jobs of men who were employed in the hand sheet mills which the new mills replaced and in the bar mills which had produced the raw material for the hand mills. But that was the consequence of a combination of factors, the most important of which was the comparatively low demand for steel at the time. On the other hand, the substantial technological changes which took place after World War II occurred in conjunction with a heavy demand for steel and, therefore, had little, if any, effect on overall employment. "Technological unemployment" is really just another way of saying that demand has declined or leveled off.

The current concern over technological displacement of workers in steel arises from two factors. First, there is a belief in some quarters that the rate of technological change is accelerating, although this is not verified by data on the total number of man-hours required to produce a ton of steel. Second, as has been noted earlier, overall demand for steel slackened after the peak production year of 1955. Reassignment of the workers directly affected by a change to jobs providing either comparable earnings or an opportunity to advance to such jobs is, of course, more difficult when demand is falling than when it is rising. Seniority arrangements have an effect in this situation where displaced workers have to leave their "home" departments or seniority units. Characteristic seniority rules require that, except by specific agreement to the contrary, anyone coming into a unit for the first time is treated as a new employee in that unit no matter how much service he may have with his company. However, in the 1962 labor agreements, provision is made for increasing a displaced worker's job opportunities in other departments and plants of his company.

There are, of course, two quite different viewpoints as to technological change. Those not directly affected by it and those who benefit from it are inclined to look at the overall and long-run effects of change. Their attitude toward change is, consequently, favorable. But change is a source of fear to a worker who may lose his job entirely or may be moved to a lower-paying job as a result of the change. His interests are naturally, personal and immediate.

It is difficult to put together any meaningful statistical information bearing on the extent and consequences of displacements resulting from technological developments. There are, however, certain facts which help put the matter into perspective:

1. Major changes in steel employment have resulted from changes in the demand for steel —not from technological change. For example, between 1956 and 1957, years of comparable activity in steel, total employment increased by 3,100, but between 1957 and 1958, a recession year, it dropped by 100,400. (See Appendix Table 36A showing steel employment, production and shipments from 1939 to 1962).
2. As we will see, job openings resulting from normal employee turnover exceed any possible losses from technological change. Turnover from retirements and deaths alone amounts to about 2½ per cent per year while the average annual decline in man-hours required per ton of steel shipped is only 1.8 per cent.

3. Most technological change takes the form of modifications to existing facilities, or replacement of existing facilities by new ones.
4. Existing seniority arrangements tend to protect the longer-service worker against loss of his job where the operation is not entirely eliminated and to provide him with a job in another department or plant of the company if he cannot be retained at his original location.
5. Most employees who lose their jobs as a result of change are protected against total loss of income through state and Supplemental Unemployment Benefits, severance pay or pensions, all paid by the employing company.*
6. Except in periods of recession, it is frequently possible to assign displaced workers to other jobs in the same locality. While that may result in a reduction in earnings at the time, it is also quite likely to put the workers into jobs from which they can advance as they gain experience.**
7. The advance of technology in steel, in so far as it has affected employment, has been somewhat slower during the postwar period than it has in other industries. This is shown by the fact that output per man-hour in steel has increased less rapidly than output per man-hour in the entire private economy or in manufacturing.
8. Changes in the composition of the population over the next five to ten years portend a considerable increase in demand for housing and consumer durables, and in public and private capital spending. Any appreciable increase in steel demand will tend to eliminate the adverse effects of technological displacement, if the American steel industry is able to compete with foreign producers.
9. It is sometimes overlooked that the man-hours displaced as the immediate result of technological change exaggerate the impact of such change, since such man-hours are in part offset by the man-hours required to build and service the new equipment. Additional man-hours may also be required for scheduling, supervising and otherwise insuring the most efficient utilization of such equipment.

To sum up, the steel industry must continue to make technological progress for survival and growth to meet the nation's need for steel products. Such progress of itself has not served to depress steel industry employment. Dislocations from such progress are basically manageable unless there is also unemployment caused by cyclical or competitive factors.

*Normal Separations and Job Opportunities in Steel*

A point frequently overlooked in considering job opportunities is that each year substantial numbers of people leave the steel companies permanently because of retirement, death or a preference for other work. While the rate of separations from the companies in the steel industry is comparatively low, the number of job openings resulting from separations is not insignificant. Appendix Table 39A shows the average monthly separation rates in steel for reasons other than layoff for the years 1952 to 1961, inclusive, and the estimated number of those separations.† The number of separations is an indication of the number of job openings created by labor turnover. Since approximately 80 per cent of all employees are production and related workers, it is natural that by far the greatest number of separations occurred among production and related workers.

The significance of the figures in Appendix Table 39A is illustrated by the fact that during the last five years the steel industry is estimated to have required more than 300,000 new employees, an annual average of 60,000, to make up for the people who left the industry for reasons other than layoff.

A great many of the people who leave the industry are, of course, those with short service and they are concentrated in jobs of comparatively low skill. The turnover in that group is high enough to mean

*A portion of unemployment compensation tax is paid by covered employees in Alabama. In all other steel-producing states, the employer pays the entire tax.

**See Appendix Exhibits A and B which contain excerpts from the statement by R. Conrad Cooper before the Subcommittee on Unemployment and the Impact of Automation of the House Education and Labor Committee, March 28, 1961, and an article by William G. Caples, "Automation in Theory and Practice," in *Business Topics*, Michigan State University, Autumn 1960, describing case histories of technological change.

†Those rates are based on total employment rather than on employment of production and related workers only.

that a number of different people occupy the same job during a year. Thus, the number of permanent job openings resulting from the departures of short-service people is considerably less than the number of individuals involved. However, retirements and deaths generally involve employees of long service and higher skills. While data are not available for the industry showing reasons for separations, the data applying to one major company are believed to be representative of the industry as a whole. During the period 1954 to 1960, in that company about 82 per cent of all separations other than layoffs involving production workers resulted from quits and discharges and about 18 per cent from deaths and retirements. Of course, during periods of high business activity, quits are more numerous and retirements fewer than they are in slack periods. However, in good times or bad, between one quarter and one fifth of all the separations from steel industry employment provide openings in jobs at the upper end of the scale.

It is also significant that the annual rate of separations, excluding layoffs, in steel exceeds the annual rate of decline in man-hours used in producing a ton of finished steel. The weighted average annual separation rate, excluding layoffs per 100 employees, as reported by the Bureau of Labor Statistics, for the years 1954 to 1960 was about 12 per cent. If 20 per cent of that rate is attributable to retirements and deaths, the rate at which job openings occurred from those causes alone was nearly 2½ per cent per year. Man-hours per ton of steel shipped have declined historically at an average annual rate of about 1.8 per cent (see Chapter IV). This is a rough measure of the overall impact of technological change on the amount of work available for production and maintenance employees. Consequently, if those trends continued without any increase in steel production, there would be about three production and maintenance job openings just from the retirement or death of regular employees for every two production and maintenance jobs lost temporarily because of technological change. In addition, there would be an unknown number of job openings resulting from employees leaving their jobs voluntarily.

*Continuity of Employment in Steel*

Steel's main unemployment problem results from the fact that steel operations are very sensitive to changes in business conditions. That is because the industry depends heavily on demand for capital goods and consumer durable goods. Demand for these goods can be cut off abruptly when general business activity falls, and it can build up very rapidly when business activity rises. Purchases of capital and consumer durables are quickly affected by unfavorable changes in the business climate, because they can usually be postponed.

This problem should not be exaggerated. The comparison previously made between total employment and average weekly hours in steel with those in other industries shows that, to the extent such data measure stability of employment, steel does not differ much from other manufacturing industries. A comparison of the rate of separations from employment in steel with the other major manufacturing industries indicates that steel has fewer separations than most manufacturing industries (Appendix Table 40A).

The rate of layoffs, however, is more pertinent here to stability of employment, since the layoff rate is affected only by changes in the activity of the industry to which it applies. Appendix Table 41A shows the average monthly layoff rate per 100 employees for the same industry groups and years as Appendix Table 40A. Here again, steel has had a more favorable experience than manufacturing as a whole, except in the recession year of 1960. As previously mentioned, the number of layoffs in 1960 was affected by the very large number of new employees taken on to fill the heavy orders at the end of the 1959 strike.

However, the *duration* of layoffs is as important as the layoff rate, and comparative data on this are not available. However, as far as steel is concerned, information is available on continuity of employment in terms of (1) the number of weeks for which employees received pay and (2) the average number of hours worked by an employee for each year beginning with 1953 (Appendix Table 42A).

The figures shown in Appendix Table 42A apply to wage (hourly-paid) employees engaged in the manufacture and sale of steel who had continuous service at both the beginning and end of the particular year. They do not, therefore, cover employees who were newly hired or whose employment terminated during the year for reasons such as voluntary quit, retirement, death, etc., but they do include employees who were absent during all or part of the year because of layoff, illness, leave of absence or disabling injury. The proportion of wage employees covered by those figures to the average number of wage employees on the payroll varies somewhat from year to year.

The weeks involved are those for which an employee received pay; i.e., the weeks in which he worked plus weeks of paid vacation. Obviously, an employee who worked 49 weeks and was on paid vacation in three weeks was fully employed. The weeks do not include weeks of absence during which an employee received other income from company-financed sources: such as, sickness and accident benefits, state and Supplemental Unemployment Benefits and weekly benefit payments resulting from work-connected disability. Directly comparable data showing the number of days lost by the average employee because of personal illness and industrial and non-industrial accidents are not available. However, information relating to payments of sickness and accident benefits to wage employees of one major company shows that time lost through illness and accidents lasting long enough to result in payment of those benefits is about seven days per year for the average employee.

As the figures in Appendix Table 42A show, a majority of employees who were attached to the companies throughout the year were paid substantially full time; i.e., 51 weeks or more per year, except in 1960.

Merely receiving pay in nearly every week of the year does not necessarily mean full employment. Of greater importance is the number of hours worked or paid for in the year. As was noted earlier, the average employee who worked full time and did not have any absence because of disability could not have worked more than 1,952 hours per year without overtime and, if he lost the average amount of time because of illness, his total annual hours worked were about 1,896. As Appendix Table 42A shows, employees who received pay in 47 weeks or more, as would be expected, worked full schedules in the good years 1955 and 1957. More significant, however, is the fact that they averaged only 13 hours less than full time (1,896 hours) in 1954, only 61 hours less than full time in 1958, 17 hours less than full time in 1960, and seven hours less in 1961.

***Regularity of Income in Steel***

In the final analysis, an employee's interest in hours and weeks of work arises primarily from his interest in regularity of income. In steel, as in other industries, the income which an employee derives from his employment consists not only of wage payments but also payments financed by his employer for periods of absence arising from causes beyond the employee's control.

Employees having two or more years of service are covered by Supplemental Unemployment Benefit plans which, together with the benefits provided under state unemployment compensation systems, provide weekly benefits in the event of layoff equal to approximately 70 per cent of the employee's normal weekly after-tax wage for periods of unemployment up to 52 weeks.

Wage employees in steel are also covered by group insurance programs which, among other things, provide weekly sickness and accident benefits ranging from \$53 to \$68 for absences up to 26 weeks and which supplement Workmen's Compensation payments where those are less than the amount provided by the programs.

These two benefits, which are financed by the employers, constitute a very substantial part of the total cash income of employees who do not work full time either because of layoff or disability, as Tables 11 and 12 show.

The data in those tables show, as does Appendix Table 42A, that a majority of employees received pay in nearly every week of the year even in a year of comparatively low activity in the steel industry. They show also that when the companies are unable to provide full-time work or when employees are unable to work because of disability, the existing benefit programs established by collective bargaining agreements and by law provide a substantial measure of income protection.

For example, the group of employees (about 4 per cent of the total) who received pay in 12 weeks or less during 1961 also received from those programs cash benefits equal to more than 160 per cent of their wages.

Employment and income regularity are, of course, related to length of service and, therefore, to age. Seniority provisions in steel collective bargaining agreements are generally designed to give

TABLE 11

AVERAGE ANNUAL EARNINGS AND ANNUAL CASH INCOME FROM COMPANY-FINANCED SOURCES, WAGE EMPLOYEES 1961

| Weeks in which pay was received | Per Cent of all employees | Average amount of wages | Supplements to wages | Average amount of cash income* |
|---|---|---|---|---|
| 0-12 | 4.3% | $ 617 | $1,010 | $1,627 |
| 13-26 | 7.3 | 2,056 | 926 | 2,982 |
| 27-32 | 4.1 | 3,178 | 749 | 3,927 |
| 33-38 | 6.2 | 3,993 | 706 | 4,699 |
| 39-44 | 5.6 | 4,671 | 512 | 5,183 |
| 45-50 | 15.4 | 5,725 | 189 | 5,914 |
| 51-52 | 57.2 | 6,580 | 19 | 6,599 |

Source: American Iron and Steel Institute. The data are derived from a sample including approximately 28 per cent of the total number of wage employees covered by Institute statistics of wages and hours for the year 1961.

*Cash income includes wages and weekly benefit payments for absences resulting from disability (illness, non-industrial accident and industrial accident) and from layoff (state unemployment compensation and Supplemental Unemployment Benefits). Except in the case of state unemployment benefits in Alabama, all such payments are financed entirely by the employer.

greatest job protection to longer-service employees and substantial improvements in that direction were made in the 1962 agreements. The general picture shown by Table 13, which does not reflect the results of those seniority improvements, is that employees whose family and community responsibilities are greatest have the greatest degree of employment and income stability. This is, of course, as it should be.

TABLE 12

RELATIONSHIP OF WAGE SUPPLEMENTS TO WAGES 1961

| Weeks in which pay was received | Average amount of wages | Supplements to wages | Supplements as per cent of wages |
|---|---|---|---|
| 0-12 | $ 617 | $1,010 | 163.7% |
| 13-26 | 2,056 | 926 | 45.0 |
| 27-32 | 3,178 | 749 | 23.6 |
| 33-38 | 3,993 | 706 | 17.7 |
| 39-44 | 4,671 | 512 | 11.0 |
| 45-50 | 5,725 | 189 | 3.3 |
| 51-52 | 6,580 | 19 | 0.3 |

Source: Table 11

The scale of supplements to wages in steel is indicated by the fact that, in 1961, about $100 million were paid to employees in the form of the supplements reflected in Tables 11 to 13. In the same year, the steel companies contributed nearly

TABLE 13

LENGTH OF SERVICE AND AGE OF WAGE EMPLOYEES RELATED TO AVERAGE WAGES, CASH INCOME AND HOURS WORKED 1961

| Years of Service | Per Cent of Employees | Average Wages | Average Cash Income | Average Hours Worked |
|---|---|---|---|---|
| Under 2 | 1.5% | $3,088 | $3,284 | 1,076 |
| 2-4 | 9.0 | 3,757 | 4,071 | 1,246 |
| 5-9 | 23.0 | 4,682 | 5,066 | 1,468 |
| 10-14 | 23.9 | 5,482 | 5,761 | 1,614 |
| 15 and over | 42.5 | 6,309 | 6,467 | 1,716 |
| Total | — | $5,458 | $5,711 | 1,583 |
| **Age** | | | | |
| Under 21 | 0.5% | $3,238 | $3,438 | 1,167 |
| 21-30 | 17.1 | 4,279 | 4,639 | 1,354 |
| 31-40 | 28.6 | 5,315 | 5,606 | 1,609 |
| 41-50 | 28.1 | 5,862 | 6,076 | 1,650 |
| 51-60 | 19.3 | 6,049 | 6,232 | 1,688 |
| 61 and over | 6.4 | 5,880 | 6,065 | 1,687 |

Source: American Iron and Steel Institute (see notes to Table 11)

$380 million for those and other benefits (pensions, social security, life insurance, hospitalization and surgical coverage, etc.) for wage employees and their dependents. The 1962 steel labor agreements provided for increases in Supplemental Unemployment Benefits and pensions which are not reflected in those figures.

In addition to this, the 1962 agreement included new seniority features designed to increase the protection against layoff for longer service employees.

The 1962 agreements also included increases in the duration of regular annual vacations and a new plan providing additional weeks of vacation which may be taken currently or deferred until retirement. To the extent that vacationers must be replaced and the new plan encourages earlier retirements, those provisions will increase the number of job openings.

***Summary***

Employment in steel over the years has been remarkably steady, considering the cyclical nature of the industry. When business conditions have been poor, the Supplemental Unemployment Benefits system has helped a great deal to provide continuity of cash income for employees. In spite of swings in employment, the net change in steel employment since World War II has been substantially the same as that for manufacturing as a whole.

Steel's basic employment problem—layoffs during down-swings of the business cycle—is being dealt with reasonably well. The industry's high rates of pay, generous employee benefits and excellent working conditions indicate that it has been and continues to be a good employer. But there can be no doubt that the competitive challenges discussed in previous chapters have reduced employment in steel below what it might otherwise have been.

For the future there are two possibilities. The competitive challenge may continue to reduce potential employment opportunities. But if the steel companies succeed in meeting the competitive challenge, employment may expand. This success depends in part on the understanding and cooperation of the Steelworkers Union. In particular, future employment in steel will depend on what happens to employment costs. Continuing increases in employment costs would do much to reduce employment opportunities.

## APPENDIX TABLES AND EXHIBITS

## APPENDIX TABLES AND EXHIBITS *(Cont.)*

TABLE



EXHIBITS

## TABLE 1A

### TRENDS IN STEEL PRODUCTION, POPULATION AND CONSTANT-DOLLAR GNP

Indexes 1900 = 100

| Year | Ingot Production Net Tons | Population | Gross National Product in Constant Dollars | Year | Ingot Production Net Tons | Population | Gross National Product in Constant Dollars |
|---|---|---|---|---|---|---|---|
| 1900 | 100 | 100 | 100 | 1931 | 255.4 | 163.1 | 218.9 |
| 1901 | 132.1 | 102.0 | 109.4 | 1932 | 134.8 | 164.1 | 186.1 |
| 1902 | 146.4 | 104.1 | 110.9 | 1933 | 229.5 | 165.2 | 181.7 |
| 1903 | 142.0 | 105.9 | 116.6 | 1934 | 260.7 | 166.2 | 199.4 |
| 1904 | 135.7 | 108.0 | 115.4 | 1935 | 341.1 | 167.4 | 218.9 |
| 1905 | 195.5 | 110.1 | 122.9 | 1936 | 477.7 | 168.5 | 250.0 |
| 1906 | 226.8 | 112.2 | 136.2 | 1937 | 505.4 | 169.5 | 263.2 |
| 1907 | 226.8 | 114.3 | 140.2 | 1938 | 283.9 | 170.8 | 250.9 |
| 1908 | 137.5 | 116.6 | 130.2 | 1939 | 471.4 | 172.2 | 271.9 |
| 1909 | 233.9 | 118.9 | 150.5 | 1940 | 598.2 | 174.3 | 295.5 |
| 1910 | 252.7 | 121.4 | 154.5 | 1941 | 739.3 | 176.0 | 344.1 |
| 1911 | 231.2 | 123.4 | 158.4 | 1942 | 767.9 | 177.8 | 390.9 |
| 1912 | 304.5 | 125.2 | 167.9 | 1943 | 792.9 | 180.4 | 439.1 |
| 1913 | 304.5 | 127.7 | 169.2 | 1944 | 800.9 | 182.6 | 470.8 |
| 1914 | 228.6 | 130.2 | 162.1 | 1945 | 711.6 | 184.6 | 462.6 |
| 1915 | 314.3 | 132.1 | 161.1 | 1946 | 594.6 | 186.5 | 406.2 |
| 1916 | 417.9 | 134.0 | 173.5 | 1947 | 758.0 | 190.2 | 405.8 |
| 1917 | 444.6 | 135.9 | 174.3 | 1948 | 791.1 | 193.5 | 421.5 |
| 1918 | 437.5 | 137.5 | 192.2 | 1949 | 696.4 | 196.8 | 421.9 |
| 1919 | 340.2 | 138.1 | 191.8 | 1950 | 864.3 | 200.1 | 457.8 |
| 1920 | 412.5 | 139.9 | 181.6 | 1951 | 939.3 | 203.5 | 494.9 |
| 1921 | 192.9 | 142.6 | 166.2 | 1952 | 832.1 | 207.1 | 512.9 |
| 1922 | 347.3 | 144.7 | 192.5 | 1953 | 996.4 | 210.5 | 536.1 |
| 1923 | 437.5 | 147.2 | 215.7 | 1954 | 788.4 | 214.2 | 525.4 |
| 1924 | 369.6 | 149.9 | 215.4 | 1955 | 1044.6 | 218.1 | 567.5 |
| 1925 | 443.7 | 152.2 | 233.9 | 1956 | 1028.6 | 221.0 | 579.6 |
| 1926 | 472.3 | 154.3 | 246.9 | 1957 | 1006.2 | 226.0 | 589.8 |
| 1927 | 440.2 | 156.4 | 246.5 | 1958 | 761.6 | 229.8 | 576.9 |
| 1928 | 505.4 | 158.3 | 248.5 | 1959 | 833.9 | 233.7 | 616.3 |
| 1929 | 550.9 | 160.1 | 261.7 | 1960 | 886.6 | 237.4 | 636.2 |
| 1930 | 398.2 | 161.9 | 237.0 | 1961 | 875.0 | 241.5 | 647.3 |

Sources: Production: **Annual Statistical Reports**, American Iron and Steel Institute
Population: As of July 1. Bureau of the Census, U.S. Dept. of Commerce
Gross National Product: Office of Business Economics, U.S. Dept. of Commerce

## TABLE 2A

### APPARENT STEEL CONSUMPTION IN THE UNITED STATES COMPARED WITH AVERAGE POPULATION (5 year averages)

| | Apparent Steel Consumption* (Mil. N. T.) | Average Population (Mil.) | Avg/ Capita (N. T.) | Avg/ Capita (Lbs.) |
|---|---|---|---|---|
| 1901-05 | 16.3 | 80.7 | .202 | 404 |
| 1906-10 | 22.9 | 88.8 | .258 | 516 |
| 1911-15 | 28.2 | 97.2 | .290 | 580 |
| 1916-20 | 39.3 | 104.3 | .377 | 754 |
| 1921-25 | 37.8 | 112.1 | .337 | 674 |
| 1926-30 | 50.8 | 120.4 | .422 | 844 |
| 1931-35 | 26.6 | 125.7 | .212 | 424 |
| 1936-40 | 48.4 | 130.0 | .372 | 744 |
| 1941-45 | 77.6 | 136.7 | .567 | 1,134 |
| 1946-50 | 77.7 | 146.6 | .530 | 1,060 |
| 1951-55 | 100.4 | 159.7 | .629 | 1,258 |
| 1956-60 | 99.8 | 174.3 | .573 | 1,146 |
| 1961 | 98.7 | 183.7 | .537 | 1,074 |

Sources: **Annual Statistical Reports**, American Iron and Steel Institute
U.S. Bureau of Census

* Steel ingot production adjusted for net exports or imports in crude steel equivalent

## TABLE 3A

### FRB INDEX OF DURABLE GOODS PRODUCTION and INDEX OF AISI STEEL SHIPMENTS PLUS IMPORTS INDEX 1957 = 100

| | Durable Goods Production* | Shipments Plus Imports** |
|---|---|---|
| 1947 | 62 | 78 |
| 1948 | 64 | 81 |
| 1949 | 59 | 72 |
| 1950 | 71 | 90 |
| 1951 | 80 | 100 |
| 1952 | 85 | 85 |
| 1953 | 96 | 101 |
| 1954 | 85 | 79 |
| 1955 | 98 | 106 |
| 1956 | 100 | 104 |
| 1957 | 100 | 100 |
| 1958 | 87 | 76 |
| 1959 | 102 | 91 |
| 1960 | 104 | 92 |
| 1961 | 103 | 85 |

Sources: *Federal Reserve Board Bulletin
**Annual Statistical Reports, American Iron and Steel Institute

## TABLE 4A

### VALUE OF PACKAGING MATERIALS AND STEEL SHIPMENTS TO CONTAINERS

| | Value of Packaging Materials (Bil. 1959 $) | Steel Shipments to Containers (Mil. N.T.) |
|---|---|---|
| 1947 | 6.5 | 5.08 |
| 1948 | N.A. | 5.30 |
| 1949 | N.A. | 4.66 |
| 1950 | 7.7 | 5.91 |
| 1951 | 8.0 | 6.52 |
| 1952 | 7.8 | 5.55 |
| 1953 | 8.2 | 6.05 |
| 1954 | 8.1 | 5.87 |
| 1955 | 9.3 | 6.72 |
| 1956 | 9.4 | 6.82 |
| 1957 | 9.4 | 6.24 |
| 1958 | 9.1 | 6.57 |
| 1959 | 10.0 | 6.32 |
| 1960 | 10.0 | 6.43 |
| 1961 | 10.3 | 6.62 |

Sources: **Modern Packaging Encyclopedia**
**Annual Statistical Reports**, American Iron and Steel Institute
N.A.—Not Available

## TABLE 5A

### TOTAL ENERGY CONSUMPTION AND STEEL SHIPMENTS TO OIL AND GAS DRILLING AND CONSTRUCTION AND MINING, QUARRYING AND LUMBERING

| | Energy Consumption (Quad. BTU) | Steel Shipments to O&G Whse. (Mil. N.T.) | Steel Shipments to O&G Constr. (Mil. N.T.) | Steel Shipments to O&G Drilling (Mil. N.T.) | Steel Shipments to M, Q & L (Mil. N.T.) | Steel Shipments O & G, M, Q and L (Mil. N.T.) |
|---|---|---|---|---|---|---|
| 1947 | 32.87 | 0.94 | 1.32 | 0.93 | 0.29 | 3.48 |
| 1948 | 33.99 | 1.43 | 2.16 | 0.68 | 0.33 | 4.60 |
| 1949 | 31.60 | 1.34 | 2.54 | 0.60 | 0.27 | 4.75 |
| 1950 | 34.15 | 1.68 | 3.04 | 0.62 | 0.29 | 5.63 |
| 1951 | 36.91 | 1.68 | 2.67 | 0.84 | 0.38 | 5.57 |
| 1952 | 36.58 | 1.42 | 2.33 | 0.77 | 0.31 | 4.83 |
| 1953 | 37.70 | 1.76 | 2.94 | 0.76 | 0.32 | 5.78 |
| 1954 | 36.36 | 2.05 | 2.07 | 0.59 | 0.20 | 4.91 |
| 1955 | 39.96 | 2.20 | 2.45 | 0.79 | 0.27 | 5.71 |
| 1956 | 42.01 | 2.25 | 2.56 | 0.78 | 0.35 | 5.94 |
| 1957 | 41.92 | 2.32 | 3.47 | 0.70 | 0.33 | 6.82 |
| 1958 | 41.49 | 1.00 | 2.10 | 0.31 | 0.18 | 3.59 |
| 1959 | 43.51 | 1.89 | 2.26 | 0.54 | 0.24 | 4.93 |
| 1960 | 44.96 | 1.12 | 2.17 | 0.40 | 0.29 | 3.98 |
| 1961 | 45.87[1] | 1.53 | 2.02 | 0.36 | 0.27 | 4.18 |

Sources: U.S. Bureau of Mines
Annual Statistical Reports, American Iron and Steel Institute
[1]Preliminary

## TABLE 6A

### TOTAL INTERCITY FREIGHT TON MILES AND STEEL SHIPMENTS TO RAIL TRANPORTATION

| | Total Intercity Freight (Tril. Ton Mi.) | Steel Shipments to Rail Transportation (Mil. N.T.) |
|---|---|---|
| 1947 | 1.02 | 4.88 |
| 1948 | 1.04 | 5.23 |
| 1949 | 0.92 | 3.66 |
| 1950 | 1.06 | 4.30 |
| 1951 | 1.18 | 5.78 |
| 1952 | 1.14 | 3.99 |
| 1953 | 1.20 | 4.79 |
| 1954 | 1.12 | 2.46 |
| 1955 | 1.28 | 3.52 |
| 1956 | 1.36 | 4.23 |
| 1957 | 1.33 | 4.15 |
| 1958 | 1.22 | 1.47 |
| 1959 | 1.30 | 2.36 |
| 1960 | 1.33 | 2.53 |
| 1961 | 1.32 | 1.59 |

Sources: Interstate Commerce Commission
Annual Statistical Reports, American Iron and Steel Institute

## TABLE 7A

### AUTOMOTIVE PRODUCTION AND STEEL SHIPMENTS TO AUTOMOTIVE

| | Total Production (Mil. Units) | Autos (Mil. Units) | Trucks (Mil. Units) | Steel Shipments to Automotive (Mil. N.T.) |
|---|---|---|---|---|
| 1947 | 4.80 | 3.56 | 1.24 | 9.27 |
| 1948 | 5.29 | 3.91 | 1.38 | 10.22 |
| 1949 | 6.25 | 5.22 | 1.13 | 10.96 |
| 1950 | 8.00 | 6.66 | 1.34 | 14.47 |
| 1951 | 6.77 | 5.34 | 1.43 | 12.98 |
| 1952 | 5.54 | 4.32 | 1.22 | 10.85 |
| 1953 | 7.32 | 6.11 | 1.21 | 14.66 |
| 1954 | 6.60 | 5.56 | 1.04 | 11.79 |
| 1955 | 9.17 | 7.92 | 1.25 | 18.72 |
| 1956 | 6.92 | 5.82 | 1.10 | 14.14 |
| 1957 | 7.22 | 6.11 | 1.11 | 14.23 |
| 1958 | 5.14 | 4.26 | 0.88 | 10.13 |
| 1959 | 6.73 | 5.59 | 1.14 | 14.21 |
| 1960 | 7.87 | 6.67 | 1.19 | 14.61 |
| 1961 | 6.68 | 5.54 | 1.13 | 12.59 |

Sources: Statistical Report, Automobile Manufacturers Association
Annual Statistical Reports, American Iron and Steel Institute

## TABLE 8A

### FRB INDEX OF APPLIANCE PRODUCTION AND STEEL SHIPMENTS TO APPLIANCES

| | FRB Index of Appliance Production (1957 = 100) | Steel Shipments to Appliances (Mil. N.T.) |
|---|---|---|
| 1947 | 69 | 1.56 |
| 1948 | 77 | 1.96 |
| 1949 | 63 | 1.32 |
| 1950 | 92 | 2.09 |
| 1951 | 80 | 1.84 |
| 1952 | 72 | 1.36 |
| 1953 | 87 | 2.05 |
| 1954 | 85 | 1.44 |
| 1955 | 99 | 2.20 |
| 1956 | 110 | 2.13 |
| 1957 | 100 | 1.56 |
| 1958 | 99 | 1.59 |
| 1959 | 119 | 1.83 |
| 1960 | 118 | 1.76 |
| 1961 | 118 | 1.75 |

Sources: Federal Reserve Board Bulletin
Annual Statistical Reports, American Iron and Steel Institute

## TABLE 9A

### VALUE OF NEW CONSTRUCTION AND STEEL SHIPMENTS TO CONSTRUCTION (LESS OIL AND GAS) AND CONTRACTORS' PRODUCTS

| | Value of New Construction (Bil. 1959 $) | Steel Shipments to Construction (Less Oil & Gas) (Mil. N.T.) | Steel Shipments to Contractors' Products (Mil. N.T.) | Steel Shipments to Construction and Contractors' Products (Mil. N.T.) |
|---|---|---|---|---|
| 1947 | 26.86 | 5.34 | 2.24 | 7.58 |
| 1948 | 31.35 | 5.12 | 2.51 | 7.63 |
| 1949 | 33.16 | 4.94 | 2.13 | 7.07 |
| 1950 | 39.40 | 5.56 | 3.08 | 8.64 |
| 1951 | 39.84 | 6.91 | 3.08 | 9.99 |
| 1952 | 40.91 | 5.47 | 2.61 | 8.08 |
| 1953 | 42.78 | 6.98 | 3.32 | 10.30 |
| 1954 | 45.60 | 6.57 | 2.97 | 9.54 |
| 1955 | 49.77 | 7.23 | 3.98 | 11.21 |
| 1956 | 48.85 | 7.89 | 4.08 | 11.97 |
| 1957 | 49.30 | 9.05 | 3.40 | 12.45 |
| 1958 | 49.97 | 6.62 | 3.47 | 10.09 |
| 1959 | 56.56 | 6.25 | 3.57 | 9.82 |
| 1960 | 54.57 | 7.50 | 3.60 | 11.10 |
| 1961 | 55.85 | 7.24 | 3.85 | 11.09 |

Sources: Construction Review, U.S. Department of Commerce
Annual Statistical Reports, American Iron and Steel Institute

## TABLE 10A

### FRB INDEX OF MACHINERY PRODUCTION AND STEEL SHIPMENTS TO MACHINERY

| | FRB Index Total Machinery Production (1957 = 100) | Steel Shipments to Nonelectrical Machinery (Mil. N.T.) | Steel Shipments to Electrical Machinery (Mil. N.T.) | Steel Shipments to Machinery (Mil. N.T.) |
|---|---|---|---|---|
| 1947 | 63 | 3.03 | 1.60 | 4.63 |
| 1948 | 64 | 3.19 | 1.60 | 4.79 |
| 1949 | 57 | 2.71 | 1.21 | 3.92 |
| 1950 | 70 | 3.47 | 1.84 | 5.31 |
| 1951 | 80 | 4.25 | 2.02 | 6.27 |
| 1952 | 88 | 3.80 | 1.61 | 5.41 |
| 1953 | 96 | 4.33 | 2.11 | 6.44 |
| 1954 | 84 | 3.52 | 1.74 | 5.26 |
| 1955 | 93 | 4.70 | 2.29 | 6.99 |
| 1956 | 103 | 5.03 | 2.44 | 7.47 |
| 1957 | 100 | 4.51 | 2.09 | 6.60 |
| 1958 | 85 | 3.18 | 1.77 | 4.95 |
| 1959 | 103 | 4.16 | 2.05 | 6.21 |
| 1960 | 106 | 3.96 | 2.08 | 6.04 |
| 1961 | 106 | 3.76 | 1.97 | 5.73 |

Sources: Federal Reserve Board Bulletin
Annual Statistical Reports, American Iron and Steel Institute

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### TABLE 11A
### IMPORTANCE OF EXPORT MARKET FOR SELECTED COUNTRIES
Thousand Net Tons

| Countries | 1957 | | 1958 | | 1959 | | 1960 | | 1961 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N. T. | Per cent | N. T. | Per cent | N. T. | Per cent | N. T. | Per cent | N. T. | Per cent |
| United States | | | | | | | | | | |
| Ingot Production | 112,715 | 100.0% | 85,255 | 100.0% | 93,446 | 100.0% | 99,282 | 100.0% | 98,014 | 100.0% |
| Exports | 7,081 | 6.3 | 3,931 | 4.6 | 2,313 | 2.5 | 3,983 | 4.0 | 2,652 | 2.7 |
| Belgium/Luxembourg | | | | | | | | | | |
| Ingot Production | 10,736 | 100.0 | 10,324 | 100.0 | 11,130 | 100.0 | 12,411 | 100.0 | 12,243 | 100.0 |
| Total Exports | 8,651 | 80.6 | 8,774 | 85.0 | 9,430 | 84.7 | 11,115 | 89.6 | 9,509 | 77.7 |
| Exports to U. S. | 479 | 4.5 | 901 | 8.7 | 1,649 | 14.8 | 989 | 8.0 | 1,076 | 8.8 |
| France | | | | | | | | | | |
| Ingot Production | 19,322 | 100.0 | 19,930 | 100.0 | 18,744 | 100.0 | 19,062 | 100.0 | 19,400 | 100.0 |
| Total Exports | 6,277 | 32.5 | 6,605 | 33.1 | 8,397 | 44.8 | 8,099 | 42.5 | 7,294 | 37.6 |
| Exports to U. S. | 273 | 1.4 | 243 | 1.2 | 866 | 4.6 | 425 | 2.2 | 343 | 1.8 |
| West Germany | | | | | | | | | | |
| Ingot Production | 26,957 | 100.0 | 25,065 | 100.0 | 30,457 | 100.0 | 37,595 | 100.0 | 36,880 | 100.0 |
| Total Exports | 7,102 | 26.3 | 6,716 | 26.8 | 8,625 | 28.3 | 11,533 | 30.7 | 9,608 | 26.1 |
| Exports to U. S. | 253 | 0.9 | 240 | 1.0 | 929 | 3.1 | 725 | 1.9 | 364 | 1.0 |
| United Kingdom | | | | | | | | | | |
| Ingot Production | 24,303 | 100.0 | 21,914 | 100.0 | 22,609 | 100.0 | 27,222 | 100.0 | 24,736 | 100.0 |
| Total Exports | 4,427 | 18.2 | 3,758 | 17.1 | 4,163 | 18.4 | 4,556 | 16.7 | 4,459 | 18.0 |
| Exports to U. S. | 69 | 0.3 | 135 | 0.6 | 296 | 1.3 | 264 | 1.0 | 190 | 0.8 |
| Japan | | | | | | | | | | |
| Ingot Production | 13,827 | 100.0 | 13,332 | 100.0 | 18,330 | 100.0 | 24,404 | 100.0 | 31,165 | 100.0 |
| Total Exports | 1,297 | 9.4 | 2,274 | 17.1 | 2,202 | 12.0 | 3,294 | 13.5 | 3,437 | 11.0 |
| Exports to U. S. | 21 | 0.2 | 327 | 2.5 | 655 | 3.6 | 641 | 2.6 | 814 | 2.6 |

Sources: **Foreign Trade Trends**, 1962 Edition, American Iron and Steel Institute
**Statistics of World Trade in Steel, 1913-1959**, United Nations
**Statistics of World Trade in Steel, 1960**, United Nations
**Iron and Steel**, Statistical Office of the European Communities
**Statistical Yearbook**, Japan Iron and Steel Federation
**Annual Statistics**, British Iron and Steel Federation

Note: Exports are in ingot equivalent

## TABLE 12A

### TOTAL WORLD STEEL TRADE AND UNITED STATES STEEL EXPORTS

| | World Steel Trade (Mil. N.T.) | U. S. A. Steel Exports (Mil. N.T.) |
|---|---|---|
| 1947 | 11.0 | 5.9 |
| 1948 | 11.4 | 3.9 |
| 1949 | 13.5 | 4.3 |
| 1950 | 15.9 | 2.6 |
| 1951 | 19.1 | 3.1 |
| 1952 | 19.1 | 4.0 |
| 1953 | 18.4 | 3.0 |
| 1954 | 20.1 | 2.8 |
| 1955 | 28.8 | 4.1 |
| 1956 | 30.4 | 4.3 |
| 1957 | 33.9 | 5.3 |
| 1958 | 32.2 | 2.8 |
| 1959 | 35.7 | 1.7 |
| 1960 | 43.2 | 3.0 |
| 1961 | 41.5[1] | 2.0 |

Sources: United Nations Economic Commission for Europe
U. S. Department of Commerce
[1]Estimate

## TABLE 13A

### UNITED STATES IMPORTS AND EXPORTS OF STEEL MILL PRODUCTS

Net Tons

| Year | Imports | Exports |
|---|---|---|
| 1950 | 1,013,600 | 2,638,634 |
| 1951 | 2,176,996 | 3,136,639 |
| 1952 | 1,201,435 | 4,005,248 |
| 1953 | 1,702,991 | 2,990,751 |
| 1954 | 770,822 | 2,791,886 |
| 1955 | 973,155 | 4,060,998 |
| 1956 | 1,340,746 | 4,347,903 |
| 1957 | 1,154,831 | 5,347,678 |
| 1958 | 1,707,130 | 2,822,910 |
| 1959 | 4,396,354 | 1,676,652 |
| 1960 | 3,358,752 | 2,977,278 |
| 1961 | 3,164,256 | 1,989,179 |

Source: **Foreign Trade Trends**, 1962 Edition, American Iron and Steel Institute

## TABLE 14A

### UNITED STATES FOREIGN TRADE IN IRON AND STEEL MILL PRODUCTS 1950-1961

Millions of Dollars

| Year | Exports | Imports |
|---|---|---|
| 1950 | $466 | $ 87 |
| 1951 | 602 | 280 |
| 1952 | 609 | 189 |
| 1953 | 484 | 225 |
| 1954 | 465 | 103 |
| 1955 | 639 | 131 |
| 1956 | 762 | 212 |
| 1957 | 993 | 212 |
| 1958 | 563 | 230 |
| 1959 | 372 | 578 |
| 1960 | 610 | 506 |
| 1961 | 429 | 422 |

Source: U.S. Department of Commerce

NOTE: The coverage of this Table and Table 13A differ in that this Table includes products, such as castings and forgings, which are not normally considered to be steel mill products. However, the general trends indicated are reasonably representative.

## TABLE 15A

### UNITED STATES FOREIGN TRADE SITUATION IN SEMI-FINISHED PRODUCTS (INCL. WIRE RODS)

| | Net Tons | | | | | |
|---|---|---|---|---|---|---|
| Year | AISI Industry Shipments[1] | Imports[2] | Exports[2] | Total Supply | Imports % of Supply | Exports % of Shipments |
| 1950 | 4,062,099 | 292,846 | 182,594 | 4,172,351 | 7.0% | 4.5% |
| 1951 | 4,555,436 | 262,672 | 245,309 | 4,572,799 | 5.7 | 5.4 |
| 1952 | 4,277,787 | 105,420 | 885,174 | 3,498,033 | 3.0 | 20.7 |
| 1953 | 4,457,786 | 199,101 | 197,826 | 4,459,061 | 4.5 | 4.4 |
| 1954 | 2,737,253 | 48,625 | 94,938 | 2,690,940 | 1.8 | 3.5 |
| 1955 | 4,818,540 | 193,862 | 721,116 | 4,291,286 | 4.5 | 15.0 |
| 1956 | 4,321,173 | 92,233 | 528,758 | 3,884,648 | 2.4 | 12.2 |
| 1957 | 3,945,369 | 62,431 | 721,166 | 3,286,634 | 1.9 | 18.3 |
| 1958 | 2,428,719 | 199,412 | 124,326 | 2,503,805 | 8.0 | 5.1 |
| 1959 | 2,869,682 | 539,893 | 34,650 | 3,374,925 | 16.0 | 1.2 |
| 1960 | 2,821,227 | 476,694 | 129,134 | 3,168,787 | 15.0 | 4.6 |
| 1961 | 2,547,651 | 630,716 | 185,240 | 2,993,127 | 21.1 | 7.3 |

Sources: [1] Annual Statistical Reports, American Iron and Steel Institute
[2] U.S. Department of Commerce

## TABLE 16A

### UNITED STATES FOREIGN TRADE SITUATION IN STRUCTURAL SHAPES AND PILING

| | Net Tons | | | | | |
|---|---|---|---|---|---|---|
| Year | AISI Industry Shipments[1] | Imports[2] | Exports[2] | Total Supply | Imports % of Supply | Exports % of Shipments |
| 1950 | 4,539,930 | 174,766 | 164,578 | 4,550,118 | 3.8% | 3.6% |
| 1951 | 5,321,043 | 452,147 | 243,801 | 5,529,389 | 8.2 | 4.6 |
| 1952 | 4,372,712 | 313,288 | 199,960 | 4,486,040 | 7.0 | 4.6 |
| 1953 | 5,364,906 | 451,106 | 245,190 | 5,570,822 | 8.1 | 4.6 |
| 1954 | 4,888,837 | 124,573 | 288,697 | 4,724,713 | 2.6 | 5.9 |
| 1955 | 5,128,335 | 110,071 | 289,305 | 4,949,101 | 2.2 | 5.6 |
| 1956 | 5,783,084 | 348,912 | 372,895 | 5,759,101 | 6.1 | 6.4 |
| 1957 | 7,387,469 | 268,472 | 470,978 | 7,184,963 | 3.7 | 6.4 |
| 1958 | 4,404,580 | 150,912 | 305,528 | 4,249,964 | 3.6 | 6.9 |
| 1959 | 4,431,204 | 506,784 | 240,074 | 4,697,914 | 10.8 | 5.4 |
| 1960 | 5,258,692 | 317,347 | 294,937 | 5,281,102 | 6.0 | 5.6 |
| 1961 | 4,734,606 | 293,228 | 222,576 | 4,805,258 | 6.1 | 4.7 |

Sources: [1] Annual Statistical Reports, American Iron and Steel Institute
[2] U.S. Department of Commerce

TABLE 17A

UNITED STATES FOREIGN TRADE SITUATION IN RAILS AND ACCESSORIES

| Year | AISI Industry Shipments[1] | Net Tons Imports[2] | Exports[2] | Total Supply | Imports % of Supply | Exports % of Shipments |
|---|---|---|---|---|---|---|
| 1950 | 2,889,561 | 6,911 | 151,068 | 2,745,404 | 0.3% | 5.2% |
| 1951 | 3,173,926 | 11,220 | 155,508 | 3,029,638 | 0.4 | 4.9 |
| 1952 | 2,532,822 | 4,514 | 208,038 | 2,329,298 | 0.2 | 8.2 |
| 1953 | 3,107,967 | 3,255 | 252,675 | 2,858,547 | 0.1 | 8.1 |
| 1954 | 1,816,305 | 3,871 | 114,112 | 1,706,064 | 0.2 | 6.3 |
| 1955 | 2,132,218 | 7,387 | 67,769 | 2,071,836 | 0.4 | 3.2 |
| 1956 | 2,293,117 | 8,388 | 87,103 | 2,214,402 | 0.4 | 3.8 |
| 1957 | 2,264,875 | 5,419 | 235,166 | 2,035,128 | 0.3 | 10.4 |
| 1958 | 988,866 | 4,932 | 164,921 | 828,877 | 0.6 | 16.7 |
| 1959 | 1,188,973 | 9,587 | 81,524 | 1,117,036 | 0.9 | 6.9 |
| 1960 | 1,265,674 | 10,396 | 133,684 | 1,142,386 | 0.9 | 10.6 |
| 1961 | 838,591 | 22,611 | 109,055 | 752,147 | 3.0 | 13.0 |

Sources:[1] Annual Statistical Reports, American Iron and Steel Institute
[2] U.S. Department of Commerce

TABLE 18A

UNITED STATES FOREIGN TRADE SITUATION IN REINFORCING BARS

| Year | AISI Industry Shipments[1] | Net Tons Imports[2] | Exports[2] | Total Supply | Imports % of Supply | Exports % of Shipments |
|---|---|---|---|---|---|---|
| 1950 | 1,674,079 | 60,421 | 18,589 | 1,715,911 | 3.5% | 1.1% |
| 1951 | 1,900,125 | 138,417 | 44,423 | 1,994,119 | 6.9 | 2.3 |
| 1952 | 1,813,146 | 124,942 | 92,848 | 1,845,240 | 6.8 | 5.1 |
| 1953 | 1,848,851 | 107,819 | 53,352 | 1,903,318 | 5.7 | 2.9 |
| 1954 | 1,750,957 | 164,199 | 29,807 | 1,885,349 | 8.7 | 1.7 |
| 1955 | 2,164,641 | 158,972 | 73,970 | 2,249,643 | 7.1 | 3.4 |
| 1956 | 2,518,691 | 173,303 | 97,302 | 2,594,692 | 6.7 | 3.9 |
| 1957 | 2,300,127 | 160,376 | 84,720 | 2,375,783 | 6.8 | 3.7 |
| 1958 | 2,034,795 | 473,017 | 24,729 | 2,483,083 | 19.0 | 1.2 |
| 1959 | 2,173,462 | 851,951 | 13,775 | 3,011,638 | 28.3 | 0.6 |
| 1960 | 2,214,498 | 515,523 | 15,465 | 2,714,556 | 18.9 | 0.7 |
| 1961 | 2,442,250 | 583,125 | 15,681 | 3,009,694 | 19.4 | 0.6 |

Sources:[1] Annual Statistical Reports, American Iron and Steel Institute
[2] U.S. Department of Commerce

TABLE 19A

UNITED STATES FOREIGN TRADE SITUATION IN OTHER BARS AND TOOL STEEL

| Year | AISI Industry Shipments[1] | Imports[2] | Exports[2] | Total Supply | Imports % of Supply | Exports % of Shipments |
|---|---|---|---|---|---|---|
| | Net Tons | | | | | |
| 1950 | 9,732,173 | 108,537 | 99,245 | 9,741,465 | 1.1% | 1.0% |
| 1951 | 11,037,512 | 244,583 | 153,280 | 11,128,815 | 2.2 | 1.4 |
| 1952 | 10,154,575 | 111,934 | 166,242 | 10,100,267 | 1.1 | 1.6 |
| 1953 | 11,633,956 | 99,501 | 123,343 | 11,610,114 | 0.9 | 1.1 |
| 1954 | 7,549,881 | 125,086 | 60,924 | 7,614,043 | 1.6 | 0.8 |
| 1955 | 10,790,751 | 124,017 | 131,831 | 10,782,937 | 1.1 | 1.2 |
| 1956 | 10,702,584 | 223,198 | 200,750 | 10,725,032 | 2.1 | 1.9 |
| 1957 | 8,985,400 | 102,691 | 129,911 | 8,958,180 | 1.2 | 1.4 |
| 1958 | 6,740,250 | 176,280 | 98,369 | 6,818,161 | 2.6 | 1.5 |
| 1959 | 8,441,171 | 487,129 | 53,817 | 8,874,483 | 5.5 | 0.6 |
| 1960 | 8,387,552 | 324,945 | 69,369 | 8,643,128 | 3.8 | 0.8 |
| 1961 | 7,629,741 | 323,557 | 75,601 | 7,877,697 | 4.1 | 1.0 |

Sources:[1] Annual Statistical Reports, American Iron and Steel Institute
[2] U.S. Department of Commerce

TABLE 20A

UNITED STATES FOREIGN TRADE SITUATION IN PIPE AND TUBING

| Year | AISI Industry Shipments[1] | Imports[2] | Exports[2] | Total Supply | Imports % of Supply | Exports % of Shipments |
|---|---|---|---|---|---|---|
| | Net Tons | | | | | |
| 1950 | 8,953,840 | 40,500 | 640,632 | 8,353,708 | 0.5% | 7.2% |
| 1951 | 9,311,871 | 239,609 | 666,330 | 8,885,150 | 2.7 | 7.2 |
| 1952 | 8,280,408 | 274,066 | 710,019 | 7,844,455 | 3.5 | 8.6 |
| 1953 | 9,858,638 | 237,805 | 612,579 | 9,483,864 | 2.5 | 6.2 |
| 1954 | 8,157,736 | 66,268 | 465,357 | 7,758,647 | 0.9 | 5.7 |
| 1955 | 9,835,983 | 77,107 | 350,155 | 9,562,935 | 0.8 | 3.6 |
| 1956 | 10,198,428 | 140,362 | 782,966 | 9,555,824 | 1.5 | 7.7 |
| 1957 | 10,875,127 | 190,835 | 1,185,102 | 9,880,860 | 1.9 | 10.9 |
| 1958 | 6,747,847 | 200,044 | 623,044 | 6,324,847 | 3.2 | 9.2 |
| 1959 | 8,310,682 | 553,137 | 266,342 | 8,597,477 | 6.2 | 3.2 |
| 1960 | 7,052,424 | 480,009 | 195,226 | 7,337,207 | 6.5 | 2.8 |
| 1961 | 7,066,766 | 521,257 | 211,096 | 7,376,927 | 7.1 | 3.0 |

Sources:[1] Annual Statistical Reports, American Iron and Steel Institute
[2] U.S. Department of Commerce

## TABLE 21A

### UNITED STATES FOREIGN TRADE SITUATION IN WIRE AND WIRE PRODUCTS

| Year | AISI Industry Shipments[1] | Imports[2] | Net Tons Exports[2] | Total Supply | Imports % of Supply | Exports % of Shipments |
|---|---|---|---|---|---|---|
| 1950 | 4,547,301 | 102,602 | 59,906 | 4,589,997 | 2.2% | 1.3% |
| 1951 | 4,849,578 | 92,739 | 110,038 | 4,831,279 | 1.9 | 2.3 |
| 1952 | 3,919,913 | 54,810 | 106,785 | 3,867,938 | 1.4 | 2.7 |
| 1953 | 3,802,689 | 76,502 | 53,954 | 3,825,237 | 2.0 | 1.4 |
| 1954 | 3,472,376 | 196,388 | 44,716 | 3,624,048 | 5.4 | 1.3 |
| 1955 | 4,329,553 | 245,324 | 49,337 | 4,525,540 | 5.4 | 1.1 |
| 1956 | 3,943,002 | 247,403 | 56,242 | 4,134,163 | 6.0 | 1.4 |
| 1957 | 3,355,600 | 301,099 | 39,437 | 3,617,262 | 8.3 | 1.2 |
| 1958 | 3,051,058 | 432,185 | 35,055 | 3,448,188 | 12.5 | 1.1 |
| 1959 | 3,363,093 | 703,458 | 25,700 | 4,040,851 | 17.4 | 0.8 |
| 1960 | 2,974,768 | 547,265 | 28,926 | 3,493,107 | 15.7 | 1.0 |
| 1961 | 3,035,276 | 562,159 | 25,807 | 3,571,628 | 15.7 | 0.9 |

Sources:[1] Annual Statistical Reports, American Iron and Steel Institute
[2] U.S. Department of Commerce

## TABLE 22A

### UNITED STATES FOREIGN TRADE SITUATION IN TIN MILL PRODUCTS

| Year | AISI Industry Shipments[1] | Imports[2] | Net Tons Exports[2] | Total Supply | Imports % of Supply | Exports % of Shipments |
|---|---|---|---|---|---|---|
| 1950 | 5,314,244 | 4,289 | 496,107 | 4,822,426 | 0.09% | 9.3% |
| 1951 | 5,591,987 | 445 | 636,995 | 4,955,437 | 0.01 | 11.4 |
| 1952 | 5,062,970 | 2,550 | 658,397 | 4,407,123 | 0.06 | 13.0 |
| 1953 | 5,410,427 | 419 | 585,099 | 4,825,747 | 0.01 | 10.8 |
| 1954 | 5,660,366 | 145 | 809,645 | 4,850,866 | * | 14.3 |
| 1955 | 6,402,119 | 47 | 967,594 | 5,434,572 | * | 15.1 |
| 1956 | 6,330,193 | 1,047 | 847,871 | 5,483,369 | 0.02 | 13.4 |
| 1957 | 5,936,564 | 106 | 802,471 | 5,134,199 | * | 13.5 |
| 1958 | 6,108,682 | 183 | 494,800 | 5,614,065 | * | 8.1 |
| 1959 | 5,832,781 | 67,111 | 459,853 | 5,440,039 | 1.23 | 7.9 |
| 1960 | 6,041,686 | 39,263 | 685,971 | 5,394,978 | 0.73 | 11.4 |
| 1961 | 6,122,072 | 19,105 | 480,482 | 5,660,695 | 0.34 | 7.8 |

Sources:[1] Annual Statistical Reports, American Iron and Steel Institute
[2] U.S. Department of Commerce
*Less than 0.01

## TABLE 23A

### UNITED STATES FOREIGN TRADE SITUATION IN SHEETS AND STRIP

| Year | AISI Industry Shipments[1] | Imports[2] (Net Tons) | Exports[2] (Net Tons) | Total Supply | Imports % of Supply | Exports % of Shipments |
|---|---|---|---|---|---|---|
| 1950 | 24,841,971 | 60,409 | 713,691 | 24,188,689 | 0.2% | 2.9% |
| 1951 | 25,276,878 | 149,866 | 720,413 | 24,706,331 | 0.6 | 2.9 |
| 1952 | 20,583,156 | 66,074 | 745,719 | 19,903,511 | 0.3 | 3.6 |
| 1953 | 26,998,399 | 394,518 | 664,969 | 26,727,948 | 1.5 | 2.5 |
| 1954 | 21,778,753 | 39,985 | 729,329 | 21,089,409 | 0.2 | 3.3 |
| 1955 | 32,353,046 | 54,670 | 1,194,217 | 31,213,499 | 0.2 | 3.7 |
| 1956 | 29,446,273 | 55,279 | 1,075,352 | 28,426,200 | 0.2 | 3.7 |
| 1957 | 25,595,421 | 41,233 | 1,074,633 | 24,562,021 | 0.2 | 4.2 |
| 1958 | 22,141,216 | 50,044 | 703,430 | 21,487,830 | 0.2 | 3.2 |
| 1959 | 26,946,863 | 385,945 | 435,333 | 26,897,475 | 1.4 | 1.6 |
| 1960 | 29,001,110 | 435,565 | 1,333,128 | 28,103,547 | 1.5 | 4.6 |
| 1961 | 25,759,860 | 171,056 | 566,289 | 23,364,627 | 0.7 | 2.2 |

Sources: [1] Annual Statistical Reports, American Iron and Steel Institute
[2] U.S. Department of Commerce

## TABLE 24A

### STEEL INDUSTRY CAPITAL EXPENDITURES, DEPRECIATION, DEPLETION AND AMORTIZATION 1946-1961

| Year | Capital Expenditures for Additions, Improvements & Replacements (Millions) | Depreciation, Depletion and Amortization (Millions) |
|---|---|---|
| 1946 | $ 365 | $169 |
| 1947 | 554 | 239 |
| 1948 | 642 | 302 |
| 1949 | 483 | 278 |
| 1950 | 505 | 327 |
| 1951 | 1,051 | 374 |
| 1952 | 1,298 | 450 |
| 1953 | 988 | 614 |
| 1954 | 609 | 670 |
| 1955 | 714 | 737 |
| 1956 | 1,311 | 748 |
| 1957 | 1,723 | 766 |
| 1958 | 1,137 | 673 |
| 1959 | 934 | 665 |
| 1960 | 1,521 | 698 |
| 1961 | 978 | 729 |

Source: Annual Statistical Reports, American Iron and Steel Institute

## TABLE 25A

### COMPENSATION OF EMPLOYEES vs. CORPORATE PROFITS 1940 and 1947-1961

| Year | National Totals: Compensation of Employees (Billions) | Corporate Profits (Billions) | Profits Per Cent of Compensation |
|---|---|---|---|
| 1940 | $ 52.1 | $ 6.5 | 12.5% |
| 1947 | 128.8 | 18.2 | 14.1 |
| 1948 | 141.0 | 20.5 | 14.5 |
| 1949 | 140.8 | 16.0 | 11.3 |
| 1950 | 154.2 | 22.8 | 14.8 |
| 1951 | 180.3 | 19.7 | 10.9 |
| 1952 | 195.0 | 17.2 | 8.8 |
| 1953 | 208.8 | 18.1 | 8.7 |
| 1954 | 207.6 | 16.8 | 8.1 |
| 1955 | 223.9 | 23.0 | 10.3 |
| 1956 | 242.5 | 23.5 | 9.7 |
| 1957 | 255.5 | 22.3 | 8.7 |
| 1958 | 257.1 | 18.8 | 7.3 |
| 1959 | 278.4 | 24.5 | 8.8 |
| 1960 | 293.7 | 23.0 | 7.8 |
| 1961 | 302.2 | 23.3 | 7.7 |

Source: U.S. Department of Commerce for both total compensation of employees and for corporate profits

## TABLE 26A

## PROFIT (LOSS) RANGE AS PER CENT OF SALES
### 30 Leading Ingot Producers

| Rank | Year 1961 | 1957-1960 Average |
|---|---|---|
| 1 | 9.4% | 10.3% |
| 2 | 8.9 | 9.4 |
| 3 | 8.8 | 8.6 |
| 4 | 7.6 | 8.5 |
| 5 | 7.5 | 8.5 |
| 6 | 6.5 | 8.4 |
| 7 | 6.5 | 7.0 |
| 8 | 6.4 | 7.0 |
| 9 | 6.0 | 6.8 |
| 10 | 5.9 | 6.4 |
| 11 | 5.7 | 6.2 |
| 12 | 5.1 | 6.0 |
| 13 | 5.0 | 6.0 |
| 14 | 4.9 | 5.9 |
| 15 | 4.4 | 5.3 |
| 16 | 4.2 | 5.0 |
| 17 | 4.1 | 5.0 |
| 18 | 4.0 | 4.3 |
| 19 | 3.7 | 4.0 |
| 20 | 3.6 | 4.0 |
| 21 | 3.2 | 3.9 |
| 22 | 2.5 | 3.1 |
| 23 | 1.4 | 2.8 |
| 24 | 1.4 | 2.8 |
| 25 | 1.1 | 2.1 |
| 26 | .9 | 1.6 |
| 27 | .2 | 1.4 |
| 28 | ( .5) | 1.4 |
| 29 | ( .6) | 0.6 |
| 30 | (12.9) | 0.5 |

Source: As reported by **STEEL Magazine**, April 2, 1962

## TABLE 27A

## COMPARISON OF STEEL INDUSTRY RETURN ON NET ASSETS WITH AVERAGE RATE OF RETURN FOR LEADING MANUFACTURING INDUSTRIES*

| | Average Return on Net Assets | | Per Cent by Which Steel Industry Return was ABOVE (+) or BELOW (—) | Steel Industry Ranking Among Leading Manufacturing Industries | Number of Leading Industrial Categories Covered |
|---|---|---|---|---|---|
| Year | Steel Industry | Leading Manufacturing Industries | Average Rate of Return for Leading Mfg. Industries | | |
| 1940 | 8.5% | 10.3% | —18% | 32nd | 45 |
| 1941 | 9.6 | 12.4 | —23 | 40th | 44 |
| 1942 | 6.5 | 10.1 | —36 | 45th | 45 |
| 1943 | 5.6 | 9.9 | —43 | 43rd | 44 |
| 1944 | 5.2 | 9.8 | —47 | 44th | 45 |
| 1945 | 5.0 | 9.1 | —45 | 44th | 45 |
| 1946 | 7.5 | 12.1 | —38 | 41st | 45 |
| 1947 | 11.3 | 17.0 | —33 | 42nd | 45 |
| 1948 | 14.0 | 18.9 | —26 | 38th | 45 |
| 1949 | 11.5 | 13.8 | —17 | 24th | 45 |
| 1950 | 15.3 | 17.1 | —10 | 28th | 45 |
| 1951 | 12.3 | 14.4 | —15 | 25th | 46 |
| 1952 | 8.8 | 12.3 | —28 | 35th | 46 |
| 1953 | 11.6 | 12.5 | — 7 | 21st | 46 |
| 1954 | 9.4 | 12.4 | —24 | 32nd | 46 |
| 1955 | 15.2 | 15.0 | + 1 | 14th | 41 |
| 1956 | 13.9 | 13.9 | 0 | 17th | 41 |
| 1957 | 13.2 | 12.8 | + 3 | 17th | 41 |
| 1958 | 8.2 | 9.8 | —16 | 27th | 41 |
| 1959 | 8.4 | 11.7 | —28 | 35th | 41 |
| 1960 | 7.8 | 10.6 | —26 | 29th | 41 |
| 1961 | 6.4 | 10.1 | —37 | 33rd | 41 |

*Computed from First National City Bank, Monthly Letters, April issues.

## TABLE 28A

### FEDERAL CORPORATION INCOME TAX RATES*

| Income Year | Per Cent | Income Year | Per Cent |
|---|---|---|---|
| 1913 | 1 | 1940 | 24 |
| 14 | 1 | 41 | 31 |
| 15 | 1 | 42 | 40 |
| 16 | 2 | 43 | 40 |
| 17 | 6 | 44 | 40 |
| 18 | 12 | 45 | 40 |
| 19 | 10 | 46 | 38 |
| 1920 | 10 | 47 | 38 |
| 21 | 10 | 48 | 38 |
| 22 | 12.5 | 49 | 38 |
| 23 | 12.5 | 1950 | 42 |
| 24 | 12.5 | 51 | 50.75 |
| 25 | 13 | 52 | 52 |
| 26 | 13.5 | 53 | 52 |
| 27 | 13.5 | 54 | 52 |
| 28 | 12 | 55 | 52 |
| 29 | 11 | 56 | 52 |
| 1930 | 12 | 57 | 52 |
| 31 | 12 | 58 | 52 |
| 32 | 13.75 | 59 | 52 |
| 33 | 13.75 | 1960 | 52 |
| 34 | 13.75 | 61 | 52 |
| 35 | 13.75 | | |
| 36 | 15 | | |
| 37 | 15 | | |
| 38 | 19 | | |
| 39 | 19 | | |

Source: U.S. Department of the Treasury

*Normal plus surtax per cent of taxable income excluding excess profits and other taxes

## TABLE 29A

## STEEL INGOT PRODUCTION U.S.A. vs U.S. POPULATION 1900-1961

| Year | Production of Ingots and Steel for Castings U.S.A. Million Tons[1] | U. S. Population Million Persons[2] | Year | Production of Ingots and Steel for Castings U.S.A. Million Tons[1] | U. S. Population Million Persons[2] |
|---|---|---|---|---|---|
| 1900 | 11.2 | 76.1 | 1931 | 28.6 | 124.1 |
| 01 | 14.8 | 77.6 | 32 | 15.1 | 124.9 |
| 02 | 16.4 | 79.2 | 33 | 25.7 | 125.7 |
| 03 | 15.9 | 80.6 | 34 | 29.2 | 126.5 |
| 04 | 15.2 | 82.2 | 35 | 38.2 | 127.4 |
| 05 | 21.9 | 83.8 | 36 | 53.5 | 128.2 |
| 06 | 25.4 | 85.4 | 37 | 56.6 | 129.0 |
| 07 | 25.4 | 87.0 | 38 | 31.8 | 130.0 |
| 08 | 15.4 | 88.7 | 39 | 52.8 | 131.0 |
| 09 | 26.2 | 90.5 | 1940 | 67.0 | 132.1 |
| 1910 | 28.3 | 92.4 | 41 | 82.8 | 133.4 |
| 11 | 25.9 | 93.9 | 42 | 86.0 | 134.9 |
| 12 | 34.1 | 95.3 | 43 | 88.8 | 136.7 |
| 13 | 34.1 | 97.2 | 44 | 89.6 | 138.4 |
| 14 | 25.6 | 99.1 | 45 | 79.7 | 140.0 |
| 15 | 35.2 | 100.5 | 46 | 66.6 | 141.4 |
| 16 | 46.8 | 102.0 | 47 | 84.9 | 144.1 |
| 17 | 49.8 | 103.4 | 48 | 88.6 | 146.6 |
| 18 | 49.0 | 104.6 | 49 | 78.0 | 149.2 |
| 19 | 38.1 | 105.1 | 1950 | 96.8 | 151.7 |
| 1920 | 46.2 | 106.5 | 51 | 105.2 | 154.4 |
| 21 | 21.6 | 108.5 | 52 | 93.2 | 157.0 |
| 22 | 38.9 | 110.1 | 53 | 111.6 | 159.6 |
| 23 | 49.0 | 112.0 | 54 | 88.3 | 162.4 |
| 24 | 41.4 | 114.1 | 55 | 117.0 | 165.3 |
| 25 | 49.7 | 115.8 | 56 | 115.2 | 168.2 |
| 26 | 52.9 | 117.4 | 57 | 112.7 | 171.2 |
| 27 | 49.3 | 119.0 | 58 | 85.3 | 174.1 |
| 28 | 56.6 | 120.5 | 59 | 93.4 | 177.3 |
| 29 | 61.7 | 121.8 | 1960 | 99.3 | 180.7 |
| 30 | 44.6 | 123.2 | 61 | 98.0 | 183.7 |

Sources: (1) **Annual Statistical Reports**, American Iron and Steel Institute
(2) As of July 1. U.S. Bureau of the Census

TABLE 30A

INCREASE IN AVERAGE HOURLY EARNINGS, SELECTED INDUSTRIES
1940, 1950 AND 1961

| Industry | Average Hourly Earnings 1940 | 1950 | 1961 | Increase 1940-1961 | Increase 1950-1961 |
|---|---|---|---|---|---|
| Blast Furnaces, Steel & Rolling Mills* | $ .844 | $1.691 | $3.20 | $2.356 | $1.509 |
| Petroleum Refining | .976 | 1.936 | 3.16 | 2.184 | 1.224 |
| Bituminous Coal | .854 | 1.944 | 3.14 | 2.286 | 1.196 |
| Tires and Inner Tubes | .961 | 1.820 | 3.07 | 2.109 | 1.250 |
| Metal Cans | .629 | 1.476 | 2.90 | 2.271 | 1.424 |
| Motor Vehicles and Equipment | .936 | 1.778 | 2.87 | 1.934 | 1.092 |
| Aircraft Engines and Engine Parts | .816 | 1.662 | 2.81 | 1.994 | 1.148 |
| Crude Petroleum and Natural Gas Fields | .845 | 1.721 | 2.78 | 1.935 | 1.059 |
| Ship and Boat Building | .865 | 1.628 | 2.78 | 1.915 | 1.152 |
| Metal Mining | .721 | 1.536 | 2.74 | 2.019 | 1.204 |
| Mining — Copper | .712 | 1.566 | 2.73 | 2.018 | 1.164 |
| Machine Tools, Metal Cutting Types | .780 | 1.621 | 2.70 | 1.920 | 1.079 |
| Meatpacking | .661 | 1.399 | 2.69 | 2.029 | 1.291 |
| Class I Railroads | .733 | 1.572 | 2.67 | 1.937 | 1.098 |
| Cement, Hydraulic | .711 | 1.441 | 2.63 | 1.919 | 1.189 |
| Malleable Iron Foundries | .699 | 1.599 | 2.54 | 1.841 | .941 |
| Telephone Communication | .827 | 1.398 | 2.37 | 1.543 | .972 |
| Synthetic Fibers | .688 | 1.479 | 2.36 | 1.672 | .881 |
| Electrical Equipment and Supplies | (a) | 1.444 | 2.35 | (a) | .906 |
| Wholesale Trade | .711 | 1.427 | 2.31 | 1.599 | .883 |
| Quarrying and Nonmetallic Mining | .557 | 1.334 | 2.28 | 1.723 | .946 |
| Food and Kindred Products | (a) | 1.262 | 2.18 | (a) | .918 |
| Bakery Products | .606 | 1.277 | 2.18 | 1.574 | .903 |
| Paper Board Containers and Boxes | .547 | 1.297 | 2.18 | 1.633 | .883 |
| Leather Tanning and Finishing | .636 | 1.405 | 2.13 | 1.494 | .725 |
| Structural Clay Products | .550 | 1.331 | 2.08 | 1.530 | .749 |
| Watches and Clocks | .582 | 1.338 | 2.04 | 1.458 | .702 |
| Canning and Preserves | .467 | 1.173 | 1.85 | 1.383 | .677 |
| Textile-Mill Products | (a) | 1.228 | 1.63 | (a) | .402 |
| Apparel and Related Products | (a) | 1.240 | 1.63 | (a) | .390 |
| General Merchandise Stores | .451 | .948 | 1.46 | 1.009 | .512 |
| Men's and Boys' Shirts and Nightwear | .414 | .988 | 1.34 | .926 | .352 |
| All Manufacturing | .655 | 1.440 | 2.32 | 1.665 | .880 |
| Durable Goods | .716 | 1.519 | 2.49 | 1.774 | .971 |

Source: U.S. Bureau of Labor Statistics
(a) Not available * See footnote, Table 45A

## TABLE 31A

### SALES, COSTS AND INCOME
### STEEL INDUSTRY*
### 1940, 1947-1961

| | 1940 | 1947 | 1948 | 1949** | 1950 | 1951 | 1952** | 1953 | 1954 | 1955 | 1956** | 1957 | 1958 | 1959** | 1960 | 1961 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Billions of Dollars | | | | | | | | | | | | | | | |
| Products and Services Sold*** | $ 3.3 | $ 6.7 | $ 8.1 | $ 7.4 | $ 9.5 | $11.8 | $10.8 | $13.2 | $10.6 | $14.0 | $15.3 | $15.6 | $12.6 | $14.2 | $14.2 | $13.4 |
| COSTS: | | | | | | | | | | | | | | | | |
| Employment Costs | 1.2 | 2.5 | 2.9 | 2.6 | 3.2 | 3.8 | 3.8 | 4.5 | 3.9 | 4.7 | 5.1 | 5.5 | 4.8 | 5.1 | 5.5 | 5.4 |
| Products and Services Bought | 1.4 | 3.2 | 3.9 | 3.5 | 4.3 | 5.5 | 5.4 | 6.1 | 4.6 | 6.1 | 7.0 | 6.7 | 5.2 | 6.4 | 6.0 | 5.6 |
| Wear and Exhaustion of Facilities | .2 | .2 | .3 | .3 | .3 | .4 | .5 | .6 | .7 | .7 | .7 | .8 | .7 | .7 | .7 | .7 |
| Interest and Other Costs on Debt | # | # | # | # | # | # | # | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 | .1 |
| Income and Other Taxes | .2 | .4 | .5 | .5 | .9 | 1.4 | .6 | 1.2 | .7 | 1.3 | 1.3 | 1.4 | 1.0 | 1.1 | 1.1 | .9 |
| Total | $ 3.0 | $ 6.3 | $ 7.6 | $ 6.9 | $ 8.7 | $11.1 | $10.3 | $12.5 | $10.0 | $12.9 | $14.2 | $14.5 | $11.8 | $13.4 | $13.4 | $12.7 |
| Income | $ .3 | $ .4 | $ .5 | $ .5 | $ .8 | $ .7 | $ .5 | $ .7 | $ .6 | $ 1.1 | $ 1.1 | $ 1.1 | $ .8 | $ .8 | $ .8 | $ .7 |
| | Per Cent of Sales (a) | | | | | | | | | | | | | | | |
| Products and Services Sold*** | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| COSTS: | | | | | | | | | | | | | | | | |
| Employment Costs | 35.9 | 36.7 | 34.9 | 35.0 | 33.1 | 32.3 | 34.9 | 34.0 | 36.7 | 33.5 | 33.3 | 35.5 | 38.2 | 36.1 | 38.9 | 40.1 |
| Products and Services Bought | 44.4 | 47.7 | 48.4 | 47.3 | 45.7 | 46.3 | 49.8 | 46.3 | 43.2 | 43.6 | 45.8 | 43.2 | 41.8 | 45.2 | 42.3 | 41.9 |
| Wear and Exhaustion of Facilities | 5.4 | 3.6 | 3.7 | 3.7 | 3.4 | 3.2 | 4.1 | 4.7 | 6.3 | 5.2 | 4.9 | 4.9 | 5.3 | 4.7 | 4.9 | 5.4 |
| Interest and Other Costs on Debt | 1.2 | .3 | .2 | .3 | .3 | .2 | .4 | .4 | .5 | .4 | .4 | .4 | .6 | .7 | .7 | .9 |
| Income and Other Taxes | 5.1 | 5.6 | 6.1 | 6.6 | 9.5 | 12.2 | 5.8 | 9.0 | 7.3 | 9.5 | 8.3 | 8.7 | 7.8 | 7.5 | 7.5 | 6.5 |
| Total | 92.0% | 93.9% | 93.3% | 92.9% | 92.0% | 94.2% | 95.0% | 94.4% | 94.0% | 92.2% | 92.7% | 92.7% | 93.7% | 94.2% | 94.3% | 94.8% |
| Income | 8.0% | 6.1% | 6.7% | 7.1% | 8.0% | 5.8% | 5.0% | 5.6% | 6.0% | 7.8% | 7.3% | 7.3% | 6.3% | 5.8% | 5.7% | 5.2% |
| MEMO: | | | | | | | | | | | | | | | | |
| Steel Products Shipped (Millions of Tons) | 46.0 | 63.1 | 66.0 | 58.1 | 72.2 | 78.9 | 68.0 | 80.2 | 63.2 | 84.7 | 83.3 | 79.9 | 59.9 | 69.4 | 71.1 | 66.1 |
| Operating Rate | 82.1% | 93.0% | 94.1% | 81.1% | 96.9% | 100.9% | 85.8% | 94.9% | 71.0% | 93.0% | 89.8% | 84.5% | 60.6% | 63.3% | 66.8% | N.A. |

Source: **Annual Statistical Reports**, American Iron and Steel Institute
N.A. Not available
*Financial data are as reported by companies representing approximately 95% of the steel industry's production of steel ingots, as reported to American Iron and Steel Institute
**Strike year
***Includes interest, dividends and other income
# Less than $50 million
(a) Per Cent of Sales calculated before rounding

TABLE 32A

**TOTAL EMPLOYMENT COST PER HOUR WORKED**
**Steel Industry**
**Wage Employees Engaged in Production and Sale of Iron and Steel Products**

| Year | Regular Pay | Total Payments for Time on the Job | Total Payments to Employees | Total Employment Cost Per Hour Worked |
|---|---|---|---|---|
| | Dollars Per Hour Worked | | | |
| 1940 | $ .836 | $ .843 | $ .855 | $ .905 |
| 1941 | .928 | .944 | .962 | 1.012 |
| 1942 | 1.013 | 1.044 | 1.063 | 1.113 |
| 1943 | 1.044 | 1.121 | 1.140 | 1.190 |
| 1944 | 1.064 | 1.167 | 1.228 | 1.278 |
| 1945 | 1.073 | 1.200 | 1.257 | 1.307 |
| 1946 | 1.228 | 1.279 | 1.354 | 1.404 |
| 1947 | 1.393 | 1.456 | 1.513 | 1.563 |
| 1948 | 1.502 | 1.573 | 1.629 | 1.679 |
| 1949 | 1.574 | 1.633 | 1.703 | 1.753 |
| 1950 | 1.603 | 1.681 | 1.746 | 1.908 |
| 1951 | 1.769 | 1.872 | 1.945 | 2.114 |
| 1952 | 1.924 | 2.044 | 2.148 | 2.315 |
| 1953 | 2.023 | 2.145 | 2.267 | 2.440 |
| 1954 | 2.107 | 2.190 | 2.333 | 2.512 |
| 1955 | 2.246 | 2.376 | 2.509 | 2.722 |
| 1956 | 2.407 | 2.542 | 2.700 | 2.954 |
| 1957 | 2.582 | 2.729 | 2.917 | 3.216 |
| 1958 | 2.787 | 2.931 | 3.181 | 3.513 |
| 1959 | 2.896 | 3.144 | 3.417 | 3.798 |
| 1960 | 2.916 | 3.094 | 3.349 | 3.820 |
| 1961 | 3.054 | 3.241 | 3.501 | 3.989 |

Source: **Annual Statistical Reports**, American Iron and Steel Institute

TABLE 33A

**AVERAGE HOURLY EARNINGS PER HOUR PAID FOR (BLS)**
**Steel vs. Other Industries**

| Year | Steel Industry | All Manufacturing | Auto Industry |
|---|---|---|---|
| | Dollars per Hour Paid for | | |
| 1940 | $ .84 | $ .66 | $ .94 |
| 1941 | .94 | .73 | 1.04 |
| 1942 | 1.02 | .85 | 1.17 |
| 1943 | 1.12 | .96 | 1.24 |
| 1944 | 1.16 | 1.01 | 1.27 |
| 1945 | 1.18 | 1.02 | 1.27 |
| 1946 | 1.28 | 1.08 | 1.35 |
| 1947 | 1.44 | 1.22 | 1.47 |
| 1948 | 1.58 | 1.33 | 1.61 |
| 1949 | 1.65 | 1.38 | 1.70 |
| 1950 | 1.69 | 1.44 | 1.78 |
| 1951 | 1.92 | 1.56 | 1.91 |
| 1952 | 2.02 | 1.65 | 2.05 |
| 1953 | 2.19 | 1.74 | 2.14 |
| 1954 | 2.23 | 1.78 | 2.20 |
| 1955 | 2.41 | 1.86 | 2.29 |
| 1956 | 2.57 | 1.95 | 2.35 |
| 1957 | 2.73 | 2.05 | 2.46 |
| 1958 | 2.91 | 2.11 | 2.55 |
| 1959 | 3.10 | 2.19 | 2.71 |
| 1960 | 3.08 | 2.26 | 2.81 |
| 1961 | 3.20 | 2.32 | 2.87 |

Source: U.S. Bureau of Labor Statistics

## TABLE 34A

## STEEL INDUSTRY EMPLOYMENT COSTS & SHIPMENTS, BLS AVERAGE HOURLY EARNINGS PER HOUR PAID FOR AND NATIONAL PRODUCTIVITY

INDEX 1940 = 100

| | STEEL INDUSTRY Per Hour Worked[1] | | BLS Average Hourly Earnings Per Hour Paid For[2] | | |
|---|---|---|---|---|---|
| Year | Employment Costs* | Shipments** | Steel Industry # | All Manufacturing | National Productivity[3]† |
| 1940 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1947 | 172.7 | 115.2 | 170.6 | 184.8 | 117.3 |
| 1948 | 185.5 | 115.4 | 187.1 | 201.5 | 119.6 |
| 1949 | 193.7 | 115.5 | 195.3 | 209.1 | 122.4 |
| 1950 | 210.8 | 126.9 | 200.0 | 218.2 | 130.1 |
| 1951 | 233.6 | 125.2 | 223.5 | 236.4 | 131.5 |
| 1952 | 255.8 | 121.9 | 235.3 | 250.0 | 133.2 |
| 1953 | 269.6 | 127.2 | 256.5 | 263.6 | 136.4 |
| 1954 | 277.6 | 120.6 | 261.2 | 269.7 | 137.6 |
| 1955 | 300.8 | 140.6 | 281.2 | 281.8 | 144.0 |
| 1956 | 326.4 | 140.8 | 298.8 | 295.5 | 143.4 |
| 1957 | 355.4 | 139.4 | 317.6 | 310.6 | 145.9 |
| 1958 | 388.2 | 130.2 | 338.8 | 319.7 | 147.3 |
| 1959 | 419.7 | 147.5 | 360.0 | 331.8 | 152.2 |
| 1960 | 422.1 | 139.6 | 357.6 | 342.4 | 154.9 |
| 1961 | 440.8 | 139.2 | 371.8 | 351.5 | N.A. |

Sources: (1) **Annual Statistical Reports**, American Iron and Steel Institute
(2) U.S. Bureau of Labor Statistics
(3) **Productivity Trends in the United States**, Dr. John W. Kendrick, Princeton University Press, for 1940-1953. For 1954-1960 from 42nd Annual Report, National Bureau of Economic Research, Inc. June, 1962.
N.A. — Not Available

*Wage employees engaged in the production and sale of iron and steel products

**Hourly and salaried employees engaged in steel producing; does not represent productivity, since this factor is only one component of productivity and percentage-wise usually rises faster than the total

#Blast-furnaces, steelworks and rolling mills

†Output per unit of total input—private domestic economy

## TABLE 35A

### EMPLOYMENT COSTS, PRICES AND NET INCOME STEEL INDUSTRY

| Year | Employment Costs* Per Hour Worked[1] | Finished Steel Mill Product Prices[2] | Net Income as Per Cent of Total Revenue[1] |
|---|---|---|---|
| | Index 1940 = 100 | | Per Cent |
| 1940 | 100.0 | 100.0 | 8.0% |
| 1947 | 172.7 | 130.8 | 6.1 |
| 1948 | 185.5 | 148.8 | 6.7 |
| 1949 | 193.7 | 161.1 | 7.1 |
| 1950 | 210.8 | 169.2 | 8.0 |
| 1951 | 233.6 | 182.8 | 5.8 |
| 1952 | 255.8 | 186.8 | 5.0 |
| 1953 | 269.6 | 201.0 | 5.6 |
| 1954 | 277.6 | 209.7 | 6.0 |
| 1955 | 300.8 | 219.5 | 7.8 |
| 1956 | 326.4 | 238.0 | 7.3 |
| 1957 | 355.4 | 260.7 | 7.3 |
| 1958 | 388.2 | 269.8 | 6.3 |
| 1959 | 419.7 | 274.3 | 5.8 |
| 1960 | 422.1 | 273.9 | 5.7 |
| 1961 | 440.8 | 272.8 | 5.2 |

Sources: (1) **Annual Statistical Reports**, American Iron and Steel Institute
(2) U.S. Bureau of Labor Statistics

*Wage employees engaged in production and sale of iron and steel products

## TABLE 36A

### STEEL INDUSTRY EMPLOYMENT, SHIPMENTS, PRODUCTION 1939-1962

| | Average Number of Employees | Steel Products Shipped | Ingot Production |
|---|---|---|---|
| Years: | | | |
| 1939 | 449,641 | 34,955,175 | 52,798,714 |
| 1940 | 511,328 | 45,965,971 | 66,982,686 |
| 1941 | 570,736 | 60,942,979 | 82,839,259 |
| 1942 | 582,925 | 60,591,052 | 86,031,931 |
| 1943 | 564,308 | 62,210,261 | 88,836,512 |
| 1944 | 533,651 | 63,250,519 | 89,641,600 |
| 1945 | 515,003 | 56,602,322 | 79,701,648 |
| 1946 | 538,148 | 48,775,532 | 66,602,724 |
| 1947 | 573,669 | 63,057,150 | 84,894,071 |
| 1948 | 591,547 | 65,973,138 | 88,640,470 |
| 1949 | 580,824 | 58,104,010 | 77,978,176 |
| 1950 | 592,261 | 72,232,292 | 96,836,075 |
| 1951 | 638,327 | 78,928,950 | 105,199,848 |
| 1952 | 621,907 | 68,003,612 | 93,168,039 |
| 1953 | 650,205 | 80,151,893 | 111,609,719 |
| 1954 | 581,922 | 63,152,726 | 88,311,652 |
| 1955 | 624,764 | 84,717,444 | 117,036,085 |
| 1956 | 620,734 | 83,251,168 | 115,216,149 |
| 1957 | 623,834 | 79,894,577 | 112,714,996 |
| 1958 | 523,451 | 59,914,433 | 85,254,885 |
| 1959 | 515,057 | 69,377,067 | 93,446,132 |
| 1960 | 571,552 | 71,149,218 | 99,281,601 |
| 1961 | 523,305 | 66,125,505 | 98,014,492 |
| 1961 | | | |
| 1Q | 484,584 | 13,918,681 | 19,741,491 |
| 2Q | 517,415 | 17,309,317 | 25,117,169 |
| 3Q | 544,733 | 17,316,477 | 25,667,742 |
| 4Q | 546,487 | 17,581,030 | 27,488,090 |
| 1962 | | | |
| 1Q | 563,302 | 21,208,611 | 30,635,007 |
| 2Q | 540,364 | 18,293,440 | 23,463,172 |

Source: **Annual Statistical Reports**, American Iron and Steel Institute.

NOTE: There are two published series of figures on employment in the steel industry, one published by American Iron and Steel Institute (Table 36A) and the other published by the Bureau of Labor Statistics (Tables 8, 9 and 10). The coverage and methods used in developing the series differ.

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## TABLE 37A

### AVERAGE WEEKLY HOURS PAID FOR — MAJOR MANUFACTURING INDUSTRY GROUPS (PRODUCTION AND RELATED WORKERS)

| | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Manufacturing | 40.4 | 40.0 | 39.1 | 40.5 | 40.6 | 40.7 | 40.5 | 39.6 | 40.7 | 40.4 | 39.8 | 39.2 | 40.3 | 39.7 | 39.8 |
| Durable goods | 40.5 | 40.4 | 39.4 | 41.1 | 41.5 | 41.5 | 41.2 | 40.2 | 41.3 | 41.0 | 40.3 | 39.5 | 40.7 | 40.1 | 40.2 |
| Ordnance and accessories | 41.2 | 41.3 | 39.7 | 41.6 | 43.3 | 42.5 | 40.7 | 39.9 | 40.4 | 41.5 | 40.5 | 40.8 | 41.2 | 40.7 | 40.8 |
| Furniture and fixtures | 41.5 | 41.0 | 40.0 | 41.8 | 41.1 | 41.4 | 40.9 | 40.0 | 41.4 | 40.7 | 39.9 | 39.3 | 40.7 | 40.0 | 39.9 |
| Stone, clay and glass products | 41.0 | 40.7 | 39.7 | 41.1 | 41.4 | 41.1 | 40.8 | 40.5 | 41.4 | 41.1 | 40.4 | 40.0 | 41.2 | 40.6 | 40.7 |
| Primary metal industries | 39.9 | 40.2 | 38.4 | 40.9 | 41.6 | 40.8 | 41.0 | 38.8 | 41.3 | 41.0 | 39.6 | 38.3 | 40.5 | 39.0 | 39.5 |
| **Blast furnaces, steel & rolling mills*** | **39.0** | **39.5** | **38.3** | **39.9** | **40.8** | **39.9** | **40.4** | **37.7** | **40.4** | **40.4** | **39.0** | **37.3** | **39.8** | **38.0** | **38.7** |
| Fabricated metal products | 40.9 | 40.7 | 39.7 | 41.5 | 41.8 | 41.7 | 41.8 | 40.8 | 41.7 | 41.3 | 40.9 | 39.9 | 40.9 | 40.5 | 40.5 |
| Machinery (exc. elec.) | 41.5 | 41.3 | 39.6 | 41.9 | 43.5 | 43.0 | 42.4 | 40.7 | 42.0 | 42.3 | 41.1 | 39.8 | 41.5 | 41.0 | 40.9 |
| Electrical equipment and supplies | 40.3 | 40.1 | 39.5 | 41.1 | 41.2 | 41.2 | 40.8 | 39.8 | 40.7 | 40.8 | 40.1 | 39.6 | 40.5 | 39.8 | 40.2 |
| Transportation equipment | 39.7 | 39.4 | 39.6 | 41.4 | 41.2 | 41.8 | 41.6 | 40.9 | 42.3 | 41.4 | 40.8 | 40.0 | 40.7 | 40.7 | 40.5 |
| Motor vehicles and equipment (autos.) | 39.8 | 39.2 | 39.7 | 42.1 | 40.4 | 41.4 | 42.0 | 41.5 | 43.6 | 41.2 | 40.9 | 39.7 | 41.1 | 41.0 | 40.1 |
| Non-durable goods | 40.2 | 39.6 | 38.9 | 39.7 | 39.5 | 39.7 | 39.6 | 39.0 | 39.9 | 39.6 | 39.2 | 39.8 | 39.7 | 39.2 | 39.3 |
| Food and kindred products | 43.2 | 42.4 | 41.9 | 41.9 | 42.1 | 41.9 | 41.5 | 41.3 | 41.5 | 41.3 | 40.8 | 40.8 | 41.0 | 40.9 | 40.9 |
| Textile mill products | 39.6 | 39.2 | 37.6 | 39.6 | 38.8 | 39.1 | 39.1 | 38.3 | 40.1 | 39.7 | 38.9 | 38.6 | 40.4 | 39.5 | 39.9 |
| Apparel and related products | 36.0 | 35.8 | 35.4 | 36.0 | 35.6 | 36.3 | 36.1 | 35.3 | 36.3 | 36.0 | 35.7 | 35.1 | 36.3 | 35.5 | 35.4 |
| Paper and allied products | 43.1 | 42.8 | 41.7 | 43.3 | 43.1 | 42.8 | 43.0 | 42.3 | 43.1 | 42.8 | 42.3 | 41.9 | 42.8 | 42.2 | 42.5 |
| Printing, publishing, etc. | 40.2 | 39.4 | 38.8 | 38.9 | 38.9 | 38.9 | 39.0 | 38.5 | 38.9 | 38.9 | 38.6 | 38.0 | 38.5 | 38.5 | 38.2 |
| Chemicals and allied products | 41.2 | 41.2 | 40.7 | 41.2 | 41.3 | 40.9 | 41.0 | 40.8 | 41.1 | 41.1 | 40.9 | 40.7 | 41.4 | 41.3 | 41.4 |
| Petroleum refining and related industries | 40.6 | 40.6 | 40.3 | 40.8 | 40.8 | 40.5 | 40.7 | 40.7 | 40.9 | 41.0 | 40.8 | 40.9 | 41.2 | 41.1 | 41.2 |
| Rubber & misc. plastic products | 39.9 | 39.2 | 38.4 | 41.0 | 40.7 | 40.8 | 40.4 | 39.8 | 41.8 | 40.4 | 40.6 | 39.2 | 41.3 | 39.9 | 40.3 |

Sources: BLS Employment and Earnings Statistics for the United States, 1909-1960 (1957 S.I.C.), Issued 1961.
BLS Employment and Earnings, June 1962.
BLS Handbook of Labor Statistics, 1950 edition.

*The years after 1950 are based on the revised Standard Industrial Classification 3312 (1957), Blast Furnaces, Steel and Rolling Mills. Data for that classification are not available prior to 1951; consequently the weekly hours of the classification Blast Furnaces, Steel Works and Rolling Mills (SIC 331-1945) have been used for the years 1947 to 1950 inclusive.

## TABLE 38A

### AVERAGE WEEKLY HOURS WORKED BY WAGE EMPLOYEES IN STEEL

| | Average Hours Worked per Employee | Estimated Avg. Hours Paid For But Not Worked* | Total | BLS Avg. Hours Paid For |
|---|---|---|---|---|
| 1950 | 39.0 | 1.5 | 40.5 | 39.9 |
| 1951 | 40.2 | 1.5 | 41.7 | 40.8 |
| 1952 | 35.8** | 1.7 | 37.5 | 39.9 |
| 1953 | 39.4 | 2.2 | 41.6 | 40.8 |
| 1954 | 36.1 | 2.3 | 38.4 | 37.7 |
| 1955 | 39.2 | 2.1 | 41.3 | 40.4 |
| 1956 | 38.6** | 2.4 | 41.0 | 40.4 |
| 1957 | 37.2 | 2.6 | 39.8 | 39.0 |
| 1958 | 35.2 | 3.0 | 38.2 | 37.3 |
| 1959 | 36.9** | 3.3 | 40.2 | 39.8 |
| 1960 | 35.7 | 2.9 | 38.6 | 38.0 |
| 1961 | 36.6 | 3.0 | 39.6 | 38.7 |

Sources: Annual Statistical Reports, American Iron and Steel Institute
- Bureau of Labor Statistics

*Payments for time not worked divided by the product of average straight-time hourly earnings and number of employees and 52

**Affected by strike

## TABLE 39A

### SEPARATIONS OTHER THAN LAYOFFS IN STEEL 1952-1961

| | Average Monthly Separation Rate Per 100 | Estimated No. Separations* |
|---|---|---|
| 1952 | 2.1 | 144,000 |
| 1953 | 1.8 | 141,000 |
| 1954 | 0.7 | 49,000 |
| 1955 | 1.3 | 99,000 |
| 1956 | 1.2 | 91,000 |
| 1957 | 1.0 | 77,000 |
| 1958 | 0.6 | 39,000 |
| 1959 | 1.1 | 78,000** |
| 1960 | 0.8 | 55,000 |
| 1961 | 0.9 | 52,000 |

Source: BLS Employment and Earnings

*Separation rate x 12 x average total employment ÷ 100

**85% of average production and maintenance adjusted for 116-day strike; balance of that and other employment unadjusted

## TABLE 40A

### AVERAGE MONTHLY SEPARATION RATES PER 100 EMPLOYEES — MAJOR MANUFACTURING INDUSTRY GROUPS

| | 1958 | 1959 | 1960 | 1961 |
|---|---|---|---|---|
| Manufacturing | 4.1 | 4.1 | 4.3 | 4.0 |
| Durable goods | 4.1 | 4.0 | 4.3 | 3.9 |
| Ordnance and accessories | 2.2 | 2.3 | 2.4 | 2.3 |
| Lumber and wood products, exc. furniture | 4.9 | 5.4 | 6.1 | 5.5 |
| Furniture and fixtures | 4.2 | 4.4 | 4.6 | 4.3 |
| Stone, clay and glass products | 3.9 | 3.8 | 4.1 | 3.8 |
| Primary metal industries | 3.4 | 2.5 | 4.0 | 2.8 |
| **Blast furnaces, etc. (iron & steel)** | **3.2** | **1.6** | **4.3** | **2.4** |
| Fabricated metal products | 4.4 | 4.7 | 4.8 | 4.5 |
| Machinery (exc. elec.) | 3.6 | 3.1 | 3.4 | 3.2 |
| Electrical equipment and supplies | 3.5 | 3.2 | 3.5 | 3.2 |
| Transportation equipment | 5.3 | 5.5 | 5.2 | 5.0 |
| Motor vehicles and equip. (automobiles) | 6.6 | 6.7 | 5.5 | 5.8 |
| Instruments and related products | 2.5 | 2.4 | 2.7 | 2.6 |
| Misc. manufacturing | 5.2 | 5.3 | 5.9 | 5.8 |
| Non-durable goods | 4.1 | 4.2 | 4.4 | 4.2 |
| Food and kindred products | 5.8 | 6.1 | 6.0 | 5.9 |
| Tobacco | 6.1 | 5.1 | 5.9 | 5.9 |
| Textile mill products | 3.5 | 3.5 | 3.7 | 3.4 |
| Apparel and related products | 5.7 | 5.6 | 6.1 | 5.7 |
| Paper and allied products | 2.5 | 2.7 | 2.9 | 2.7 |
| Chemicals and allied products | 2.2 | 2.0 | 2.1 | 2.0 |
| Petroleum refining and related industries | 1.5 | 1.4 | 1.6 | 1.6 |
| Rubber and misc. plastic products | 3.6 | 3.4 | 3.9 | 3.5 |
| Leather & leather products | 4.5 | 4.7 | 5.0 | 5.0 |

Sources: BLS Employment and Earnings, May 1960 and June 1962

BLS Employment and Earnings Statistics for the United States, 1909-60 (1957 S.I.C.), Issued 1961

## TABLE 41A

## AVERAGE MONTHLY LAYOFF RATES PER 100 EMPLOYEES — MAJOR MANUFACTURING INDUSTRY GROUPS

| | 1958 | 1959 | 1960 | 1961 |
|---|---|---|---|---|
| Manufacturing | 2.6 | 2.0 | 2.4 | 2.2 |
| Durable goods | 2.7 | 2.0 | 2.6 | 2.2 |
| Ordnance and accessories | 1.0 | .7 | .9 | .7 |
| Lumber and wood products, exc. furniture | 2.6 | 2.1 | 3.1 | 2.8 |
| Furniture and fixtures | 2.4 | 1.8 | 2.1 | 2.1 |
| Stone, clay and glass products | 2.4 | 1.8 | 2.4 | 2.2 |
| Primary metal industries | 2.6 | 1.1 | 3.0 | 1.7 |
| **Blast furnaces, etc. (iron & steel)** | **2.6** | **.5** | **3.5** | **1.5** |
| Fabricated metal products | 3.0 | 2.6 | 3.1 | 2.9 |
| Machinery (exc. elec.) | 2.5 | 1.4 | 1.9 | 1.7 |
| Electrical equipment and supplies | 2.1 | 1.2 | 1.6 | 1.4 |
| Transportation equipment | 3.9 | 3.7 | 3.6 | 3.5 |
| Motor vehicles and equip. (automobiles) | 5.3 | 5.1 | 4.2 | 4.5 |
| Instruments and related products | 1.3 | .6 | 1.0 | .9 |
| Misc. manufacturing | 3.4 | 2.7 | 3.2 | 3.2 |
| Non-durable goods | 2.5 | 2.0 | 2.2 | 2.2 |
| Food and kindred products | 3.9 | 3.6 | 3.6 | 3.2 |
| Tobacco | 4.7 | 3.6 | 4.5 | 4.6 |
| Textile mill products | 1.8 | 1.3 | 1.5 | 1.3 |
| Apparel and related products | 3.5 | 2.7 | 3.2 | 3.1 |
| Paper and allied products | 1.3 | .9 | 1.2 | 1.1 |
| Chemicals and allied products | 1.3 | .8 | .9 | .9 |
| Petroleum refining and related industries | .6 | .5 | .6 | .6 |
| Rubber and misc. plastic products | 2.3 | 1.5 | 2.2 | 1.7 |
| Leather and leather products | 2.4 | 1.8 | 2.1 | 2.3 |

Sources: BLS Employment and Earnings, May 1960 and June 1962

BLS Employment and Earnings Statistics for the United States, 1909-60 (1957 S.I.C.), Issued 1961

## TABLE 42A

## WEEKS PAID FOR AND HOURS WORKED PER YEAR BY WAGE EMPLOYEES IN STEEL HAVING SERVICE AT BEGINNING AND END OF YEAR*

| | Employees Paid For | | | | |
|---|---|---|---|---|---|
| | 51 Weeks or More | | 47 Weeks or More | | All Employees Average Hours Worked[1] |
| Year | Per Cent of Total | Avg. Hours Worked | Per Cent of Total | Avg. Hours Worked | |
| 1953 | 77.3 | N.A. | 89.7 | N.A. | 1,970 |
| 1954 | 67.5 | 1,905 | 80.2 | 1,883 | 1,702 |
| 1955 | 73.7 | 2,069 | 88.1 | 2,049 | 1,966 |
| 1956 | 76.3[2] | ** | 89.3[2] | ** | 1,974[4] |
| 1957 | 70.2 | 1,972 | 85.8 | 1,947 | 1,847 |
| 1958 | 53.5 | 1,861 | 67.4 | 1,835 | 1,536 |
| 1959 | 82.1[3] | ** | 90.6[3] | ** | 1,930[5] |
| 1960 | 49.5 | 1,912 | 66.0 | 1,879 | 1,626 |
| 1961 | 50.9 | 1,914 | 68.6 | 1,889 | 1,635 |

Source: **Annual Statistical Reports**, American Iron and Steel Institute

*Includes employees who did not work during year

**Not computed because of strike effects

1) Excluding hours paid for but not worked; such hours are estimated to average between 104 and 140 per year. In 1956 and 1959, however, most employees received pay in lieu of vacation and a larger proportion than usual worked on holidays both before and after the strike

2) Including 4 weeks for which pay was not received because of strike

3) Including 16 weeks for which pay was not received because of strike

4) Including estimated 150 hours not worked because of strike

5) Including estimated 520 hours not worked because of strike

Note: The hours shown are hours actually worked and are, therefore, not directly comparable with the weeks for which pay was received, shown in the table. Nearly all the employees covered by the reports on which the table is based received paid vacations and vacation weeks paid for are included, but hours worked do not include equivalent vacation hours. Similarly, equivalent hours are not shown for holidays paid for but not worked (see section "Average Weekly Hours in Steel and Other Industries," in Chapter V, and Appendix Table 37A).

N.A. — Not Available

## TABLE 43A

### TOTAL EMPLOYMENT COST - WAGE EMPLOYEES IN THE IRON AND STEEL INDUSTRY - 1940-1961

| Year | Average No. of Wage Employees | Average Hours Worked Per Week Per Employee | Payroll Costs (Average—Per Hour): Pay for Hours Worked: Straight Time: Regular | Straight Time: Shift differentials | Straight Time: Sunday Premium | Overtime Premium | Premium for Work On Holidays | Sub-Total Pay for Hours Worked | Comparison: Average Hourly Earnings in Steel (BLS)* | Other Payroll Costs: Pay for Holidays Not Worked | Vacation Pay | Adjust-ments | Total Payroll Cost | Pensions, Insurance, S.U.B., & Social Security Per Hour | Total Employment Cost Per Hour | Aggregate Payroll Wage Employees |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| 1961 | 405,924 | 36.6 | $3.054 | $.045 | $.050 | $.048 | $.044 | $3.241 | $3.20‡ | $.055 | $.200 | $.005 | $3.501 | $.488 | $3.989 | $2,713,734,637 |
| 1960 | 449,888 | 35.7 | 2.916 | .046 | .050 | .045 | .037 | 3.094 | 3.08 | .054 | .195 | .006 | 3.349 | .471 | 3.820 | 2,813,991,905 |
| 1959 | 399,738 | 36.9 | 2.896 | .048 | .060 | .082 | .058 | 3.144 | 3.10 | .047 | .220 | .006 | 3.417 | .381 | 3.798 | 2,628,339,234 |
| 1958 | 411,565 | 35.2 | 2.787 | .038 | .040 | .031 | .035 | 2.931 | 2.91 | .056 | .190 | .004 | 3.181 | .332 | 3.513 | 2,405,994,652 |
| 1957 | 508,434 | 37.2 | 2.582 | .035 | .029 | .047 | .036 | 2.729 | 2.73 | .038 | .147 | .003 | 2.917 | .299 | 3.216 | 2,877,819,176 |
| 1956 | 509,231 | 38.6 | 2.407 | .036 | .008 | .066 | .025 | 2.542 | 2.57 | .028 | .126 | .004 | 2.700 | .254 | 2.954 | 2,772,910,985 |
| 1955 | 519,145 | 39.2 | 2.246 | .036 | — | .065 | .029 | 2.376 | 2.41 | .023 | .105 | .005 | 2.509 | .213 | 2.722 | 2,665,410,755 |
| 1954 | 478,030 | 36.1 | 2.107 | .034 | — | .026 | .023 | 2.190 | 2.23 | .031 | .109 | .003 | 2.333 | .179 | 2.512 | 2,100,914,059 |
| 1953 | 544,325 | 39.4 | 2.023 | .036 | — | .066 | .020 | 2.145 | 2.19 | .024 | .095 | .003 | 2.267 | .173 | 2.440 | 2,537,885,248 |
| 1952 | 519,265 | 35.8 | 1.924 | .029 | — | .091 | — | 2.044 | 2.02 | — | .099 | .005 | 2.148 | .167 | 2.315 | 2,085,014,689 |
| 1951 | 540,365 | 40.2 | 1.769 | .023 | — | .080 | — | 1.872 | 1.92 | — | .070 | .003 | 1.945 | .169 | 2.114 | 2,202,684,299 |
| 1950 | 503,309 | 39.0 | 1.603 | .023 | — | .055 | — | 1.681 | 1.691 | — | .064 | .001 | 1.746 | .162 | 1.908 | 1,785,910,374 |
| 1949 | 491,615 | 34.5 | 1.574 | .022 | — | .037 | — | 1.633 | 1.646 | — | .068 | .002 | 1.703 | .050 | 1.753 | 1,506,465,668 |
| 1948 | 503,351 | 39.1 | 1.502 | .022 | — | .049 | — | 1.573 | 1.580 | — | .054 | .002 | 1.629 | .050 | 1.679 | 1,675,913,066 |
| 1947 | 489,138 | 38.6 | 1.393 | .022 | — | .041 | — | 1.456 | 1.439 | — | .051 | .006 | 1.513 | .050 | 1.563 | 1,489,531,509 |
| 1946 | 458,259 | 35.0 | 1.228 | .022 | — | .029 | — | 1.279 | 1.281 | — | .047 | .028 | 1.354 | .050 | 1.404 | 1,133,503,371 |
| 1945 | 438,825 | 44.1 | 1.073 | .019 | — | .108 | — | 1.200 | 1.179 | — | .039 | .018 | 1.257 | .050 | 1.307 | 1,268,048,553 |
| 1944 | 456,682 | 46.6 | 1.064 | — | — | .103 | — | 1.167 | 1.157 | — | .022 | .039 | 1.228 | .050 | 1.278 | 1,365,342,466 |
| 1943 | 487,187 | 42.9 | 1.044 | — | — | .077 | — | 1.121 | 1.116 | — | .019 | — | 1.140 | .050 | 1.190 | 1,242,032,184 |
| 1942 | 511,414 | 38.9 | 1.013 | — | — | .031 | — | 1.044 | 1.018 | — | .019 | — | 1.063 | .050 | 1.113 | 1,101,787,008 |
| 1941 | 507,306 | 38.5 | .928 | — | — | .016 | — | .944 | .941 | — | .018 | — | .962 | .050 | 1.012 | 980,845,190 |
| 1940 | 453,990 | 36.1 | .836 | — | — | .007 | — | .843 | .844 | — | .012 | — | .855 | .050 | .905 | 733,364,058 |
| Increase 1961 vs. 1940 | —48,066 | — | $2.218 | $.045 | $.050 | $.041 | $.044 | $2.398 | $2.346 | $.055 | $.188 | $.005 | $2.646 | $.438 | $3.034 | $1,980,370,579 |
| % Increase 1961 vs. 1940 | —10.6% | — | 265% | — | — | — | — | 284% | 278% | — | 1567% | — | 309% | — | 341% | 270% |

## Notes for Table Above
### by column numbers

(3) Includes cost of living adjustment and incentives.

(5) Sunday premium pay was initiated September 1, 1956.

(7) and (10) Prior to 1953, cost of pay for holidays and premium for holidays worked were included in overtime premium. Pay for holidays not worked was instituted in 1952.

(8) and (9) American Iron and Steel Institute pay for hours worked is comparable with BLS average hourly earnings for blast furnaces, steel and rolling mills, 1951 and subsequent years.

(12) Adjustments include retroactive payments and adjustments for prior periods.

(13) and (16) Total payroll of wage employees in column 16 is the aggregate annual amount of total payroll cost shown in column 13, and does not include pensions, etc. shown in column 14.

(14) Pensions, insurance and social security taxes estimated for years prior to 1950.

## Wage Rate Increases in the Iron and Steel Industry**

| | |
|---|---|
| 1941 | $.10 per hr. |
| 1942 | .055 per hr. |
| 1946 | .185 per hr. |
| (a)1947 | .16 per hr. |
| (b)1948 | .13 per hr. |
| (a)1950 | .16 per hr. |
| (a)1952 | .16 per hr. |
| 1953 | .085 per hr. |
| 1954 | .05 per hr. |
| (c)1955 | .152 per hr. |
| (d)1956 | .095 per hr. |
| (e)1957 | .082 per hr. |
| (e)1958 | .082 per hr. |
| (f)1960 | .083 per hr. |
| (g)1961 | .077 per hr. |

Total $1.656 per hr.

**Note: These wage rate increases relate only to base rates, and do not include the effects of incentive, cost of living or other payroll items. Nor do they include the effect of adoption of standard hourly wage scale in 1947 averaging about 5 cents per hour, part of which was retroactive to January, 1944. Nor were increases eliminating geographic wage differentials included in the above table.

(a) Average consisting of 12½¢ per hour increase in the minimum rate plus increase in wage scale increments of ½¢.

(b) Average consisting of 9½¢ per hour increase in the minimum rate plus increase in wage scale increments of ½¢.

(c) Average consisting of 11½¢ per hour increase in the minimum rate plus increase in wage scale increments of ½¢.

(d) Average consisting of 7½¢ per hour increase in Job Class 1-2, combination of Job Class 1 rates with Job Class 2, plus increase in wage scale increments of 3/10¢.

(e) Average consisting of 7¢ per hour increase in Job Class 1-2, plus increase in wage scale increments of 2/10¢.

(f) Average consisting of 7¢ per hour increase in Job Class 1-2 plus increase in wage scale increments of 2/10¢, bringing the increment to 6.9¢.

(g) Average consisting of 7¢ per hour increase in Job Class 1-2, plus increase in wage scale increments of 1/10¢, bringing the increment to 7.0¢. As of Oct. 1, 1961, the minimum rate was $2.10, and the rate for Job Class 32 was $4.20.

Supplementing the above wage increases, the following additional cost of living adjustments were made, effective on the dates indicated:

**COST OF LIVING ADJUSTMENTS** (Cents Per Hour)

| | 1957 | 1958 | 1959 | 1961 |
|---|---|---|---|---|
| January | $ .030 | $ .050 | $ .010 | — |
| July | .040 | .040 | — | — |
| October | — | — | — | $ .015 |

By Oct. 1961, the cost of living adjustments had accumulated to 18.5¢ per hour.

Source: **Wage Trends**, 1962 Edition, American Iron and Steel Institute

## TABLE 44A

## AVERAGE HOURLY EARNINGS, STEEL COMPARED TO ALL MANUFACTURING 1940-1961

| | All Manufacturing | Steel Industry | Spread in Favor of Steelworkers |
|---|---|---|---|
| 1940 | $ .655 | $ .844 | $ .189 |
| 1945 | 1.016 | 1.179 | .163 |
| 1949 | 1.378 | 1.646 | .268 |
| 1950 | 1.440 | 1.691 | .251 |
| 1951 | 1.56 | 1.92 | .36 |
| 1952 | 1.65 | 2.02 | .37 |
| 1953 | 1.74 | 2.19 | .45 |
| 1954 | 1.78 | 2.23 | .45 |
| 1955 | 1.86 | 2.41 | .55 |
| 1956 | 1.95 | 2.57 | .62 |
| 1957 | 2.05 | 2.73 | .68 |
| 1958 | 2.11 | 2.91 | .80 |
| 1959 | 2.19 | 3.10 | .91 |
| 1960 | 2.26 | 3.08 | .82 |
| 1961 | 2.32 | 3.20 | .88 |

Source: U. S. Bureau of Labor Statistics

## TABLE 45A

## THE LONG-TERM INCREASE IN AVERAGE HOURLY EARNINGS AND PURCHASING POWER OF STEELWORKERS

### Average Hourly Earnings of Production Workers in Steel Industry(*)

| Years | Average Hourly Earnings | Consumer Price Index (1957-59 = 100) | Real Average Hourly Earnings (In 1957-59 Purchasing Power) |
|---|---|---|---|
| 1914(a) | $0.301 | 35.0 | $ .860 |
| 1929(a) | .674 | 59.7 | 1.129 |
| 1939(a) | 0.838 | 48.4 | 1.731 |
| 1940 | 0.844 | 48.8 | 1.730 |
| 1941 | 0.941 | 51.3 | 1.834 |
| 1942 | 1.018 | 56.8 | 1.792 |
| 1943 | 1.116 | 60.3 | 1.851 |
| 1944 | 1.157 | 61.3 | 1.887 |
| 1945 | 1.179 | 62.7 | 1.880 |
| 1946 | 1.281 | 68.0 | 1.884 |
| 1947 | 1.439 | 77.8 | 1.850 |
| 1948 | 1.580 | 83.8 | 1.885 |
| 1949 | 1.646 | 83.0 | 1.983 |
| 1950 | 1.691 | 83.8 | 2.018 |
| 1951 | 1.92 | 90.5 | 2.122 |
| 1952 | 2.02 | 92.5 | 2.184 |
| 1953 | 2.19 | 93.2 | 2.350 |
| 1954 | 2.23 | 93.6 | 2.382 |
| 1955 | 2.41 | 93.3 | 2.583 |
| 1956 | 2.57 | 94.7 | 2.714 |
| 1957 | 2.73 | 98.0 | 2.786 |
| 1958 | 2.91 | 100.7 | 2.890 |
| 1959 | 3.10 | 101.5 | 3.054 |
| 1960 | 3.08 | 103.1 | 2.987 |
| 1961 | 3.20 | 104.2 | 3.071 |

Sources: U.S. Bureau of Labor Statistics
**Historical Statistics of the United States, 1789-1945**, U.S. Department of Commerce

(*) As used in this table, the term "Steel Industry" corresponds, for statistical purposes, to the Government Standard Industrial Classification 331 (1945), "Blast Furnaces, Steel Works and Rolling Mills," for the years 1940 through 1950 inclusive. For 1951 and subsequent years use is made of SIC 3312 (1957), "Blast Furnaces, Steel and Rolling Mills." The new series was not carried back prior to 1951.

(a) Data for average hourly earnings prior to 1939 usually are not wholly consistent. Thus, for 1914, BLS estimated the average hourly earnings for blast furnaces, steel works and rolling mills at 30.1 cents an hour. The National Industrial Conference Board estimated the 1914 average at 26.3 cents an hour.

## TABLE 46A

### Rise in Minimum Wage Rate

| Date when Rate was Established | Common Labor Rate or Minimum Plant Rate of a Major Steel Company — Pittsburgh, Pennsylvania, area | |
|---|---|---|
| January 1, 1900 | $.15 | |
| June 1, 1902 | .16 | |
| January 1, 1904 | .145 | |
| April 1, 1905 | .155 | |
| January 1, 1907 | .165 | |
| May 1, 1910 | .175 | |
| February 1, 1913 | .20 | |
| February 1, 1916 | .22 | |
| May 1, 1916 | .25 | |
| December 16, 1916 | .275 | |
| May 1, 1917 | .30 | |
| October 1, 1917 | .33 | |
| April 16, 1918 | .38 | |
| August 1, 1918 | .42 | |
| February 1, 1920 | .46 | |
| May 16, 1921 | .37 | |
| August 29, 1921 | .30 | |
| September 1, 1922 | .36 | |
| April 16, 1923 | .40 | |
| September 1, 1923 | .44 | |
| October 1, 1931 | .39 | |
| May 16, 1932 | .33 | |
| July 16, 1933 | .40 | |
| September 16, 1933 | .425 | |
| April 1, 1934 | .47 | |
| November 16, 1936 | .525 | |
| March 16, 1937 | .625 | |
| April 1, 1941 | .725 | |
| February 15, 1942 | .78 | |
| January 1, 1946 | .8725 | |
| February 16, 1946 | .965 | |
| | **Minimum Plant Rate (Job Class 1)** | **General Labor Rate (Job Class 2)** |
| February, 1947(a) | $ .965 | $1.00 |
| April 1, 1947 | 1.09 | 1.13 |
| July 16, 1948 | 1.185 | 1.23 |
| December 1, 1950 | 1.31 | 1.36 |
| March 1, 1952 | 1.435 | 1.49 |
| June 12, 1953 | 1.52 | 1.575 |
| July 1, 1954 | 1.57 | 1.625 |
| July 1, 1955 | 1.685 | 1.745 |
| | | **Rate for Job Class 1 and 2** |
| August 3, 1956 | | 1.82 |
| July 1, 1957 | | 1.89* |
| July 1, 1958 | | 1.96* |
| December 1, 1960 | | 2.03* |
| October 1, 1961 | | 2.10* |

Source: **Wage Trends**, 1962 Edition, American Iron and Steel Institute

(a) Since the establishing of the standard hourly wage scale in February, 1947, the rates paid for common labor have generally been above the minimum rate. In many instances the rate for common labor was the Job Class 2 rate shown in the table, and the minimum rate then applied primarily to janitors, sweepers, and newly hired apprentices. As of August 3, 1956, the rate in Job Class 1 was combined with the rate for Job Class 2.

*These figures do not include cost of living adjustments shown at the bottom of Table 43A

## EXHIBIT A

***Excerpts from the statement by R. Conrad Cooper before the Subcommittee on Unemployment and the Impact of Automation of the House Education and Labor Committee, March 28, 1961.***

Even though, as I have indicated, the unemployment problem in the steel industry is predominantly cyclical, it does not happen, of course, that technological displacement affects only those who are, let us say, about to retire. After normal attrition has been utilized as fully as it may be and after all the possible transfers have been worked out, there are frequently people who must face the prospect of finding a new job, not just temporarily but, as we are more concerned about here, permanently.

United States Steel has an approach to this kind of situation and I presume it would be helpful to you to know about it. While there are some variations in practice followed because of differences in size and location of plants, kinds of operations, and number of employees involved, by and large certain basic procedures are applied.

As soon as plans to abandon, discontinue, or replace certain facilities are finalized and, as far in advance of the actual shutdown as possible, an analysis is made to determine the number of employees affected. Their service, age, family status, place of residence, seniority status, and ability to perform other work in the plant are determined. Their status with respect to pension, severance, and unemployment compensation benefits is also determined. The job opportunities on replacement facilities, where involved, are taken into consideration.

At this point, the scope of the problem is known and the next step is to determine what plans can be made to absorb these employees. The prospects of placement at the plant concerned are appraised as are those at sister plants in the area or elsewhere, and those with outside employers in the area. Estimates are made of which individuals, if any, are likely to exercise their pension, severance, supplemental unemployment benefits, or seniority rights. A determination is made of what is the most reasonable way to alleviate the resultant displacement by such measures as utilizing turnover to absorb such employees and limiting the hiring of new employees where feasible, transferring employees to other jobs, retraining employees either for new jobs on the replacement unit or providing on-the-job training where necessary in cases of transfer to other jobs in the plant, circulating rosters of available employees and their skills to other plants in the company if prospects of placement exist, and, similarly, contacting other employers in the vicinity or the state employment office in the area.

Necessary general announcements and notices are made at the appropriate time to international, district, or local union representatives, to the individual employees either personally or by letter, and to the general public.

At the proper time interviews are conducted with the employees involved to discuss their individual status both as to other employment prospects and what rights they have as to pension, vacations, insurance coverage, severance pay, SUB, other jobs, etc. The employees decide which of the available options they choose to select.

To the maximum extent practicable the arrangements decided upon are put into effect following the announcement and appropriate union representatives are kept informed as to what is being done and the progress being made.

The degree of success realized through these procedures, of course, varies in relation to the circumstances surrounding each specific case of technological improvement. The range is from cases completely successful in alleviating the change, to those where there simply is no way within our control to obviate the impact upon some of the employees involved.

A few specific cases will serve to demonstrate the situation as it exists in our actual practice.

For example, toward the end of 1956 we began to replace the old structural mills at our South Chicago Works with modern, up-to-date mills. The last of the old mills was shut down about the beginning of 1960. A recent survey shows how the 1,346 affected employees fared. At the present time 953 of them, about 71 per cent, having received a substantial amount of retraining, are now working in the new mill. Another 109, about 8 per cent, were transferred to work in other operating departments of the plant, including four who have been promoted to the management group. Of the remainder only one is on layoff, and 29 are on sick leave. The other 254 individuals involved are accounted for by retirements, voluntary terminations, discharge for violation of plant rules, death, and leave of absence.

Unfortunately there are other cases, such as some of those involving abandonment of facilities, where we have been unable to do so well.

A case in point: The discontinuance of an Open Hearth Shop and Blooming Mill at Vandergrift, Pennsylvania, in the period from 1952 through 1954. The experience was that of the 1,373 employees involved, 492 were employed in this or other plants, 293 retired on pension, 282 elected severance allowance and termination, and 306 had to be laid off.

## EXHIBIT B

***Excerpts from "Automation in Theory and Practice" by William G. Caples in "Business Topics," Michigan State University, Autumn, 1960 issue.***

### The Inland Steel Experience

Even if the long-range overall effects of automation on employment are all positive, the same may not be true of the short-run effects. There have been and there will be employment changes due to automation: these include, in the short run, both increased opportunities, promotions, and higher wages, and dislocations, downgrading and disemployment. Obviously the changes will vary greatly according to the circumstances in each case; there cannot be a single clear-cut pattern for the transition from less-automated to more-automated production. Since the short-run effects will probably be encountered by a large number of companies, however, case studies of the experiences of firms in many industries should prove of value. In the hope that the experiences and experiments at Inland Steel may be useful to firms that have yet to face this problem, I should like to discuss the changes in production methods in terms of specific experience in three departments—a sheet mill, rail accessories and the galvanizing lines. The last is virtually a textbook case of automation—one process discontinued and a more efficient and faster method for producing the same product of better quality substituted. The shutdown of the sheet mill and rail accessories, however, were from different causes.

[The hand sheet mill] was on its way out when the continuous hot strip mill was introduced in the 1930's. We had maintained a few of the hand mills to process electrical steel products, but this process also was superseded by new methods, and in 1954 it no longer was practical to operate the hand fed sheet mill.

The termination of manufacture of rail was an economic matter:

Simply stated the rail business had become relatively unprofitable, and good business practices demanded that the steel being rolled into rails be made into other more profitable products. Since rails and rail accessories are sold together we had to discontinue production [of rail accessories in 1958.]

Since there was no substitution of process in either instance when these mills were discontinued there were added difficulties in placing the employees. There was no logical place for them to go.

*Communicating the Problem*

No company-issued information can hope to get ahead of the grapevine, but we tried not to be too far behind it, to reduce the length of time that false rumors could circulate unchallenged.

We communicated with four different groups:

*The employees affected*, to inform them of the proposed shutdown and of their rights under the contract, and to tell them what additional steps the company proposed to take to keep them on the payroll.

*The plant's supervisory personnel*, to inform them of the discontinuance of the mill involved and to enlist their cooperation in holding jobs vacant for the disemployed workers.

*The union officers*, to inform them of the imminent shutdown and the steps the company proposed to take.

*The public*, in the immediate area of the mill involved.

The sequence of communications in the rail mill case illustrates this process:

First, the superintendent of the department explained thoroughly to his foremen the full story behind the decision, giving each foreman the authority and the information to review with his crew the economics of the problem in much greater detail than is usually done.

The first public announcement was made on August 21, 1958, when the president of the company told our customers by letter that we were going out of the rail business.

On August 22 we issued press releases to the newspapers, and announcements were placed on the rail mill department bulletin boards.

On August 27 registered letters were sent to employees telling them of the discontinuance of production and of their rights under the contract to transfers elsewhere in the plant.

On September 5 the hiring of new people for plant employment was temporarily discontinued for all but a few specialized occupations so that rail mill people could be placed in new jobs.

On September 8 departments with job openings began looking over personnel record folders and interviewing.

On September 13, 1958 the rail mill was shut down for good.

We believe that this early and extensive communication program was very helpful in allaying employee fears and in preventing bitterness and bad feeling. We also think that its success was due to the fact that we followed up our words with prompt action; all but one of the employees affected were placed on other jobs. The one exception chose severance pay and early retirement.

As a general principle I would venture to guess that communications to employees about technological shutdown of their work area, if not followed by action placing all, or the large majority, of them on other jobs, may turn out to do more harm than good. Information alone is not enough.

***Transferring Displaced Workers***

We were very successful in placing displaced workers on other jobs—and it was not due to luck. In the case of the sheet mill and rail mill shutdowns, where there was no neat and obvious place to transfer the displaced workers, we spent thousands of supervisory man-hours lining up transfer possibilities, interviewing workers to determine their preferences and their skills, discussing with supervisors throughout the plant the need for holding vacancies for the displaced workers, following up the transfers to see how they were working out, doing before-and-after wage surveys —and answering irate letters from disgruntled wives asking us why we were so cold and heartless as to do nothing about the displaced workers Even in the case of the galvanizing lines, where all employees who wanted to transfer could easily do so, discussions were scheduled with the foremen and the workers to ease and simplify the actual transfer as much as possible.

Our placement score in the rail mill was indicated above: only one retirement, all other displaced employees transferred to other jobs.

Of the 96 men affected on the galvanizing lines change, 75 were placed in jobs on the new line which directly replaced the old process, while 21 were transferred to other occupations within the department.

Of the 145 employees affected in the sheet mill shutdown, 125 were placed on other jobs; 12 quit or were terminated, with severance allowances; five retired and one was put on a disability pension; and two physically disabled employees were also eventually pensioned.

Getting displaced workers other jobs is, of course, the basic requirement of a successful transfer program, but it is by no means the only one. We were also concerned with moving employees to jobs where their take-home pay would be cut as little as possible. We were concerned with transferring them as rapidly as possible. We attempted as far as possible to move them to departments where their highest skills can be utilized. And finally we tried to put them in situations where they would feel satisfied and happy with the change. There follows an analysis of the results of our placement efforts.

***Wages***

*Galvanizing Lines.* In 1951 a new continuous galvanizing line was built, and production in the old process, the pot operations, was reduced by half. When the second galvanizing line was built in 1954, all pot production was discontinued. Just prior to the 1951 reduction in pot production, the weighted average wage per hour for production employees was $1.43. Using the same (1950) base rates, the average wage per hour for the continuous line operation was $1.56. This increase resulted from the higher skill requirements of the new operation; the average job class rose, and consequently, the average wage rate was increased. In actual fact, wages have increased much more than 9 per cent, since base rates have increased substantially since 1950. Currently (Spring 1960), workers on the new galvanizing operation have an average wage 73 per cent higher than that received in 1950.

*Sheet Mill.* The experience in the sheet mill might appear at first glance to be less satisfactory than in the galvanizing lines. Average weekly earnings in the sheet mill for the first three quarters of 1954 were $81.25, including incentive pay, for the transferred employees. It was estimated that these same employees on their new assignments would receive average weekly earnings of approximately $70.00, exclusive of incentive pay (most of these employees had no incentive pay available on their new assignments). Shortly after the transfer 80 employees were receiving lower hourly average earnings than they had in the sheet mill, while 41 were receiving earnings equal to or slightly higher than their sheet mill earnings. The employees who experienced the greatest reduction were those who had been on top-rated specialized jobs in the discontinued mill.

But within a very short time there was a substantial improvement in this picture. By the middle of 1955 the average weekly earnings of the transferred sheet mill workers had risen to $85.50. The number of men receiving less than their previous weekly sheet mill earnings had dropped to 51, while those receiving more than their previous earnings had risen to 62.

By May 1956 still further improvement in job status and earnings had taken place. Forty per cent of the transferred workers had had one or more promotions; 55 per cent had remained on their assigned jobs, while 5 per cent had been demoted. Generally, employees with fewer years of service advanced more rapidly than long-term service workers. It should be noted, however, that the shorter service workers had generally held higher job classifications in the sheet mill than the longer service workers. But, relative to their average job class in the sheet mill, employees with 25 years or more of service did, in fact, experience the largest drop in average job class and in earnings.

The average hourly earnings do not, however, give the entire picture. The transferred sheet mill employees are now generally in jobs offering steadier employment than the sheet mill did during its last year or so of operation. The sheet mill had been on intermittent production for some time prior to its close; weekly take-home pay had consequently suffered even though hourly rates were high.

The sheet mill employees themselves recognized that their transfer represented, on the whole, an improvement in their status. A survey of all former sheet mill employees was made in April, 1956 to determine how they felt about their present job status in relation to their work in the sheet mill. Replies were obtained from 121 of the 124 employees who had been transferred. 16 per cent reported that they were "highly satisfied" with their present job status; 72 per cent were "satisfied"; 11 per cent were "dissatisfied"; and only 1 per cent were "highly dissatisfied." 10 of the 14 employees composing the "dissatisfied" or "highly dissatisfied" group had 25 years or more of service (in all, 50 employees had 25 years or more of service). Under 25 years, however, there was no significant relationship between degree of satisfaction and length of service.

***Re-training***

It has been assumed by some that automation would necessitate substantial amounts of re-training in order to fit displaced production workers into new jobs. The actual experience of Inland Steel and other companies has demonstrated that this is not always the case. Charles Walker, in his extensive case study of automation in the Lorain Works of the National Tube Division of the U. S. Steel Company, found that while some re-training was necessary, it needed to be neither extensive nor intensive. Our own experience in the substitution of one galvanizing process for another was very similar. Two weeks after the new galvanizing line was started, production was at virtually 100 per cent of capacity.

While we do not view this experience as the inevitable pattern in future changes, we have found, so far, that a more formidable problem in re-training workers is the inadequacy of their basic education rather than their work skills. For example, in setting up qualifications for jobs in the new galvanizing processes, the ability to speak, read and write English and do simple arithmetical calculations became a requirement for the first time. This requirement was imposed by the fact that the new process puts the men at considerable physical distances from each other, whereas formerly the men worked within conversational range. Workers unable to understand the foreman's orders could get them interpreted by fellow workers. Today, all communication within the galvanizing department is either by intercom or by written memorandum. Consequently, 20 per cent of the men employed in the old galvanizing operation were ineligible for jobs on the new process: they could not meet these new qualifications.

[From the American Iron and Steel Institute, New York, N.Y.—For release May 22, 1963]

ADVANCES IN BASIC OXYGEN STEELMAKING CITED BY COAUTHORS AT AISI MEETING

Basic oxygen steelmaking is the most efficient thermochemical process which has been used in steelmaking history, according to two Jones & Laughlin Steel Corp. production men.

Speaking at the 71st general meeting of American Iron and Steel Institute in New York today were John A. Glasgow, superintendent, steelmaking, at J. & L.'s Cleveland works and W. D. Smith, assistant superintendent, steelmaking at J. & L.'s Aliquippa works. They cited a single-heat production record, at Cleveland, of 368.2 tons an hour.

On a monthly basis, J. & L.'s Cleveland works, which operates two 230-ton basic oxygen furnaces, has achieved a record of 243.4 tons an hour, and an 8-hour turn record of 290 tons an hour at Aliquippa, where J. & L. has two 81-ton furnaces in operation. The monthly record is 121.3 tons an hour. This can be compared with good open hearth furnace practice of approximately 40 tons an hour.

"Since the work forces in both shops are essentially the same, the economy of large furnace operations is evident," the J. & L. men said. "Oxygen flow rate should be the controlling factor on ultimate production rates."

In discussing furnace yields, they said, "Experience indicates that yields in the basic oxygen furnace can be controlled at a high level, provided that extreme care is exercised in details of design features and operating technique."

The basic oxygen steelmaking furnace produces a "remarkable uniformity in steel chemistry, difficult to duplicate in any other conventional steelmaking process."

As an example of this, they cited fine grain steel sheets produced for the automotive industry, where the average carbon, manganese, phosphorus, sulfur and aluminum are well within the automakers' specifications.

These figures, compiled during a typical 2-week period at the Cleveland shop, are "normal performance," they said. "It should not be assumed that this analysis performance is limited only to the production of low carbon content steel grades. Heats have been produced successfully on a production basis from 0.03 to 1.10 percent carbon, and 0.25 to 1.65 percent manganese, with excellent quality ratings. Much has been learned about the production potential of basic oxygen steelmaking, and experimental development work now in progress indicates that a high degree of control of the process is close at hand. Furnace gas analysis looks most promising and should enable the operator to terminate each heat at a uniform specified analysis and temperature level.

Jones & Laughlin was among the first steel producers in this country to put the basic oxygen furnace into operation. The two Aliquippa furnaces went into production in November 1957. Successful experience with these units prompted J. & L. to build the 230-ton furnaces at Cleveland in September 1961. At the time, these were the largest basic oxygen furnaces in the world.

(Whereupon, at 4:30 p.m., the committee adjourned, subject to the call of the Chair.)

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