86th Congress
1st Session

JOINT COMMITTEE PRINT

STAFF REPORT
ON
EMPLOYMENT, GROWTH, AND PRICE LEVELS

PREPARED

FOR CONSIDERATION BY THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

DECEMBER 24, 1959

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This staff report is part of the materials being prepared for consideration by the Joint Economic Committee in connection with its "Study of Employment, Growth, and Price Levels." The committee neither approves nor disapproves of the findings of this report. The staff report is being presented in this form to obtain the widest possible comment before the committee prepares its own report.

LETTERS OF TRANSMITTAL

DECEMBER 17, 1959.

To Members of the Joint Economic Committee:

Submitted herewith for the consideration of the members of the Joint Economic Committee and others is the comprehensive staff report on the "Study of Employment, Growth, and Price Levels," which the Joint Economic Committee is conducting under Senate Concurrent Resolution 13, 86th Congress, 1st session.

A number of aspects of the problem as it relates to particular subject fields have been examined, largely by outside scholars, and reports of these studies have been released by the committee for review and comment. This comprehensive report, which I am transmitting today, is based on findings and recommendations of the separate reports, as well as additional analyses in special subject fields by individual members of the committee staff. The report, as noted in the technical director's transmittal letter, also makes wide use of the excellent materials and comments which were received during the committee's extensive hearings and additional statements submitted by invited groups. Nearly 100 witnesses were heard at these hearings which were held in nine groups covering 40 separate days.

With the completion of the committee's hearings, the printing of the individual subject reports, and the submission of this staff document, the careful, thoroughgoing, factual background which the committee has sought to lay for its own report is now largely completed. Some additional individual subject reports, details, and supplemental materials which have formed the basis for sections in the main staff report will be released over the next 4 or 5 weeks in order to make them available for public use, but this will not delay the committee's preparations and deliberations on its own report.

The staff report, as in the case of the previous separate reports, is being printed and distributed not only for the use of the committee members but also to obtain the review and comment of other experts during the committee's final consideration of these materials. The findings are entirely those of the technical director of the study staff and the staff members indicated by him, and the committee indicates neither approval nor disapproval by this publication.

PAUL H. DOUGLAS,
Chairman, Joint Economic Committee.

DECEMBER 15, 1959.

Hon. PAUL H. DOUGLAS,
Chairman, Joint Economic Committee,
U.S. Senate, Washington, D.C.

DEAR SENATOR DOUGLAS: Transmitted herewith is the staff report on the "Study of Employment, Growth, and Price Levels." This report has been prepared in accordance with the committee's desire for a

broad-gage, factual, and analytical examination of the problems and possibilities of reconciling the national objectives of providing substantially full employment and achieving an adequate rate of economic growth, while maintaining substantial stability of the price level.

The staff has proceeded as far as possible, within the limits of time and data, to carry out the plan for the study which was outlined to the committee and approved at its meeting on July 30, 1959. We have drawn heavily on the special reports from outside experts, on the materials and analyses supplied by the nearly 100 witnesses in the committee's hearings, and on the contributed statements. The overall responsibility for the character and conclusions of this report must necessarily rest with the Technical Director.

Individual chapters of the report have been developed by members of the staff as indicated at the beginning of the chapters. The findings and conclusions in those chapters are shared by the director and the individual authors, but are not necessarily concurred in by the other members of the staff.

I have incurred more debts in preparing this report than I can hope to acknowledge. John Kareken has significantly improved portions of the report. Thomas A. Wilson carried out the machine computations.

I am also grateful for the cooperation shown to the study by several Government agencies. The Board of Governors of the Federal Reserve System and the Bureau of Labor Statistics made their computing installations available. Special statistical tabulations have been prepared by several agencies.

John W. Lehman, administrative officer, and James W. Knowles, special economic counsel for the study, have facilitated the report at every stage.

Our excellent staff of research assistants and secretaries has contributed greatly to the work of the study. Other office services have been effectively provided by the permanent staff of the committee, augmented for this purpose.

Otto Eckstein,

Technical Director, Study of Employment, Growth, and Price Levels.

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CHAPTER SUMMARIES

Summary of Chapter I: Introduction

The slow growth of the American economy of the last 6 years, which coincided with a rise in the price level, has caused concern about the performance of the American economy.

This study of employment, growth, and price levels was undertaken to determine whether it is possible for our economy to resolve this apparent dilemma, to see if more vigorous growth can occur, without the kinds of price increases which beset the last boom.

To determine the growth potential of the economy, a statistical analysis was made of the historical record, and projections were prepared on the basis of increases in the supply of labor and of capital, as well as of continued improvement of productivity and technology. It is clear from this analysis that the potential rates of growth of the American economy, without use of regimentation or any fundamental changes in our economic system, can be substantially higher than they have been, and could accelerate during the next 15 years.

Three views of the relation between growth and the price level are not substantiated by this report:

We find that policies designed to stabilize the price level do not automatically promote economic growth. In fact, the present set of policy tools, applied with the objective of keeping prices stable, have been the major cause for the slowdown in growth. Second, we find that the promotion of growth will not suffice to halt the inflation. While it is true that an increase in final demand would have raised productivity in 1956 and 1957 and would have allowed the increase in productive capacity to be more fully utilized, it would have been impossible with the policy tools available to manage this increase in demand in such a way that it would not have added to the pressures on demand in those sectors in which prices were already rising. However, it does appear, with the benefit of hindsight, that the amount of growth that was surrendered for what at best was a small gain toward stabilizing the price level, was very large. Third, we find that inflation and growth are not separate problems, that inflation cannot be defeated by policies to improve the market structure of the economy alone, while leaving fiscal and monetary policies free to promote growth.

THE CAUSES OF INFLATION

Our studies suggest that the recent inflation cannot be explained by a single hypothesis. Rather, there were at least three sources of inflationary pressure:

1. The instability of output caused inflationary pressures. The tremendous upswing of 1955, supported in part by a rapid increase in consumer credit, led to very high profits in some industries and resulted in long-term wage settlements. This upswing also contributed

to the spectacular capital goods boom which produced excess demand in the machinery industries and thereby an increase in machinery prices. It also caused rising prices in construction. When total demand failed to grow in accordance with the rosy expectations established in 1955, businessmen found themselves with higher increases in overhead costs which served to raise unit costs, and in some instances, prices. Thus, the die for the inflation in 1956 and 1957 was cast in 1955.

2. In many industries, a small number of firms account for more than one-half the sales, and so at least the potential of market power—that is, the power to raise prices in the absence of excess demand—is widely prevalent. Market power appears to have added substantially to the inflation in three ways: First, the extraordinary behavior of steel prices, which rose by 29 percent from 1954 through 1958, far more than any other important price in the economy, and which served to drive up costs in many steel-using industries, must at least in part be attributed to this factor. The rise in steel prices was a classic illustration of the profit-wage process. High profits caused by the upswing of 1955 and early 1956 led to large wage settlements; the companies, determined to maintain their profit margins, passed on the higher labor costs with a markup of their own.

Second, the ability of some industries to pass on their higher unit overhead costs in the face of falling demands is another instance of the exercise of market power. Finally, the failure of prices to fall in recession, while not wholly due to this factor, must at least in part be attributed to it.

3. The prices of services, which loom particularly large among consumer prices, rose substantially. This is a very diverse group of items with no one single explanation. Among the most rapidly increasing components was urban mass transit, which suffered from rising unit costs because of falling demands; medical care prices, which rose because of the worsening imbalance between supply and demand; repair services, which moved in response to manufacturing wages; and rent, which has continued to drift upward throughout the period because of its slow response to changing conditions, and because of the higher construction costs.

Policies to reconcile growth with stable prices

The policies designed to reconcile economic growth at levels close to our potential with reasonable stability in the price level are outlined in detail in the sections below. They are broadly designed to accomplish the following objectives:

First, the instability of the economic system must be reduced, because it adds to inflation and retards growth. Improvement in our budgetary policies, particularly reduction in the unpredictable and not wholly necessary volatility of orders for durable goods by the Defense Department, is the single most important contribution which the Federal Government could make to economic stability. A greater willingness to make discretionary changes in taxes, consumer credit controls and strengthening of the unemployment insurance system are some of the other major changes that we recommend.

Second, since market power is an important element in inflation, some beginning steps toward making the private organizations which

exercise this power more responsive to the public interest should be taken. A series of measures of increasing severity is available, and the Federal Government must adopt them to the extent that the actions of these centers of private power require.

Third, the Federal Government must take steps to increase the supply of those services which threaten to continue to increase in price for a long time to come. An increase in the effective supply of medical services, studies to raise the productivity in some of the low-wage, low-productivity fields, and other steps should be taken.

With the inflationary bias of the economy reduced, we shall be in a position to pursue policies designed to stimulate growth. Policies designed to accomplish that objective include: a growth of demand sufficient to induce a high level of investment and increases in productivity; a Federal program of aid to education to assure that our entire labor force develops its potential talents fully; improvement in the institutions of collective bargaining to strengthen the processes which facilitate the introduction of new techniques into American industry and which assure that the social cost of technological change are borne equitably; continued high and rising support for research and development activities to hasten technological progress; and when the need arises, fiscal measures to raise the supply of funds for private investment.

Summary of Chapter 2: Economic Growth in the Long Run

A. ECONOMIC GROWTH: ITS CAUSES AND CHARACTER

1. No economy can match the record of growth of the American economy over the past 120 years. It has been estimated that real gross national product grew 4.3 percent per year from 1839 to 1879; 3.7 percent per year from 1879 to 1919; and 3 percent per year from 1919 to 1959. Consumption increased at similar, though slightly lower, rates.

2. The growth of the labor force and of the capital stock partly explains our economic growth. In addition, more than half the growth is accounted for by improvement in the factors of production and in technology.

3. Improving health and education of the labor force has made a considerable contribution to increasing labor productivity. Overall, the labor force has become more skilled—the amount of education received by the typical worker has risen and the educational level of new entrants into the labor force has also increased.

4. As the economy has grown, our resource needs have been met by a falling fraction of the total labor force. As American industry has expanded, however, a rising share of resources has come from abroad.

5. An examination of the movements of gross national product in the past 60 years reveals long stretches over which demand rather than supply has determined the level of output. Periods of recession and depression account for 24 years, and even in some prosperous years output fell short of potential supply. Since World War II there have been no depressions; but recessions account for a total of 14 quarters, or roughly 23 percent of the total period.

B. RECOMMENDATIONS FOR PROMOTING LONG-TERM ECONOMIC GROWTH

1. The maintenance of high-level demand must be a goal of economic policy; for, without continuing high-level demand, other attempts to increase the rate of growth will surely be frustrated.

2. It is essential that the Federal Government invest in education programs. Some form of Federal aid to education for those States with large school-age populations and few financial resources is required. This is the single most important recommendation for strengthening our economic growth.

A national scholarship program, based on merit, but with a geographical distribution that insures that talented youngsters from inferior school systems are given an opportunity, is desirable. So is a continuation of programs designed to identify scientific talent. Existing vocational training programs should be examined, and, where necessary, strengthened by Federal aid.

3. To insure an adequate supply of trained individuals, the Government should encourage unions to expand their apprenticeship programs. In this connection, it may be that the Bureau of Apprenticeship of the Department of Labor should be expanded. Entry into high-skill trades should be facilitated.

4. Without indorsing any specific proposals, it is recommended that a program be developed and adopted which will make special provision, within the unemployment insurance system, for workers who are laid off because of technological change. Benefits should, under such a program, be related to seniority.

5. Special programs for adjustment in depressed areas should be introduced.

6. The institutions of collective bargaining which facilitate the introduction of new techniques must be strengthened.

7. Serious study should be given to the possibility of setting up national productivity centers of the type which the United States encouraged other countries to set up. Such productivity centers might well put special emphasis on the development of new techniques for low-productivity industries, many of which are made up of small, highly competitive units too small to support research programs of their own.

8. Programs for Federal support for medical research should be expanded, just as should vocational rehabilitation programs.

9. The Federal Government must assure continued adequate support for scientific research, even in the event the national security stimulus to succeed becomes less urgent.

10. Ways must be found to make the patent system a more effective tool for technological progress.

11. The Federal program for abstracting and translating foreign scientific and technical journals should be expanded and more widely publicized. Abstracts and translations should be made available at low cost.

12. The level of public services must keep pace with private economic development. All levels of Government must do their part, but the Federal Government, with its greater financial strength, must play a key role.

Summary of Chapter 3: The Slowing Down of the Economy in Recent Years

A. THE RECORD ON GROWTH

1. The growth rate in the postwar period tapered off substantially after 1953. Not only was recent history marred by two recessions; a period of low growth during prosperity also occurred. This low growth during prosperity was due primarily to the slowing down of the rate of growth of demand, particularly the demand for goods. The declines in residential construction and Federal Government purchases were the primary causes of the trouble in the goods sectors. The resulting decline in disposable income, by eroding the growth of consumers' purchasing power, further retarded the demand for hard goods.

2. That the supply of labor and capital did not limit growth during this period is revealed by: (*a*) Higher unemployment rates, even during the prosperity phase 1956–57; (*b*) the higher percentage of the labor force which was working part time; (*c*) the low and falling rates of capital utilization; (*d*) the increasing absorption of labor by the low productivity sectors of services and trade.

3. The record of productivity in the postwar period was influenced by: (*a*) The shift of labor into services and trade which tended to slow down the rate of increase of productivity in those sectors; (*b*) the slackness of demand for goods which held productivity advances down in the goods sectors, because utilization rates were lower than normal for the expansion phase of the business cycle.

B. LESSONS OF THE RECENT EXPERIENCE

4. Had these factors not operated, the growth rate after 1953 would have been substantially higher. The blame must fall primarily upon the behavior of the Federal Government. The private sector behaved optimistically, but their decisions were made unwise in hindsight by the unduly restrictive behavior of the Federal Government. Whereas private industry was making large investments during 1956 and 1957 in order to meet high anticipated levels of output, these anticipations turned out to be overly optimistic primarily because the Government stepped too hard on the fiscal and monetary brakes.

5. Had the Government's policies been aimed at maintaining the growth of total demand, our growth rate over the 1953–59 period would have compared favorably with the early postwar growth rate. It is highly unlikely that such a set of policies would have involved much additional inflation. Some intensification of the capital goods inflation and the inflation in certain areas of services might have occurred, but this would be offset, to some extent, by the increases in output per man-hour that would have resulted from the stimulation of demand. A considerable amount of growth was sacrificed in order to prevent inflation; and as will be shown in subsequent chapters, the policies pursued were not capable of containing inflation either.

Summary of Chapter 4: Potential Growth

1. In recent years, the total output of the economy has been well below its potential output.

2. So long as a major depression, like that of the 1930's, is avoided, the economy will probably grow in the future at a rate somewhat higher than the average rate for the past five decades. Making the least favorable assumptions about the future behavior of the factors determining growth, but still assuming no depression, it turns out that the economy will probably grow at a rate of 3.4 percent per year. If somewhat more optimistic assumptions are fulfilled, the growth rate is likely to be 3.9 percent per year. But to repeat, achievement of either rate requires that growth not be interrupted by severe or too frequent slumps in economic activity.

3. Actually, we can enjoy an even higher rate of growth, 4.5 percent per year, if we try. Achievement of this rate of growth, which is considerably higher than the average of the past 50 years, requires no change in our economic way of life. It does, however, require that the Government actively pursue growth-facilitating policies, that it continually maintain an adequate level of aggregate demand, and that it promote increased resource mobility and competition.

Summary of Chapter 5: The Postwar Inflation

A. THE RECORD

1. The greatest increases in prices occurred during the post-World War II boom from 1946 to 1949 and the Korean war period from mid-1950 to 1953. Taken together, they accounted for over 75 percent of the total postwar inflation. These increases were primarily caused by high aggregate demand in both the product and the labor market. A third period of inflation, from 1955 to 1959, accounted for the remaining 25 percent of the postwar inflation. This rise in prices, however, was largely concentrated in a few important sectors of the economy, particularly steel, machinery, construction, services, and government.

2. Because the existing price indexes do not adequately reflect quality improvements or productivity increases, these indexes tend to overstate the amount of inflation we have experienced, particularly since 1955. Nevertheless, some inflationary pressure has occurred.

3. The major burden of inflation has fallen on groups whose incomes are relatively fixed and who are unable to supplement their incomes by finding employment. By far the greatest losses of real income have been suffered by older persons living on their past savings or on pensions.

4. Since 1955, approximately three-fourths of the total rise in the wholesale price index, excluding farm and food products, was accounted for by the "metals" and "machinery" components of the index. A detailed analysis of the forces underlying the inflation in these sectors indicated that in the case of steel, the dominant factors were high and rising profits and exceptional increases in wage and fringe benefits, both of which were related to strong market power in the labor and product markets, initiated in the context of a favorable state of demand. In the case of machinery, the dominant underlying factor

was the pressure of excess demand on productive capacity. In most other manufacturing industries, the rate of increase in prices was due to several interrelated factors, particularly the degree of competition in the product market and trends in output.

5. Another important trend in manufacturing was a remarkable shift in employment away from production workers and toward nonproduction workers. This has resulted in a considerable increase in the proportion of fixed labor costs, thus accentuating the degree of downward rigidity during recessions.

6. The rising price of construction, both residential and nonresidential, can be explained by a combination of a strong demand throughout most of the postwar period, probably combined with the exercise of some market power by the strong construction unions.

7. The inflation in services has been the result of several independent developments. The rise in the price of medical care is attributable to a great increase in demand without an equivalent rise in supply. In the case of unskilled services, the primary cause has been a low rate of increase in productivity combined with a rise in wage rates somewhat less than the rise in manufacturing. Primary emphasis should be placed, therefore, on methods of increasing the supply of medical services and on raising the productivity in the unskilled areas.

8. In general, the degree of demand pressure in the labor market does have an important effect on the rate of change in wages. Nevertheless, wages showed a high degree of downward rigidity in recessions. This rigidity, however, was more a reflection of the absence of any prolonged declines in business activity than a manifestation of strong unionism.

9. It is unlikely that a secular upward trend in wages and prices can be avoided with an average level of unemployment which is considered socially tolerable, given our present anti-inflation weapons.

10. No significant relationship was found between changes in earnings and changes in employment, in output, or in man-hour productivity in the manufacturing, mining, or railroad industries.

11. Within manufacturing, the most important factors which were related to wage changes were (1) the level of profits, and (2) the degree of competition in the product market, as measured by concentration ratios. This relationship was not evident in mining or railroads.

12. There was no generally applicable relationship between wage changes and union strength.

13. From 1946 to 1949, most collective bargaining settlements in manufacturing followed the "pattern" usually established in the automobile and steel industries. After 1950, however, those manufacturing industries in which competition in the product market was severe and in which profit levels were seriously curtailed did not match the pattern established in the more concentrated and more profitable industries. This was not true in coal mining and railroads, however, where wages continued to rise despite adverse profit and employment conditions. In these industries, union power was a dominant factor.

14. The initial impetus for the inflationary trend from 1955 to 1959 developed out of the very rapid recovery from the 1954 recession, centering in the automobile and residential construction industries and spreading from there into steel, rubber, building materials, and

others. These increases led in turn to a substantial capital goods boom in 1956–57, extending particularly into the machinery and nonresidential construction sectors. Within this favorable economic environment, important key bargains were negotiated by strong unions in the automobile and steel industries, both of which were enjoying very high levels of output and near record postwar profits. These collective bargaining contracts contained liberal provisions extending over a 3-year period to 1958 and 1959. These provisions, in turn, became the pattern for several other important industries in which profits and product market conditions were also favorable. As a result of these long-term contracts, wages continued to rise during 1957 and 1958, after the postwar boom had leveled off and the economy had entered into a recession. In addition, the continuing shift from production to nonproduction workers caused unit labor costs to rise sharply in 1957 and 1958. These factors contributed to the rise in prices during 1958 in those industries which had a considerable degree of market power.

B. THE GENERAL SIGNIFICANCE OF THIS RECORD FOR POLICY

The most significant point to be stressed again in concluding this summary is that no one "theory" is adequate to explain the inflation of the postwar years, particularly since 1955. Rather, a number of varied and interrelated factors have been involved. It also follows, therefore, that any public policy designed to deal with the problem must itself be diverse and flexible. Such a public policy should include three basic approaches:

1. A program to deal with the problems of severe instability arising out of aggregate or sectoral excess demand.
2. A program designed to reduce the undesirable effects of excessive market power.
3. A program designed to increase the supply of medical personnel, and to raise the productivity of services in general.

SUMMARY OF CHAPTER 6: THE PROBLEM OF UNEMPLOYMENT

A. THE POSTWAR RECORD

1. Experience with unemployment in the postwar period has not been appreciably different from that of preceding decades in this century, other than the depressed thirties. Nevertheless, there is evidence that unemployment is a growing problem. The reduction in unemployment since the trough of the 1957–58 recession has not been as rapid as in the preceding two recessions. In mid-August of this year, prior to any large-scale layoffs as a result of the steel strike, the seasonally adjusted unemployment rate was still 5.5 percent, considerably above the rate of 4.3 percent achieved in the period 1955–57. It was only one-half of a percentage point below the rate of 6 percent obtaining at the trough of the recession of 1953–54.

2. An increase in unemployment of relatively long duration has accompanied the rise in overall unemployment rates. In March of 1959, 35 percent of the unemployed had been unemployed 15 weeks or longer; 18 percent had been unemployed more than half a year.

3. All of the moderate increase in unemployment between the years 1948 and 1956 was accounted for by the proportionately much greater

rise in long-term unemployment—unemployment lasting for at least 15 weeks.

4. The increase in unemployment rates between 1948 and 1956 accompanied a relative decline in employment opportunities in manufacturing, a tendency which has persisted since that time. Factory workers now account for about 32 percent of long-term unemployment, a rate which is disturbingly high, considering that the trough of the business cycle was a year and half ago and that industrial production has averaged higher in 1959 than it did in 1956 or 1957.

5. There are a number of chronically depressed areas in the country which have had unemployment rates averaging about twice as high as those in the rest of the Nation in recent years. These areas, with two or three exceptions, are recovering more slowly than the national economy from the recession, and have poor prospects for prosperity in the foreseeable future.

6. Even in prosperous times, such as 1957, only about half the unemployment can be attributed to seasonality of industry operations, voluntary quits, or recent entry into the labor force. About half the unemployment arises from separations, layoffs, or long-standing failure to find a job.

B. SOME POLICY RECOMMENDATIONS

1. Unemployment well in excess of the frictional minimum should not be regarded complacently even though the country is generally prosperous. Measures to reduce the frequency and severity of business cycles and to insure an adequate secular growth in demand should be supplemented by efforts to increase the employability and efficiency of the labor force, and to attract new industry into areas of chronic labor surplus. Greater efforts should be made toward training young workers and retraining workers displaced through technological progress or relocation of industry. A program looking toward relocation of workers from some of the areas of persistent labor surplus should be undertaken.

2. Adjustments should be made in the unemployment compensation system. Extended benefits should be paid to workers displaced in a recession, adjusted upward to a reasonably high percentage of average wages. A Federal-State aid program should be worked out to maintain income for persons suffering from long-term unemployment who cannot qualify for unemployment benefits.

3. Federal leadership is needed to assist the recovery of a number of the chronically depressed areas. Both technical and long-term financial aid will probably be required. Assistance programs should be of sufficient scope to justify the expectation that the areas will become self-sustaining within a reasonable period. While some nonrecoverable costs may be incurred by the Federal Government in this effort, a well-planned program for reviving the chronically depressed areas should result in a net economic and social gain to the country.

Summary of Chapter 7: The Problem of American Agriculture

A. THE PROBLEMS

1. The situation of American agriculture has continued to deteriorate in recent years. Production has outrun demand, prices have

fallen, and farm incomes have dropped. Overproduction has been due to the dramatic upsurge in productivity that has taken place since 1942, combined with a growth of demand which has been low because of the small response of sale of farm products to rising per capita incomes. The imbalance has persisted because of the Government price support program, the cost of which has been mounting rapidly.

4. Rural poverty continues to constitute an important social problem. Many farms are too small and have too little capital to support a family. They have been bypassed by technological progress and receive little benefit from the price support program.

5. The behavior of farm prices has served to moderate the increase in the price level in recent years.

B. POLICIES FOR AMERICAN AGRICULTURE

1. *Policies to deal with overproduction and falling farm incomes:*

(*a*) The only ultimate solution to the surplus problem is to stop the increase in production, or at least to slow down the rate of growth, so that farm output can be brought more closely into line with the growth in demand for farm products. Since the fruits of technology will continue to be reaped, this will require a transfer of resources out of agriculture. Human costs and economic costs will be incurred in this process.

(*b*) The first prerequisite to successful agricultural policy is a high level of employment in the rest of the economy.

(*c*) Continued retirement of land from use through the soil bank program will effectively reduce output.

(*d*) With an excess of arable land clearly evident, the Federal Government should cease to add to this excess through reclamation, except where other pressing social purposes are served, or where economic feasibility can be clearly demonstrated.

(*e*) As long as there are price supports, there must be production controls and these should be strengthened through greater use of cross-compliance provisions.

(*f*) The feasibility of a program of income payments, based on the net incomes that farmers would have earned, given recent levels of production and prices, should be explored.

(*g*) The emphasis in agricultural research should continue to be shifted away from increasing output toward increasing the use of farm products.

(*h*) The program for disposal of surpluses overseas should be continued on as vigorous a basis as possible, though the interests of other traditional export countries should be kept in mind. These programs should be put on a longrun basis and not made dependent on shortrun fluctuations in our own stocks.

(*i*) In executing American foreign trade policy, particularly with regard to Western Europe, effort should be made to reduce agricultural protectionism in potential customer countries.

(*j*) Since mobility of people and of resources out of agriculture into other industries is the only ultimate long-term solution to the prob-

SUMMARY OF CHAPTER 9: MONETARY POLICY AND DEBT MANAGEMENT

A. MONETARY POLICY: THE RECORD

1. Increasing reliance has been placed on monetary policy as a means of maintaining economic stability in recent years, especially since 1953.

2. Interest rates have exhibited an upward drift due to the fact that the effects of tight money in early 1953, 1955–57, and 1958–59 have greatly overbalanced the effects of easy money in the recessions of 1953–54 and 1957–58.

3. The Federal Reserve System has relied almost entirely upon so-called general credit controls, including changes in discount rates, changes in member bank reserve requirements, and open market operations. Reserve requirements have been gradually lowered in several stages in the recessions of 1953–54 and 1957–58, and have not been raised since 1951. Since early 1953, the Federal Reserve has confined its open market operations almost entirely to short-term securities—the so-called bills-only policy. The System has shown a decided antipathy for selective credit controls.

4. General credit controls have been rather slow to exert their effects on aggregate demand, even in dealing with inflation, the job for which they are alleged to be most suited. When credit is tightened by reducing the money supply or slowing down its rate of increase, as in 1955–57, the income velocity of monetary circulation tends to rise, as existing cash balances are dishoarded to finance increased spending. Much of the tendency for changes in velocity to offset the effects of changes in the money supply seems to be due to various financial adjustments. These include shifts in the composition of bank portfolios from Government securities to loans, which tend to increase velocity as the buyers of the securities sold by banks release idle cash balances which are then loaned to active spenders by the banks. Other adjustments include changes in holdings of liquid assets by business corporations and to some extent activities on the part of financial intermediaries, such as life insurance companies, savings banks, and savings and loan associations, which result in the activation of money balances. Various other financial devices for economizing the use of cash balances have also contributed to the tendency for velocity to rise as credit has tightened. It has proven difficult for the Federal Reserve to act with sufficient speed to overcome these offsetting tendencies, because expenditures of most groups have proven to be relatively insensitive to changes in interest rates and credit availability and for other reasons.

5. The impact of monetary controls has varied greatly from one sector of the economy to another. The greatest impact has clearly been felt by residential construction, due mainly to the presence of ceilings on FHA-insured and VA-guaranteed mortgages. As a result of its sensitivity to monetary policy, residential construction has behaved in a distinctly contracyclical fashion. It appears that monetary policy has also had a noticeable effect on expenditures of State and local governments for schools and other public improvements. There is some evidence that smaller business concerns have been disproportionately affected due to the fact that the sources of funds avail-

able to them are limited, but the evidence on this is not entirely clear. Investment in plant and equipment by larger firms appears to have been affected very little for a number of reasons. Consumer credit has probably been affected somewhat, but the impact has not been strong. Business investment in inventories does not seem to have been influenced noticeably. Such impacts as monetary policy does appear to be felt only with substantial lags.

6. Much of the inflation of the last few years was due to sudden shifts in demand among sectors, the exercise of market power which both raised some prices and kept others from falling, and inadequate supplies of some services. Monetary policy is not effective in dealing with this kind of inflation. The sectoral impact of monetary policy does not coincide with the sectoral occurrence of inflation, and does not deal with market power or with shortages of supply. Therefore, it relies heavily on the indirect effects of reducing total demand. With prices rigid and resources immobile in the short run, monetary policy of the present type applied to a degree that would suffice to stop inflation, would lead to great unemployment and ultimately to recession.

7. While the short-run effects of monetary policy on business investment in plant and equipment do not appear to be very great, we cannot be sure that the upward drift of interest rates does not gradually reduce the incentive to invest and affect growth.

8. General credit controls have proved to be selective in their effects; in fact generality in stabilization policy is an illusion. Moreover, in the kind of economy we have today with its price rigidities and immobility of resources in the short run, effective stabilization should be selective in an intelligent way. The trouble with general monetary controls, in addition to the fact that they are relatively weak and slow to take effect, is that they are selective in a way that would be appropriate only under very special—and unlikely—circumstances.

B. RECOMMENDATIONS FOR IMPROVING MONETARY POLICY

1. The problem of achieving stable growth of output should be distinguished from the problem of controlling inflation. The maintenance of stable growth of output is a question of maintaining a balance between the growth of capacity and the growth of demand.

2. The development of selective controls over fixed investment might be desirable, because rapid increases in investment, as in 1955–57, have resulted in rapid growth of capacity, have created difficulties in keeping demand growing in pace with capacity, and have added to inflation. However, while the possibility of developing controls over investment should be studied, the prospects of effective control do not seem very promising, and there is danger that in attempting to prevent instability in investment, we might reduce its average level and thus slow down the rate of growth.

3. Consumer credit and inventory investment have been destabilizing influences, and serious thought should be given to the development of effective controls in these areas. More effective control over bank loans might help to stabilize inventory investment. Residential construction has been subject to control as a result of the interest rate ceilings on FHA-insured and VA-guaranteed mortgages. Selective con-

lem, the Federal Government should take all reasonable measures to facilitate this process: special aid to education in rural areas to provide skills usable in other industries; relocation allowances; and strengthening of employment service facilities.

2. *Policies for low-income farmers:*

(*a*) The rural development program, which is particularly aimed at farmers who do not produce for market, should be carried through on a more substantial scale.

(*b*) Technical assistance in developing more effective farms and in improving marketing facilities should be expanded in order to further reduce rural poverty.

Summary of Chapter 8: Fiscal Policy

A. The record of postwar fiscal policy and economic stability

1. Changes in the volume and character of Federal Government demands, particularly for defense purposes, have been an important source of economic instability.

With the single exception of the Korean war, changes in defense demands have not been accompanied on a timely basis by discretionary fiscal action to compensate for their disturbing impact.

2. Except during the Korean war period, Federal postwar fiscal policy has relied almost exclusively on discretionary changes in expenditures and on built-in stabilizers for purposes of achieving economic stability.

3. Although the automatic stabilizers served to moderate both economic declines and booms once underway, they have not been adequate to prevent major fluctuations in rates of employment and output.

4. The effectiveness of stabilizing fiscal action, either discretionary or automatic, is significantly affected by monetary conditions.

5. So-called traditional fiscal policy, relying on broad changes in the relative levels of receipts and expenditures, is poorly suited to deal with inflationary pressures orginating in strong shifts in demand among sectors of the economy rather than in excessive total demand.

B. Secular trends in federal fiscal policy since world war ii

1. Federal fiscal policy has tended to become less restrictive with respect to the expansion of total demand.

2. The trend toward a less restrictive fiscal policy has been accompanied by a secular movement toward a more restrictive monetary policy.

3. The changing mix of monetary and fiscal policies has, on the whole, been unfavorable to private investment.

4. For the postwar period as a whole, no major change has occurred in the distributional impact of the Federal tax structure.

5. Federal expenditure trends have been in the direction of encouraging increases in productive capacity and in productivity.

6. Changes in Federal expenditures have contributed to economic instability; continuation of post-Korean trends in the composition of Federal outlays suggests an increased tendency toward economic fluctuation.

C. RECOMMENDATIONS FOR IMPROVING FEDERAL FISCAL POLICY

1. More rapid growth, if it is to be maintained, increases the desirability of prompter and more effective stabilization policies. At the same time, achieving a higher rate of economic growth may involve greater tendencies toward economic instability.

2. Under some circumstances, public policy may have to choose between the price level and the rate of employment as the stabilization objective. In such circumstances, greater emphasis should be placed on stabilizing the rate of employment.

3. Tax policy should be used more promptly and more vigorously to offset economic fluctuations than it has throughout the postwar period.

4. Automatic fiscal stabilizers should be strengthened, particularly with a view toward increasing their sensitivity to changes in employment.

5. Decisions with respect to the volume and character of defense procurement should be made on the basis of judgments about long-term military posture. They should be divorced from short-run budgetary considerations and prospects concerning the level of economic activity. On the other hand, these decisions should be a major consideration in formulating stabilization policies.

6. Reducing the information lag is an important condition for increasing the speed and vigor of discretionary fiscal responses to economic fluctuations.

7. Federal fiscal policy should aim at substantially greater surpluses, for any given level of desired restraint on demand, than have been realized during the post-Korean period, leaving less of a burden for other policies.

8. If a higher rate of capital formation in the private sectors of the economy is desired, then over the long run tax burdens may have to be shifted to bear less heavily on investment and saving and more heavily on consumption.

9. Reform of the Federal tax structure, particularly the income and estate and gift taxes, is essential if there is to be a shift in the policy mix toward higher levels of budgetary surpluses.

10. Government expenditure programs should be revised to place greater emphasis on activities which increase productivity and make possible increases in productive capacity and to reduce outlays supporting inefficient use of resources.

11. Accurate appraisal of long-term trends in Federal expenditures requires reform of budgetary accounting. Such reform is also necessary if the short-term impact of Federal fiscal activities on levels of activity throughout the economy is to be accurately appraised. Primarily this reform requires halting the erosion of the conventional budget and restoring it to accounting for procedures and receipts now set apart in fiscal accounts.

12. To reduce the destabilizing effects of the budget, the ceiling on the national debt should be abolished.

trols are needed in this area, but the interest rate ceilings should probably be removed and replaced by other kinds of controls. To the extent that the volatile behavior of consumer credit, inventory investment, and residential construction is responsible for rapid shifts in the composition of demand, effective controls over these sectors would help to minimize inflation, as well as maintain stable growth.

4. Except to the extent that selective controls can prevent shifts in demand by regulating unstable sectors, monetary policy cannot deal effectively with inflation resulting from the exercise of market power which keeps prices and wages from falling or forces them up unduly. If we really want to deal with this kind of inflation, we should strike at market power directly.

5. General controls can exert some influence in preventing aggregate demand from growing too rapidly and in providing a monetary environment in which other policies can work effectively. Consequently, we will need to use them even if we decide to make greater use of selective controls.

6. Some changes in the use of the present general credit control weapons would probably be desirable. Discount rate changes are a source of uncertainty and subject to misinterpretation. Consideration should be given to the adoption of the Canadian system under which the discount rate is tied to open market interest rates, or perhaps to doing away with member bank borrowing entirely. The Federal Reserve should either justify the practice of lowering reserve requirements to supply reserves for growth or else abandon it. The use of open market purchases of Government securities for this purpose would have the advantage of reducing the Treasury's interest cost in managing the public debt. The Federal Reserve should abandon the "bills-only" policy in its present rather doctrinaire form and be prepared to deal in long-term securities whenever the economy would benefit from it.

7. The administration of the Federal Reserve System should be streamlined by reducing the cumbersomeness of the present Open Market Committee and perhaps turning over the entire administration of monetary policy to a Board of Governors reduced in size. Such streamlining is especially necessary if any effort is to be made to implement a more selective monetary policy.

C. DEBT MANAGEMENT: SOME PRINCIPLES

1. The publicly held debt, which does not include the debt held by Government agenices and trust funds or the Federal Reserve System, is the proper concept to use in the analysis of debt management. It is substantially smaller than the gross public debt. The magnitude of the debt management problem is frequently exaggerated because improper statistics are used.

2. Debt management may be defined as all operations by the Treasury (and the Federal Reserve) which affect the composition of the publicly held debt.

3. The net effects on the level of expenditures resulting immediately from debt management operations (essentially selling securities of one maturity and using the proceeds to retire securities of another maturity) due to the changes they produce in the structure of interest rates and liquidity are probably not great.

4. Changes in the structure of interest rates may be regarded as a selective control device, although our knowledge concerning the precise effects of such changes is not very extensive.

D. RECOMMENDATIONS FOR IMPROVING DEBT MANAGEMENT

1. To the extent that changes in the rate structure are desired for their selective stabilization effects, the responsibility for bringing them about should lie with the Federal Reserve, which can use open market operations in various maturity sectors for this purpose.

2. Debt management operations by the Treasury should be directed at achieving and maintaining a debt structure which is desirable in the longrun. A debt consisting predominantly of long-term securities would be less readily shiftable and capable of facilitating the dishoarding of idle cash balances when the financial system and economy are subjected to external disturbances. Under present circumstances, the Treasury should direct its efforts toward the lengthening of debt maturities with due consideration for the interest cost on the debt. This suggests that efforts to sell longer-term securities should be emphasized in periods when interest rates are low. In addition to tightening up the financial system somewhat, lengthening of the debt will also permit a better distribution of maturities and thus minimize interference with the Federal Reserve's freedom of action.

3. The cost and difficulty of managing the debt in an effective way would be reduced if (*a*) monetary restrictions were relaxed somewhat; (*b*) fiscal policy were tightened and monetary policy relaxed still more, thus producing a policy mix more conducive to growth; (*c*) more reliance in monetary policy were placed on selective controls which work directly on credit rather than by pushing up interest rates; and (*d*) the Federal Reserve stopped lowering reserve requirements to supply reserves needed to support economic growth and used open market purchases instead. Most of these measures would be desirable on other grounds; they would encourage growth and might increase our effectiveness in dealing with economic instability.

4. The Treasury should explore various methods of improving the debt management techniques, including the auctioning of long-term bonds, more frequent small offerings of securities, improved methods of underwriting its offerings, an improved selling organization, and the judicious use of advance refunding. The Federal Reserve should abandon the "bills-only" policy for a number of reasons, one of which is that such a step would permit the System to reduce erratic fluctuations in the prices of Government securities which have made these securities less attractive to investors. It might be desirable for the Treasury to introduce purchasing-power savings bonds in order to supply the small investor with protection against inflation.

5. The concern about high interest rates has its basis in disagreement about the appropriateness of policies for achieving our economic objectives. The 4¼ percent ceiling on interest rates on Government securities with an original maturity of more than 5 years is an arbitrary limitation which complicates the problem of debt management. But, though the interest rate ceiling should be repealed, modification

of the policies that led to the present situation is a matter of much more pressing importance. Whether it wants to repeal the interest rate ceiling before basic reforms in monetary, fiscal and debt management policy are put into effect, is a matter for Congress to decide.

Summary of Chapter 10: Public Policy and Market Power

1. A vigorous antitrust program is the most preferable method for reducing the impact of market power. By making the economy more competitive, antitrust activities serve not only to reduce inflation; they also help encourage a more rapid rate of growth.

2. If the antitrust approach is to be relied on, it must be considerably strengthened. The professional staff of the Antitrust Division should be expanded, with a salary scale sufficient to attract and retain able personnel.

In addition, Congress should give serious consideration to several other aspects of our present antitrust enforcement procedures. Prenotification of proposed mergers would be desirable; greater power to subpoena records in civil cases should be provided; and finally, a more effective method for dealing with market power which is not based on overt collusion should be developed.

Finally, the present policies of our regulatory agencies should be reevaluated with particular regard to the effect of these policies on competitive practices within their respective jurisdictions.

3. We also recommend, as part of an overall program to limit and possibly reduce market power in the American economy, that tariffs be steadily reduced.

4. The antitrust approach to the problem of union market power is neither feasible nor desirable, except in instances where there is collusion between unions and firms to fix product prices. Making industrywide bargaining unlawful would be unwise; nor would it be sound policy to prevent national unions from participating in collective bargaining. This is not to say that union market power has not contributed to the inflation problem; it has. But increased competition in product markets, as the result of tariff reductions and a vigorous antitrust program, can do much to check the exercise of this power.

5. We do not believe that moral suasion can be relied upon to check the exercise of market power. We do believe, however, that an annual conference for business and labor leaders, at which they can be apprised of the economic outlook and the implications of their actions for this outlook, would yield some benefits and should therefore be instituted.

6. We believe there should be a presumption against Government intervention in wage and price determination, unless the circumstances involved make it necessary. If this approach were to be utilized, several alternatives are available, reflecting increasing degrees of intervention. These would include establishment of a study group to advise the President on important price and wage changes; the use of factfinding procedures, with or without the issuance of a report and recommendations; the requirements of prior notification to the Government of proposed price or wage increases in certain key industries; the power to suspend such increases; and finally, direct price and wage controls.

At this stage of our knowledge and experience, we believe that if such an approach were to be utilized, it should be limited to the establishment of factfinding procedures to be invoked at the discretion of the President and to result in the issuance of a report and recommendations regarding the justification and desirability of price or wage increases. In the coming years, the historical record will determine the extent to which further measures are necessary.

Summary of Chapter 11: America's Role in a Changing World Economy

1. In the past 9 months, the U.S. balance-of-payments position interpreted solely in terms of U.S. gold plans appears to have improved substantially. This may, however, be only appearance. Analysis suggests that the U.S. position may actually have worsened, for there has been an acceleration in the accumulation by foreigners of liquid dollar holdings.

2. The growth of liquid foreign claims against the United States creates problems for U.S. policy which cannot be evaded indefinitely. The position of the dollar as the dominant key currency, as the major supplement to gold stocks in providing international liquidity, cannot but create periodic U.S. payments problems. And, similarly, for the stability of the American balance-of-payments position.

3. This suggests that the problem of international liquidity, and not the problem of American export competitiveness, is the real threat to the American balance of payments. Indeed, the data examined in our study of the international situation do not on their face justify the conclusion that the current U.S. balance-of-payments position is primarily due to a decline in the export competitiveness of American industry.

4. The development of economic regionalism—which may ultimately prove to have been a good thing, but which also may prove to have been a harmful development—is in part due to the international liquidity problem.

5. It would be unwise for the United States to move hastily in adopting policies intended to solve what are fundamental problems. Lasting solutions will come only as a result of free world cooperation.

CHAPTERS 1–11

EMPLOYMENT, GROWTH, AND PRICE LEVELS

CHAPTER 1. INTRODUCTION

The tempo of the American economy slowed in the last 6 years. Simultaneously, prices rose. And although the economy remained free of severe depression, two recessions occurred which caused considerable unemployment.

This is a record which warrants concern. Not that 1953–58 was a period of economic disaster. The recessions were brief, and the inflation mild; moreover, real output continued to increase, if at a slower rate than before. Yet, if the American economy performs no better in the coming decade, we shall not have an easy time of it. We shall have to accept lower standards of living, or else give up the full attainment of essential national objectives. Similarly, we shall have to continue to accept less than full employment, and, at the same time, continue to live with the injustices of inflation.

There is nothing inevitable in these prospects. We can achieve a greater rate of economic growth and a lower average level of unemployment with little inflation. But to do this, an overall economic policy different in important respects from that of the past several years will have to be utilized. If we keep on with the present approach, we shall also keep on having to choose between sufficient economic growth and more inflation and insufficient economic growth and moderate inflation.

This, then, is the theme of this staff report. It is a theme which emerges from all of the research studies we have undertaken. Indeed, this report is largely a summary of these studies. It will therefore include analyses of the process of inflation and of the process of economic growth, as well as of economic policy in the postwar period. In addition, however, this report contains recommendations—intended to serve as a background of the committee's own deliberations—for an economic policy which will promote the attainment of economic growth with a minimum of inflation.

I. Our Economic Objectives

A. ECONOMIC GROWTH

1. What is economic growth?

Economic growth is the expansion of a nation's capability to produce the goods and services its people want. Productive capability depends on the amount of available resources and their productivity—upon the size of the labor force and the skills and know-how it has acquired through education, training, and experience, upon the physical stock of capital, upon the availability of natural resources, and upon the state of technology. Economic growth, therefore, is the process of expanding and improving these components of productive

capability. It is accomplished by increasing the labor force, by education and training, by adding to the stock of physical capital, by research and development activities which advance technology, by the discovery of new resources, and by improving the effectiveness with which all of these components are organized in productive effort.

A perfect measure of economic growth, so defined, has not yet been developed. Instead, we rely on measures of output, potential and actual, to indicate how much our economy could produce and how much of our productive capability is in fact being used. Comparing the increase in output which in fact occurs with potential output measures how fully and effectively we are using our expanding productive capability.

Economic growth, as we have defined it, is not a simple process which depends only on increasing any one of the components of productive capability. If these components are in substantially full use, applying more of them to, say, increasing the stock of physical assets means that less of them will be available during the same period of time for satisfying current consumption demand or for increasing or improving other components of productive capacity.

The private and public sectors of the economy have responsibility for the rate and character of the Nation's economic growth. With an ever more complex technology, increasing the productivity of the labor force demands better basic education and increased effort to provide specialized skills and knowledge. Assuring continued technological progress demands that resources be devoted to basic research and to determining how these findings may be most efficiently applied to improve production methods, and to develop new products and devices to meet ever-expanding and more diversified demands. Achievements in these fields increase the opportunities for profitable private investment, without which, very often, these gains could not be fully exploited.

2. How is economic growth used?

The fundamental purpose served by the Nation's economic growth is to increase the welfare of its people. Increasing production potential does so in two ways: It makes possible an increase in the total goods and services available to individuals in private consumption, and it can increase the capability of the Federal, State, and local governments to discharge the responsibilities assigned to them. In our economy, individuals make their desires for different kinds of consumer goods and services felt in the market through their willingness to purchase at a price. The direction and magnitudes of public undertakings in a democracy are determined through the political process. Thus, for economic growth to be meaningful to individual welfare, there must be free markets to determine the composition of private spending and a democratic political process to determine the activities of government.

(a) Rising standards of living

The American average standard of living is the highest in the history of the world. The average American family of 3.6 persons had an annual income before Federal income tax of $6,220 in 1958. High as this level, there is no question that individual welfare would be improved by a broadly based increase in average income. Our society

has become accustomed to rising standards of living. Should our living standards fall or even fail to rise over any extended period, social strife and group conflicts over the division of available goods and services would be intensified. Economic growth, therefore, has an important bearing on the political and social stability of the Nation as well as on improving the material well being of the people.

(*b*) *Public responsibilities*

Rarely has a democratic nation been confronted by such great public responsibilities as the United States is today. It is beyond the province of this staff report to set forth programs in the various areas of these responsibilities. To sharpen our focus on the importance of economic growth, however, we must at least outline the public responsibilities which confront the Nation, the fulfillment of which will absorb rising amounts of economic resources.

1. *The military security of the American people.*—Our national security policy has four main objectives:

(*a*) To deter direct attack on the United States;

(*b*) To limit damage to the United States if deterrence fails and to come out of a war in as favorable a position as possible;

(*c*) To deter attack on our major allies, especially in Western Europe, and to help defend them if deterrence fails;

(*d*) To aid in the defense of other allies and in the defense of the free world.

Each of these objectives places great demands on our economic resources. The rapid progress of Soviet military technology increases our peril and requires us to accelerate our own advances if the present delicate balance of military capability which keeps the nuclear peace is not to be lost. If we cannot, thereby, deter nuclear war, we must be in a position to strike back. For this purpose, we need effective civil defense programs and immunity of our retaliatory forces from enemy attack.

In addition, we must maintain the ability to fight and to win limited wars without thermonuclear weapons. All-out nuclear warfare is not the sole threat to world peace. Piecemeal weakening of the free world through limited territorial aggression remains a threat. We must be ready at all times to engage in limited skirmishes wherever they may arise to protect the free world. As nuclear weapons become ever greater in destructive power, the possibility of using them to achieve limited military objectives diminishes. Maintaining our strength in nonnuclear arms, therefore, is essential to the safety of the free world. Finally, we must provide military aid to our allies, enabling them to resist external aggression and internal subversion.

We now devote a little over 9 percent of our gross national product to the military objectives described above. Our NATO allies are spending about 5 percent. The Soviet Union, on the other hand, in addition to supporting its large nonmilitary investment program, is devoting about 15 percent of its resources to defense. The military power she has procured with these resources is impressive. In some important categories, her arms capabilities substantially exceed that of the West. Much of this power has been created within the last few years. Within the next 10 years or so, we can expect to observe a growth in Communist military power on a scale which reflects the rapid growth of the Soviet economy.

In the modern world, it is impossible to buy 100-percent protection against military threat. All that the heavy commitment of economic resources can do is to keep high our chances of ultimate success in protecting the free world against aggression. Despite the current relaxation of tensions, Soviet military technology continues to advance. The Soviet economy is growing at an annual rate of 7 percent, and its allocation of resources to the objectives of Russian international policy is apparently undiminished. The United States must, therefore, look ahead to rising demands on its own economy arising from this expanding challenge.

By 1970, when the Soviet Union will probably have doubled her output, the resources she is likely to devote to her drive for military and political hegemony are likely to be far greater than they are today. Should we grow at, say, 3 percent, while her expenditures remain a fixed share of her output, we will have to increase our own military effort from 9 to 14 percent of our output. This would be a heavy burden, corresponding to national security outlays today of over $65 billion. It is a burden we could carry, and is far lighter than the fraction we devoted to military purposes in World War II or even during the Korean war. But it is a steadily rising burden, both absolutely and relatively, and as it becomes heavier, our willingness to let ourselves slip behind may become greater.

Economic growth will not suffice to assure an adequate military effort. Only the willingness of the American people to bear the burden can do that. But growth can make it easier, and keep us in a position of being able to match Russian and Chinese efforts at whatever level of resource commitment they choose to pursue the cold war.

2. *Economic aid to underdeveloped countries.*—The United States, as the richest country in the world, has assumed a substantial responsibility for providing economic aid to accelerate the economic development of the many countries that are trapped in the vicious circle of poverty. The United States has always extended a helping hand to poorer countries, for humanitarian reasons. In addition, it must be expected that the Communist countries will intensify their own programs of economic aid. Should we succeed in maintaining the military stalemate, more of their efforts will go into the economic sphere. As their total output grows and as the number of skilled technicians which their educational system produces rises, they (the Soviet Union and other Communist countries) will increase the amount of their development aid. If the uncommitted nations of the world, particularly in Asia and Africa, are to pursue their economic, social, and political goals without adopting the Communist system, our own efforts must increase. This aid can take the form of private investment, public investment, or technical assistance. In any event, the demands on our production capabilities will increase.

3. *Domestic public responsibilities.*—Increasing demands will be placed on our economic capabilities by domestic public undertakings. A rapidly growing, increasingly wealthy population, devoted to political and economic freedom, will necessarily require more of the services and goods which can only be, or are most effectively, provided by government. We cannot maintain our advance in economic well-being if we fail to educate better our young people. As our living standards rise, our responsibility to reduce poverty rises. As

urbanization proceeds, basic public services must expand if living standards are not to fall; slum clearance and improvement and expansion of public utilities become increasingly the means to greater well-being. The expansion of the civil functions of government has been an important element of economic progress throughout the Nation's history.

Some of the major areas that will require increased investment over the next few years are:

(*a*) *Education.*—Our total school population will continue to increase rapidly in the coming years. A study paper prepared for this committee concludes that the total cost of education by 1970 will equal $17.4 billion, but that with present methods of financing, no more than $15.3 billion will be available. In addition, there is widespread belief that the quality of our educational system is not rising fast enough. There are also enormous differences in the expenditures per pupil in different parts of the country, with the graduates of the poorest school systems handicapped in later life.

(*b*) *Research.*—The amount of scientific research in which the country engages will have to continue to increase. Today, the Federal Government supports half of all the research of the country; this support has been the main factor in the acceleration of our scientific efforts. Much of this Federal support has been induced by the race in weapons technology. Besides the military accomplishments, it has led to the development of important advances that have benefited the civilian economy. In addition, the opportunities for medical research have widened, and increasing resources can be effectively employed in this field.

Thus, execution of the public responsibility in this area of investment for growth, both through accelerating the rate of technological progress as well as improving our medical knowledge, will require additional economic resources in the coming years.

(*c*) *Health.*—The economic output devoted to improving the quantity and quality of health services will also have to increase greatly in the coming years. Besides the improvement of medical care which we take for granted as a part of a rising standard of living, the very large increase in the older population results in a need for more medical facilities and personnel. Much of this need will be met privately, but as one of our study papers points out, public responsibilities will also rise.

(*d*) *The improvement of our cities.*—Our cities, which have been the centers of commerce and culture of the country, and which even in this age of suburbia continue to play a focal role in our way of life, have been deteriorating greatly. Slums have become more and more widespread. Transportation facilities have deteriorated, as have community services. With the financial base of our cities weak and with political leadership frequently wanting, only a national effort can hope to reverse the accelerating decline of our cities.

(*e*) *Public works backlogs.*—During World War II and the Korean war investment in public works was cut. Large backlogs were newly created, and while our efforts of recent years have been increasing, particularly in connection with highways, far more remains to be done. The road program has just reached high gear. Investment in water supply and pollution control and in conservation and natural resource development will have to increase in coming years.

(*f*) *The reduction of the poverty that remains in the United States.*—Despite the high average levels of income, poverty still remains an important problem. A study paper finds that 19 percent of the population receives less than $2,500 a year for a family of four, and that the incidence of poverty is particularly high among the aged, nonwhites, those with less than 8 years of schooling, and family units headed by women.

To reduce this poverty, social security and public assistance programs must continue to be improved. But, in addition, the country must seek to equip the affected people to play a more productive role in our economy. Much of our poverty is concentrated in certain special groups that have been bypassed by economic progress, such as farmers in areas where the resource base cannot support the present population, the American Indians, and the physically handicapped. With skillful effort, including the investment of economic resources, many of these people can be put into an economic position in which they can earn an adequate living.

Economic growth will not in and of itself guarantee the fulfillment of our public responsibilities. Thus, in addition to encouraging economic growth, we must, particularly in the near future, take other steps. First, we must reconsider the priorities of present public expenditures. Much of our budget is now devoted to various subsidies which favor special groups, and from which large savings could be realized. Second, we must direct to the public sector, through taxation, any additional resources that will be needed. Any attempt to increase the level of tax revenues should be begun by strengthening and broadening the tax base by reducing the favoritism extended by the tax laws to some individuals and groups. But if we find that even with an overhaul of the tax system and elimination of present uneconomical public programs, the level of revenues is inadequate to support the expenditures required to meet these public responsibilities, we must raise tax rates to levels appropriate for a responsible fiscal policy. Third, having made the resources available, government must effectively utilize them to accomplish its objectives.

In the longer run, however, economic growth must play a crucial role in the achievement of our goals.

As the Communist economies expand rapidly, our own accomplishments must keep pace. We must have an economy which can support a foreign policy sufficient to keep the Western world advancing toward an ever more democratic way of life and the uncommitted nations of the world outside the Communist sphere of influence. At home, we must continue to have rising consumption standards and we must carry on our public activities at a level appropriate to a country of our wealth.

B. THE IMPORTANCE OF HIGH-LEVEL EMPLOYMENT

High rates of employment are important not only as a means to economic growth, but as an important goal of policy in itself. Unemployment is a serious social problem. In our society, work for those physically able is a prerequisite for self-respect; the ability to find work is thus an essential characteristic of the good society. Unemployment is also an important cause of poverty, and because of the sud-

den loss of income which it entails, disrupts the plans and aspirations of those affected.

In recent years, unemployment has become an increasing problem. The rate of unemployment in the last recession was considerably higher than in the two preceding postwar recessions. In the present recovery, unemployment is still running at a rate of 5.6 percent, considerably above the average rate of 4.3 achieved in the period 1955–57, and only one-half percent below the rate which prevailed at the trough of the recession of 1953–54. There has also been a substantial increase in unemployment of long duration, much of it originating in goods-producing industries, and involving heads of households. There has also been an increase of involuntary part-time employment.

A part of the unemployment is concentrated in chronically depressed areas which have had unemployment rates averaging about twice as high as those in the rest of the Nation in recent years. Generally, these areas have recovered more slowly from the recession, and some have poor prospects for future prosperity.

C. THE IMPORTANCE OF PRICE-LEVEL STABILITY

Stable prices are a desirable attribute of the American economy. When inflation occurs, some groups gain and others lose in a pattern which is unjust. On the whole, those individuals in the most vulnerable economic position suffer the greatest losses. Retired persons particularly, who receive little earned income and who frequently rely on fixed interest incomes and transfer payments which are only slowly escalated, are much the most important group who suffer from inflation. Inflation has led to little shift in the distribution of income between property and labor.

Inflation, if it becomes severe enough, can also seriously interfere with the efficiency of the economy. Management may become careless in its investment decisions and in watching its costs. So far, there is little evidence that the United States has been affected in this way.

Policy is also confronted with difficult choices in times of inflation. Growth and employment cannot be promoted as effectively if rising prices circumscribe policy actions. This has probably been the heaviest cost that inflation has placed on the American economy in recent years.

II. The American Growth Potential

In order to determine the growth potential of the American economy, members of our staff undertook a statistical analysis of the historical record. This analysis was then used as a basis for the alternative projections of future growth which are presented in table 1 below. These alternative projections, which, of course, are based on different assumptions about the future behavior of those factors which determine the rate of economic growth, provide a realistic range of possible future growth rates.

Projection A is based on the assumption that our economic affairs are managed in such a way that a high level of prosperity is maintained. Thus, it is assumed that unemployment averages only 3 percent by the mid-1970's, and that job opportunities are sufficiently abundant to attract a relatively large proportion of the population

into the labor force; capital accumulation and the composition of output are assumed to follow the historical pattern established in past periods of prosperity. On these assumptions, the growth rate is 4.5 percent if measured from the output potential for 1959, and 4.9 percent if measured from the preliminary estimate of the actual output for 1959. Both of these rates exceed the average rate for the past 50 years.

Projection B is based on somewhat more modest assumptions: specifically, that unemployment averages about 4 percent, that the recent trends in labor force participation rates continue, and that the rate of capital accumulation and the mix of output follow the pattern of previous periods when growth was occasionally interrupted. As table 1–1 indicates, these assumptions, when applied to the 1959 output potential, yield a growth rate of 3.9 percent; when applied to the preliminary estimate of actual 1959 output, they yield a growth rate of 4.3 percent.

Finally, projection C is based on the assumption that public and private policies continue as in the recent past, and that therefore growth is frequently interrupted. Unemployment is assumed to average 5 percent, and the labor force is assumed to grow more slowly than was assumed for projection B, because, with high unemployment, labor force participation rates are lower. Continued inadequate mobility of labor and capital is assumed, and capital is assumed to accumulate at a lower rate than was assumed for projection B. The resultant projection is 3.4 percent, measured from potential output for 1959, and 3.8 percent, measured from the preliminary estimate of actual output for 1959.

None of these projections, then, is based on the assumption of a radical change in our economic way of life or economic circumstances. Thus, no major depression, like that in the 1930's, is assumed. Nor is it anywhere assumed that the Government imposes an elaborate system of controls designed to force a certain rate of saving or pattern of consumption. This last point is of particular importance, for it means that without relinquishing our cherished freedoms we can nevertheless enjoy a rate of growth of output substantially higher than that experienced in the past. What is required, however, is that the

TABLE 1–1.—*Selected indicators of economic growth potentials, 1959–75*

[Percent increase per year] [1]

Indicator	Projected potential growth rates for 1959 to 1975		
	A	B	C
Total labor force	1.9	1.7	1.5
Total employment, including the Armed Forces	[2] 1.9	[3] 1.7	[4] 1.5
Average annual hours of work	−1.4	.5	−.6
Total man-hours	1.5	1.2	.9
Stock of private plant and equipment in constant prices	3.2	2.7	2.2
Average age of capital stock	−.2	−.15	−.1
Gross national product, in constant prices:			
From 1959 actual (preliminary estimate)	4.9	4.3	3.8
From 1959 potential	4.5	3.9	3.4

[1] Computed by a compound interest formula, using the initial and terminal years.
[2] Assumes 97 percent of the labor force employed in 1975.
[3] Assumes 96 percent of the labor force employed in 1975.
[4] Assumes 95 percent of the labor force employed in 1975.

Government pursue growth-facilitating policies: by monetary and fiscal measures, aggregate demand must be kept sufficient to insure a high level of prosperity and employment; and increased resource mobility and competition must be actively encouraged. If the Government does not make economic growth an explicit objective, economic potential will not increase as rapidly as it might. Even so, it will continue to outrun actual performance.

III. The Recent Record

In the last few years, total output has been growing at a rate substantially less than the potential rate at which it could have grown. From 1953 through 1959 the average rate of increase of output was only 2.4 percent. In contrast, the average rate of increase of the potential of the economy was about 4 percent. Had full potential been realized over this period, gross national product would today be greater by from 5 to 7 percent.

Several other symptoms of weakness in the economy have become evident. Unemployment has been increasing. For the years 1946 to the 3d quarter of 1959, unemployment has averaged 4.5 percent of the labor force. This is greater than the long-run average.

Unemployment during periods of prosperity has also been increasing. The rate of unemployment was 3 percent in 1947–48, 4.2 percent in 1956–57, and now, in the present boom, is 5.1 percent. Some of the recent unemployment is, of course, related to the steel strike, but, even allowing for this, the rate is alarmingly high for good times. Nor is the prospect for the remainder of the present boom favorable; at best, unemployment will probably not dip below the level of 4 percent for more than a few months during the current boom.

Similarly, the recession unemployment rate has increased. In 1949 it was 5.9 percent, and in 1954, 5.6 percent; in 1958, however, it was 6.8 percent.

During this period of weakening booms and deepening recessions, the price level rose. Consumer prices are 9.7 percent higher now than in 1953. Wholesale prices are higher by 8.3 percent, and the GNP deflator, the most comprehensive price index, by 13.9 percent.

IV. Economic Growth and Price Stability

This is not an encouraging record. But could we have done better? Could we have had greater growth and less unemployment without more, or perhaps with even less, inflation? And can we do better in the future? Answers to these questions are not easy to come by. At a minimum, some knowledge of the relationship between economic growth and the behavior of the price level is required. Accordingly, we have spent much time and energy investigating this relationship. Before turning to a review of our findings, however, we must consider briefly three widely held theories about this relationship, theories which we believe to be incomplete and, therefore, inadequate as bases upon which to construct a satisfactory economic policy. These three theories, while different in some ways, are alike in one very important respect: each, in its own way, supports the view that any conflict between economic growth and a stable price level is readily resolvable.

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A. THREE THEORIES OF GROWTH AND PRICES

1. Promoting growth by fighting inflation

The first of these theories, which appears to be the foundation of our present economic policy, argues that growth is stimulated by taking the most vigorous measures to stop inflation. This theory, which has never been presented in detail, appears to have the following components: (1) inflation disrupts the growth process by reducing the individual's incentive to save, by leading to the senseless hoarding of goods, and by causing carelessness in business investment decisions in plant and equipment and in inventories; (2) for these and other reasons any inflation will inevitably accelerate from creep, to trot, to gallop; (3) stable prices are assured provided the Federal budget is balanced, preferably at constant or falling levels, and if the supply of money is managed with the primary objective of stabilizing prices; (4) given an environment of price level stability, the economy will experience sustainable, healthy, growth.

The theory is fallacious because it overlooks these points: First, it assumes that all inflation is a classical demand inflation in which "too much money chases too few goods," that prices are determined smoothly and quickly by the relation between supply and demand, with decreases in prices and wages occurring as rapidly and easily as increases, and that the monetary authorities can control the supply of money and credit quickly and effectively, and can moderate demands in all or most of the sectors of the economy. Our studies indicate that these assumptions are not warranted. At least in some parts of the economy, there are sufficient concentrations of market power to permit prices to be raised even in the absence of excess demands. In a wider portion of the economy, prices and wages fail to fall when supply exceeds demand. Moreover, monetary policy works more slowly and more selectively than this view suggests. Given rapid shifts in demand, with an excess now in one sector, now in another, but with total demand not in excess, and the prevalence of market power and downward rigidities, monetary policy can stabilize the price level only if used in such drastic measure that a high level of unemployment is also generated.

Second, some portion of the recent inflation, particularly in medical services, was caused by shortages of supply in the face of rising inelastic demands; if inflation is to be defeated in the longrun, these supplies must be substantially increased. But this will cost budget money, and the unwillingness to incur these particular increases in public expenditures will inexorably worsen the inflation problem in the future.

Third, maintenance of a continued adequate rate of growth in the longrun requires that investment by Government in education continue to raise average education levels of the labor force, that investments in public works keep pace with the growth of the private economy, and that public services be provided at adequate levels. A constant or falling budget without a reranking of the priorities of expenditures, will preclude adequate public investments for growth.

Fourth, and most important, the severe restrictive application of present monetary and fiscal tools which would be necessary to halt the increase in prices would keep the economy in a perennial state of

slack. With private capital accumulation heavily dependent upon the state of demand in product markets, and with the advance in productivity influenced by the need for output, the rate of growth of the economy would be cut by a substantial amount.

It is true that inflation can have adverse effects on economic growth; if the inflation is severe enough this is a certainty. In the United States, in recent years, there is no evidence that this occurred. The rate of private saving has continued undiminished, though the form in which the savings are held has been changed; similarly, the rate of business saving has not been reduced. Nor is there any evidence that rising prices have led to the hoarding of goods, either by households or by business in the form of inventories. Probably, rising prices during the last capital goods boom did lead to some carelessness in business investment; but that many investments turned out to be unsound is more the result of policies which did not let demand grow with productive capacity and which finally led to recession.

The hazard of a creeping inflation turning into a gallop is truly perennial, and requires constant anti-inflationary efforts. Monetary and fiscal authorities must be continuously vigilant against this contingency. But this does not mean that growth is thereby promoted; nor does it follow, assuming policy continues as in the past, that if a creeping inflation is brought to a halt, the creep will not renew as soon as policy allows for more growth.

The historical record, which is summarized in tables 1–2 and 1–3, casts considerable doubt on the view that inflation and growth are incompatible. Table 1–2 gives changes in output and prices, decade by decade, for several countries. Similarly, table 1–3, which covers the postwar period only, gives annual average changes in prices and output for the United States and Western Europe. The data in both tables point to a single conclusion: there is no simple relationship between changes in output and changes in prices. Rapid economic growth has at different times been associated with rising, constant, and falling price levels, just as periods of slow growth, or, indeed, of no growth, have been marked by every manner of price behavior.

TABLE 1–2.—*Growth of output and changes of prices, successive decades, in some advanced countries*

Change from preceding decade	Output growth (percent)	Price change (percent)
UNITED STATES		
1869–78		
1879–88	88.0	−19.5
1889–98	38.2	−12.9
1899–1908	56.4	+9.3
1909–18	35.5	+34.6
1919–28	39.2	+46.3
1929–38	6.2	−18.0
1939–48	71.7	+34.2
1950–54 [1]	29.0	+34.5
UNITED KINGDOM		
1965–74		
1875–84	21.2	
1885–94	37.6	−15.0
1895–1904	29.2	−.9
1905–14	16.5	+9.6
1915–24	−.8	+106.0
1925–34	21.1	−16.6
1935–44	30.2	+17.1
1949–53	22.7	+51.3
JAPAN		
1883–92		
1892–1902	64.8	+35.4
1908–12	34.7	+38.2
1913–22	45.3	+86.5
1923–32	67.4	−7.1
1953–42	52.1	+28.6
1950–54 [1]	10.6	+1,856.3
NORWAY		
1900–1908		
1909–18	33.0	+71.9
1919–28	29.1	+60.8
1929–39	38.1	−37.5
1950–54	33.5	+174.6
NETHERLANDS		
1904–13		
1914–23	25.1	+58.3
1924–33	40.1	−12.7
1934–43	.2	−7.1
1950–54 [1]	33.7	+145 4

Change from preceding decade	Output growth (percent)	Price change (percent)
UNITED STATES		
1874–83		
1884–93	54.8	−16.0
1894–1903	45.2	−7.1
1904–13	50.6	+20.7
1914–23	29.0	+64.0
1924–33	29.1	0
1934–43	26.0	−7.1
1944–53	52.0	+84.8
ITALY		
1864–73		
1874–83	4.2	+13.1
1884–93	19 4	−.87
1894–1903	11.8	−2.6
1904–13	30.7	+11.4
1914–23	9.3	+260.0
1924–33	40 6	+35.0
1934–43	8 8	+18 5
1950–54	23.9	+4,442.4
SWEDEN		
1864–73		
1874–83	30.6	+7.5
1884–93	21.7	−12.0
1894–1903	40.5	+2.7
1904–13	40 3	+13.9
1914–23	25.1	+99.2
1924–33	23.2	−11.3
1934–43	36 3	+13 0
1950–54 [1]	60.1	+62.4
DENMARK		
1874–83		
1884–93	24.3	−6 2
1894–1903	38 4	0
1904–13	41.9	+3 5
1914–23	35 8	+126.5
1924–33	36 7	−26 7
1934–43	16.1	+25 6
1950–54	28 5	+119.3

[1] Last figure for all countries is not a decade by decade comparison.

Source: Computed from data appearing in S. Kuznets, Quantitative Aspects of the Economic Growth of Nations, Economic Development and Cultural Change, vol. V, No. 1.

TABLE 1–3.—*Average annual changes in per capita output*[1] *and prices*,[2] *by country, 1949–58*

[Percent]

	1949–58		1949–53		1953–58	
	Output	Price	Output	Price	Output	Price
Austria	6.5	7.2	5.8	11.9	6.9	3.4
Germany (F. R.)	6.3	[3] 3.3	10.0	[4] 4.8	5.4	2.3
Italy	5.5	2.9	5.8	4.5	5.3	1.7
France	4.0	7.0	4.2	9.9	3.9	4.6
Switzerland	3.5	[5] 1.2	3.9	1.1	3.2	[6] 1.2
Netherlands	3.2	4.3	2.7	4.9	3.6	3.8
Belgium	2.6	[5] 2.5	3.0	2.3	2.4	[6] 2.7
Sweden	2.5	5.1	2.1	7.5	2.9	3.2
Norway	2.5	5.4	3.6	7.4	1.6	3.8
Denmark	2.1	4.0	2.8	5.5	1.6	2.9
United Kingdom	1.9	4.5	2.2	5.1	1.8	4.1
United States	1.9	2.4	4.5	2.7	(—0.1)	2.3

[1] Real gross national product per capita.
[2] Price indexes of gross national product.
[3] 1950–58.
[4] 1950–53.
[5] 1949–57.
[6] 1953–57.

Source: OEEC, "General Statistics." Cited in M. Leiserson, A Brief Interpretive Survey of Wage Peace Problems in Europe, Steady Paper No. 11, p. 36.

Let it be emphasized, however, that to deny the validity of this theory is not to deny that a condition of excess demand is a danger to be avoided. Nor is it to deny that monetary and fiscal policies, even when designed to influence only aggregate demand, have an important role to play. What is denied is the idea that to promote economic growth it is sufficient to restrict aggregate demand to a level such that the price level does not rise.

2. Fighting inflation by promoting growth

Others have argued that inflation is sometimes the result, not of excessive demand, but of insufficient demand. In such situations, policies aimed at rapid economic growth would at the same time serve to check upward pressures on prices, if not actually to reduce them.

How is it possible that an increase in aggregate demand can result in a fall in prices? Assume for the moment that wages increase at some more or less fixed rate. The objective, then, is to force increases in productivity in excess of this rate of increase in wages so that unit labor costs will fall. The available evidence suggests that the rate of increase of productivity is greater when output is expanding than when it is not. Similarly, fixed costs which include capital charges and nonproduction worker salaries are favorably affected by increasing the level of output; unit fixed costs will fall as output expands. Again, an expansion of demand, and hence of output, is seen to put downward pressure on prices.

It is clear, of course, as the proponents of this theory would agree, that it is applicable only when excess capacity is widespread; it obviously cannot apply when aggregate demand is nearly or actually excessive. Furthermore, an expansion of demand may not reduce upward pressure on prices even when there is excess capacity in some (or even many) sectors of the economy. The rate at which wages increase is influenced by the level of demand. Also, it is doubtful

that, with present monetary and fiscal policies, any increase in demand can be directed to only those industries faced with excess capacity.

This theory does, however, raise an interesting question. If there is a genuine dilemma between growth and price level stability with the given policy weapons, how much growth would have been gained at the expense of how much of an increase in prices? The evidence, for recent years at least suggests that a somewhat faster increase in demand would have led to a significantly higher rate of growth of output, while having only a minor impact on prices. The choice that was actually made appears to have cost a lot of output both through slow growth and recession, without cracking the inflation.

3. Growth and inflation as separate problems

It has also been argued that the behavior of the price level and the behavior of real output are largely independent of each other. The rate of economic growth, in this view, is determined by the level of aggregate demand; when growth is slight, it is because aggregate demand has been unduly restricted. Of course, excessive aggregate demand can cause the price level to increase. Often, however, as in recent years, inflation is the result, not of excess demand, but of concentrations of market power. Thus, to check inflation, the Government must either destroy these concentrations of market power, or to take a less favorable alternative, control prices directly. But once having gotten to the heart of the inflation problem, the Government will be free to employ less restrictive monetary and fiscal policies in the interest of more rapid economic growth.

This view, like the other two reviewed here, contains an important element of truth. Market power is a part of the inflation story. But, again, it is not the whole story. It can account for little of the inflation in the nonmanufacturing sectors of the economy; and even in the manufacturing sector, other causes, for example, the existence of bottlenecks, and increases in material and labor costs, must be given their due.

B. INFLATION AND GROWTH IN RECENT YEARS: AN ANALYSIS

As the foregoing discussion indicates, the three theories reviewed here must be rejected as being insufficient portrayals of the relationship between the behavior of prices and output. This is not to say that the individual messages of these theories can be disregarded. Quite the contrary; the special emphasis of each has relevance for the developments of recent years, as our own analysis of the record, to which we now turn, will show.

1. Causes of the recent inflation

The postwar inflation did not end with the Korean truce. In fact, roughly one-quarter of the post-World War II price inflation took place after mid-1955. Nor has this latest round of inflation gone unnoticed; if anything, it has occasioned more comment than the two previous rounds (1946–48 and 1950–53). The former were more readily understood, within the framework of traditional economics, as the usual economic heritage of war and reconversion. Not so, however, for the "creeping inflation" of the post-Korean period.

In some measure, the recent inflation is undoubtedly a statistical

fiction. That is to say, our price indexes are biased in an upward direction. Most serious, perhaps, is the fact that changes in the quality of products are not adequately reflected in the indexes. Since adjustments for quality changes must, to some extent anyway, be a matter of judgment, it may well be that they cannot be made in such a way that the objective nature of the indexes will not be compromised. But granting that our indexes are not perfect measures, it does not follow that the post-Korean inflation is entirely appearance. It would be pleasant if this were so; unfortunately, it is not likely.

Before turning to the specific causes of the recent inflation, one more general observation must be made. The inflation which did occur was not spread evenly through the economy. Rather, it was concentrated in relatively few sectors: in certain of the consumer services, that is, medical care, personal care, and rent; in steel and machinery; in Government; and in construction.

(*a*) *Inflation and economic instability.*—The recent inflation can to a very considerable extent be traced directly to economic instability.

The pace of recovery from the 1954 recession low was extremely rapid. Consumer spending on automobiles and, to a lesser extent, housing, made possible by the extension of consumer and mortgage credit, led the way back to prosperity. Later on in 1955 other industries—steel, other consumer durables, machinery—also caught fire. The rapid expansion of activity in the auto industry is of particular importance, however, for as a result the auto companies realized unusually large profits. Even though the share of value added received by labor fell during 1955, the auto wage settlement of that year was considerable. Moreover, this wage settlement was a key bargain: it influenced settlements in other industries, particularly that in steel, during 1956.

The spectacular capital goods boom which got underway in mid-1955 can also be largely explained by the sudden surge of economic activity earlier in the year. Of course, once started, the boom in a sense explained itself; businessmen, that is, get caught up in their own optimism. And undoubtedly only a portion of the fixed investment of 1955–57 is to be related to an immediately previous expansion of consumer demand. In any event, the boom was sufficient to produce excess demand in the machinery industries, and, as a result, marked increases in machinery prices. Similarly, the pressure of demand for factories and other forms of commercial construction pushed up profits, costs, and prices in this segment of the construction industry. In addition, it drove up costs and prices in the residential construction industry, where output was actually falling.

As expenditures on plant and equipment increased, so did other types of business spending. Research activities were expanded. Advertising budgets were increased. Generally, there was a considerable rise in the employment of administrative personnel. To a certain extent, this was but a continuation of a trend, an expression of changing technology. Also, businessmen may not have figured their costs as closely as they should have; such carelessness, however, is a characteristic of all booms. Here again, though, one cannot escape the conclusion that the increase in the sort of spending mentioned above was related to the sudden return to prosperous condi-

tions. But when total demand failed to grow in accordance with expectations established by the rapid growth of early 1955—real output expanded no more than 1 percent per year from the last quarter of 1955 through the third quarter of 1957—businessmen were stuck. Expenditures for plant and equipment and other fixed-cost commitments had been based on a greater rate of increase of output. Overhead costs thus turned out to be higher than had been expected. In many instances these increases were passed on in the form of higher prices.

It would certainly appear, then, that insofar as the price level was concerned, the die was cast during 1955. The initial upsurge in profits gave rise to large wage settlements in autos and subsequently in steel; these long-term settlements, in turn, influenced other industries' wages, at least in those industries which were enjoying prosperous conditions. Then, too, the suddenness of the economic upswing helped to trigger the inflationary plant and equipment boom. Finally, once the boom began to fade and the pace of economic expansion slowed, businessmen found themselves in an awkward position. Because they had been overly optimistic about the future, and had on that basis incurred additional overhead costs, they saw their unit costs rise. Where they could, therefore, they increased their prices.

(*b*) *The exercise of market power.*—In many American industries, a small number of firms account for well over half of all sales. Potential market power—that is, the power to raise prices in the absence of excess demand—is therefore widely distributed through the economy. There are always limits to the exercise of market power, in the form of new entrants into the industry, price cutting to gain a larger share of the market by existing firms, the substitution of products of other industries, and the increase of imports. Because of the uncertainties in such situations, including the unknown degree of effectiveness of these limiting factors, as well as the possibility of antitrust prosecution, market power is rarely exercised to the fullest possible extent. Thus, at any one time, the potential inflationary influence of market power is likely to be quite large, and the extent to which it is exercised dependent upon specific historical circumstances, including the attitudes and ideals held by the wielders of this power, the leaders of particularly powerful corporations and their opposing unions.

It is impossible to assign a precise estimate to the contribution which the exercise of market power made to the recent inflation. Our study did not undertake a systematic, industry-by-industry survey of this problem. Nor would such research have yielded exact answers in many instances, since several industries in which market power is strong also experienced strong demands. Conversely, several of the industries that are most competitive fared quite poorly in the last business cycle. The influence of market power could, however, be clearly identified in at least three instances in our analysis of the historical data.

First, the extraordinary behavior of steel prices must at least in part be attributed to this factor. In the inflation in the hard goods sector of the economy, the price of steel provided a central thrust, rising by 29 percent from 1954 through 1958, serving to drive up costs in the many user industries, and adding to the inflation psychology

which was one of the characteristics of the capital goods boom. The very large profits earned in the upswing of 1955 and early 1956 helped produce the large 3-year wage settlement of 1956. The companies, in turn, seeking to pass on the unit labor cost increases and widen the margins allowed for profits plus depreciation, raised prices. As the automatic wage increases of the contract occurred, the companies continued to raise prices, finally producing a total price increase far in excess of other price increases in the economy. The level of demand, while high during large parts of the period, was clearly lower than in previous booms, and no higher than in many other industries which had much smaller price increases. The state of demand in the labor market was clearly quite unfavorable.

The experience in the steel industry was a classic illustration of the profit-wage spiral at work. There is no point in allocating blame, since both sides gained at the expense of the rest of the economy. At the time that key bargains are made, each side is convinced that it is seeking to do no more than maintain its proper share of the total income. Analyzing the business cycle, trough to trough, profits rise first—which is certainly very strong evidence against adopting a pure wage-push view. But if one breaks into the spiral at a subsequent stage, the companies appear to be doing no more than seeking to maintain their margins, including the rising depreciation allowances. It should be added, however, that in the last boom, the price leader of the industry, United States Steel Corp., appears to have increased its profit target, a move which is partly the reflection of the improvement of its relative cost position within the industry.

This profit-wage spiral could not have occurred if the demand for steel had been weak. Some of the consuming industries, including the capital goods industries, were faring very well and were able to absorb the cost increases. In the longer run, the rising competition of foreign steel also limits the spiral. But given the conditions of the last boom, the increase in the price of steel would clearly have been less if the industry were competitive.

A second instance of the exercise of market power is the ability of many industries to pass on their higher unit overhead costs. In a strictly competitive system, companies would have absorbed the losses caused by overinvestment and overcommitment in nonproduction personnel. But, in fact, the influence of costs on prices, particularly when similar costs are experienced by all the firms in the industry, is greater than one would expect under strict competition.

A third influence of market power is the failure of prices to fall when demand falls in recession, or for many of the sectors which experience unfavorable shifts of demand during prosperity. In the case of wages, where downward rigidity in times of unemployment is almost universal except in really disastrous circumstances, this pattern was found even before American workers were widely organized. But in the case of prices, the phenomenon appears to be becoming more widespread. The experience of the recession of 1958 was clearly worse in this respect than the recessions of 1954 or 1949.

(*c*) *Inflation in the services sector.*—The increase in the Consumer Price Index was due more to increases in the prices of services than to increases in the prices of goods. No single explanation can account, however, for the various increases in service prices, although the fail-

ure of productivity in selected service industries to increase at a rate even closely approximating the increase in the average for the economy as a whole undoubtedly accounts for some of the price increases which did occur.

In the case of urban mass transportation, the price of which rose very sharply over the period considered here, the explanation appears to be a decline in demand which resulted in an increase in costs. An unfortunate dynamic process is at work here; as price increases, the share of public transportation in total transportation falls, so that costs and hence prices are further increased. To halt the rise in the price of urban public transportation requires therefore that in one way or another this circular process be broken. It should be noted, though, that urban transportation is currently overweighted in the Consumer Price Index: the quantity purchased has declined relatively since the last revision of the index.

Medical care prices also rose rapidly. The inflation was most acute in the case of hospital services, so that the cost of hospital insurance also increased dramatically. This part of the inflation is attributable to a tremendous increase in demand which was not offset by a similar increase in supply. Nor is it at all likely that the rising cost of medical, particularly hospital care will be checked until supply is increased by additional public programs and an improvement in the organization of the services is effected.

The explanation for the increase in the prices of repair services, which was considerable, is largely to be found in the movement of wages in manufacturing industries. Our studies indicate that mechanics' wages are closely related to wages in manufacturing; this is true both of the longrun level of these wages and of shortrun rates of increase. That personal care prices (that is, for haircuts, beauty parlor services, etc.), rose is probably to be explained in part by the fact that relatively few people entered some of these fields; in other instances, it appears that an exercise of market power explains the increases. In the case of services such as laundry and drycleaning, the low wages in which rose less than wages generally, the failure of productivity to increase appears to be the answer. The wages of the unskilled workers employed in these trades fell relative to wages in manufacturing, but not by as much as the productivity differential between these sectors widened.

Rent, a particularly important component of the service price index, continued to drift upward during the post-Korean period. In part, this was a lagged response to the abolition of rent control. Also, construction costs were increasing. And, in some sections of the country, there was a continuing imbalance between the supply of and demand for housing.

2. Causes of the slowdown in economic growth

Just as with the inflation of the last few years, several reasons must be given to account adequately for the recent slowdown in the rate of economic expansion.

(*a*) *Economic instability.*—The single most important cause of the slowdown was the instability of the economy. During the 6 years, 1953–59, second quarter to second quarter, there were two recessions, accounting for 10 out of a total of 24 quarters. Economists have not so far been able to quantify the extent to which

recessions result in a loss of capacity, that is, give rise to a loss of growth which is not made up in the subsequent boom. It does processes which drive the economy upward. Investments are put off; the rate of increase of research budgets is slowed; and resistance to technological change stiffens. Of course, recessions also promote greater efficiency of operations, although the postwar evidence suggests that small recessions are just as effective in this respect as larger ones.

Losses of output during recessions, the result of idle men and machines, are not made up in subsequent booms. For the past 6 years, this loss is the equivalent of a loss of 1.0 percent in total output.

(*b*) *Inadequate growth of demand.*—If total output is to grow at a rate approximating its potential, demand must grow at that rate as well. In recent years, however, total demand has not grown at an adequate rate. Table 4 shows the rates of growth of the several components of final demand over the interval from the second quarter of 1953 through the second quarter of 1959, and the seven quarters of low growth during the last boom, that is, from the fourth quarter of 1955 through the third quarter of 1957. It can be seen that the demand for goods and services by the Federal Government fell at a rate of 1.6 percent a year during the briefer period, and at the rate of 4.9 percent a year during the period 1953–59. The decline from 1953, which was concentrated in 1954, was doe to the desirable reductions in military spending at the end of the Korean war. But if a decline in Federal Government purchases is not to serve as a depressant on the growth of the economy, other components must grow at sufficiently high offsetting rates. The growth of purchases by State and local government did partially serve this purpose, but the rate of growth of demand of the private economy was not great enough to fill the remainder of the gap. Consumption grew at 3.4 percent per year over the longer period, and 2.4 percent per year during the long plateau of the boom.

TABLE 1–4.—*Growth of gross national product and its components: Constant dollars, selected periods, 1953–59*

[Average annual percentage rates]

Period	Total GNP	Personal consumption expenditures				Gross private domestic investment			Government purchase of goods and services	
		Total	Durables	Nondurable	Services	New construction		Producers durable equipment	Federal	State and local
						Nonfarm residential	Other			
1953 2d quarter to 1955 4th quarter	3.9	4.2	7.3	3.2	4.3	10.2	6.4	3.9	−12.0	7.2
1955 4th quarter to 1957 3d quarter	1.3	2.4	−1.5	2.2	4.3	−8.3	1.8	1.2	−1.6	4.1
1957 3d quarter to 1959 2d quarter	3.1	3.1	3.9	2.2	4.2	17.7	−6.9	−6.6	3.6	8.1
1953 2d quarter to 1959 2d quarter	2.5	3.4	3.5	2.7	4.3	6.6	1.3	−.7	−4.9	6.4

Source: "U.S. Income and Output" table I–5. Rates are compound interest computed from base and terminal values.

There is no reason why each of the components of gross national product should grow at the same rate. From the point of view of keeping the growth of the economy close to its true potential, it is only the growth of total demand that matters. Thus, it would be incorrect to blame excessively tight monetary policies alone. Nor, for that matter, can an excessively restrictive fiscal policy be singled out as the villain. It is the overall impact of all Government policies affecting demand which must be judged. Specifically, in the name of economic policy, an all-out effort has been made in recent years to keep Government expenditures down. In retrospect, the degree of severity actually exercised was too great from the point of view of economic growth. The economy was capable of supplying more Government services. Some may have felt that extra Government expenditures were not desirable. But then monetary policy should have been easier or, alternatively, taxes should have been lower, so that the economy could have grown at its potential rate.

Rising prices immensely complicated the task of managing the total level of demand by fiscal and monetary policy. But, as has been argued above, the amount of growth that was given up for what was at best a very minor contribution to the control of inflation, was large.

(*c*) *Trouble in the goods sector.*—The goods-producing sector of the economy was especially hard hit by the failure of demand to grow sufficiently. From 1953 through mid-1959, the entire increase in the labor force was absorbed by services, trade, Government, and related industries. Employment in manufacturing, public utilities, and transportation grew not at all. Yet, by and large, the latter are the high-productivity sectors, and the sectors in which the rate of increase of productivity has been large.

Four developments help to explain the lack of growth of demand in the goods sector. First, Federal purchases fell drastically in the first year and moved sideways thereafter. Second, consumers voluntarily chose to spend a larger fraction of their incomes on services. The huge backlog of demand for durables which had provided such a large impetus to the economy in the latter half of the 1940's had disappeared. The backlog demand for housing had shrunk. With many of these needs met, consumers spent more on restaurant meals, vacations, the upkeep of their homes, and durables, and other services.

Third, while there was a shift in the pattern of consumption, it is also true that the relatively small increase in consumer purchasing power resulted in a squeeze on the demand for goods, particularly durables. There is a strong upward trend element in the demand for services. As standards of living rise, consumers become accustomed to more and more services. So, when incomes fall, they are very reluctant to cut back on their consumption of services; since purchases of durables and some nondurables can be postponed, consumers can spend a greater fraction of their incomes on services without difficulty. Moreover, in the last few years, this upward trend in the demand for services was reinforced by the increase in service prices; with higher prices, that much more of total consumer purchasing power was absorbed by the service sector.

Finally, over the longer interval, the behavior of foreign demand contributed to the failure of the goods sector to grow.

3. The causes of economic instability

Since both the inflation and the slowdown of growth were partly the result of economic instability, it is important that this latter phenomenon be understood. The four most important sources of instability are discussed briefly here.

First, business investment in plant and equipment continued, as all through our modern history, to come in sharp spurts. Second, and somewhat less understandable, were the gyrations in the budget of the Federal Government; the placement of new orders for major procurement was extremely volatile, and led to severe disturbances in the hard-goods sector of the economy and to large-scale inventory fluctuations. Available data do not permit a ranking of these two influences in terms of their relative importance in bringing on the 1957–58 and earlier recessions. But both were clearly of great significance.

Third, fluctuations in spending for consumer durables, made possible by the availability of consumer credit, added considerably to economic instability. The rate of spending on durables which occurs in the first year or two of recovery is often unsustainable; this was certainly the case in 1954–55, particularly in automobiles. As the stock of durables increases, and as more and more consumers find themselves saddled with larger repayments, the market for durables inevitably weakens. This is not to say that the longrun expansion of consumer credit has proceeded at an unsustainable rate; such an expansion can continue for many more years. But rapid shortrun expansions have proved to be unsustainable.

Fourth, inventory investment has been the most volatile component of total demand, and has accounted for a large fraction of the total cyclical variation in demand. In recent years, however, it appears that inventory fluctuations have been a result rather than a cause of instability, although, of course, the evidence on this point is not completely unambiguous. Fluctuations in orders and sales, induced largely by fluctuations in Government, plant and equipment, and consumer durables demand, have triggered inventory movements.

It must be stressed, however, that all of the types of demand enumerated above interact with each other and with the remainder of the components of total demand. Fluctuations in plant and equipment spending are partly the result of fluctuations in demand for other goods. Variations in consumer durables spending and consumer credit are a part of the mechanism of recovery from recession. Even fluctuations in Government purchases are, in some degree, the result of fluctuations in Government revenues, at least when budget balancing is a major concern.

V. Economic Policies for Growth and Price-Level Stability

The tasks of economic policy are very difficult to achieve. So much is evident from the foregoing analysis, which indicates that the inflation, the slowdown in growth and the considerable economic instability of the last several years were all parts of a complicated process. Clearly, then, perfection is impossible. It cannot be expected that the price level will remain precisely constant, and that economic growth will proceed smoothly and at a high rate.

The behavior of the American economy is the product of millions of individual decisions, and so is not easily predicted. Moreover, the present tools of economic policy have an impact at only a few points in our predominantly private economy. Nor is such a private economy a machine which, once understood, can be managed in some simple best manner. The characteristics of the economy are continually changing: no two business cycles follow an identical course; successive inflationary episodes do not follow the same pattern; economic growth does not proceed according to a simple exponential formula. It is impossible, then, for all these reasons, to devise a blueprint which will guarantee the accomplishment of all of our economic objectives.

Nevertheless, there is reason to believe that the performance of the economy can be improved. But this means that economic policies must be continually reexamined in the light of whatever new understanding we gain about the functioning of the economic system; only in this way can economic policies be adapted to the changing character of the economy.

A. ECONOMIC POLICY IN RECENT YEARS

A full account of the many actions of Government, both large and small, which have influenced the economy in the past several years cannot be attempted here. But at the risk of some oversimplification, the major policies which affect the level of employment and prices and the rate of economic growth, that is, monetary and fiscal policies, can be characterized—at least in broad outline.

1. Monetary policy

For several years now, monetary policy has emphasized control of the money supply. During the period 1953–58, changes in the money supply were accomplished by purchases and sales of very short-term Government securities, and, in recessions, by reductions in legal reserve requirements. The hope was that by limiting intervention in the money and credit markets to short-term open market operations and changes in reserve requirements, the goal of economic stabilization could be made most consistent with free-market resource allocation. The degree of monetary restraint achieved was considerable. Between 1953 and 1959 the money supply rose at a rate of only 1.9 percent per year. The growth of the money supply shows an approximately countercyclical pattern. But the postrecession return to tight money was much faster and more pronounced in 1958 than in 1954–55. Interest rates are much higher today than at any time since World War I.

In determining specific policy actions, particular, though not exclusive, emphasis was placed on price level stability. The results, however, were not all that might have been hoped. Although money supply was not allowed to grow at the same rate as output, individuals and businesses found many ways of utilizing their money balance more effectively, thereby permitting the money supply to accommodate a rising volume of transactions. Commercial banks, by selling Government securities, were able to expand their loans. Financial intermediaries other than commercial banks also assisted in this process.

Of course, monetary restraint did affect the total level of spending. The impact on spending occurred, however, only after considerable time had passed, and was extremely selective among the sectors of the economy. During recessions, corporations accumulate cash as they reduce their inventories and fixed investment outlays, and pay less taxes. Individuals reduce their average level of consumer debt. Government deficits lead to an increase of the volume of short-term liquid assets in the hands of the public, and to some extent in the hands of the banking system. In the first years of recovery, such as 1954–55 and 1958–59, the Federal Reserve System is unable to make its policy of monetary restraint felt. The volume of bank loans rises very sharply; consumer credit rises at an unsustainable rate; and even the supply of mortgage funds remains quite ample for a period. Yet this early phase of the business cycle is particularly crucial for the subsequent behavior of the price level. Profits reach very large levels, inducing large wage settlements. Business optimism, based on the very high rate of expansion, helps to trigger the capital goods boom. And the surge in consumer durables borrows from durable sales subsequently in the boom.

This weakness of monetary policy is appreciated by the Federal Reserve System. After the experience of 1954–55, the Federal Reserve sought to tighten credit much more quickly in the most recent upswing. Still, the increase in bank loans in the current boom is just as great as the last time. Consumer credit has risen somewhat more slowly, but the rise will continue for a longer period. The lag in affecting residential construction has recurred. And while the plant and equipment boom has been more moderate, this is probably explained by the memory of the bad experience in the last boom.

When the signs of recession become clear and monetary policy loosens, similar lags occur before spending is affected. After money for investment becomes available, a number of months go by before the loans are made and result in economic activity.

To the extent that we could determine, it appears that much the major impact of monetary policy is on residential construction. In this sector, the impact is so large that the level of activity is substantially greater in recession than in prosperity. With other types of investment, inventories, plant and equipment, and other commercial construction, the effect seems to be much smaller. This is partly because the motivation to invest is extremely strong in good times when profit expectation are high and internal funds ample.

Consumer credit is also affected in only a minor way. Interest cost is a small part of the total charges to consumers; and the securities issued by the consumer credit companies are of such high quality and are managed with such skill, that the supply of funds to them is cut back very little. Borrowing by State and local governments and by small business may be somewhat more affected, but to a far lesser extent than residential construction, judging by the behavior of real investments made by these sectors over the business cycle.

The impact on residential construction is so large both because interest charges are such a large part of total costs and because the statutory ceilings on Government-guaranteed mortgages dry up the supply of funds as soon as effective long-term market rates rise above the statutory ceilings. Some investments of State and local governments are similarly affected by legal interest limits.

The maximum potential effectiveness of traditional monetary policy, even ignoring the inevitable mistakes of prognosis, is limited. Confronting the sources of inflation with the impacts of monetary policy, it can be seen that there is very little coincidence. On the one hand, the inflation is due to the instability of output of the economy, the exercise of market power, excess demands in the capital goods industries, and to various longrun imbalances between supply and demand in the services sector. On the other hand, monetary policy primarily raises and lowers the volume of residential construction. This sector, while it has experienced rising prices, has not been a prime source of inflation, but has largely reflected rising cost patterns established in commercial and factory construction. Insofar as the costs of materials for residential construction have risen as a result of high activity in this industry, they have risen during periods of easy money.

This is not to say that monetary policy has been wholly ineffective in containing inflation. Had monetary policy been much looser, even the resulting small increases in investment in plant and equipment and other fields would have resulted directly in additional inflation in the capital goods industries, and perhaps, indirectly, in other areas of the economy as well. A reduction in residential construction cuts back the total national money income and thereby reduces the demand for all commodities and services. Thus, through this indirect route, the entire economy is affected.

However, because the direct impact of monetary policy on the inflationary process is small, thereby forcing a heavy reliance on income effects, the intensity of monetary policy that will be required to stabilize prices is very great. And because prices are rigid downward and resources immobile, the amount of unemployment that would have to be induced would be large, much larger than the country is willing to allow. A policy of such tightness would probably result in recession or depression, and would halt economic growth.

Two important qualifications should be added. First, the effectiveness of monetary policy depends in part on the fiscal and other policies that are being pursued. If steps had been taken to minimize the inflationary impact of the exercise of market power, if the Federal budget had been in substantial surplus during the interval of high prosperity, and if the economy had been more stable, the task remaining for monetary policy would have been smaller. Perhaps it then could have been more effective in stabilizing prices. Thus the comments of the preceding paragraphs assumed the totality of conditions which prevailed during recent inflationary spells. Second, it must be emphasized that a monetary policy which does not move in a countercyclical fashion will gradually increase the liquidity of the economy and will accelerate inflationary trends. While monetary policy is not sufficient to defeat inflation, it must create a monetary and credit environment in which other policies can operate effectively.

2. Fiscal policy

Fiscal policy, which includes variations in both Federal revenues and expenditures, is the most important economic policy for achieving our economic goals. In principle, taxes should be increased relative to expenditures rise in periods of inflation, while revenues should be reduced relative to expenditures in recession. By the resulting coun-

tercyclical swings in the budget surplus or deficit, and in the level of the budget, the total national money income is to be stabilized.

Fiscal policy can be divided into two components, automatic policies and discretionary policies: The former, often referred to as automatic stabilizers, include automatic changes in the budget which occur over the business cycle, such as variations in tax revenues at given rates, in unemployment insurance payments, in social security and in various other transfers payments. Discretionary policies require explicit action.

The automatic elements in fiscal policy have, on the whole, functioned well in recent recessions. As production fell, the impact on purchasing power was dampened. For each dollar of decline in total output and hence in total payments to factors of production, changes in taxes and transfer payments provided an offset of about a third of a dollar. In addition, financial policies of corporations, which result in the maintenance of dividend payments even in the face of declining profits, have provided an important element of private automatic stabilization. As the economy slides into recession, real purchasing power falls by less than one-half as much as total output. This offset has been sufficient to prevent any of our recessions from turning into depressions. It would take a very large and continued decline in production to plunge the country into depression today. Automatic stabilizers do not, however, lead to the reversal of a recession. They slow down the decline but provide no upward stimulus of their own.

The record of discretionary fiscal policy is much more disappointing. A detailed analysis of the entire record of discretionary actions taken since World War II discloses that on only one occasion, at the outbreak of the Korean war, were major, active steps taken on the revenue side for countercyclical purposes. As for discretionary expenditures, the acceleration of outlays in recession, while having some beneficial effect, in large part only had an impact after the recovery was well under way.

An examination of the overall record of fiscal policy over the last 14 years shows that the size of the surpluses, relative to GNP, occurring in good times declined; the size of deficits, relative to GNP, occurring in bad times also declined. Thus, over all, fiscal policy became less and less effective.

In judging the effect of fiscal policy on the attainment of our economic objectives, several conclusions emerge. First, as long as discretionary changes in taxation are stalemated, the contribution of fiscal policy will be severely circumscribed. Second, the decline of fiscal policy has put an excessive burden on monetary policy, a burden the latter cannot carry effectively. Third, during prosperity fiscal policy has relied primarily on efforts to restrain the increase in expenditures. Given the nature of the inflationary process, this policy can at best have only limited effectiveness in moderating price increases. Fourth, the fluctuations in Government orders for defense hardware have been an important source of instability.

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B. MONETARY AND FISCAL POLICIES TO RECONCILE PRICE LEVEL STABILITY AND ECONOMIC GROWTH

On the basis of our analysis of the workings of the economy, we believe that the following steps, if taken, will substantially reduce the present impasse between price level stability and a rate of growth commensurate with our true potential.

(1) The perverse destabilizing effects of the Federal budget must be eliminated. In all three of the postwar recessions, changes in the Federal budget were an important contributing cause. The impact of Federal spending on the economy occurs before actual purchases are made. The most important often is the issuance of orders which leads to private investment, particularly in inventories. This process could be much better managed. If changes in Federal Government orders, particularly Defense obligations for hard goods, are warranted, compensating stabilizing action, particularly in the form of tax changes, should be undertaken.

The ceiling on the national debt, which has been one of the causes of budgetary disturbance, should be repealed.

Statistics on obligations, which reflect orders, should be collected on a current basis and projected. Detailed analyses of the impact of Government purchases on different sectors of the economy should be undertaken. With better information in hand, the Federal Government, which is the largest purchaser of goods and services in the economy, could cease to add to the instability of the economy.

This policy reform is particularly important today because there is at least some slight possibility that substantial disarmament will occur in the near future. Should the opportunity arise for reducing our armaments burden, we should be ready with plans to manage the transition successfully. The economy does not need the stimulus of armaments expenditures. But care must be taken if disarmament is to bring an increase in spending on nonmilitary public needs and private consumption and investment goods instead of a recession.

(2) Our antirecession arsenal must be strengthened:

(*a*) Prompt and substantial changes in tax rates should be used to combat recession and to check inflationary pressures which stem from generally excessive demand. Without a greater willingness to change personal tax rates in recession, policy again recession is bound to be weak, and prompt recovery dependent on chance factors. Completely automatic countercyclical variations in tax rates should not be relied upon, since no two recessions are exactly alike and stabilization requirements are likely, therefore, to differ from one recession to another.

(*b*) Unemployment insurance benefits must be improved; both the level of payments, in relation to wages, and the duration of benefit payments must be increased.

(3) To achieve any given level of restraint, relatively more fiscal policy and less monetary policy should be used.

(4) To strengthen the effectiveness of monetary policy, consumer credit controls should be enacted. A slower rate of increase of consumer credit in the first years of a boom would eliminate one important source of economic instability.

(5) To increase the effectiveness of monetary policy further, the Federal Reserve System should abandon its policy of confining its open markets transactions to bills only, and should assume direct responsibility for the overall availability of funds in the long-term capital market. This could be accomplished by the purchase and sale of long-term Treasury securities.

(6) The interest ceilings on mortgages should either be recognized as a selective credit control device and co-ordinated with other policy measures or be repealed and replaced by authority to set minimum downpayment and maximum repayment terms on mortgages. The latter alternative would be preferable since it would result in a more efficient allocation of credit. However, the interest ceilings should not be removed unless they are replaced by the other type of selective controls, since the existence of these ceilings explains in large part why monetary policy has been so effective in controlling residential construction, and the Federal Reserve can ill afford to be without power to affect this sector.

Whichever form of selective controls is relied upon, the administration of the controls should be placed in the hands of the Federal Reserve. Selective controls over mortgage credit permit monetary policy to be applied to the long-term market without wide swings in long-term interest rates and increase the effectiveness of monetary policy above the level which could be attained by bank-reserve manipulation alone.

(7) Serious study should be given to the possibility of imposing a more effective form of control over bank loans. Present techniques, which operate on reserves, and which can be offset by the sale of Treasury securities, may not be sufficient. Such a measure would reduce, at least, somewhat, the violence of inventory fluctuations.

(8) Serious study should also be given to both fiscal and monetary devices which would serve to stabilize plant and equipment outlays. Revision of the corporation income tax to allow a deduction for dividend distributions would force corporations to rely more heavily on external financing, and hence would make these investments more subject to influence by monetary policy.

Foreign experience with a wide range of devices has not been wholly satisfactory. It may well be that little can be done to stabilize plant and equipment investment directly and that this is a source of instability which is an inevitable part of a free economy. If this is so, it further emphasizes the importance of effective stabilization policies. It should also be added, however, that if the economy as a whole becomes more stable, plant and equipment investment will also become more stable. Similar reasoning applies to inventory investment.

C. DEBT MANAGEMENT

Debt management, as we think of it, includes all operations by the Treasury (and the Federal Reserve) which affect the composition of the publicly held debt. It is the publicly held debt—that is, gross public debt less debt held by Government agencies and trust funds and by the Federal Reserve System—which is relevant for debt management. It is substantially smaller than the gross public debt.

Debt management, so defined, influences the structure of interest rates and of liquidity. It is in this way that debt management influences the level and composition of spending. Changes in the structure of interest rates and liquidity should be regarded as a selective control device affecting different parts of the capital market. Our knowledge concerning precise effects of such changes is not extensive; it does not appear, however, that these effects are of great significance.

It is our opinion that responsibility for changing the structure of interest rates to achieve stabilizing effects should lie with the Federal Reserve. The Federal Reserve, using open-market operations, can bring about such changes more sensitively than can the Treasury, and has prime responsibility for credit policy for economic stabilization.

The Treasury, in managing the debt, should aim at achieving and maintaining a desirable long-term debt structure. Refunding, and other debt operations, should not be managed with an eye to short-run economic stabilization. Under present circumstances, the Treasury should direct its efforts to lengthening the average maturity of the debt. Since the interest cost of the debt should not be disregarded, efforts to sell longer term securities should be greatest in periods when interest rates are relatively low.

The Treasury should further explore the various possibilities for improving the techniques of debt management. In particular, it should consider introducing the auction techniques for longer term securities and making more frequent and smaller offerings of securities. Improved methods of underwriting and an expanded marketing setup might also make debt management an easier task. A judicious use of advanced refunding would also make the job easier.

There are a number of reasons why the Federal Reserve should abandon its "bills only" policy. At least one is relevant in the context of debt management. Were the Federal Reserve to abandon this policy, it could reduce the erratic fluctuations in the prices of Government securities which have made these securities less attractive to investors.

The concern about high interest rates is at heart a concern about the appropriateness of present policies for achieving our economic objectives. It is in this light that the question of the interest ceiling must be viewed. The present 4¼-percent ceiling on interest rates for Government securities with an original maturity of more than 5 years is arbitrary and complicates debt management. While the interest rate ceiling should be repealed, modification of the policies that led to the present situation is a matter of much more pressing importance. Whether the Congress will want to repeal the interest ceiling without basic reforms in fiscal, monetary, and debt-management policy is a matter for it to decide.

D. POLICIES TO REDUCE THE INFLATIONARY EFFECT OF THE EXERCISE OF MARKET POWER

(1) In the long run, the most effective policy to reduce this source of inflation is vigorous antitrust action. By making the economy more competitive—by eliminating restrictive practices, by breaking up monopolistic concentrations of market power, by preventing mergers, etc.—the inflationary bias of the economy is reduced. The exercise

of market power having inflationary implications should be considered as a basis for antitrust prosecution.

However, even the most vigorous antitrust policy will not eliminate the prevalence of very big business and unions. Therefore, this policy alone will not eliminate the problem.

(2) One of the most effective checks on the exercise of market power in recent years has been the rise of imports. For example, in the automobile industry, in electrical equipment, and now in steel, the prices of foreign products are competitive with our own and make it much less attractive for domestic companies to raise their prices. If tariffs are not raised, and even lowered in exchange for tariff concessions from other countries, the inflationary potential originating in market power will be substantially reduced.

Taking for granted the continuance of concentrations of economic power, a series of steps of ascending severity is indicated, which seeks to inject a public viewpoint into key price and wage decisions. These proposals are advanced to indicate how this particular inflation problem can be dealt with. The injection of the Government into these decisions can have serious side effects, however, and we do not propose that this be a road traveled with enthusiasm.

(*a*) *An annual labor-management conference:* This proposal, if put into effect, would bring together leaders of business and labor so that they could be apprised of the statistical evidence on the recent and expected behavior of such factors as productivity, prices, profits, wages, and so forth. Such a conference, at which these private wielders of economic power would be given the benefit of the thinking of responsible officials in Government, would also provide an opportunity for a useful interchange of views. It would be the hope that at such a conference the public viewpoint would be thoroughly considered.

(*b*) *Direct intervention in key price and wage decisions:* The imposition of price and wage controls would clearly be undesirable in peacetime, and would be wholly unjustified by the small increases in the price level which have occurred. The choice, however, is not between an elaborate system of wartime controls and a complete hands-off policy. If antitrust measures are inadequate to reduce substantially inflationary price increases resulting from the exercise of market power, more direct measures may be the only effective means of limiting its adverse impact on the economy as a whole. There is a spectrum of moderate measures which appear to be feasible. The extent to which these measures are invoked by legislative action in the future should depend upon whether the industries with market power limit the exercise of that power in the interest of the entire economy.

The mildest approach would be to set up a study group to advise the President on key price and wage changes that threaten economic stability. Such a study group could recommend hearings when it felt them to be desirable. A somewhat more drastic step would require certain clearly defined key industries to notify the Government when they raised their prices. An agency set up to deal with this problem could then decide whether or not to hold hearings. A further and much more drastic step would give such an agency the power to suspend price increases for a brief period. In addition, should any new machinery be set up for the handling of emergency disputes, stability of the price level could be specified as one of the criteria to be supplied.

In considering legislation for dealing with an inflation originating in market power, the nature of that process must be kept clearly in mind. It will be futile and unfair to invoke price level stability as a principle when wages are considered while ignoring it when prices are set. If, in new wage negotiations, appeal is to be made through hearings to the weight of public opinion, then the public point of view must be applied equally where key prices are concerned. Especially during the period of rapidly rising profits in the early stages of the business cycle is this important. With profits typically rising first in recovery, the subsequent call for wage restraint is likely to fall on deaf ears. If the inflationary spiral is to be broken by voluntary restraint, business must cut prices either in the recession or in the early stages of recovery when rising production makes unit costs fall. Conversely, there is little point to exhorting for price restraint without considering wages.

E. INCREASING THE SUPPLY OF SERVICES

Much of the recent inflation was due to a longrun increase in the costs of services which cannot be easily reversed. None of the policies so far discussed will have much of an effect on the rise in medical costs, in rents, and in personal care. In order to check the rise in prices that will continue to emanate from this source, several steps should be taken: First, an increase in the supply of medical services must be effected. The total number of doctors must be increased; hospitals must be expanded; and the availability of nonhospital medical facilities, such as nursing homes, must be vastly increased. Equally important, strenuous efforts must be made to improve the organization of medicine, to raise productivity in medical care. Similarly, in other service fields, in which productivity is low, efforts should be undertaken to raise productivity. Serious study should be given to the possibility of setting up national productivity centers, of the type that United States encouraged other countries to institute after World War II. Perhaps in this way, some improvement could be effected in the low-wage, low-productivity sectors of the economy.

F. IMPROVEMENT IN THE PRICE INDEXES

With price level stability an important objective, with some wages mechanically tied to a price index, and with an increased public concern about inflation spurred by influential public and private groups, it is particularly important that the indicators of inflation, our price indexes, be as accurate and unbiased as possible. There is reason to believe that there are some upward biases in all three of the indexes now in common use. In addition to the restudy of the consumer price index which has already begun, the other two price indexes, the wholesale price index and the gross national product deflator, should also be reexamined and improved even at the cost of some extra money. While we urge reexamination of the indexes, we also wish to stress that their objective nature must be preserved. We reject arbitrary quality adjustments. The indexes should continue to be an average of actual, observable prices.

G. POLICIES TO STRENGTHEN LONG-TERM GROWTH

The long-term rate of growth of the American economy is determined by the security of our political institutions, the attitudes of the American people, the increase in the size and quality of the labor force and capital stock, the abundance of resources, the advance of technology, and the general level of prosperity. To maintain a high rate of growth, we recommend the following steps:

1. A high level of prosperity must be maintained. The level of prosperity influences longrun growth through its influence on total output, the level of investment, the length of the workweek, the size of the labor force, the rate of productivity increase, and the advance in technology.

2. In order to maintain the increase in the quality of the labor force, educational levels and standards must continue to increase. The remaining potential contribution of education to growth is still large; a significant fraction of our labor force is the product of poor school systems. A program of Federal aid to education, designed to help the poorer school districts, is the single most important step that can be taken to raise our longrun economic growth.

3. To promote a continued high rate of increase in productivity, the introduction of new technology must be facilitated. The inevitable social costs of technological change must be borne equitably. Collective bargaining, which is the institution through which much of the cost and gain is allocated, must be adapted to fulfill this task more effectively. Recent examples in several industries illustrate the institutional arrangements which can facilitate the adoption of new techniques. In addition, productivity can be increased by strengthening apprenticeship programs, by reducing barriers to high-skill occupations, and perhaps by instituting national productivity centers.

4. More resources should be devoted to promotion of scientific and technological progress. The Federal Government today supports more than half of all the research and development conducted in the United States. Much of this is a byproduct of the race in weapons technology. In the event that the opportunity for reducing expenditures for defense should materialize, the Federal Government must continue to exercise financial responsibility for our scientific establishment. Much of the scientific progress from which civilians production has benefited has originated in military research. If disarmament should come, the Federal Government must find other channels through which it keeps the scientific establishment advancing our scientific knowledge and our technology. In addition, with Federal support such a large part of the total, the Government must make sure that sufficient scientific resources are put into basic, rather than applied, research.

5. Numerous programs of the Federal Government have as their purpose subsidizing uneconomical uses of resources. These programs not only slow growth by diverting resources to relatively low-productivity uses, but also contribute to inflation by supporting prices of commodities and services above the level they would command in a free market. Reducing these expenditures can be a major means of financing expansion of those Government programs which will contribute significantly to the Nation's economic progress.

VI. The Problems of American Agriculture

Overproduction is the most important of our agricultural problems. It is the result of a rapid advance in technology and a relatively slow growth in demand, and the Government price support program. The latter has prevented an adjustment of prices and a movement of resources sufficient to correct the persistent supply-demand imbalance.

The price support program has not reduced the instability of farm incomes greatly. Nor has it resulted in an elimination of rural poverty, which is even today a serious social problem. In fact, the benefits of this program tend to accrue to the larger commercial farms which produce market crops in quantity rather than to the smaller subsistence farms which produce little or nothing for sale on the market.

Yet the cost of the price support program is enormous, and keeps us from meeting other responsibilities. Policies which we think would better serve the interests of farmers and the general public—including greater emphasis on income payments rather than price supports, on special programs for the low-income portion of the farm community, and on an expanded export program—are detailed in chapter 7.

CHAPTER 2. ECONOMIC GROWTH IN THE LONG RUN[1]

I. The Measurement of Economic Growth

We have defined economic growth as the expansion of a nation's capability to produce the goods and services its people want. Productive capability depends on the amount of available resources and their productivity—upon the size of the labor force and the skills and know-how it has acquired through education, training, and experience, upon the physical stock of capital, upon the availability of natural resources, and upon the state of technology. Economic growth, therefore, is the process of expanding and improving these components of productive capability. It is accomplished by increasing the labor force, by education and training, by adding to the stock of physical capital, by research and development activities which advance technology, by the discovery of new resources, and by improving the effectiveness with which all of these components are organized in productive effort.

Recognition of these long-run influences on economic growth is essential if we are to avoid an overly mechanistic view of the growth process and of the influence of public policies on the Nation's economic development. On the other hand, this recognition should also emphasize the importance of providing the best possible framework of public policies in which the forces making for economic growth will be most encouraged.

Numerous measures of growth are commonly used. Most of these imply the growth of productive capacity by explicably measuring the growth of output. Throughout this staff report, these conventional measures of growth are widely used. It is recognized, however, that these measures, particularly for short-run changes, are only proximate.

1. *Gross national product in current dollars* measures the dollar value of the total volume of goods and services produced by the economy. Because price changes influence this statistic, it is of limited usefulness as an indicator of economic growth.

2. *Gross national product in constant dollars* is the value of total output adjusted for changes in prices. It is the most comprehensive measure of real output for the economy as a whole. The total does not show what is done with that output, though the component figures, which constitute the gross national product accounts, reveal the division of output among consumption, investment and public services.

3. *Gross national product per capita, in constant dollars,* shows the growth of goods and services produced per person. It reveals the extent to which output is rising faster than population.

4. *Consumption* shows the total amount of goods and services absorbed by households. Consumption per capita shows the amount of goods and services purchased per person. It is a good indicator of

[1] Miss Katherine Dolfis assisted in the preparation of this chapter.

the average standard of living being enjoyed in the economy, and its rate of growth reflects the rate of improvement in the standard of living.

5. There are subsidiary measures of growth, the detailed production indexes of the Federal Reserve Board, employment and output per man-hour figures, and many others, which are useful for the study of specific facets of the problem of growth.

II. The Long-Run Record of Growth

A. THE GROWTH OF OUTPUT

No economy can match the record of growth of the American economy over the last 120 years. The data in table 2–1 and in charts 2–1 to 2–3, which were presented before this committee by Prof. Raymond Goldsmith, show that real gross national product rose at a substantial rate in each of the three 40-year subperiods. From 1839 to 1879, Goldsmith estimates the growth of output to have been 4.31 percent; from 1879 to 1919, 3.72 percent, and from 1919 to 1959, 2.97 percent.

TABLE 2–1.—*Trend of gross national product and personal consumption, 1839–1959*

[Percent increase per year [1]]

	Entire period, 1839–1959	40-year subperiods		
		1839–79	1879–1919	1919–59
Gross national product:				
Price level	1.15	−0.16	1.91	1.40
Aggregate, constant prices	3.66	4.31	3.72	2.97
Population	1.97	2.71	1.91	1.30
Per head, constant prices	1.64	1.55	1.76	1.64

[1] Calculated from values in first and last year of period.

While this may suggest a slowing down of the rate of growth, this appeared to be largely due to the slower growth of population. In the earlier periods, immigration added substantially to population growth. Adjusting for population growth, the growth of output per head seemed to move much more uniformly, 1.55 percent in the first 40 years, 1.76 percent in the middle period, and 1.64 in the most recent 40 years.

B. THE GROWTH OF CONSUMPTION

Consumption increased at similar rates over the last two subperiods; at an annual rate of 3.7 percent from 1879 to 1919, 3.2 percent from 1919 to 1959. Adjusting for the increase in the number of consumers, Goldsmith finds that the rate of growth of per consumer consumption was 1.64 percent from 1879 to 1919, and 1.85 percent from 1919 to 1959. Thus, there has been no retardation in the rate of advance of our standard of living, in fact there has even been some slight acceleration.

C. THE RATE OF GROWTH OF OUTPUT HAS BEEN UNEVEN

Recurrent business cycles temporarily halted growth, and in some cases even reversed it, every few years. But even apart from that

Chart 2–1

AGGREGATE GROSS NATIONAL PRODUCT CURRENT AND CONSTANT (1929) PRICES

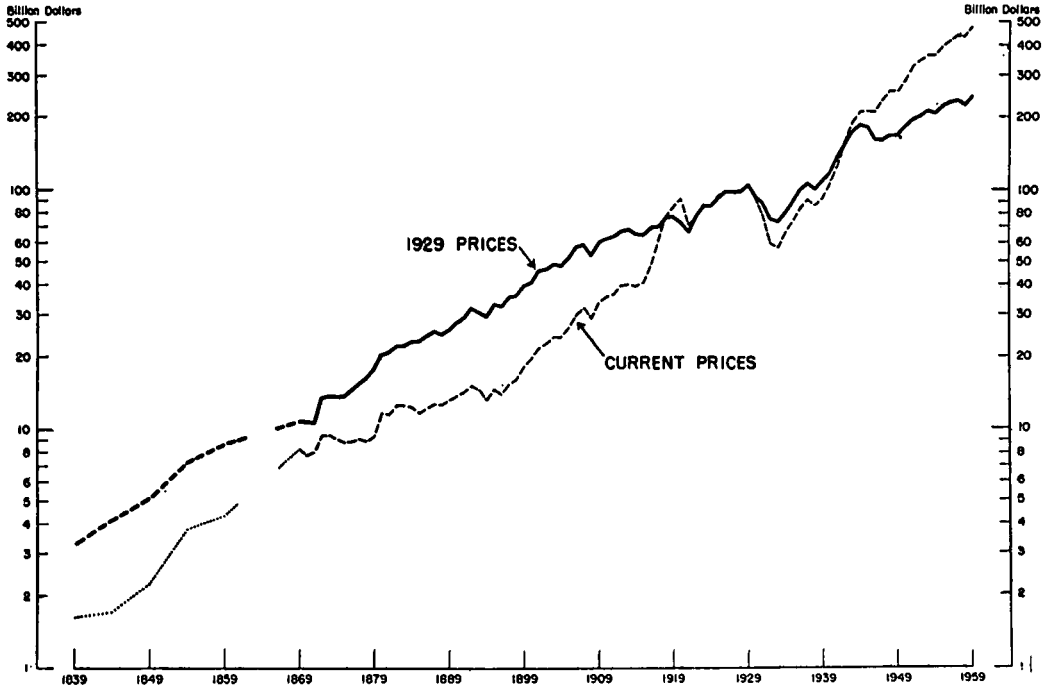


Chart 2–2

REAL GROSS NATIONAL PRODUCT (1929 PRICES) AGGREGATE AND PER HEAD

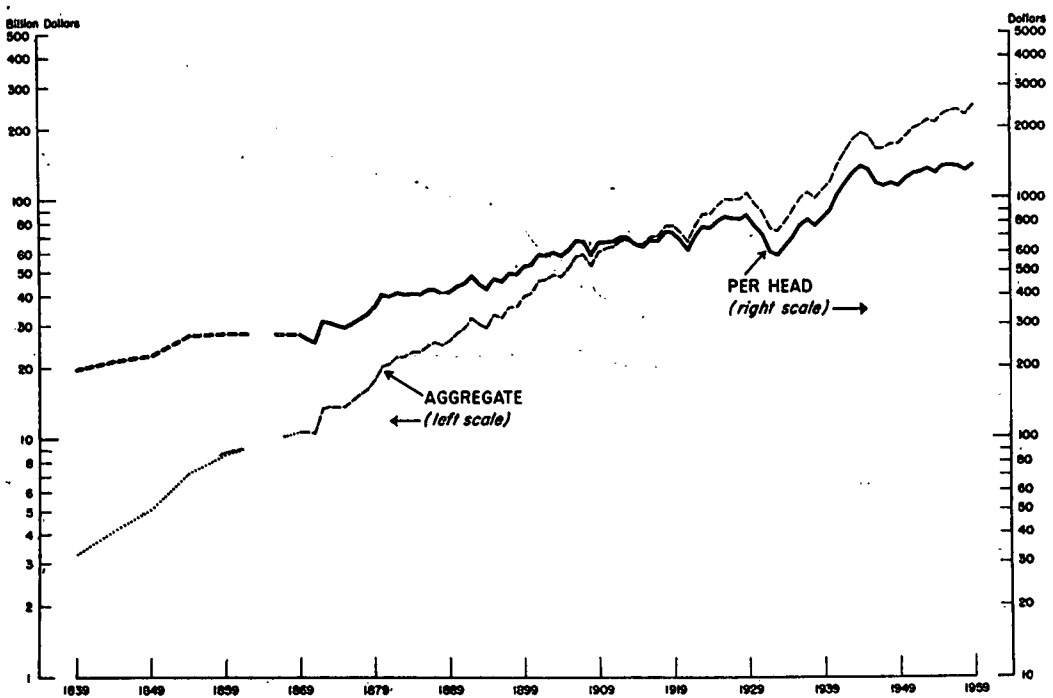
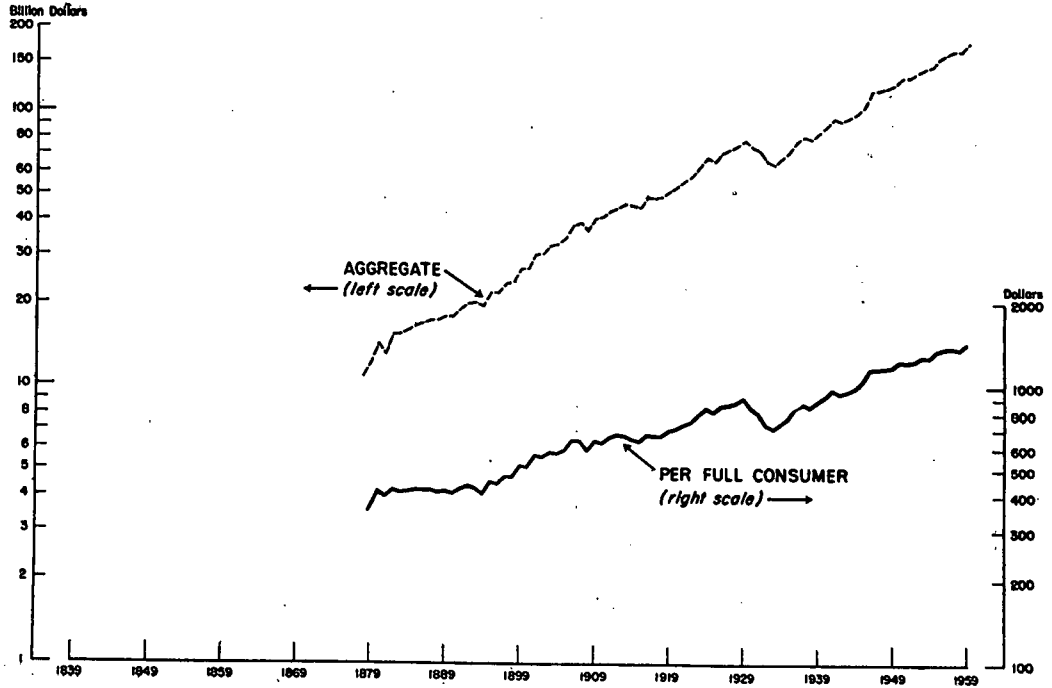


Chart 2–3

PERSONAL CONSUMPTION EXPENDITURES (1929 PRICES) AGGREGATE AND PER FULL CONSUMER



source of disturbance, the rate of growth from one peak of a business cycle to the next shows a wide range. Table 2–2 shows the average annual rate of increase of gross national product from one business cycle peak to the next. These growth rates have had a very wide range and while some of the extreme values are related to the economic changes associated with war and with conversion to a peacetime economy, wide variation remains even in peacetime. Some observers have classified business cycles into major and minor cycles. The peak-to-peak growth rates of major cycles, while not as variable as for the shorter intervals, still range from 0.1 percent from 1929 to 1937 to as high a rate as 6.4 percent from 1873 to 1882 and 7.2 percent from 1937 to 1945.[2]

TABLE 2–2.—*Gross national product rates of growth, peak-to-peak*

[Percent per annum]

Dates	Rates of growth	Dates	Rates of growth
1873 to 1882	6.4	1913 to 1918	6.9
1882 to 1887	4.0	1918 to 1920	−9.3
1887 to 1890	3.4	1920 to 1923	6.5
1890 to 1893	2.7	1923 to 1926	5.6
1893 to 1895	4.3	1926 to 1929	3.1
1895 to 1899	4.4	1929 to 1937	.1
1899 to 1902	4.9	1937 to 1945	7.2
1902 to 1907	2.2	1945 to 1948	−3.0
1907 to 1910	4.2	1948 to 1953	4.9
1910 to 1913	2.1	1953 to 1957	2.4

D. THE ALLOCATION OF GROWTH: USES OF GNP

As real GNP has grown, its allocation among various uses has changed (see chart 2–4). The shares of GNP created and absorbed by Government have risen, primarily due to the greater cost of national security, secondarily due to higher costs and higher standards providing for civil public services. National security absorbed only 1.5 percent in 1939, reached a peak of 45 percent in 1944, fell to 5 percent after the disarmament of the late 1940's, rose to 14 percent in 1953 at the end of the Korean war, and since then has been falling pretty steadily, running at 9.6 percent in the first three quarters of 1959.

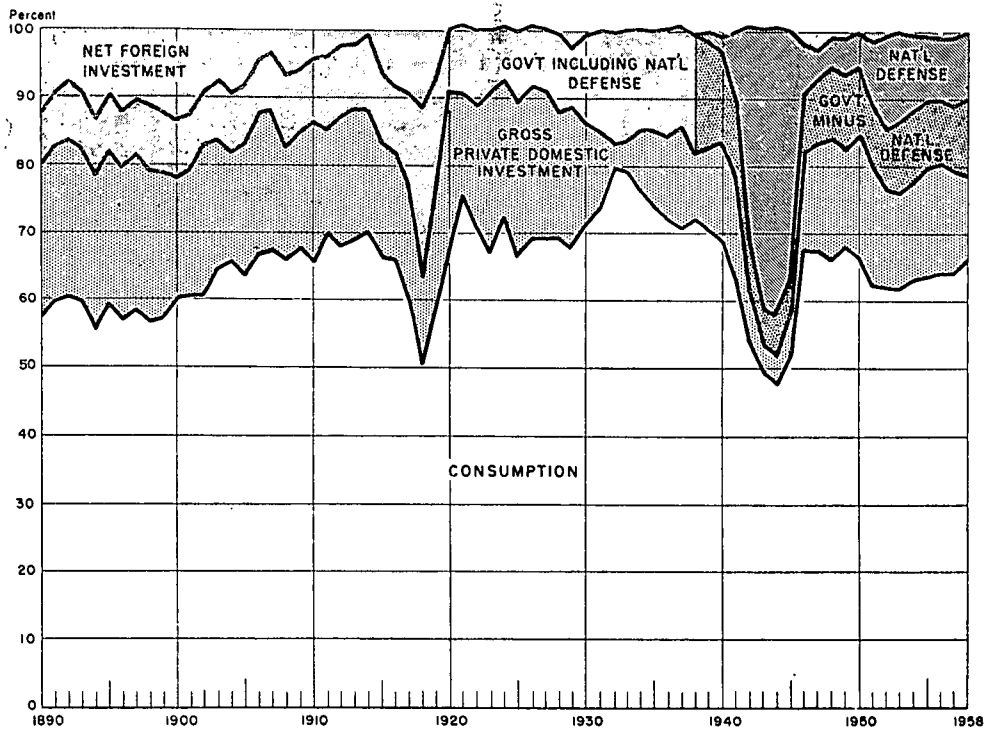
The civil functions of all levels of government absorbed 7.5 percent of GNP in 1929. Following the antidepression measures of the 1930's the figure rose to 13.2 percent in 1939. With the outbreak of the war, expenditures for civil purposes fell, reaching a low point of 3.3 percent in 1945. From 1945 until the Korean conflict, civil expenditures rose continuously, reaching a peak in 1949 of 10.5 percent. The recent low point of 8.1 percent was reached in 1951. Since then, new construction expenditures (which had lagged in the prior decade), particularly education and highways, have raised the civilian public share of GNP back up to 10.9 percent (1958), with most of it still at the State and local level.

Investment in plant and equipment, representing modernization and expansion of business productive capacity, amounted to 12.9 per-

[2] For a much more detailed analysis of rates of growth from one business cycle to the next, see the testimony of Moses Abramovitz; hearings, pt. 2, "Historical and Comparative Rates of Production, Productivity, and Prices," pp. 411–466. Abramovitz analyzes the long swings among business cycles.

CHART 2-4

GNP AND ITS ALLOCATION



Source: 1890–1929, based on data in "Productivity Trends in the United States," a study by Dr. John Kendrick for the National Bureau of Economic Research, now in process of preparation. Data used by courtesy of the Bureau. 1929–1958, U.S. Department of Commerce.

cent in the years 1926–29, 9.5 percent in 1956–59. Residential construction has decreased from 6.9 percent in the period 1926–29 to 4.1 percent in 1956–59. Inventory investment, a very unstable element in the short run, absorbed only 0.6 percent over the period 1926–59 as a whole; and net foreign investment another 0.2 percent.

Consumption absorbed the remainder, a slightly falling share of GNP. Even in recent years, after the rise of Government expenditures, the share of GNP going to consumption remained relatively high.

III. Factors in Our Growth

No one simple theory will explain the continued successful growth of the American economy. At the top of any list of factors contributing to the growth, four elements must be mentioned. The first is the opportunity for individuals to exercise their initiative, to organize new enterprises, to effect changes in old-established ways. Second, many Americans have possessed the enterprising, risk-taking attitudes which are the essential driving force of a capitalistic system. Third, the American people have a healthy attitude toward work which has resulted in a high and rising productivity for the labor force. Fourth, a stable political environment, with private property secure from government seizure without due process of law, has given individual initiative a setting in which it can function successfully. These factors cannot be expressed in numbers, yet they are the foundations of American economic growth. The remainder of this chapter is devoted to the more narrow economic elements; yet they would never function effectively without these prior personal qualities and political institutions.

A. The growth of supply versus the growth of demand

In order for real gross national product to grow at some rate for an extended period of time, both the potential supply and the actual demand must grow at that rate. At some times it is supply which primarily determines growth; at other times, demand. The growth rate will equal the lower of the two.

In defining demand, we mean effective demand, i.e., demand backed by purchasing power. The desires of consumers for goods can, for all practical purposes, be considered as unlimited, given the vast range of products and services available.

The relation between supply and demand will differ among industries. At any one time, some fraction of industries will have sellers' markets, other buyers' markets. The overall relation for the economy as a whole can be described in terms of the wider prevalence of the one kind of market or the other. If supply grows faster than demand, unsold inventories rise, excess productive capacity develops, in sector after sector more markets become buyers' markets and, finally, general unemployment results. If demand rises faster than supply, prices are bid up and inflation results.

Because of the crucial relation between the growth of supply and demand, and because the factors behind them are quite distinct, we shall analyze these two elements separately.

IV. The Longrun Growth of Supply

A. EXPANSION OF LABOR FORCE

The expansion of the labor force accounts for a substantial part of our growth (chart 2–5). It has grown at an average of 1.5 percent a year since 1890 although there was considerable variation within the period. Generally it grew more rapidly in good times than in bad, as abundant job opportunities drew women into the labor force. The slowdown in its rate of growth in the 1920's and 1930's is partly due to the decline of immigration, in the 1940's and 1950's due to the low birth rates in the interwar period.

B. SHORTENING NUMBER OF HOURS OF WORK

Over the same period, the average workweek shrank from 46.3 hours (1920) to 39.2 hours (1958). Since the beginning of this century, average weekly hours have declined by about 0.9 percent per year. To some extent this offset the rise in the labor force and in productivity by cutting the total number of hours worked. But it also served as a stimulus to raise productivity as management strove to offset the loss of hours and keep unit costs down, and as workers performed more efficiently during the shorter workday.

Chart 2–6 shows the movements in the workweek. It can be seen not only that the workweek shrinks in recessions and expands in booms, but also that it is in periods of unemployment that the largest [structural] changes in the workweek are effected. Unions, workers, and Government place much more emphasis on shorter hours when there is not enough work for everybody at previously prevailing standard hours.

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CHART 2–5

PERSONS ENGAGED

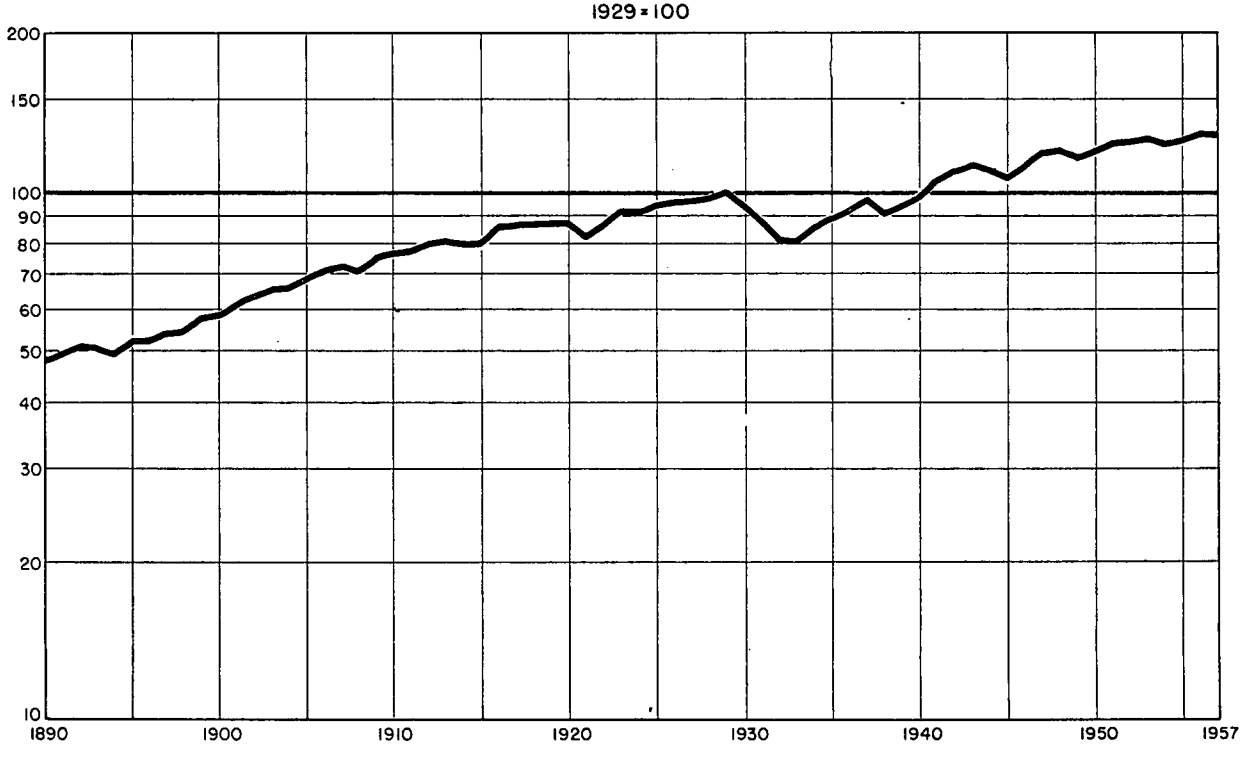
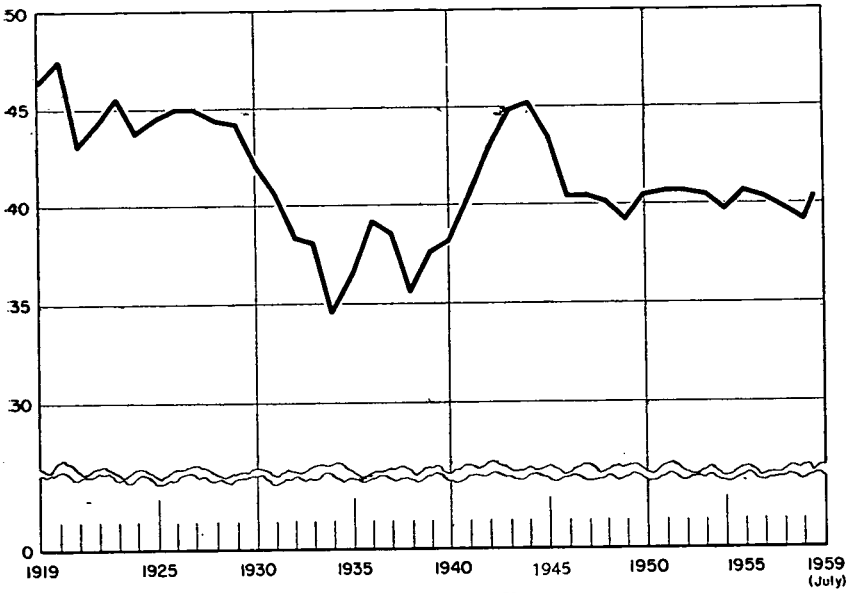


CHART 2-6

AVERAGE WEEKLY HOURS - Production Workers Manufacturing



Source: Employment and Earnings - U.S. Department of Labor, Aug. 1959

A desire for more leisure has also been a motivating force in this trend. However, the large and increasing amount of multiple-job holding, particularly in industries with short workweeks, as well as the rising participation of married women in the labor force suggests that where families have a choice between more leisure and more money income, many of them choose more income.

While increased leisure is a part of a rising standard of living, the size of the future workweek is much more likely to shrink substantially if unemployment should be high.

The reduction in the annual hours worked by the average person engaged in productive employment has been greater than that accounted for by the reduction in the length of the workweek. Parallel to the reduction in the number of hours per day and in days per week, there has been an increase in the time off from work as a result of holidays and vacations. The practice of providing workers with increased leisure through these devices has greatly increased, particularly in the past two decades.

Some part of the decline in average hours of work, whether per week or per year, has resulted from the shift of employment from occupations and industries with relatively longer hours—for example, agriculture—to those in which hours have tended to be shorter.

It seems probable that our data on hours of work understate the increase in leisure or reduction in average annual hours of work since they have not made adequate allowance for reductions due to wider adoption of vacations, holidays, etc., which have spread through industry, trade, finance, government, etc.

C. RISING PRODUCTIVITY

The productivity of labor, as measured by output per man-hour, has risen steadily and has been an important component of growth. Table 2–3 summarizes the evidence submitted by Solomon Fabricant, Director of Research of the National Bureau of Economic Research. Physical output per unweighted man-hour rose at an annual rate of 2.4 percent from 1889 to 1957. The rate of increase after 1919 was greater than before, 2.6 percent as compared with 2.0. In the postwar period the rate of increase was particularly large, 3.3 percent. Output per weighted man-hour, in which highly paid man-hours are weighted more heavily than others, rose at somewhat lower rates but in a similar pattern over time. Output per unit of weighted labor and capital combined rose at a somewhat lower rate, since the rate of growth of capital was considerably greater than the rate of growth of labor. Over the entire period, this measure of the combined productivity of labor and capital rose by 1.7 percent. In the postwar period, it rose by 2.1 percent, a rate no higher than the long-term rate of the last 40 years, because the rate of increase in tangible capital was so great that output per unit of capital alone actually fell.

TABLE 2–3.—*Average rates of increase in productivity before and after 1919, private domestic economy*

	Average annual percentage rate of change			
	1889–1957	1889–1919	1919–57	1945–48 to 1953–57
Physical output per unweighted man-hour	2.4	2.0	2.6	3.3
Physical output per weighted man-hour	2.0	1.6	2.3	2.9
Physical output per weighted unit of tangible capital	1.0	.5	1.3	−.5
Physical output per unit of labor and capital combined (weighted)	1.7	1.3	2.1	2.1

D. CAPITAL

The total amount of capital in the U.S. economy has grown more rapidly than the labor force, or about 2.6 percent per year. The amount of capital per worker has been rising at about 1.0 percent per year, therefore, providing more tools, machinery, buildings, power, transportation, and equipment, and serving as a part of the process of technological change.

While the rising amount of capital per worker has served to raise output per man-hour, recent researches suggest that the simple increase of the quantity of capital accounts for no more than a modest fraction of the total increase.[3]

Solow's analytical technique, by which he computes what output would be if the additional capital were applied without technological

[3] Robert Solow, "Technical Change and the Aggregate Production Function," Review of Economics and Statistics (August 1957); Moses Abramovitz, "Resource and Output Trends in the United States Since 1870," National Bureau of Economic Research, occasional paper 52 (1956), p. 11; Solomon Fabricant, "Basic Facts on Productivity Change," NBER, occasional paper 63, p. 23, reprinted in Joint Economic Committee hearings on Employment, Growth, and Price Levels, pt. 2, "Historical and Comparative Rates of Production, Productivity, and Prices," p. 312; F. Massell, "Capital Formation and Technological Change," Cowles Foundation Discussion Paper 58.

progress, suggests that no more than 13 percent or so of the increase in output per man-hour in the nonfarm private sector between 1909 and 1949 can be explained by this factor alone. Massell, applying Solow's method to productivity data for manufacturing prepared by the staff of the Joint Economic Committee, for 1919 to 1955, finds almost identical results. Because these analyses assume that technological progress occurs independently of capital accumulation, they understate the total contribution of capital to the growth in output per man-hour. Solow has also made some crude estimates of the combined effect of capital and of the share of technological change associated with capital accumulation. He finds this total contribution of capital to output per man-hour to be about twice as large. These results are confirmed by studies conducted by our staff.[4]

Thus, while capital plays an important role in economic growth, it is far from the sole factor. In particular, it would be a serious mistake to assume that the growth of output or the growth of output per man-hour would increase proportionately with an increase in the rate of capital accumulation. Other things being equal, a higher rate of capital accumulation will lead to more growth, but any program to hasten the process of economic growth must combine an increase in capital accumulation with other equally important policies.

The same general conclusions are reached by Fabricant and Abramovitz. Fabricant finds that increases in labor and capital account for 1.0 percent of the total 3.1 percent of average annual growth in physical output, 1919 to 1957, and that increases in capital account for an even smaller share of the rise in output per man-hour. Abramovitz, in interpreting these data, writes:

> When all due allowance for the concealed increase in resource expansion has been made, however, there will remain a huge area to be explained as an increase in productivity. Our capital stock of knowledge concerning the organization and technique of production has grown at a phenomenal pace. A portion of this increase—presumably an increasing portion—is due to an investment of resources in research, education, and the like. This part we may possibly be able to attribute accurately to the input of these resources insofar as we learn to trace the connection between such investment in knowledge and its marginal social contribution, as distinct from those small parts of its value which can be privately appreciated. Beyond this, however, lies the gradual growth of applied knowledge which is, no doubt, the result of human activity involving costly choice which we think of as economic input. To identify the causes which explain not only the rate at which our opportunities to raise efficiency increase but also the pace at which we take advantage of those opportunities will, no doubt, remain the central problem in both the history and the theory of our economic growth.

E. THE RISING QUALITY OF THE LABOR FORCE

1. Education

Over the years the amount of education received by the typical worker has risen a great deal. Table 2–4 shows that whereas only 39.6 percent of people in the age brackets 25 years and over had more than 9 years of schooling in 1940, this number had risen to 52 percent by 1957. At the other end of the scale the number of people with less than 5 years of school has fallen from 13.7 percent to 9.1 percent.[5]

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[4] See a forthcoming paper, by Thomas A. Wilson.

[5] Because women have scored larger gains in schooling, but constitute less than half the labor force, the gain in the cited figures overstates the gain in the labor force.

TABLE 2–4.—*Educational attainment of the adult population 25 years old and over, by years of school completed*

Years of school completed	Percent of population		
	1940	1950	1957
	Percent	*Percent*	*Percent*
Less than 5 years	13.7	11.2	9.1
5 to 7 years	18.5	16.4	13.0
8 years	28.2	20.8	18.2
9 to 11 years	15.2	17.4	18.1
12 years	14.3	20.7	26.5
13 to 15 years	5.5	7.3	7.4
16 years or more	4.6	6.2	7.7

Source: Status and Trends: Vital Statistics, Education, and Public Finance, NSF research report 1959—R13.

The amount of education received by new entrants into the labor force has also been rising rapidly. The percentage of the population in the age brackets 14 to 17 who are in high school has risen substantially as shown in table 2–5. Similarly, the percentage attending college has risen even more dramatically. The number of days in the typical school year has been increasing, while the amount of absenteeism in school has fallen (see table 2–6).

TABLE 2–5.—*School enrollment as a percent of school-age population*

Year	Percent total public school enrollment is of population, 5–17 years	Percent total secondary school enrollment is of population, 14–17 years	Percent total higher education is of population, 18–21 years
1900	78.3	11.4	4.01
1910	79.9	15.4	4.84
1920	83.2	32.3	8.14
1930	89.6	51.4	12.19
1940	94.1	73.3	15.32
1950	94.3	76.5	[1] 30.20
1959	96.7	82.8	39.97

These figures do not indicate the percent of the population in these age brackets in school, since people in other age brackets also receive higher education.

[1] Including veterans.

Source: Research Division, National Education Association, research report 1959—R13, "Status and Trends: Vital Statistics, Education, and Public Finance."

TABLE 2–6.—*Length of school term and student absenteeism*

School year ended	Average length of school term in days	Average number of days absent by pupils enrolled	School year ended	Average length of school term in days	Average number of days absent by pupils enrolled
1900	144.3	45.3	1950	177.9	20.0
1910	157.5	44.5	1952	178.2	22.2
1920	161.9	40.7	1954	178.6	19.7
1930	172.7	29.7	1956	178.0	19.5
1940	175.0	23.3			

Source: "Status and Trends: Vital Statistics, Education, and Public Finance NEA 1959–R13."

The effect of education on productivity is not readily quantifiable. The incomes paid to people with more schooling are higher; but innate ability, family position, and income from personal wealth associated with education make it difficult to separate the influence of these factors.[5a]

2. Increasing Skills

The labor force has also become more skilled, and has adapted to the change in technology (table 2–7). Unskilled workers, who were 36.0 percent of the labor force in 1910, represented only 19.9 percent in 1957. While the percentage of semiskilled workers rose from 14.7 to 20.1 percent, the percentage of skilled workers rose only from 11.7 (1910) to 13.9 (1957). Professional and technical workers exhibit a marked increase over the period, 4.4 percent to 9.9. In addition the percentage of clerical and administrative workers has risen from 10.2 percent to 21.8. This growth in professional and clerical employees has easily absorbed the rising number of high school and college graduates. In recent years employment experience in the white-collar fields has been better than in blue-collar jobs.[6]

TABLE 2–7.—*Occupational distribution of experienced civilian labor force, 1940–57, and gainful workers, 1910–30, as a percent of total labor force*

Years	Proprietors, managers, and officials as percent of labor force	Clerks and kindred workers as percent of labor force	Skilled workers and foremen as percent of labor force	Semiskilled workers as percent of labor force	Unskilled workers as percent of labor force	Professional, technical, and kindred as percent of labor force
1910	23.0	10.2	11.7	14.7	36.0	4.4
1920	22.3	13.8	13.5	16.1	29.4	5.0
1930	19.9	16.3	12.9	16.4	28.4	6.1
1940	(18.0)	(16.3)	(11.7)	(18.7)	(28.3)	(7.0)
1950	(17.4)	(18.9)	(13.0)	(20.8)	(22.7)	(7.3)
1957	(14.5)	(21.8)	(13.9)	(20.1)	(19.9)	(9.8)

NOTES

1910–1930: "Economic Forces in the United States," Facts and Figures (June 1957).
1940–1950: Current Population Reports, June 1959, table f.
1957: The 1957 figure was found by taking the average of the ratios 1940 and 1950 of: Current population figures to Facts and Figure estimates and adjusting the Facts and Figures estimate for that year.

3. Improving health

The improving health of the labor force has also made a considerable contribution to output, with less man-hours lost through illness and death. Mortality rates have fallen, particularly in the working years. Many of these gains are behind us, with mortality rates in the working years already quite low. Cancer remains as the major cause of death during working lives. Mental illness also cuts deeply into productivity and output, with 574,000 people (1955) completely out of the labor force in mental institutions.[7]

[5a] For some interesting pioneer work on the effect of education on income, expressed as a rate of return on the investment in education, see Gary S. Becker's "Evidence of Under-investment in Education," a paper to be presented at the annual meetings of the American Economic Association, December 1959.

[6] The Extent and Nature of Frictional Unemployment," by BLS, study paper No. 6.

[7] In his recent study, "Economics of Mental Illness," sponsored by the Joint Commission of Mental Illness and Health, Dr. Rashi Fein points out that private psychiatric and general medical care of the mentally ill costs over $1 billion a year, not counting loss of income, which more than doubles this figure.

F. TECHNOLOGICAL PROGRESS

Continuous technological progress has pushed output per man-hour up steadily. Better plant layouts, more efficient machinery, and new processes have been devised, both through formal research and through many small cost-cutting innovations devised directly in the plants. Foreign students of American industry are struck by the many small ways in which the American factory produces more output. This know-how, which is the product of innovation-minded management and alert, cooperative workers, is as much the secret of American productivity as any other single factor. Our system of collective bargaining, which permits workers to share in the benefits accruing from these advances, facilitates the steady introduction of new methods.[8]

G. RESOURCES

The United States has been extremely fortunate in the abundance and variety of natural resources [9] which it possesses. The abundance of land, forests, fisheries, and wild game, provided the basis for our early growth. The many energy resources, minerals, including iron ore and coal, and the rich land for agriculture stimulated our subsequent development in the 19th century, and has proved more than adequate up to the present. As the economy has grown, our resource needs have been met by a falling fraction of the labor force, particularly in agriculture. However, as American industry has expanded, a rising share of resources has come from abroad.

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[8] See the testimony of John T. Dunlop and George W. Taylor, hearings, pt. 8, pp. 2741–2742, 2592–2593.

[9] This section draws heavily on Study Paper No. 13, "The Adequacy of Resources for Economic Growth in the United States," by Joseph L. Fisher and Edward Boorstein.

TABLE 2–8.—*Resource trends in the United States, 1870–1954*

	1870	1880	1890	1900	1910	1920	1930	1940	1950	1954
Consumption of resources (1947–49=100)	17	23	30	41	53	62	68	86	103	110
Agriculture	19	27	32	43	54	63	70	92	100	108
Timber products		[1] 50.0	[2] 73.6	113.3	121.7	102.2	81.0	87.4	113.0	113.7
Minerals	3.0	6.4	12.9	19.7	37.9	52.4	60.5	73.4	108.8	116.8
Per capita resource consumption (1954 dollars)	174	191	195	221	237	238	226	266	279	279
Agriculture	125	138	132	147	152	152	148	179	171	172
Timber products	[3] 11	[1] 12	[2] 14	18	16	12.0	7.9	8.0	9.0	8.5
Minerals	8.72	14.8	23.8	30.1	47.6	57.1	56.9	64.4	83.1	83.4
Output of resources (as percent of GNP in 1954 prices)	36	32	29	27	22	21	17	16	13	12
Agriculture	27	25	21	19	15	14	11	10	8	8
Timber products	4.0	3.7	3.9	3.9	2.8	2.0	1.2	1.0	.77	.69
Minerals	1.5	2.0	2.8	3.4	4.2	4.9	4.3	4.1	3.6	3.3
Price of resources (deflated by BLS general wholesale index, 1947–49=100)	78	66	66	68	76	83	85	78	96	90
Agriculture	69	69	68	68	83	78	82	72	92	82
Timber products	26.6	29.3	35.9	39.7	40.6	62.1	53.8	70.5	108.5	104.2
Minerals	119	66.4	64.7	72.9	64.2	105	98.4	97.7	103	107
Net resource imports (1947–49=100)	−31	−75	−77	−107	−69	−56	16	294	76	88
Agriculture	−148	−394	−371	−495	−285	−310	−113	482	120	96
Timber products				−27.7	−28.0	8.0	−5.0	35.2	204.6	177.2
Minerals [4]	−1.2	7.8	−1.9	−6.3	−14.2	8.4	24.2	266.7	51.6	75.5
Employment in resource industries as percent of total employment	51.9	51.9	45.4	40.5	33.9	28.5	25.2	21.4	14.6	11.8
Agriculture	49.9	49.5	42.3	36.9	30.4	25.2	22.6	19.0	12.5	10.1
Timber products	.2	.3	.4	.4	.4	.4	.3	.3	.3	[5]
Minerals	1.5	1.8	2.4	2.9	2.9	2.7	2.1	1.9	1.6	1.2

[1] 1879 nearest year.
[2] 1889 nearest year.
[3] 1869 nearest year.
[4] Including gold (of which there were large movements in some years).
[5] Not available.

Source: Neal Potter and Francis Christy, Jr., "U.S. Natural Resource Statistics, 1870–1955," Resources for the Future, Inc., preliminary draft.

In the coming years, "resources are not likely to restrain growth in any general way," according to the study paper by Joseph L. Fisher and Edward Boorstein. There will be specific resource problems and shortages of some raw materials as demand shifts suddenly. Reliance on imports will probably increase. But over all, we can look ahead to continued benefit from the ample resource base with which this country has been endowed.

H. INTERINDUSTRY SHIFTS

A significant share of the gain in output per man-hour has been achieved by transferring workers from fields in which the level of productivity was fairly low to the technically more advanced sectors. Fabricant's measures of productivity shed some light on the contribution of interindustry shifts to the total rate of increase. While physical output per unweighted man-hour rose at a rate of 2.4 percent from 1889 to 1957, physical output per weighted man-hour rose at 2 percent, the difference being due to shifts among industries. Thus, they appear to have accounted for one-sixth of the total gain in productivity.

Less gain can be expected from these shifts in the future; employment in services is rising, a sector with only slowly rising productivity, while employment in manufacturing, the most important high-productivity sector, appears to have leveled off at least for the present.

I. CONCLUDING COMMENT ON THE LONG-RUN INCREASE IN THE SUPPLY OF OUTPUT

Several factors have been enumerated as determining the growth of long-run supply. Economic science cannot yet give us firm estimates of their relative significance. This task is particularly difficult because the factors are not independent. For example, the effect of an increase in the rate of capital accumulation depends on the quality of the labor force and the rate of progress of technology. Nor does economics reveal the contributions at the margin. Would an additional expenditure on education yield a higher growth return than the same amount spent on health, on research, on private capital, or on public works? It is to be hoped that in the coming years our knowledge will improve with research. In the meantime, we know that these factors are the ingredients of growth; to accelerate the expansion of our economy, policy must promote these factors. Fortunately, in the United States, health, education, technological progress, and private and public capital formation need not be competitive with each other. By promoting all of them, even in the absence of knowledge about the exact best combination of policies, we can accelerate the growth of supply of output.

V. The Long-Run Growth of Demand

The movements of the gross national product over the last 60 years reveals long stretches over which demand rather than supply determined the growth of output. Periods of recession and depression alone accounted for 24 years, and even in some of the years of prosperity output fell short of potential supply. Since World War II,

when depressions have no longer occurred, recessions accounted for a total of 14 quarters. No study of potential growth can, therefore, proceed very far without considering the demand side of the equation.

In the late 1930's, there was considerable fear that private demands alone would not be sufficient to permit high employment. Since then, Government expenditures have remained so high that this hypothesis has never been put to the test.

More important, we have learned that the total level of demand can be managed by fiscal and monetary policies, and even if Government does not choose to manage demand (perhaps using other objectives to determine economic policy), its operations are so large that, willy-nilly, it drastically affects it. Our shortrun capability to set total demand equal to supply is still quite limited, particularly once the economy is sliding into recession. Also, our forecasting skills fall far short of perfection. But as a longrun phenomenon, the Government is capable of preventing a shortage of purchasing power by fiscal and monetary policy.

Whether maintenance of total demand will require Government stimulation through budget deficits depends on the willingness of consumers and of business to spend, rather than to save, the additional incomes they will be receiving in coming years. On the consumer side, there appears to be no tendency for the proportion of income saved to rise over long periods. Goldsmith in his classic study of saving finds little change in the saving-income ratio; in the three postwar cycles, the ratio including consumer durables was about the same as in the 1920's, a little lower excluding them.[10] The rise in wants matches

[10] Goldsmith summarizes his evidence as follows:

During the entire period covered by this study, i.e., from 1897 through 1949, households—including farms and unincorporated business enterprises—saved on the average a little more than one-eighth of their income. This figure is unfluenced by the extraordinarily high saving ratios during war periods. If these years as well as the particularly low ratios of the great depression are excluded, the average personal savings ratio for what may be called the "normal" period (1897–1916, 1919–29, 1934–41, 1946–49) amounts to approximately one-ninth. In periods of practically full employment during peacetime (1902, 1905, 1929, 1929, and 1948), the ratio has been substantially higher, savings averaging approximately one-seventh of personal income after taxes. These ratios include saving through consumer durables. Without it, all ratios are between one-tenth and one-fourth lower. For example, the personal saving ratio excluding consumer durables averages approximately one-twelfth for the normal period. Raymond Goldsmith, "A Study of Savings in the United States," vol. I, pp. 6–7.

The relevant data are summarized in the following table:

Cycle averages of personal saving-income ratios [1]

Cycle reference trough to reference trough	Personal saving ratio	
	Including consumer durables	Excluding consumer durables
1896–1900	9.4	8.1
1900–04	10.5	9.0
1904–08	12.0	10.4
1908–11	10.5	9.1
1911–14	10.3	9.0
1914–19	16.1	15.2
1919–21	8.8	8.4
1921–24	11.0	9.0
1924–27	13.9	10.6
1927–32	7.4	7.1
1932–38	2.0	2.0
1938–46	19.4	18.5
1946–49 [2]	13.4	8.5

[1] Source, Goldsmith, p. 76.

[2] Subsequent figures are not available.

the rise in incomes. As our society becomes wealthier, our standards rise. The vast effort devoted to research and development of new products is also some assurance that total demand will not prove inadequate because of consumers' unwillingness to spend their incomes.[11]

As for the willingness of business to spend the funds it accumulates from depreciation allowances and the retention of earnings, as a longrun phenomenon investment outlays have at least equaled and typically exceeded these cash flows. Business has been a net borrower, though only to a small extent. The main outlet for personal savings has been Government borrowing to finance deficits, and mortgage loans to other households.

Thus, there is presently little evidence that the spending tendencies of income recipients will lead to any shortage of demand. Short-run fluctuations will continue to occur, of course, and stabilization policies must seek to offset them as much as posible.

VI. Longrun Policies for Growth

What would it take to raise our longrun rate of growth in output by 1 or 2 percent? A rate of growth of 2½ to 3 percent will mean a very slow advance in our standard of living, continued severe, though self-imposed financial limits to the accomplishment of public responsibilities in the domestic field, and most important of all, a level of investment of economic resources for the duties of free world leadership which is likely to prove inadequate. To raise the rate of growth of the American economy to 7 or 8 percent, the current Russian rate, is impossible without revolutionizing our system, and is probably unnecessary. As the gap between the levels of per capita output in the two countries narrows, the rate of growth of the Russian system is likely to decrease. The possibilities of imitating more advanced technology diminishes; the effectiveness with which capital can be used will fall, and gradually, as more of the labor force is drawn out of agriculture into industry, the rate of growth of the industrial labor force will fall and will set some limit to their growth. A deliberate stunting of the growth of services might leave industry with a continued large influx of workers, but the overall increase is likely to fall.

It would be quite unfounded optimism to envisage that the Russian rate of growth will fall to the levels of 2 to 3 percent that has characterized the American economy in recent years. Our rate of growth was accomplished with no gains in the size of the industrial labor force whatever (manufacturing, mining, public utilities, and transportation), a state of affairs the Russian Government is hardly likely to tolerate for many years to come.

Were the American rate of growth in output to reach levels of 4 to 5 percent, rates that are absolutely feasible, the gap between the two economic systems would close very slowly—so slowly that with an acceleration of effort in a few crucial fields, such as military technology for the strategic deterrent mission, an increase in limited war capa-

[11] See James S. Duesenberry, "Income, Savings, and Consumer Behavior," Harvard University Press, 1949, for the significance of rising standards; see Franco Modigliani, "The Income-Savings Ratio," in the National Bureau of Economic Research, "Studies in Income and Wealth," where the significance of new products is stressed. Also see Sumner H. Slichhter's contribution in National Science Foundation, "Report of a Conference on Research," May 1958, where these and other impacts of research and development are set forth.

bility, space exploration, and development assistance to backward areas—and the longrun Russian challenge could be met successfully.

In this section, some of the essential policies are outlined.

A. PROVISION FOR AN ADEQUATE GROWTH OF DEMAND

The single most important requirement for successful expansion of the economy is the growth of demand at a rate equal to the expansion of productive capacity. Other efforts to raise output will be frustrated if demand is not growing at the same rate.

Fiscal and monetary policies are the means by which government influences demand. Prior to the growth of government of the last 30 years, fiscal policies had little influence. Today, the very size of government makes its actions important. Further, the automatic stabilizers which cushion declines in the economy in recession by maintaining purchasing power, limit the expansion of purchasing power in periods of growth. Monetary policy, the effectiveness of which had been limited by the great liquidity put into the economy by World War II and its aftermath, today also has become somewhat more powerful again and can check demand, at least in some sectors.

In chapters 8 and 9 below, the workings of these policies are presented in detail, and specific policy recommendations in these fields are presented there. Here, only the importance of the total impact of the entire set of demand policies is stressed.

The growth of demand is important not only to avoid short-term stagnation and recession, but also as a continuing stimulus to the underlying long-run forces in the economic system.

Strong demand will have the following important results:

(1) The shrinkage in the workweek will be smaller;

(2) Productivity will advance more rapidly;

(3) The level of investment will be greater, and

(4) There will be less restrictive practices such as protection against free competition, government-backed price maintenance schemes, and subsidies of various sorts.

B. IMPROVEMENT OF THE LABOR FORCE: THE POTENTIAL OF EDUCATION

Rising educational levels have kept productivity advancing. While American workers are better educated than others, continued improvement in the quality and quantity of education is an essential ingredient of further productivity gains. Even today many individuals terminate their education long before reaching the full development of their talents. Also, a large fraction of our labor force is trained in schools of poor quality. Table 2–9 summarizes some of the more significant evidence of differences in the quality and quantity of education in different parts of the country. Whereas 14 percent of the population aged 14 to 17 do not attend high school in the top 12 States, 22 percent do not attend in the bottom 12.[12] Also, the high school completion rate is much lower in the bottom 12. The number of students going on to college is much higher in the top than in the bottom States.

[12] Criteria for determining State rankings based on expenditures per pupil per average daily attendance.

TABLE 2–9.—*Differences in education expenditures and amount of schooling among States*

	Estimated current expenditure per pupil in average daily attendance, 1958–59		Percent of population 25 years old and older with 4 or more years of college, 1950	Percent of population, 14 to 17, not attending high school, 1950
	Dollars	Percent increase 1948–49 to 1958–59		
Top 12 States: [1]				
New York	535	87.8	7.4	12.4
Alaska	520	64.7	7.3	n.a.
New Jersey	463	69.2	6.8	13.7
Wyoming	435	86.6	7.1	14.6
Delaware	420	88.7	7.3	18.2
Oregon	413	69.1	6.6	8.6
Illinois	410	53.4	5.9	12.9
Nevada	410	66.7	7.3	10.8
California	390	52.5	8.1	9.5
New Mexico	390	91.7	6.9	19.2
Connecticut	380	58.0	7.0	11.9
Rhode Island	380	59.8	5.8	18.6
Michigan [2]				11.5
Average	429	70.7	7.0	13.5
U.S. average	340	67.4	6.0	16.3
Bottom 12 States: [1]				
Idaho	270	68.0	4.3	11.5
Maine	255	71.4	6.3	17.2
Virginia	245	82.6	4.8	22.4
West Virginia	225	54.1	5.5	21.3
North Carolina	220	73.3	5.0	21.9
South Carolina	215	87.6	5.4	28.0
Georgia	208	94.7	4.5	26.6
Kentucky	205	76.5	3.8	30.1
Tennessee	205	76.1	4.1	22.6
Arkansas	201	101.4	3.1	22.5
Mississippi	181	135.1	3.8	22.1
Alabama	164	53.2	3.6	22.0
Average	216	81.2	4.5	22.4

[1] Criteria for determining the ranking of the States was the estimated current expenditure per pupil in average daily attendance 1958–59.
[2] Where data for Alaska was not available, Michigan, the 13th top State, was used.

Sources: "Rankings of the States," Research Division, National Education Association, 1959–R4; Gaumnitz, "High School Retention by States," U.S. Department of Health, Education, and Welfare circular No. 398.

Differences in expenditures per student are also very large. In the top 12 States, expenditures per pupil per day in the years 1957–58 were $429 as contrasted with $216 in the bottom 12 States. Differences in the length of the school year varies from 180 days in the top States to 175 in the bottom group. Teachers' salaries average $5,405 in the top States and only $3,546 in the bottom. To some extent this reflects differences in regional incomes, but there are also differences in quality. For example, 92.1 percent of elementary school teachers in the top States have had 4 years of college, while only 40 percent had similar qualifications in the bottom group. These differences in expenditures are not due to differences in financial effort. The schools in the bottom group have a much larger fraction of their population enrolled in school because of differences in the age structure of the population, 197 in the top 12, as compared to 236 in the bottom. There are also enormous differences in per capita disposable personal income, with the top 12 States receiving an average or $1,879, while the bottom States had an average income of only $1,183. Because the poorer States have relatively more children, the differences in personal income per student are even greater than the differences per capita, making for an even wider range of financial capacity in relation to need.

A continued increase in educational standards in the coming years will have to occur in the face of rising enrollments. According to projections prepared for this study by Prof. Werner Hirsch,[13] total education costs will rise from $11 billion in 1958 to about $17.4 billion in 1965, an increase of 58 percent. With present financing efforts, no more than $15.3 billion is likely to be available, suggesting that unless new sources of funds are found the rise in standards which has occurred over the past 50 years will slow.

We therefore recommend that a program of Federal aid to education be enacted which would provide substantial financial assistance to those States which have the largest school populations and the least financial resources.

From an economic point of view such aid should be for teacher's salaries or be on some per pupil basis, but in order to prevent Federal control of educational policy it may be more desirable to give the aid in the form of construction grants. Whatever the form of the aid, it should come in such a pattern that it puts the money where it is needed.[14]

Diversity and local initiative and control are traditional in American education and should be preserved. But many of these differences are simply due to lack of financial resources, and are a part of the general problem of financing the services of State and local governments. By one means or another, funds collected from the lucrative Federal tax base must be funneled into education, particularly in low-income States and school districts, whether this is done by grants-in-aid for construction, or by some other method.

This recommendation is the single most important policy step which would promote the economic growth of the country in the long run. If we are serious about growth, we must be concerned with the tremendous underdeveloped potential of our labor force in those parts of the country where school systems are substandard.

Education beyond the high school, which bears critically on the performance of managerial, technical, and professional tasks, is another area of necessary investment for growth. Here too, rising numbers will necessitate large efforts just to hold standards constant. But, in addition, full utilization of the potential of our population requires that the present large educational attrition of talented individuals be reduced. Recent studies [15] found that at least 60 percent of students in the top quarter of ability of high school classes do not go to college. Economic factors play an important role in determining who will attend college. Recent nationwide figures show that about two-thirds of high school graduates whose fathers were in professional and semi-professional occupations, one-half whose fathers were in managerial and white collar categories, and one-fourth of those whose fathers were farmers or manual workers continued their education. Other factors such as religion, race, geographical locale, and age at the time of high school graduation also played a determining role.

Education must also be strengthened to accomplish the very specific

[13] Werner Hirsch, "Analysis of the Rising Costs of Public Education, Study Paper No. 4."
[14] This view is also expressed in the hearings by Richard A. Musgrave and others. See hearings, pt. 9, p. 2763.
[15] See Charles C. Cole, Jr., "The Identification and Encouragement of Scientific Talent," a report to the National Science Foundation.

national objectives of free-world leadership, the East-West technological competition for military, civilian, and symbolic purposes requires full development of the best potential scientific talent of our population. The recently enacted National Defense Education Act does much to solve this problem, though the failure to include a scholarship program hurts its effectiveness. Technical assistance programs require an abundance of trained and dedicated technicians.

The Soviet Union has staked its future on education. As Commissioner L. G. Derthick writes in his recent report on his trip to Russia:

> The one fact that most impressed us in the U.S.S.R. was the extent to which the nation is committed to education as a means of national advancement. In the organization of a planned society in the Soviet Union, education is regarded as one of the chief resources and techniques for achieving social, economic, cultural, and scientific objectives in the national interest. Tremendous responsibilities are therefore placed on Soviet schools, and comprehensive support is provided for them by all segments and agencies of Soviet society.[16]

The Soviet Union is devoting 10 to 15 percent of its gross national product to investment in education, while the United States is content with 3.2. Much of their expenditure has to be devoted to training the technicians necessary to staff the modern economy they are building, and is a form of catching up. Nevertheless it is pretty clear that our efforts in this area are inadequate, both in facilitating a high rate of productivity advance and in meeting the technological competition.

To assure maximum development of talent, we recommend a national scholarship program, based on merit, but with a geographical distribution that assures that talented youngsters from inferior school systems are given an equal opportunity. The programs to identify talent, which are a part of the National Defense Education Program, should be continued. In addition, whatever steps would encourage talented students to attend college, by providing motivation, making information available, etc., should be taken.

C. IMPROVEMENT OF THE LABOR FORCE: HEALTH

The largest economic gains to be realized from improving health standards have already been scored. Nevertheless, much remains to be done. General measures to improve mental and physical health will have effects both on the size and the productivity of the labor force.

We therefore recommend that the programs of support of medical research by the Federal Government be advanced as rapidly as is feasible. We also recommend continued expansion of the programs to promote vocational rehabilitation which restore individuals to active participation in the labor force.

D. MAINTAINING THE RATE OF PRODUCTIVITY ADVANCE: FACILITATING THE INTRODUCTION OF NEW TECHNOLOGY

New technology leads to severe problems of human adjustments: jobs long held are destroyed; work crews change in size; workloads are changed, and work rules are modified in many other small and large ways.

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[16] "Soviet Commitment to Education," report of the first official U.S. Education Mission to the U.S.S.R., U.S. Department of Health, Education, and Welfare Bulletin 1959, No. 16, p. 1.

In much of American industry, work rules have come to be determined by negotiation in collective bargaining.[17] By this process, the social costs of change have come to be balanced off against the gains and have been borne in a more equitable manner. With some exceptions, this system has worked extremely well. The American worker is probably more willing to accept changes in work rules than workers in any other free country.

The degree of workers' resistance to technological change depends on the outlook for alternative employment. One witness, who saw increasing rigidity against changed work rules in the mass production industries traditionally relatively free from such resistance, attributes it to the general decline in production worker employment in recent years.[18] To prevent acceleration of this trend, means must be found quickly to fit the worker for another job, and to have the economy prosperous so that jobs are plentiful. In addition to the piecemeal unemployment generated by technological advances in existing plants, the changes in products demanded and the shifts in geographic patterns of location lead to layoffs. The human adjustments that must be made are part of the cost of rising national productivity. Some resistance to such changes, reflected in demands for protection from foreign competition, in restrictive labor-management agreements, and in other ways, is inevitable since there are serious human dislocations. To keep the economy moving forward, the sting must be taken out of these adjustments.

Several witnesses recommended that special provision be made in our employment compensation system for workers laid off by technological change.

> For example, our unemployment compensation system might be modified to provide that men who had 15 years' seniority—I am not going to quarrel about the particular number of years—in a plant who are displaced for technological reasons shall be entitled to double benefits for a period twice as long, provided, however, they shall make themselves available for retraining programs and retraining skills.[19]

Despite the most imaginative efforts of public and private agencies to avoid or shorten the duration of structural unemployment, however, we can be sure that some families will always be subject to its effects. In particular, it will always prove more difficult to retrain or relocate older workers. Youngsters caught by structural economic changes can be expected to make the adjustment on their own, with relatively little assistance, perhaps only a little guidance. But the older the worker the less adaptable is he likely to be to changes thrust on him. For those who are in the clutch of such circumstance, a longer period of transition is necessary—transition either to a new, probably less desirable, employment situation, or to new financial arrangements, probably involving a lower standard of living and a dependency relationship. These adjustments, even if they may be ultimately inescapable, should be cushioned by a longer period of preparation for them. Some form of income support of longer duration than unemployment compensation programs usually provide is needed.

I suggest the following simple formula as one possible approach. Recognizing that whatever is done in this area will have to be undertaken by the Federal Government if it is to apply uniformly throughout the Nation, we might consider Federal continuance of unemployment compensation—at State levels—past the date of their normal exhaustion. To take account of the age factor, I would suggest additional benefits at the rate of 1 week for each year of employment for those up to age 40; for those in the age bracket 40 to 50, 1½ weeks of addi-

[17] See the testimony of George W. Taylor, "The Economics of Working Conditions" in hearings, pt. 8, p. 2591.
[18] Testimony of Jack Stieber, hearings, pt. 8, p. 2600.
[19] John T. Dunlop, hearings, pt. 8, p. 2746.

tional benefits for each year of employment; and for those older than 50, 2 weeks of benefits for each year of employment. Thus, for example, assuming a benefit duration of 26 weeks under a State unemployment compensation plan, a man displaced at age 35 after having worked for 15 years would receive 15 weeks' additional benefits or a total of 41 weeks. At age 45, after 26 years of employment, he would receive an additional 39 weeks of benefits or a total of 65 weeks of income support. And at age 55, after 35 years of work, he would be entitled to an additional 70 weeks or a total of 96.

If these totals sound high, may I remind you that they would be paid only if the individual remained unemployed. And I would argue the case that it is not excessively generous to allow a person who has had a work career of 25 to 35 years, after which his job has been shot out from under him, something less than 1 to 2 years to make a difficult adjustment to a less desirable economic status.[20]

1. Without endorsing any specific proposal, we recommend that a program be developed and adopted which would make special provision within the unemployment insurance system for workers who are laid off by technological change, with benefits related to seniority.

2. We also recommend a special program for problems of adjustment in depressed areas. This program is discussed below in the chapter on employment.

Recently, new institutions have begun to be developed, which should further facilitate technological change. In the West Coast long-shore industry, an agreement has been signed which sets aside a fraction of any savings caused by new technology to be allocated among the workers; in meatpacking, the Armour Co. has agreed to set up a fund to be devoted to retraining, relocation, and other adjustments for workers displaced by technological change.[21]

The contract between the United Steel Workers Union and the Kaiser Steel Co. provides for a study to devise similar institutions.

Private collective bargaining is bringing about these advances. We must continue to rely on this institution as the main method of "greasing the way," in the words of Dunlop. Government policy can probably have little impact on this process. But insofar as public policy deals with labor-management relations in the coming years, it should seek to encourage, not discourage, the development of these new agreements which serve to ameliorate the human impact of changing technology.

E. MAINTAINING THE RATE OF PRODUCTIVITY ADVANCE: RAISING SKILLS

In the coming years, the potential use of a continued rise in skill levels is very great as automation and other complicated technologies spread through industry. The large number of new and untrained entrants into the labor force, coupled with a particularly low level of male workers in the high-skill ages of 25–44, will make it difficult to provide the economy with a sufficient number of highly skilled workers.[22]

To increase the supply of skilled workers, several steps should be taken:

1. Unions should be encouraged to expand their apprenticeship programs.

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[20] Neil W. Chamberlain, hearings, pt. 8, pp. 2705–2706.
[21] See testimony of John T. Dunlop, hearings, pt. 8, p. 2741.
[22] See testimony of John T. Dunlop, and U.S. Bureau of the Census, Population Reports.

2. The work of the Bureau of Apprenticeship of the Department of Labor should be expanded.

3. Policies should be devised which discourage union restrictions to entry into apprentice programs for skills that are scarce.

4. Vocational training programs in schools should be examined and strengthened both by an expanded Federal program and by intensified efforts of State and local governments. The cooperation of industry in pointing out future skill needs is essential in meeting this problem.

5. Some of the skills that are going to be needed to man the new technology will be of a highly technical and semiprofessional nature. Junior colleges will be the institutions in which this training can be given. With the enormous growth of these institutions just ahead, studies which explore their potential role in the area of technical training are desirable.

6. Serious study should be given to the possibility of setting up national productivity centers[23] of the type that the United States encouraged other countries to institute as part of the Marshall plan. Such productivity centers might particularly emphasize the development of new techniques in the low-productivity industries of the economy, many of which consist of small highly competitive units, too small to support research programs. The success of Federal research for agriculture suggests the great potential of Federal research for industries unable to support their own research.

F. THE PROMOTION OF SCIENCE AND TECHNOLOGY

To keep the scientific foundations of economic progress advancing, Government's most important duty is to create a favorable environment for science. The Government can promote this objective by encouraging the free exchange of ideas and the unfettered pursuit of knowledge. The Government should also, by its own actions and pronouncements, promote public understanding of the work of scientists.

In addition to these very general responsibilities, the Federal Government today plays a critical role in maintaining our scientific establishment. Total research and development expenditures in the economy amounted to about $10 billion in 1957.[24] At least half of the expense was met by the Federal Government. Of all the research and development conducted by private industry, which amounted to $7.2 billion, the Federal Government provided 52 percent of the money.

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[23] See the testimony of Solomon Barkin in the Joint Economic Committee hearings on the January 1959 Economic Report of the President, p. 308, and his further evidence to appear in hearings of this study.

[24] "Reviews of Data on Research and Development," National Science Foundation. NSF–59–46.

TABLE 2–10.—*Funds for research and development performance financed by the Federal Government, by industry, 1957*

Industry	Federal funds (millions of dollars)	Federal funds as percent of total research and development [1]
All industries [2]	3,741	52
Industrial chemicals	33	9
Drugs and medicines and other chemicals	1	1
Petroleum refining and extraction [3]	9	4
Stone, clay, and glass products	1	1
Fabricated metal products	42	38
Machinery, except electrical	260	38
Electrical equipment	717	61
Motor vehicles and other transportation	212	30
Aircraft and parts	2,165	85
Scientific and mechanical measuring instruments	38	30
Optical, surgical, photographic, and other instruments	33	29
Other manufacturing [4]	110	23
Communications	112	54
Other nonmanufacturing [5]	8	6

[1] Percentages are based on unrounded figures.
[2] The industries are listed in order of their standard industrial classification; e.g., food and kindred products SIC 20, paper and allied products SIC 26, etc.
[3] Geological and geophysical exploration activities of petroleum companies are presently excluded from the definitions of research and development.
[4] Includes an estimate for food and kindred products, paper and allied products, primary metal products, ordnance, tobacco manufactures, textile mills products and apparel, lumber and wood products, furniture and fixtures, printing and publishing, rubber and plastic products, leather, and miscellaneous manufacturing industries.
[5] The 1957 figures for certain nonmanufacturing industries are estimates rather than reported amounts.

Source: "Reviews of Data on Research and Development," National Science Foundation, August 1959.

This high level of Federal support and activity is largely due to the race in weapons technology. It is clear from table 2–11 that the industries with the largest and most rapidly rising expenditures are aircraft, machinery, and electronics, which are doing the bulk of their research for the Defense Department. The other great research-minded industry is the chemical industry, including pharmaceuticals, which is almost wholly based on industry financed research.

TABLE 2–11.—*Funds for research and development performance, by industry, 1956–57*

Industry	Funds for research and development performance (millions of dollars)		Percent change, 1956–57 [1]
	1956 [2]	1957	
All industries [3]	6,018	7,155	19
Food and kindred products	58	68	16
Paper and allied products	44	50	13
Industrial chemicals	338	334	14
Drugs and medicines	94	109	16
Other chemicals	89	102	15
Petroleum refining and extraction [4]	187	230	23
Stone, clay, and glass products	51	61	19
Primary metal industries	93	113	22
Fabricated metal products	92	110	19
Machinery, except electrical	562	688	22
Electrical equipment	941	1,170	24
Motor vehicles and other transportation	666	708	6
Aircraft and parts	2,109	2,544	21
Scientific and mechanical measuring instruments	97	126	30
Optical, surgical, photographic, and other instruments	103	113	10
Other manufacturing [5]	209	246	18
Communications	177	206	16
Other nonmanufacturing [6]	107	126	18

[1] Percentages are based on unrounded figures.
[2] Statistics for research and development performance by private firms were also collected by the Bureau of Labor Statistics for 1956. The total performance figure reported by BLS was $6,231,000,000 or 4 percent larger than the Bureau of Census figure. The percentage differences between the 1956 figures for the 2 agencies were significantly larger for a number of separately reported industries.
[3] Same as footnote 2, previous table.
[4] Same as footnote 3, previous table.
[5] Same as footnote 4, previous table.
[6] The 1956 and 1957 figures for certain nonmanufacturing industries are estimates rather than reported amounts.

While the primary purpose of most Government-financed research is military, it has also been an important source of civilian technology. Developments in electronics, including modern computers, of jet airliners, of nuclear power, have largely been byproducts of military research.

The Government also makes the market for scientists and engineers, since it directly and indirectly employs almost half of them. More people are being drawn into science and engineering as compared with a few years ago; this is largely in response to the improved opportunities, and to increased attractiveness of a career which so clearly constitutes a national service in the context of the East-West struggle.

Given this situation, the Federal Government has a heavy responsibility to the country's scientific establishment. The following recommendations are designed to meet this responsibility.

1. There must be assurance of continued adequate financial support.

The Government cannot abandon the vast research programs it has stimulated. Even in the unlikely event that the need for military research diminishes, nonmilitary research in the physical sciences should be supported heavily. The increasing opportunities in space research, in nuclear power and in many other fields offer great scope for future activity. As more scientific resources are released for civilian efforts, they will generate their own research opportunities, provided there are no severe disruptions in the transition period.

2. Any economy waves in the budget should be executed in a manner that do not disrupt research and development programs in government, industry, and universities.

3. There must be adequate provision for sufficient basic research.

Since Government programs have absorbed so much of the scientific resources of the country, including the services of many scientists in universities, basic research will be stinted unless there is basic support for it. The National Science Foundation, the National Aeronautics and Space Administration, the Department of Defense, the Public Health Service and other agencies do support and undertake considerable basic research.[25]

4. There should also be studies of the appropriate methods of administering publicly supported scientific research efforts.

Recent studies[26] suggest that flexible, decentralized, on-the-spot authority to choose methods to accomplish general objectives, and competitive pursuit of alternative research strategies, yield better results than monolithic central specification of a detailed research plan.

There should also be some reexamination, without ideological preconceptions, of the proper division between publicly financed contract research in private industry and work in Government installations.

5. The supply of scientists, engineers and technical personnel should be increased.

Much is already being done at the graduate level through fellowships. The major remaining opportunities for developing the scientific potential of the country lie in a general program to cut the attrition rate in the education of talented youngsters between high school and college. As pointed out above, a scholarship program is needed and should be instituted. The supply of subprofessional technicians, which is particularly short in this country, could be increased through junior college programs. Finally, the progress now being made in strengthening the science curricula in our schools should be encouraged and efforts made to have the weaker school systems share in the advance.

It should be stressed that all these efforts will come to naught if Government support of research slackens, since employment opportunities in industry and education will not grow fast enough to offset a substantial decline in the demand for scientific effort now generated by Government.

Besides these direct responsibilities, the Federal Government, through its policies, affects the productivity, scope, and direction of private research.

6. *There should be further study to find ways of making the patent system a more effective tool for technological progress.*

The patent system has proved to be an important incentive to the conduct of research in private industry. At the same time, it has

[25] See the Budget of the United States for Government, 1960, p. 989. It is estimated that a total of $500 million is being spent for basic research out of a total research budget of $1,300,000,000 and a total research and development budget of $5,500,000,000. More funds should be allocated to basic research.

[26] For example, Burton H. Klein, "A Radical Proposal for R. and D.," *Fortune*, May 1958.

also been a frequent device for monopolistic practices, retarding the introduction of new test products and processes.

7. While, as the world leader in research and technology, the United States can gain less from imitation of foreign techniques than other countries, the rapid advances being scored abroad, particularly in Western Europe, in the Soviet Union, and in Japan, create new opportunities for the United States. We have probably been less alert to progress abroad than any other advanced country. Relatively few companies in few industries have conducted systematic surveys of foreign developments.

The Federal program for abstracting and translating foreign scientific and technical journals should be expanded and publicized, and the results made widely available at low cost. This would be a particular boon for the smaller companies and would have some beneficial effects both on the rate of technological progress and on the competitiveness of industry.

G. ACCELERATING THE ACCUMULATION OF CAPITAL

Since the amount of capital used by each worker affects his productivity and since new investment is the vehicle for the introduction of much of new technology, a higher rate of growth requires a higher rate of capital accumulation. The share of output ploughed back into investment—excluding housing, which should probably be considered a form of consumption—has been relatively low in the United States, compared to other countries. Simply increasing the amount of investment is not likely to produce as dramatic results as the use of simple capital-output ratios would suggest.[27] The magnitude of the influence on output of any given increase in capital depends in large part on the age distribution or average age of the existing capital stock, which reflects the extent to which the latest technology has or has not been incorporated in productive facilities. And a mechanical increase in the supply of investible funds may lead to more mischief than good, as the liberalization of depreciation allowances in 1954 and the subsequent abortive investment boom suggests. But an acceleration of the growth process in the U.S. economy will undoubtedly involve some increase in the absolute rate of capital accumulation, and possibly in the fraction which it constitutes in GNP.

The major factors which determine the level of investment are the following:[28]

1. The degree to which the demand for output utilizes the already existing capacity.
2. The expected profitability of new investment.
3. The magnitudes of the internal cash flows of corporations from profits and depreciation allowances.

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[27] In a country in a stage of development similar to that of the Soviet Union, a very high rate of capital accumulation is more likely to yield a high rate of growth. This is because the capital is applied to a large backlog of technology developed in more advanced countries and because there is still an abundant labor supply in farming which can be drawn into industry to use the extra capital.

[28] A forthcoming study by Sidney S. Alexander will deal with this question.

4. The availability and cost of capital to borrower-investors.
5. The prices of capital goods and their relation to the prices of other inputs.
6. The state of business confidence.

In the long run, these factors determine the general level of investment opportunities:

1. The rate of technological progress, including the advances in developing new products.
2. The vigor of the entrepreneurial spirit and the effectiveness of competitive pressure to cut costs, develop new products and develop and meet new markets in the economy.
3. The stability of political institutions and the security of private property.

The first four factors hinge on the state of the product market; profit levels will be high and the need for new capacity strong when demand for output is strong. The cost of borrowing, a factor that is of importance primarily in public utilities, because of the long economic lives of equipment and the use of external financing, depends on money and credit policies.[29]

To raise the rate of capital accumulation, the following steps are necessary: (1) Technological progress must be continued vigorously and a competitive business environment maintained; (2) demand must be allowed to grow and keep the rates of utilization of capacity high; (3) in the event that the supply of investible funds becomes a serious limit to investment, fiscal measures, such as further liberalization of depreciation allowances, should be enacted, provided the demand for capital goods does not promise to outrun the capacity of the capital goods industries. At the present time, there is no evidence of any need for such steps; (4) the interest cost of borrowed money should be kept as low as is possible, consistent with other objectives, particularly price stability.

H. RESOURCE POLICY

In this report, no attempt is made to develop a Federal resource policy and only the following general observations are made:

While the United States does not face any general shortage of resources, the Federal Government must have continued concern with those specific items which threaten to be in short supply. Water presents the most serious problem, and its supply and control has traditionally been a public activity. Federal water resource policy must continue to be adapted to the changing needs of the economy, including particularly ample supplies for industry and for domestic use. Research programs for finding new supplies, and programs for more economical use of water should also be strengthened.

Continued studies, seeking to anticipate emerging resource scarcity, should also be conducted, and policies devised to deal with it.

I. STRENGTHENING THE COMPETITIVENESS OF THE ECONOMY AND IMPROVING THE ALLOCATION OF RESOURCES

An improvement in the competitiveness of the economy would lead to an acceleration of the dynamic processes of growth and to a better

[29] See ch. 9 below.

allocation of productive resources. This would lead not only to a one-time gain in the real value of output but would also lead to a subsequent higher rate of advance. In a subsequent chapter, policies designed to affect the structure of American industry are examined in more detail. In addition to directly affecting the structure of industry, the Federal Government can strengthen the forces of competition and improve the allocation of resources by the following steps: (1) Reductions in Government subsidies consistent with their objectives, particularly in agriculture and mining; (2) reduction in tariff and quota protection from foreign competition.

J. PRESERVATION OF A STABLE POLITICAL AND ECONOMIC SYSTEM

The political and legal system must be stable and provide a dependable framework for the economy. If capital is to be accumulated privately, there must be assurance that there will be no loss of property without due process of law. In some underdeveloped countries, the greatest obstacle to economic progress is political instability. The stability of our political system has been an important factor in our growth, and we should be ever watchful to preserve it.

K. ENCOURAGEMENT OF INDIVIDUAL INITIATIVE

American growth has been based on individual initiative, on new ideas carried out by venturesome people who were free to promote new enterprises, products, processes. The rise of large organizations, private and public, which reward on "organization man" criteria, has diminished the scope of individual initiative. Nevertheless, even today our economy has more room for the individual with ideas and drive than any other economy. In the coming years, we must count on the continued evolution of organizational arrangements which will permit large organizations to utilize the creative spark of their many members.

Public policy can promote individual initiative only indirectly. It can do so by:

(1) keeping business free from unnecessary external interference, so that creative energies will not be diverted to coping with Government regulations; (2) keeping the forces of competition strong, so that organizations that have become rigid and stifled individual initiative will decline as they are left behind by more creative competitors; (3) keeping the supply of capital as abundant as is consistent with other objectives, so that the cautious attitudes of financial limitations will not receive excessive weight in key production and investment decisions.

L. PROVISION OF PUBLIC SERVICES AND INVESTMENTS

If the private sector of the economy is to be able to accelerate its growth, certain public services and investments must grow along with it. The transportation system must continue to be strengthened,

responsibility for large portions of which, including roads, airports, and waterways, rest with the several levels of Government. Public policy toward the railroad system, which is still much the most important mover of goods, must face up to the changing problems besetting that industry. These systems which are important to the mobility of the labor force within the large labor markets of our metropolitan areas, must be provided with the capability to carry the rapidly rising loads which are in prospect. Water supplies for homes and industry must be increased. Police, fire and flood protection, public health activities, and many other large and small public programs, will have to increase as the economy expands. The large geographic shifts that characterize a dynamic economy will also generate needs for social overhead investments in the rapidly expanding communities.

Inadequate provision for these investments and services can be a serious drag on growth. All levels of government, Federal, State, and local, will be faced with extra costs as part of the price of growth. Extra revenues will be generated as well though not necessarily in the same pattern as costs. While there can be much honest debate about the level of government at which these services are to be provided, from the point of view of the country's growth, the issue is clear: some level of government must do the job.

CHAPTER 3. THE SLOWING DOWN OF THE ECONOMY DURING RECENT YEARS[1]

I. Introduction

Recently, the economy has slowed down. The chief manifestations are:

(1) The growth of real gross national product has decreased since 1953.

(2) Unemployment rates in recent years have been higher than those of the early postwar period.

(3) Productive capacity has been increasingly underutilized.

(4) An increasing proportion of the labor force is being absorbed by low-wage sectors.

(5) The rate of increase of productivity has slowed.

Other chapters of this report contain discussions of the need for high rates of economic growth, and analyses of the determinants of growth over the long run, including policy recommendations for increasing long-run growth. The aim of this chapter is to provide an explanation of the recent slowdown in the economy.

The conclusions reached have an optimistic implication: National output could have grown considerably more during the postwar period if a proper set of demand policies had been pursued by the Federal Government. This means that our market economy is capable of achieving and sustaining a high rate of advance without new forms of government regulation.

This is not to deny the crucial importance of supply factors over the long run. The potential growth of the economy over any period is limited by the growth of capital and labor resources and by the rate of technological advance. From the point of view of maintaining a high growth rate, however, it is just as important to realize the growing supply potential by letting demand grow as it is to speed up the growth of that potential. In our failure to realize the growing supply and productivity of our resources since the Korean war lies the root cause of the low growth achieved over the past 6 years.

II. The Magnitude and Cyclical Characteristics of the Decline in Growth

While most other industrial countries have been enjoying rapid rates of economic growth in recent years, our own economy has grown very slowly. From the second quarter of 1953 to the second quarter of 1959, our real gross national product increased by only 2.5 percent per year. This is below our longrun historic rate of 3 percent, and

[1] Main responsibility for the drafting of this chapter rested with Thomas A. Wilson and George W. Bleile.

substantially lower than the rate of 4.6 percent achieved during the earlier part of the postwar period. Even if the economy follows the more optimistic forecasts, the growth rate from the second quarter of 1953 to the second quarter of 1960 will be no more than 2.7 percent.

Some insight is gained by looking at the cyclical patterns contained within the 1947–53 period of rapid growth and the 1953–59 period of slow growth of output. Chart 1 compares the growth of real gross national product from its peak value in the fourth quarter of 1948 with its growth from the peak value in the second quarter of 1953. Some striking differences emerge:

(1) The growth of real product since the 1953 peak has twice been interrupted by recessions. The 1954 recession held up the growth process for seven quarters, the 1958 recession for five quarters.[2] For fully half of the period—second quarter 1953 to second quarter 1959—the economy marked time in recessions.

During the earlier years, the 1949 recession interrupted growth for five quarters, which was less than one-third of the period fourth quarter 1948 to second quarter 1953.

(2) Although the growth rates following each recession have been quite large, the period of rapid growth was shorter after the 1954 recession. The current recovery already has faltered at least briefly, because of the steel strike. Real gross national product declined during the third quarter of 1959. The highest estimate for the fourth quarter, if achieved, would yield a growth rate over the year of only 4.6 percent. This is much below the 1950 and 1955 growth rates of 13.2 and 8.4 percent. Since real product in the last half of 1959 has been affected by the steel strike, no firm conclusion can be drawn as yet.

(3) The rise in output was much slower during 1956 and 1957 than it was during 1952 and 1953. Whereas the output rose at an annual average rate of 4.4 percent between the third quarter of 1951 and the second quarter of 1953, the rate between the fourth quarter of 1955 and the third quarter of 1957 was a mere 1.3 percent. Of course, growth in output during the former period was spurred by the extraordinary stimulus of the Korean war demands upon the economy.

These observations suggest that the advance achieved after 1953 was substantially less than the rate of the earlier postwar years because:

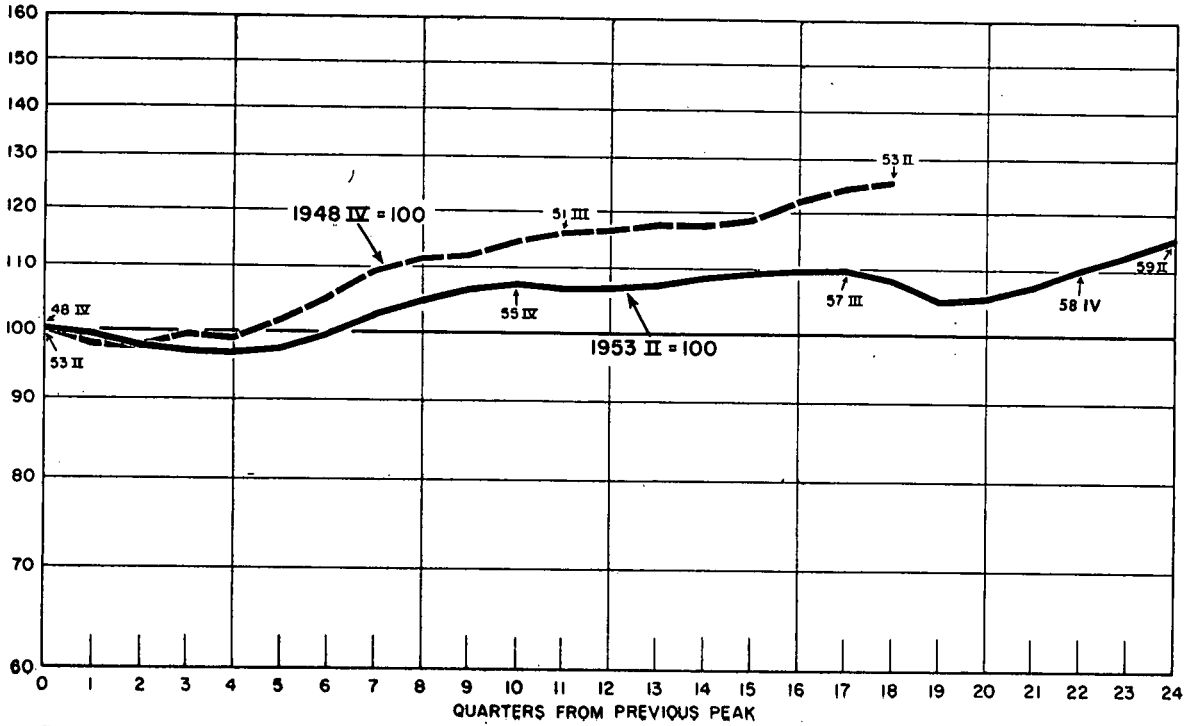
(1) The later period was marred by two recessions, and

(2) The recovery from the 1954 recession aborted near the end of 1955, with a consequent drastic reduction in the growth rate. The causes of and cures for the postwar recessions are discussed elsewhere in this report. The next section marshalls the evidence of the extensive underutilization of labor and capital during the more prosperous months of the 1953–59 period.

[2] Real product did not surpass its previous peak until the first quarter of 1955, which was 7 quarters after the previous peak. In the latest recovery, real product surpassed the previous peak in the fourth quarter of 1958, 5 quarters after the previous peak.

CHART 3–1

GNP IN CONSTANT (1954) DOLLARS, INDEX NUMBERS



Source: U.S. Income and Output, table I–5.

III. Further Evidence of Weakness: Underutilization of Labor and Capital

The period since the end of the Korean war has been marred by two recessions. During these recession periods, potential supply in the aggregate was, of course, higher than actual demand. Labor and capital were both being underutilized, as is revealed by the aggregate unemployment rates and capacity utilization rates. Both of these recessions were worse than the 1949 recession—the 1954 recession was longer, and the 1958 recession deeper.

As has been noted above, the period between these two recessions contained a phase of rapid rise in output and a longer phase of very little rise. Since the Federal Government's policies during the period of low growth were restrictive, it is of importance whether or not labor and capital were being fully utilized during that period.

A. CAPITAL

Six different measures of the utilization of capital in manufacturing during the postwar period are shown in table 3–1. Basically each is a comparison of manufacturing output with a measure of manufacturing capacity.

Table 3–1.—*Indexes of production and capacity in manufacturing*

[May 1953=100]

	July 1948	Dec. 1949	Jan. 1951	Dec. 1952	May 1953	Dec. 1953	Dec. 1954	Dec. 1955	Dec. 1956	Aug. 1957	Dec. 1957	Dec. 1958	Aug. 1959
Production indexes:													
(1) Federal Reserve production	75	71	88	97	100	91	94	105	106	106	99	104	110
(2) Value added in constant dollars (Schultze)	75	75	86	90	100	96	97	104	105	103	101	[2] 98	(1)
Capacity indexes:													
(3) Net value of equipment	75	82	87	98	100	103	106	109	116	120	122	122	(1)
(4) Depreciation of equipment	74	83	87	97	100	104	107	113	118	120	121	129	(1)
(5) McGraw-Hill index	73	77	85	94	100	101	106	115	121	125	127	131	(1)
Utilization rate:													
(1) as a percentage of (3)	100	87	101	99	100	88	89	96	91	88	81	85	(1)
(1) as a percentage of (4)	101	86	101	100	100	87	88	93	90	88	82	81	(1)
(1) as a percentage of (5)	103	92	104	103	100	90	89	91	88	85	78	79	(1)
(2) as a percentage of (3)	100	91	99	92	100	93	93	95	91	86	83	80	(1)
(2) as a percentage of (4)	101	90	99	93	100	92	92	92	89	86	83	76	(1)
(2) as a percentage of (5)	103	97	101	96	100	95	93	90	87	82	80	75	(1)

[1] Not available. [2] Annual average.

Source: "United Nations World Economic Survey, 1957" revised and extended as follows:
Capacity A and B: Estimates of net value of equipment and depreciation at 1947 prices from "Survey of Current Business," November 1956, were extended using revised data from "US Income and Output."
Capacity C: From the "12th Annual McGraw-Hill Survey," April 1959.
Output A: Federal Reserve Board production index for manufacturing, seasonally adjusted.
Output B: Estimate of real value added in manufacturing from forthcoming paper by Charles L. Schultze. Linear interpolations from annual averages.

By the most conservative of these estimates, the utilization of capital in December 1956 was 91 percent, and by August 1957 had fallen to 88 percent of the May 1953 utilization rate. These data strongly suggest that capital was not being fully utilized during the period of slowdown. Chart 3–2 uses the data in this table to show a similar picture.

B. LABOR

The labor force continued to grow at about the same rate after 1953 as before. (See table 3–2.) However, the utilization of the labor force was lower during the 1954–57 expansion than during the 1949–53 expansion.

TABLE 3–2.—*Average annual increase in civilian labor force, selected periods, 1947–59*

Period:	*Percent rate of increase*
1947–59	1.52
1947–53	1.46
1953–59	1.55

NOTE.—1959 figure is for June.

Source: "Employment and Earnings," Bureau of Labor Statistics.

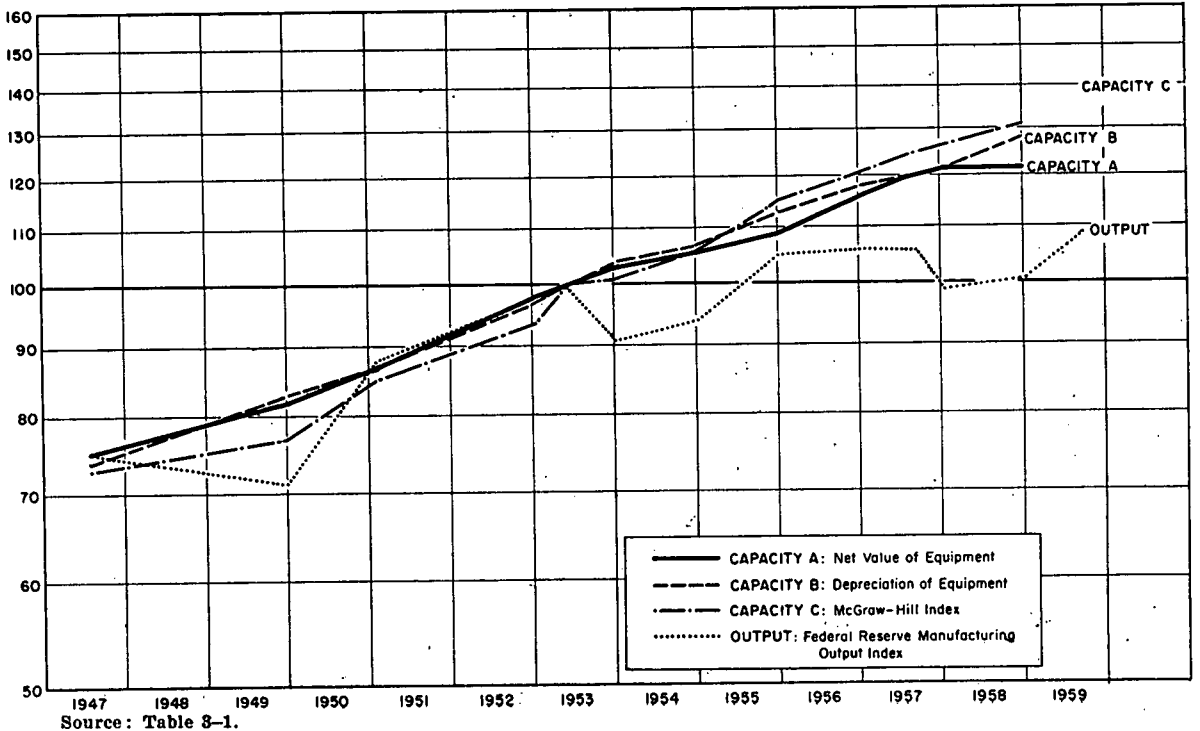
The evidence of this underutilization can be summarized as follows:

(*a*) Aggregate unemployment rates were higher during 1956 and 1957 than during earlier prosperity periods. Whereas the lowest monthly unemployment rate achieved during 1956–57 was 4.1 percent of the labor force, in 1953 levels of 2.7 percent were achieved, and during the immediate postwar period levels of 3.7 percent were reached. Undoubtedly, part of the difference can be explained by the effects of the Korean war, especially the drawing off of people into the Armed Forces which somewhat reduced unemployment—this being highest in the age brackets drawn on by the Armed Forces. Chart 3–3 presents this picture graphically.

CHART 3–2

CAPACITY AND OUTPUT IN MANUFACTURING

1948–1959

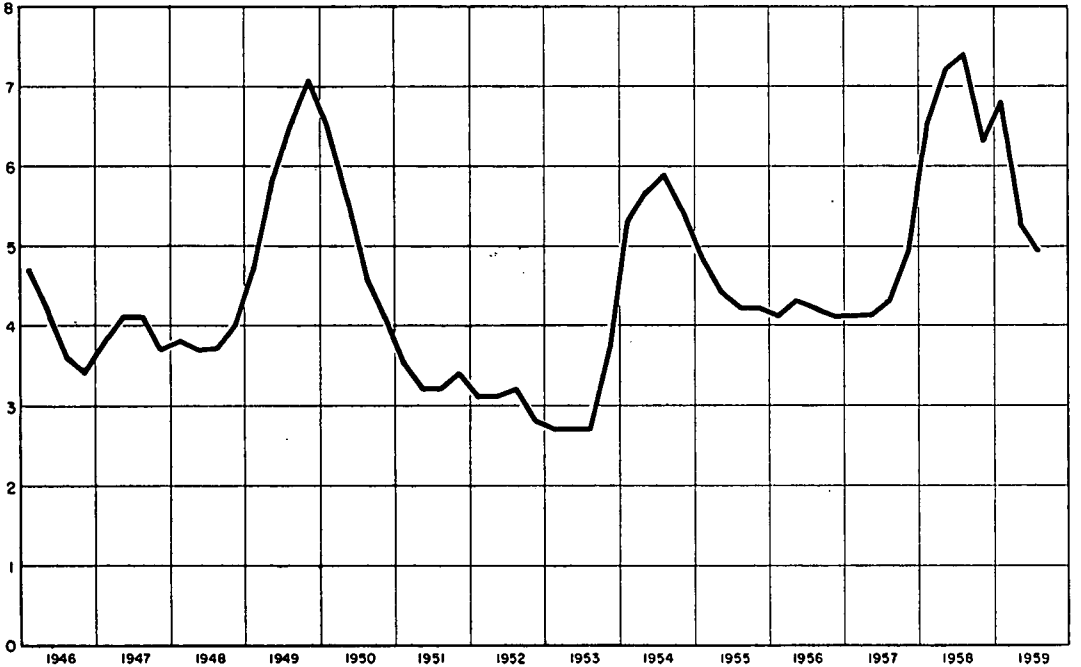


Source: Table 3–1.

CHART 3-3

UNEMPLOYMENT RATE 1946-59

(quarterly, seasonally adjusted)



Source: Bureau of Labor Statistics

56836—60——8

(*b*) The percentage of the labor force composed of part-time workers who preferred full-time work has increased. Whereas in 1948 and 1952 levels of about 2.0 to 2.5 percent were reached, during 1956 and 1957 the average level achieved was about 3.0 percent.

C. UNDERUTILIZATION OF LABOR AND CAPITAL IN THE 1958–59 RECOVERY

The latest capital utilization rates for manufacturing available are those for December 1958. These reveal that capital utilization was lower than in December 1954, a comparable month of the previous recovery. Subsequent movements in output suggest that this underutilization of capital has remained at high levels throughout 1959. The percentage of the labor force unemployed in the second quarter of 1959 was much higher than in the third quarter of 1955. (Both dates are about 5 quarters from the previous output trough.) The number of part-time workers who preferred full-time work has continued to rise relative to the labor force.

If this increased underutilization of resources continues throughout the current expansion, the economy will forgo even more growth than was lost in the last expansion.

IV. Causes of the Decline: Trouble in the Goods Sectors

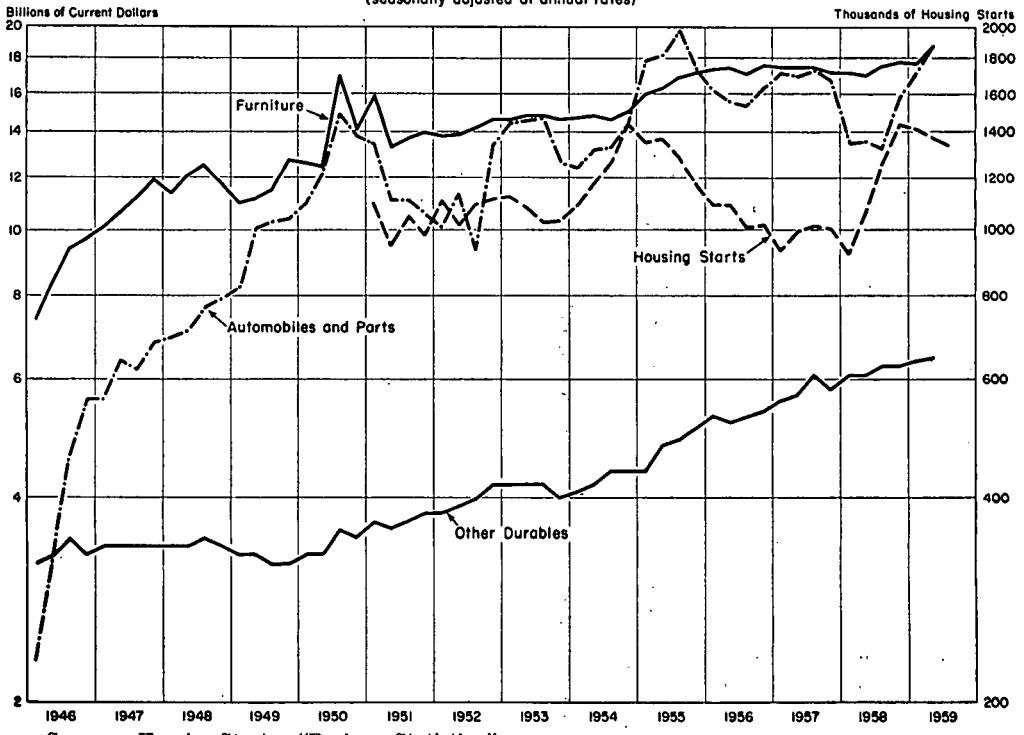
A. WHY GROWTH SLOWED DOWN AT THE END OF 1955

The movement of the components of the real gross national product provides some clue as to the cause of the aborted recovery. The period of rapid growth following the recession (fourth quarter 1954 to fourth quarter 1955) was generated primarily by the upsurge of residential construction and purchases of consumer durables, particularly automobiles. Housing starts had been encouraged by the easy money policy and loose mortgage terms available during 1954, and a large backlog of housing demand existed on which to draw. The expansion of housing stimulated an expansion of purchases of complementary durable goods such as furniture. Automobile purchases rose dramatically in 1955 primarily because of style innovations and the relatively easy consumer credit conditions that prevailed.

CHART 3–4

CONSUMER DURABLES EXPENDITURES, AND HOUSING STARTS

(seasonally adjusted at annual rates)



Sources: Housing Starts: "Business Statistics."
Durables Purchase: "U.S. Income and Output," table II–6.

As charts 3–4 and 3–5 reveal, housing expenditures and automobile purchases fell sharply after 1955. Nothing appeared to take their places as the primary demand forces stimulating the growth of output. Purchases of plant and equipment and State and local government purchases expanded, to be sure, but these developments only served to keep the economy moving sideways. The high level of plant and equipment purchases was unsustainable when consumer and Government purchases did not grow sufficiently.

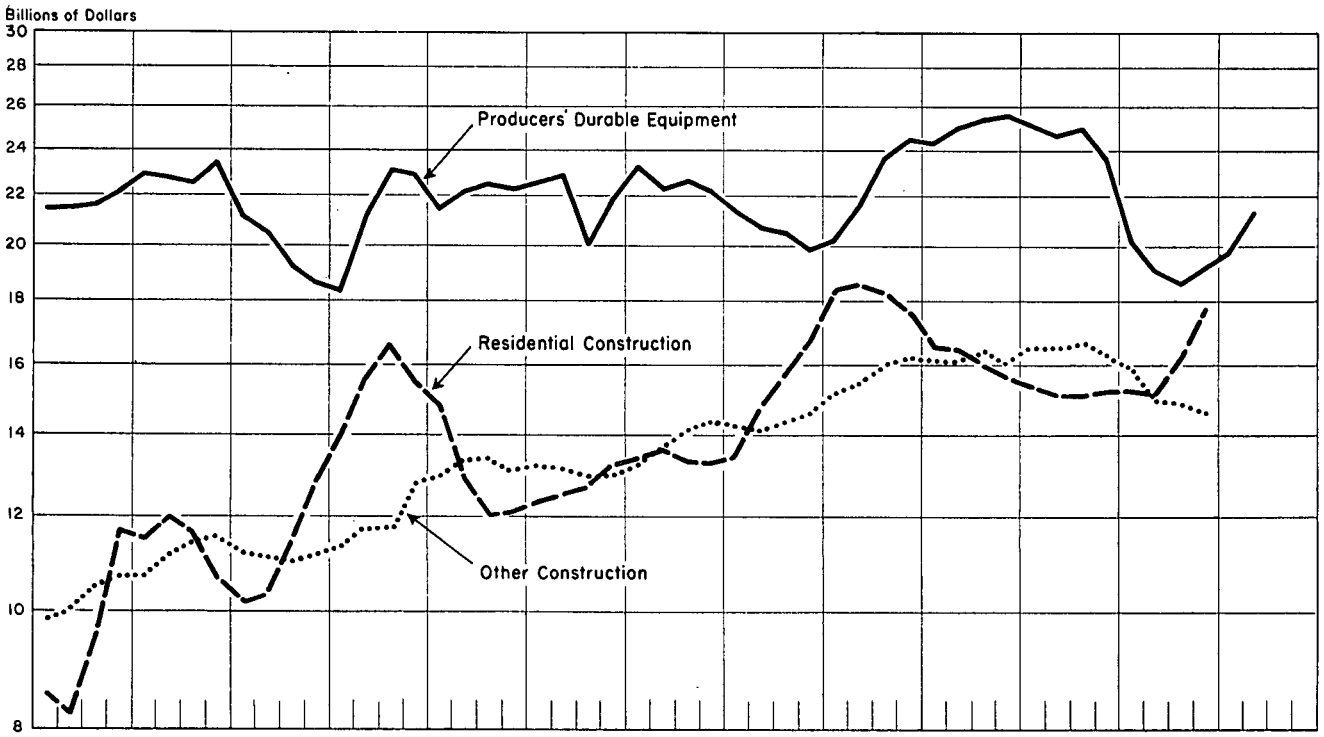
The automobile boom could not have been long sustained at its 1955 level; its collapse was, therefore, not unusual. Given the large backlog of housing needs, however, residential construction could have continued at high levels for a much longer period if monetary and credit policy had not been so rigorously tightened.

Government purchases was another possible area of expansion. State and local government purchases in real terms did continue to rise, though the rates slowed in 1957. Federal Government purchases in real terms fell between 1955 and 1956, then expanded to mid-1957, after which a renewed decline set in. (See table 3–3.) The Federal Government's revenues exceeded its expenditures each quarter during the period of sideways movement (fourth quarter 1955 to third quarter 1957).[3]

[3] See Table III–3 in "U.S. Income and Output."

CHART 3–5

GNP COMPONENTS, IN CONSTANT DOLLARS (1954)



Source: "U.S. Income and Output," Table I–5.

TABLE 3–3.—*Growth of gross national product and its components in constant dollars, selected periods 1947–59* [1]

[Average annual percentage rate]

Period	Total gross national product	Personal consumption expenditures			Gross private domestic investment			Government purchases of goods and services	
		Durable goods	Nondurable goods	Services	New construction		Producers durable equipment	Federal	State and local
					Residential nonfarm	Other			
1947 2d quarter to 1959 2d quarter	3.7	4.9	2.3	4.1	7.8	3.4	−0.1	7.6	6.2
1947 2d quarter to 1955 4th quarter	4.3	6.6	2.3	4.0	9.4	5.8	1.4	10.5	6.4
1955 4th quarter to 1959 2d quarter	2.1	0.9	2.3	4.2	4.0	−2.2	−4.0	0.9	5.3
1955 4th quarter to 1957 3d quarter	1.3	−1.5	2.2	4.5	−8.3	1.8	1.2	−1.6	4.1

[1] Net exports are not included in the table because average annual rates cannot be computed when the series swings from positive to negative values.

Source: Data from "U.S. Income and Output" table I-5. Rates are compound interest computed from base and terminal year values.

The decline in housing and in automobiles after 1955, coupled with the 1955–56 decline of Federal Government purchases, held the economy to a snail's pace of growth.

These growth-inhibiting declines in demand were not offset enough by increases in other components of the gross national product. The impact fell primarily upon the goods sector, since consumers' purchases of services rose relative to their purchases of goods.

B. THE SHIFT TOWARD SERVICES

If the trouble in the goods sector and the increasing proportion of services in consumers' budgets are an inevitable concomitant of our maturing economy, the prospects for reasonably rapid growth would be slim indeed.

The shift of consumer purchases in favor of services was not inconsiderable. Between 1947 and 1959, the services components of gross national product grew at an average annual rate of 4.1 percent in constant dollars, whereas the private domestic goods components only grew at 2.7 percent per year. Most of the disparity between the rates of growth of the two components came about during the period after 1955.

It has been contended that a rising proportion of income is spent on services as incomes rise. If this were the explanation of the shift to services since 1955, one would have to acknowledge that the slower growth rate was in part a result of changing consumer preferences arising from an increase in incomes. The fact that the shift to services occurred suddenly after 1955 suggests that this hypothesis could hardly explain most of that shift. Such a trend would also be contrary to the longrun historical evidence. Between 1909 and 1958, consumer purchases of goods grew 2.7 percent per year and consumer purchases of services 2.5 percent per year. (See table 3–4.)

TABLE 3–4.—*Growth of goods and services compared, selected periods, 1909–58*

[Average annual percentage rates]

Period	Goods		Services	Period	Goods		Services
	Total private domestic [1]	Consumer sector	Private domestic economy [2]		Total private domestic [1]	Consumer sector	Private domestic economy [2]
1909–58	2.4	2.7	2.5	1947–55	3.3	3.2	3.9
1919–25	5.8	5.1	2.3	1955–59	1.5	2.3	4.4
1919–29	4.3	4.5	3.4	1947–59	2.7	2.9	4.1

[1] The sum of consumer goods and gross private domestic investment, in constant dollars.
[2] Consumer services in constant dollars.

Source: Data, 1929–58 "U.S. Income and Output" table I-5; 1909–29, based on unpublished estimates consists with 26 GNP in 1954 dollars supplied on Department of Commerce work-sheets. Compound interest rates computed from base and terminal year values.

The next section will attempt to show that the consumer shift to purchases of services is primarily a result of two factors: (1) certain demographic changes, and (2) the slowed growth of consumer income.

1. Demographic changes

The age structure of the population has been changing during the postwar period. Table 3–5 illustrates that the extreme age groups—

those under 14 and over 65 years of age—account for a larger part of the population than previously. Furthermore, the most marriageable part of the population, the young adults, accounted for a shrinking portion of the population.

TABLE 3–5.—*Civilian population by age groups*

[Percent distribution]

Age group	1940	1950	1953	1955	1957	1959
Under 14	23.2	25.4	27.0	28.0	28.8	29.6
14 to 24	20.1	16.1	15.2	14.9	14.9	14.6
25 to 34	30.1	15.7	15.2	14.6	13.9	13.2
35 to 44		14.2	14.1	13.8	13.6	13.5
45 to 54	19.8	11.7	11.4	11.4	11.5	11.7
55 to 64		8.8	8.8	8.8	8.7	8.8
65 and over	6.8	8.1	8.4	8.5	8.6	8.7

Source: "Statistical Abstract of the United States," 1959 and 1950.

These demographic factors have affected the relative demand for services and goods, directly because of the special needs of the young and old, and indirectly through a reduction in the rate of increase in household formation.

The number of households has increased about 30 percent since 1947. However, the average rate of net increase in households has dropped from around 3 percent per year in the late 1940's to about 2 percent in the late 1950's.[4] This is mainly a result of the very high marriage rate immediately after World War II, and of the low birth rates of the 1930's.

Surveys of consumer buying habits show that people between the ages of 20 and 30 buy more appliances, automobiles, furniture, and housing than the average for all ages. Persons 65 and over typically spend considerably less than the average on these goods. They spend on the average a great portion of income on food, drugs, and home improvement materials for example.

These changes in the structure of our population doubtlessly accounted for some of the rising importance of services in the consumer budget. However, it is unlikely that most of the shift can be explained by these demographic changes since these changes occurred gradually throughout the period, whereas the shift to services began rather suddenly after 1955. Other changes in the structure of the community have also occurred which have tended to increase the purchases of durable goods. Namely, the rise in home ownership and the movement to the suburbs.

In view of these considerations, demographic changes alone cannot account for the increasing importance of services after 1955. Since the shift to services increased when the growth of disposable personal income slowed, an examination of the income position of consumers after 1955 is necessary.

2. The erosion of the growth in consumers' purchasing power

Consumers were squeezed between the slowed growth of disposable income and the rising expenditures required to maintain basic patterns of consumption.

[4] Source: "Statistical Abstract of the United States," 1955 and 1959.

When the growth of family income slows, consumers postpone purchases which they might have made if income had grown faster. Durable goods feel the greatest impact, since much of the consumer's budget for nondurable goods and services is very difficult to curtail or postpone. Food must be purchased, the rent and doctor's bills paid. There is little opportunity to substitute these purchases for a new appliance or car. When incomes do not grow fast enough, the demand for hard goods languishes.

Consumer demand for goods is not unimportant. About three quarters of the total goods produced in the economy are purchased by households. The ability of households to maintain and increase their consumption is not only desirable from a social standpoint, but is also vital to the maintenance of the growth of the economy. A major determinant of the size and rate of growth of consumption expenditures is the rate of growth of consumer purchasing power.

(*a*) *The growth of disposable personal income has slowed down*

Real disposable personal income is the means consumers have at their disposal to purchase goods and services. During the period from 1947 to 1959 total real disposal personal income grew at 3.7 percent per year. However, that growth was not uniform throughout the whole period. From 1955 to 1959, the average annual rate was 3.2 percent; from 1947 to 1955, it was 3.9 percent.

The contrast is heightened if real disposable income per person is used: this grew at 2.2 percent per year before 1953, and only at 1.4 percent per year thereafter.

(*b*) *Service expenditures as family "overhead costs."*

While some types of service expenditures are sensitive to changes in current income and while there is evidence of some shifts in the demand for services—for example, from movie admissions to TV repair—outlays for many services are virtually fixed costs to the family. Rent, utilities, cleaning and laundry, automobile repairs and operations, household and automobile insurance, and medical and hospital care are family expenses which are probably more sensitive to the size and age composition of the family than to short-run changes in income.

In fact, when a comparison is made between the annual percentage change in spending for services [5] and for food, services show less sensitivity than food to the fluctuation of disposable income.

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[5] From the figure for total consumer service expenditures, imputed value of owner occupied housing was deducted. This was done because the imputed item never enters the stream of current market purchases.

TABLE 3–6.—*Inflation in prices of "Overhead services"*

Item	Weight	1953–59 [1] percent increase	Item	Weight	1953–59 [1] percent increase
"Overhead services"	19.4	20.5	"Overhead services"—Con.		
Rent	5.6	12.8	Transportation service	3.7	32.3
Gas and electricity	1.9	14.1	Medical care	4.2	27.5
Water	.3	39.8	All other items	80.6	6.7
Property insurance	.2	9.9			
Laundry	.8	18.2	Total all items	100.0	9.4
Cleaning	1.2	13.8			

[1] 1959 based on third quarter average.

Source: Computed from Bureau of Labor Statistics data.

Prices of items of family "overhead cost" have risen faster than all items in the Consumer Price Index in the period 1953–59. Customary overhead items represent a prior claim on the consumer's income. If the prices of these items rise faster than the prices of other goods in the consumer's budget, he must use more dollars of his income to cover these "overhead costs," and will have less left over for discretionary purchases.

From 1953 to the third quarter of 1959, the prices of the "overhead services" shown in table 3–6 accounted for 42.8 percent of the total rise in the Consumer Price Index. The prices of these items increased on the average 20.5 percent while all the prices of other items increased only 6.7 percent. Durable goods prices actually declined 1 percent in the period 1953–58 and by third quarter 1959 were within one index point of the 1953 level.

C. SUMMARY OF TROUBLE IN THE GOODS SECTORS

(1) The primary source of the slow growth of the demand for goods after 1955 was the decline in residential construction and the fluctuations and decline in Federal Government purchases.

(2) The resulting trouble in the goods sector was further worsened by a shift of consumer purchases from goods to services.

(3) Although demographic changes may have caused some of this shift, it appears to be mainly due to the erosion of the growth of consumers' purchasing power. This phenomenon was due to the slowed growth of consumer income and the absorption of purchasing power by "overhead" service outlays that rose in price.

V. Results of the Trouble in the Goods Sector: Underutilization and Slowed Growth of Productivity

The trouble in the goods sector had ramifications upon the growth of the economy in two main ways:

(1) By decreasing the degree of utilization of both labor and capital.

(2) By slowing down the rate of growth of aggregate productivity (gross national product per man-hour used in production).

The evidence of the extensive underutilization of labor and capital has been presented above. This section discusses the slowed growth of productivity.

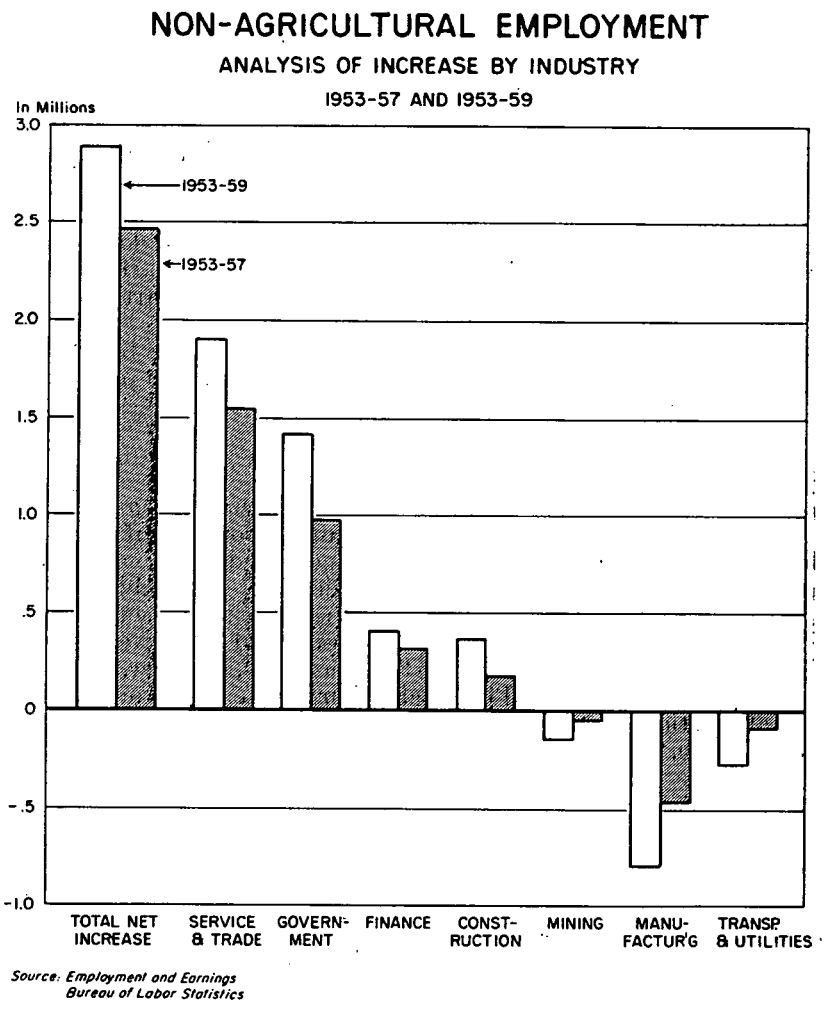
One important way that the slow growth of demand resulted in slow growth of productivity and increased underutilization of labor was through the absorption of labor by low-productivity sectors of the economy. A shift in the composition of the labor force from high-productivity to low-productivity sectors will tend to slow down the rate of growth of productivity. In addition, many of the workers absorbed by the low productivity sector only worked part time when they were willing to work full time.

Before turning to the analysis of slowed aggregate productivity growth, the absorption of labor by the low-wage, low-productivity sectors of services and trade requires elaboration.

A. The Absorption of Labor by the Services and Trade Sectors

As has already been shown, the output of services has grown faster than that of goods since 1955. Some of the output of services is produced, however, in sectors of high and rapidly growing productivity—namely, transportation, communication, and public utilities. If these high-productivity, high-wage sectors had been absorbing labor, the movement of labor into services would not have a negative significance for growth. As table 3–7 illustrates, however, these high-wage service sectors gained little labor during the post-Korean period. The absorption of labor took place in the low-wage services sectors and in trade.

CHART 3–6



Source: Employment and Earnings
Bureau of Labor Statistics

TABLE 3–7.—*Nonagricultural employment; industrial composition of increases during selected periods, 1925–59*

[In thousands]

	1925–29		1947–57		1953–57		1953–June 1959	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total increase in nonagricultural employment during period	2,536	100.0	8,700	100.0	2,481	100.0	2,899	100.0
Services and trade	1,127	44.4	3,659	42.0	1,563	63.0	1,910	65.9
Manufacturing	748	29.5	1,492	17.1	−456	−18.4	−783	−27.0
Mining	−2	−.1	−134	−1.5	−43	−1.7	−139	−4.8
Contract construction	51	2.0	826	9.5	186	7.5	364	12.5
Transportation, communication and public utilities	83	3.2	29	.3	−73	−2.9	−277	−9.5
Finance, insurance, and real estate	265	10.4	676	7.8	323	13.0	404	13.9
Government	264	10.4	2,152	24.8	981	39.5	1,420	49.0

Source: Bureau of Labor Statistics.

Historically, a shift of labor into services and trade has been an early sign of developing weakness in the economy. In the late 1920's, services were absorbing a considerable fraction of the increase in the labor force. This absorption continued through the first years of the great depression of the 1930's.

This is not to imply that a movement of labor into services and trade is necessarily a symptom of weakness. Such a shift could occur if the demand for services expanded relative to the demand for goods.

1. Was labor pulled into services and trade by demand?

It has already been shown that the changed pattern of consumer expenditures was itself largely a result of the slow growth of consumer incomes. This section shows that whatever the cause of the level of demand for services, the large increase in low-wage employment in the service industries was not necessary. The same level of services could have been supplied by fewer workers. It was because of the lack of job opportunities elsewhere that there was a relatively abundant supply of labor to these low-wage industries, with the result that the pressure for introducing labor-saving innovation which had been occurring ever since the end of the depression slowed down. Our evidence is as follows:

(1) Whereas employment grew a lot, wages in services did not grow faster than wages in many sectors of contracting employment (see table 3–8).

TABLE 3–8.—*Increase in average annual earnings, 1953–57*

Industry	Percent increase	Amount of increase
Mining	19.9	$865
Transportation	19.2	845
Communication and utilities	19.2	774
Manufacturing	18.1	732
Construction	16.5	698
Government	19.5	660
Finance, insurance, real estate	17.5	642
Trade	16.6	573
Services	17.5	468
Total	17.2	618

Source: "U.S. Income and Output," table VI–15.

This behavior of wages is all the more striking when the low-wage character of services and trade is considered. A low-wage sector should normally experience higher than average percentage gains in wages just to hold the labor it has got.

TABLE 3–9.—*Average annual earnings and value added per person engaged in production: services and trade compared with other private nonagricultural sectors (1958)*

	Value added per person engaged in production	Average annual earnings
Trade	$4,697	$4,135
Service	4,526	3,262
All Private Economy	5,787	4,452

Source "U.S. Income and Output."

If labor were being drawn into these sectors by expanding demand, one would expect their wages to rise relative to the wages of other sectors.

(2) The behavior of productivity does not suggest that demand pressure in the labor market occurred. The productivity of both services and trade showed little or no growth during the depression, but a healthy increase during the Second World War. In the post-war period, productivity in services grew fairly well until 1955, when a tapering off occurred. Trade productivity revealed a similar pattern.

The war and depression behavior suggests that productivity in this area is related to the available labor supply. Most of the shift in employment towards services and trade took place subsequent

to 1953, a period when the behavior of productivity suggests that the labor market was quite "loose."

(3) An important proportion of employees in services and trade are women. However, the growth of female labor force participation rates showed no tendency to increase in the later part of the postwar period. If women were in fact pulled into the labor force by demand, that demand was not strengthening toward the end of the period.

(4) The number of persons working part time who prefer full-time work has increased relative to the labor force. (See section III–B above.) It is notable that during the 1954–57 expansion, the proportion of the labor force in this category did not decline after 1955, whereas during the preceding boom, declines occurred until the peak level of output was reached. As table 3–10 illustrates, almost all the increase in part-time workers during the postwar period took place in the trade and services sectors. In some other sectors, the percentage of part-time workers actually declined.

TABLE 3–10.—*Ratio of part-time to full-time employees, by industry*

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Construction	28.9	34.8	38.9	25.7	17.6	23.1	42.9	25.9	25.8	26.0	27.8
Manufacturing	18.0	25.2	22.6	16.0	10.4	13.2	27.5	12.0	12.5	12.6	15.6
Durable	16.8	23.6	20.4	12.5	7.6	11.3	24.7	9.0	9.3	9.9	13.7
Nondurable	19.4	26.9	25.1	20.4	14.1	15.9	31.3	16.2	17.3	16.4	18.1
Transport	9.5	12.2	14.6	10.3	6.7	9.5	18.6	9.3	9.3	10.2	11.1
Trade	20.9	22.0	22.9	20.6	18.9	21.5	28.8	22.3	24.4	25.6	26.5
Service	26.1	35.7	36.8	34.3	28.3	31.0	40.5	31.9	34.1	34.0	34.8
Other	16.0	27.0	21.4	15.4	10.5	16.4	28.9	15.0	14.7	14.6	14.8

Source: Bureau of Census.

2. Services and trade as a sponge for labor

It is clear that the hypothesis that demand pulled labor into services cannot explain most of the actual movement. Some other explanation must be found. Since the shift of labor into services accelerated when the growth of total demand tapered off, the explanation of that shift may be the slow growth of total demand itself.

If the rate of growth of aggregate demand is not sufficiently high to keep the growing labor force fully employed in high pay, high productivity occupations, labor may tend to be absorbed by the services and trade sectors. Since these sectors have low output per man-hour, a higher level of employment can be supported by a given level of aggregate demand if a greater proportion of people are employed in these sectors.

To put the matter simply, the rapid growth of employment in services and trade is a result of the lack of jobs elsewhere. People who

would prefer to work in the high-wage and high-productivity sectors of the economy were forced to seek jobs in the low-wage areas, because the rate of growth of demand for goods was not strong enough. These low-wage areas could supply the needed jobs by increasing their underutilization of labor in the form of a slowed productivity advance. The shift also helps to perpetuate itself since it slows down the rate of change of productivity and therefore the rate of increase of real income.

3. Meaning of shift for growth

If the sponge theory of the shift of labor to services is basically correct, then a type of underemployment exists in our country. Demand is not growing at a sufficiently fast rate to absorb the increasing labor force in highly productive occupations, so it is absorbed by the low-wage, low-labor utilization sectors.

Since services have low and slowly growing productivity, a relative shift of labor into this sector has critical implications for economic growth. This impact will become cumulative since the growth of output per man-hour in the high-wage sectors is adversely affected if output does not grow fast enough, and since productivity growth in the services industries themselves tends to slow down if labor is abundantly available to them.

B. THE DECLINE IN THE GROWTH OF AGGREGATE PRODUCTIVITY

We have demonstrated the widespread underutilization of labor and capital in the period since Korea.

TABLE 3–11.—*Comparison of growth in private gross national product with real product per man-hour*

[Average annual percentage rates]

	Total private economy	
	Real gross product per man-hour	Real gross product
1947–53	3.7	4.4
1953–57	2.4	2.7
1947–57	3.2	3.7

Source: Computed from data from Bureau of Labor Statistics and Department of Commerce.

Table 3–11 reveals that more of the decline in the growth of real gross national product can be attributed to the decline in the growth of real gross national product per man-hour rather than to a decline in the growth of man-hours. The increased underutiliza-

tion of labor was offset, to some extent, by the more rapid growth of the labor force. Had aggregate productivity grown at the same rate after Korea as before, the annual average growth of real product over the 1947–57 period would have been 4.3 percent instead of 3.8 percent. Had such a rate of growth of productivity been coupled with the high 1953 utilization rate for labor at the end of the period, our postwar growth would have been even higher. It is clear that an explanation of the slowdown of productivity growth is an essential part of an analysis of the slowdown in the growth of real output.

This declining growth of total productivity can be separated into: (1) the effect of labor shifting between sectors and (2) the effect of changing productivity within sectors.

(1) *The effect of labor shifting between sectors.*—Two adverse developments occurred during the 1953–57 period: (a) After 1953, the shift toward low-wage and low-productivity services and trade accelerated. (b) The outflow of labor from agriculture declined dramatically. Whereas, in the previous period 1.2 million people had left agriculture, only 0.4 million left between 1953 and 1957. This slowing down of the outflow of people from agriculture was due to governmental policies which encouraged people to remain on the farm (and the absence of policies encouraging them to leave), and the insufficient pull of suitable jobs elsewhere in the economy.

Both of these developments tended, of course, to slow the rate of increase in aggregate productivity. The increased absorption of labor by the low-wage services and trade sectors meant that a larger and larger proportion of the labor force was switching to an area where real product per man-hour was below average. The slowing of the movement of labor out of agriculture signified that fewer workers were leaving an area of below average productivity.

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(2) *The behavior of productivity within sectors.*—Among the most reliable productivity statistics today available are the Bureau of Labor Statistics estimates of output per man-hour in agriculture, manufacturing, and other industries. They form a solid starting point for the analysis of changes in sectoral productivity.

TABLE 3–12.—*Indexes of real product per man-hour for private economy, 1947–58*

[1947–49=100]

Year	Total	Agriculture	Nonagricultural industries		
			Total	Manufacturing	Nonmanufacturing
1947	96.7	90.5	97.5	97.6	97.3
1948	100.2	107.1	99.4	100.1	98.9
1949	103.1	102.2	103.3	102.6	103.9
1950	110.4	116.2	108.8	109.5	108.4
1951	113.2	114.6	110.6	111.2	110.0
1952	115.7	124.5	112.0	113.0	111.3
1953	120.4	138.6	115.1	118.3	112.8
1954	122.6	148.3	116.9	117.4	116.7
1955	128.0	153.3	121.9	125.6	120.0
1956	128.8	160.7	121.8	127.1	119.1
1957	132.3	168.6	124.4	127.7	122.9
1958	133.4	190.1	124.3	(1)	(1)

[1] Not available.

Source: Bureau of Labor Statistics.

TABLE 3–13.—*Growth of real product per man-hour; sectors of the private economy, 1947–57*

[Average annual percentage rates]

Period	Agriculture	Nonagriculture		
		Total	Manufacturing	Nonmanufacturing
1947–53	6.5	2.8	3.3	2.5
1953–57	6.0	2.0	1.9	2.2
1947–57	6.2	2.5	2.7	2.4

Source: Data from table 3–12. Rates are compound interest computed from base and terminal year values. For agriculture, base and terminal values are averages of the years 1947–49, 1952–54, and 1956–58. This was done because of the highly volitile nature of the productivity index.

Table 3–13 reveals that the growth rate of other nonagricultural productivity only diminished slightly after 1953. There occurred little change in the rate of growth of agricultural productivity.

By far the majority of the within-sector productivity decline occurred in the manufacturing sector. Real value added per man-hour in manufacturing grew only 1.9 percent per year from 1953–57, whereas it had grown at 3.3 percent per year from 1947 to 1953.

An analysis of output and productivity for major 2-digit industrial groups within manufacturing and mining reveals that every industry which experienced a slower growth of productivity following 1953 also experienced a slowdown of the rate of growth of its output. Of the 16 inductries which had faster productivity growth in the more recent period, 9 also had faster output growth.[6]

Within manufacturing, comparisons of output and productivity for each year during the postwar period reveal that changes in productivity are positively associated with changes in the output. Output per man-hour in manufacturing evidently grew at a slower rate after 1953 because the output of many industries did not expand so rapidly.

The association of productivity gain with the rate of growth of output within manufacturing appears to be clear. Had manufacturing output grown more rapidly in the 1953–57 period, productivity in manufacturing would, no doubt, have risen faster than it did.

Within the nonmanufacturing, nonfarm sector, with the exception of services and trade, productivity appeared to grow at about the same rate during both periods.[7] The evidence is as follows:

(1) Public utilities and communications: The rate of increase in productivity was extremely high over the whole postwar period, and was higher after the Korean war. Each of these sectors also experienced extremely high rates of output growth.

(2) Transportation: Railways experienced an acceleration in the rate of growth of productivity after 1953, together with some improvement in output (whereas output fell between 1947 and 1953 it remained unchanged between 1953 and 1957). Other transportation experienced a decline in the growth of productivity after 1953.

(3) Construction: No evident change in the growth rate of productivity occurred.

(4) Mining: Some decline in the rate of growth of productivity occurred. Changes in the rate of growth of productivity for 2 digit mining industries were positively associated with changes in their output growth.

Taken as a group, productivity in these sectors grew about the same during the post-Korean war period as before.

The slight decline in the growth of total productivity within the nonfarm nonmanufacturing sector was primarily a result of: (1) the increased importance of services and trade (2) the slowdown of services and trade productivity growth, both of which were discussed above.

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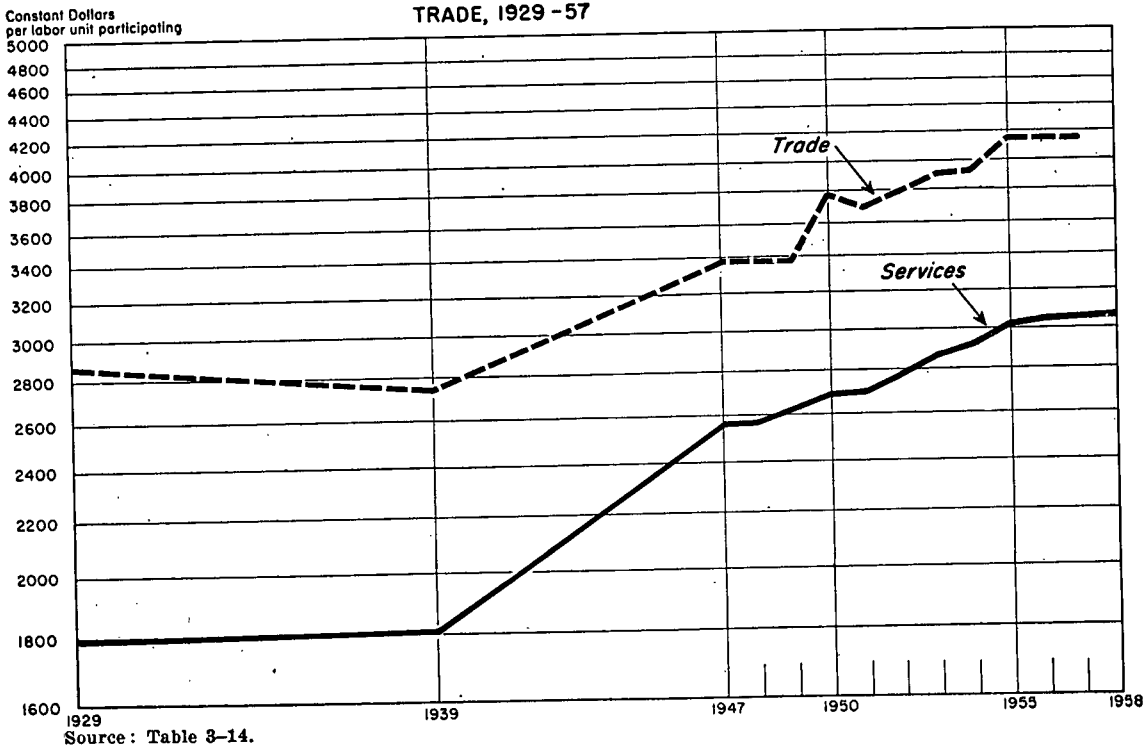
[6] The productivity estimates for manufacturing and mining industries are based on Federal Reserve Output Indexes with 1954 value added weights.

[7] Productivity estimates for railways are those of B.L.S. Estimates for communications, public utilities, other transportation, and construction are based on the real product estimates computed by Charles Schultze.

CHART 3–7

NATIONAL INCOME PER PERSON PARTICIPATING IN PRODUCTION
IN CONSTANT (1947) DOLLARS
SERVICES, 1929-58 (Selected Years)
TRADE, 1929-57



Source: Table 3–14.

TABLE 3–14.—*Services and trade: National income originating per person participating in production, 1929–58*

[In 1947 dollars]

	Services	Trade		Services	Trade		Services	Trade
1929	$1,799	$2,863	1950	$2,697	$3,790	1955	$3,002	$4,138
1939	1,803	2,749	1951	2,701	3,704	1956	3,054	4,134
1947	2,562	3,394	1952	2,779	3,795	1957	3,063	4,146
1948	2,570	3,392	1953	2,856	3,913	1958	3,077	----------
1949	2,622	3,398	1954	2,903	3,929			

NOTE.—Net National Income originating in services was deflated using the "Other Services" deflator for consumption expenditure except for 1929 and 1939, where the total consumer services deflator was used; in trade, the Schultze real value added index was used for the 1947–57 estimates. The 1929 and 1939 estimates were derived from Barger's indexes of productivity in distribution. The labor input figure in trade was adjusted to take account of the reduction average weekly hours which took place during the period. This served to raise the productivity estimate.

Source: U.S. Income and Output; forthcoming paper by Charles Schultze; Harold Barger, "Distribution's Place in the American Economy," N.B.E.R., 1955.

TABLE 3–15.—*Average annual rates of growth in productivity in service and trade*

[Average annual percentage rate]

Period	Service	Trade
1929–39	Nil	−0.4
1939–47	4.5	2.7
1947–58 [1]	1.7	2.0
1947–53	1.8	2.4
1953–58 [1]	1.5	1.4
1955–58 [1]	0.8	0.1

[1] 1957 for trade.

Source: Compound interest rate computed from base and terminal values. Data from table 4–15.

In addition to the postwar evidence already cited, the conclusion that demand is an important determinant of productivity is supported by three other pieces of evidence:

(*a*) Aggregate productivity grew faster over the long period of strong demand 1942–53 than over the long period of weak demand 1925–42.[8]

(*b*) Fabricant has reported that industries with rapid long-run output growth tended to have rapid long-run productivity growth.[9]

(c) Kuh has demonstrated that increases in output require less than proportionate increases in man-hours, especially near the end of a business expansion.[10]

C. SUMMARY OF ANALYSIS OF PRODUCTIVITY GROWTH

(1) After 1953 changes in the flow of labor between sectors dampened the rate of growth of productivity. The outflow of labor from agriculture slowed down, and the absorption of labor by services and trade accelerated.

(2) The within-sector decline in productivity was concentrated in those sectors of manufacturing where the data suggest that the slow-

[8] Between 1929 and 1942, gross output per man-hour rose 2.5 percent per year; between 1942 and 1953, it rose 3.1 percent per year. Computed from table A in Solomon Fabricant, "Basic Facts on Productivity Change," NBER Occasional Paper 63, 1959. (Reprinted in Employment Growth and Price Levels Hearings, pt. 2.)

[9] Solomon Fabricant, "Basic Facts on Productivity Change." Hearings, pt. 2, p. 313.

[10] Edwin Kuh, forthcoming study paper for Joint Economic Committee, Study of Employment, Growth, and Price Levels.

down of output played a key role. The other sectors of the economy showed offsetting patterns—the increasing growth of productivity in communications, public utilities, and railways being counterbalanced by declining growth in other transportation, mining, services and trade.

(3) Though it is difficult to assign a precise quantitative estimate of the role played by demand in the decrease in the growth rate of aggregate productivity, it seems clear that the slowing of demand had a strong impact on:

(*a*) The movement of labor into services and trade,

(*b*) The declining growth of productivity *within* services and trade, and

(*c*) The slowed growth and productivity in several manufacturing industries.

Furthermore, demand conditions may have had some adverse influence upon the outflow of labor from agriculture.

It is clear that productivity would have grown at a faster rate, had demand grown more.

VI. Summary and Policy Implications

A. SUMMARY

1. The growth rate of output in the postwar period tapered off substantially after 1953. Not only was recent history marred by two recessions, but also there occurred a period of slow growth during prosperity.

2. This low growth during prosperity was due primarily to the slowing down of the rate of growth of demand, particularly the demand for goods.

3. The declines in residental construction and the fluctuations and decline in Federal Government purchases were the primary causes of the trouble in the goods sectors. The resulting decline in disposable income, by eroding the growth of consumers' purchasing power, further retarded the demand for hard goods.

4. That the supply of labor and capital did not limit growth during this period is revealed by:

(*a*) Higher unemployment rates, even during the prosperity phase 1956–57.

(*b*) The higher percentage of the labor force which was working part time.

(*c*) The low and falling rates of capital utilization.

(*d*) The increasing absorption of labor by the low-productivity sectors of services and trade.

5. The record of productivity in the postwar period was influenced by:

(*a*) The shift of labor into services and trade which tended to slow down the rate of increase of productivity in those sectors.

(b) The slackness of demand for goods which held productivity advances down in the goods sectors, because utilization rates were lower than normal for the expansion phase of the business cycle.

6. Had these factors not operated, the growth rate of output after 1953 would have been substantially higher.

B. POLICY IMPLICATIONS

The blame must fall primarily upon the behavior of the Federal Government. The private sector behaved optimistically, but its decisions were made unwise in hindsight by the unduly restrictive behavior of the Federal Government. Whereas private industry was making large investments during 1956 and 1957 in order to meet high anticipated levels of output, these anticipations were overly optimistic primarily because the Government stepped too hard on the fiscal and monetary brakes.

Had the Government's policies been aimed at maintaining the growth of total demand, our growth rate over the 1953–59 period would have compared favorably with the early postwar growth rate. It is unlikely that such a set of policies would have involved much additional inflation. Some intensification of the capital goods inflation and the inflation in certain areas of services might have occurred, but this would have been offset, to some extent, by the increases in output per man-hour that would have resulted from the stimulation of demand. A considerable amount of growth was sacrificed in order to prevent inflation; and the policy tools that were employed were not capable of containing inflation. But these matters are discussed in detail elsewhere in this report.

CHAPTER 4. POTENTIAL GROWTH [1]

The preceding chapters have reviewed the record of our past economic growth and the factors underlying it, both for the longer sweep of many decades and for the immediate past few years. In the current chapter, attention turns to the future. How fast could the American economy's output grow over the next decade or two if we realize the full production potential for growth which is inherent in the structure of the economy? What are the implications for policy of different assumptions as to the underlying factors influencing our economic growth? What range of possibilities can we reasonably contemplate as a basis for discussion of the issues of public and private economic policy?

At the outset it must be recognized that the further ahead we attempt to project our potential for economic growth the more uncertain are the resulting estimates and the less likely it is that we can really effectively apply the results. On the other hand, too short a period would not allow time for underlying forces to work out their longer term consequences. After a review of the various considerations it was decided that the year 1975 would be the target date for the most remote of these projections. It is to be understood that the projections for the year 1975 are an average of expectations for several years centered at 1975.

THE DETERMINANTS OF POTENTIAL ECONOMIC GROWTH

In order to develop estimates of the growth potential of the American economy, an analysis was made of the historical record and of the major output-determining factors, including changes in the size of the labor force, fluctuations in the ratio of employment to the labor force, changes in hours of work, trends in productivity, the effect of the capital stock and of its average age, and changes in the composition of demand. The full analysis, supporting data, and other technical materials will be found in a separate study paper "The Potential Economic Growth of the United States." [2]

As has been made clear in a previous chapter, actual output is the result of a variety of forces affecting both demand and supply over any particular period. The actual growth in output will be determined by the growth of demand or the growth of supply according to which is the smaller and hence the limiting factor for each period of time. But we are concerned here not with what is actually the past growth in output or the future rate of growth, but rather with what

[1] Main responsibility for the drafting of this chapter rested with James W. Knowles. He was assisted by Charles B. Warden, Jr.

[2] The study paper, "The Potential Economic Growth of the United States," by James W. Knowles, will be published separately at a future date.

has been the growth in the economy's potential output from the supply side, whether or not demand has been sufficient to utilize this capacity. Therefore, we ignore, in large part, the demand side of the problem. Even with this simplification it is obvious that there are a large number of factors to be considered, including: the rate and character of scientific progress; the proportion of output which is plowed back into capital assets; the average age of our capital assets and, hence, the extent to which the current capital stock embodies the most up-to-date technology; rising levels of educational attainment and health; the ratio of the labor force to the population; changes in average number of hours worked per year per person employed; changes in the average degree of skill exhibited in managing productive activities; the degree of stimulation of advancement in efficiency from competition at home and abroad; and a wide variety of considerations concerning the social and political environment in which the economy operates. In addition to all these factors, consideration should be given to the availability of natural resources and their average quality. Some of these factors cannot be measured directly at the present time and some cannot be measured at all. In the historical analysis, covering the years 1909 to 1958, it has been assumed that we can represent all of their influences on our potential economic growth by the following measurable inputs.

(*1*) *Labor*

The labor input has been measured in terms of total man-hours of labor available for productive activity in the economy, including governmental functions. It was arrived at by a study of trends in rates of participation in the labor force of men and women in various age groups, and by a study of trends in the average annual hours worked by all employed. It was assumed for the historical period (1909–58) that about 4 percent of the labor force was unemployed when the economy was operating at its potential output. Other percentages could have been assumed without changing the basic analysis except as to the relative level of the series. In the analysis there was utilized, also, an actual labor input which represented the product of the total number of persons employed multiplied by actual annual average hours worked.[3]

The ratio of the actual labor input to the potential labor input measured cyclical variations in inputs while the other factors in the analysis carried the burden of explaining long-term or secular movements in potential output. Therefore, in the analysis both this ratio of actual to potential labor input and the potential labor input itself were used.

(*2*) *The stock of capital*

To measure the supply of capital services available for use in production an estimate of the gross capital stock of the private economy prepared by Dr. George Terborgh was utilized.[4]

[3] For employment and hours of work, the figures used were those prepared by Dr. John Kendrick in his study for the National Bureau of Economic Research entitled "Productivity Trends in the United States" (in preparation), a summary of which was presented by Dr. Solomon Fabricant in his statement before the Joint Economic Committee at hearings in connection with the Study of Employment, Growth, and Price Levels (pt. 2, "Historical and Comparative Rates of Production, Productivity, and Prices," p. 281).

[4] The estimate of capital stock, prepared by Dr. Terborgh, is that underlying Capital Goods Review, No. 39, September 1959, published by Machinery and Allied Products Institute, Washington, D.C.

In this series the gross capital stock represents the value, in constant dollars, of all capital assets surviving from past installations at any particular point in time. It is, therefore, gross of depreciation. It includes private plant and equipment in agriculture, mining, manufacturing, commercial, and similar types of activities, but specifically excludes residential structures, inventories, and all Government assets.

(3) The age of capital

To measure the degree to which the existing capital stock incorporates available technology, it was decided to use as one variable in the analysis a computation of the average age of surviving capital assets included in the above estimate of capital stock. This also was the work of Dr. Terborgh.[5]

(4) All other variables

Because there were a number of important influences which could not be measured directly, the analysis included a time trend having a constant rate of increase per year. This time trend is a proxy or stand-in for the many other variables mentioned at the outset, such as changes in managerial skill, technological progress, improvements in the health and education of the labor force, and so forth. It was found that there was no basis for varying this rate from period to period.

These measures of the growth-determining factors were utilized to frame a number of alternative analyses of economic growth. The final formulation expresses changes in potential output as being the result of changes in the inputs of potential man-hours of labor, in the ratio of the stock of capital to this potential labor input, in the average age of the capital stock, and in time as a proxy for all other influences.

The formulation shows that potential output grows directly with increases in available man-hours, increases in the ratio of capital to labor, and the passage of time; while an increase in the average age of capital assets, on the other hand, tends to reduce potential output, and a fall in the average age tends to increase potential output.

Variation in actual output from the potential are explained by the cyclical variable, the ratio of actual labor hours to potential labor hours. Some of the variations are the result also of variations in the composition of demand and of random errors in the statistical data.

Without going into the technical computations and formulas involved, which will be given in the forthcoming study paper already cited, the relative importance of the various factors can be indicated as follows:

(1) The increase in the potential man-hours, or potential labor input, accounts for between one-quarter and one-third of the change in potential output.

(2) The change in the ratio of the capital stock to the potential labor input accounts for between one-eighth and one-sixth of the change in potential output.

[5] See Capital Goods Review, No. 40, Machinery and Allied Products Institute, December 1959. The average age refers to a weighted combination of the Terborgh series for plant and for equipment.

(3) The variation in the age of the capital stock accounts for between 2 and 4 percent of the variation in potential output.

(4) The many factors represented by the time trend, as a proxy, account for between one-half and two-thirds of the total annual increase in potential output.

(5) The other changes in output were determined by changes in the mix or composition of demand as between industries with different rates of productivity and by variations in the ratio of actual man-hours to potential man-hours.

THE POTENTIAL ECONOMIC GROWTH TO 1975

The historical analysis was employed to prepare projections of future potential growth, given trends in population, as well as alternative assumptions about participation in the labor force, unemployment, hours of work, and the average level of prosperity. These projections, which, of course, are subject to some error, are designed to indicate a realistic range of potential growth rates that our economy might experience over the next decade. Table 4–1 summarizes these projections.

Three alternative projections of the rate of growth of potential output are given. Projection A assumes that our economic affairs are managed to keep a high level of prosperity, that unemployment is held to an average of 3 percent by the mid-1970's, that job opportunities are sufficiently abundant to attract a relatively large proportion of the population into the labor force, that the rate of capital accumulation proceeds at a rate typical of past periods of prosperity, and that the composition of output follows the historical patterns prevalent in past periods of strong growth. This projected rate of growth is 4.6 percent, measured from current potential output levels, and 5.2 percent, measured from the preliminary estimate of 1959's actual output. It exceeds the average rate over the past 50 years.

Projection B assumes somewhat more modest success in maintaining continuous maximum employment, an average unemployment of about 4 percent as in the recent past, continuation of recent trends in participation rates of the population in the labor force, a rate of capital accumulation typical of similar past periods marked by occasional interruptions to growth, and a corresponding mix of demand. The projected rate of growth on this basis is 4.0 percent per year, measured from the output potential for 1959, or 4.7 percent per year, measured from the preliminary estimate of the actual output for 1959.

Projection C assumes continuation of public and private policies which in recent years have been accompanied by fairly frequent interruptions to growth, continued inadequate mobility of labor and capital, average unemployment of 4½ to 5 percent, slower rate of growth in the labor force as participation rates reflect the lower level of job opportunities and a lower rate of capital accumulation as industries are constantly faced with a threat of excess capacity at higher investment rates. The projected rate of growth in output is 3.5 percent per year, measured from the output potential for 1959 or 4.2 percent per year, measured from the preliminary estimate of the actual output for 1959. This rate is significantly higher than the 50-year average of about 3 percent per year achieved in the first half of this century.

The acceleration is explained by the fact that even this, the lowest of our projections, assumes that there will be no deep or prolonged depression such as interrupted growth during the preceding 50 years, namely, between 1929 and 1941. During the decade of the 1930's the ratio of capital to labor hardly changed while the average age of capital stock rose rapidly and these developments significantly lowered the average rate of growth over the past half century.

TABLE 4-1.—*Selected indicators of economic growth potentials, 1959-75*

[Percent increase per year] [1]

Indicator	Projected potential growth rates, 1959-75		
	A	B	C
Total labor force	1.9	1.7	1.5
Total employment, including the Armed Forces	[2] 1.9	[3] 1.7	[4] 1.5
Average annual hours of work	−.4	−.5	−.6
Total man-hours	1.6	1.2	.9
Stock of private plant and equipment in constant prices	3.2	2.7	2.2
Average age of capital stock	−.2	−.1	0
Gross national product, in constant prices:			
From 1959, actual (preliminary estimate)	5.6	4.7	4.2
From 1959 potential	4.6	4.0	3.5

[1] Computed by a compound interest formula, using the initial and terminal years.
[2] Assumes 97 percent of the labor force employed in 1975.
[3] Assumes 96 percent of the labor force employed in 1975.
[4] Assumes 95 percent of the labor force employed in 1975.

These projections have the following implications:

(1) Without changing our economic system in any fundamental way, that is, without instituting elaborate controls or having the Government impose a pattern of consumption, and without Government-imposed, forced high rates of capital accumulation, our economy can grow at a rate as high as 4.6 percent per year. On the other hand, it will prove extremely difficult to achieve rates greater than this within our economic system.

(2) If we avoid stumbling into real depression, the rate of growth may be only as low as 3.5 percent per year, higher than the 50-year average of 3 percent per year which was achieved despite a prolonged interruption in the 1930's. Thus, there is a considerable range of possible growth rates, even within a range of assumptions which exclude depression and a forced-draft economy.

(3) There is a moderate inherent tendency for the rate of growth of the economy to rise in the coming decade if unemployment can be held on the average to about 4 percent, or less, of the civilian labor force. This is due to the increase in the rate of growth in the labor force and to the fact that the rate of increase in the capital stock and the decline in the average age of the capital stock would not be restricted as in the past by long periods of low investment such as occur in periods of prolonged depression. So long as recessions are neither too frequent nor deep, the rate of accumulation of capital can be quite favorable to growth.

(4) Our economic growth is within our own control. If the Government pursues growth-facilitating policies, the economy will expand near the upper limit of the range. If, on the other hand, the Government, as a matter of policy, sacrifices economic growth to the pursuit of other objectives, our economy will continue to perform

sluggishly, will add less to our capacity, and our potential growth will tend to be near the lower limit of the above range or even below.

(5) In recent years, including currently, the output of the economy has been well below its potential and probably would be in the 1970's under the assumptions of the C projection.

CHAPTER 5. THE POSTWAR INFLATION [1]

The Historical Record

Since the cessation of hostilities in August of 1945 and the release of most wartime wage and price controls in mid-1946, the United States has experienced a very considerable degree of inflation, although its severity has varied greatly from some subperiods to others. All three of the general price indexes which measure price movements in broad sectors of the economy—the Consumer Price Index (CPI), the Wholesale Price Index (WPI), and the gross national product (GNP) implicit price deflator—have increased by approximately the same amount since 1947, after the immediate sharp postwar price rise had slowed. The CPI, which is designed to measure retail price trends of goods and services purchased by city worker families, rose 31 percent during this period. The WPI, which measures price movements of goods at the primary market level in several sectors of the economy, increased 24 percent. Finally, the GNP deflator, which most nearly approaches a measure of the change in the overall price level for all final purchases of goods and services in the economy, went up 35 percent in this time. The movement of each of these indexes since July 1945 is presented in table 5–1.

[1] Main reponsibility for the drafting of this chapter rested with Harold M. Levinson. He was assisted by Stanley Heckman and Hamilton Gewehr; Thomas Wilson provided extensive help in the statistical computations.

TABLE 5–1.—*Changes in the price level, 1945–59*

[1947-49=100]

Date	Consumer price index	Wholesale price index	GNP [1] deflator
1945—July	77.5	68.9	[2]
1946—January	77.8	69.6	[2]
July	84.6	81.1	
1947—January	91.9	92.3	93.8
July	95.0	95.3	96.2
1948—January	101.3	104.5	100.6
July	104.3	105.5	103.2
1949—January	102.7	102.8	102.9
July	101.4	98.0	101.2
1950—January	100.6	97.7	101.4
July	102.9	103.0	104.1
1951—January	108.6	115.0	109.9
July	110.9	114.2	111.4
1952—January	113.1	113.0	112.7
July	114.1	111.8	113.7
1953—January	113.9	109.9	114.1
July	114.7	110.9	114.6
1954—January	115.2	110.9	115.4
July	115.2	110.4	115.5
1955—January	114.3	110.1	116.1
July	114.7	110.5	117.3
1956—January	114.6	111.9	119.0
July	117.0	114.0	121.5
1957—January	118.2	116.9	123.7
July	120.8	118.2	126.0
1958—January	122.3	118.9	127.3
July	123.9	119.2	127.9
1959—January	123.8	119.5	129.0
July	124.9	119.5	[2]
September	125.2	119.7	[2]
Percent change:			
July 1946 to July 1948	+23.3	+30.1	[2]
July 1948 to July 1950	−1.3	−2.4	+0.9
July 1950 to July 1953	+11.5	+7.7	+10.1
July 1953 to July 1955	0	−0.4	+2.4
July 1955 to July 1959	+8.9	+8.1	[3] +10.0

[1] 1st and 3d quarter figures.
[2] Not available.
[3] Based on January 1959.

Sources: Bureau of Labor Statistics and Department of Commerce.

A further breakdown of these indexes into major subperiods and by important components clearly indicates two other important aspects of the postwar inflation. First, the greatest proportion of these price rises occurred during the post-World War II boom from 1946 to 1948 and the Korean War period from mid-1950 to 1953. Taken together, they account for over 75 percent of the total inflation. A third period, often called one of creeping inflation, beginning in 1955 and continuing through 1958, accounted for an additional 25 percent.

Second, the greatest proportion of the postwar inflation has been increasingly accounted for by exceptionally large price increases in a relatively few, but quite important, sectors of the economy. In the nature of the case, of course, some sectors will always rise more than others, particularly over time. Nevertheless, an understanding of the reasons underlying the diversified experience we have had, particularly in those areas where inflation has been most severe, can help to provide considerable insight into the basic causal forces involved.

Some of the most important divergences among sectors can be seen in the summary figures in table 5–2. The services sector, which carries considerable weight in both the CPI and GNP deflator, has contributed a large proportion of the increases in both of these indexes, particularly the CPI. The price of new construction, which enters directly

into the GNP deflator, has risen almost 50 percent since 1947, as contrasted to 33 percent for the index as a whole. The residential component of construction also indirectly affects the CPI through "rent" and "home purchase" costs, which are included as part of consumer expenses. Equally important, the price of nonresidential construction, which has risen 56 percent since 1947, ultimately affects the prices of almost all other goods through its effects on the costs of factories, stores, hospitals, etc. The "Government GNP" index, which enters into the GNP deflator as a measure of the price of Government services, has also risen by over 70 percent. Taken together, therefore, these three sectors—services, construction, and Government—accounted for a very large share of the rise in the CPI and GNP indexes.

TABLE 5–2.—*Percentage change in prices in selected sectors, 1947–58*

Price index and sector	Relative importance in index (percent)	Percent change, 1947–58
Consumer Price Index:	*Base=December 1952*	
All items	100.0	+29.3
All services	32.1	+50.7
Wholesale Price Index:	*Base=1954*	
All commodities	100.0	+23.7
Textile products	7.5	−6.6
Farm products	10.7	−5.1
Machinery and motive products	19.3	+61.9
Metals and metal products	13.5	+64.7
GNP deflator:	*Base=1956*	
Entire GNP	100.0	+33.4
Producers' durable equipment	6.4	+55.0
Government GNP (services)	8.2	+71.9
New private construction	8.5	+48.4
Residential nonfarm	4.2	+41.7
Other	4.3	+55.6
Personal consumption:		
Services	23.8	+42.1
Nondurable goods	31.3	+19.5
Durable goods	9.2	+19.0

Sources: Bureau of Labor Statistics and Department of Commerce.

The same type of extreme divergence is present among WPI groups as well, which range from a decline of 5 and 7 percent in farm and textile products to a rise of 62 and 65 percent in "machinery and motive products" and "metals and metal products," respectively, from 1947 to 1958. The two latter groups not only account for almost one-third of the direct weights in the WPI, but also have a very considerable immediate impact on the prices of other goods which use steel and other metal or metal parts, and a longer run impact on other prices through their effects on costs of machinery and equipment. These two sectors also account for a large part of the 55-percent increase in the "producers' durable equipment" index in the GNP deflator. It is clear, therefore, that any analysis of the inflationary process must recognize the sectoral nature of the process and direct its attention to these sectors, within the context of conditions in the economy as a whole.

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It is also helpful in evaluating the significance of the postwar inflation to view these developments in the broader framework of a longer run time period. There is certainly no gainsaying the fact that a more than doubling of the price level over the past 20 years cannot be lightly regarded. Nevertheless, as chart 5–1 indicates, the American experience from 1939 to 1953 was by no means exceptional for a period which included two wars and only a short interwar period; similar price movements have been associated with the dislocations and stresses of war and postwar years throughout our history.

It is for this reason that we may view the sharp price rises of 1946–48 and 1950–53 with at least some equanimity, though this is not to say that they were in any sense desirable. The third period of so-called "creeping" inflation, however, beginning in mid-1955 and continuing to the present time (October 1959), has caused much more concern because of the lack of any exceptional stress on the economy, and indeed, because the price indexes have continued to rise even in the face of relatively high unemployment and very low increases in output. It is this period more than any other which has posed the basic questions with which the present report is concerned.

Some Problems of the Price Indexes

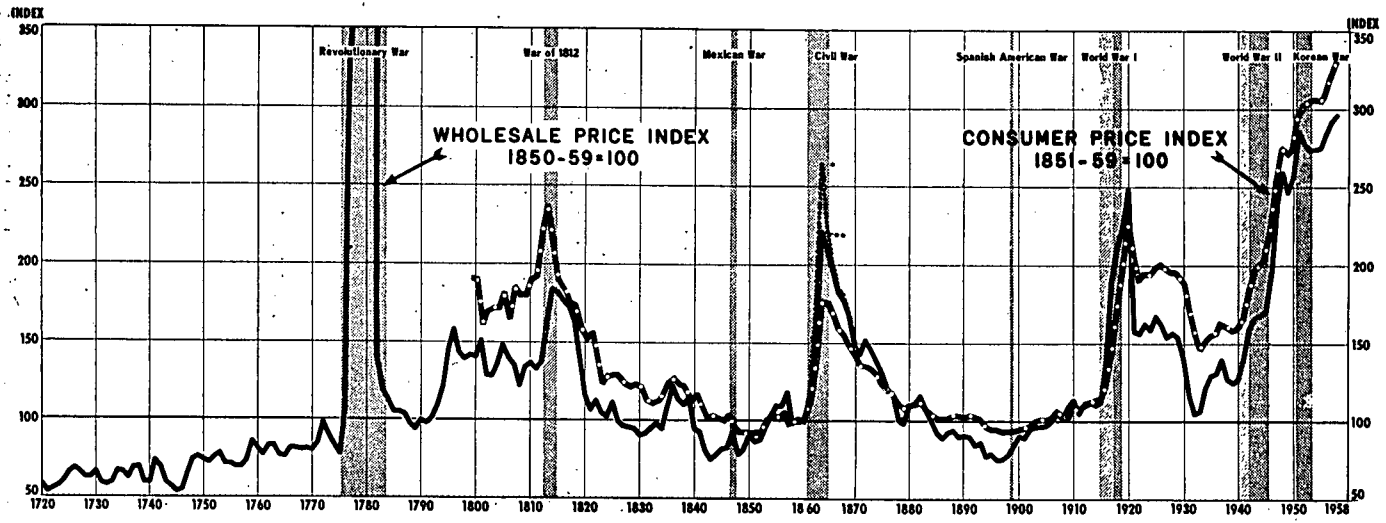
Changes in the level of prices, as measured by the three major indexes mentioned above, have now become an important basis upon which vital Government and private policy decisions are made. Monetary policy aimed at price stabilization may be considerably affected by monthly movements in the CPI or WPI; similarly, wages affecting millions of employees are adjusted regularly on the basis of changes in the "cost of living," as reflected in the CPI, and many business purchase contracts, particularly for fixed capital assets, include provisions for escalation in line with the WPI or one of its segments. Society in general, as consumers, savers, or producers, make decisions based upon past and anticipated movements in the price level. The nature of these decisions themselves, based upon past changes in price indexes, may have a profound effect on the future movements in prices.

A brief evaluation of the nature and limitations of these indexes is therefore necessary. The Consumer Price Index measures changes in the prices of a particular "market basket" of goods and services bought at retail by city wage earners and clerical workers, with the composition of that market basket determined by consumer spending patterns in 1951–52. By definition, therefore, it does not presume to represent all consuming units, though there is no obvious reason to believe it understates or overstates the movement of consumer prices to other persons in the economy—self-employed, nonurban, or extreme income groups.

The CPI, however, suffers from several important deficiencies, most of which are extremely difficult to deal with by precise statistical techniques. Perhaps the most serious problem is that of dealing with changes in quality, particularly in the services sector, which represents almost one-third of the total CPI. Since the basic unit of measurement is a fixed transaction—e.g., the price of a hospital room per day—no recognition is given to the fact that the quality of the good or

CHART 5-1

WHOLESALE PRICE INDEX, 1720-1958 AND CONSUMER PRICE INDEX, 1800-1958



* Higher index Cotton at prewar importance.
** Lower index Cotton reduced in importance.

Source: Joint Economic Committee, Study of Employment, Growth, and Price Levels. Hearings, Part 2- Historical and Comparative Rates of Production, Productivity, and Prices. (April, 1959) p. 394.

service may be changed. Thus, for example, the far greater effectiveness of modern diagnosis and treatment may effect a cure with many fewer hospital days. In the case of goods, changes in styling, improvements in design and durability, greater ease of operation, etc., may all occur with no change in price. On the presumption that over time, the quality of most goods and services will improve, an upward bias is introduced into the index—that is, it tends to overstate the actual cost to the consumer of (say) recovering from a sickness. Other examples come readily to mind. A particular tire at a constant price may yield a lower price per mile because of improvements in the quality of rubber; a man's suit at a constant price may yield longer wear because of improvements in the fabric; etc.

A similar problem arises from the use of fixed weights and the failure to take account of the introduction of new products which may be close substitutes for older and higher priced goods.[2] On both counts, current changes in the prices of a given "market basket" of goods tends to overstate current changes in the cost of living, or in the costs to the consumer of acquiring an equivalent level of satisfaction. Perhaps the most widely known situation of this type has occurred within the past year with the introduction of the smaller car by American automobile producers. For many uses, the new car represents an adequate and cheaper mode of transportation; its very introduction, in fact, was a reflection of consumer preferences for a more economical vehicle. Yet this important deflationary development finds no reflection in the current Consumer Price Index, even after the prices of these vehicles are introduced into the index under present techniques.

The Wholesale Price Index is subject to the same general qualifications, though it is designed to measure price changes for commodities as they enter markets at various levels in the productive process. Thus, for example, the price of steel enters into the index as a primary metal; it may affect the index again as part of the price of a fabricated metal part; and yet again as part of the price of a refrigerator. In addition, very difficult issues of quality enter into an evaluation of improvements in metals, industrial machinery, and other goods. The index is also based upon constant weights which are revised about every 5 years. On balance, therefore, some degree of upward bias is probably involved.

It will be noted that one important segment of economic activity—Government—is not included in either the CPI or the WPI. Also, the direct costs of all types of construction—residential, commercial, and industrial—are not measured in either index. It is largely for this reason that the GNP deflator, which includes a measure of these sectors as well as those in the CPI and WPI, is considered to be the most widely representative price index available for the economy as a whole. Furthermore, its construction gives some greater recognition to current spending patterns. Nevertheless, most of the individual prices which go to make up the GNP deflator are taken from other sources, including the components of the CPI and WPI, and hence are subject to the qualifications regarding quality, new products, etc., already noted.

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[2] At the time of this writing, the base period used in the CPI was 7 years out of date; a revision is in process, however.

Two additional deficiencies, however, both of which result in an upward bias in the GNP deflator, relate to the Government and the construction components. The price index which is applied to the Government sector in constructing the GNP deflator is essentially a measure of changes in the cost of *inputs*—i.e., in the level of wages and salaries of Government employees—rather than a measure of changes in the price of Government *services rendered.* In other words, the Government price index does not take into account any rise in productivity of Government employees. While the general nature of Government work may be such that increases in productivity are relatively low, there can be no doubt that improvements in data-handling equipment, accounting and office machinery, and others have resulted in very considerable reductions in the price of many services rendered by Government.

The index of "new construction" is also based largely on data provided by private trade organizations whose methods and reliability are not completely known. In an industry like construction, which is characterized by a high degree of specialization among subcontractors and in which many structures are unique, it is extremely difficult to obtain even a proximate measure of changes in productivity. Under these conditions, it is probable that private trade sources rely heavily on changes in wage rates and in building materials costs as a measure of "construction costs." If so, improvements in productivity will not be fully reflected in the construction price index and the GNP deflator is biased upward thereby.

Because of these deficiencies in the data, some observers have suggested that the apparent inflation since 1955 is more statistical than real. It is certainly very probable that the amount of inflation reflected in the indexes is overstated; it seems most unlikely, however, that the increase of 2 to 2½ percent per year since 1955 can be accounted for solely by this means. Furthermore, it must be recognized that at least some counterbalancing biases are probably present in the data; changes in quality are not always in an upward direction, nor are changes in styling always a net benefit to consumers. The problems of inflation, therefore, do not seem to be so easily assumed away.

What is strongly indicated, nevertheless, is that a considerably greater effort should be made by the BLS or other agencies to study and improve the design of these price indexes so that they would more accurately reflect quality and productivity changes and the introduction of new products. This is vitally important in the case of the CPI, which is widely publicized as reflecting changes in the cost of living and which is widely used as a basis for wage adjustments in collective bargaining and elsewhere. For this reason, a relatively small upward bias in the CPI can have secondary effects which in turn create further upward movements in costs and prices. Both the BLS and the Department of Commerce are, of course, fully cognizant of the problems discussed here and have done a great deal to overcome them. Many of the deficiences still remaining, however, could certainly be reduced if funds and personnel were made available. The potential gains would be well worth the added costs.

The Gains and Losses From Inflation

To most individuals and families in society, inflation is much more than a distant and impersonal phenomenon. Its effects can be seen daily in the prices they must pay for the goods and services they buy. The severest effects of inflation, however, are found in the great burden it imposes on those persons whose incomes, for various reasons, do not rise in step with the increasing prices of the things they need. Among the groups who are most hurt are the aged, the sick, and those who must live on fixed incomes or on past savings. In effect, inflation robs these groups of their share in the distribution of income and reduces the real value of their wealth. In the following discussion, therefore, we will be concerned with the effects of the postwar inflation (1) on the distribution of income and (2) on the ownership of wealth.[3]

THE DISTRIBUTION OF INCOME

As a payment for productive services rendered by their labor or their capital, people in society receive incomes in the form of wages, salaries, profits, interest, or rent. These people are then able in turn to utilize these incomes to purchase the goods they need or want from others. In this way, goods and services are continually being exchanged for money, and vice versa, in a never-ending flow.

Clearly, the ability of any individual to command a share of the goods produced will depend upon the price of his productive service (including the quantity of it he can sell) relative to the prices of the goods he wishes to buy. If inflation develops, so that all prices rise, the effects of that inflation on each individual's share of the income produced—i.e., on the distribution of income—will depend upon whether his income (price) rises more or less rapidly than prices he pays. And this, in turn, will depend upon a number of other considerations, including the presence or absence of long-term contractual commitments, the mobility of the suppliers of services, the degree to which custom plays a role in price setting, etc.

On this basis, it has usually been presumed that the major group which benefits from inflation is the profit recipient, since costs tend to lag behind prices during an upswing. Wage earners may also often gain since their payments are more flexible upward than those of fixed-income recipients. At the other extreme are those who earn interest and rent, whose payments are often fixed at contractual levels for long periods of time. Finally, there is a broad group of salaried workers, many of whose incomes are quite "sticky"—teachers, nurses, white-collar groups, etc.—and begin to move upward only with a considerable lag. If the inflation continues for long, however, even the fixed and sticky incomes are renegotiated and the continuing redistribution effects of the inflation tend to become considerably less.

These expectations have been only partially supported by the actual distribution of income trends during the postwar inflation. These trends, of course, may have been affected by other factors than the inflation. The major shifts in income shares since 1946 have been the following:

[3] This discussion draws heavily on several papers written in conjunction with the present study, particularly S. E. Harris, "The Incidence of Inflation: or Who Gets Hurt," Study Paper No. 7; A. H. Conrad, "The Share of Wages and Salaries in Manufacturing Incomes, 1947–56," Study Paper No. 9; and G. L. Bach, "How Important Is Price Stability in Stable Economic Growth," in "The Relationship of Prices to Economic Stability and Growth," a compendium of papers submitted to the Joint Economic Committee, Mar. 31, 1958.

1. The share of national income going to all employees—a heterogeneous category which includes all types of wage and salaried workers, from a corporation's president to its janitor and from a schoolteacher to a lathe operator—rose from about 65 to 69 percent. It is very probable that a portion of this increase was due to a change in the "product-mix," particularly the shift away from agriculture into services (which would shift many people out of the category of unincorporated businessmen into employees). This possibility is given support by the fact that within the manufacturing sector only, the wage and salary share remained quite stable throughout the period. A further portion is explained by the shift in the relative importance of Government employment, since income originating in this sector is 100 percent labor income.

2. By far the greatest loss has been suffered by unincorporated business, whose share was cut by almost 50 percent from 1947 to 1957. Here again, however, a large portion of this decline was a reflection of the drastic reduction in total farm income, due in part to the declining level of agricultural prices and in part to a sharp decline in the number of persons in agriculture.

3. For the entire period, the share of corporate profits before taxes declined very slightly. During the period, however, this share rose at the beginning of each inflationary upswing in 1947–48 and 1950–51. After the initial upsurge, the share again declined. Within the manufacturing sector alone, the corporate share remained quite stable.

In evaluating these trends in corporate profits, it must be noted that they are net of depreciation. If depreciation charges are included in the returns to corporations, their share shows no decline. To the extent that depreciation charges are based on historical rather than replacement costs, however, this share will be overstated.

4. The interest share rose slightly, while the rent share remained about the same. However, both of these shares had already declined very markedly during the war years and even in the late 1930's, largely as a result of Government monetary policies and wartime controls. The minor recovery of the postwar decade, therefore, is not surprising, and does not indicate that these shares did not suffer markedly. In fact, it is largely as a result of the declining share going to interest that the older people in society have suffered the most, since they are no longer in a position to provide a labor service and are dependent primarily on fixed incomes from savings accumulated in the past.

5. Within the broad employee group mentioned under item 1, above, various subgroups were affected very diversely. The most important lagging income groups were employees of governments, educational institutions, and religious and charitable organizations. In some instances, salaries of these groups lagged so greatly that their real incomes have actually declined over the past two decades.

Of greater importance as a measure of the unequal burden of inflation on individuals is the fact that it is primarily the incomes of older retired persons which have been most unresponsive to a rising price level. This arises, of course, from the fact that it is this group more than any other which must depend upon interest income, pensions, life insurance annuities, or other types of fixed income payments. Furthermore, older persons have little or no capacity or opportunity to supplement their incomes by active employment. By the

same token, older persons who depend upon social security payments for their major source of support have been able to avoid serious reductions in their real standard of living only because of numerous upward revisions in the tax and benefit programs. *Continuing revisions of this type are essential if the burden of inflation on these groups is not to become severe.* The same is true, of course, for other recipients of social security benefits through unemployment insurance, workmen's compensation, etc.

Nor does the available evidence indicate that the period of inflation has seen any improvement in the share of income going to those families at the bottom end of the income scale. According to Lampman,[4] "the lowest fifth of income receivers now get 5 percent of all income. It received 5 percent of income in 1947. It apparently received about 5 percent of income in the 1930's." Lampman also points out, however, that the income share of the top 5 percent of income receivers has been lowered considerably at the expense of a gain in the share of the upper middle income group. It is not clear, however, whether this redistribution is attributable solely, or even primarily, to the inflation. Data on the distribution of income by families are given in table 5–3.

TABLE 5–3.—*How family income was shared by income 5ths and by the top 5 percent, 1935–36, 1944, 1954, 1957*

[Percent shares]

Quintile	Before tax—			1957		
	1935–36	1944	1954	Before tax	After tax	Average income after tax [1]
Lowest	4.1	4.9	4.8	4.8	5.1	$1,428
2d	9.2	10.9	11.1	11.3	11.8	3,290
3d	14.1	16.2	16.4	16.3	16.8	4,690
4th	20.9	22.2	22.5	22.3	22.7	6,326
Highest	51.7	45.8	45.2	45.3	43.6	12,154
Total	100.0	100.0	100.0	100.0	100.0	----------
Top 5 percent	26.5	20.7	20.3	20.2	18.2	20,279

[1] Federal individual income tax.

Source: Survey of Current Business, June 1956 and April 1959, and earlier studies of the staff of the National Income Division of the U.S. Department of Commerce.

THE DISTRIBUTION OF WEALTH

In addition to its effects on the distribution of current income, inflation brings about a redistribution in the ownership of wealth, measured by the net worth (the market value of assets less liabilities) of different households, business enterprises, or governments. As in the case of income, this redistribution is due to differences in price movements of various assets during and under the influence of inflation. While the dollar value of monetary assets such as bank deposits, saving and loan shares, mortgages, Government and corporate bonds, life insurance contracts and claims under most pension and social insurance contracts remains unchanged, inflation commonly increases the price of equities and tangible assets such as common stock, real estate, producer and consumer durables and inventories. Obviously

[4] Robert J. Lampman, "The Low Income Population and Economic Growth," Study Paper No. 12.

individual economic units or groups of them will profit to the extent that they hold price-sensitive rather than monetary assets; that the price-sensitive assets they hold increase in price; and that the assets they hold have been financed by borrowing which is payable in dollars. Because the share of price-sensitive assets in total assets held by different groups, the extent to which their price-sensitive assets increase in value, and their debt-to-asset ratios vary, they are differently affected by inflation.

From the end of 1939 to the end of 1959, the price of common stock has increased by about 350 percent. That of real estate, for which our information is much more deficient, has advanced by 200 to 250 percent. On the other hand, the cost of living has advanced during the same period only by approximately 110 percent. A household without debt holding all its assets in monetary form would therefore have suffered a decline of a little more than 50 percent in the purchasing power of its net worth, as the result of inflation. On the other hand, a household that had divided all its assets between real estate and common stock and had at the beginning of the period financed one-half of its total assets by borrowing, would at the end of the 20-year period not only have preserved intact the purchasing power of its net worth, but would actually have increased it by 60 percent.

The available statistics, defective as they are, indicate that for most of the major sectors in the economy, monetary assets were either less than debt or not much in excess of debt, so that the purchasing power of their net worth has been little if at all damaged by inflation. This is the case, for instance, for nonfarm households, farmers, unincorporated business enterprises, corporate business, and State and local governments. All these sectors have owned enough assets that have advanced in price and have been sufficiently in debt to offset the losses in purchasing power suffered on their monetary assets. The Federal Government has on balance profited from the inflation since the purchasing power of its debt has been substantially reduced by the rise in prices.

While the inflation of the last two decades thus has not impaired the net worth of the major sectors of the economy or sharply changed the distribution of national wealth among them, there undoubtedly have been substantial groups of households, and also some groups of businesses, that have suffered an impairment in net worth as a result of inflation, though there are others who have benefited. On the basis of our information about the character of assets held by different groups of households, business, and governmental units, and about their debt-to-asset ratios, it is known, or at least it is very likely, that the main groups of households whose net worth has been impaired by inflation have been people in the older age groups and of modest income and wealth, particularly those that did not own their home. On the other hand, households with heads in their twenties or thirties, who often acquire homes and consumer durables on credit, and individuals in the upper wealth groups concentrating their assets in common stock, have actually seen the purchasing power of their net worth increased by the differential price movements accompanying the inflation of the last 20 years. Such increases have been particularly marked during the last 6 years during which the level of stock prices more than doubled while the cost of living increased by less than 10 percent.

The statistics available now are not sufficient to show in detail the effect that inflation has had on the purchasing power of the net worth of different groups of households, business enterprises, and governmental units, and on the distribution of total national wealth among them. They do suffice to show, however, that at least among individuals, the postwar inflation has increased the inequality in the distribution of wealth. It is estimated [5] that the share of the top percentile of wealthholders, that is, the one percent of individuals ranking highest if measured by total assets, which had fallen from 32 percent to 21 percent between 1922 and 1949, increased to 24 percent in 1953 and to 26 percent in 1956, the latest date for which such estimates can be made. Because of the further sharp advance in stock prices in the last few years, it is likely that the share of the top one percent of wealthholders has increased and by the end of 1959 may not be far from its level of 1922, if the calculation is made on the basis not of individuals but of families. Thus the postwar inflation appears to have reversed, at least for the time being, the trend toward a more equal distribution of personal wealth and to have restored inequality to approximately the level of the early 1920's.

THE VOLUME OF REAL OUTPUT AND ITS RATE OF GROWTH

Inflation may affect not only the distribution of output, but also the total available to be distributed. Inflation may lead to waste, to less saving, to a poor allocation of resources, etc. Conversely, a rising price level can raise investment and facilitate readjustments within the economy. In the United States there has been no clear relationship between output and prices; we have experienced rising output in periods of both rising prices and declining prices; the precise relationship between them, therefore, is far from clear.

Theories of the Inflationary Process

Before proceeding with a brief discussion of the alternative explanations of how and why inflation arises, an important distinction must be stressed. The term "inflation" is usually used to mean a general rise in the price level; contrariwise, the methods of prevention of inflation normally center on policies designed to hold the general price level reasonably stable. Price *level* stability, however, should in no sense be identified with the stabilization of any *particular* price. It is the very essence of a free enterprise economy that the prices of *individual* products and services be free to adjust to changing market conditions. A change in price in response to changes in market demand or natural changes in supply conditions is essential to induce particular industries or firms to expand while others contract. To achieve price *level* stability by requiring that *particular* prices remain stable, therefore, may well create more problems than it solves. In fact, as will be seen, it may well be that price level stability can be more readily achieved by making individual prices more flexible.

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[5] R. J. Lampman, "Review of Economics and Statistics," XLI (1959).

DEMAND-PULL INFLATION

Despite a vast outpouring of writings in the past decade or more concerning the nature of the inflationary process, the basic theoretical frame of reference is still essentially quite simple. The traditional economic theory of inflation—commonly called a "pure demand-pull"—has long held that the primary cause is to be found in an excess of available purchasing power (demand) competing for a relatively limited quantity of available goods (supply), resulting in a rise in prices. The limitation on supply is due to the fact that available resources are being fully utilized—i.e., *that there is full employment in the economy*—so that the excess purchasing power can only bring about a higher price level. Assuming no further increases in aggregate purchasing power, the competitive pressures of buyers will cease once prices have risen to the point where total money demand is just adequate to purchase the available (full employment) flow of goods.[6]

Furthermore, this equilibrium will not be seriously affected by shifts in the composition of a given total demand. For while such shifts will result in price increases in the sectors where demand is rising, purchases in other sectors must decline correspondingly and prices in those sectors will drop. On balance, no net upward movement will follow.

The "demand-pull" theory of inflation presumes that the prices of productive services and of goods are determined in the market by the impersonal competitive forces of supply and demand. Prices are reasonably flexible both upward and downward; by the same token, monopolistic considerations are sufficiently minor that they do not significantly affect the final outcome.

The policy implication of a demand-pull inflation are likewise quite clear. Since the basic cause is an excess of aggregate purchasing power, policy must be directed toward reducing that purchasing power by aggregate fiscal and monetary policies. And since markets are competitive and wages and prices flexible, this result can be achieved without developing any serious unemployment.

MARKET POWER INFLATION

An alternative theory of the inflationary process which has been increasingly stressed during the postwar period has been variously referred to as a "cost-push," an "administered-price," or a "sellers" inflation. In the following discussion, we will use the term "market power" inflation to denote this type of theory. The term "market power" is extremely difficult to define precisely. *Conceptually*, it refers to the ability of any group of sellers (or in the case of industry, the ability of a monopolist) to establish a price for its product or service which differs from the "competitive" level. This ability is usually, in turn, the result of some type of group action, which may be quite open, as in the case of labor unions, or quite tacit, as in the case of "accepted" practices in industries with a few relatively large firms. Thus no collusion or concerted action is necessarily implied. *Opera-*

[6] If purchasing power rises as well, as part of the inflationary process, there will be further price increases. The process may or may not come to an end, depending on the extent of feedbacks. A strong and progressive tax system or an unwillingness of the central bank to increase the money supply would ultimately halt the process.

tionally, the exercise of such market power would usually be most clearly identified by an increase in wage rates not associated with the existence of a relatively tight labor market or by a rise in price not associated either with pressures on capacity or with rising costs. It may also be that *downward rigidity* of wages and prices in the face of declining employment and sales is also a reflection of the exercise of market power; this is, however, a weaker case, which will be discussed in more detail in a subsequent section.

If an important degree of "market power" inflation exists, two major policy approaches have been suggested. One, perhaps paradoxically, is identical to that proposed to deal with a pure demand-pull, viz, to restrict *aggregate* demand by stringent monetary and fiscal policies. This approach is based upon the fact that a market power inflation cannot—unless extreme assumptions are made—continue for long unless accompanied by a continually rising aggregate demand. For if demand is held constant, continually rising wages and/or prices will result in continually rising unemployment of both labor and capital. *At some point*, the depressing effects of these developments will weaken market power sufficiently that the inflationary pressures will cease. Some proponents of this view believe that the level of unemployment necessary to achieve this stability is low enough to be socially tolerable; others feel that price stability is of such overriding importance that the problems of unemployment associated with achieving price stability are secondary.

The second approach is designed to deal with the problem by reducing, directly or indirectly, the power to set prices by the groups involved. The variations on this theme are extensive and will be discussed in chapter 10 below. Some proposals call for Government participation in wage and price setting in the key sectors of the economy in which market power is considered excessive. Other proposals call for much stronger application of antitrust legislation in both the labor and product markets in order to restore the constraints imposed by a more competitive market.

STRUCTURAL INFLATION

A third approach to inflation, largely developed within the past 2 or 3 years, presents the view that inflation can arise from *structural* adjustments in the economy, in the absence of either excess aggregate demand or concentrations of market power. The most recent and comprehensive statement of this theory is that of Schultze,[7] who develops the proposition that an initial upward thrust of prices and wages can occur in particular sectors of the economy because of substantial and rapid *shifts* in demand toward those sectors, though aggregate demand in the economy is not excessive. A *net* inflationary movement can result, however, partly because of the immobility of factors of production—which prevents supply from adjusting quickly to the shifts in demand—but more importantly, because of the *lack of downward flexibility* of prices and wages in those sectors in which demand has declined.

[7] Charles L. Schultze, "Recent Inflation in the United States," Study Paper No. 1.

The inflationary impact of structural imbalances becomes further accentuated by secondary effects of the original demand-pull in the favored sector. To the extent that the price increases result in higher input costs for other industries, other prices will rise. If the cost of living rises, wage rates in other industries may rise, even though no tightness exists in the labor market; also wage increases in the areas where demand is expanding may establish a "pattern" for equivalent adjustments where unemployment is still substantial. The final result of this process of interaction can be continuing inflationary pressures even after the initiating forces have disappeared.

The problems of dealing with the downward inflexibilities and interpendencies of structural inflation from a public policy point of view are extremely difficult. It is clear that the use of aggregative monetary and fiscal controls will result primarily in lowered output and employment with only small effects on the level of wages or prices. If attempts are made by selective controls of some sort to halt the price rise in the particular sectors where demand pressures exist, there is danger that additional resources of labor and capital, which should be attracted into those sectors, will not be; in the long run, the allocating function of the pricing mechanism will be seriously impaired. Conceptually, the most appropriate policy would be to reduce the degree of downward inflexibility in the labor and product markets. How this can be done without sacrificing other desirable objectives, however, is a most difficult question.

THE COMPLEX REAL WORLD

To this point, we have been concerned with the various ways in which an inflationary process *can* occur. Any actual inflation, however, may be made up of several interrelated factors, reflecting some elements of all of these "theories." An inflation which is initiated by a condition of excess demand may be accentuated by the use of market power; conversely, an inflation initiated by autonomous increases in wages and/or prices through market power cannot long continue without an increase in aggregate demand financed by an expansion in the money supply. Or, in the case of "structural inflation," sectoral increases in demand and employment may pull up wages; these wage increases may establish a pattern, however, which unions in other industries follow despite poor demand and employment conditions. Finally, it may simply be that at the same time, demand forces are strong in some industries while market power is strong in others. Prices and/or wages may rise in both cases quite independently of each other.

It is essential to recognize, therefore, that the real world is varied and interrelated, and that no one "theory" is likely to provide a complete explanation of an actual inflation. Nevertheless, if we are to formulate an improved public policy in this area, we must do what we can to identify and, so far as possible, isolate the *dominant* factors involved at various times and in various industries. In the remainder of this chapter, therefore, we will be concerned primarily with presenting a summary of the empirical evidence relating to the role of demand and supply factors, market power, and structural adjustments during the postwar period. This summary is based, in turn,

upon several studies conducted as part of the Study of Employment, Growth and Price Levels of the Joint Economic Committee, which have been or will be published separately as study papers, as well as other research. The point cannot be too strongly stressed, however, that both the analytical and empirical problems involved are very great, and we can only hope to provide a somewhat more complete understanding of postwar developments than has perhaps been available previously. We will approach the problem first by confining our discussion to the product market and will then proceed to an analysis of the labor market.

The Product Market

The early section of this chapter has already presented data indicating the general nature of price movements in the economy as a whole and in some of its major sectors during the period since 1945. It will be recalled that all three major price indexes—the Consumer Price Index, the Wholesale Price Index, and the GNP deflator—indicated similar basic trends. It was also pointed out that a large portion of the inflation, particularly since 1955, can be accounted for by much greater than average price increases in certain important sectors and industries. In manufacturing, the industries which had the greatest price rises were "machinery and motive products" and "metals and metal products." Other sectors in which the inflation centered were construction, services, and government. In the following discussion, therefore, primary emphasis will be placed upon a detailed evaluation and analysis of most of these particular sectors.

MANUFACTURING

Table 5–4 provides an overall summary of general trends within the manufacturing sector of the economy. A number of important points are evident. Of basic importance, of course, is the fact that the manufacturing price level has continued to rise steadily, except for a fairly substantial reduction of 3.2 percent in the 1949 recession and a small downward readjustment after the sharp rise which accompanied the outbreak of the Korean war in mid-1951. The 1954 recession, however, brought no price reduction, although the price index for "all manufactures" remained almost constant during the period 1952–54.

TABLE 5–4.—*Trends in output, prices, profits, wages, and employment in manufacturing, 1947–58*

[1497–49=100]

Year	Industrial production	Wholesale price index (all manufactures)	Profit margins	Profit: rates of return	Production worker employment	Nonproduction worker employment	Direct labor costs per unit of output
1947	100	95.9	102.3	109.4	103.4	97.4	96.3
1948	103	103.8	105.0	109.5	102.8	101.8	101.6
1949	97	100.3	92.7	81.1	93.8	100.8	101.6
1950	112	104.1	119.0	119.7	99.6	103.5	99.8
1951	120	115.5	114.6	123.4	106.4	115.2	109.2
1952	125	112.9	99.7	98.6	106.3	124.6	111.6
1953	136	112.8	100.6	100.9	111.8	133.0	114.6
1954	127	113.7	98.0	82.3	101.8	133.0	114.5
1955	142	115.0	112.8	104.9	105.6	136.8	112.1
1956	147	119.5	109.3	98.2	106.7	144.8	115.8
1957	147	123.2	102.3	86.8	104.4	151.2	118.8
1958	136	124.5	92.7	67.2	94.2	148.8	120.4
Percent change:							
1947–51	20.0	20.4	12.0	12.8	2.9	18.3	13.4
1951–55	18.3	−.4	−1.6	−15.0	−.8	18.8	2.7
1955–57	3.5	7.1	−9.3	−17.3	−1.1	10.5	6.0
1955–58	−4.2	8.3	−17.8	−35.9	−10.8	8.8	7.4

Sources: Industrial production—Federal Reserve Board; Employment—Bureau of Labor Statistics; Profits—Federal Trade Commission–Securities and Exchange Commission.

It is by now almost universally agreed that the sharp rise in prices immediately after World War II and the second wave of manufacturing price increases during 1950–51 (1950 to 1953 in the case of the CPI and GNP deflator) can be attributed primarily to demand forces. The available data on rates of change in output during these years provide considerable support to this view. During the period 1947–53 the average annual increase in manufacturing production was over 5 percent per year. While rates of increase in output are not *per se* evidence of pressures of demand on supply, since there may be considerable excess productive capacity to draw on, this was certainly not the case in 1947. The tremendous backlog of demand which had accumulated during the war for all types of consumers' goods, particularly durables, plus the inability to maintain or replace much of the stock of consumer-oriented capital goods, left us with a productive capacity which was low relative to total demand in the immediate postwar years. In such circumstances, an increase in *output* of well over 5 percent per year strongly suggests that pressures on productive capacity existed up to at least 1953. From 1953 to 1955, the rate of increase in output slowed to only 2.2 percent per year; nevertheless, it is likely that demand forces still impinged upon capacity in at least some sectors of the economy during the 1955 recovery. In the light of this general background, it is not likely that the price increases to 1953, and perhaps to 1955, reflected the exercise of market power to any appreciable degree, though this may have been a factor, of course, in some industries. By the same token, the high level of profits in the postwar period, which reached a peak in 1950–51, was largely the result of demand conditions.

After 1955, however, the increase in output continued at a very low rate. From 1955 to 1957, production rose less than 2 percent per year; from 1955 to 1958, total output actually declined. Nevertheless, prices continued to rise throughout the period by approximately 8 percent, including an increase of slightly less than 1 percent during

the recession period 1957–58. By this point in time, there can be little doubt that pressure on productive capacity can no longer be considered a reasonable explanation of the continuing rise in manufacturing prices. Furthermore, the *rise* in prices during the 1958 recession, though small, suggests a greater degree of upward pressure in the price level than was evident in either of the two prior recessions.

Another interesting trend indicated in table 5–4 is the remarkable rise in the employment of nonproduction workers as compared to production workers. From 1947 to 1958, production worker employment fell from 12.8 million to 11.6 million, a decline of over 9 percent; nonproduction worker employment, on the other hand, rose from 2.5 million to 3.8 million, or over 50 percent. *This shift in the nature of employment is of considerable significance as an added factor in explaining the increasing amount of downward rigidity in unit labor costs and prices in recessions.* A comparison of the movement of production versus nonproduction worker employment during the recessions of 1949, 1954, and 1958 indicates clearly that the former is considerably more responsive to cutbacks in production than the latter. This continuing shift toward a less flexible labor force has resulted in a rising proportion of relatively fixed labor costs and hence, a greater tendency for labor costs per unit of output to rise in recessions. This is particularly evident in the figures for 1958, and may provide an additional explanation of the increasing tendency for prices to rise even in recession years.

Further insight into the nature of the inflation is provided by a more detailed breakdown of the data into the major components provided in the WPI, and further into the major (2-digit) industries which make up the manufacturing sector of the economy.[7a] Table 5–5 shows the percentage contribution to the total change in the WPI (other than farm and food) accounted for by each of its major components during selected subperiods. In table 5–6, a more detailed index of a "value added price" is presented for each manufacturing industry over the entire postwar period.[8] Taken together, these fig-

[7a] It is another anomaly in the data currently provided by the "Wholesale Price Index" that its major classifications do not correspond, even roughly, to the major classifications used by all other Government agencies in compiling data on profits, output, earnings, etc. This makes it virtually impossible to obtain reasonably consistent series by industries for analytical purposes. An expansion of the "Wholesale Price Index" data along these lines is an essential improvement.

[8] These indexes are taken from a forthcoming study paper by C. Schultze and J. Tryon, A "value added price" differs from the usual type of price index in that it is designed to reflect the price movements *after deducting the cost of materials.* A full explanation of the sources and methodology used will be found in the forthcoming study paper.

ures show a very consistent picture of the inflationary process in manufacturing. During the early period from 1947 to 1951, all prices rose considerably, with the greatest increases centered in rubber, metals and metal products, and lumber. From 1951 to 1955, the overall price index remained virtually stable; this was, however, the result of sharply divergent trends among industries. Metals and metal products, particularly iron and steel, led the rise; other substantial increases occurred in machinery, minerals, and tobacco. In terms of their weights in the index, however, the overwhelming bulk of the increase centered in metals and machinery. The major counterbalancing declines were in textiles, apparel, and leather. These were all industries in which raw material costs had declined markedly after the initial speculative runup of prices in 1950–51 (the wholesale price index for farm products declined from 113.4 in 1951 to 107 in 1952 and to 97 in 1953), output rose considerably less rapidly than in manufacturing as a whole, and strong competitive conditions existed in the product market.

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TABLE 5–5—*The rise in industrial prices, a component analysis of change in the Wholesale Price Index, excluding food and farm products* [1]

Component	1947–51				1951–55				1955–58				
	Index, 1947	Percent change	Relative importance, 1947	Percent contribution to total change	Index, 1951	Percent change	Relative importance, 1951 [1]	Percent contribution to total change	Index, 1955	Index, 1958	Percent change	Relative importance, 1955	Percent contribution to total change
All commodities other than farm and food	95.3	21.6	100.00	100.0	115.9	0.9	100.00	100.0	117.0	126.0	7.7	100.00	100.0
Textile products and apparel	100.1	10.5	13.94	6.7	110.6	−13.8	13.30	−161.6	95.3	93.5	−1.9	10.84	−2.7
Hides, skins, and leather	101.0	19.1	2.98	2.6	120.3	−22.0	3.10	−59.6	93.8	100.6	7.2	1.87	1.8
Fuel, power, and lighting material	90.9	17.4	12.38	9.9	106.7	1.1	11.41	10.8	107.9	112.7	4.4	11.79	6.9
Chemicals and allied products	101.4	8.5	7.58	3.0	110.0	−3.1	7.20	−20.2	106.6	110.4	3.6	8.48	3.9
Industrial chemicals	98.8	22.2	(2.83)	(2.8)	120.7	−2.2	(2.95)	(5.9)	118.1	123.5	4.6	(3.53)	(2.1)
Rubber and products	99.0	49.5	2.24	5.1	148.0	−2.8	2.88	−7.1	143.8	145.0	.8	2.49	.3
Lumber and wood products	93.7	32.2	3.78	5.6	123.9	−.2	4.04	−1.5	123.6	117.7	−4.8	3.57	−2.2
Pulp, paper, and allied products	98.6	21.3	4.91	4.8	119.6	−.3	5.07	−.4	119.3	131.0	9.8	4.99	6.4
Metals and metal products	91.3	34.5	16.79	26.5	122.8	11.0	17.80	178.1	136.6	150.4	10.1	18.60	24.7
Iron and steel	89.7	37.3	(7.34)	(12.5)	123.2	14.1	(7.81)	(95.9)	140.6	168.8	20.1	(8.45)	(22.3)
Machinery and motive products	92.5	28.6	20.22	26.4	119.0	7.9	20.77	148.8	128.4	149.8	16.7	22.73	49.7
Motor vehicles	91.3	23.6	(7.19)	(7.8)	112.9	8.9	(7.01)	(56.3)	122.9	139.7	13.7	(7.78)	(14.0)
Furniture and other household durables	95.6	19.3	5.54	4.9	114.1	1.6	5.45	7.2	115.9	123.2	6.3	5.40	4.5
Nonmetallic minerals, structural	93.9	21.0	1.97	1.9	113.6	9.3	1.93	17.7	124.2	136.0	9.5	2.75	3.4
Tobacco manufacturing and bottled beverages	97.2	11.2	3.37	1.7	108.1	12.5	3.14	30.4	121.6	128.2	5.4	3.12	2.2
Miscellaneous	100.8	4.1	4.30	.8	104.9	−12.3	3.90	−42.6	92.0	94.2	2.4	3.37	1.1

[1] This table is computed as follows: The relative importance weight of each item is multiplied by the percent change in the item and then divided by the sum of these products. The beginning of period relative importance weights are used in each instance, except in the middle period where the computation had to be carried out in 2 stages because of the revisions in the index at the end of 1954.

Source: Bureau of Labor Statistics, Wholesale Prices and Price Indexes.

TABLE 5–6.—*Value added price indexes in manufacturing industries, 1947–58*

[1947=100] [1]

Industry	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Primary metals	100.0	109.6	123.9	127.0	148.1	145.8	154.0	160.6	160.0	172.4	184.8	193.3
Nonelectrical machinery	100.0	112.1	120.3	123.1	136.6	139.2	135.5	144.3	143.5	150.5	163.9	168.4
Instruments	100.0	109.3	120.7	129.3	145.8	135.9	138.2	142.4	143.4	150.7	154.3	160.8
Stone, clay, and glass	100.0	109.6	116.1	121.5	126.0	125.9	136.9	143.1	151.1	150.2	152.6	157.3
Fabricated metals, including ordnance	100.0	110.0	111.7	116.6	129.1	130.1	127.3	133.4	134.5	143.7	148.9	152.8
Electrical machinery	100.0	110.1	113.0	119.3	130.7	126.0	125.3	123.5	118.9	121.0	134.1	147.9
Rubber products	100.0	96.8	96.4	89.7	127.0	132.0	123.5	109.8	113.0	136.0	141.4	144.6
All manufacturing	100.0	110.0	113.2	114.8	123.5	124.5	123.4	128.4	129.8	132.7	139.4	141.4
Transportation equipment	100.0	108.2	122.3	134.7	133.1	139.9	134.9	138.8	145.5	136.3	139.0	140.5
Printing and publishing	100.0	102.8	106.0	106.9	112.0	119.3	123.9	122.4	127.5	129.7	135.9	138.4
Tobacco products	100.0	103.3	108.3	107.5	111.1	120.7	126.7	127.8	128.1	129.9	133.6	131.8
Furniture and fixtures	100.0	110.9	117.1	116.4	134.3	135.9	131.1	121.4	123.0	128.4	133.3	130.2
Food and kindred products	100.0	110.5	108.2	110.5	113.2	120.3	124.5	121.3	126.4	124.6	125.8	125.8
Paper and allied products	100.0	104.1	101.3	104.2	123.2	121.0	118.3	119.2	118.5	127.2	124.3	122.1
Leather and leather products	100.0	116.9	109.4	101.2	129.8	121.5	122.1	121.3	115.7	121.4	123.8	119.3
Miscellaneous manufactures	100.0	108.8	108.0	109.5	124.2	123.2	120.6	120.6	118.1	118.5	117.7	117.3
Chemical and allied products	100.0	110.8	115.1	111.0	119.3	112.9	113.4	117.1	119.2	115.2	116.8	115.4
Lumber and wood products	100.0	111.7	107.2	112.8	127.5	121.9	115.7	112.2	119.1	124.0	117.6	113.6
Apparel and fabric products	100.0	98.6	95.0	91.4	103.9	101.6	103.3	102.7	99.8	105.5	105.7	104.6
Textile mill products	100.0	104.7	93.0	90.3	105.7	95.0	90.3	84.4	87.4	88.1	87.5	86.7

[1] Petroleum and coal products is omitted because of defects in the basic data. The figures for all manufacturing, however, include this industry.

Source: Forthcoming study paper by C. Schultze and J. Tryon. A full explanation of the methodology and sources will be found in this paper.

The concentrated nature of the inflation was even stronger from 1955 to 1958. During this time, the WPI, other than farm and food, rose 9 percent. Three-fourths of this rise was accounted for by metals, very largely the iron and steel sector, and by machinery and motive products. The remaining one-fourth was scattered throughout most of the remaining components. It is to the steel and machinery industries, therefore, that we will first direct our attention.

Steel

According to a detailed analysis of the steel inflation made in one study paper,[9] the *direct* rise in the price of steel from 1951 to 1958 (37 percent as compared to approximately 9 percent for all commodities less farm and food) plus its *indirect* effects on the costs, and hence on the prices of products made with steel, accounted for approximately 40 percent of the total rise in the WPI since 1947, and over 50 percent since 1953. In addition, wage settlements in the steel industry may have had further indirect effects through their role as "pattern setter" for other industries, particularly aluminum, copper, and fabricated metal products.

This impact of steel prices was attributed primarily to a combination of strong market power in both the product and labor markets, which resulted in an extraordinary increase in both prices and wages at

[9] O. Eckstein and G. Fromm, "Steel and the Postwar Inflation," Study Paper No. 2.

the expense of the rest of the economy. More specifically, the underlying factors were two:

(1) A high and relatively rising level of profit margins, which reflected in turn an attempt by management in the industry to raise the necessary funds for replacement and expansion of productive capacity through internal financing, plus a strong oligopolistic market power position in an industry where demand was relatively inelastic (i.e., price increases did not result in great reductions in sales).

(2) An exceptional rise in wages and fringe benefits, particularly after 1955, which resulted from the bargaining pressures exerted by a strong union operating within an economic environment in which profits and output were high, and the outlook was favorable.

In effect, these two factors reflected a situation in which two strong groups attempted to bring about a redistribution of income, each in its own favor, with the result that the rest of the economy suffered. Of greatest significance, however, was the general conclusion of the study that—

Neither the increase in steel wages nor the increase in steel prices can satisfactorily be explained by demand factors alone. The wage and price behavior of the steel industry represents an important instance of inflation caused to a substantial degree by the exercise of market power. This type of inflation cannot be controlled by policies aimed solely at restricting total demand.

Machinery [10]

Second only to the influence of steel prices was that resulting from the rise in machinery prices from 1955 to 1958. During this period, the wholesale price index component "machinery and motive products" rose 16.7 percent; if motive products (motor vehicles) are excluded, the increase was somewhat greater. Considering only the *direct* weight of machinery prices in the index, almost one-fifth of the total rise from 1954 to 1958 was due to the greater than average rise in that sector. The indirect effects were much less than in steel, however, since machinery prices do not represent costs of materials which are immediately incorporated into other products.[11]

The most important finding of the machinery study, however, was that demand pressures rather than market power played an important role in the 1955–57 inflation. The analysis of the evidence during this period indicated that neither unit wage costs nor material costs rose by enough to account for the sharp rise in the machinery and equipment price index. Gross profit margins, on the other hand, rose 52 percent in electrical machinery and 32 percent in nonelectrical machinery, as compared to a rise of only 12 percent in manufacturing as a whole. Of crucial importance was the fact that data relating to plant and equipment expenditures, output trends, and new and unfilled orders figures, all showed a consistently strong pressure on productive capacity in these industries. Finally, a similar analysis of the movement of these same variables in the steel industry indicated that similar demand conditions were not present in steel.

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[10] This discussion is based on T. Wilson, "An Analysis of the Inflation in Machinery Prices." Study Paper No. 3.

[11] In the longer run, of course, machinery costs must be covered just as material costs must be if the concern is to operate profitably.

The discussion concludes, therefore, that "demand pressure played the major role in that inflation."

We are left, then, with an important conclusion. *Since steel and machinery together accounted for close to two-thirds of the 1955–58 increase in the wholesale price index, other than farm and food, it is clear that neither "demand-pull" nor "market power" is in itself a sufficient explanation of the "creeping" inflation of that period.*

Other manufacturing

Additional data relating to changes in price and several other variables are indicated in table 7 for each major manufacturing industry. It should be noted that the increases in prices shown are *value added* prices. (See footnote 8 for a brief explanation of this concept.) In general, the industries fell into two groups; the 10 which had the greatest price increases—from primary metals down to tobacco—and the 8 which had the smallest—furniture to textiles.

The strongest relationship was that involving concentration ratios.[12] Of the 10 industries with the highest price increases, 7 had concentration ratios of over 50 percent; by contrast, 6 out of the lowest 8 had concentration ratios below 25 percent. The data also suggest, however, that a similar, though weaker, relationship existed between price changes and output changes, and between concentration ratios and output changes. Thus, output rose by 30 percent or more in all but 1 of the 10 highest sectors, but increased by less than 20 percent in 5 of the 8 industries with the lowest price increases. *In view of these general interrelationships between price changes, output changes, and concentration ratios, it is impossible, without a more detailed evaluation of developments in each industry, to differentiate the role of demand from that of market power considerations.*

It is possible, however, to indicate some of the more evident situations. In five industries—textiles, apparel, lumber, leather, and food—changes in output and concentration ratios were very low. In all of these, value-added prices rose by much less than the average—in fact, textile prices actually fell by 12 percent. In all of these sectors, the average level of profits from 1947 to 1957 was also considerably below the general average, and average hourly earnings in three of them fell far below the rate of increase in all manufacturing.

At the other extreme, with both high concentration ratios and high increases in output, were four industries—instruments, transportation equipment, electrical machinery, and chemicals. Price increases in these industries, however, varied from a low of only 17 percent in chemicals to a high of 54 percent in instruments. Profit levels, however, were consistently higher than the average, and the rate of wage increases was also about equal to that in all manufacturing.

Most of the specific industries which have not fallen into these two general groups have experienced relatively unique developments. In

[12] Concentration ratios represent a rough measure of the degree of competition in the product market. They were measured by the proportion of the total value of the products produced in each major (two-digit) classification represented by four-digit classifications in which the largest eight firms accounted for over 50 percent of the value of the product. The basic data are in "Concentration in American Industry," Subcommittee on Antitrust and Monopoly of the Senate Judiciary Committee, 1957. This volume also contains a very able statement of the limitations on the use of concentration ratios as a measure of "degree of monopoly."

particular, the extraordinary rise in the value-added price in primary metals and machinery, which has been discussed above, should again be noted.

TABLE 5–7.—*Trends in manufacturing industries, 1947–57*

Industry	Percentage change			Average profit rates before taxes	Concentration ratios
	Value added price	Output	Average hourly earnings		
All manufacturing	39	47	68	23	
Primary metals	85	30	80	23	81
Nonelectrical machinery	64	35	70	25	31
Instruments	54	84	73	24	70
Stone, clay, and glass	53	43	72	26	58
Fabricated metals	49	33	70	24	19
Rubber	41	32	63	25	51
Transportation equipment	39	112	66	33	83
Printing	36	34	62	23	2
Electrical machinery	34	96	64	28	72
Tobacco	34	15	68	21	100
Furniture	33	39	58	23	7
Food	26	20	79	19	22
Paper	24	55	75	24	5
Leather	24	13	47	16	2
Chemicals	17	99	80	26	59
Lumber	18	9	60	21	2
Apparel	6	19	32	13	8
Textiles	−12	6	44	16	12

CONSTRUCTION

The construction industry is another highly strategic sector of the economy, not only in terms of the extent of the inflation within it, but also in terms of its longer run indirect effects on the rate of increase in prices of virtually all other goods and many services in the economy. This results, of course, from the fact that the costs of new factory facilities, hospitals, public utilities, and other such fixed investments must, in the long run, be covered by the prices of the goods and services they produce. The price of residential construction does not have such far-reaching indirect effects since it is a final product sold to the consumer; nevertheless, as has been pointed out, it can have a bearing on the movement of the CPI through its effects on the components "rent," "home purchase," "mortgage costs," etc.

Some of the basic data relating to trends in output and prices in construction may be found in table 5–8. For the entire postwar period 1947–58, the GNP deflator for all construction rose more than 48 percent, which was considerably in excess of the rise of 33 percent for the GNP deflator as a whole. Since new construction represented about 9 percent of the total weight in the GNP in 1956, and considering the indirect impact of construction prices as well, it is clear that the overall impact on the entire GNP deflator has been considerable.

A breakdown of the data into "residential" versus "other" construction also shows a considerable difference in the degree of inflation, although both components have risen substantially. By far the greater impact has come from the nonresidential sector, where prices have risen by almost 56 percent since 1947; by contrast, the residential index has gone up only about 42 percent.

TABLE 5–8.—*Price and output trends in construction, 1947–58*

	GNP deflators (1947–49=100)			Wholesale price index, building materials	Real GNP	Real output (1947–49=100) new construction			Nonfarm dwelling units starts (thousands)
	Residential nonfarm	Other	All			Residential nonfarm	Other	All	
1947	93.0	93.3	93.1	94.0	98.0	90.0	94.0	92.0	849
1948	105.1	103.7	104.4	104.0	101.0	107.0	103.0	105.0	932
1949	101.9	103.0	102.5	102.0	101.0	105.0	102.0	103.0	1,025
1950	107.8	106.2	107.3	109.5	110.0	145.0	109.0	127.0	1,396
1951	115.7	116.1	115.8	119.6	118.0	121.0	121.0	120.0	1,091
1952	119.0	120.4	119.6	118.2	122.0	120.0	121.0	120.0	1,127
1953	120.2	123.4	121.7	119.9	128.0	127.0	128.0	128.0	1,104
1954	118.6	124.7	121.6	120.2	125.0	144.0	131.0	138.0	1,220
1955	122.2	128.7	125.3	125.5	136.0	170.0	144.0	157.0	1,329
1956	129.3	138.1	133.5	130.8	139.0	151.0	148.0	150.0	1,118
1957	131.4	143.8	137.6	130.7	141.0	144.0	151.0	148.0	1,042
1958	131.8	145.2	138.2	129.2	138.0	151.0	139.0	146.0	1,209
Percent change:									
1947–51	24.4	24.4	24.3	27.2	20.4	34.4	28.7	30.4	----------
1951–55	5.6	10.9	8.2	4.9	15.2	40.4	19.0	30.8	----------
1955–57	7.5	11.7	9.8	4.1	3.7	−15.3	4.9	−5.7	----------
1955–58	7.9	12.8	10.3	2.9	1.5	−11.2	−3.5	−7.0	----------
1947–58	41.7	55.6	48.4	37.4	40.8	67.7	47.8	58.6	----------

Sources: Bureau of Labor Statistics and Department of Commerce.

A further breakdown of these trends into major subperiods gives additional support to the tendencies already noted in the manufacturing industries, but with some important exceptions. First, it is evident that the degree of downward rigidity in prices has shown the same basic tendency—that is, increasing rigidity in 1949 and 1954 and finally, a continuing upward movement in 1958. This upward shift has been much more marked in nonresidential than in residential construction, however. In the nonresidential sector, prices barely declined at all in 1949, as compared to over a 3-percent drop in residential; in the 1954 recession, nonresidential prices *rose* by 1 percent while residential fell more than 1 percent; and in 1958, nonresidential prices rose another 1 percent, residential remained almost constant. Finally, a very notable difference between the price trends in the construction industry as a whole and most others was the continuing and quite substantial rise from 1951 to 1955. This was a period of stability in the WPI, and the CPI and GNP deflator rose by only 3.4 and 5.3 percent. (The GNP deflator was, of course, affected by the construction index itself.) Yet the construction index rose by over 8 percent during these same years.

This considerable and persistent upward movement in the construction indexes again raises the issue of the degree to which productivity is appropriately reflected in these indexes. As was pointed out earlier in this chapter, the sources of the basic data upon which the GNP price deflator for each major type of construction is based are compiled by several independent trade sources, whose sampling procedures, methodology, and accuracy are not known. Unless some assurance is available that a reasonable allowance is made for productivity improvements, it may well be that these indexes overstate the amount of price increases in construction. This is particularly important in view of the fact that productivity in construction has undoubtedly increased considerably since the end of the war, despite a common belief to the contrary. Even an increase as low as 1 percent

per year can make an important difference in the indicated trends, if no account has been taken of it.[13]

Be that as it may, we are primarily concerned with the underlying forces which may explain the substantial price movements which did occur. We may note to begin with that the construction industry is a rather strange hybrid of competitive and monopolistic characteristics, though probably the former are on balance the stronger. The production process is split up among several contractors and subcontractors, each usually specializing in one or two functions (such as plumbing, electrical work, etc.); within each of these specialized fields, competition is usually strong. On the other hand, each local market is largely isolated from outside competition because structures cannot be built except at their final site.[14] This situation tends to encourage collusion among local contractors to follow common pricing practices. In turn, the presence of a strong union helps to maintain and perhaps encourage such practices. Nevertheless, on balance, it is doubtful that the exercise of market power by entrepreneurial groups in the industry can provide much of the underlying explanation of the exceptional rise in prices.[15]

An examination of the trends in real output in the industry suggests that at least a good part of the explanation may be found on the demand side of the market. It is by now well known that the backlog of demand for housing units had grown tremendously as a result of the very low building rates of the 1930's and early 1940's combined with the huge amount of liquid funds or near-liquid assets with which family units were left as a result of our war financing. After a brief "starting up" period in 1947–48, housing starts have exceeded 1 million in every year since 1949; in addition, there has been a consistent and strong upgrading in the size and quality of houses built.[16] From 1947 to 1951, real output of new residential nonfarm construction rose 34 percent, or an annual average rate of over 8 percent. Actually, the use of 1951 as the terminal year understates the rate of increase in output, and hence the extent of pressure on the productive facilities of the industry, since output dropped over 15 percent from 1950 to 1951. Similarly, residential output rose over 18 percent from 1951 to 1954 and over 40 percent from 1951 to 1955, the latter year having been one of very great expansion in homebuilding. *The rise of 18 percent during the 1954–55 recovery added another strong upward thrust to the rapid rise on economic activity and general optimism of this period.* Over the entire period 1947–55, residential output rose a phenomenal 90 percent, averaging well over 10 percent per year. Under these conditions, it is most difficult to believe that demand did not constitute the major underlying cause of the inflation which occurred during this period.

The nonresidential sector of construction showed a slower, but almost continuous rise from 1947 to 1955, at an average rate of over

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[13] For a detailed discussion of improvements in techniques in residential construction, see W. Haber and H. Levinson, "Labor Relations and Productivity in the Building Trades," University of Michigan Press, 1956.

[14] This situation is somewhat modified in residential construction by the growth of prefabricated housing; this is, however, only a small part of the total construction industry.

[15] Unfortunately, no adequate data are available on profit levels or profit margins in the construction industry.

[16] See the annual reports of the Housing and Home Finance Agency for detailed data on these trends.

5 percent per year. Taken together with the more sporadic but overall much greater proportionate increase in the residential sector (gross money expenditures in the two construction sectors were approximately the same), all construction showed a rise in output of about 7 percent per year from 1947 to 1955. Given the initial shortage of productive capacity in the industry, the demand hypothesis is still given strong support.

The period after 1955 is, as usual, more difficult to evaluate. After the extraordinary spurt in homebuilding in 1955, the output trend was downward in residential construction; the decline was over 10 percent from 1955 to 1958. *In the nonresidential sector, however, the investment boom of 1956–57 continued to carry output to new high levels.* From 1955 to 1957, output rose 5 percent; from 1953 to 1957, it rose over 18 percent. Thus the *overall* trends in construction from 1953 to 1957 were generally favorable; in all construction, total output increased by 16 percent from 1953 to 1957, or almost 4 percent per year. Since there is a reasonably high degree of mobility of labor and capital between the two construction sectors, demand probably still played a role in both until 1957; certainly its role appears to have been stronger than in manufacturing. *It is also interesting to note that a very sharp runup in the prices of building materials was very closely tied in to the huge expansion in 1955, and to a considerable degree to the 1950 expansion as well.* From 1951 to 1954, the price index of building materials remained constant, despite a continuing increase in building activity. In the 2 years from 1954 to 1956, however, the index rose almost 9 percent, then again remained almost constant through 1958. *Here again, the role of the very sharp upswing in particular sectors in 1955 is emphasized as a key factor in explaining price developments during that and the ensuing few years.*

The output data also show a rather marked contracyclical pattern in nonresidential construction, particularly in 1954 and 1958. Despite a drop in real GNP in both of these years, real residential construction rose almost 14 percent in 1954 and 5 percent in 1958. In every postwar recession, including 1949, housing starts rose at least 10 percent over their prior level; in 1958, the increase was 15 percent. Contrariwise, real output and housing starts were cut back sharply from 1951 to 1953, and in 1956–57. Nonresidential construction, on the other hand, followed a much more traditional cyclical pattern. The significance of the contracyclical movements in residential construction and their relationship to monetary policy will be discussed in more detail in chapter 9 below.

We turn finally to a brief consideration of the role of costs. So far as costs of building materials are concerned, the data in table 5–8 suggest that they have risen somewhat less than prices in residential construction, and by considerably less than the prices of nonresidential construction, particularly after 1955. There are no grounds for believing, therefore, that the price increases in construction can be traced back to material costs. The role of labor costs and of collective bargaining will be discussed at a later point in this chapter.

The Service Industries

In some ways, the service industries represented the most important sector of the American economy in the postwar period. For one thing, the rate of increase in prices has been among the highest of the major components of the GNP deflator, and very much the highest in the CPI. Moreover, these indexes have moved inexorably upward in every year since 1945, during recessions as well as booms. From 1947 to 1958, the GNP price index for all services rose 42 percent, as compared to 33 percent for the GNP as a whole. The impact of services on the movement of the CPI and, in view of the importance of the CPI as a factor affecting wage movements, on the economy as a whole, is striking. Over the entire postwar years, the price index for "all services" rose over 50 percent, while the entire CPI went up only 29 percent. In fact, *the CPI would have shown no net increase whatever from 1951 to 1956 if the prices of services had remained constant;* in other words, *the entire rise in consumer prices from 1951 to 1956 was due to the services sector.* Beginning in 1956, however, all components of the CPI rose by considerable amounts.

Second, the services industries provided the most important sources of employment expansion after the war. After one year of no net increase from 1947 to 1948, employment in services has risen annually. From 1953 to 1957, the average annual rate of increase in services employment has been 3.4 percent. This contrasts sharply with a drop of approximately 1 percent per year in manufacturing, mining, and "transportation and public utilities," and to a rise of only 1.7 percent per year in construction and 1.8 percent in trade. Put another way, the very great bulk of the expansion of employment in the economy as a whole after 1953 can be traced to the services industries.

Third, services have claimed an increasingly important share of total consumer expenditures. From 1947 to 1958, consumer purchases of services increased 120 percent while total consumer purchases rose only 89 percent; as a percent of the consumer's budget, services rose from about 32 to 38 percent over this same period. Prior to 1955, these increasing outlays were primarily at the expense of nondurables; since 1955, however, the durables sector has borne the major brunt of the shift toward more services.

Finally, the trends in real output show that after 1955, real output of services rose by a much greater amount than did real GNP. From 1947 to 1955, real GNP increased by 39 percent, while services rose by slightly less (37.5 percent). From 1955 to 1958, however, real

GNP rose only 1.5 percent; in sharp contrast, the output of services increased by 14.5 percent. By the same token, of course, it was the services sector which provided the main source of employment expansion during this period.

THE DIVERSE NATURE OF THE SERVICE INDUSTRIES

In tables 5–9 and 5–10, the trends in output and prices of the major components of what are called "services" in the GNP and CPI are given. A closer examination of these components indicates that, to some extent at least, they represent areas of the economy which have already been discussed, but viewed in a somewhat different perspective. Thus the "housing" component of both indexes partially reflects the costs of residential construction and hence is affected by many of the same elements discussed above. Similarly the costs of home repair services are often affected by the wages established by the building trades unions; in some instances, the same workers may be employed.

TABLE 5–9.—*Output trends in the service industries, 1947–58*

[1947–49=100]

	Real output					
	Real GNP	All services	Housing	Household operations	Transportation	Other
1947	98.0	97.0	94.0	96.0	101.0	97.0
1948	101.0	100.0	100.0	100.0	101.0	100.0
1949	101.0	103.0	106.0	104.0	98.0	103.0
1950	110.0	109.0	113.0	113.0	98.0	107.0
1951	118.0	113.0	119.0	120.0	104.0	108.0
1952	122.0	116.0	124.0	123.0	106.0	111.0
1953	128.0	121.0	129.0	129.0	108.0	115.0
1954	125.0	124.0	133.0	133.0	104.0	120.0
1955	136.0	131.0	138.0	149.0	108.0	127.0
1956	139.0	138.0	145.0	161.0	109.0	134.0
1957	141.0	144.0	153.0	170.0	110.0	138.0
1958	138.0	150.0	162.0	179.0	109.0	142.0
Percent change:						
1947 to 1951	20.4	16.5	26.6	25.0	3.0	11.3
1951 to 1955	15.3	15.9	16.0	24.2	3.8	17.6
1955 to 1957	3.7	9.9	10.9	14.1	1.9	8.7
1955 to 1958	1.5	14.5	17.4	20.1	.9	11.8
1947 to 1958	40.8	54.6	72.3	86.5	7.9	46.4

Source: "U.S. Income and Output," Supplement to the Survey of Current Business, U.S. Department of Commerce, 1958, tables II–5 and VII–13.

TABLE 5–10.—*Price trends in the service industries, 1947–58*

[1947–49=100]

	GNP implicit price deflators (1947–49=100) [1]						Consumers Price Index (1947–49=100) [2]						
	GNP	All consumer services	Housing	Household operations	Transportation	Other	All items	All services	Housing	Household operation	Transportation	Medical care	Other services including personal care and recreation
1947	96.0	95.0	95.0	98.0	93.0	95.0	95.5	94.5	95 0	96.6	89.3	94.5	97.1
1948	102.0	101.0	101.0	100.0	101.0	102.0	102.8	100.4	101.7	99.9	99.7	100.9	100 2
1949	102.0	104.0	104.0	102.0	106.0	103.0	101.8	105.1	103.3	103.6	111.0	104.6	102.7
1950	103.0	106.0	107.0	104.0	110.0	105.0	102.8	108.5	106.1	105.9	118.2	107.0	103.4
1951	111.0	111.0	112.0	107.0	115.0	111.0	111.0	114.1	112.4	109.4	129.3	112.4	109.1
1952	113.0	116.0	113.0	111.0	120.0	116.0	113.5	119.3	114.6	113.4	138.4	119.5	111.3
1953	114.0	121.0	122.0	114.0	128.0	121.0	114.4	124.2	117.7	117.1	147.3	123.8	113.4
1954	116.0	124.0	126.0	115.0	131.0	124.0	114.8	127.5	119.1	118.1	153.7	127.5	116.2
1955	117.0	126.0	127.0	115.0	133.0	127.0	114.5	129.8	120.0	120.7	153.9	131.3	118.4
1956	121.0	129.0	129.0	116.0	137.0	131.0	116.2	132.6	121.7	123.9	156.4	136.4	120.3
1957	125.0	133.0	132.0	118.0	139.0	137.0	120.2	137.7	125.6	127.4	163.9	142.2	126 0
1958	128.0	135.0	134.0	120.0	144.0	140.0	123.5	142.4	127.7	131.4	174.1	149.2	129.6
Percent change:													
1947 to 1951	15.6	16.8	17.9	9.2	23.7	16.8	16.2	20.7	18.3	13.3	44.8	18.9	12.4
1951 to 1955	5.4	13.5	13.4	7.5	15.7	14.4	3.2	13.8	6.8	10.3	19.0	16.8	8.5
1955 to 1957	6.8	5.6	3.9	2.6	4.5	7.9	5.0	6.1	4.7	5.6	6.5	8.3	6.4
1955 to 1958	9.4	7.1	5.5	4.3	8.3	10.2	7.9	9.7	6.4	8.9	13.1	13.6	9.5
1947 to 1958	33.3	42.1	41.1	22.4	54.8	47.4	29.3	50.7	34.4	36.0	95.0	57.9	33.5

[1] Source: U.S. Income and Output, tables and VII–4 and VII–13.
[2] Source: Bureau of Labor Statistics.

NOTE.—Housing is not a pure service group. It includes house furnishings (about one-seventh of the weight) whose price index was only 104.0 in 1959, plus household operation services, the price index for which is separately shown in this table.

Another important category of services is utilities—gas, electricity, water, telephone, railroads, intercity and local buses and streetcars, and airlines. Limitations of time and resources have prevented a detailed analysis of each of these industries. To a very substantial degree, however, all of these utilities have similar product and labor market characteristics. In the product market, the prices charged are subject to regulation by Government agencies which are required to permit these utilities to earn a "fair return on the fair value" of their property. In this sense, the prices of the services rendered by these utilities are strongly "cost-oriented." In industries like railroads and local transit operations where demand has been declining sharply, prices have been increased in an attempt to cover rising unit costs. In most of the remaining utilities, however, prices probably have been held to levels below what they would be in the absence of Government regulation.

The service industries which remain may be classified roughly into those requiring a high degree of skill and training—medical care in particular—and those involving very little or no skill—domestic service, laundries, cleaning and dyeing, and so forth. A relatively small group of personal services falls somewhere between, such as barbershop and beauty shop operators, and automobile, radio, and television repairmen.

Medical care [17]

Since 1948, the price index for medical care has increased by approximately 65 percent, or at an annual rate of well over 5 percent. The greatest increase has been for hospital care and hospitalization insurance premiums, which have increased at an annual rate of 7.7 and 6.3 percent, respectively. Physicians fees rose about 43 percent from 1947 to 1958 and dental fees by 38 percent.

This very considerable increase in the costs of medical care is attributable to a tremendous rise in the demand for medical services combined with severe shortages of medical personnel. Roberts points out that—

> Combined private and public health care spending rose from 3.6 percent of gross national product in fiscal 1929 to 4.7 percent in fiscal 1950 and to 5.2 percent in fiscal 1958. Total spending rose from $3.6 billion in 1929 to $12.4 billion in 1950 and to $22.7 billion in 1958. It is clear that health and medical care is taking vastly increased amounts of the Nation's output in absolute and relative terms.

These trends will undoubtedly continue strongly into the future as the American people become increasingly aware of the improvements in medical science, as the health needs of a rising proportion of older persons are felt, and as greater insistence upon Government support for medical research develops.

Yet despite this great increase in demand, the relative supply of medical personnel has been declining. The number of hospital beds per 1,000 population dropped from 9.7 in 1948 to 9.1 in 1958. Since 1949, the ratio of M.D. physicians has declined from 135 to 132 per 100,000 population; in 1920, the ratio was 137 and in 1930, it was 125. A similar downward trend has occurred with respect to dentists.

[17] For a more complete analysis of the inflation in medical care prices, see Markley Roberts, "Trends in the Supply and Demand of Medical Care," Study Paper No. 5.

Furthermore, projections based upon currently predicted output of U.S. medical and dental schools plus graduates from foreign medical schools indicate that this downward trend will become even more pronounced over the next 15 years.

Under these circumstances, there is no doubt that the rise in this component of services has been due to the pressures of a rapidly rising demand on a relatively slowly increasing supply. *It is also clear that the long run solution must rest on policies which will expand the training facilities and provide other assistance to increase the supply of all types of skilled medical personnel.*

Unskilled services

At the opposite end of the service spectrum are several occupations—domestic, cleaning and laundry workers, hotel employees, and others—for which price indexes rose from 34 (dry cleaning and pressing) to 51 (laundry) percent. Several other low-skill service occupations, such as retail clerks, service station attendants, janitors, etc., probably followed similar trends.

There is very little data available by which to evaluate the underlying causes of upward movements in the prices of these types of services. Since they are all characterized by large numbers of small establishments operating under severely competitive conditions, it is highly unlikely that excessive profit margins are involved. Since they all utilize a high proportion of labor, however, some analysis of wage-employment trends may be helpful.

From 1947 to 1958, employment in these sectors expanded quite slowly, as compared to expansion in the medical and other professional occupations. Over the entire 11-year period, total employment in hotels and in laundry and cleaning establishments rose from 899,000 to 991,000, an increase of less than 1 percent per year. Employment in wholesale and retail trade, however, increased from about 9 to 11 million from 1947 to 1958, or an average annual increase of about 2 percent per year; this was in excess of the rate of increase in nonagricultural employment in the economy as a whole. Judging on the basis of these trends in employment, there does not seem to be a particularly strong case for the existence of demand pressures in these areas. Nor can the lack of expansion in employment in these sectors be attributed to a general shortage of labor in the economy as a whole, at least after 1955.

An analysis of wage trends in these sectors also fails to provide any basis for excessive increases in price. Table 5–11 compares the percentage increase in wages in several unskilled service occupations with those in various manufacturing industries. It can be seen that the service trades have had wage increases generally below those in manufacturing as a whole. This suggests that while some "spillover" of wage increases from manufacturing to service industries may occur, there is by no means a clearcut relationship between them.

TABLE 5–11.—*Percent increase in wages in selected service and manufacturing industries, 1947–58*

Industry	1947–53	1953–58	1947–58
Services:			
Laundry	27.3	15.3	46.7
Cleaning	26.7	15.8	46.7
Wholesale trade	40.5	22.6	72.2
Retail trade	38.6	21.4	68.3
Hotels	37.9	24.2	71.2
Finance, insurance, and real estate	32.1	20.1	58.7
Manufacturing:			
All manufacturing	45.1	20.3	73.6
Rubber	37.5	23.0	69.1
Textiles	31.4	9.7	44.1
Leather	31.1	14.9	50.5
Lumber	22.7	15.9	42.2
Apparel	18.0	13.7	34.2
Chemicals	49.2	26.7	89.0
Primary metals	47.4	31.2	93.3
Food	46.0	25.2	82.7
Paper	45.5	26.3	83.6
Printing	45.0	18.1	71.1

Source: Bureau of Labor Statistics.

The final variable which may explain the price movements in services is productivity. Here no reliable data are available. The nature of the occupations involved, however, is such that it is quite probable that productivity increases have been considerably lower in these sectors than in the goods-producing industries, such as manufacturing and mining. If this is the case, labor costs per unit of output have risen by more than the average and prices have been forced upward thereby. Except insofar as the wages in services have been increased more than otherwise by the indirect influence of union pressures elsewhere—a possibility not generally supported by the data available—the higher prices in the unskilled services appear to be the result of normal competitive market forces.

Since the underlying cause of price pressures in the unskilled service areas appears to have been the low rate of increase in productivity, primary emphasis should be directed to this problem. The rise of supermarkets, the use of accounting and computing machines, and other similar advances indicate that productivity in services is not immune to improvements, if sufficient incentive is provided to encourage it.

Skilled services

There remain a few small service occupations which require some degree of training and skill, including automobile, radio, and TV repair, barbers, and beauticians. From 1947 to 1958, auto repairs increased almost 50 percent in the CPI; men's haircuts rose 72 percent; and beauty shop services increased 24 percent. The first of these has undoubtedly been affected by the more complicated repair services necessary with modern automobiles. In addition, auto mechanics' wages rose about 87 percent over the period, an amount almost equal to the extraordinary rise in wages in the primary metals sector of manufacturing. The levels and the increases of these wages differed among cities in the same pattern as manufacturing wages. Little is known about the market characteristics of the services provided under men's and women's personal care, although a considerable degree of common setting of "price lists" is present in the former. In any case, the importance of these items is small.

Summary

As was the case in the several manufacturing sectors, the underlying causes of the rising prices of services have been diverse. In those sectors calling for a high degree of skill and training, as in medical care, the inflation has clearly been one of pure demand and supply. In the low-paid unskilled service groups, the underlying cause appears to have been related primarily to a low rate of increase in productivity, combined with a rate of increase in wage rates which was by no means excessive, and which in fact was considerably less than in manufacturing. Here again, the role of market power was small, though some "spillover" from low-paid manufacturing industries may have occurred.

The Labor Market: The Movement of Industrial Wages

In table 5–12, annual data on earnings, employment and unemployment are presented for the entire economy and for certain major sectors for the period 1945 through 1958. The sectors shown are those in which "market power," in the form of strong collective bargaining, would be expected to exert its strongest influence, if any. An examination of these figures shows that hourly earnings in these sectors—manufacturing, mining, railroads, and construction—have continued to rise consistently throughout the postwar period, although the rate of increases varied greatly. This fact obviously raises two important questions. One, to what extent have these wage increases been a response to demand pressures in the labor market. And two, have wage rates been inflexible downward during periods of recession and if so, is this evidence of the existence of "market power" in the labor market?

Table 5–12.—*Employment, unemployment, and earnings in the entire economy and in selected major sectors, 1945–58*

ENTIRE PRIVATE ECONOMY

Year	Employment (millions)	Percent of civilian labor force unemployed	Average number weeks unemployed
1945	53.9	1.9	(1)
1946	57.5	3.9	(1)
1947	60.2	[2] 3.9	9.8
1948	61.4	3.8	8.6
1949	62.1	5.9	10.0
1950	63.1	5.3	12.1
1951	62.9	3.3	9.7
1952	63.0	3.1	8.3
1953	63.8	2.9	8.1
1954	64.5	5.6	11.7
1955	65.8	4.4	13.2
1956	67.5	4.2	11.3
1957	67.9	4.3	10.4
1958	68.6	6.8	13.8

See footnotes at end of table, p. 138.

TABLE 5–12.—*Employment, unemployment, and earnings in the entire economy and in selected major sectors, 1945–58*—Continued

MANUFACTURING

Year	Straight time hourly earnings	Percent change in earnings	Percent unemployed [2]	Production worker employment (thousands)
1945	[1]		[1]	12,864
1946	$1.05		[1]	12,105
1947	1.20	14.2	[1]	12,795
1948	1.31	9.2	3.5	12,715
1949	1.37	4.6	7.2	11,597
1950	1.42	3.3	5.6	12,317
1951	1.53	8.1	3.3	13,155
1952	1.61	5.2	2.8	13,144
1953	1.71	6.2	2.5	13,833
1954	1.76	2.9	6.1	12,589
1955	1.82	3.4	4.2	13,061
1956	1.91	4.9	4.1	13,195
1957	2.01	5.2	5.1	12,911
1958	2.08	3.5	9.2	11,656

MINING

Year	Gross hourly earnings	Percent change in earnings	Percent unemployed	Production worker employment (thousands)
1945	[1]		[1 3]	[1]
1946	[1]		[1]	[1]
1947	1.51		[1]	845
1948	1.71	13.2	2.3	877
1949	1.77	3.2	[3] 4.9	811
1950	1.82	3.1	6.2	788
1951	1.99	9.3	3.3	812
1952	2.07	4.0	3.1	772
1953	2.20	6.3	[1]	737
1954	2.20	0.0	13.0	658
1955	2.27	3.2	3.2	651
1956	2.41	6.2	6.4	673
1957	2.53	5.0	5.9	664
1958	2.56	1.2	11.0	572

CONSTRUCTION

Year	Gross hourly earnings [4]	Percent change in earnings [4]	Union hourly rates	Percent change in union rates	Percent unemployed [3 4]	Production worker employment (thousands) [4]
1945						
1946						
1947	[5] 1.68		1.89			1,764
1948	1.79	6.5	2.09	10.6	7.4	1,930
1949	1.86	3.9	2.18	4.3	11.9	1,925
1950	1.98	6.5	2.28	4.6	10.7	2,076
1951	2.15	8.6	2.42	6.1	6.0	2,309
1952	2.27	5.6	2.57	6.2	5.5	2,328
1953	2.43	7.0	2.71	5.4	6.1	2,310
1954	2.54	4.5	2.81	3.7	10.5	2,277
1955	2.60	2.4	2.90	3.2	9.2	2,410
1956	2.73	5.0	3.04	4.8	8.3	2,559
1957	2.89	5.9	3.19	4.9	10.0	2,442
1958	3.01	4.1	3.34	4.7	13.9	2,278

See footnotes at end of table, p. 138.

TABLE 5–12.—*Employment, unemployment, and earnings in the entire economy and in selected major sectors, 1945–58*—Continued

CLASS 1 RAILROADS

Year	Gross hourly earnings	Percent change in earnings	Percent unemployed [3]	Total employment (thousands)
1945	0.96		(1)	1,420
1946	1.09	13.5	(1)	1,359
1947	1.19	9.2	(1)	1,352
1948	1.30	9.7	(1)	1,327
1949	[7] 1.43	[7] 9.7	5.5	1,191
1950	1.57	10.2	3.4	1,221
1951	1.73	10.1	1.5	1,276
1952	1.83	5.8	1.7	1,226
1953	1.88	2.7	(1)	1,207
1954	1.93	2.7	5.7	1,065
1955	1.96	1.6	4.6	1,057
1956	2.12	8.2	2.5	1,043
1957	2.26	6.6	3.7	945
1958	2.44	8.0	9.7	841

[1] Not available.
[2] New definitions used for 1947 and subsequent years. Under the old definitions, the figure for 1947 was 3.6 percent.
[3] Old definitions.
[4] Contract construction.
[5] Excluding strike month of October.
[6] Estimated.
[7] Most of this increase was due to a shift from the 48- to the 40-hour week for many railroad workers.

Source: Bureau of Labor Statistics.

Turning first to the periods during which we have experienced the greatest amount of inflationary pressures—1946 to 1948, 1950 to 1953, and 1955 to 1957—the data consistently show that demand pressures were quite strong during the first two of these periods, but considerably less so in the last one. So far as the economy as a whole was concerned, the most striking single item of evidence reflecting the extreme shortage of labor in the immediate postwar years is the fact that total employment increased by 6.3 millions in the short span of 2 years, with another 1.2 million added in 1948. As a result, the huge demobilization program, which reduced the Armed Forces by 10 million men in 2 years, only resulted in a rise in the rate of unemployment from 1.9 percent in 1945 to less than 4 percent in 1947 and 1948.[18] The latter rate was still well within the normal range of "full employment" in peacetime and in fact probably rose as high as it did partly because of reconversion problems in some industries. There can be little doubt, therefore, that considerable demand pressures existed in the labor market through 1948. It was not until January of 1949 that the unemployment rate in the economy rose as high as 4.5 percent; by December of that year, the trough of the 1949 recession was reached, with an unemployment rate of 6.8 percent. In early 1950, unemployment began to decline and a level of 4.5 percent was again achieved in August 1950, shortly after the Korean outbreak. During the entire 3 years from January 1951 to December 1953, the unemployment rate rose above 3.5 percent in only 3 months; during 14 months of the period it was 3 percent or below. Under these circumstances, there is again no question but that demand pressures were very strong throughout the economy. These figures provide clear support for the widely held view that the considerable wage increases of the period

[18] In part, this transition was also aided by the withdrawal of approximately 3 million persons from the labor force after the war ended.

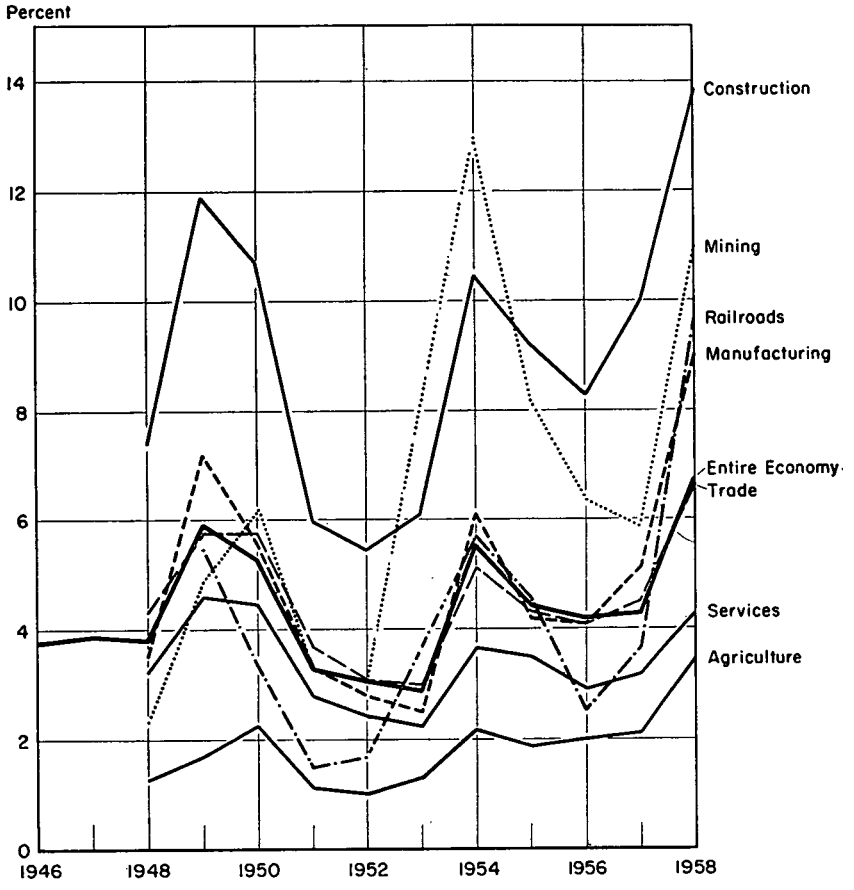
were primarily, if not exclusively, the result of "normal" competitive pressures.

The recovery from the 1954 recession was rapid until mid-1955, by which time the unemployment rate had fallen to slightly above 4 percent; it remained between 4 and 4.5 percent until late 1957. On the basis of the *overall* figures on unemployment, therefore, the average of about 4.3 percent for 1955–57 as contrasted to 3 percent for 1951–53 and slightly under 4 percent for 1946–48 suggests that demand pressures were *relatively* weaker in the later period. Nevertheless, the level of unemployment of approximately 4.3 percent during this period cannot be considered so high as to preclude the presence of demand pressures in the labor market.

Overall averages, however, can often be quite misleading. As table 5–12 and chart 5–2 indicate, the trends of both employment and rates of unemployment show considerably less favorable conditions in 1955–57 in the manufacturing, mining, construction, and railroad sectors than in the economy as a whole. This is largely due to the fact that unfavorable economic conditions in such sectors as agriculture, trade, and services are reflected far more in *under*employment than in unemployment, since so large a proportion of these groups is self-employed. There has also been a shift in the composition of demand away from the goods and toward the services producing industries in the economy.

CHART 5–2

RATES OF UNEMPLOYMENT, MAJOR SECTORS, 1946-'58



In any case, it seems clear that the degree of demand pressures in the more strongly unionized sectors weakened measurably after 1953. In manufacturing, production worker employment reached a peak of 13.8 million in that year, then dropped away to about 13 million in 1955–57; the rate of unemployment rose from an average of 3 percent in 1951–53 to close to 4.5 percent in 1955–57.

In coal mining and railroads, production worker employment showed very marked declines throughout almost the entire period. In the light of this, the rates of unemployment were remarkably low, doubtless reflecting a high rate of retirement of older workers under private and government pension programs combined with a very low rate of new entrants into these declining areas. Even so, rates of unemployment in mining ranged from 6 to 8 percent in 1955–57, compared to less than half that amount in 1948 and 1951–52 (no data were available before 1948 or for 1953), while in railroads, it averaged

3.6 percent in 1955–57 compared to 1.6 percent in 1951–52. The situation in construction was somewhat more favorable, with production worker employment continuing to grow from the early 1950's to the later period. Yet once again, unemployment rates ranged from 8 to 10 percent in 1955–57 contrasted to 5 to 6 percent in 1951–53 and 7.4 percent in 1948.

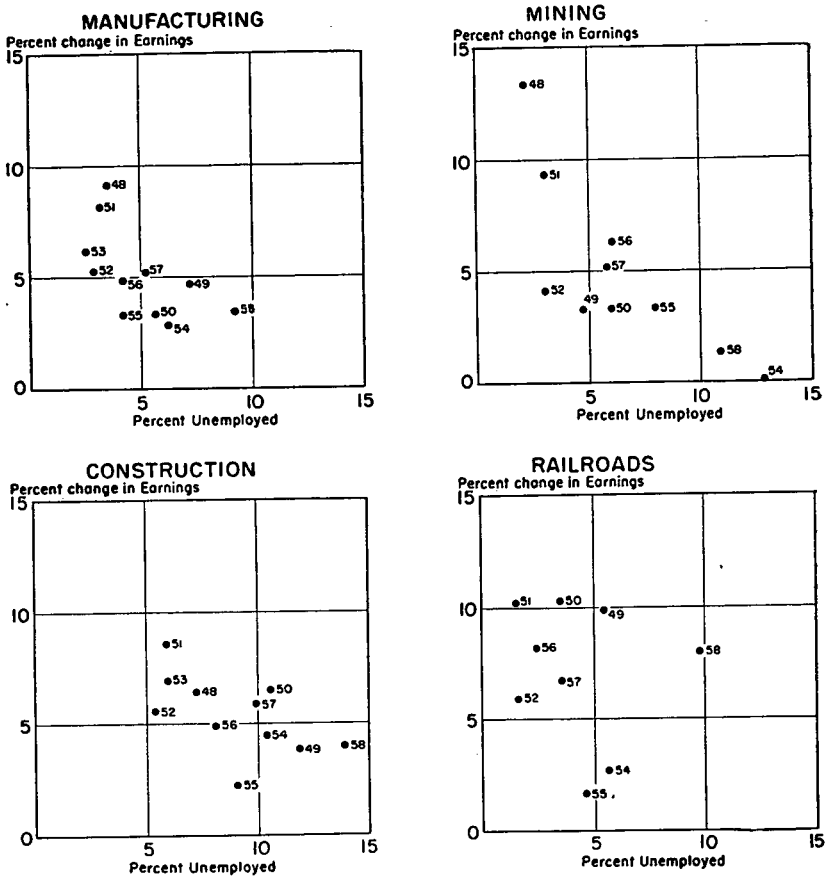
The conclusion seems indicated that demand forces were sufficiently strong during the immediate postwar and the Korean war periods to provide the dominant explanation of the upward thrust of wages, though union strength may well have been an added factor, particularly in railroads and some mining sectors. In the 1955–57 period, however, the demand side of the labor market was relatively weaker, though it may well have contributed to wage increases in important industries.

We turn now to a closer examination of the year-to-year relationship between the rate of unemployment and the rate of change in wages in these same major sectors. In the manufacturing, mining, and construction industries, the relationship is clearly evident (chart 5–3). In each of these, the lowest increases in wages consistently occurred during the recession years of 1949, 1954, and 1958 and in the immediate post recession years 1950 and 1955. The years of greatest increases were usually 1947 and 1948, and 1951–53.[19]

[19] The railroad data do not reflect this type of relationship; this is largely due, however, to the lag in wage adjustments which often resulted from the extensive procedural provisions of the National Railway Labor Act. The substantial rise in wages in 1949 is a case in point. Negotiations begun in 1948 between the railroads and the nonoperating employees resulted in lengthy delays, including the appointment of a Presidential fact finding board. In March 1949, a 7-cent increase was negotiated, plus a shift from a 48- to a 40-hour week at the same weekly pay, as of September 1, 1949.

CHART 5-3

RELATIONSHIP BETWEEN PERCENTAGE CHANGES IN EARNINGS AND RATES OF UNEMPLOYMENT, 1947-'58



Taken as a whole, the evidence supports the general conclusion that the level of unemployment—or alternatively, the degree of demand pressures in the labor market—does have an important effect on the rate of change in the wage level.

In itself, however, this is of limited significance. More important is the fact that wages also showed not only a very high degree of downward rigidity, but also a tendency to continue to move upward, even during periods of substantial unemployment. An analysis of the movement of hourly earnings in manufacturing, mining, construction, and railroads during the downswings of 1949, 1954, and 1958, indicates that in no instance did wages decline. Rather, they rose quite markedly in all sectors during 1958 and to a much lesser extent—with the exception of mining—in 1949 and 1954.[20] From January

[20] This was also true of negotiated rates in collective bargaining, except that most negotiated rates remained unchanged in 1949.

1949 to January 1950, earnings rose 1.5, 3.2, and 7.3 percent in manufacturing, construction, and railroads, respectively;[21] the figures for January 1954 to January 1955 were 2.1, 2.0, and 0.5 percent. These magnitudes are sufficiently small so that they might reflect mere shifts in the composition of the sample or other chance variations in the data. When considered in conjunction with the increases of 3.9, 3.3, 6.7, and 2.7 (in mining) percent from January 1958 to January 1959, however, it appears that a gradual upward movement rather than mere downward rigidity has characterized the postwar recessions, at least in the most recent instance. This is made more likely by the fact that the costs of various fringe benefits have probably also risen to some degree during these years. It appears that there has been an upward drift in wage-fringe costs in postwar recessions, becoming increasingly strong in each subsequent recession.

Does this experience provide evidence of the exercise of market power by strong unionism? So far as downward rigidity itself is concerned, the very probable answer is "No"; rather, what historical data are available indicate that similar rigidities have commonly been noted during mild downswings at times when the influence of unionism was virtually absent.[22] Thus, accoring to Creamer, average hourly earnings in all manufacturing remained steady and perhaps rose slightly during the 1923–24 and 1926–27 recessions, as well as during the first year of the 1929 depression. Historically, substantial downward movements in wages have occurred only during periods of prolonged and severe depressions, as in 1920–22 and 1929–33. *The downward rigidity of wages in the postwar period, therefore, is not so much a manifestation of strong unionism, as it is a reflection of the absence of any prolonged declines in business activity.*

Furthermore, downward wage rigidity may itself be an important element in preventing a mild recession from developing into a serious depression. It is by no means clear that a wage reduction during a downswing will yield a higher level of employment; rather, a cumulative deflation and perhaps rising unemployment may develop. It may well be, then, that downward wage rigidity is of some assistance in maintaining greater economic stability.

The data in table 5–12 and chart 5–3 also provide some insight into the question of the possibility of achieving price stability within a "tolerable" level of unemployment. It must be recognized to begin with that a rise in wages even in the face of considerable unemployment is not in itself inflationary. For one thing, producers may be willing or be forced to accept lower profit margins, at least within limits. More important is the fact that wage increases are counterbalanced to some extent by increases in productivity. So long as wages rise by no more than productivity, no increase in prices need occur. During recessions, however, productivity usually rises by less than its long run average, so that wage increases cannot be counterbalanced as easily.

It is also necessary to recognize that the level of unemployment which society is willing to accept as "tolerable" cannot be precisely defined. This is a value judgment which will vary among individuals.

[21] The figure for railroads is almost completely due to the shorter workweek introduced in 1949. However, a 7-cent increase was also negotiated by the nonoperating unions.

[22] Daniel Creamer, "Behavior of Wage Rates During Business Cycles," Occasional Paper 34, National Bureau of Economic Research, 1950, pp. 12 and 37.

Furthermore, what society as a whole is willing to accept may depend upon the characteristics of the unemployment as well as its amount. Thus, a 6 percent level of "frictional" unemployment, affecting many people for short periods of time, may be more acceptable than a 4 percent level, which is primarily "structural" in nature, affecting relatively few people for a much longer time. Again, a relatively high rate of unemployment may be more acceptable if accompanied by an adequate social insurance system than a relatively low rate without such insurance.

The long run possibilities of maintaining price stability by this approach are discouraging. During the recession years 1949, 1954, and 1958, the average aggregate rates of unemployment were 5.9, 5.6, and 6.8 percent respectively. During 1949, average hourly earnings in manufacturing and mining rose by less than 1.5 percent, while construction rose 3.2 percent (in railroads, an increase of 16 percent was almost all due to hours reduction). In 1954, earnings rose by 2 percent or less in all sectors; and in 1958, all sectors rose by an average of approximately 4 percent. This again suggests that the rate of increase in wages in recessions may be growing.

Past evidence suggests, therefore, that unemployment would have to *average* at least 6 percent to keep the rate of wage advance no greater than the rate of increase in productivity. Clearly, monetary and fiscal policies that yielded this result would be socially unacceptable.

The general conclusions suggested by this analysis of the movement of wages in the manufacturing, construction, mining, and railroad sectors are the following:

1. *In general, the degree of demand pressures in the labor market were less strong during the 1955–57 period than during the years from 1946 to 1948 and 1951 to 1953. Nevertheless, the rate of unemployment in 1955–57 was not so high as to preclude some role to demand, at least in some sectors of the economy.*

2. *Over the course of business cycles, the rate of increase in wages was related to the rate of unemployment—that is, wages increased most when the rate of unemployment was lowest.*

3. *During recessions, there was a marked downward inflexibility of wages, plus some upward movement particularly in 1958. Such downward inflexibility has long been characteristic of mild downturns and cannot be attributed primarily to the presence of strong unions. The continuing upward movement, however, is more suggestive of the influence of market power.*

4. *It is doubtful that a secular upward trend in wages and prices can be avoided with an average level of unemployment which is considered socially acceptable, given our present types of anti-inflation weapons.*

THE LABOR MARKET: THE STRUCTURE OF WAGES

To this point, we have been concerned with the movement of the general level of wages over the postwar period. Equally important to an understanding of the major factors underlying wage movements, however, is an analysis of the wage *structure*—that is, of the relationship between the wages in different industries. In order to do this, the changes in wages in 26 separate industry groups were tested against several possible explanatory variables—changes in employment, output, productivity, profits, concentration ratios (a rough measure of the degree of competition in the product market), and others. The 26 industries included 19 manufacturing and 5 mining sectors, class I railroads, and contract construction.[23]

Before proceeding with an analysis of these tests, however, it is interesting to note to begin with that wages in these different industries have risen by very similar amounts, particularly during 1947–51 and 1955–58. Even considering the entire postwar period, almost two-thirds of these sectors had increases falling within a range of 70 to 90 percent. These figures are shown in chart 5–4. It is evident to begin with, therefore, that the range within which any *differentiating* variables can operate is relatively small; by the same token, equalizing factors appear to have been quite strong.

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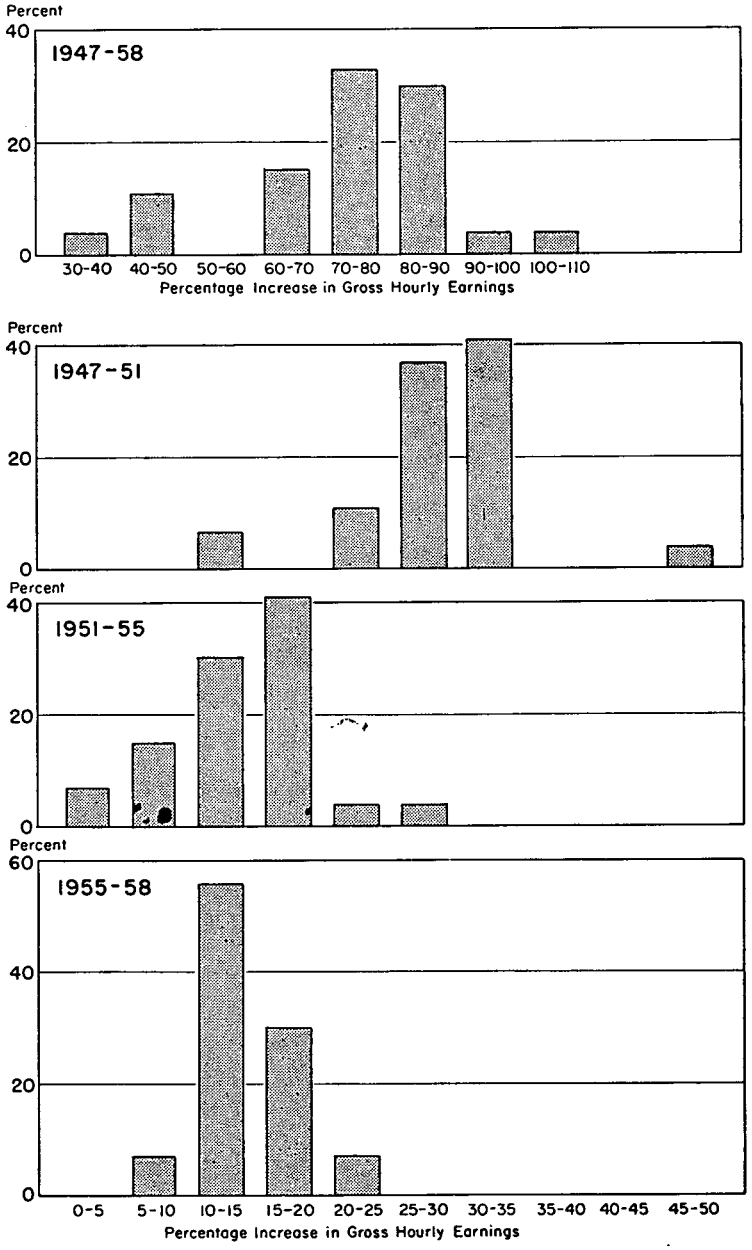
[23] For the reader who may be interested in methodology, the 26 industries used were all 2-digit standard industrial classifications. For 19 manufacturing industries both cross section and time series regressions were computed. For the 5 mining sectors and railroads, only time series were run. The decentralized nature of the construction industry required a more qualitative evaluation.

CHART 5-4

DISTRIBUTION OF INDUSTRIES BY AMOUNT OF WAGE INCREASES, SELECTED PERIODS 1947-'58



Source: Bureau of Labor Statistics.

The results of these statistical tests carried out for manufacturing, mining, and railroads can be summarized briefly:

1. No significant relationship whatever was found between annual percentage changes in hourly earnings and annual percentage changes in employment in each industry. Nor was this relationship improved by utilizing changes over particular subperiods or for the entire postwar period.

2. No important relationship was found between changes in wages and changes in output.

3. No relationship was found between changes in wages and changes in productivity per production worker man-hour.[24]

4. *Within the 19 manufacturing industries, the most important factors which were related to wage changes were (1) the level of profits, measured as a rate of return on equity, and (2) the degree of competition in the product market, as measured by 1954 concentration ratios.*[24a] *The relationships to profits and concentration ratios were very much stronger after 1951, however. The basic data are presented in tables 5–13 and 5–14.*

In mining and railroads, however, the relationship of wages to profits did not appear and concentration ratios were not available.

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[24] As noted, these findings are based upon only 25 industry observations, hence, would normally be subject to considerable qualification on grounds of lack of homogeneity within the units. A similar test using 61 smaller (3-digit) industries, however, showed identical results. See A. Conrad, "The Share of Wages and Salaries in Manufacturing Incomes, 1947–56," Study Paper No. 9

[24a] See notes to table 5–14 for the sources of profits data in manufacturing and of concentration ratios. Profits figures for mining are from reports of the Internal Revenue Service, and for railroads from the ICC.

TABLE 5–13.—*Changes in earnings, profit rates, concentration ratios, and estimated union strength, 1947–53 and 1953–58*

	1947–53			
	Percent change in straight-time earnings	Profit rates (average before taxes)	Concentration ratio	Estimated union strength
Manufacturing:				
Chemicals	49.2	26.0	59.4	25–50
Petroleum refining	47.6	19.1	99.1	50–75
Primary metals	47.4	22.8	81.1	75–100
Food	46.0	20.2	22.4	25–50
Paper	45.5	26.2	5.0	50–75
Printing	45.0	23.3	2.3	75–100
Instruments	44.9	24.6	69.9	50–75
Stone, clay, and glass	44.3	26.6	57.9	50–75
Lumber	44.0	24.4	1.5	25–50
Fabricated metals	43.9	26.3	19.3	50–75
Nonelectrical machinery	43.8	26.6	31.1	75–100
Furniture	41.9	26.0	7.3	25–50
Transportation equipment	40.1	33.1	83.2	75–100
Tobacco	38.6	20.0	100.0	25–50
Electrical machinery	38.2	31.2	72.2	75–100
Rubber	37.5	25.5	51.2	75–100
Textiles	31.4	20.3	11.9	0–25
Leather	31.1	15.5	2.3	25–50
Apparel	18.0	13.6	5.7	75–100
Nonmanufacturing:				
Class I railroads	58.5	7.9	[1]	75–100
Metal mining	56.1	15.1	[1]	75–100
Bituminous mining	51.6	10.5	[1]	75–100
Nonmetallic mining	51.4	17.6	[1]	25–50
Petroleum and natural gas	50.0	15.6	[1]	25–50
Contract construction	50.0	[1]	[1]	75–100
Anthracite mining	49.8	5.3	[1]	75–100
	1953–58			
Manufacturing:				
Primary metals	31.2	21.0	81.1	75–100
Tobacco	28.7	24.0	100.0	25–50
Chemicals	26.7	24.3	59.4	25–50
Paper	26.3	19.9	5.0	50–75
Food	25.2	17.7	22.4	25–50
Fabricated metals	24.9	18.9	19.3	50–75
Nonelectrical machinery	24.6	20.9	31.1	75–100
Instruments	24.6	23.8	69.9	50–75
Petroleum refining	24.3	14.9	99.1	50–75
Electrical machinery	24.1	24.6	72.2	75–100
Transportation equipment	24.1	30.7	83.2	75–100
Rubber	23.0	22.7	51.2	75–100
Stone, clay, and glass	22.9	24.4	57.9	50–75
Printing	18.1	21.6	2.3	75–100
Furniture	16.1	18.7	7.3	25–50
Lumber	15.9	14.0	1.5	25–50
Leather	14.9	15.6	2.3	25–50
Apparel	13.7	12.8	5.7	75–100
Textiles	9.7	9.2	11.9	0–25
Nonmanufacturing:				
Class I railroads	29.8	6.9	[1]	75–100
Contract construction	23.8	[1]	[1]	75–100
Bituminous mining	21.8	[2] 4.0	[1]	75–100
Nonmetallic mining	21.8	[2] 13.1	[1]	25–50
Petroleum and natural gas	21.7	[2] 13.4	[1]	25–50
Metal mining	21.6	[2] 14.9	[1]	75–100
Anthracite mining	18.5	[2] 3.3	[1]	75–100

[1] Not available.
[2] Profits in mining sectors are based on 1953–56 averages.

TABLE 5–14.—*Cross-section correlation coefficients between changes in straight-time hourly earnings, profits, concentration ratios, and production worker employment in manufacturing industries, 1947–58* [1]

Year	Profits before taxes [2]	Profits after taxes [2]	Concentration ratio [3]	Production-worker employment
1947–48	0.012	0.138	0.226	0.417
1948–49	.616	.777	.336	−.050
1949–50	−.087	−.097	.033	−.563
1950–51	.178	.127	.045	.171
1951–52	.598	.707	.283	.087
1952–53	.550	.689	.423	.249
1953–54	.628	.520	.463	.203
1954–55	.514	.600	.383	.233
1955–56	.055	.146	.428	−.197
1956–57	.546	.544	.607	.230
1957–58	.392	.484	.549	−.576

[1] The 0.05 level of significance is 0.4555.
[2] Profits were measured as a percentage of stockholders' equity. Data are from FTC–SEC Quarterly Financial Reports for Manufacturing Corporations.
[3] Concentration ratios were measured by the proportion of the total value of the products produced in each 2-digit classification represented by 4-digit classifications in which the largest 8 firms accounted for over 50 percent of the value of the product. The basic data are from "Concentration on American Industry," Senate Subcommittee on Antitrust and Monopoly.

4. Qualitative judgments regarding the strength and philosophy of unionism in several sectors of the economy suggests that this was also a contributing factor in particular industries, sometimes reinforcing and sometimes being limited by the variables noted above. *There was no generally applicable relationship evident between union strength and wage changes, however.* This is indicated by the figures in table 5–13, in which industries are ranked in accordance with their percentage increases in earnings during two major subperiods, together with data on estimated union strength,[25] profits, and concentration ratios in those industries.

WAGE TRENDS IN NONMANUFACTURING INDUSTRIES

The wage trends in some of the nonmanufacturing industries shown in table 5–13 are also worth special comment. It will be recalled that in railroads, bituminous coal, and anthracite, employment and output dropped very sharply and almost continuously during the entire postwar period. Yet the railroad workers enjoyed the greatest increase in wages of any sector included in the analysis. Similarly, wage increases in coal mining exceeded those in every manufacturing sector from 1947 to 1953, although they fell somewhat behind the average of all manufacturing after that time.

It is extremely difficult to explain such a relatively rapid rise in wages in these areas by tightness in the labor market, particularly after 1953. Up to that point, it is possible that the low rate of unemployment in the economy as a whole was such as to encourage an exodus from these industries, particularly the mining sectors. After 1953, however—and probably to some extent before that as well—the conclusion is strongly suggested that wages have been considerably affected by the strong market power of the unions in these industries.

[25] Unfortunately, the most recent study of union strength was made in 1946. See "Extent of Collective Bargaining and Union Recognition, 1946," Monthly Labor Review, May 1947. The estimates in table 5–13 are based largely upon these data; in general, however, the strength of unions in most industries has probably not changed greatly since that time.

Average hourly earnings in the construction industry also rose by considerably more than those in manufacturing from 1947 to 1953 and by an amount about equal to those in manufacturing from 1954 to 1958. The nature of the construction industry is such as to create conditions which are very favorable to the exercise of market power by unions. First, the industry is strongly organized by several unions representing highly skilled craftsmen, who are limited in supply. Second, the competitive area of the product market is almost completely local, so that no problem of outside competitive pressures or of "runaway" shops exists. Third, bargaining is conducted very largely by autonomous local unions, subject to considerable interlocal rivalries. And finally, the settlements negotiated in the residential sector of the industry are often determined by the terms established by the same local unions in the industrial and commercial sectors, where the economic environment is generally more favorable to relatively liberal wage-fringe adjustments. Taken together, all these considerations would suggest that union power has been a factor underlying the relatively high wage increases in the industry.

On the other hand, however, there was considerable evidence presented in the previous section of this chapter that output and employment trends were extremely favorable, at least until 1955, and that they continued to be quite favorable in nonresidential construction through 1956 and 1957. Under these conditions, it is difficult to assert that demand considerations did not also play an important role in the rising wages and prices in this industry. On the basis of the available data, it is impossible to pass judgment on the relative importance of demand versus market power in the determination of wages in the construction industry.

WAGE "PATTERNS" IN THE POSTWAR PERIOD

The general findings noted above are also given support by an analysis of the nature of negotiated collective bargaining settlements from 1946 to 1958. One of the most interesting phases of postwar labor markets has been the development of so-called "pattern bargaining," which may be defined as the process of negotiating a collective bargaining agreement on the basis of the same or very similar provisions to those already established in a prior, or "key" bargain. It has been argued that such patterns contribute to the inflationary process since the "key" settlement is usually made in an industry where conditions are favorable to a "liberal" agreement. Since this becomes the pattern for other industries—including perhaps, nonunion areas—the net effect is inflationary.

Table 5–15 summarizes the wage-fringe increases negotiated in several industries, or in companies which were generally representative of entire industries, during major postwar periods. For purposes of analysis, these settlements have been separated into groupings according to the concentration characteristics of the industries involved. In addition, nonmanufacturing industries have been separated out.

TABLE 5–15.—*Wage and fringe adjustments in selected industries, 1946–58*

Company or industry	Collective bargaining settlements 1946–49
High concentration manufacturing:	
United States Steel (key)	46½ cents.[1]
General Motors (key)	44 cents plus 6 holidays.[2]
Ford (key)	42½ cents plus 6 holidays.
Chrysler (key)	43 cents plus 6 holidays.
International Harvester	40½ cents plus 6 holidays.
Rubber (4 companies)	41 cents plus 6 holidays.
General Electric	42 cents plus 6 holidays.
Armour	42½ cents plus 8 holidays.
Aluminum Co. (steelworkers)	44 cents (estimated; actual increases usually involved range of rates) plus noncontributory health and welfare.
Anaconda Copper	42 cents plus 6 holidays.
Lockheed	40 cents plus 6 holidays previously in effect plus noncontributory health and welfare.
Martin	33 cents plus 7 holidays.
North American	33½ cents plus 6 holidays.
Bethlehem Shipbuilding	37 cents.
Pacific Shipbuilding	41 cents (new construction).
Sinclair Oil	67½ cents plus 6 holidays.[3]
American Viscose	45 cents plus 6 holidays.
Low concentration manufacturing:	
Full Fashioned Hosiery	35½ cents plus 5 holidays.
Northern Cotton Textiles	42 cents plus 6 holidays.
American Woolen	45 cents plus 6 holidays.
Men's clothing	40 cents plus 6 holidays previously in effect.
Women's clothing	42 cents plus 6½ holidays previously in effect.[4]
International Shoe	36 cents plus 6 holidays.
Massachusetts Shoe	32½ cents plus 6 holidays.
Nonmanufacturing:	
Anthracite	49½ cents.[5]
Bituminous coal	46 cents.
Railroad trainmen	44 cents.
Railroad nonoperating	41 cents.
Atlantic longshoring	63 cents.
Pacific longshoring	67 cents.

SETTLEMENTS, 1950–54

High concentration manufacturing:	
U.S. Steel (key)	45½ cents plus noncontributory pensions plus contributory health and welfare plus 6 holidays.
General Motors (key)	44 cents plus noncontributory pensions plus contributory health and welfare.
Ford-Chrysler (key)	43 cents plus noncontributory pensions plus contributory health and welfare.
International Harvester	41 cents plus noncontributory pensions plus contributory health and welfare.
Rubber	43½ cents plus noncontributory pensions plus contributory health and welfare.
General Electric	43 cents plus contributory pensions plus contributory health and welfare plus 1 holiday.
Armour	44½ cents plus noncontributory pensions plus noncontributory health and welfare.
Aluminum Co. of America	49½ cents plus noncontributory pensions plus 6 holidays.
Anaconda Copper	48 cents plus noncontributory pensions plus contributory health and welfare.
Lockheed	46 cents plus noncontributory pensions previously in effect.
Martin	53½ cents plus noncontributory pensions plus contributory health and welfare.
North American	52½ cents plus noncontributory pensions plus contributory health and welfare previously in effect.
Bethlehem Shipbuilding	52½ cents plus noncontributory pensions plus contributory health and welfare plus 6 holidays.
Pacific Shipbuilding	61 cents (new construction) plus noncontributory health and welfare.
Sinclair Oil	43 cents plus contributory pensions previously in effect plus contributory health and welfare plus 1 holiday.
American Viscose	25 cents plus contributory pensions previously in effect plus noncontributory health and welfare previously in effect.

See footnotes at end of table, p. 152.

TABLE 5–15.—*Wage and fringe adjustments in selected industries, 1946–58*—Con.

Company or industry	Collective bargaining settlements
SETTLEMENT 1950-54—Continued	
Low concentration manufacturing:	
Full Fashioned Hosiery	No change (estimated; actual increases usually involved range of rates) plus noncontributory pensions plus noncontributory health and welfare previously in effect.
Northern cotton textiles	17 cents plus noncontributory health and welfare previously in effect.
American Woolen	16 cents plus noncontributory health and welfare previously in effect.
Men's clothing	25 cents plus noncontributory health and welfare previously in effect plus noncontributory pensions previously in effect.
Women's clothing	28 cents plus noncontributory health and welfare previously in effect plus noncontributory pensions previously in effect.
International Shoe	20½ cents plus noncontributory health and welfare.
Massachusetts Shoe	18 cents plus noncontributory health and welfare previously in effect plus ½ holiday.
Nonmanufacturing:	
Anthracite	57 cents plus noncontributory pensions previously in effect plus noncontributory health and welfare previously in effect.
Bituminous	53 cents plus noncontributory pensions previously in effect plus noncontributory health and welfare previously in effect.
Railroad trainmen	34½ cents (roadmen).[7] 49 cents (yardmen).[7]
Railroad nonoperating	25½ cents plus contributory health and welfare plus 7 holidays.
Atlantic longshoring	54 cents plus noncontributory pensions plus noncontributory health and welfare.
Pacific longshoring	39 cents plus noncontributory pensions plus contributory health and welfare.
SETTLEMENTS 1955–58	
High concentration manufacturing:	
U.S. Steel (key)	59½ cents plus supplementary unemployment benefit plan plus 1 holiday.
General Motors (key)	47½ cents plus supplementary unemployment benefit plan plus 1 holiday.
International Harvester	49 cents plus supplementary unemployment benefit plan plus 1 holiday.
Rubber	43 cents plus supplementary unemployment benefit plan plus 1 holiday.
General Electric	40 cents estimated.
Armour	54 cents.
Aluminum Co. of America	63 cents plus supplementary unemployment benefit plan plus 1 holiday.
Anaconda Copper	37 cents plus 1 holiday.
Lockheed	39 cents plus 1 holiday.
Martin	41 cents (estimated; actual increases usually involved range of rates).
North American	36 cents plus 1 holiday.
Bethlehem Shipbuilding	66 cents plus 1 holiday.
Pacific Shipbuilding	51 cents plus 6 holidays.
Sinclair Oil	41½ cents (estimated; actual increases usually involved range of rates) plus 1 holiday.
American Viscose	13½ cents.
Low concentration manufacturing:	
Full Fashioned Hosiery	Association bargaining discontinued after 1954.
Northern cotton textiles (Berkshire-Hathaway).	7½ cents.[8]
American Woolen	Out of business after 1954.
Men's clothing	12½ cents plus 1 holiday.
Women's clothing	14 cents.
International Shoe	14½ cents plus noncontributory pension.
Massachusetts Shoe	18 cents plus ½ holiday.
Nonmanufacturing:	
Anthracite	21 cents.
Bituminous	50 cents.
Railroad trainmen	52½ cents.
Railroad nonoperating	51½ cents.
Atlantic longshoring	31 cents plus 5 holidays.
Pacific longshoring	42 cents.

[1] Additional 5 cents increase in January 1947 as result of job classification study.
[2] Deviation of 1 cent from pattern as result of annual improvement factor—cost of living adjustments, 1948–49.
[3] Includes 25 cents negotiated in late 1945 prior to 1946 pattern.
[4] New York City coat and suit industry.
[5] Paid holidays applicable to time workers only.
[6] The effective hourly increase was much greater than shown because of the introduction of pay for travel time and the reduction of the workweek without reduction in total pay.
[7] In the railroad industry, contributory pensions and some noncontributory sickness benefits are provided by Federal legislation rather than through collective bargaining.
[8] Association bargaining discontinued after 1954. The Berkshire-Hathaway Co. was substituted because it had been a major concern in the previous association.

Source: Wage Chronology Series, Bureau of Labor Statistics. Additional information was obtained from personal correspondence and data published by the Bureau of National Affairs.

The results are quite striking. During the postwar period, 1946–49, there were a total of three "rounds" of wage increases, with the "key" bargains usually attributed either to the steel or the automobile[26] industry. *With few exceptions, other manufacturing industries or companies, regardless of their product market characteristics, followed this pattern with deviations of only a few pennies.* In the few instances of substantial downward modifications of the pattern in the high concentration sectors (aircraft and shipbuilding), the differences were made up in the 1950–55 period. Both coal mining and longshoring, on the other hand, exceeded the pattern by considerable amounts.

The 1950–54 period, however, showed important deviations beginning to develop. Among the key bargains, the automobile industry adopted an *automatic* cost of living annual improvement factor approach (plus pensions and welfare) throughout. The steel industry, on the other hand, negotiated new contracts annually or semiannually. Over the 5 years involved, the latter approach yielded a small net advantage.

Of considerably greater importance for our purposes, however, is the fact that *the nonconcentrated sectors—textiles, clothing, and leather (shoes)—fell far below the pattern level.* In addition, the one company in the concentrated sector which also fell far below—American Viscose, manufacturers of rayon yarn—was subject to severe competition from the development of other synthetic fibers. *In effect, those manufacturing industries in which competition in the product market was severe and in which profit levels were being seriously curtailed, did not match the pattern established by the more concentrated and more profitable industries.*

The nonmanufacturing industries, however, continued to meet or exceed the pattern. This is particularly noteworthy in coal mining and railroads, where profits were low and employment and output sharply declining. *It should also be noted, however, that in these instances, the union was sufficiently strong to control the supply of labor to virtually the entire industry, including potential new entrants into the product market.*

This general configuration continued through 1955–58, but with some significant deviations. The textile and clothing industries (including American Viscose) and shoe firms continued to reach settlements far below the level set in the better situated industries; one major woolen concern discontinued operations and two employers' associations in hosiery and cotton were discontinued. On the other hand, both the railroad and bituminous coal industries continued to meet or exceed the pattern despite adverse economic conditions; anthracite coal, however, fell behind. Within the more profitable concentrated sectors, more diversification also developed, although the bulk of settlements still ranged between 40 and 50 cents per hour. Exceptionally large increases, however, were negotiated in three industries organized by the steel union—steel, aluminum, and Atlantic coast shipbuilding (Bethlehem Steel Co.); in these sectors, wage increases were 59½, 63, and 66 cents respectively (plus fringes) over the 4-year period.

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[26] In fact, several settlements often precede these "key" bargains each year. Nevertheless, the size and status of these particular industries are such that no "pattern" is considered as established until one of these industries has negotiated its contract. In addition, several basic industries will normally postpone action until the steel or automobile contract is signed.

Developments during 1955–58

The sequence of developments during the 1955–58 period is also of very considerable interest. In the summer of 1955, the "key" bargain was negotiated in the automobile industry, which was enjoying its second most profitable postwar year, with sales of over 7 million cars. The data in table 5–16 indicate that profits before taxes represented a 46-percent return on stockholders' equity; profits after taxes were 21 percent. With this level of production and profits as a backdrop, a 3-year contract was signed, embodying an annual improvement factor of 2½ percent (approximately 6 cents), an automatic cost-of-living clause, plus fringes estimated at about 12 cents per hour. Shortly thereafter, the steel industry negotiated a wage increase, under a wage reopener clause, in a contract which expired in 1956. Output in steel had also risen sharply from the 1954 recession and profits were also at close to record highs. Table 5–16 shows that in 1955 profits before taxes on equity were 27 percent; after taxes, 13.5 percent. These levels had been only slightly exceeded in the 1950–51 Korean war boom. Once again, this economic environment led to a wage increase averaging 15 cents per hour. Before the year was out, the leading firms in several other major industries which were enjoying favorable conditions had negotiated similar contracts, many on a 3-year basis.

TABLE 5–16.—*Profits in the steel and automobile industries, 1947–58*

	Profits before taxes on equity	Profit after taxes on equity	Profits before taxes as percent of sales	Profits after taxes as percent of sales	Profits before taxes plus depreciation as percent of sales	Profits after taxes plus depreciation as percent of sales
MOTOR VEHICLES						
1947	27.9	15.6	10.4	5.8	12.3	5.8
1948	32.9	18.7	11.8	6.7	13.5	8.4
1949	35.8	20.9	13.2	7.7	14.9	9.4
1950	51.8	24.6	17.1	8.1	18.6	9.6
1951	39.5	14.1	13.2	4.7	14.6	6.2
1952	36.8	13.6	12.6	4.7	14.3	6.4
1953	37.9	13.6	11.0	3.9	12.6	5.6
1954	29.4	13.9	10.8	5.1	13.0	7.3
1955	46.1	21.1	15.1	6.9	17.2	9.0
1956	27.1	13.0	10.8	5.2	13.6	7.9
1957	28.1	14.0	10.8	5.4	13.9	8.5
1958	14.4	8.1	7.0	4.0	10.9	7.9
IRON AND STEEL						
1947	19.8	12.1	10.9	6.7	----------	----------
1948	17.0	14.7	12.3	7.5	----------	----------
1949	17.0	9.9	10.9	6.4	14.2	9.7
1950	28.1	14.2	15.1	7.9	18.3	11.1
1951	34.0	12.3	16.0	5.8	18.7	8.5
1952	17.6	8.5	9.3	4.5	12.9	8.1
1953	25.5	10.7	12.4	5.3	16.5	9.4
1954	16.0	8.1	10.5	5.3	16.2	11.0
1955	27.1	13.5	14.5	7.2	19.1	11.8
1956	25.1	12.7	12.9	6.5	17.2	10.8
1957	22.7	11.4	13.0	6.5	17.3	10.8
1958	14.2	7.2	10.5	5.3	15.4	10.2

In 1956, the key bargain open for negotiation was in steel. Both production and employment were at about their 1955 levels; profits were still high, a major investment boom was developing in the machinery sectors, and the pattern effect of the previous year's settlement in automobiles and other industries was strong. The result was

an extremely favorable settlement for the steelworkers—a 3-year contract including major fringe benefits, automatic cost of living adjustments, plus a 9-cent annual improvement factor in 1957 and 1958. Similar long-term contracts were signed in aluminum and somewhat less liberal terms were negotiated elsewhere.

The results of these two "patterns," negotiated during periods of high output and profits, continued to be felt throughout the declining years of 1957 and 1958. *In both of these years, despite marked declines in output and employment, wage increases were automatic in several basic sectors of the economy—automobiles, farm equipment, meatpacking, electrical equipment, aircraft, steel, aluminum, copper, bituminous coal, railroads, and others.* The automobile contract, which terminated in the midst of the sharp recession in 1958, was renewed to provide for an increase of 2½ percent per year plus cost of living adjustments over the next 3 years. And in 1959, the steel contract was again being negotiated in the context of a developing boom.

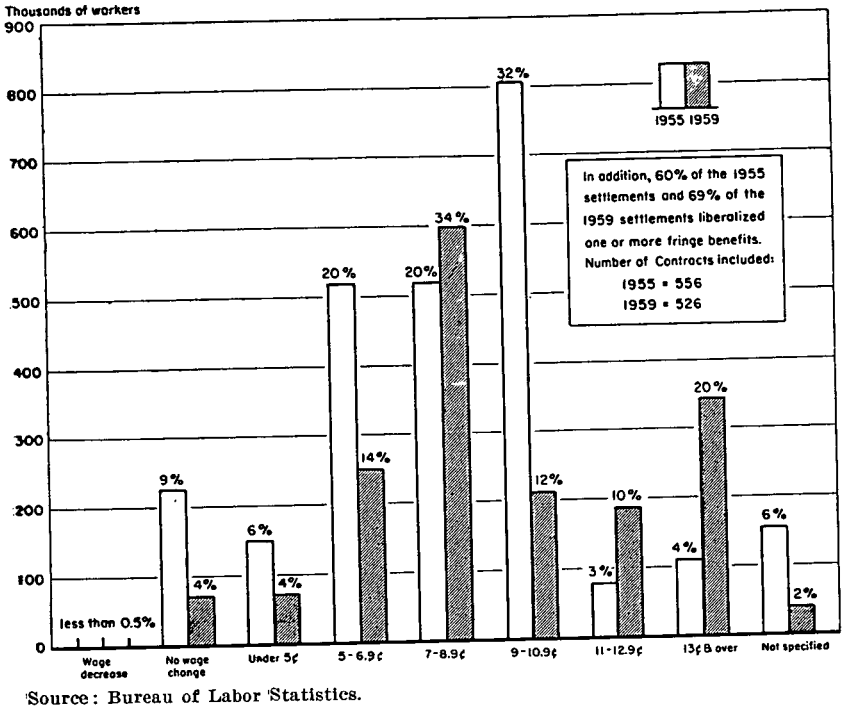
This sequence of events appears to provide considerable support to the view that the wage increases of the 1955–58 period can be traced back to the automobile-steel expansions of 1955 and to the negotiation of long-term key bargains at a time when economic conditions were quite favorable.

By the same logic, however, one would expect that the long-term contract in automobiles, negotiated with minimum terms in the midst of a recession, may create a pattern which will yield *lower* wage increases during subsequent boom years than would be the case under annual contract renewals with strong unionism. This possibility, however, is given very little support by a comparison of the wage-fringe increases negotiated during the first 6 months of 1959, as compared to the same period in 1955. These periods were somewhat comparable since they both represented approximately the same phase of fairly sharp recovery from previous recessions. From December 1954 to June 1955, unemployment declined from 5 to 4.1 percent, seasonably adjusted; in the same period, December 1958 to June 1959, the rate fell from 6.1 to 4.9 percent.

Chart 5–5 provides a comparison of the number of employees covered by negotiated contracts who received wage increases within specified ranges in the first 6 months of 1955 and 1959. In 1955, 72 percent of employees received wage increases of 5 to 11 cents, compared to only 60 percent in early 1959. However, a full 30 percent received more than 11 cents in 1959, contrasted to only 8 percent in 1955; contrariwise, 15 percent received less than 5 cents in 1955 compared to 8 percent in 1959. An approximate weighted average of wage increases for 1955 was 7.6 cents, in 1959, 9.2 cents. This increase of about 20 percent approximates the rise in hourly earnings from 1955 to 1959; relatively, therefore, the 1959 increase was no greater than 1955. On the other hand, the rate of unemployment was almost 1 percentage point greater in the first 6 months of 1959 as compared to 1955. And finally, 69 percent of the 1959 settlements also liberalized one or more fringe benefits as contrasted to 60 percent in the first 6 months of 1955, although the costs of the 1959 fringes may well have been below those of 1955. Nevertheless, the weight of evidence gives very little support to the view that the rate of advance in wage-fringe costs has been slower during the 1959 upswing.

CHART 5–5

NEGOTIATED SETTLEMENTS, FIRST SIX MONTHS 1955 AND 1959



Source: Bureau of Labor Statistics.

The above chart relates to 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 chart excludes—

Settlements involving fewer than 1,000 workers.

Settlements in construction, the service trades, finance, and government.

Instances in which contract reopening privileges were not exercised.

Wage increases and changes in supplementary practices that went into effect during the period but that were negotiated earlier (for example, deferred wage increases, cost-of-living adjustments, or annual improvement factor increases).

One final possible qualification should be noted. The data on which these comparisons are based excludes contracts which contained reopening clauses that were not utilized—that is, contracts in which no increases occurred because the union chose not to request one. They also exclude several types of settlements noted in the chart. It is doubtful that this would affect the data in any important way.

THE LABOR MARKET: GENERAL CONCLUSIONS

It is clear from the preceding discussion that no one explanation underlies the continuing upward movement of wages in these sectors of the economy; rather, varying factors have been dominant during

different periods and in different industries. The following general observations appear to be indicated:

(1) *At least up to 1951, with the exception of the 1949 recession, the general level of employment and profits was sufficiently high in virtually all industries that most, if not all, of the wage increases of the period were caused by pressures of demand.* Wages in all industries moved closely together. The downward rigidity of wages in the 1949 recession was not unusual for a mild downturn of short duration.

(2) *After 1951, divergences in wage movements began to develop, based primarily on the level of profits in various industries, but also attributable in a few industries to the strength of the union.* In the manufacturing sector, wage increases in those industries characterized by considerable competition in the product market and suffering declining profits, began to fall considerably behind the general increases being introduced elsewhere. This occurred in some strongly unionized industries, such as men's and women's clothing, as well as elsewhere. In the coal mining and railroad industries, on the other hand, both profits and employment were declining, yet wage increases were substantial. In these areas, union strength appears to have been an important contributing factor; it is interesting to note that these are also industries in which there is very little possibility of new nonunion entrants being established in the industry. This is probably the basic reason for the difference in the approach of the clothing unions as contrasted to the coal or railroad organizations.

For most industries, however, the years from 1951 to 1953 continued to remain quite profitable, particularly those that were not subject to serious competitive pressures. In these sectors, wages continued to rise by approximately equal amounts, often in line with the "pattern" established in the key bargains of strongly unionized sectors. In these latter industries both employment and profits continued to remain favorable during the Korean war period; thus it is again doubtful that the rate of increase in wages was much, if at all, in excess of what would have developed in any case.

(3) *Beginning with the 1954 recession, however, and again through the years 1956 to 1958, the role of collective bargaining appears to have been much stronger, though largely in an indirect manner.* The downward rigidity of 1954 was, as before, quite typical of such brief downturns; to some degree, however, an upward movement was beginning to be "built in" by the automatic increases included in the automobile and some other contracts. This "pattern" did create a presumption for a wage increase of from 3 to 5 cents during the year, even in those industries which had not contracted for it.

The continuing upward wage movements of 1957–58, in the face of a higher rate of unemployment, declining production worker employment (which had not recovered its 1953 level even in the strong recovery of 1955), and a very slow rate of increase in output and productivity, cannot be explained on the basis of the demand for labor or for output. This is surely even more true in coal mining and railroads; the situation in construction, however, was generally more favorable.

How, then, can the 1957–58 wage movements be explained? It has already been noted that most of the wage increases in the manufacturing industries is traceable back, directly or indirectly, to the bargains negotiated in 1955, particularly in automobiles, when profits were

extremely high, output was expanding rapidly, and expectations were extremely favorable. *Within this economic environment, long term contracts were signed which provided not only for liberal wage-fringe improvements immediately, but for continuing increases into the following 2 years.*

The 1956 agreements, led by the highly profitable steel industry, were even more favorable, both for the immediate year and into 1959. Output and production worker employment in steel had remained at about 1955 levels through the first two quarters of 1956; profits had been high in 1955 and promised to remain so in 1956; and an investment boom was developing in the machinery sectors. Once again, a 3-year "key" bargain was signed in an industry with high profits and strong market power in the product market. As it turned out the 1955-early 1956 economic environment changed drastically in 1957 and 1958; the indirect effects of the negotiations of the earlier years, however, remained. And the preliminary evidence available regarding the trends in early 1959 suggests that the 1955 experience cannot be considered as exceptional.

In an important sense, therefore, it may be said that the wage movements of 1957–58 can be related to strong collective bargaining; in an equally important sense, however, it is also true that the key bargains were negotiated at a time when demand pressures were relatively strong. But even more basic to the developments of the period was the fact that the two major industries from which the wage patterns of the period emerged were industries whose product market conditions were such that profits were high, competitive conditions weak, and the ability of the industry to negotiate substantial wage increases into the future without serious concern for the adverse effects of competition assured. It was, then, a combination of market power in both the product and labor markets, initiated by rising demand and high profits which accounted for the developments in these industries. Similarly, the increases negotiated in these circumstances did tend to be followed by other industries (both union and nonunion) in which the level of profits and the characteristics of competition in the product market were such as to permit similar wage-fringe adjustments without fear of serious adverse economic reactions. Where the economic environment was unfavorable, however, particularly in terms of actual or potential competition, the "pattern" tended to break down.

SUMMARY

The preceding analysis of the postwar inflation in the United States has brought out several points which may be summarized as follows:

1. The greatest increases in prices occurred during the post-World War II boom from 1946 to 1949 and the Korean war period from mid-1950 to 1953. Taken together, they accounted for over 75 percent of the total postwar inflation. These increases were primarily caused by the high aggregate demand in both the product and the labor market.

2. A third period of inflation, from 1955 to 1959, accounted for the remaining 25 percent of the postwar inflation. This rise in prices, however, was largely concentrated in a few important sectors of the economy, particularly in steel, machinery, construction, and services.

3. Because the existing price indexes do not adequately reflect quality improvements or productivity increases, these indexes tend to overstate the amount of inflation we have experienced, particularly since 1955. Nevertheless, some inflationary pressure has probably occurred.

4. The major burden of inflation has fallen on groups whose incomes are relatively fixed and who are unable to supplement their incomes by finding employment. By far the greatest losses of real income have been suffered by older persons living on their past savings or on pensions.

5. Since 1955, approximately three-fourths of the total rise in the Wholesale Price Index, excluding farm and food products, was accounted for by the "metals" and "machinery" components of the index. A detailed analysis of the forces underlying the inflation in these sectors indicated that in the case of steel, the dominant factors were high and rising profits and exceptional increases in wage and fringe benefits, both of which were related to strong market power in the labor and product markets, initiated in the context of a favorable state of demand.

In the case of machinery, the dominant underlying factor was the pressure of excess demand on productive capacity.

6. In most other manufacturing industries, the rate of increase in prices was due to several interrelated factors, particularly the degree of competition in the product market and trends in output.

7. Another important trend in manufacturing was a remarkable shift in employment away from production workers and toward nonproduction workers. This has resulted in a considerable increase in the proportion of fixed labor costs, thus accentuating the degree of downward rigidity during recessions.

8. The rising price of construction, both residential and nonresidential, can be explained by a combination of a strong demand throughout most of the postwar period, probably combined with the exercise of some market power by the strong construction unions.

9. The inflation in services has been the result of several independent developments. The rise in the price of medical care is attributable to a great increase in demand without an equivalent rise in supply. In the case of unskilled services, the primary cause has been a low rate of increase in productivity combined with a rise in wage rates somewhat less than the rise in manufacturing. Primary emphasis should be placed, therefore, on methods of increasing the supply of medical services and on raising productivity in the unskilled areas.

10. In general, the degree of demand pressure in the labor market does have an important effect on the rate of change in wages. Nevertheless, wages showed a high degree of downward rigidity in recessions. This rigidity, however, was more a reflection of the absence of any prolonged declines in business activity than a manifestation of strong unionism.

11. It is unlikely that a secular upward trend in wages and prices can be avoided with an average level of unemployment which is considered socially tolerable, given our present anti-inflation weapons.

12. No significant relationship was found between changes in earnings and changes in employment, in output, or in man-hour productivity in the manufacturing, mining, or railroad industries.

13. Within manufacturing, the most important factors which were related to wage changes were (1) the level of profits, and (2) the degree of competition in the product market, as measured by concentration ratios. This relationship was not evident in mining or railroads.

14. There was no generally observable relationship between wage changes and union strength.

15. From 1946 to 1949, most collective-bargaining settlements in manufacturing followed the "pattern" usually established in the automobile and steel industries. After 1950, however, those manufacturing industries in which competition in the product market was severe and in which profit levels were seriously curtailed did not match the pattern established in the more concentrated and more profitable industries. This was not true in coal mining and railroads, however, where wages continued to rise despite adverse profit and employment conditions. In these industries, union power very probably was a dominant factor.

16. The initial impetus for the inflationary trend from 1955 to 1959 developed out of the very rapid recovery from the 1954 recession, centering in the automobile and residential construction industries and spreading from there into steel, rubber, building materials, and others. These increases led in turn to a substantial capital goods boom in 1956–57, extending particularly into the machinery and nonresidential construction sectors.

17. Within this favorable economic environment, important key bargains were negotiated by strong unions in the automobile and steel industries, both of which were enjoying very high levels of output and near record postwar profits. These collective-bargaining contracts contained liberal provisions extending over a 3-year period to 1958 and 1959. These provisions, in turn, became the pattern for several other important industries in which profits and product market conditions were also favorable.

18. As a result of these long-term contracts, wages continued to rise during 1957 and 1958, after the postwar boom had leveled off and the economy had entered into a recession. In addition, the continuing shift from production to nonproduction workers caused unit labor costs to rise sharply in 1957 and 1958. These factors contributed to the rise in prices during 1958 in those industries which had a considerable degree of market power.

Perhaps the most significant point to be stressed again in concluding this chapter is the fact that no one "theory" or explanation is adequate to explain the inflation of the postwar years, particularly since 1955. Rather, a number of varied and interrelated factors have been involved. It also follows, therefore, that any public policy designed to deal with the problem must itself be diverse and flexible.

CHAPTER 6. THE PROBLEM OF UNEMPLOYMENT[1]

Introduction

The provision of employment opportunities for persons who want to work has long been regarded as an essential function of economic organization. That the economy should fulfill this function effectively also been prime concern of government. Certainly it would be difficult for any government to survive today in a developed country which countenanced mass unemployment for any extended period of time.

Preventing depressions and unemployment of disaster proportions is a minimum aim of economic policy today, however. Success of policies is measured by the degree to which unemployment is kept at as low a level as possible, consonant with other goals, year in and year out. Even further, policies to assure effective use of the labor force are needed—ones that will lead to high worker productivity and growth in the economy.

The United States is not threatened at the moment with massive unemployment. Nevertheless, it has serious labor force problems. Unemployment is high for the present stage of the business cycle. It is particularly severe in several chronically troubled areas and in some industries. Younger persons are finding it more difficult to break into the work force and older persons who have once lost their jobs are finding barriers against reemployment. Colored persons and unskilled workers suffer high rates of persistent unemployment.

Perhaps even more disturbing is the fact that a gradual trend toward a rising average rate of unemployment is revealed by the record of the last several business cycles. Associated with this has been a substantial increase of unemployment of long duration in the last few years.

It would indeed be unfortunate if these trends were regarded with complacency merely because they do not directly affect the majority, and the more prosperous and vocal groups in the population. The burden of unemployment falls very heavily indeed on many American families, but it also represents a real loss both economically and socially to the Nation.

In recognition of this fact, this report offers, in this and other sections, policies for developing the skills and capabilities of the labor force, for helping areas which are chronically afflicted with high rates of unempoyment, for eliminating employment barriers to certain groups in the population, and for increasing employment opportunities, generally. These policies, if adopted, would help to implement the Employment Act of 1946 and to achieve a high rate of growth.

[1] Main responsibility for the drafting of this chapter rested with Mary W. Smelker.

The Historical Record

LONG-TERM TRENDS

In this century, a rate of unemployment of 5 percent of the labor force or less has been achieved one-half the time. According to testimony presented before this committee—

> no decade has passed without severe unemployment—over 7 percent of the labor force—occurring at least once, and none, except for that in the 1930's, has passed without seeing at least 1 year of what we may call minimum unemployment, 3 percent or less.[2]

Since 1800, the proportion of the labor force exposed to unemployment has grown greatly.

> In 1800, about 10 percent of the labor force was employees; in 1860, about 40 percent were, while today almost 90 percent work for others. Moreover, the proportion employed in agriculture fell from 90 percent in Jefferson's day to say 10 percent in our own.[3]

The share of factory employment has risen from about 2 percent of the labor force in 1800 to 26 percent today.

While the proportion of the labor force exposed to unemployment has increased greatly, unemployment as a percent of the labor force has not shown a rising long-term trend in this century, decade to decade. Two reasons for this may be the increasing participation of women in the labor force (who tend to work mainly to supplement the family income and thus may leave the labor force when jobs are scarce) and increasing Government intervention to stabilize the economy.

POSTWAR EXPERIENCE

The average postwar experience with unemployment has not been greatly different from prewar experience, with the exception of the depressed thirties. About 4.5 percent of the labor force have been unemployed on the average since 1947. In the recessions of 1949 and 1954 the rates were as high as 5.9 and 5.6 percent, respectively, while in 1958 the proportion of unemployed averaged 6.8 percent of the labor force.

However, this was counterbalanced as far as the postwar level is concerned by a rate of around 3 percent in 1951, 1952, and 1953—years affected by the Korean war.

EFFECT OF RECESSIONS

Recessions and depressions have been the major cause of high unemployment in both the prewar and postwar period. The rise in the rate of unemployment in recessions ranges from 2 percentage points in the recessions of 1945–46 and 1948–49 to over 20 percentage points in the depression of 1929–32 (table 6–1). The latter is by far the most severe depression in this century, and the worst in our history. When ranked by the increase in the percentage of labor force unemployed, the recession of 1957–58 was less severe than most prewar recessions.

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[2] Testimony of Stanley Lebergott, hearings before the Joint Economic Committee, 86th Cong., 1st sess., pt. III, Apr. 25, 27, and 28, p. 571.
[3] Ibid., p. 571.

TABLE 6–1.—*Increase in rates of unemployment during business declines, 1900–58*

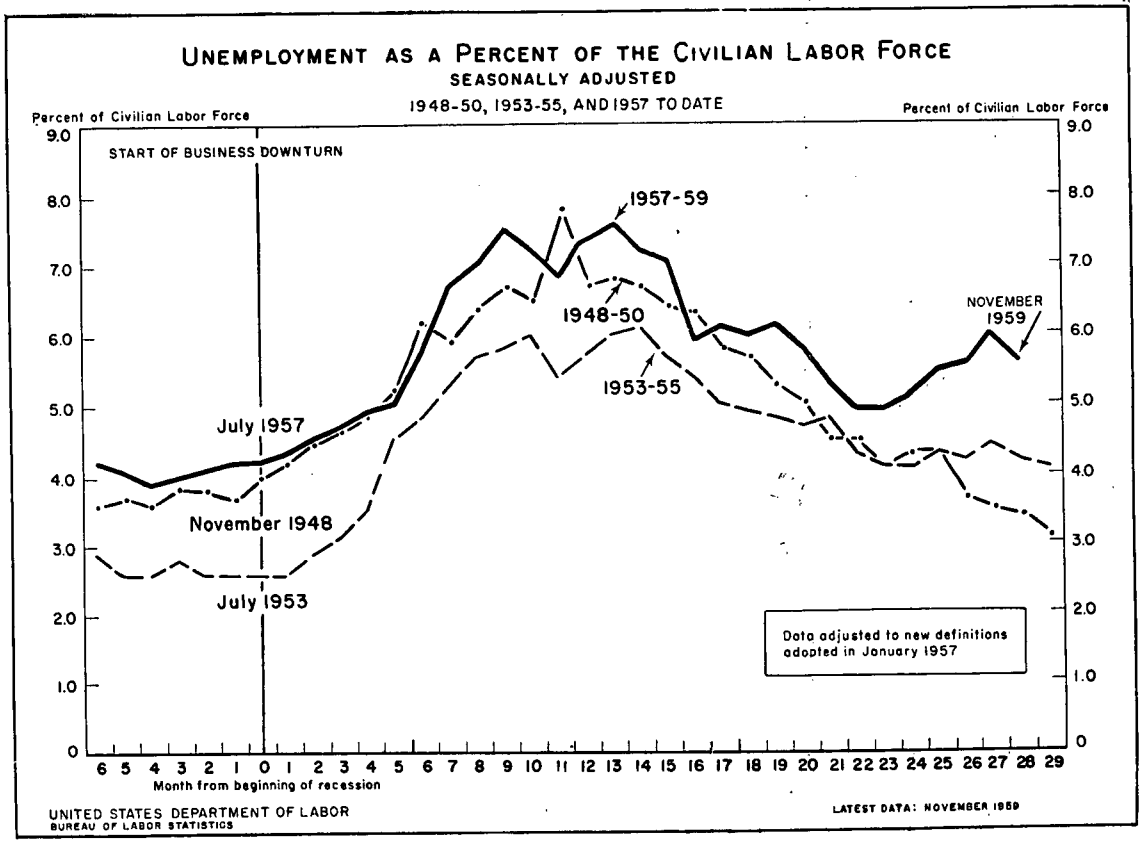
[Ranked by unemployment rises]

	Rise in percent civilian labor force unemployed	Percentage change			
		Output of—		Wholesale textile prices	Wholesale metal prices
		Finished commodities	Gross national product		
1929–32	20.3		−28	−37	−20
1920–21	9.6	−6		−43	−21
1907–8	7.7	−11		−14	−22
1913–14	5.3	−5		−5	−11
1937–38	4.7		−5	−13	0
1957–58	2.5		−2	−2	0
1953–54	2.5		−2	−2	+1
1903–4	2.2	−2		0	−11
1948–49	2.1			−6	−4
1945–46	2.0		−10	+16	+10

Source: Testimony of Stanley Lebergott, hearings before the Joint Economic Committee, Apr. 25, 27, and 28, 1959, p. 585.

Since the end of World War II, there have been three major recessions, each of which has caused the percentage of unemployed in the labor force to double approximately. In mid-1953, unemployment totaled only about 1.7 million, but it rose to 4 million, or almost 6.1 percent of the labor force (seasonally adjusted) at the trough of the 1954 depression. Between mid-1948 and mid-1949 unemployment rose from 2.2 million to 4.2 million, or 6.7 percent of the labor force. In the latest recession, that lasting from mid-1957 to mid-1958, it rose from 2.85 million to almost 5.2 million, or 7.6 percent of the labor force. In contrast, in years of relatively full employment, 1948, 1953, and 1956, unemployment fell to annual rates as low as 3.8, 2.9, and 4.2 percent of the labor force, respectively (chart 6–1).

CHART 6-1


UNEMPLOYMENT AS A PERCENT OF THE CIVILIAN LABOR FORCE
SEASONALLY ADJUSTED
1948-50, 1953-55, AND 1957 TO DATE
Percent of Civilian Labor Force
Percent of Civilian Labor Force
START OF BUSINESS DOWNTURN
1957-59
1948-50
1953-55
NOVEMBER 1959
July 1957
November 1948
July 1953
Data adjusted to new definitions adopted in January 1957
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0
6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
Month from beginning of recession
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
LATEST DATA: NOVEMBER 1959

UNEMPLOYMENT IN PROSPEROUS TIMES

Even in times of high prosperity, however, the problem of unemployment is more serious than it appears on the surface. Although an unemployment rate of 4 percent or so is often considered the minimum desirable in view of the needs of a dynamic economy for high mobility among its workers, a study of frictional unemployment by the Department of Labor, conducted for this inquiry,[4] concluded that only about half of the unemployment in good times is due to such short-term frictional factors as high voluntary quit rates and seasonality of industry operations. The report finds that in the period 1955–57, when unemployment averaged 2.9 million, or 4.3 percent of the labor force, about half the unemployment was accounted for by the following factors: new entrants into the labor force, most of whom found jobs in a relatively short time, accounted for about 20 percent; persons "between jobs," who had made a voluntary shift, accounted for another 10 percent; and unemployment deriving from seasonal fluctuations in industry another 20 percent.

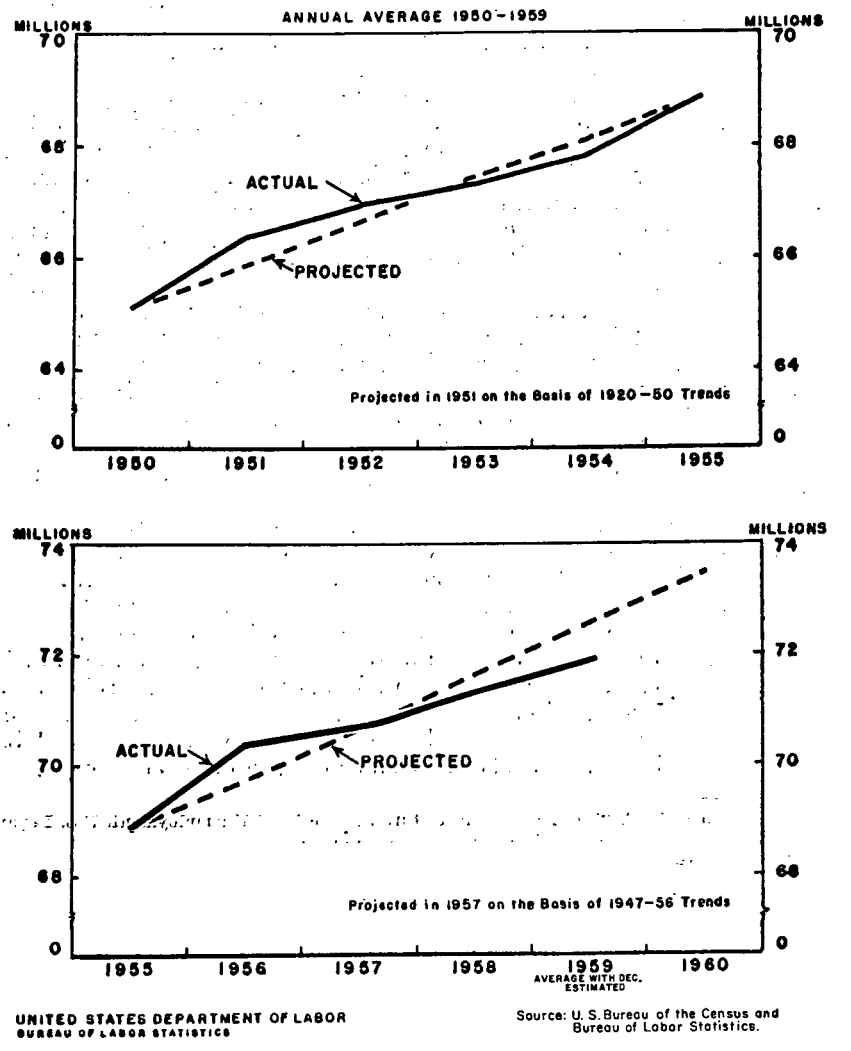
About 50 percent of unemployment even in good times is thus in the category of persons who have been separated involuntarily and who may experience more or less trouble finding new jobs. Among these are found most of the persons unemployed for considerable periods of time.

Further, unemployment may appear to be low because the number of jobs is not expanding, as was probably the case in the first half of 1957. Many people do not actively seek jobs if they realize jobs are unavailable, or very scarce. Many people who retire from the labor force do so because of the difficulty of finding suitable employment. In the event of continued low employment opportunities for several years, labor force growth may be slow in relation to the increase in population, and concealed unemployment exists. Such a tendency in recent years is indicated in chart 6–2; the actual labor force in 1959 is about 700,000 persons below the long-term trend.

[4] Study paper No. 6, "The Extent and Nature of Frictional Unemployment, U.S. Department of Labor, Bureau of Labor Statistics, Nov. 19, 1959.

CHART 6-2

COMPARISON OF ACTUAL AND PROJECTED TOTAL LABOR FORCE



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

Source: U. S. Bureau of the Census and Bureau of Labor Statistics.

Finally, even in good times a number of persons are working only part time when they would prefer full-time employment. In July of 1958, for example, when only 2.5 million people were totally unemployed, there were 2.4 million people working less than full time who would have preferred longer hours. Converting the part-time hours to full-time equivalents, a figure of 3.7 million full-time equivalent workers is obtained. In September of this year, when unemployment was officially reported at 3.2 million workers, a calculation of full-time equivalent gives the number as 4.2 million.

UNEMPLOYMENT OF LONG DURATION

Even during the best times a substantial proportion of the population is suffering unemployment of sufficient frequency and duration to constitute a severe problem. In 1957, when the unemployment rate was only 4.3 percent overall, long-term unemployment—defined as lasting 15 weeks or longer—averaged 560,000, or almost 20 percent of the unemployed total. This means, according to a study submitted to this committee by the Bureau of Labor Statistics, that 3.4 million persons had 15 weeks or more of unemployment during the year.

Even more significant, from the point of human social costs, is the fact that 1.5 million people were out of work over 6 months during 1957. Many of these suffered more than one spell of unemployment.

The industrial compilation of long-term unemployment is shown in table 6–2.

TABLE 6–2.—*Persons unemployed 15 weeks or more by major occupation group, March 1958 and 1959*

Occupation	Number (in thousands)		Percent distribution		Percent of unemployed	
	1959	1958	1959	1958	1959	1958
Total [1]	1,544	1,446	100.0	100.0	35.4	27.8
Professional, technical, and kindred workers	49	26	3.2	1.8	41.5	17.6
Farmers and farm managers	1	3	.1	.2	5.9	15.8
Managers, officials, and proprietors, except farm	40	45	2.6	3.1	42.6	31.7
Clerical and kindred workers	115	87	7.4	6.0	29.7	19.9
Sales workers	56	28	3.6	1.9	26.3	15.6
Craftsmen, foremen, and kindred workers	231	242	15.0	16.7	35.1	28.7
Operatives and kindred workers	431	452	27.9	31.3	40.0	27.1
Private household workers	30	31	1.9	2.1	22.9	21.5
Service workers, except private household	160	151	10.4	10.4	31.9	32.1
Farm laborers and foremen	57	56	3.7	3.9	35.6	23.6
Laborers, except farm and mine	276	271	17.9	18.7	39.7	34.0

[1] Includes persons without work experience, not shown separately.

Source: U.S. Bureau of the Census.
Prepared by U.S. Department of Labor, Bureau of Labor Statistics, Division of Manpower and Employment Statistics, Apr. 10, 1959.

WHO ARE THE UNEMPLOYED?

Testimony presented to this committee by Ewan Clague, Commissioner of Labor Statistics, shows that the incidence of unemployment is very unevenly distributed among different groups in the population.[5]

By age

By far the heaviest rates of unemployment in March of this year were to be found among young workers under 24 years. About 12 percent of this group were unemployed compared with 6.4 percent for the population as a whole (see table 6–3). Almost one-third of total unemployment was accounted for by the younger labor force members—a very substantial proportion, but scarcely high enough to support the contention that unemployment now is largely a problem of untrained youth. The lowest rates of unemployment were to be found, as is to be expected, in the 35–to–54-age group—4.9 percent. In the age group ranging from 55 to 64, an experience of 5.5 percent unemployed is probably reduced to some extent by early retirement.

[5] Hearings before the Joint Economic Committee, 86th Cong., 1st sess., pt. 3: "Historical and Comparative Rates of Labor Force, Employment and Unemployment."

TABLE 6–3.—*Unemployment by age and sex, March 1957, 1958, and 1959*

Age and sex	Number (in thousands)			Percent distribution			Rate of unemployment		
	1959	1958	1957	1959	1958	1957	1959	1958	1957
Both sexes:									
14 and over	4,362	5,198	2,882	100.0	100.0	100.0	6.4	7.7	4.3
14 to 24	1,297	1,419	889	29.7	27.3	30.8	11.9	13.4	8.5
14 to 19	606	603	497	13.9	11.6	17.2	13.0	13.5	10.8
20 to 24	691	816	392	15.8	15.7	13.6	11.1	13.4	6.7
25 to 34	903	1,190	556	20.7	22.9	19.3	6.2	8.1	3.8
35 to 44	795	1,036	506	18.2	19.9	17.6	4.9	6.5	3.2
45 to 54	706	828	457	16.2	15.9	15.9	4.9	5.9	3.4
55 to 64	503	561	349	11.5	10.8	12.1	5.5	6.2	3.9
65 and over	158	164	127	3.6	3.2	4.4	5.0	5.0	3.8
Male:									
14 and over	2,971	3,743	1,950	68.1	72.0	67.7	6.5	8.2	4.3
14 to 24	846	1,021	586	19.4	19.6	20.3	12.9	16.3	9.5
14 to 19	394	423	331	9.0	8.1	11.5	14.2	16.1	12.3
20 to 24	452	598	255	10.4	11.5	8.8	12.0	16.4	7.3
25 to 34	642	870	350	14.7	16.7	12.1	6.2	8.3	3.3
35 to 44	510	679	342	11.7	13.1	11.9	4.7	6.3	3.2
45 to 54	474	615	303	10.9	11.8	10.5	5.0	6.6	3.3
55 to 64	373	418	270	8.6	8.0	9.4	5.9	6.7	4.3
65 and over	127	138	98	2.9	2.7	3.4	5.5	5.7	4.0
Female:									
14 and over	1,391	1,456	932	31.9	28.0	32.3	6.2	6.6	4.3
14 to 24	451	398	302	10.3	7.7	10.5	10.4	9.3	7.1
14 to 19	212	180	165	4.9	3.5	5.7	11.3	9.7	8.7
20 to 24	239	218	137	5.5	4.2	4.8	9.7	8.9	5.7
25 to 34	261	320	206	6.0	6.2	7.1	6.3	7.7	4.9
35 to 44	285	356	163	6.5	6.8	5.7	5.5	6.9	3.3
45 to 54	232	213	154	5.3	4.1	5.3	4.6	4.5	3.4
55 to 64	130	143	79	3.0	2.8	2.7	4.5	5.2	3.0
65 and over	31	26	29	.7	.5	1.0	3.7	3.0	3.3

Source: U.S. Bureau of the Census.
Prepared by U.S. Department of Labor, Bureau of Labor Statistics, Division of Manpower and Employment Statistics, Apr. 10, 1959.

By sex

The average rate of unemployment was slightly higher among males than females—6.5 percent compared to 6.2 percent. This represents a decided improvement for men from the recession situation of 1958, when the percent of men unemployed rose to 8.2 percent compared to 6.6 percent for women.

By major occupation groups

The highest percentage by far of unemployed in March were factory operatives and kindred workers. Almost 25 percent of the unemployed were in this group; 16 percent were laborers (except farm and mines); and 15 percent were craftsmen and foremen. Almost 8.6 percent of factory operatives were unemployed, the highest rate for any group except for laborers, among whom the incidence was almost twice as high—16.6 percent.

TABLE 6–4.—*Unemployment by major occupation group, March 1958 and 1959*

Major occupation group	Number (in thousands)		Percent distribution		Rate of unemployment	
	1959	1958	1959	1958	1959	1958
Total [1]	4,362	5,198	100.0	100.0	6.4	7.7
Professional, technical, and kindred workers	118	128	2.7	2.5	1.6	1.8
Farmers and farm managers	17	23	.4	.4	.6	.7
Managers, officials, and proprietors, except farm	94	146	2.2	2.8	1.4	2.1
Clerical and kindred workers	387	430	8.9	8.3	4.1	4.5
Sales workers	213	189	4.9	3.6	4.7	4.4
Craftsmen, foremen, and kindred workers	659	809	15.1	15.6	7.3	8.9
Operatives and kindred workers	1,077	1,654	24.7	31.8	8.6	12.7
Private household workers	131	130	3.0	2.5	5.6	5.4
Service workers, except private household	501	463	11.5	8.9	7.8	7.6
Farm laborers and foremen	160	229	3.7	4.4	7.5	11.3
Laborers, except farm and mine	695	760	15.9	14.6	16.6	19.1

[1] Includes persons without work experience, not shown separately.

Source: U.S. Bureau of the Census.
Prepared by U.S. Department of Labor, Bureau of Labor Statistics, Division of Manpower and Employment Statistics, Apr. 10, 1959.

By color and sex, the rate of unemployment in March was over twice as high for colored persons as for white persons—12.7 percent as compared to 5.6 percent. The higher rate obtained for both male and female workers.

TABLE 6–5.—*Unemployment by color and sex, March 1957, 1958, and 1959*

Color and sex	Number (in thousands)			Percent distribution			Rate of unemployment		
	1959	1958	1957	1959	1958	1957	1959	1958	1957
Total	4,362	5,198	2,882	100.0	100.0	100.0	6.4	7.7	4.3
Male	2,971	3,743	1,950	68.1	72.0	67.7	6.5	8.2	4.3
Female	1,391	1,456	932	31.9	28.0	32.3	6.2	6.6	4.3
White	3,428	4,163	2,328	78.6	80.1	80.8	5.6	6.9	3.9
Male	2,362	3,056	1,576	54.1	58.8	54.7	5.7	7.4	3.9
Female	1,066	1,106	752	24.4	21.3	26.1	5.5	5.8	4.0
Nonwhite	933	1,035	554	21.4	19.9	19.2	12.7	14.4	7.3
Male	609	686	374	14.0	13.2	13.0	13.6	15.5	8.4
Female	325	349	180	7.4	6.7	6.2	11.4	12.6	6.7

Source: U.S. Bureau of the Census.
Prepared by U.S. Department of Labor, Bureau of Labor Statistics, Division of Manpower and Employment Statistics, Apr. 10, 1959.

Owing to the fact that colored persons constitute a minority in the labor force, the proportion of unemployed accounted for by colored persons was only 21.4 percent, despite the high incidence of unemployment in this group.

Unemployment, as can be seen from the evidence presented above, does not boil down to particular problem groups, despite the high incidence among some age groups, the less skilled, colored workers, etc. Efforts to improve the employability of these groups should certainly be undertaken; nevertheless the basic problem of unemployment goes deeper. Fundamentally, unemployment above frictional levels is a matter of inadequate total demand.

Unemployment a Growing Problem

Unfortunately, evidence is accumulating that the problem of unemployment is a growing rather than a receding one. Employment did not respond as vigorously after the last recession as after the preceding two postwar recessions, particularly in manufacturing. (See chart 6–3.) Consequently, the reduction in unemployment since the recession of 1957–58 has not been as satisfactory as from the preceding two recessions. In mid-August, prior to any large scale layoffs as a result of the steel strike, the seasonally adjusted unemployment rate was still 5.5 percent, considerably above the rate of 4.3 percent in the period 1955 through 1957. It was only one-half percentage point below the rate of 6 percent reached at the height of the 1953–54 recession.

In March of this year, according to evidence submitted by Ewan Clague, Commissioner of Labor Statistics, 35.4 percent of the unemployed were accounted for by those unemployed 15 weeks or longer, compared to 27.8 percent in March 1958, and 23.0 precent in the same period of 1957; 17.8 percent had been unemployed more than half a year. (See chart 6–4.)

More serious, perhaps, is the fact that recent levels of persistent or long-term unemployment are substantially higher than at corresponding stages of recovery from the 1949 and 1954 recessions, as is shown in chart III. In August, the number of unemployed workers who had been jobless for at least 15 consecutive weeks totaled 783,000, about 60 percent above the total just before the last recession. August was 16 months after the trough of the recession. At a similar time in the last two recessions, long-term unemployment was less than 500,000 persons. Individuals with long-term unemployment at present represent nearly one-quarter of the unemployed.

Not only has the reduction in unemployment since mid-1958 been disappointingly slow, but it is worthy of note that after the recession of 1954 the rate of unemployment never did fall as low as it had been in 1951 and 1952. Perhaps this should not have been expected because the latter were years affected by the exigencies of the Korean war. However, if the present recovery leaves us with a higher residue of unemployed than in 1951 and 1957, a strong presumption will be established that the economy is suffering from increasing "structural unemployment."

Structural Unemployment Rising

Unemployment in excess of the frictional minimum which persists in good times is usually called structural unemployment because it indicates a basic failure of the economy to adjust efficiently and rapidly to shifts in technology and resource use, location of industry, or changes in the pattern of final demand. It may also be used to include unemployment above frictional rates which exists over more than a business cycle because of the failure of the economy to attain an adequate rate of growth. It is usually (although not necessarily) accompanied by unemployment of long duration among specific groups of workers associated with particular industries, or in particular geographic areas.

CHART 6-3

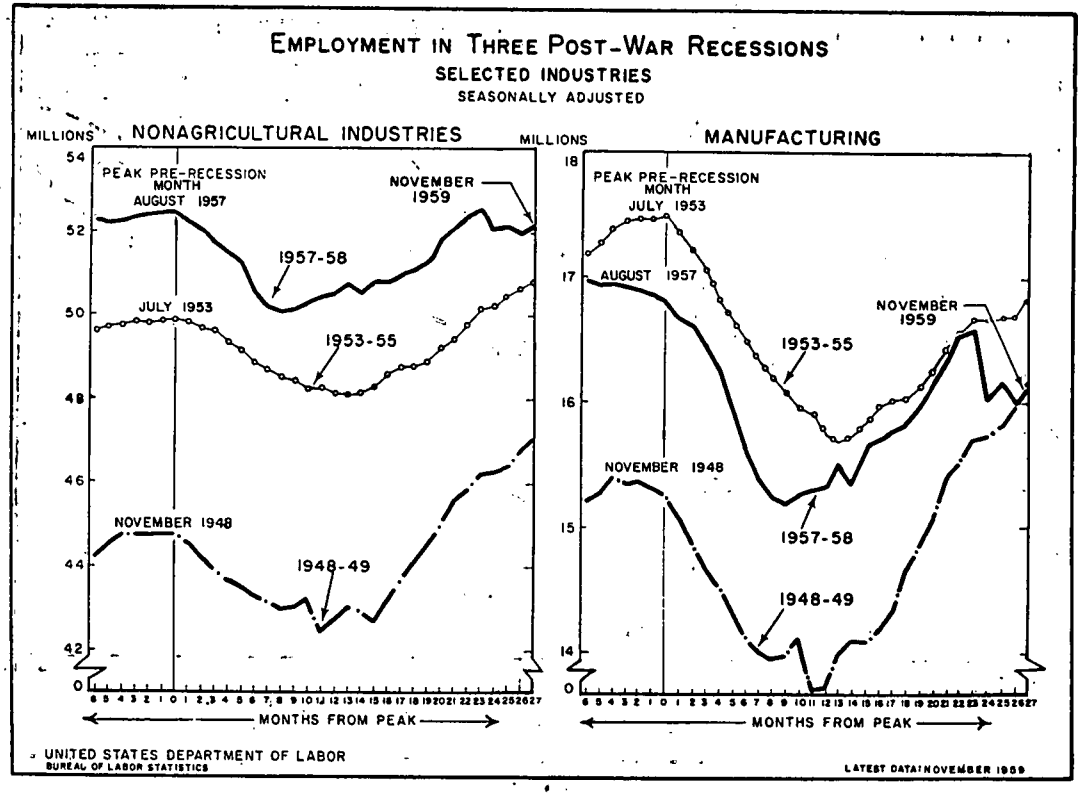
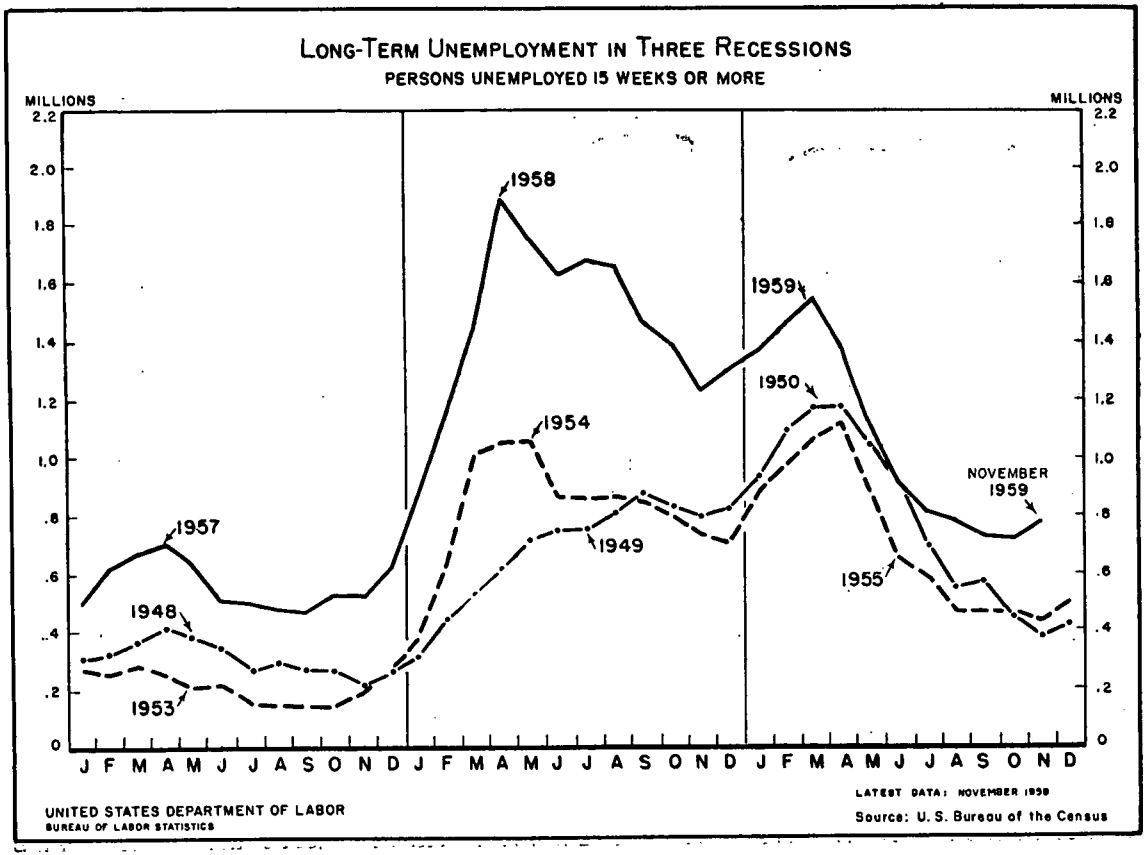

EMPLOYMENT IN THREE POST-WAR RECESSIONS
SELECTED INDUSTRIES
SEASONALLY ADJUSTED
MILLIONS
NONAGRICULTURAL INDUSTRIES
PEAK PRE-RECESSION MONTH
AUGUST 1957
NOVEMBER 1959
1957-58
JULY 1953
1953-55
NOVEMBER 1948
1948-49
MONTHS FROM PEAK
MILLIONS
MANUFACTURING
PEAK PRE-RECESSION MONTH
JULY 1953
AUGUST 1957
NOVEMBER 1959
1953-55
NOVEMBER 1948
1957-58
1948-49
MONTHS FROM PEAK
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
LATEST DATA: NOVEMBER 1959

CHART 6-4


LONG-TERM UNEMPLOYMENT IN THREE RECESSIONS
PERSONS UNEMPLOYED 15 WEEKS OR MORE
MILLIONS
MILLIONS
2.2
2.0
1.8
1.6
1.4
1.2
1.0
.8
.6
.4
.2
0
1958
1959
1950
1954
1957
1949
1948
1953
1955
NOVEMBER 1959
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
LATEST DATA: NOVEMBER 1959
UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
Source: U. S. Bureau of the Census

In a recent statement submitted to the Senate Committee on Unemployment Problems, Mr. Charles D. Stewart, Deputy Assistant Secretary of Labor for Research and Development said:

> It (structural unemployment) can typically be recognized by its long duration * * *. My own estimates * * * suggest that approximately one-third of the unemployed, in periods we usually regard as ones of full employment, fall in this category.

He stated further:

> One advantage of this emphasis is to avoid the narcotic effect of regarding what normally is called normal or frictional unemployment as an irreducible minimum. Unemployment of 3 or 4 or 5 percent can be regarded as consistent with full employment only if nothing can be done to reduce the long-term unemployment that persists when there is full employment demand for labor.

Growing structural maladjustments in the economy are indicated by an increase in the amount of long-term unemployment between the prosperous years 1948 and 1956.

A study submitted to this committee by the Department of Labor shows that the average duration of unemployment rose from 8.6 weeks to 11.3 weeks between 1948 and 1956, as shown in table 6–6. Even worse, the percent of unemployed reporting more than 6 months' unemployment rose from 5.6 to 9.1 percent. The study states:

> All of the moderate increase in the rate of unemployment (between 1948 and 1956) was accounted for by the proportionately much greater rise in the continuing unemployed * * *. The increasing extent of prolonged unemployment lasting 15 weeks or longer, and even more so, 27 weeks or longer, appears to have been one of the most important factors in this development.

TABLE 6–6.—*Selected measures of the duration of unemployment, 1948, 1952, and 1956*

Duration measure	1948	1952	1956
Annual average duration of unemployment (weeks)	8.6	8.3	11.3
Male	9.2	(1)	12.0
Female	7.1	(1)	10.0
Percent of total unemployed reporting:			
15 weeks or more unemployment	15.0	13.9	20.9
27 weeks or more unemployment	5.6	5.0	9.1

[1] Not available.

NOTE.—Figures are based on old definition of unemployment.

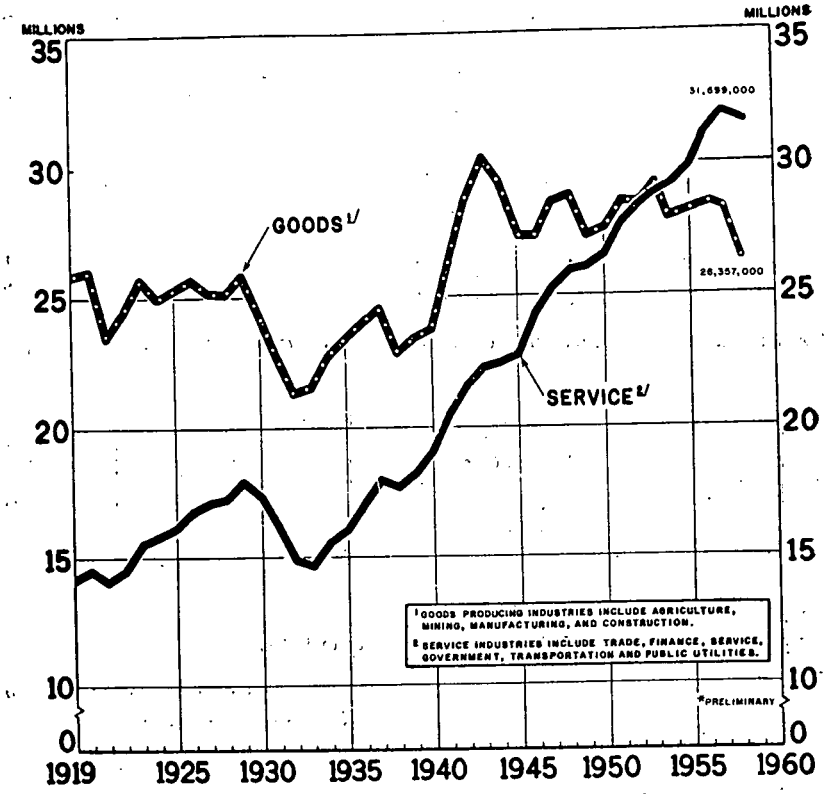
Source: U.S. Department of Labor, Bureau of Labor Statistics.

The increase in long-term unemployment between 1948 and 1956 is linked to the fact that goods-producing industries, agriculture and manufacturing, have been declining in relative importance in the economy, while services and Government employment have been rising. (Chart 6–5.)

CHART 6—5

EMPLOYMENT IN GOODS PRODUCING INDUSTRIES COMPARED WITH EMPLOYMENT IN SERVICE INDUSTRIES

ANNUAL AVERAGES, 1919-1958*



UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS

SOURCE: NONFARM WAGE AND SALARY EMPLOYMENT FROM THE U.S. BUREAU OF LABOR STATISTICS, AGRICULTURAL EMPLOYMENT INCLUDING PROPRIETORS, FAMILY WORKERS, AND HIRED WORKERS FROM THE U.S. DEPARTMENT OF AGRICULTURE, AGRICULTURAL MARKETING SERVICE.

TABLE 6–7.—*Changes in unemployment between 1948 and 1956, by major industry group for wage and salary workers*

Industry division	Unemployment rate (percent)		Change in unemployment due to [1]—		
	1948	1956	Total	Structural changes	Labor force changes
Wage and salary labor force			+379	+113	+266
Goods-producing industries	4.1	5.0	+298	+215	+83
Agriculture	4.7	6.5	+30	+32	−2
Mining	2.3	6.4	+26	+30	−4
Construction	7.4	8.3	+80	+33	+47
Manufacturing	3.5	4.1	+162	+120	+42
Service-rendering industries	3.4	3.1	+81	−102	+183
Transportation	3.0	2.4	−27	−29	+2
Trade	4.3	4.1	+35	−21	+56
Service, including private household	3.2	2.9	+81	−37	+118
Forestry and fisheries	10.8	7.0	−1	−3	+2
Public administration	2.0	1.6	−7	−12	+5

[1] The structural change in unemployment is obtained by applying the change in the rate of unemployment between 1948 and 1956 to the appropriate 1956 labor force component. The labor force change is the product of the appropriate 1948 rate of unemployment and the 1948–56 change in the associated labor force component.

NOTE.—Figures are based on old definition of unemployment.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Since 1956, the importance of manufacturing and agriculture as a source of employment has declined further both relatively and absolutely. The number of jobs in manufacturing declined from 16.9 million in 1956 to 16.5 million in June of this year, so far the peak month of industrial production. (By contrast, industrial output had risen from 143 percent of the 1947–49 average in 1956 to 155 percent in June 1959.)

The decline in jobs in manufacturing is strikingly illustrated by trends in the steel, autos, and other major industries. For example, over the 9-year period between May 1950 and May 1959 monthly steel production increased by about 35 percent nationally while employment moved up by about 6 percent. (In Pittsburgh, the overall employment increase was about one-third the national average.) Textile employment decreased 22.6 percent over the same period. Coal mining employment was already 46 percent below the 1950 level in 1957 and the decline has continued. In automobiles the production of 6.1 million cars required 928,900 workers in 1953, but only 786,300 in 1957.

In April of this year, 1 million factory workers were looking for jobs; about 600,000 of these were in the durable goods industries, where the unemployment rate was 50 percent above that of 1957. This is true despite the fact that many factory workers have retired from the labor force, or taken jobs in trade or service industries, presumably at lower rates of pay. In August factory workers represented about 32 percent of all long-term unemployment (lasting 15 weeks or longer in one spell).

Characteristics of areas with persistent labor surplus

Hitherto unpublished data of the Department of Labor shows that important areas of the country have serious problems of persisting or long-term unemployment. Areas which had an unemployment rate in excess of 6 percent in the years 1957, 1958, or 1959 (or had fallen into this group in the 1957–58 downturn and were in this category in May 1959) were compared to areas which did not fall into the above 6-percent group, even in the 1957–58 recession, or had recovered from it by May of this year.

The overall rate of unemployment in the areas with persistent unemployment problems differed strikingly from that of the more prosperous areas in May; 6.3 percent for the areas with the most prolonged unemployment problem compared to 4.9 percent for the other two groups, as is shown in table 6–8. Moreover, long-term unemployment—15 weeks or longer—was much more prevalent in the areas of higher persistent unemployment; 42 percent of the labor force unemployed had been unemployed 15 weeks or longer, compared to 28.7 percent in the group of areas which never fell below 6 percent in its overall rate of unemployment. Even more significant, over 25 percent of the unemployed work force had been unemployed for half a year in the areas with the long-standing problem of unemployment, almost twice as many as in the group of areas of continued high employment opportunities. (See table 6–9.)

TABLE 6–8.—*Unemployment by labor market area group, by age and sex: April and May 1959*

[Separate data for each of the 2 months have been averaged]

Age and sex	Number of unemployed (thousands)			Unemployment rate (percent of labor force in each age-sex group)			Percent distribution		
	Group I	Group II	Group III	Group I	Group II	Group III	Group I	Group II	Group III
Total	579	524	1,130	4.9	4.9	6.3	100.0	100.0	100.0
Male	356	333	717	4.7	4.6	6.0	61.5	63.5	63.5
14 to 19	84	62	99	17.8	15.2	17.1	14.5	11.8	8.8
20 to 24	45	43	76	6.6	7.1	8.6	7.8	8.2	6.7
25 to 34	63	72	171	3.4	4.1	6.2	10.9	13.7	15.1
35 to 44	54	53	128	2.9	3.0	4.3	9.3	10.1	11.3
45 to 54	50	46	115	3.3	3.2	4.7	8.6	8.8	10.2
55 to 64	43	40	95	4.5	4.2	5.5	7.4	7.6	8.4
65 and over	18	17	32	5.6	5.7	6.0	3.1	3.2	2.8
Female	224	191	413	5.4	5.5	6.9	38.7	36.5	36.5
14 to 19	58	39	81	17.2	12.1	17.6	10.0	7.4	7.2
20 to 24	34	18	61	7.3	4.8	8.4	5.9	3.4	5.4
25 to 34	42	37	61	4.8	5.8	5.9	7.3	7.1	5.4
35 to 44	40	40	70	4.5	5.2	4.8	6.9	7.6	6.2
45 to 54	27	34	95	2.9	4.3	7.0	4.7	6.5	8.4
55 to 64	20	19	35	4.0	4.3	4.7	3.5	3.6	3.1
65 and over	3	5	15	2.2	4.0	6.9	0.5	1.0	1.3
Male, 25 to 64	210	211	509	3.4	3.6	5.1	36.2	40.2	45.0

NOTE.—Group I includes major labor market areas which did not have more than 3.0–5.9 percent of unemployed during the 1957–58 downturn.
Group II includes areas which had higher unemployment rates than 6 percent at some time during 1957–58 but had returned to a less than 6 percent classification by May 1959.
Group III includes areas which had more than 6 percent unemployed throughout 1957, 1958, and 1959.

Source: Bureau of Labor Statistics, U.S. Department of Labor.

TABLE 6-9.—*Unemployment by labor market area group, by duration of unemployment, April and May 1959*

[Separate data for each of the 2 months have been averaged]

Duration of unemployment (weeks)	Number of unemployed (thousands)			Percent distribution		
	Group I	Group II	Group III	Group I	Group II	Group III
Total	579	523	1,130	100.0	100.0	100.0
Less than 5	269	214	360	46.5	40.8	31.9
5 to 10	102	97	199	17.6	18.5	17.6
11 to 14	42	40	96	7.3	7.6	8.5
15 or longer	166	172	476	28.7	32.8	42.1
15 to 26	92	72	187	15.9	13.7	16.5
27 or longer	74	100	289	12.8	19.1	25.6

NOTE.—Group I includes major labor market areas which did not have more than 3.0–5.9 percent of unemployed during the 1957–58 downturn.
Group II includes areas which had higher unemployment rates than 6 percent at some time during 1957–58 but had returned to a less than 6 percent classification by May 1959.
Group III includes areas which had more than 6 percent unemployed throughout 1957, 1958, and 1959.

Source: Bureau of Labor Statistics, U.S. Department of Labor.

CHRONICALLY DEPRESSED AREAS

A great part of the long-term unemployment is to be found in the 17 major labor market areas and 53 smaller areas classified by the Department of Labor as "chronically depressed." These are areas where unemployment rates are consistently much higher than for the rest of the Nation, and which tend to be more severely affected by recessions and to recover more slowly in expansions than more prosperous communities or regions.

In the chronically depressed areas, unemployment has been 50 percent or more above the national average in 4 of the past 5 years. On the average, approximately 11 percent of the labor force in these sectors was unemployed in May 1959; this was more than double the unemployment rate for the country as a whole. Together, these 70 major and smaller chronic labor surplus areas accounted for about 490,000 unemployed workers, or almost 15 percent of the countrywide total as of May 1959.

The chronic labor surplus areas, as a group, also fared worse than the Nation generally during the recent recession, and they have not improved as much as the rest of the country during the recovery period. Total nonfarm employment in the 17 major chronic areas declined 10.1 percent between May 1957 and May 1958—about 2½ times the national average decrease of 4.2 percent. Between May 1958 and May 1959, the country had recovered slightly more than 93 percent of the previous year's job losses; in the chronic surplus areas, only 31 percent of the decline from May 1957 to May 1958 had been made up by May 1959.

Most of these areas are located in States in the northeastern sections of the country. However, at least one major or smaller area with chronic unemployment has been identified in each of 22 States. As the following listing indicates, the 17 major chronic areas are concentrated in 8 States; 9 of these are in 2 States—Pennsylvania and Massachusetts.

MAJOR AREAS WITH CHRONIC LABOR SURPLUSES

Indiana:
- Evansville
- Terre Haute

Massachusetts:
- Falls River
- Lawrence
- Lowell
- New Bedford

Michigan:
- Detroit
- Muskegon

New Jersey: Atlantic City
North Carolina: Asheville
Pennsylvania:
- Altoona
- Erie
- Johnstown
- Scranton
- Wilkes-Barre—Hazleton

Rhode Island: Providence
West Virginia: Charleston

States which have smaller areas of persistent unemployment are: Alabama (two areas), Connecticut (two), Illinois (five), Indiana (two), Kansas (one), Kentucky (nine), Maine (one), Maryland (one), Massachusetts (one), Michigan (four), Montana (one), New Jersey (two), New York (two), North Carolina (two), Oklahoma (one), Pennsylvania (six), Tennessee (one), Texas (one), Virginia (one), Washington (two), and West Virginia (six).

CAUSES OF CHRONICALLY DEPRESSED CONDITIONS

The factors behind the persistent high unemployment rates in the depressed areas are very diverse. Probably the most significant common characteristic of most of these areas, with the exception of Detroit, is lack of industrial diversification. Frequently the area depends largely or completely upon the health of one firm or industry as the source of its income and employment. If, under such conditions, shifts occur in consumer preferences, techniques of production, the optimum location of plants, or the availability of natural resources, the area is left with a rate of unemployment which cannot be greatly alleviated by the normal cyclical upswing of business activity.

This situation is clearly demonstrated by an examination of the particular areas involved. The increasing use of gas and oil for home-heating purposes, for example, has cut sharply into the previous market for anthracite coal, and resulted in severe employment curtailment in anthracite mining centers such as Scranton and Wilkes-Barre-Hazleton, Pa. In bituminous coal mining areas, such as Johnstown, Pa. and Charleston, W.Va., the growing mechanization of mine operations has been a factor in the rise of local jobless totals to relatively substantial levels. Technological changes resulting from the conversion of the railroads from steam to diesel engines have also contributed to high unemployment in Altoona, Pa., and a number of other railroad centers.

Decreased markets for wool and cotton textiles, in competition with newer products based on synthetic fibers—as well as the shutdown or relocation of several large local mills—have been responsible for a major share of the prolonged unemployment problems in a number of New England textile centers, among them Providence, R.I., Law-

rence and Lowell, Mass. The declining sales position of gas refrigerators—as compared with electric-powered models—accounts for some of the unemployment problem in the Evansville, Ind., area; reductions by auto plants have also been a factor in this locality. Shifting consumer preferences among various auto makes and models have been primary elements in the deteriorating employment situation in Detroit over the past few years; the area has been affected also by decentralization of auto manufacturing facilities, automation, and changes in emphasis in the defense program during this period.

The impact of continued unemployment in the areas of chronic distress is very severe. According to the Department of Labor, close to a quarter of a million workers in the 17 chronic areas exhausted their insurance eligibility under regular State and Federal unemployment compensation programs during the year ended May 1959.

Unemployment is particularly prevalent for the main breadwinner. The Department of Labor found that in May 76.5 percent of the unemployed workers in the 17 major areas of persistent unemployment were males, compared to 61.5 percent nationally. The proportion was as high as 80 percent in Charleston, W.Va., and 75 percent in Terre Haute, Ind., Johnstown, Pa., and Detroit, Mich.

OUTLOOK FOR DEPRESSED AREAS

Despite the prospects for further substantial increases in employment nationally, and particularly for increases in the output of metals, automobiles, and aircraft, and machinery (which are important sources of employment in about half of the 17 major chronic labor surplus areas) the outlook for most of the depressed areas is not too favorable. As shown in table 6–10, substantial progress has been made in reducing unemployment rates in Muskegon, Mich., Lawrence, Mass., and Asheville, N.C., but the circumstances which apply to these areas are somewhat special. The Labor Department notes that the five areas in which recovery experience from May 1957 to May 1958 was better than for the country as a whole—Terre Haute, Lawrence, Lowell, Atlantic City, and Asheville—had common characteristics.

Each of these areas is a soft-goods or nonmanufacturing center. In each of these, the staffing of new plants or other activities offset the effects of cutbacks in some local nonmanufacturing activities.[6]

[6] "Chronic Labor Surplus Areas, Experience and Outlook," U.S. Department of Labor, July 1959.

TABLE 6–10.—*Unemployment and unemployment rates, major areas with chronic labor surpluses, September 1959 and annual averages 1954–59*

State and area	September 1959			Annual average unemployment rates [1]					
	Total labor force	Total unemployment		1954	1955	1956	1957	1958	1959
		Number of workers	Rate [1]						
Indiana:									
Evansville	77,600	6,100	7.9	8.6	7.3	8.9	6.8	10.2	8.0
Terre Haute	44,200	2,600	5.9	12.1	12.8	11.3	7.7	8.5	7.8
Massachusetts:									
Fall River	56,820	3,410	6.0	9.3	6.1	6.3	10.6	12.2	8.5
Lawrence	56,180	2,850	5.1	23.9	16.4	10.2	8.9	10.3	7.5
Lowell	51,650	3,300	6.4	10.5	8.8	6.7	7.0	11.0	9.5
New Bedford	67,560	4,280	6.3	11.3	8.6	6.1	6.6	11.2	9.7
Michigan:									
Detroit	1,425,000	120,000	8.4	8.8	4.3	7.7	7.3	16.1	11.3
Muskegon-Muskegon Heights [2]	56,400	2,900	5.1	9.0	4.3	6.4	8.7	13.1	7.7
New Jersey: Atlantic City	70,600	2,600	3.7	9.5	10.1	9.3	9.4	11.5	10.0
North Carolina: Asheville [2]	52,800	2,800	5.3	8.1	7.6	6.8	6.9	8.2	6.4
Pennsylvania:									
Altoona	53,700	4,600	8.6	17.4	11.9	9.2	10.4	16.5	10.5
Erie	98,700	7,600	7.7	8.8	7.5	5.0	6.2	13.3	12.7
Johnstown	97,300	15,800	16.2	16.0	10.6	8.0	6.6	15.4	15.4
Scranton	102,200	13,100	12.8	13.9	13.9	11.9	11.2	16.4	14.7
Wilkes-Barre-Hazleton	136,800	19,500	14.3	15.3	13.9	13.0	11.4	16.8	15.8
Rhode Island: Providence	335,000	21,700	6.5	12.1	8.7	8.0	9.8	13.1	9.5
West Virginia: Charleston	113,950	9,800	8.6	11.9	11.5	8.7	8.2	11.6	10.1

[1] Unemployment as a percent of labor force (1959 data cover bimonthly periods, January–September).
[2] Classified as group C areas of moderate labor surplus in November 1959.

NOTE.—Annual average rates generally based on bimonthly data.

Source: Department of Labor and State employment security agencies.

In addition to the chronically depressed "disaster areas" there are at present a large number of other areas with large reservoirs of labor. In July, with industrial production near an all-time high, areas such as Pittsburgh, Pa., Detroit, Mich., Birmingham, Ala., Flint, Mich., and Buffalo, N.Y., had unemployment in excess of 6 percent of the labor force. By November, the general unemployment picture had improved, but these areas where still characterized as having "substantial labor surpluses," or more than 6 percent unemployed.

By January, the number of areas with labor surpluses may have shrunk further—possibly from the present 32 to about 25. Nevertheless, many cities, including the industrial centers named above, will still have large reservoirs of unemployed even though the business recovery will be more than a year and a half old. Many communities will continue to have unemployment rates well in excess of the frictional minimum through most of the months of the business expansion. The percentage of unemployed in the country may not drop to 4 percent or below except for a few months at the peak of the boom.

In addition, the social and economic situation in areas which have not been able to substantially reduce their labor surplus problem is becoming more distressing with the passage of time.

DIFFICULTIES OF BUSINESS REVIVAL

When a community or region has been depressed for some years, it becomes very difficult for it to attract the new industry which will put it back on its feet. The available labor force may deteriorate in

quality, the younger and more capable members leaving the region and leaving a residue of older and less employable persons. The income of the area declines so that the surrounding market for consumer goods is not an inducement to new firms who hope to sell locally. In some areas, business and financial leadership may be inadequate or unwilling to employ measures which could exploit the natural advantages and potentialities of the area.

Generally, also, the public facilities on which industry depends—roads, schools, water supply systems, etc., become run down. It becomes difficult to secure public approval for bond issues even when these are clearly necessary for the future of the community. Progressive businesses often will not attempt to bring highly paid technical and supervisory personnel into an area that offers less in the way of amenities than more prosperous localities. (In this respect, it is interesting to note that progress is taking place among some of the Massachusetts areas of chronic labor surplus because of their proximity to Boston with its scientific and research centers.)

Long-Term Unemployment Not Merely a Problem of Depressed Areas

Specific areas will continue to present grave problems. Nevertheless, persistent unemployment may become more of a general problem and less a problem of specific depressed areas in the future than it has in the past. Long-term unemployment may become more widely diffused throughout industrial centers. This will certainly be true if the country does not maintain a higher rate of growth of demand than in the past few years. Unless there is a steadily expanding labor market, it will be impossible to absorb workers displaced by machines and technological progress in general.

To the extent that manufacturing jobs become less important in relation to the employment offered in the less cyclical services and trades, and that white-collar or overhead jobs replace production worker joins in manufacturing itself, cyclical variations in unemployment may be reduced in magnitude. In the recession of 1957–58, unemployment rates rose substantially, with the loss of jobs concentrated in the durable-goods manufacturing industries. However, the severity of the recession was no doubt mitigated by the fact that a high proportion of the labor force was engaged in Government work, services, and trade, which were relatively unaffected.

Even if the amplitude of cyclical variations in employment is reduced, long-term unemployment resulting from structural dislocations, failure to attain a high rate of economic growth, and technological change may tend to increase. Important areas of the country normally engaged in soft-goods manufacturing, aircraft production, automobiles, and textiles have already been severely affected by technological unemployment. The fear of more technological unemployment is one of the major factors making work rules an important issue in labor-contract disputes today. If the industrial centers of the country become reservoirs of displaced labor, there will be little hope of eliminating unduly restrictive work rules, or even of preventing featherbedding from increasing.

Policies for Dealing With Unemployment

The most important policy for remedying unemployment in excess of the frictional minimum is the maintenance of adequate effective demand for the output of the economy as a whole.

Supplementary measures are required to accelerate the recovery of areas affected by structural unemployment, and to reduce frictional unemployment. Measures for abating the severity and frequency of recessions, and for insuring adequate economic growth are presented elsewhere in this report. Some analysis is also presented of the lack of growth in goods production which has led to persistent high rates of unemployment among manufacturing and mining workers in particular.

Policies to insure national prosperity will help, although not eliminate, human distress resulting from changes in technology and the patterns of demand. The burden of such changes, necessary and desirable as they may be, should be more equitably distributed.

In addition, specific means to improve the situation in hard-hit areas are required. Measures are also needed to raise the employability and economic status of certain disadvantaged groups in the population.

In the following pages, measures to reduce frictional, cyclical, and structural unemployment will be discussed.

Reduction of Frictional Unemployment

So-called "frictional" unemployment can be reduced. A high level of job opportunities in itself will tend to reduce time "between jobs."

In this regard, there need be little fear that a plenitude of jobs will increase frictional unemployment because of high voluntary job-quitting. Material submitted to this committee shows conclusively that lay-offs and separations are a far more frequent cause of short-term unemployment than voluntary quits even in prosperous times.

Improved knowledge of the labor market and of job opportunities would help to reduce frictional unemployment. In this respect, increase emphasis by the U.S. Employment Service on placement activities and on providing information channels between employers and job seekers on a nationwide coordinated basis is desirable.

Policies for Cyclical Unemployment

The reduction of cyclical unemployment is a matter of wise general economic policy, discussed elsewhere in this document.

However, the Federal Government should use its influence to achieve certain improvements in the State unemployment compensation schemes. This might include Federal supplementation of State funds in recessions.

A high proportion of workers becoming unemployed during a recession exhaust their benefits before it is over.

This is indicated by statistics collected under the temporary unemployment compensation program enacted in 1958. Under this emergency program more than 2 million workers who had exhausted their rights after drawing benefits for an average of 20 weeks collected extended benefits for 10 weeks more. Factory workers accounted for

the largest percent of recipients of extended benefits in the industrialized States. In Pennsylvania, a State hard hit by the recession, a study of persons receiving temporary unemployment benefits conducted in November 1958 reported that the median length of continuous unemployment was 52½ weeks while less than 10 percent had been out of work less than 46 weeks.

In the event of a recession, workers should be assured of continued benefits until job opportunities are restored. They should also be assured that a reasonable fraction of their usual wage will be forthcoming.

Better provision for maintaining the income of workers losing jobs as a result of depressions would help to cushion declines in the economy and perhaps shorten the duration of recessions. However, income maintenance should not be used as an alternative to more fundamental measures to alleviate and prevent business declines.

POLICIES RELATING TO STRUCTURAL UNEMPLOYMENT

Structural unemployment is often thought of in connection with chronically depressed areas. However, it may also be present in other areas when a surplus of labor has existed for some time. It can also relate to certain occupational groups. The following measures should not, therefore, necessarily be restricted to chronically depressed areas.

Measures to reduce structural unemployment or its impact include (*a*) relocation of workers, (*b*) training and retraining of workers, (*c*) income maintenance for persons who have been involuntarily unemployed for a long time, and (*d*) special measures to rehabilitate chronically depressed areas.

(*a*) *Relocation of workers*

Two general approaches to the problems of areas where labor tends to be in excess of job opportunities are possible: Further development of the area or relocation of workers to more prosperous areas. Both of these approaches should be used, depending in part on the industrial or other possibilities of the areas.

Positive recruitment and relocation of workers from depressed areas is desirable to supplement natural outmigration. This would require expansion of the activities of the U.S. Employment Service in interarea recruitment, which is presently confined to professional and skilled occupations. Experience of the Farm Security Administration shows that relocation cannot be done on a mass basis. Individual attention is necessary.

Legislation to allow *payment of transportation costs and travel allowances* might be desirable.

The feasibility of a program contemplating relocation of workers on a generous scale depends on a high level of prosperity being maintained nationally. At present, there are few shortages of workers in any area outside of highly skilled and professional occupations.

Encouragement of out-migration should be most actively pursued where opportunities for rehabilitating and stimulating the area appear unfavorable. It may not be too desirable in areas with good prospects for rehabilitation. For one thing, relocation tends to remove the younger and more aggressive members of the labor force, on which the community would depend for revival.

(*b*) *Training and retraining of workers*

A disproportionate amount of long-term unemployment is found among unskilled and semiskilled occupations. At the same time, there are current shortages of some types of skilled labor, and some of these may become more acute.

Unemployed workers who will undertake training or retraining in order to acquire skills should be given loans or allowances. Programs for vocational training should be tied in with Department of Labor studies of employment trends and job opportunities in various industries.

Young people should be urged and aided to stay in school until they have received education and training commensurate with their capabilities and prospective requirements in employment markets.

Special programs for retraining older people, who have unusual difficulty finding employment once they have lost their jobs, are also needed.

There can be little doubt that better preparation for employment would contribute in a high measure to increases in productivity and a more rapid rise in the standard of living.

(*c*) *Income maintenance for persistent unemployment*

A Federal-State program of public assistance is needed for persons who have been involuntarily unemployed for some time, have exhausted their benefit rights, or have failed to establish any, and who reside in areas of "chronic labor surplus" as presently defined. Present public assistance programs are woefully inadequate for the need, particularly in chronically depressed areas. Testimony presented to the Special Senate Committee on Unemployment has shown conclusively that conditions of abject poverty and critical need exist in many communities.

An adequate public assistance program would do more than relieve distress among persons who are bearing the brunt of economic dislocations. It will help keep the labor force reemployable and help prevent deterioration of business in the area.

(*d*) *Aid for chronically depressed areas*

It has been recognized for some time that a number of the chronically depressed areas are unlikely to recover in the foreseeable future from the autonomous operation of economic forces with whatever assistance the areas themselves can offer. It is also widely recognized that programs for income maintenance, training and relation of workers, while helpful, will not be sufficient to put the areas back on their feet.

In this connection, a brief résumé of Federal policy relating to chronically depressed areas might be helpful.

Federal policy—What has been done

Localized unemployment was recognized as a significant labor market problem during the recession of 1949. In that year, the President directed the establishment of a program of selective Federal assistance to such areas, which involved priority consideration for Government loans, expediting the placement of public works contracts and preferences in the award of procurement contracts in the event of tie bids with other areas. These policies were given further

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implementation as a result of the Korean conflict, which restricted the production of some civilian items and resulted in serious unemployment in certain areas. In November 1953, the Federal Government initiated a program to permit rapid write-off allowances to firms establishing or expanding certain types of defense facilities in labor surplus areas. These areas have also been eligible, since December 1954, for preferential treatment in competing with foreign firms for Government procurement contracts. Finally, surplus labor markets have received primary emphasis in Federal technical assistance programs, operated through the BES and State agencies, and through the Office of Area Development of the Department of Commerce.

These various policies, however, have been of minor importance in dealing with the problem. For one thing, none of these programs have attempted to distinguish between chronic versus nonchronic labor surplus areas. Furthermore, the magnitude of the programs themselves have been almost insignificant. Over the 7-year period, March 1952 to March 1959, approximately $213 million for defense contracts have been placed under the special preference provisions cited above, equal to only 1½ percent of the total defense contracts *awarded to labor surplus areas*. Rapid tax amortization assistance was extended to 71 plants in 40 different areas over a 4-year period to August 1957, at which time the eligibility requirements were sharply restricted. The other policies have also been very limited in scope.

Technical assistance is provided by various agencies of the Federal Government: The Office of Area Development in the Department of Commerce prepares "how-to-do-it" pamphlets and statistical studies; the U.S. Employment Service works with community groups and provides placement services for new firms; the Department of Defense also maintains a program to assist labor surplus areas to obtain defense contracts.

In the past 3 years, there has been general agreement among the leaders of both political parties that a broader Federal program was required, aimed specifically at areas with persistent unemployment. Bills have been introduced in the 84th, 85th, and 86th Congresses, but no legislation has as yet been enacted.

State and local efforts

Almost every State now has a development agency, though the functions of these agencies are not at all similar. A growing, but still limited, number of States have authorized the formation of private development corporations—basically, bankers' pools—to invest in equity capital in businesses operating within the State but with no mandatory provision to favor the depressed areas.

Pennsylvania, in addition, has set up a Pennsylvania Industrial Development Authority patterned after the features of the Federal area assistance bills to help areas of labor surplus. During the first 2½ years of its life, loans were made helping to finance 72 projects costing $24.5 million. It is estimated that 11,916 operatives will be employed, with an estimated payroll of over $38 million.

Outlines of Federal policy for depressed areas

Programs for relocating workers in more prosperous areas are particularly applicable to chronicaly depressed areas, particularly those

with poor prospects. However, relocation can only supplement this revitalization of the areas themselves.

In planning for area assistance, the object should be to develop self-sustaining industries and sources of employment in the areas. Federal aid or subsidies should not be permanent. This implies:

(1) Careful appraisal of the prospects of the areas, which are very diverse.

(2) A large enough program of Federal aid to have a reasonable expectation of accomplishing the result of making the areas viable.

It must be admitted that there may be large outlays involved in these efforts, only part of which may be recoverable directly by the Federal Government. On the other hand, it should also be recognized that there are large social costs involved in continuous unemployment. Young people are growing up without the advantages which will permit them to make an effective contribution to the Nation's well-being. There may also be large "sunk costs" in public and private facilities which can be retrieved, at least in part, through a program designed to revive the economic life of the areas.

Perhaps of even greater importance is the fact that it is not self-evident that areas of chronic unemployment are, by that very fact, areas in which costs of production in all types of industries are too high to be competitive. There are many instances of labor markets which have, over time, recovered from the adverse effects of over-dependence on a declining firm or industry and have successfully attracted new industry into the area. It is true, of course, that in most of these instances the establishment of new firms was done by private industry without financial assistance; in this sense, no "interference" with the market mechanism is involved. But it is also true that this redevelopment process usually takes a considerable period of time. Any type of assistance, therefore, which can be provided to depressed areas to reduce this time lag by encouraging the formulation of redevelopment plans, by facilitating any necessary retraining of the labor force, by providing information to prospective businessmen as to the economic advantages of the area, by lending funds at low interest rates to permit the area to maintain its public facilities, etc., is quite consistent with the longrun objectives of the economy as a whole. While some costs to the taxpayer will necessarily be involved, they will be lower than the costs incurred as a result of permitting available human and capital resources to remain unemployed for long periods of time.

Elements of a Federal program might include:

(*a*) Technical assistance to the areas in planning a redevelopment program with reasonable chances for success.

(*b*) Financial assistance to chronically depressed areas for community facilities necessary to attract new industry.

(*c*) Long-term loans to new industries locating in the area.

(*d*) Retraining allowances for workers who can thus be qualified for reemployment.

CHAPTER 7. THE PROBLEMS OF AMERICAN AGRICULTURE

INTRODUCTION

Economic policy faces no more perplexing problems than those posed by American agriculture. No survey of the economic tasks ahead for the country can be complete without special treatment of the agricultural sector, which historically has been the base of American growth and which even today provides us with our wonderfully abundant food supply and with many raw materials for American industry. This study engaged in no large-scale primary research on the problems of agriculture. In 1957, the Joint Economic Committee, through its Subcommittee on Agricultural Policy under the Chairmanship of Senator John Sparkman (Democrat, Alabama), held extensive hearings and published a compendium in which most of the authorities in this field presented their views. Since then, there have been few new developments. The gloomy views held by most of the experts at that time have so far been confirmed by the subsequent record.

In this chapter, a brief restatement of the major dimensions of the problem is given and the particular implications for the attainment of the objectives of employment, growth, and price level stability are set forth.

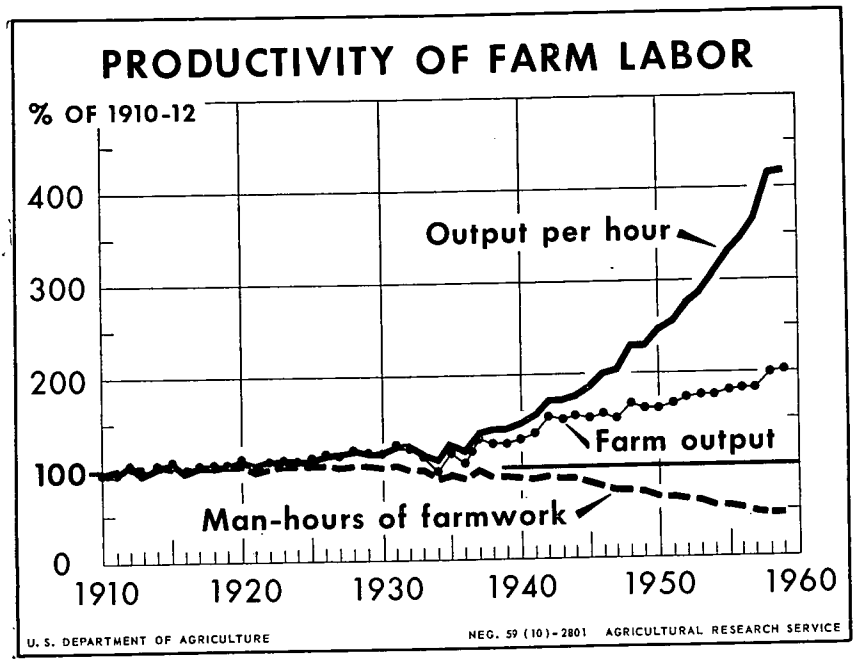
I. THE PROBLEM OF OVERPRODUCTION

The economic forces which have created the substantial overproduction on our farms, but which also have resulted in serious declines in farm income, are the following:

1. After a long period of relatively slow advance in productivity, output per unit of input started rising dramatically in 1942 and has shown little sign of slowing down. This rise in efficiency is the result of the tremendous research effort by government over a long period, improving farm practices, developing new plant strains, selective breeding of animals, etc. Also, the American farmer is probably the first highly educated farmer in the world, with a college degree becoming almost a credential for running a family farm in some parts of the country. Besides this improvement in human resources and in technology, the use of machinery, of fertilizer and of other inputs has greatly risen.

Some quantitative indications of these changes are presented in charts 1 and 2. They have resulted in an increase of total output of American agriculture of about 5 percent a year from 1942 to 1959.

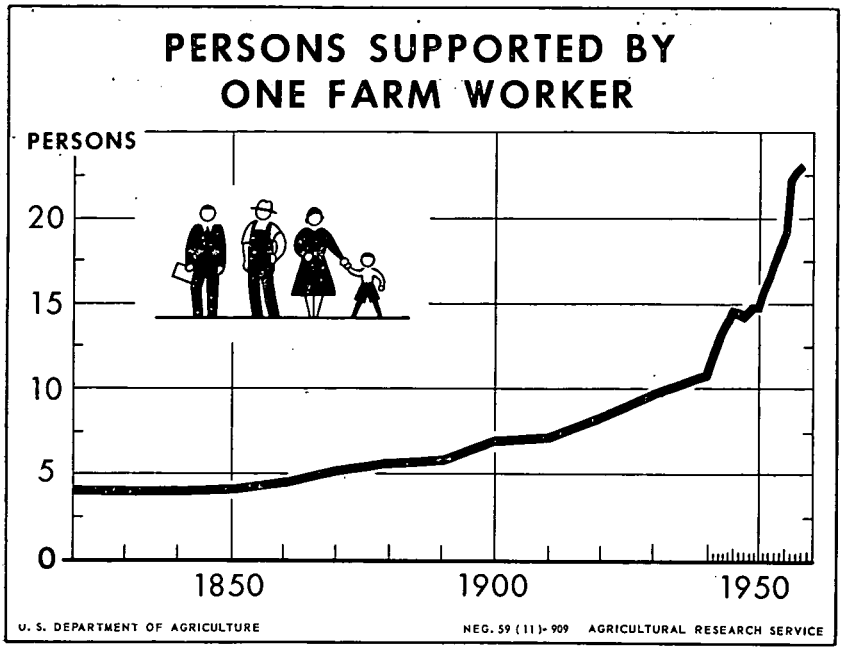
CHART 7-1



2. The growth of demand for farm products is at a much slower rate. Estimates presented before this committee and elsewhere suggest a 10 percent increase in real per capita disposable income at most leads to an increase of consumption of farm products of 2 percent.[1] With population growing at about 1.7 percent, and real per capita income typically rising at 1.3 percent, the total increase in the demand for farm products is only about 2.0 percent. Furthermore, chart 3 shows clearly that the growth of farm output has been and continues to be well ahead of population growth.

[1] See estimates by Theodore W. Schultz and references cited by him in the Joint Economic Committee "Policy for Commercial Agriculture," 1957. Also W. W. Wilcox, Journal of Farm Economics, May 1959, p. 245.

CHART 7–2



3. The resultant imbalance persists, in part, because of inadequacies in the Government price support programs. The levels of price supports have been sufficient to encourage farmers to draw additional inputs into agriculture, particularly capital and fertilizer, to use the new technology being made available to the fullest, and to produce large crops. The production controls that have been applied, primarily acreage restrictions, have proved to have only limited effectiveness as farmers have utilized the remaining acreage more intensively.

II. FALLING FARM INCOMES

With outputs rising more rapidly than demand, prices have been falling. At the same time, the prices paid by farmers have increased along with the general price level, resulting in a decline in the parity ratio, the ratio of prices received to prices paid. As is seen in chart 7–4, this ratio today is at its lowest in 19 years.

Farmers' total net income has been falling irregularly. Income per farm has not fallen as fast because of the great decline in the number of farms. (See chart 7–5). From 1947 to 1959 the number of farms fell by 1.3 million, or 22 percent.

TABLE 7–1.—*Reduction in number of farms, selected periods*

Period	Reduction in farm establishments	
	Number (millions)	Percent
1940–59	2.2	28.1
1947–53	.6	10.2
1953–59	.7	13.2

Source: Joint Economic Committee, Economic Indicators.

These figures do not show the wide range of experience within farming. Thirty-one percent of the farm output is produced on 3 percent of our farms; all but about 10 percent of total farm output is produced on less than one-half of the total number of farms. The larger commercial farms produce the bulk of the output as table 7–2 shows:

CHART 7–3

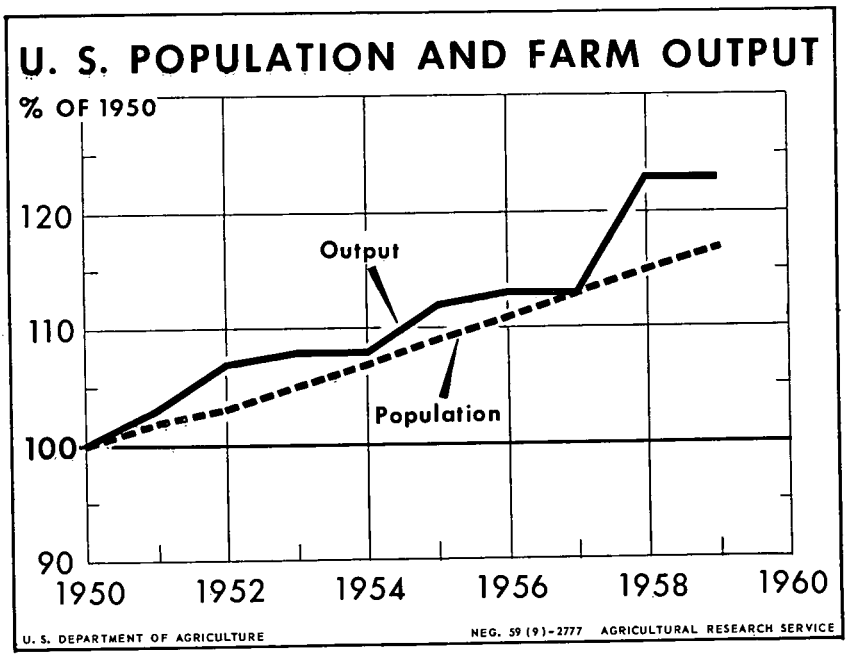
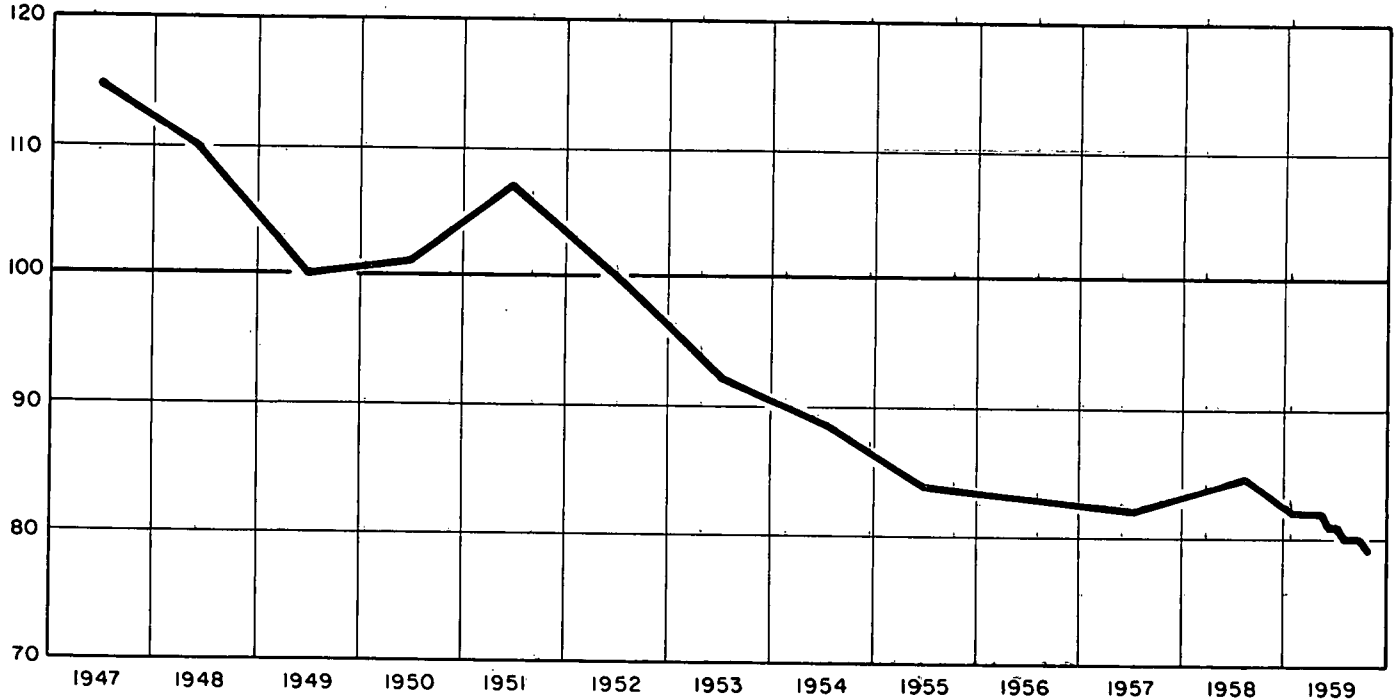


CHART 7-4

PARITY RATIO



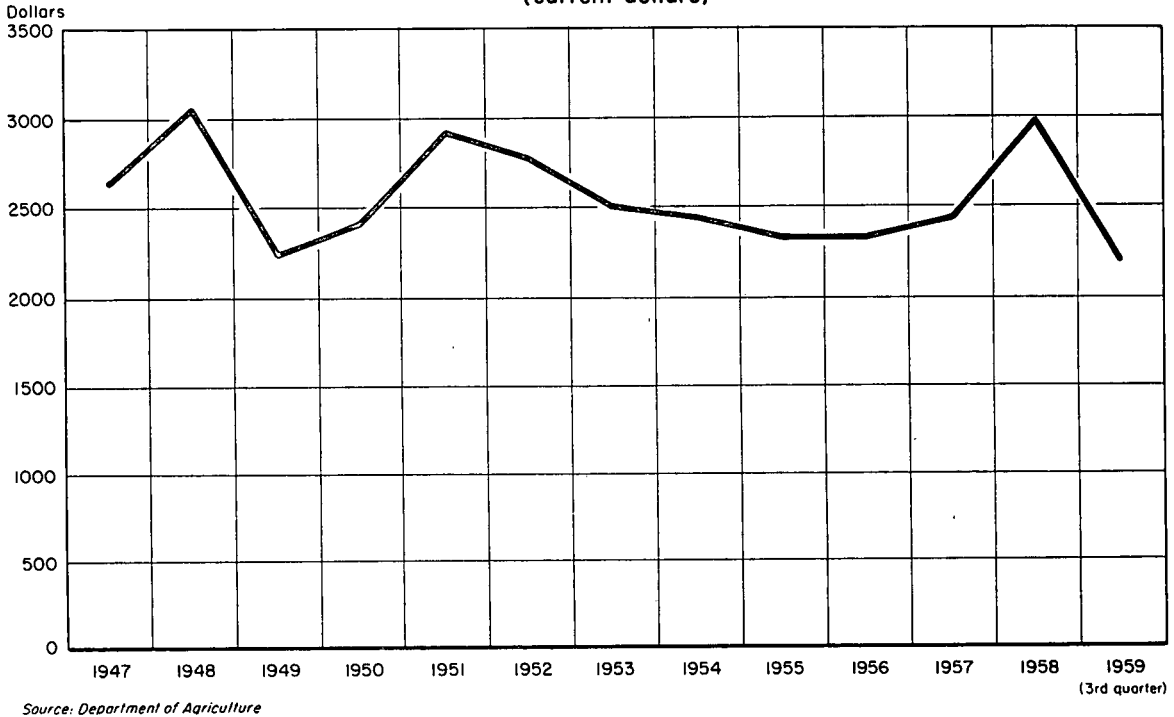
NOTE: Parity is the ratio of prices received to an index of prices paid, interest, taxes, and wage rates.

Source: Joint Economic Committee, Economic Indicators.

CHART 7-5

NET INCOME PER FARM, 1947-59

(current dollars)



Source: Department of Agriculture

TABLE 7-2.—*Relation of farm size and output share*

	Number of farms	Percent of total farms	Percent of total dollar output	Percent of acres used
I. Commercial farms having market sales of:				
$25,000 or over	134,000	2.8	31.3	22.4
$10,000 to $24,999	448,945	9.4	26.9	20.8
$5,000 to $9,999	706,929	14.8	20.5	19.0
$2,500 to $4,999	811,965	17.0	12.1	14.1
Total, over $2,500	2,101,839	44.0	90.8	76.3
II. Small full-time commercial farms having market sales of:				
$1,200 to $2,499	763,348	16.0	5.7	8.8
Less than $1,200	462,427	9.7	1.4	3.9
Total, less than $2,500	1,225,775	25.7	7.1	12.7
III. Part-time, residential, and other [1] farms	1,455,404	30.4	2.0	11.0

[1] This classification includes 2,693 institutional and experimental farms.

Source: U.S. Bureau of Census, 1954 Census of Agriculture, cited in Committee for Economic Development, "Toward a Realistic Farm Program," December 1957.

Since the major portion of farm aid has always been based upon supporting the prices of crops produced for market, the major benefit of farm programs has accrued to the larger farms with the larger output. The other half of the total number of farms, which have much less production for market, gets less benefit from price support programs.

III. THE STABILITY OF FARM INCOMES

Because of fluctuations in the weather, crop yields have varied and farmers' income has been unstable. This has been accentuated by the inability of farmers to predict price movements as far ahead as is necessary to reasonably plan production; the corn-hog cycle—with high hog prices in one year leading to large hog production and high corn prices thereafter, and culminating in an oversupply of hogs—continues as it has for many years, injecting instability into an important segment of the agricultural economy. Instability has been a problem of agriculture throughout its history, and the problem has declined but little in recent years.

IV. POVERTY IN AGRICULTURE

Rural poverty continues to constitute one of the leading social problems of the United States. Geographically the poverty is largely concentrated in the Appalachian mountains, the Southern States, and in New Mexico (including particularly the Indian reservations), with some other problem areas scattered through the Northwest and the upper Middle West. These low production farms suffer from an acreage too small to support a family living standard and from an inadequate stock of capital. They have also tended to be bypassed by technological progress and have received relatively very little benefit from Government price support programs, because they do not produce much of a marketable crop.

V. THE ACCUMULATION OF SURPLUSES AND THE DRAIN ON THE FEDERAL BUDGET

The biggest symptom of the inadequacy of present programs is the enormous accumulation of surpluses and the rising drain on the Federal budget.

Not all crops are under price support. These apply to the six basic commodities, cotton, wheat, corn, tobacco, rice, and peanuts, as well as dairy products, soy beans, and several other commodities. Somewhat more than half of all agricultural sales are on crops not under price support, the leading items being commercial vegetables, fruits, nuts, and other grains.

Because the advance in output constantly tends to be greater than the rise in demand, the Federal Government has been acquiring enormous stocks of surpluses under price support programs. Table 7–3 indicates the value of total stocks held by the Department of Agriculture on June 30 as well as the net acquisitions of recent years. Table 7–4 indicates the costs of these acquisitions. It can be seen that the total cost of price supports has been increasing. In addition to the $5.38 billion spent in 1959 for the stabilization of farm prices and incomes, other programs to promote agriculture add at least another $1.5 billion to the budget.

TABLE 7–3.—*Expenditure for stabilization of farm prices and income, 1954–59*

Fiscal year:	*Millions*
1954	$1,689
1955	3,486
1956	3,901
1957	3,430
1958	3,151
1959 [1]	5,386

[1] Estimate.

Source: Hearings, Senate Committee on Agriculture, February 1959.

CHART 7–6

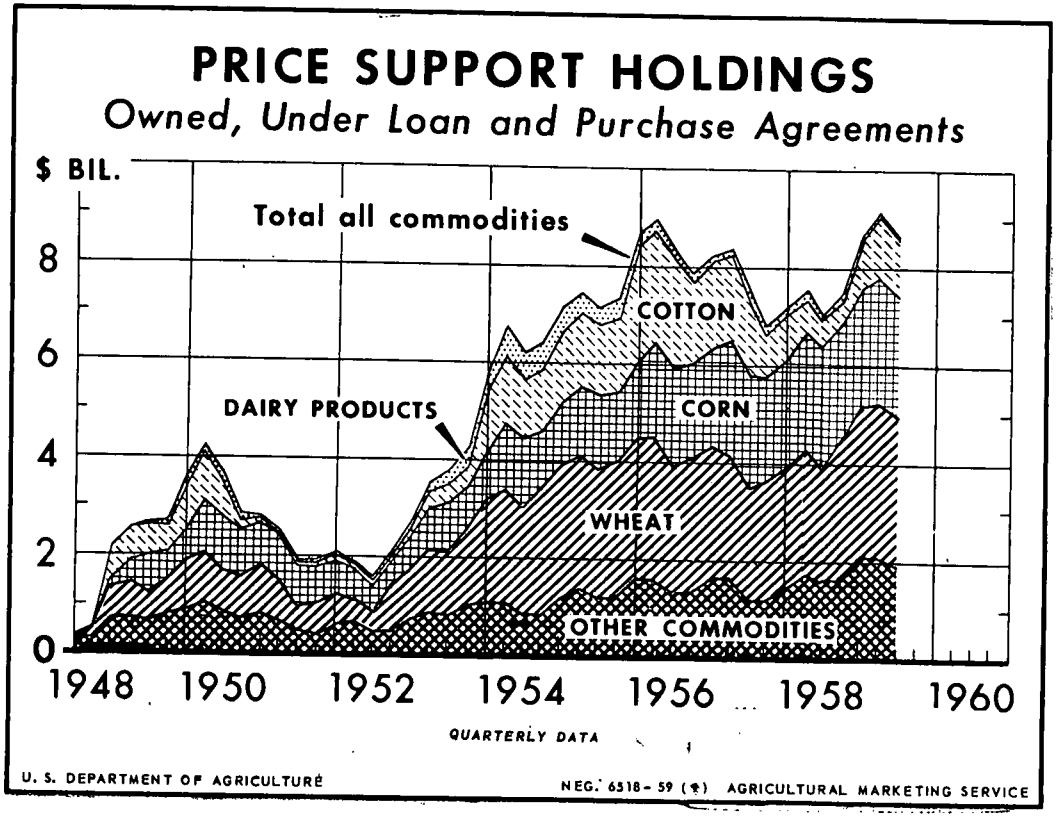

PRICE SUPPORT HOLDINGS
Owned, Under Loan and Purchase Agreements
$ BIL.
8
6
4
2
0
Total all commodities
COTTON
CORN
DAIRY PRODUCTS
WHEAT
OTHER COMMODITIES
1948
1950
1952
1954
1956
1958
1960
QUARTERLY DATA
U. S. DEPARTMENT OF AGRICULTURE
NEG. 6518-59 (9) AGRICULTURAL MARKETING SERVICE

TABLE 7–4.—*Price support holdings, owned under loan and purchase agreements, United States, by quarters, June 1948 to June 1959*

[In millions of dollars]

Date	Wheat	Corn	Cotton	Dairy products	Other commodities	Total obligations
1948—June 30	8	1	5	0	280	294
Sept. 30	170	0	51	0	331	552
Dec. 31	692	130	628	0	713	2,163
1949—Mar. 31	721	410	680	0	785	2,596
June 30	569	762	609	14	694	2,648
Sept. 30	716	587	520	67	804	2,694
Dec. 31	1,016	611	931	98	910	3,566
1950—Mar. 31	1,045	1,086	961	106	1,038	4,236
June 30	820	1,078	717	180	908	3,703
Sept. 30	882	880	162	205	778	2,907
Dec. 31	1,005	867	21	130	837	2,860
1951—Mar. 31	848	881	34	19	719	2,501
June 30	505	827	19	5	505	1,861
Sept. 30	602	748	36	7	477	1,870
Dec. 31	679	667	86	8	619	2,059
1952—Mar. 31	531	650	62	4	626	1,873
June 30	411	557	55	5	503	1,531
Sept. 30	955	485	43	6	512	2,001
Dec. 31	1,093	593	194	9	720	2,609
1953—Mar. 31	1,262	848	368	153	903	3,534
June 30	1,284	1,007	372	303	840	3,806
Sept. 30	1,066	1,322	408	395	1,065	4,256
Dec. 31	2,110	972	1,293	392	1,107	5,873
1954—Mar. 31	2,321	1,331	1,387	596	1,105	6,740
June 30	2,169	1,397	1,239	568	909	6,282
Sept. 30	2,567	1,151	1,270	579	893	6,460
Dec. 31	2,767	1,239	1,458	515	1,218	7,197
1955—Mar. 31	2,705	1,436	1,475	436	1,420	7,472
June 30	2,586	1,550	1,419	352	1,274	7,181
Sept. 30	2,746	1,426	1,514	365	1,288	7,339
Dec. 31	2,864	1,584	2,330	281	1,631	8,690
1956—Mar. 31	2,910	1,943	2,276	210	1,613	8,952
June 30	2,626	2,000	2,228	173	1,330	8,357
Sept. 30	2,778	1,887	1,698	171	1,365	7,899
Dec. 31	2,698	2,049	1,724	111	1,641	8,223
1957—Mar. 31	2,505	2,330	1,747	118	1,662	8,362
June 30	2,288	2,295	1,469	165	1,229	7,446
Sept. 30	2,430	2,147	865	190	1,224	6,856
Dec. 31	2,504	2,175	912	166	1,455	7,212
1958—Mar. 31	2,515	2,404	678	147	1,785	7,529
June 30	2,368	2,427	546	146	1,601	7,088
Sept. 30	2,959	2,285	511	119	1,627	7,501
Dec. 31	3,069	2,354	1,108	62	2,148	8,741
1959—Mar. 31	3,164	2,532	1,313	47	2,111	9,167
June 30	3,083	2,419	1,219	72	1,900	8,693

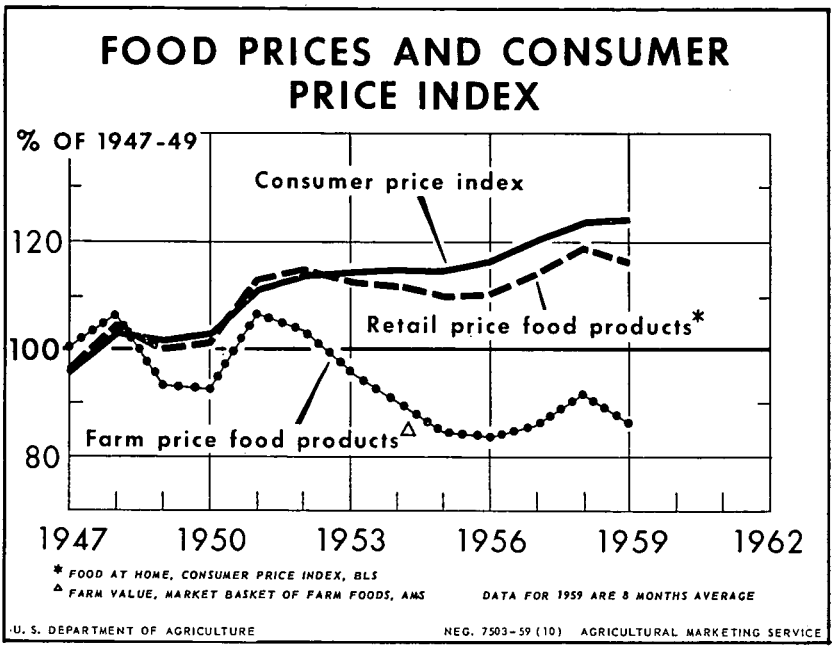
Source: Compiled from reports of the Commodity Stabilization Service.

There is an almost universal feeling in the nonagricultural population that price and income support programs are ineffective and their cost too high.

VI. AGRICULTURE AND THE PRICE LEVEL

In recent years, the total inflation of the economy has been substantially moderated by the fall in farm prices. Chart 7 contrasts the movement of farm prices with food prices at retail and with other retail prices.

CHART 7–7



While the overall price trends in agriculture have moderated inflation, the changes in food prices play a particularly large role in the movements of the Consumer Price Index. The periods of drastic increase in this index have been periods in which food prices happen to be rising. During both of the fast runups in the CPI—one associated with the Korean war in 1950 and early 1951, the other in 1947–48—food prices in the index increased faster than other commodities and rose to a higher level than all items. For example, the total index hit a peak in December 1951 of 113.1; the food index was 115; and the index of all nonfood commodities was only 110.4. Thus, because a price rise in agriculture happened to correspond with forces in the economy causing other prices to rise, the inflationary pressure as measured by the CPI was greater than it otherwise might have been.

A similar phenomenon occurred during the latest recession. Nonfood commodities did not rise in price on the index from December 1957 until September 1958. But the food price index rose because of temporary supply stringency caused by weather and other factors. The food price index rose 5.5 index points between September 1957 and June 1958 when it began to go down again. Thus the much discussed consumer price rise during the recession was due to food prices and the ever-rising prices in the service sector. Nonfood commodities did not resume their rise until the last quarter of 1958, well after the beginning of the recovery.

A distorted picture of the inflationary process results since the movements of these food prices were determined by forces which, at times, had little to do with the general inflationary processes. Thus periods of increases in the Consumer Price Index have not always

coincided with the periods of most acute inflationary pressure in the economy. An exaggerated notion of the significance of food prices in the inflation is conveyed. The fundamental fact is not occasional running-up of food prices in response to certain changes in crop yields, but rather the longrun downward trend of prices of farm products. The rising costs of processing have also served to obscure the relationship between farm prices and the overall inflation.

VII. POLICIES FOR AMERICAN AGRICULTURE

Policies to deal with overproduction and falling farm incomes

1. The only ultimate solution to the surplus problem is a stop to the increase in production, or at least a slowdown in the rate of growth, to bring rising farm outputs more closely into line with the growth in demand for farm products. Since the fruits of technology will continue to be reaped, this will require a transfer of resources out of agriculture. Human costs and economic costs will be incurred in this process.

In some other sectors of the economy, where firms are large and labor strongly organized, such adjustments have resulted in higher prices and lower production, leaving the per capita incomes unaffected, and in some instances rising. The coal industry and the railroads are examples of this type of adjustment. In other segments of the nonagriculture economy, such as textiles, where unions are weak and managements are not the beneficiaries of Government protection and regulation, the costs have been borne by the industry and the workers, and there has been widespread suffering. The adjustments required in agriculture are so enormous, the incomes of many farms already low, and the market structure of most of agriculture so devoid of power on the part of the sellers, that continued large-scale Government programs are essential. *The country as a whole must share the burden of adjustment.*

At the same time, the urgent needs to accomplish other objectives and the enormous drain on the Federal budget make it important to have the Federal programs encourage the process of adjustment rather than just to freeze the resources in agriculture. Thus, we must be prepared for continued large outlays, but we must organize the programs so that some end is in sight and so that the rate of growth of the whole economy is enhanced by the transfer of excess resources to more productive uses in other industries and occupations. Neither the American farmer nor the rest of the people are well served by the present impasse.

2. *The first prerequisite to successful agricultural policy is a high level of employment in the rest of the economy.* People leave farming only when other job opportunities are abundant and known. In periods of substantial unemployment, exits from farming slow.

3. *Continued retirement of land from use through the soil bank program will effectively reduce output.* Retirement of entire farms through the conservation reserve program is a much more effective device than partial retirement of acreage on farms which continue in operation. Therefore the conservation reserve program should be expanded. Expansion of the conservation reserve program with emphasis on entire farm retirement should help eliminate an unfortunate

side effect of partial retirement programs: the tendency of farmland values to become inflated. Operators who have placed all the farmland in the soil bank will not be anxious to acquire additional land for crops; but farmers with only part of their lands in fallow typically seek more land in order to fully utilize their equipment. Thus land prices are bid up.

4. *With an excess of arable land clearly evident, the Federal Government should cease to add to this excess through reclamation, except where other pressing social purposes are served, or where economic feasibility can be clearly demonstrated.*

5. Recent modifications in the price support program have stressed the abandonment of production controls. While controls have not succeeded in stabilizing output or in reducing it, they did have some effect in slowing down the rate of increase. Abandonment of the controls in the case of corn has resulted in an enormous crop and an enormous surplus. Extension of the same principle to wheat, as has been proposed, would have the same effect. *Thus, as long as there are price supports, there must be production controls and these should be strengthened through greater use of cross-compliance provisions* (which prevent surplus acreage of one program from being used to produce crops in other programs).

6. In the long run, however, price support programs will inevitably lead to continued accumulation of surpluses perhaps at an accelerated rate. Since the objective of farm policy is not to be fair to individual crops but to be fair to farm families, the ultimate emphasis of any program must be on income parity, not price parity. *The feasibility of a program of income payments, based on the net incomes that farmers would have earned on a recent historical level of production at recent historical prices, should be explored;* this would permit the prices of commodities to seek their natural level and leave farmers free to grow as much as they can profitably produce at going market prices. Limits should be placed on the total amount to be paid to any individual; a figure such as $2,000, applied to net income, would confine the benefits to equitable levels; further limits related to the gross income of farmers might also be imposed. This proposal would shift the distribution of Government payments from large commercial farms toward lower income farms. It would also be likely to cost less than present programs. But even this proposal would have only small benefits for low-income farmers who do not produce much of a cash crop.

7. *The emphasis in agricultural research should continue to be shifted away from increasing output toward increasing the use of farm products.* The longrun programs of physical research, which represent the spearhead of technical agricultural progress for the entire world, should not be seriously impaired; but their emphasis might well be shifted toward more research that would benefit the countries in the world that suffer from famine rather than to aid our own output which is already too large.

8. *The program for disposal of surpluses overseas should be continued on as vigorous a basis as possible, keeping in mind the interests of other traditional export countries. These programs should be put on a longrun program basis and not made dependent on shortrun fluctuations in our own stocks.* The recent case, in which

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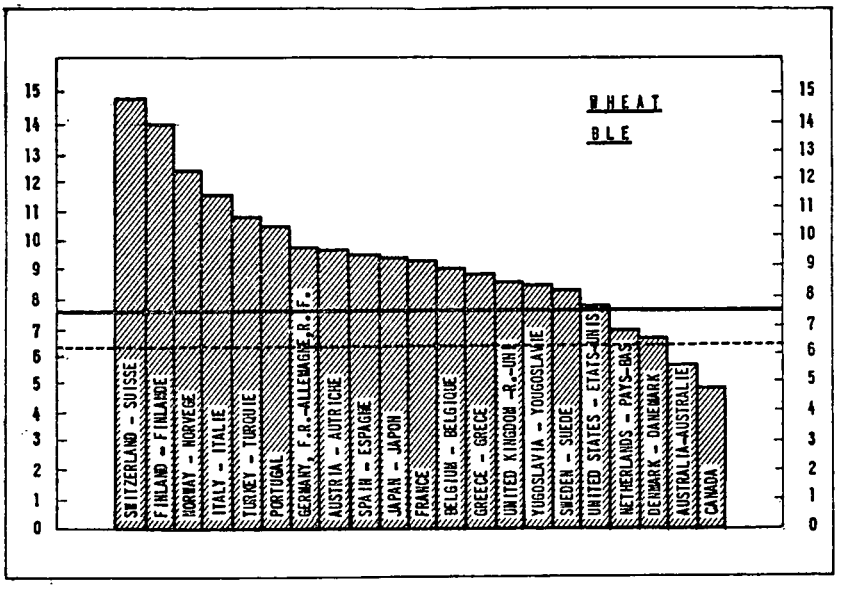
our surplus disposal of dairy products was suddenly terminated because the surplus stock had fallen, leading to dislocations in the import programs of the countries that had been acquiring these surpluses, shows that these surplus activities are important to other countries and that we must keep their stake in the program in mind to facilitate their economic development.

9. *In executing American foreign trade policy, particularly with regard to Western Europe, effort should be made to reduce agricultural protectionism in potential customer countries.* The extent of foreign agricultural protectionism, at least for one commodity, wheat, is indicated in chart 8.

CHART 7–8

PRICE OF WHEAT (AVERAGE 1954/55 AND 1955/56) RECEIVED BY FARMERS

(Dollars per 100 kgs)



——— Average World Import Price.
..... Average World Export Price.

Source: Reproduced from the GATT publication "Trends in International Trade," October 1958, p. 86.

In the words of one witness:

In the case of our agricultural exports, it is clear that the underlying long-run economic possibilities for expansion are extremely large. Just as the growth of productivity in Western Europe has been most marked in such fields as metal products, machinery, and vehicles, the broad sector of our economy which in the past two decades has shown the most spectacular gain in productivity, both absolutely and in relation to productivity trends abroad has been agriculture. If actual patterns of trade were permitted to adjust to these divergent trends in productivity, and to the resulting shift in the structure of comparative advantage, there can be little doubt that the increasing competition of Western European manufactured exports in world markets would go hand in hand with rapidly growing demands in Western Europe for imported agricultural products, and that the United States would be the largest beneficiary of this growth of demand. Comparison of Western European with

American food-consumption patterns shows their much higher caloric intake from potatoes and grains, with correspondingly lower consumption of meat and dairy products. Since growth in real income carries with it an increasing demand for costlier foods, it is clear that the combination of expanding manufacturing activity and real incomes abroad and strikingly rapid gains in agricultural productivity here create vast underlying, longrun economic possibilities for expansion of American agricultural exports to the Common Market countries (and to other Western European countries).

Unfortunately, however, realization of this underlying possibility is inhibited by serious obstacles. A sizable expansion of agricultural exports to the Common Market may reasonably be expected, but one major obstacle to the realization of the very large basic potentialities for expansion of agricultural exports—and the obstacle most pertinent to the committee's present discussion—is European agricultural protectionism. On this score, the agricultural provisions of the Treaty of Rome are not encouraging. A permanent policy of high protection, subsidization, and official control is clearly contemplated. In future commercial negotiations with Common Market countries, a strong effort should be made to induce them to adopt a long-term program of gradual reduction of import barriers and domestic agricultural subsidies. It must be admitted that our own past position and the special exceptions for agricultural products which we have included in our past trade liberalization proposals, will be a source of some difficulty in any such negotiations. Nevertheless, this opportunity should not be neglected since the underlying possibilities for expansion of our exports to Common Market countries are much greater for agricultural products than for manufactured goods.[2]

10. *Since mobility of people and of resources out of agriculture into other industries is the only ultimate long-term solution to the problem, the Federal Government should take all reasonable measures which facilitate this process—special aids to education in rural areas to provide skills usable in other industries, relocation allowances and strengthening of employment service facilities, and encouragement of movement of nonfarm enterprises to rural areas to provide job opportunities to those who prefer rural to urban living even when working in nonfarm occupations.*

11. *It has been suggested that the ultimate solution to the problem of overproduction lies in providing agriculture with the same type of market structure as in some industries, giving the producers, through market organization, control of supply and giving them the power to keep goods off the market when they think appropriate.* This other policy of adding to the monopoly and quasi-monopoly elements in the economy would add significantly to inflationary tendencies as well as have other undesirable effects on the market structure of the economy. It would be a serious deterioration of the overall structure of the American economy.

Policies for the low-income farmers

1. None of the above policies will be sufficient to solve the problem of the low-income farmers. The regions in which they are concentrated pose a similar challenge to the United States as underdeveloped countries overseas. Technical assistance in many forms could be usefully applied.

The rural development program, which is particularly aimed at farmers that do not produce much for market, should be put on a substantial scale. This program is conducted by five Federal departments and the Small Business Administration, in cooperation with land-grant colleges, and aims to expand off-farm jobs, develop efficient family-sized farms, and provide special programs of education, vocational training, and guidance. It is only by these and related

[2] Hearings, pt. 5, p. 1034, in statement by Prof. Emile Despres of Williams College.

methods that the problem of poverty in agriculture can ultimately be cured.

We recommend that this program be developed with all possible speed and energy. Given the general overproduction of agriculture and the outlook on farm incomes, we recommend that the program put particular stress on the development of nonagricultural job opportunities and on vocational training for industry. The attraction of industry within commuting distance of these low-income farm areas would be the most effective step for ameliorating their poverty.

Technical assistance in developing more effective farms and in improving marketing facilities should also be expanded in order to further reduce rural poverty. Educational programs will also prove useful.

Similar activities by the Bureau of Indian Affairs designed to cure the rural poverty of the American Indians, should also be promoted.

The programs to provide capital to low-income families, conducted by the Farmers' Home Administration and other agencies, should also be continued and strengthened, particularly to encourage land acquisition in those areas where consolidation of farms would permit the development of viable family enterprises.

CHAPTER 8. FISCAL POLICY[1]

I. Fiscal Policy and the Employment Act's Objectives

The Employment Act of 1946 added to the practice of Government a new responsibility and function, that of contributing to achieving and maintaining a high and steady rate of employment, stability in the general level of prices, and a high rate of economic growth. The language of the Employment Act does not explicitly set forth the second and third of these objectives. In practice, it has been widely construed to include these objectives. In fact, of course, the Employment Act did not change the existing relationships between Government and the economy; the actions of Government have always been consequential in these respects. The Employment Act's principal significance is its express recognition of this fact and its statement of intention that such considerations be made explicitly the objective of Government action and that such actions be specifically adjusted to contribute to achieving these broad economic objectives.

The act calls upon the Federal Government to—

> * * * use all practicable means consistent with its needs and obligations and other essential considerations of national policy, * * * to coordinate and utilize all its plans, functions, and resources for the purpose of creating and maintaining, in a manner calculated to foster and promote free competitive enterprise and the general welfare, conditions under which there will be afforded useful employment opportunities, including self-employment, for those able, willing, and seeking to work, and to promote maximum employment, production, and purchasing power.

This directive clearly embraces the policies guiding the Federal Government's revenues and expenditures, i.e., Federal fiscal policy.

To the extent that the rate of employment and the level of prices are sensitive to changes in total demand, the implications of fiscal policy for achieving and maintaining economic stability are, in general, quite clear. Fiscal policy should seek to offset fluctuations in total demand which, on the one hand, would threaten an undesirably high level of unemployment, and on the other, would result in aggravating upward pressures on prices by creating conditions of excess demand.

Early postwar period experience appeared to emphasize the concurrence of trends in the price level and in the rate of employment. Increasing unemployment and falling prices were regarded as the pattern of recession, i.e., inadequate aggregate demand, while rising prices were associated with a tight labor market, i.e., excess demand. More recently, however, the divergence of trends in employment conditions and in price movements has led to separate identification of

[1] Responsibility for the drafting of this chapter rested with Norman B. Ture of the permanent committee staff. He was assisted by Hamilton Gewehr of the permanent staff and William Cumberland, Brenda C. McKeon, and Mona Salyer.

stability in the employment sense and in the price level sense as objectives of public policy. Downward rigidities and upward flexibility in wage rates and in many prices pose the problem of directing fiscal policy toward maintaining a level of total demand adequate to serve the employment stabilization objective without inflation, or alternatively, toward restricting total demand adequately to achieve stability in the price level without at the same time producing serious unemployment.[2]

A distinction has also been made in recent years between the policy objective of stable high employment and economic growth. With a growing labor force, achieving stability in the rate of employment obviously means an expansion of total production. Moreover, stability in this sense is an important requirement for a high rate of capital formation in the private sectors of the economy; recession is a major deterrent to economic growth. The policy question today, however, is not merely whether growth in total output can be assured but how high a rate of growth is desirable.

Stabilizing employment at a higher rate than has prevailed on the average during the postwar period would in itself represent a major contribution to economic expansion. Moreover, minimizing lapses from high employment means not only more production available to meet all the demands of the economy but also, in the aggregate, less risk attendant upon private investment. But an additional element of the problem today is to use the Nation's productive capacity, at whatever rate is deemed appropriate, to a greater extent for the purpose of making possible a still larger volume of output in the future.

Fiscal policy aimed at a higher rate of growth, therefore, must be concerned not merely with adjusting total demand to the requirements of high employment and a stable price level, but also explicitly with channeling a larger proportion of total demand into growth-generating activities. In the last analysis, this requires devoting a larger proportion of total available resources to private capital accumulation, public investment, research, education, and similar intangible activities aimed at increasing productivity. Whether principal emphasis should be given to increasing tangible assets or an increase in technical skills and knowledge, whether the most productive growth-generating activities are plant and equipment outlays or more basic research, whether private capital additions should result in a more intensive or a more diversified capital structure, and whether a relatively large or small proportion of the increased efforts to expand productive capacity and productivity should be in the private or public sectors are assuredly important policy problems. Whatever the answer to these questions, however, the aggregate result is likely to be a relative increase in components of gross national product other than private consumption and a consequent increase in saving, both private and public, relative to the total national income. Fiscal policy, if it is to con-

[2] This dilemma is quite frequently attributed to "wage push," which can be prevented only if unemployment is sufficiently severe to undermine union power in seeking higher wage rates. This is *not* what is meant here. Instead, we are referring to the fact that with downward rigidities in prices and wages, the process of relative price movements by which dynamic adjustments occur takes the form of some prices rising while other prices remain stable, rise less, or fall little. The question we pose is whether there is some socially tolerable level of unemployment at which these downward rigidities become weak so that relative price changes can take the form of offsetting increases and decreases.

tribute to a higher rate of growth, must be concerned with the composition as well as the total volume of economic activity.

Other broad social, political, and economic objectives are also the concern of fiscal policy. The impact of Government fiscal activities on the distribution of income, both by income level and by type of income share, has long been a major issue of public policy. So indeed has been the influence of fiscal policy on competitive conditions and the opportunities for new enterprise. The fact that this chapter of the report does not focus specifically on these concerns does not imply their deprecation as fiscal policy objectives.

A. DIMENSIONS OF FISCAL POLICY

The Federal fiscal structure is an elaborate system of specific expenditures and revenue devices. The *immediate* objectives of most expenditure programs are the satisfaction of social wants, not necessarily the Employment Act objectives. By the same token, the specific elements of the Federal revenue system were not originally nor are they now determined primarily on the basis of these objectives. The basic function of fiscal *policy* is to arrange these myriad elements of the fiscal system in such a way that while serving their individual purposes they will as well serve the broader objectives of the Employment Act. Fiscal policy, therefore, has a dual aspect.

1. *Short-run economic stabilization*

The Employment Act objectives of fiscal policy, in turn, have a twofold focus. The language of the act appears to emphasize the orientation of public policy toward maintaining economic stability, in the sense both of a high rate of employment and stability in the general price level. Considering the background of this legislation and the widely prevalent fears of postwar depression at the time it was conceived, this emphasis on the short-run problem of stability is easily understood.[3] And although postwar experience appears to have demonstrated substantial inherent resistance in the U.S. economy against prolonged and deep underemployment and deflation, it has not shown the same resistance to more moderate economic reversals, still less to inflation. The short-run stabilization focus of the Employment Act and of fiscal policy, therefore, is certainly warranted, even if the magnitude of the problem appears to be different from that originally conceived.

In the context of fiscal policy, the economic stability problem is a twofold one. In the first place, there is the problem of minimizing the undesirable shocks which changes in Government activity may impose on the economy as a whole or on some important section thereof. A national defense emergency is certainly the most dramatic example of this problem. The attendant increases in Government demands upon the resources of the economy can hardly be constrained by considerations of economic stabilization. Any change in the composition or volume of Government demand, moreover, may involve the same sort of economic shocks. Since the immediate objective of most Government programs is not economic stability but to achieve

[3] Cf. Grover W. Ensley, "The Employment Act of 1946: The Dynamics of Public Economic Policy," The Relationship of Prices to Economic Stability and Growth, compendium of papers submitted by panelists, Joint Economic Committee, Mar. 31, 1958, pp. 1–12.

some more specific goal, and since, in a dynamic society, these other objectives are hardly likely to remain constant for very long, Government is likely to be a source of economic instability, of changing pressures on resources, the rate of their employment, their prices, and the prices of the goods and services they produce.

The corollary of the destabilizing impact of changing Government demands is the capacity of fiscal policy to offset economic instability. Changes in taxes, or in expenditures, or in both may be used to compensate for changes in private demands or in demands by Government which would otherwise give rise to recessionary or inflationary trends.

2. *Secular focus on economic growth*

While the background of the Employment Act explains its emphasis on economic stabilization, emphasis in public policy has turned increasingly to economic growth over the long run. The objective of achieving and maintaining a high rate of growth has assumed a status of equal importance with the stabilization goals explicitly stated in the act. (See ch. 1 of this report for discussion of the importance of economic growth.) This emphasis introduced additional problems for fiscal policy, since it focuses concern on the impact of fiscal developments on the composition as well as on the aggregate level of economic activity. It therefore raises thorny issues about the character of Government activity and the distribution of fiscal burdens, traditionally the most politically sensitive aspects of public finance.

In summary, fiscal policy cannot seek to pursue a "neutral" course with respect to the Employment Act's objectives. The expenditure and revenue-raising activities of Government will affect the level and the composition of economic activity, will impinge on the conditions determining the rate of employment, the level of prices, and the rate of economic expansion whether or not expressly and deliberately formulated with these objectives in mind. In a free, representative, self-governing society, the obligation of Government to serve the people is matched by the obligation of the people to make sure that Government serves them well. This obligation cannot be discharged if fiscal policy is divorced from the Employment Act.

B. CONSTRAINTS AGAINST THE USE OF FISCAL POLICY TO ACHIEVE THE EMPLOYMENT ACT'S OBJECTIVES

The practice of fiscal policy aimed at maintaining a high rate of employment, stability in the general level of prices, and a high rate of economic growth is not easy. Indeed, the constraints on the vigorous, prompt use of fiscal policy for these purposes are numerous and varied.

In the first place, the fact that the fiscal structure consists of numerous and diverse expenditure and tax elements imposes limitations on the use of fiscal policy to achieve broad economic objectives. Those responsible for formulating fiscal policy may be in substantial agreement with respect to broad objectives. This global decision must then come to grips with the problem of determining the specific changes in expenditures or taxes necessary to achieve the objective. These decisions may well be made on the basis of considerations which are remotely, if at all, related to the global economic policy objectives.

Ineffectual or undesirable changes, or more likely, fiscal inertia, may often result from the interaction of political considerations.

There are other serious obstacles to the use of fiscal policy for the achievement of broad economic policy goals. The most significant is the fact that, except in times of national emergency, there is little likelihood of a consensus, among those responsible for formulating public policies, with respect to the relative priorities of policy objectives. Changes in these priorities will involve changes in fiscal impact. The quick association of change in fiscal burden, in other words, with change in policy objectives in itself acts as a deterrent to easy agreement about what fiscal policy should seek to do.

Arraying the priority of policy objectives also involves the difficulty of clear delineation of objectives. How much and what kind of economic growth is sought? What is "reasonable" stability in the price level and what measure of "the price level" should be used? At what rate is employment "full"? The determination of policy priorities involves trading off gains with respect to the various objectives. The representative political process does not lend itself to making such marginal determinations quickly and smoothly. In a dynamic setting, they will often be reached only after the conditions which impelled the determination in the first place have changed. Fiscal policy, therefore, is likely to be sluggish, and often, at least from the vantage point of hindsight, out of tune with the times.

An offsetting factor is the fortunate fact of automatic responsiveness or "built-in" flexibility of both revenue and expenditure structures. The tendency of Federal expenditures, particularly transfer payments to persons, to rise and for receipts to fall during periods of recession, and for the reverse to occur during periods of economic expansion, without explicit, discretionary action reduces—but does not eliminate—the inherent sluggishness of fiscal policy with respect to the stabilization objective.

A further difficulty is that the stabilization problem may not be one of aggregate excess or deficient demand, so that fiscal measures of general impact may not be effective. Fiscal policy aimed at achieving the broad economic policy objectives of employment and price level stability and a high rate of growth is conventionally discussed in aggregative terms, despite the fact that it consists of a large number of specific fiscal components. Analytically, this conception involves no serious difficulty so long as the actual economic developments with which the policy is to cope are, similarly, broad, aggregate movements. But the important economic developments to which public policy may have to be addressed may be sectoral changes involving no excess demand but which lead to a rise in the price level because of downward rigidities in prices and wages. The customary prescription for an increase in the budget surplus under these circumstances is likely to take the form of efforts to achieve price level stability by way of depressing the level of total demand below that at which full employment can be maintained.

An additional difficulty is that arising from lack of knowledge and agreement about policy mechanics. Even assuming concensus about policy objectives and willingness to use any policy means to achieve them, the problem remains of determining which means are in fact optimum. The assumption is that different combinations of policy

techniques and fiscal devices will have significantly different effects on the economy. The "mix" of policy techniques, therefore, should be adjusted in the light of the mix of policy objectives. This presupposes, however, a substantial amount of knowledge about the specific effects of alternative mixes of policy devices. But this is the very substantive area in which so much of the debate about public economic policy has centered, particularly in the years since 1954. It is, indeed, one of the major issues which has occasioned this inquiry by the Joint Economic Committee. Without substantial agreement among policymakers with respect to at least proximate conclusions on this question, fiscal action is likely to coincide with "good" policy, given policy objectives, only haphazardly.

Acknowledging these limitations on the use of fiscal policy to achieve broad economic objectives certainly does not imply that they should be complacently accepted. On the contrary, concern with the institutional constraints on a purposive fiscal policy is directed at pointing up the importance of finding the means to eliminate or mitigate them. Economic theory posits, and the historical record confirms, that fiscal actions may have a powerful impact on the level and character of economic activity. That such effects may occur, willy-nilly, without efforts on the part of a self-governing society to control them can imply only indifference on the part of that society to its economic fate. Such indifference is belied by this study undertaken by the Joint Economic Committee and the numerous similar inquiries in the past.

C. THE MECHANICS OF FISCAL POLICY

Fiscal policy aims at achieving the stabilization and growth objectives set forth above primarily through its influence on the level and composition of total money demand for goods and services. In the aggregate, this influence is the difference between Government expenditures (or in a number of very important instances, orders) which add to the volume of current demand, and taxes which reduce non-Government expenditures by reducing the disposable income of taxpayers. The extent of the increase or decrease in total non-Government expenditures resulting from these Government expenditures and taxes depends on the spending patterns of affected taxpayers and of the recipients of the payments by the Government. The composition of total demand is affected by fiscal actions both by virtue of the specific Government expenditures and by the differential impact of the various revenue sources.

1. Basic budget-income relationships

In a simple aggregative analysis, fiscal policy will increase the level of total economic activity if the Government's contribution to total demand through its expenditures is not fully offset by the contraction of private demand resulting from the taxes imposed by the Government. If all resources are substantially fully employed, this expansion of total demand will be reflected in an increase in prices. If there is idle capacity and unemployment, expansionary fiscal policy will result in increases in output or in prices, depending on the initial impact of the increase in demand in terms of the rate of capacity utilization and the fullness of employment in the immediately affected lines of activity and the mobility of resources.

In general, if the fiscal impact is to be neither expansionary nor contractionary, an increase in the budget surplus (or decrease in deficit) is called for when Government purchases of goods and services are increasing and the reverse is required when purchases are declining, i.e., the change in receipts should exceed the change in purchases. This is because Government purchases add dollar for dollar directly to total demand but an equal amount of taxes will not reduce taxpayers' expenditures dollar for dollar unless changes in their income are entirely reflected in changes in their expenditures. Accordingly, equal increases in Government purchases and taxes will increase total demand; equal decreases will contract total demand.[4]

Without reference to explicit non-Government spending functions, however, it is impossible to determine whether any given surplus or deficit budget is expansionary or contractionary in any absolute sense. Changes in non-Government spending functions, by the same token, may alter the expansionary or contractionary impact of any given amount of budget surplus or deficit. One cannot safely generalize that budget surpluses are contractionary and deficits are expansionary, although one can say that compared to no budgetary change, an increase in surplus or reduction in deficit is contractionary while a reduction in surplus or increase in deficit is expansionary.

2. Differences in effects on income of different types of expenditures and revenue sources

Differences in the composition of fiscal changes have different implications for the impact of overall fiscal policy on the level of total economic activity. Government expenditures for the purchase of goods and services have a larger impact on total demand than do transfer payments, which are not made for current production. (Transfer payments are frequently treated as negative taxes, implying that their impact on total demand will be of the same magnitude, but opposite sign as an equal amount of income taxes.) Moreover, the immediate demand and price effects of various types of Government purchases may very well differ, depending on the immediate availability and the degree of specialization of the productive services and capacity required to produce the goods and services, the volume of inventories of raw materials and final products involved, and similar conditions.

Similarly, the immediate demand effects of equal changes in various taxes may differ. Musgrave has calculated, for example, that consumption expenditures would change by $700 million in response to a $1 billion change in individual income taxes effected by a flat percentage cut in all bracket rates, $825 million in response to a $1 billion change in excises (assuming consumers adjust their outlays in response to real rather than current money income changes), and $500 million in response to a $1 billion change in the corporation income tax.[5]

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[4] For a tabular outline of these budget-income relationships, cf. Walter D. Fackler, "Government Spending and Economic Stability," in Federal Expenditure Policy for Economic Growth and Stability, papers submitted by panelists appearing before the Subcommittee on Fiscal Policy, Joint Economic Committee, 85th Cong., 1st sess., joint committee print, p. 322. For an excellent discussion of the balanced budget theorem, cf. William A. Salant, "Taxes, Income Determination, and the Balanced Budget Theorem," the Review of Economics and Statistics, vol. XXXIX, No. 2, May 1957, pp. 152–161.

[5] Richard A. Musgrave, "The Incidence of the Tax Structure and Its Effects on Consumption," in Federal Tax Policy for Economic Growth and Stability, papers submitted by panelists appearing before the Subcommittee on Tax Policy, Joint Committee on the Economic Report, joint committee print, 84th Cong., 1st sess., pp. 104–105.

Equal changes in surplus or deficit, therefore, may have different consequences for the level and composition of total demand, depending on the specific fiscal ingredients of these surpluses or deficits and non-Government spending functions.

3. Built-in fiscal stabilizers

The change in income related to the change in surplus or deficit described above assumes a once and for all change in either expenditures or receipts (or both). The fiscal structure, however, contains features which result automatically in changes in receipts and in expenditures in response to changes in income. For example, a reduction in income reflected in a fall in employment will lead, under present statutory arrangements, to an increase in transfer payments in the form of unemployment compensation. The same reduction in income will result in a decline in various tax receipts at any given level of tax rates, the extent of the decline depending on the income elasticity of the various taxes. By the same token, an increase in income will result automatically in a decline in transfer payments and a rise in tax receipts.

Discretionary fiscal actions to expand or contract the level of total demand, therefore, will result in automatic changes in some fiscal components in an opposite direction. The net change in surplus or deficit, therefore, will be less than that of the discretionary fiscal action itself.

The greater the degree of "built-in flexibility" in the fiscal structure, the less, other things being equal, need be the discretionary fiscal action taken to moderate any destabilizing development. In view of the "stickiness" of discretionary fiscal action, increasing the automatic responsiveness of the fiscal structure to changes in income is, in itself, widely regarded as an important objective of fiscal policy. These automatic fiscal responses, however, cannot fully replace discretionary action for stabilization purposes, except insofar as the effects of automatic changes on income result in changes in private spending patterns.

An offsetting consideration is the fact that taxes respond not merely to changes in real activity but to changes in the price level as well. To the extent that price level fluctuations and changes in the rate of employment are in the same direction, automatic fiscal responses will tend to moderate instability in both. But when increases in the price level coincide with steady or declining employment rates, built-in flexibility may result in undue restraint on the level of total demand from the point of view of maintaining a high rate of employment.

4. Repercussions of fiscal developments on monetary conditions

Fiscal policy developments also affect the level and composition of total economic activity through their impact on monetary conditions. An increase in the deficit (or reduction in surplus) generally means that the Government will add directly to the total demand for loanable funds, while the opposite fiscal change generally reduces total demand for loanable funds. In addition, monetary conditions will also be affected by the expansionary or contractionary influence of fiscal policy on aggregate demand. With a given supply of money and credit, an expansionary fiscal policy "tightens" monetary condi-

tions and a restrictive fiscal policy eases them. The actual change in monetary conditions, of course, depends on actions affecting the supply as well as the demand for loanable funds. Fiscal policy influences on monetary conditions, therefore, may at times be offset or reinforced by monetary policy changes.

Differences in specific fiscal ingredients of the surplus or deficit, as indicated, may have differential consequences for both the level and composition of total demand which in turn may also affect the composition and level of demand for loanable funds. These changes in monetary conditions will affect the level and composition of total demand. Indirect or "feedback" effects on Government revenues and expenditures, therefore, result not merely as the direct product of automatic stabilizers times initial demand response to discretionary fiscal actions, but also from the secondary consequences stemming from changes in monetary conditions.[6]

5. The impact of Government orders on economic activity

In a number of important instances, changes in Government orders—or obligations—more accurately measure the impact of Government demand on the economy than changes in expenditures. The principal reason for this is that budget expenditures are recorded as such at the time disbursements are made, but a disbursement is sometimes made considerably after the time that a Government order for goods and services has been placed. It is the order which in fact gives rise to the production activity in the private sector of the economy, while the expenditure may reflect the conclusion of this Government-generated activity.

Hard-goods procurement actions of the Department of Defense frequently demonstrate this timelag between the initial impact of Government activity and expenditures. Assume, for example, an 18-month production leadtime for a given category of military hard goods. Activity in the private sector of the economy will be generated by placing an order in this category. The private contractor undertaking to fill the order will, at the time the order is placed (or perhaps even before, if intent to place the order has been expressed to him), begin to acquire the resources required for its completion. It is, therefore, at the order stage that the procurement action will have its initial and often major impact on the markets for labor, raw materials, and financial resources, in this instance, as much as 18 months before the procurement transaction is recorded in budget terms. Indeed, the budget expenditure may coincide in time with a reduction in Government impact on total demand.[7]

The impact of Government orders on economic activity cannot be directly traced in changes in gross national product. Until the actual disbursement of funds, no change will be shown in Government pur-

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[6] For a careful and detailed discussion of the interaction of fiscal changes, monetary conditions, and private demand, see Richard A. Musgrave, "The Theory of Public Finance," McGraw-Hill Book Co., Inc., (New York, 1959), ch. 22. See also Warren L. Smith, "Monetary-Fiscal Policy and Economic Growth," Quarterly Journal of Economics, vol. LXXI, February 1957, pp. 36–55.

[7] Differences in leadtime are not necessarily directly correlated with lag between order and expenditure. Procurement contracts quite generally provide for progress payments by the Government at periodic stages in the production process prior to delivery of the completed product. In some instances, progress payments eliminate all but a very small portion of the lag between order and expenditure, while in others the reduction in the lag is slight. In view of these differences, a change in the composition of the Government's "shopping list" may involve substantial changes in the order-expenditure lag.

chases. Gross private domestic investment, however, will expand, other things being equal, by virtue of the increase in aggregate inventories, reflecting the addition to stocks at various stages in the production process of filling the Government order. As deliveries are made with the completion of the order, the national income account measure of gross private domestic investment will be reduced, other things being equal, while the Government purchases account will rise. At this point there is no further direct expansionary effect attributable to the Government purchase. The Government disbursement, however, does result in a transfer of liquidity from the Government to the private sector, which may be of consequence for the level of private activity.

Apart from these direct effects on the private sector, the Government order may result in a substantial induced income effect. The increase in gross private domestic investment, for example, may significantly exceed the inventory change, both because of new capital outlays required to fill the order and because of expansionary effects on investment in other lines of activity. If the Government order represents an initial phase of a new procurement program, anticipations in a wide area of business activity, as well as in that immediately involved, may be favorably influenced. By the same token, cancellation of any specific order may have adverse effects on anticipations of a magnitude substantially in excess of those directly attributable to the immediately affected line of business. Similarly, completion of an order may signal the "phasing out" of a procurement program, with the same sort of widespread impact on anticipations. Interruptions of a procurement program by holding back of orders previously expected, by delaying deliveries of completed orders, or by stretching out progress payments may also have adverse effects on anticipations and on investment in general.

The difference in timing between order and expenditure has its counterpart in revenue changes and, quite possibly, in other Government expenditures. The expansionary impact of the Government order will expand tax revenues and reduce the level of transfer payments, other things being equal. (Depending on monetary policy actions, there may also be an overall reduction in liquidity, reflected in higher interest payments by the Government.) An increase in budget surplus (or reduction in deficit), therefore, may emerge soon after the order is placed and before Government disbursements are made. Other things being equal, this rise in receipts will taper off as the order moves toward completion, so that a reduction in surplus or increase in deficit may develop when the Government disbursement is actually made (to the extent that the order results in expansion of investment and income lasting beyond the actual direct production on the order, the rise in revenues may continue beyond the increase in Government outlays, moderating this budget change). From the point of view of stabilization policy, of course, this succession of budget shifts toward surpluses and deficits is likely to be more appropriate than a closer coincidence in time of the increase in revenues with the increase in Government outlays.

In general, if the composition of Government demand does not materially change, period-to-period changes in expenditures provide an adequate approximation of the impact of Government demands on the

economy. For appraisal of multiperiod trends in which the composition of Government expenditures is relatively stable, the differences in time between orders and expenditures may be of little consequence. In other circumstances—for example, analysis of short periods of time in which significant changes in the composition of Federal outlays occur—reference to expenditure data rather than the flow of Government orders may be quite misleading.[8]

II. The Record of Postwar Fiscal Policy

The record of postwar Federal fiscal policy offers highly instructive insights concerning the impact of Federal fiscal developments on the stability and growth of the American economy. In a dynamic environment, history may be a poor instructor. Nevertheless, the postwar record affords a wide variety of examples of the types of problems with which fiscal policy has been, and is likely to continue to be, faced. Detailed examination and appraisal of this experience is helpful in suggesting the ways in which Federal fiscal policy may make a greater contribution to economic growth and stability.

This review of postwar policy begins with an examination of the economic stabilization record and then turns to longer-run trends in the Federal fiscal structure with respect to their relative restrictive or expansionary impact on the growth of total demand and productive capacity.

A. THE STABILIZATION RECORD

In reviewing the impact of postwar fiscal policy on economic stability, the following major conclusions emerge:

(1) *Changes in the volume and character of Federal Government demands, particularly for defense purposes, have been an important source of economic instability.* The postwar period has seen several rising and falling waves of defense procurement activity, in connection with the Marshall Plan, the Korean war, the post-Korean defense program, and most recently the post-sputnik defense program. Because of the relatively high rate of change in military technology, these changes in defense programs are likely to involve requirements for new specialized production facilities. They therefore have had a sizable impact on business spending for new plant and equipment in addition to their more immediate impact on the volume of activity in the durable goods industries in general. Each of the several sharp cutbacks in defense orders during the postwar period has been associated with a decline in durable goods activity, in plant and equipment outlays, in inventories, and in economic activity throughout the economy. Each of the rising waves of defense demands, similarly, has coincided with rising activity in durables, expanding plant and equipment outlays, inventory accumulation, and strong expansionary trends throughout the economy. The available data do not support a firm assertion that changes in defense demands were the sole source

[8] For a detailed discussion of these questions, see Murray L. Weidenbaum, "Government Spending: Process and Measurement," a study released by Boeing Airplane Co., based on Mr. Weidenbaum's doctoral dissertation. See also Weidenbaum, "The Federal Government Spending Process" in Federal Expenditure Policy for Economic Growth and Stability, papers submitted by panelists appearing before the Subcommittee on Fiscal Policy, Joint Economic Committee, 1957, Joint Committee print, 85th Cong., 1st sess., pp. 493–506.

of these fluctuations in durables and plant and equipment, but the coincidence of movement is so close as to support the conclusion that defense programs exert an extremely significant influence, both directly and indirectly, in this regard.

With the single exception of the Korean war, however, changes in defense demands have not been accompanied on a timely basis by discretionary fiscal action to compensate for their disturbing impact. Such compensatory action as has been taken has been delayed until inflationary or recessionary pressures have had an opportunity to make themselves widely felt.

It may well be that failure to moderate the destabilizing effects of changing defense activities is a result of inadequate emphasis in policy formulation, in both the administration and the Congress, on Defense Department obligations and too much emphasis on near-term changes in expenditures. Because of the lag between defense orders for hard goods and budget disbursements, undertaking compensatory adjustments for changes in expenditures rather than orders defers such action until the destabilizing influence has taken effect.

(2) *Except during the Korean war period, Federal postwar fiscal policy has relied almost exclusively on discretionary changes in expenditures and on built-in stabilizers for purposes of achieving economic stability. Discretionary tax changes have not been employed even in the face of strong recessionary and inflationary developments throughout the economy.* Reductions in tax rates in 1948 and in 1954 certainly contributed to moderating the recessions of 1949 and 1953–54, respectively. In the former case, however, the reductions were enacted despite the general assumption that inflationary, rather than recessionary, influences dominated the economy. In the latter case, the reductions were automatic, pursuant to the Revenue Act of 1951; their effective date was 6 months after the recession had begun. Earlier enactment had been proposed by the Committee on Ways and Means in the House, but was opposed by the administration on budgetary grounds.

(3) *While the automatic stabilizers served to moderate both economic declines and booms once underway, they have not been adequate to prevent major fluctuations in rates of employment and output.* Within the Federal revenue system, the corporation income tax has been highly responsive to broad cyclical movements in the economy. This sensitivity has had little apparent significance with respect to capital outlays. Individual income tax liabilities, on the other hand, have responded, in general, to a lesser degree to abrupt changes in economic conditions. In particular, they have been relatively insensitive, particularly in the post-Korean period, to sharp drops in employment. During the 1957–58 recession, for example, changes in the volume of transfer payments made more than twice as great a contribution to stabilizing disposable personal income as did changes in personal tax payments. The principal stabilizing influence, however, appeared to be outside the immediate framework of the fiscal system altogether.

(4) *The effectiveness of stabilizing fiscal action, either discretionary or automatic, is significantly affected by monetary conditions.* Under conditions of extremely high liquidity in the private sectors of the economy, even very large budget surpluses may prove inade-

quate to restrain inflationary expansion of total demand. This appears to have been the situation in 1946 and 1947. In the post-Korean period of increasing illiquidity, on the other hand, the responsiveness of the economy as a whole to quite modest changes in fiscal conditions appears to be relatively substantial.

(5) *So-called "traditional" fiscal policy, relying on broad changes in the relative levels of receipts and expenditures, is poorly suited to deal with inflationary pressures originating in strong shifts in demand among sectors of the economy rather than in excessive total demand.* More important than the magnitude of the change in budget surplus under conditions of dynamic demand changes is the source of the surplus. Presumably, if the objective sought is to curb inflationary price pressures at their source, selective tax increases and/or expenditure cuts should be aimed specifically at the sectors in which demand increases are likely to give rise to upward price movements. To do so, however, would limit the process of dynamic adjustment through relative price changes.

On the whole, the record of Federal fiscal policy aimed at economic stabilization throughout the postwar period is not very heartening. The following detailed review, it is hoped, will illustrate the conclusions listed above and substantiate the recommendations offered in the concluding section of this chapter.

1. Postwar reconversion and expansion: 1946–48

The postwar period began with widespread fears of serious unemployment and economic distress. These adverse anticipations were based in large part on the assumption that without the stimulus of war demands, total spending would fall to a level far below that required, at then current levels of prices and wages, to provide employment opportunities for a greatly enlarged labor force. These anticipations, however, underestimated the strength of the backlog of private demands deferred by the war and the impact of the very large accumulations of liquid savings in making these demands effective.

Despite these misgivings about economic conditions in the postwar era, the actual fiscal policy proposals of the administration during the first 3½ postwar years were oriented to expectations of inflationary strains.

(a) Reconversion: 1946

In the immediate postwar era, fiscal policy was based on the assumption that even with a rapid windup of defense expenditures and orders, the level of Federal Government demand could not be expected to fall back to that of the prewar era. In addition, the administration took explicit note of the low level of business outlays for plant and equipment and of consumer outlays for durable goods over a prolonged period of time. In view of the high degree of liquidity in both the business and consumer sectors, demands in both these areas were expected to be very high, if the private sector of the economy could be provided assurance that both employment and product markets would be strong. At the same time, the administration recognized that the period of reconversion from war to civilian production would coincide with demobilization of the Armed Forces and therefore with a greatly expanded labor force. Until civilian production lines were restored

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and put into full production, a serious unemployment problem might prevail. The immediate policy objective, therefore, was to facilitate reconversion to the greatest extent possible.[9]

Short-term, transition-period stresses, both on the price level and on employment conditions, associated with reallocation of productive services, were the major problems with which fiscal policy was concerned in the first postwar year. It was specifically proposed that relaxation of economic controls be undertaken slowly and with due regard for the possibilities of spending sprees, both in the consumer and business sectors, financed by the high liquidity of the private sector. Both inflationary strains and unemployment resulting from this reallocation seemed to have been of greater concern than the adequacy of expected total demand.

The net result of these anticipations was a system of proposals calling for limited tax reductions aimed primarily at encouraging business reconversion and investment in civilian production facilities, but also providing some support for consumption outlays. Despite the proposed reductions in taxes, anticipated reductions in Government outlays were expected to result in a substantial reduction in the budget deficit, although by no means eliminating it entirely.[10]

The Revenue Act of 1945, enacted November 8, 1945, provided tax reductions aggregating $5.9 billion, for the calendar year 1946, as estimated at that time. The excess profits tax was repealed for tax years beginning after December 31, 1945. In addition corporate surtax rates were reduced and the capital stock and declared value excess profits taxes were repealed. The estimated net revenue loss from these corporate tax changes was $3.1 billion. The act also provided individual income tax reductions, estimated to total $2.6 billion for calendar 1946, and a modest $0.1 billion reduction in excises, limited to repeal of the use tax on motor vehicles and boats.

Given the assumptions upon which the Treasury proposals were based, the tax reductions afforded by the Revenue Act of 1945 appear to have been appropriate in terms of the employment and price-level stabilization objectives enunciated in the fiscal messages of 1945. These assumptions, while nowhere so bearish as others widely used in evaluating immediate postwar economic prospects, were nevertheless too pessimistic, even though their major ingredients may have been correct.

Unemployment did, indeed, rise sharply following the termination of hostilities but only to a level which by postwar, peacetime standards seems quite low. Moreover, this movement was quickly reversed; by the last quarter of calendar 1946, the unemployment rate had fallen below that realized at any time subsequently, except during the Korean war (table 8–1, p. 275).

Gross national product in current prices fell from the second quarter 1945 peak of $223.7 billion to $197.1 billion in the fourth quarter.

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[9] Budget Message of the President, in the Budget for the Fiscal Year 1946, Jan. 3, 1945, pp. V–XXVII.

[10] See the statement of Secretary Vinson before the House Ways and Means Committee, Oct. 1, 1945, in Annual Report of the Secretary of the Treasury for the fiscal year 1946, pp. 426 ff.

Thereafter it rose steadily through 1946 and by the fourth quarter had reached $221.2 billion (table 8–2, p. 276).

The price level rose along with this increase in employment and production. Without belaboring the point, it seems clear that these price increases were associated primarily with the very great changes in the mix of productive activity, rather than with the aggregate level of demand. While a slight drop in gross national product in current prices occurred in 1946 compared with 1945, the decline in constant prices was precipitous (table 8–3, p. 280). But every major sector of gross national product increased substantially both in current and constant prices, except for the Federal Government, whose purchases of national defense goods and services declined by substantially more than the aggregate increase elsewhere in the economy. Moreover, these increases occurred in the face of a sharp contraction in Federal Government defense orders which declined sharply in the fourth quarter of 1946 compared with the estimated amounts in the three preceding quarters.

The fiscal result of these developments, as measured on a national income and product account basis,[11] was a sharp drop in Federal receipts of over $10 billion from the second quarter of 1945 to the first quarter of 1946. Despite the reductions in tax rates, receipts rose subsequently at a rapid rate and by the last quarter of 1946 were about $3 billion higher than a year earlier. At the same time, Federal expenditures were contracting drastically; purchases of goods and services fell by nearly 50 percent from the first to the fourth quarter of 1945. The net result was a drastic shift from a deficit of more than $20 billion in the last quarter of 1945 to a surplus of $10.1 billion a year later. Most of this shift was realized from reduction in outlays, but the increase in receipts during 1946 also contributed significantly—$7.8 billion (table 8–5, p. 286).

In appraising these immediate postwar fiscal and economic developments, the principal question is whether any materially different policy should have been adopted even had there been an accurate appraisal of economic prospects.

It may be argued that in view of the increase in prices which in fact occurred and assuming the desired reductions in Federal expenditure could not have been made at a materially more rapid rate, tax rates should have been maintained at least at their wartime level, if indeed, they should not have been raised. This appraisal, however, implicitly places a substantially higher priority for the transition period on curbing inflation than on speeding the reallocation of resources to civilian production with a minimum increase in unemployment.

If, in fact, the level of private demand was significantly influenced by the high degree of liquidity, the tax reductions affected by the Revenue Act of 1945 may very well have been redundant in terms of

[11] Most of the quantitative discussion of fiscal actions in this chapter is presented in the national income and product account terms. These differ in certain major respects from both the conventional budget accounts and the accounts showing Federal Government cash receipts from and payments to the public. National income account receipts, for example, include receipts of trust funds, which are excluded from the conventional but not from the cash accounts. They show receipts on a liability rather than a collection basis; the collection basis is used in both the conventional budget and the cash accounts. Similar adjustments are involved for expenditures. For a detailed discussion of these differences in concepts and measurement, see U.S. Department of Commerce, Office of Business Economics, U.S. Income and Output, pp. 56–57 and 178–179.

their short-run impact. On the other hand, in view of the very great sectoral demand shift and the high degree of private-sector liquidity, it is at least questionable whether a substantially greater degree of fiscal restraint, except by effecting a decline in total private disposable income of so great a magnitude as to have involved intolerably high levels of unemployment, would have moderated the sharp increase in the price level to any significant extent.

The reservation with respect to the general approval of immediate postwar fiscal policy implied in this tentative conclusion is that had the tax reductions of the Revenue Act of 1945 not been provided, aggregate demand might very well not have been appreciably lower, but greater inroads would have been made into the accumulated liquid financial reserves of the private sector. This reduction in liquidity would, presumably, have had little effect on production, employment, or prices in the transition period, but the cumulative reduction in liquidity might have increased the effectiveness of fiscal restraints subsequently. The annual rate of gross private saving, in fact, fell from $44.3 billion in 1945 to $26.5 billion in 1946, while financial saving by individuals declined even more sharply, from $37.3 billion to $14 billion.[12] Conceivably, with a lower level of income, ex ante, for 1946, achieved through greater fiscal restraint, greater inroads into liquid private financial reserves than those implied by these data might have resulted. A more rapid decline in these reserves during the early postwar period might have served to increase the restrictive impact of the substantial budget surpluses achieved subsequently.

The job of reducing liquidity, if indeed this was the key to less inflation while achieving high levels of output and employment, presumably should have been assumed by monetary policy. Monetary policy during this period, however, was subject to the constraint imposed by the responsibility of the Federal Reserve to support the prices of Federal Government obligations. Under this circumstance, the reduction in private liquidity which monetary and credit actions could effect was also limited. In point of fact, however, the money supply was not reduced nor even held constant in 1946, but increased more than in any other year in the postwar period.[13]

(*b*) *Expansion: 1947*

Going into 1947, some of the major questions around which policy discussions had focused in the latter days of the war appeared to have been resolved. Large-scale rapid demobilization had not produced the prolonged unemployment crisis which was a feature of many end-of-war forecasts for the early postwar period. On the other hand, the inflation anticipated to result from high private spending propensities, supported by large accumulations of liquidity, and from the drastic shift in demand and production from military to civilian items, had materialized. The decontrol of virtually all prices in late 1946 made the problem of containing further inflationary movements appear to be quite acute because of the assumed backlog of demands both by business and consumers for durable goods and the continuing high degree of liquidity in the private sectors of the economy.[14] Although

[12] January 1959 Economic Report of the President, pp. 156, 157.
[13] Cf. January 1959 Economic Report of the President, p. 186.
[14] Cf. the January 1947 Economic Report of the President, p. 16, and the 1947 Midyear Economic Report of the President, p. 18.

there was some concern as to how long these backlogs would continue to support high levels of production and employment, on balance the principal challenge was quite generally conceded to be that of containing further inflation.

This view was reflected in the budget presented in January 1947 for the fiscal year 1948. The budget called for an estimated $5 billion reduction in expenditures. It also contained a specific request for extension of wartime excise tax rates, which, if granted, would result in net budget receipts only $300 million lower than the amount estimated for fiscal 1947. On the basis of these proposals, a conventional budget surplus of $1.8 billion was contemplated in the budget message.[15]

This emphasis on maintaining existing tax rates was occasioned by the growing pressure for tax reduction, which quickly materialized in the tax bill, H.R. 1, a broad-scale individual income-tax reduction effort.[16] Moreover, the Presidential declaration of the cessation of hostilities on December 31, 1946, involved an automatic expiration of wartime excise-tax rates on July 1, 1947. The first substantive proposal in the budget message, therefore, was for legislation continuing excises at existing rates and urging a hold-the-line position on revenues generally.

Early in the year, the Congress moved to provide large, widely applicable individual income-tax reduction in H.R. 1. Proposals for tax reform and reduction had, of course, been flying thick and fast ever since the end of the war had been in sight. Indeed, the administration had urged the desirability of such reform in the closing days of the war.[17] The Secretary of the Treasury, appearing before the House Committee on Ways and Means in May 1947, supported with an extended discussion, efforts to effect long-range reform in the Federal tax structure.

The specific legislative effort which culminated in H.R. 1, however, was described by its authors not merely as a reform but as an economic stabilizing measure as well. Both House and Senate committees specifically urged enactment of H.R. 1 to meet a possible recession situation which might materialize in the latter part of the year when Congress was not in session.[18]

H.R. 1 was vetoed on June 16, 1947, and 1 month later the President vetoed H.R. 3950, the provisions of which were identical with those of H.R. 1, except that it would have become effective January 1, 1948, instead of July 1, 1947. Noting that the level of personal income, employment, and business activity had continued to rise, he repeated his earlier observations that the bill was inconsistent with sound fiscal policy, which should be directed toward achieving a surplus to be used for debt retirement.[19]

While attempting twice to enact individual income tax reduction in the face of presidential opposition, the Congress did provide the

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[15] Cf. Budget Message of the President for the Fiscal Year Ending June 30, 1948, pp. M5, M12, and M14.

[16] For details of this bill, see Annual Report of the Secretary of the Treasury for Fiscal Year 1947, pp. 56–57.

[17] Cf. Annual Report of the Secretary of the Treasury for Fiscal 1945, pp. 100–101, and statement of Secretary Vinson, op. cit., pp. 326–327.

[18] U.S. House of Representatives, Committee on Ways and Means, "Individual Income Tax Reduction Act of 1947," Rept. 180, Mar. 24, 1947, and U.S. Senate, Committee on Finance, "Individual Income Tax Reduction Act of 1947," Rept. 173, May 14, 1947.

[19] Message from the President, July 18, 1947, returning without approval the bill (H.R. 3950), to reduce individual income tax payments, loc. cit., p. 247.

indefinite extension of wartime excise rates requested by the President in his budget message.

Federal expenditures (on income and product account) were relatively stable during 1947, at a level for the year as a whole close to $6 billion less than that for 1946. Receipts, on the other hand, rose about $4 billion for the year compared to 1946, yielding a surplus of $12.2 billion for 1947, an increase of $10 billion over the preceding year. From the last quarter of 1946 to the last quarter of 1947, however, both the increase in receipts and the decline in expenditures were quite modest. During 1947, therefore, the net result of Federal fiscal actions was a $3.8 billion increase in surplus (table 8–5, p. 286).

At the same time, gross national product in current prices rose very rapidly—by about $24 billion—from the fourth quarter of 1946 to the last quarter of 1947. Gross national product in constant 1954 dollars also increased during this period, but at a much more moderate rate (tables 8–2 and 8–3, pp. 276 and 280).

Implicit recognition of the inadequacy of existing efforts to curb inflation came late in 1947 with the President's calling the Congress back into special session to consider a 10-point anti-inflation program. As summarized by the President in his January 1948 Economic Report, this program called for selective credit controls to curb the expansion of business and consumer credit, authority to control allocations of commodities and services, extension and strengthening of rent controls, and authority to impose rationing and price and wage controls on a highly selective basis.[20] Quite notably, it did not include proposals for greater fiscal restraint. The program was not enacted.

(c) The 1948 boomlet and tapering off

Going into 1948, the administration's focus in public economic policy was firmly on the fight against inflation. In his Economic Report of January 1948, the President asserted that "the first objective for 1948 must be to hold the inflationary trend." [21]

Generally, the source of inflationary pressures was identified as excessive demands in each of the major private sectors, financed in part by the liquidation of financial reserves, and aggravated by speculative buying in areas of anticipated or actual shortages. In addition, some specific supply situations were regarded as especially significant in generating inflationary price and wage developments throughout the economy.

While fiscal 1948 net budget receipts were expected to increase by about $2 billion over fiscal 1947, fiscal 1949 receipts were expected to decline very slightly, in spite of rising tax revenues because of a reduction in receipts from sales of surplus property. Expenditures for fiscal 1948 were expected to be about $5 billion lower than in the preceding year, but to increase moderately in fiscal 1949. A reduction in the surplus, therefore, was expected for fiscal 1949.[22]

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[20] Loc. cit., pp. 5–6

[21] Ibid., p. 5.

[22] January 1948 Budget Message of the President for Fiscal 1949, pp. M–9, M–11. On a cash basis, a further but very modest reduction of about $1 billion in Government expenditures in calendar 1948 was proposed. Cash receipts were expected to rise to $49.2 billion in calendar 1948, providing a surplus for 1948 of $8.8 billion, an increase of $3.2 billion over 1947. January 1948 Economic Report of the President, p. 99.

In the light of these economic and budget prospects, the administration's major tax proposal hardly appears to be in line with the prescripts of a stabilizing fiscal policy. This proposal was for a "cost of living" tax credit of $40 for each individual taxpayer and each dependent, the revenue effects of which were to be offset by increases in corporation income taxes.

The reasoning in support of this proposal was tortuous, at best. The inflationary effect of the individual income tax reduction was explicitly conceded, but somehow this was to be offset by an equal dollar volume of corporation income tax receipts which nevertheless would not "* * * cause production to fall below the highest output that available materials, capacity, and labor will permit." [23] But, in any case—

> Any net change one way or the other in the effect of these tax revisions upon inflation is outweighed by the manifest equity of the revisions proposed.[24]

In short, facing an inflationary situation the seriousness of which was emphatically stressed and at least one major source of which was identified as an anticipated *general* excess demand, the administration proposed to rely primarily on *automatic* tax stabilizers for achieving the desired fiscal constraint. But even these could hardly be counted upon to have their usual potency, in view of the proposed redistribution of tax burdens to lighten the load on taxpayers with spending propensities presumably higher than the average for the economy as a whole. Selective price and wage controls, rationing, direct materials and resource allocations authority, and an array of selective credit controls were proposed, in effect, to replace the fiscal curbs.

> In any event, these equitable [tax] adjustments will not interfere with success in our anti-inflationary efforts if the other anti-inflationary measures * * * are promptly adopted and vigorously applied.[25]

The Congress did not heed the administration's proposals. Instead, it proceeded with efforts to reduce tax rates. The result of these efforts, the Revenue Act of 1948, was introduced on December 18, 1947, during the special session called by the President to consider an anti-inflation program, and was passed on March 22, 1948. On April 2, 1948, it was enacted over the President's veto. Effective May 1, 1948, withholding rates on wages and salaries, pursuant to the legislation, were reduced.

The act involved an estimated full-year revenue loss of $5 billion.

These tax deductions occurred while Federal Government demand was increasing. Both defense and civil purchases, excluding Commodity Credit Corporation and similar capital items, were rising markedly. In addition, U.S. commitments under the Marshall plan were beginning to affect Federal expenditures. Moreover, obligations for major defense procurement items were also rising, from a quarterly rate of about $0.2 billion in the third quarter of 1946 to $1.2 billion in the second quarter of 1948 and an annual total in that year of $3.8 billion, about a third greater than in 1947. This increase in defense demands coincided with a steady rise, to mid-1948, in new orders received in the durable goods industries. Unfilled orders in those industries had been falling sharply in 1947, but leveled off in 1948. Inven-

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[23] Ibid., p. 48.
[24] Idem.
[25] Idem.

tories in durables rose steadily during 1948. Total nonfarm business inventories also increased markedly in the first three quarters of the year (tables 8–2 and 8–4, pp. 276 and 284). Business outlays for new plant and equipment were also increasing through the first quarter of 1948 (table 8–9, p. 303).

The net result of these fiscal developments early in 1948 was a sharp decline in the Federal budget surplus (income and product account). The vigorous anti-inflationary orientation of public policy advocated by the administration at the start of the year took the form of a $10.1 billion reduction in surplus from the last quarter of 1947 to the last quarter of 1948 (table 8–5, p. 286).

The year 1948 began with a slight downturn in economic activity measured in constant 1954 dollars. The decline occurred primarily in net exports of goods and services, but a slight drop also took place in consumer durables, new construction, and nonfarm business inventories. Activity rose, however, in the second quarter and continued to rise through the year, although at a relatively low rate following the second quarter rise. In current prices, the first quarter lull was less pronounced but the pattern for the remainder of the year closely parallels that of the deflated series. In the last quarter of the year, activity was rising at a very slow rate in some sectors and declining in others. At the same time, the upward price trend began to weaken (tables 8–2, 8–3, and 8–6, pp. 276, 280 and 294).

In mid-1948, the President reasserted the continuing strength of inflationary pressures and recommended an eight-point program to arrest general price increases. First among these proposals was an excess profits tax, apparently based on the forecast by the Council of Economic Advisers that the Revenue Act of 1948 and the increase in defense and foreign-aid expenditures would eliminate the cash surplus previously estimated for calendar 1948.[26] The Council also estimated that as a result of the tax reductions of the 1948 Revenue Act, the annual rate of consumer expenditures would increase by $3 billion to $4 billion above the rise which would have been forthcoming in the absence of the tax cuts.[27]

The President's program was not adopted.

As matters developed, the inflationary consequences of the Revenue Act of 1948 did not materialize to any significant extent. Personal income, before and after personal taxes, rose sharply from the last quarter of 1947 through the third quarter of 1948, before declining very slightly in the last quarter of the year. Personal consumption expenditures, however, rose by less than half the increase in disposable personal income during 1948 (table 8–7, p. 298). Although the tax reduction of the 1948 Revenue Act did not increase consumption outlays significantly, it may have contributed to a higher rate of consumption expenditures than otherwise would have been realized.

On the whole, therefore, the Revenue Act of 1948 may be absolved from responsibility, at least in the short run, for inflationary price developments. Prices did, indeed, rise during the first three-quarters

[26] Mid-Year 1948 Economic Report of the President, pp. 5, 7, 41, 42.
[27] Idem.

of the year, but little of the increase occurred in sectors in which the impact of the tax cut could have been promptly registered. The personal consumption component of the gross national product implicit price deflators, for example, shows a very modest increase from the first to the third quarters of the year and a slight decline in the last quarter. Far more marked increases are found in gross private domestic investment and in the Government component (table 8–6, p. 294).

(d) Overall appraisal of fiscal policy, 1946–48

On the whole, fiscal policy performed quite well during the early postwar years. This was a period characterized by vigorous expansion of real output in response to strong demand pressures throughout the private sector of the economy. Although the support of extraordinarily high levels of Federal defense and related outlays, upon which many of the end-of-the-war forecasts asserted prosperity depended, was quickly removed, private demand and output expanded at an extremely rapid pace. In constant 1954 dollars, total private demand increased from $182.9 billion in 1945 to $251.0 billion in 1948, or at an average annual rate of slightly more than 11 percent. Apart from inventory accumulation, gross private domestic investment totaled $120.4 billion for the 3 years 1946–48. During the same period, Federal purchases of goods and services fell from a total of $117.1 billion in 1945 to $22.9 billion in 1948 (table 8–3, p. 280). With a rapidly growing labor force, the rate of employment was quite stable at between roughly 96 and 97 percent (table 8–1, p. 275). In terms of the growth and employment stability objectives of public policy, therefore, the early postwar record must be scored very high.

In terms of the price-level stabilization objective, however, the record is less commendable. In the 3-year period ending with 1948, the implicit price deflators for gross national product increased by 20.5 percentage points, from 68.0 (1954=100) in 1945 to 88.5 in 1948 (table 8–6, p. 294). The rise in both wholesale and consumer price indexes was even more pronounced (table 8–8, p. 302).

One of the most striking conclusions emerging from review of this period is the apparent reluctance of the administration to rely on discretionary tax action for stabilization purposes. For the period as a whole, reductions in expenditures and the automatic increase in tax revenues were the sources of the budgetary surpluses which provided the desired fiscal constraints. The administration, in fact, proposed no increases in any tax rates at any time during this period of generally excessive demand, except after taxes had been reduced by the Revenue Act of 1948.

It may nevertheless be argued that in view of the success in reducing outlays and in view of the apparent responsiveness of revenues to income expansion, no further discretionary increases in taxes were necessary. But, basically, this question is one of the volume of budget surplus, in view of anticipated levels of total demand, necessary to restrict total spending to levels consonant with high employment and output, on the one hand, and stability in the price level, on the other.

A major ingredient of the public policy situation in the pre-Korean period was the extraordinarily high degree of liquidity prevailing in the economy which apparently served as a buffer against the private

spending constraint which presumably would have resulted from the large Federal surpluses realized during the first 3 postwar years. During the war period, a large volume of liquid financial reserves was accumulated, to a very substantial extent in the form of Federal Government debt issues. The commitment by the Federal Reserve to support the prices of these issues, which continued through the postwar period until the Federal Reserve-Treasury Accord in 1951, served to support the value of this major component of financial reserves. In this respect it served to retard the reduction in the real value of aggregate liquid balances resulting from both rising levels of total activity and a rising price level. On the other hand, the support program made it difficult to impose monetary restraint. In this way, it may have contributed to the rise in commodity prices, thus depressing the real value of liquid assets.

Administration policy statements during this period made frequent reference to the possibility that consumers and business would supplement their incomes generated from current production activity by drawing on accumulated savings to finance an inflationary level of expenditures.[28] In fact, although past savings were drawn upon by many individuals and firms, in the aggregate no reduction in liquid financial reserves by the nonbank sectors occurred. On the contrary, these were substantially greater in 1948 than they were in 1945. In the 3 years 1946–48, individuals added $29.8 billion to their holding of financial assets, while corporations, other than banks and insurance companies, increased their financial assets by $13.4 billion.[29] Although the money supply was only very slightly greater in 1948 than it had been in 1946, monetary policy did not limit the increase in aggregate liquidity to any significant extent.

Nevertheless, the fears expressed by the administration appear to have been well founded in terms of the rapid decline which did occur in the rate of personal saving out of current disposable income in the early postwar years. Personal saving fell from 19.1 percent of disposable personal income in 1945 to 8.4 percent in 1946 and 2.8 percent in 1947, and rose to 5.8 percent in 1948 (table 8–7, p. 298). A similar trend is observable in the corporate sector during this period. Although retained profits rose relative to corporate profits after tax, increases in physical assets (plant and equipment and inventories) rose relative to retentions at a considerably more rapid rate.[30] High liquidity, therefore, appears to have supported the early postwar disposition toward a rising spending propensity in the private sectors of the economy.

In view of these conditions, the necessary but unanswered question is whether a more restrictive fiscal policy could indeed have prevented the rise in the general level of prices when price controls were removed, except at the cost of widespread and fairly prolonged unemployment and a slower rate of growth in real output. For the 3 immediate postwar years, Federal surpluses on income and product account totaled $22.4 billion. Quite conceivably, some significantly greater level of budgetary surplus, achieved by explicit tax increases

[28] For example, the Midyear 1947 Economic Report of the President asserts that these savings were in fact being used to support the high level of demand then prevailing. Cf. pp. 1, 12, 31, 35.

[29] U.S. Income and Output, op. cit., pp. 194–195.

[30] U.S. Income and Output, op. cit., pp. 194–195.

(since it appears unlikely that Federal expenditures could have been reduced much more than they were) might have checked the rise in private spending propensities. Consumers and business alike, presumably, could have been made more reluctant to reduce the rate of their current saving if disposable income had been reduced more drastically relative to pretax income.[31] But this assumes a tax bite sufficiently large that adverse anticipations about the change in net worth would offset significantly the strength of war-deferred demands. Such adjustments have usually been associated with quite violent cyclical fluctuations; history offers little evidence, if any, that the fine adjustments in fiscal and monetary conditions which, in theory, would have eliminated the inflationary component of total demand without significantly reducing real output and employment could have been made through the use of the blunt instruments of general fiscal and monetary controls.

In short, the principal deficiency of fiscal policy in the early postwar years was its inability to cope with excessive liquidity. This in turn was the result of wartime and postwar monetary policies and debt management.[32] Given the monetary conditions then prevailing and the basic monetary and debt management policies pursued, fiscal policy deserves at least an A for effort.

2. The recession of 1949

While many of the early postwar forecasts suggested that public policy would have to be concerned primarily with persistent recessionary pressures, fiscal policy from the very termination of hostilities was focused almost exclusively on containing inflationary trends. The first test of postwar fiscal policy in preventing or ameliorating economic *decline* occurred in 1949.

The year 1948 had ended with numerous indications that the rate of expansion of the postwar years had fallen materially. In a number of broad sectors, declines, in both current and constant dollars, were underway, even though of modest proportions. Despite these indications, the picture at the beginning of 1949 was by no means clear. Federal Government expenditures were rising and were expected to continue to do so for some time. While some softness had appeared in consumer durables, it was difficult to evaluate how persistent or large any decline in this sector might be. Wage settlements negotiated in 1948 were expected to add substantially to personal income, and the problem of an upward wage-price spiral was still very much a matter of conern.[33]

The fiscal program proposed by the administration for 1949, as in the preceding years, was geared to combating inflation. Expenditures were expected to increase (on a cash basis) sufficiently to replace the

[31] Conceivably, budget surpluses could have been used to increase the Treasury's cash balance instead of retiring debt; requiring banks to hold reserves against Government deposits, under these circumstances, would have reduced reserves available to support loans to the private sector. Substantially offsetting this effect, however, was the opportunity of the banks to take advantage of the Federal Reserve's commitment to support the price of Government issues.

[32] Explicit acknowledgment of this responsibility is found in the 1949 annual report of the Secretary of the Treasury, pp. 11–20. The Secretary pointed out that the policy of tailoring issues to investor's "needs" was aimed at keeping the portfolios of banks and corporations highly liquid. In addition, the January 1949 Budget Message of the President, at pp. 10–11, 42–43, explicitly notes the possibility that effective general credit control, to reinforce fiscal and other constraints on inflation, might well require amendation of the [then] existing policy of Federal Reserve support of Government issues at par.

[33] January 1949 Economic Report of the President, pp. 8, 43–45.

surplus of 1948 with a deficit of about $600 million 1949. Cash receipts were expected to be lower in 1949 than in 1948 by $1.5 billion, but about $1 billion higher than the annual rate for the last half of 1948, reflecting, respectively, the revenue loss from the Revenue Act of 1948 and the higher level of income anticipated for 1949.[34]

The President proposed restoring the anti-inflationary budget surpluses of earlier postwar years by tax rate increases netting $4 billion annually. The additional revenue was to be obtained from increases in corporation income taxes, additional individual income taxes on middle and upper income brackets, and increases in estate and gift tax revenues. In addition, it was urged that the contributions rate for social security be increased.[35]

The proposed $3.4 billion cash surplus for calendar 1949 based on the proposed tax increases, as outlined in the Economic Report, was not regarded in itself as adequate to the task of curbing expected inflation strains. The Economic Report repeated the prior year's request for authority to impose mandatory controls over the allocation of certain materials, and for selective price and wage controls. Extension of Federal Reserve authority to increase reserve requirements of member banks was also requested. In addition, explicit note was taken of the possibility that effective general credit control, to reinforce fiscal and other constraints on inflation, might well require amendation of the existing policy of Federal Reserve support of Government issues at par.[36]

The President delineated the full employment production goal as requiring a 3- to 4-percent increase in total output in 1949 over 1948.[37] With this assumption specified, but with explicit recognition of the possibility that recession trends would predominate,[38] the President set forth the anti-inflation program described above, implying, therefore, that in its absence, aggregate demand would be so great as to absorb not only the 3- to 4-percent increase in real output required for employment stabilization but also to involve significant price increases.

Even while the President was urging the need for drastic anti-inflationary action, the economy was sliding off the plateau of late 1948 into recession. In virtually every sector but Government and net exports, expenditures declined, generally with some accompanying decrease in prices. Unemployment rose from 4 percent, seasonally adjusted, in the last quarter of 1948 to 4.7 percent in the first quarter of 1949.

The recession was sharp and severe. In current prices, gross national product fell 7.5 percent from the fourth quarter of 1948 level (annual rate) of $265.9 billion to a second quarter 1949 rate of $256.4 billion (table 8–2, p. 276). In constant 1954 dollars the decline in gross national product was 4.9 percent, from $297.3 billion (annual rate) in the last quarter of 1948 to $290.3 billion in the second quarter of 1949 (table 8–3, p. 280). Price declines occurred in most of the broad sectors of gross national product (table 8–6, p. 294). Unemployment rose to a seasonally adjusted quarterly rate of 5.8 percent in the second quarter of 1949 (table 8–1, p. 275).

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[34] Ibid., p. 29.
[35] Ibid., p. 10.
[36] Ibid., pp. 10–11, 42–43.
[37] Ibid., p. 8.
[38] Ibid., p. 3.

While the recession gained momentum, the public policy debate in the winter and spring of 1949 continued to focus on anti-inflationary action and did little, therefore, to resolve basic issues concerning stabilizing fiscal action aimed at arresting recession and promoting recovery. The issue whether the Federal Government should deliberately seek a budget deficit in order to minimize a decline in economic activity and loss of employment and output was not fairly joined.

The erroneous policy focus on inflation in the midst of a deflationary, recessionary movement occurring virtually across the board is to be attributed primarily to the lag in information. The only clearly apparent trend early in 1949 was the rising level of Government outlays and, by virtue of the Revenue Act of 1948, the emergence of a budget deficit after 3 years of large surpluses. In view of the extremely limited success of these surpluses in holding back general price increases, the prospect of losing even this constraint against inflation must indeed have appeared alarming.

By mid-1949, however, the facts of recession and softness in prices were not to be missed any longer.[39] In his Midyear Economic Report, the President abandoned his vigorous anti-inflation program of the early part of the year, but not before observing that the then present recession was attributable to prior inflationary excesses which resulted from the failure to provide the administration with the wide array of specific anti-inflation controls requested repeatedly in prior years.[40]

The President's antirecession program focused on (1) increasing the amount and duration of benefits and extending the coverage of the unemployment compensation system; (2) raising benefits and extending coverage under the old age and survivors insurance system and improving the public assistance program; (3) increasing the minimum wage to 75 cents an hour; (4) liberalizing Reconstruction Finance Corporation loans; (5) improving farm income supports; and (6) effecting certain limited tax changes. The latter proposal called for repeal of the excise on the transportation of property, liberalization of the loss carryover provision, and increasing estate and gift taxes.

Basically, therefore, the administration's fiscal policy proposals in mid-1949 were to support existing trends in Federal outlays while holding the line on taxes. Although explicitly recognizing the adverse stabilization effects which would result from efforts to balance the budget either by cutting outlays or increasing taxes, the antirecessionary consequences of deliberately expanding the deficit were not granted.[41] In short, already anticipated increases in expenditures, supplemented by recession induced increases in transfer payments, and the automatic decline in revenues were to carry the fiscal burden for halting the decline in activity and promoting recovery.

As matters developed, however, only the automatic stabilizers were fully operative. State and local transfer payments to persons rose from $10 billion in the fourth quarter of 1948 to $11.8 billion a year

[39] By mid-1949, when the fact of recession was acknowledged, the bottom had been reached and recovery, though still weak, was underway. Unemployment continued to rise, however, through the 4th quarter of 1949 (table 8–1, p. 275).
[40] Loc. cit., pp. 5–6.
[41] Ibid., p. 8.

later (annual rate). Federal receipts fell during the same period from $42.6 billion to $38.7 billion, while State and local government receipts (net of Federal grants-in-aid) rose, offsetting $1.5 billion of the decline in Federal revenues (table 8–5, p. 286).

Apart from the increase in transfer payments and the automatic decline in receipts, Federal fiscal actions made little contribution to economic stabilization and indeed were one of the sources of instability. National defense obligations for major procurement, which had sharply risen in the first half of 1948, primarily in response to demands arising under the Marshall plan, declined from a quarterly rate of $1.2 billion in the second quarter of 1948 to $0.7 billion in the third quarter of 1948. These orders rose again to $1.1 billion in the last quarter of 1948, fell in the first quarter of 1949 before rising to $1.3 billion in the second quarter of 1949, and then fell to $0.6 billion in each of the remaining quarters of the year (table 8–4, p. 284).

The specific impact of fluctuations in defense orders on total durable goods industry activity cannot be precisely delineated. The fact remains that new orders received in the durables industries declined sharply after the third quarter 1948 cut in defense orders. Unfilled orders, which had leveled off in the first three-quarters of 1948, dropped off sharply through the third quarter of 1949. The change in inventories in the durable goods industries lagged about a half year behind the change in orders and unfilled orders, continuing to rise through the first quarter of 1949 before turning down (table 8–4, p. 284). Moreover, the reduction in defense orders and in total new orders for durables came on top of a decline beginning after the first quarter of 1948 in business outlays for new plant and equipment. In constant 1954 dollars, these outlays fell by $5 billion (annual rate) from the first quarter of 1948 through the second quarter of 1949 (table 8–9, p. 303).

Federal civil purchases, before deducting sales and net of purchases of capital items, also changed perversely and contributed to the 1949 decline. These outlays fell from an annual rate of $7.9 billion in the last quarter of 1948 to $6.9 billion in the second quarter of 1949 (table 8–10, p. 304).

In short, both Federal purchases and orders offered no significant barrier to the decline in total demand; indeed, they actually contributed to it.

On income and product account, the net result of these Federal fiscal developments was a shift from a third quarter 1948 surplus of $5.8 billion to a second quarter 1949 deficit of $3.9 billion. Of this change, the decline in receipts accounted for $4.3 billion and the increase in transfer payments accounted for an additional $3.2 billion. For the remainder of the year, the deficit fell as expenditures declined while receipts rose very slightly (table 8–5, p. 286).

Fiscal policy can hardly be rated high for its role in the 1949 recession. While the built-in stabilizers performed well, they had to overcome not merely the decline in demand originating in the private sector but also the recessionary influence of Federal orders and purchases. Moreover, quite apart from errors in judgment and in analysis, the administration explicitly rejected the deliberate use of budgetary deficits as an antirecession instrument of public policy.

In extenuation of the administration's position in this regard, several arguments may be offered. In the first place, the President and

his Council of Economic Advisers hopefully—and correctly—assessed the recessionary developments as moderate and unlikely to be self-reinforcing (although the 1949 midyear Economic Report leaves considerable doubt that they did so for the correct reasons). With this outlook, it may seem reasonable to have relied primarily upon the then prevailing fiscal trends to provide all of the necessary support from the public sector. While never made explicit, the reasoning of the administration appears to have been that further discretionary action to increase the deficit would not be easily reversed and would, in the long run, therefore, contribute to renewal of the prerecession inflationary trend.

In addition, the recession appeared to be accomplishing the anti-inflation objective which had been vigorously sought by the administration in the postwar period. This is not to suggest that the administration endorsed the loss of employment and output in the recession, but the midyear Economic Report suggests that these losses, in real terms, were not so severe as to warrant drastic fiscal action which might arrest the recession at the expense of renewing upward price movements.

Giving due weight to such extenuations, the facts remain that the recession was severe, whether measured in terms of losses in employment, in real output, or in the decline in the rate of capital formation, that several important Federal fiscal developments contributed to the recession, and that no material effort was made to supplement built-in stabilizers with vigorous, compensatory fiscal action. We have given Federal fiscal policy an A for its first postwar semester of reconversion and expansion. For its second semester course in dealing with recession, we may, if we are indulgent, concede a barely passing grade.

3. Recovery and Korea: 1950–53

At the beginning of 1950, recovery was underway. Although unemployment remained high, the decline in total output had been arrested and had given way to rising levels of activity. Measured in current dollars, gross national product regained the fourth quarter 1948 postwar peak in the first quarter of 1950. In constant (1954) dollars, the first quarter 1950 level of activity exceeded the prior postwar high. Moreover, with the exception of producers durable equipment and Federal purchases of goods and services, virtually every major sector of demand registered increases in the first quarter of 1950 compared with the last quarter of 1949. A net turn in inventories of $7.8 billion occurred during this period, following the fourth quarter 1949 spurt in consumer outlays, particularly for durables.

The recovery was noted on a more timely basis than the recession. In his January 1950 Economic Report, the President and the Council detailed the ingredients of the upturn, although explicitly noting that recovery was still in an early stage.[42] Emphasis in policy formulation, therefore, was on promoting recovery to full employment levels of activity while maintaining price level stability.

The President's broad fiscal policy proposals were intended to contribute to achieving this objective. Noting and decrying the then present deficit, he nevertheless cautioned against trying to eliminate

[42] Loc. cit., pp. 1–6, pp. 25 ff.

it by drastic reductions in expenditures or tax increases, lest these impair further recovery.[43] At the same time, the budget proposals, submitted in January for fiscal 1951 provided for a gradually falling level of expenditures and promised tax proposals which would produce some additional net revenue in 1951, beyond those resulting from rising levels of income.[44] This program, it was hoped, would move the Federal budget toward balance and surplus in a few years.

Several of the specific legislative recommendations in the January report and budget message were intended to stimulate demand, particularly investment outlays. The promised proposals for tax changes were also characterized as stimulating business activity.[45]

These proposals were transmitted to the Congress on January 23, 1950. Their aims, as expressed by the President, were "* * * to reduce present inequities, to stimulate business activity, and to yield about $1 billion in net additional revenue." [46]

The specific revisions proposed were (1) selective reductions in excises; (2) income tax revisions aimed at broadening the tax base; (3) estate and gift tax revisions; (4) a change in the corporate rate structure; (5) liberalization of the loss carryover provision; and (6) liberalization of the treatment of income derived abroad. Revision of the estate and gift taxes and of the corporate rate structure was to bring in an additional $1 billion annually, while longrun revenue gains were anticipated with respect to the income-tax base-broadening proposals.[47]

The most important features of this tax program were the excise reduction, the corporate rate structure change, and the estate and gift tax revision. In general, the first two would have effected a shift in the Federal tax burden from low- and middle-income individuals to corporations, or from consumption to investment. While other provisions would have moved to offset some of the additional taxload on corporate income, they were of substantially lesser magnitude and of considerably more restricted impact. On the whole, therefore, the proposed tax program was directed toward promoting recovery through stimulating consumption outlays.

By the time the House Committee on Ways and Means was well underway in its work on the bill, however, the need for this stimulus had disappeared. Income and output were rising rapidly, both in current prices and real terms. While unemployment was still high by prior postwar standards, it was falling rapidly. By the end of the second quarter of 1950, gross national product had increased 7 percent in current prices and 7.5 percent in constant 1954 dollars from the second quarter 1949 recession low. Business inventories had continued to rise, and the decline in outlays for producers durable equipment had turned into a sharp second quarter rise. Personal income had risen 6 percent from the second quarter of 1949, while corporate profits in the same period had risen about 50 percent to a new postwar peak (tables 8–1, 8–2, 8–3, 8–7, and 8–11, pp. 275, 276, 280, 298, and 305).

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[43] Ibid., p. 11.
[44] January 1950 budget message of the President for the fiscal year 1951, pp. M5–M7.
[45] January 1950 Economic Report of the President, p. 11.
[46] Message from the President, Jan. 23, 1950, transmitting a request for a revision of the tax laws, reproduced in Annual Report of the Secretary of the Treasury for fiscal 1950, p. 181 ff.
[47] Idem.

Recovery, in short, was well on the way. Whatever the desirability of the President's tax proposals made earlier in the year in terms of longrun reform, they hardly appeared to be needed as a stimulus for recovery.

On June 29, 1950, the House passed the tax revision bill, H.R. 8920, incorporating in general, the President's proposals for reducing excises and for income tax revision.

The Korean war broke out 4 days before the House passage of the bill. As the bill passed to the Senate, therefore, the Korean war crisis completely changed the immediate objectives of fiscal policy. The Secretary of the Treasury, testifying before the Senate Finance Committee on July 5, duly noted the marked improvement in business conditions and the excellent economic prospects for the remainder of the year. Yet, with the reservation that developments in Korea might change fiscal requirements in the near future, he endorsed the committee's continuing to work along the lines of the House bill:

> The bill * * * has the merit of making improvements in the equity of our tax system. It provides stimulation of business * * *.[48]

The Secretary urged amendment of the House bill to add the provisions recommended by the President but not adopted by the House. On July 11, however, the Secretary recommended to the Finance Committee that action on the bill be suspended.

Three weeks later, the President's 1950 Midyear Economic Report observed that—

> There is now no need to reduce any taxes to stimulate business recovery—

and again focused fiscal policy on the fight against inflation.[49] The President recommended that action be taken on an interim basis to eliminate the bill's revenue-reducing features while keeping its revenue gaining provisions and to add substantial revenues by raising individual income tax rates and the corporate tax rates provided for in the House bill. These measures, it was hoped, would add $5 billion annually on a full year basis.[50] The President, at the same time, asserted that additional revenues would be needed in the near future.

As finally enacted, the Revenue Act of 1950 raised individual and corporation income tax rates, incorporated certain of the income tax revisions proposed earlier and eliminated the House bill excise reductions. The act also provided a directive to both House and Senate tax committees to report out an excess profits tax bill as soon as practicable after November 15, 1950.[51]

In his July Mid-Year Economic Report, the President also asked for selective credit controls, particularly over consumer and mortgage credit, authority to establish priorities and allocate certain commodities, and a program to provide loans and incentives for expansion of capacity to produce strategic and critical materials.[52] This request reflects the administration's assumption that even if fiscal actions were adequate to confine total demand to noninflationary levels, the drastic and rapid shifts in the composition of demand, which might be necessary if the Korean situation required a very large

[48] Ibid., p. 209.
[49] Loc. cit., p. 10.
[50] 1950 Report of the Secretary of the Treasury, p. 36, and pp. 225–242.
[51] Ibid., pp. 36–42.
[52] Ibid., pp. 11–12, 14.

expansion of defense outlays, could produce severe upward strains on the price level.[53] These direct controls, and additional powers including the price and wage controls requested by the administration, were provided.

Nevertheless, fiscal policy was called upon to bear the principal burden for economic stabilization during the Korean war. Apparently the defense-crisis character of the anticipated inflationary strains impelled the administration and the Congress to a view regarding the role of fiscal—and particularly tax—policy which both had eschewed previously in the postwar era. In prior postwar years, the administration had on the whole urged a hold-the-line-on-taxes, reduce-expenditures fiscal policy and had urged various direct controls for curbing inflationary strains. The Korean war swung the administration's position around to principal reliance on fiscal restraints with, on the whole, prompt acceptance by the Congress.

Tax policy, moreover, was especially emphasized, since changes in expenditures would largely reflect the expansion of defense requirements and the rate of deliveries of defense orders. The President urged, therefore, that the Revenue Act of 1950, and the subsequent Excess Profits Tax Act of 1950, be supplemented with substantial additional revenues. At the beginning of 1951, therefore, he recommended broad-scale individual and corporation income tax and excise tax increases to yield an additional $10 billion annually. Of this amount, $4 billion was to come from increases in individual income tax rates, $3 billion from additional corporation income taxes, and $3 billion from excise increases.[54]

The Congress responded with the Revenue Act of 1951, enacted October 20, 1951, which increased individual income tax liabilities by an estimated $2.5 billion and corporation income tax liabilities by an estimated $2.3 billion a year, and also increased then existing excise rates on a wide variety of items and imposed new excises, at an estimated annual yeld of $1.1 billion. Various other provisions of the act were estimated to result in a loss of revenue of about $500 million.[55]

Together with the Revenue Act of 1950, the Excess Profits Tax of 1950 and the Revenue Act of 1951 were estimated to raise $14.7 billion on a full year basis. Of this amount, it was estimated that the Revenue Act of 1950 accounted for $5.8 billion, the Excess Profits Tax Act of 1950 for $3.5 billion, and the Revenue Act of 1951 for $5.4 billion.[56] The latter fell far short of the $10 billion tax increase which the President had requested. All but $1.1 billion of this additional revenue came from increases in individual and corporation income taxes.

In January 1952, the President repeated his request for additional tax revenues in an amount at least equal to that by which the Revenue Act of 1951 fell short of the $10 billion requested in 1951.[57] By mid-1952, however, the urgency of additional tax receipts appeared to the administration to be considerably diminished. In his Mid-Year Economic Report, the President observed that—

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[53] Ibid., p. 11.
[54] Message from the President, Feb. 2, 1951, transmitting a request for increased taxation, in Annual Report of the Secretary of the Treasury for Fiscal 1951, pp. 439–442.
[55] Ibid., pp. 492 ff.
[56] Cf. Annual Report of the Secretary of the Treasury for fiscal year 1951, p. 44.
[57] January 1952 Economic Report of the President, p. 21.

Whether the Government runs a surplus or a deficit is important but it is not of such decisive importance for the economy as to outweigh all other considerations.[58]

Having noted that defense outlays would rise from the second quarter 1952 rate of $50 billion to between $60 and $65 billion in 1953,[59] he nevertheless asserted that—

* * * the prospective deficit is not sufficiently threatening to our economy to justify reducing it by gambling with our national safety. * * * To the extent that the Congress does not reduce the deficit through tax actions, the only available course is to seek the more gradual removal of the deficit by (*a*) the leveling-off of security outlays at a maintenance rate after the necessary buildup has been achieved, (*b*) the increase in revenues resulting from the further expansion of the economy, and (*c*) the continuation of policies designed to eliminate waste and increase efficiency without sacrificing essential objectives for national security and for economic progress.[60]

Federal receipts (on an income and product account basis) rose very rapidly in response to both the increases in tax rates and the expansion of income during the Korean war, from the fourth quarter 1949 annual rate of $38.7 billion, to a peak of $72.3 billion in the second quarter of 1953. Revenues had been expanding during the first half of 1950 in response to the widespread recovery from the 1949 recession, and, in the second quarter of 1950, receipts were $8.5 billion higher (annual rate) than during the last quarter of 1949. In the first quarter of 1951, they reached an annual rate of $67.7 billion, more than $20 billion higher than the second quarter 1950 rate. All major components of the revenue system contributed to this increase, but the rapid rise in personal income and corporate profits, together with the substantial increase in rates, resulted in sharp increases in both personal income tax receipts and corporate profits tax accruals (table 8–5, p. 286).

Individual income tax liabilities continued to rise in the second and third quarters of 1953. Corporation profits tax accruals, however, dipped sharply after the peak in the first quarter of 1951, as a result of a sharp drop in corporate profits, part of which reflected the increase in depreciation charges as special 5-year amortization charges were claimed on defense facilities. Most of the increase in Federal revenues to the second quarter 1953 peak, therefore, was derived from the individual income tax.

Federal expenditures, which had risen sharply in the first quarter of 1950, reflecting the national service life insurance dividend distribution, dropped off even more sharply to the third quarter of 1950. As national defense purchases rose thereafter, other expenditures first leveled off, then began a moderate but uneven rise to a fourth quarter 1953 peak. All Federal expenditures, civil as well as national defense, rose from a third quarter 1950 annual rate of $36.6 billion to a peak of $79.4 billion in the second quarter of 1953 (table 8–5, p. 286).

The rapid increase in revenues and the initial restraint on nondefense outlays resulted in very large budget surpluses (on an income and product account basis) during the initial stages of the Korean

[58] Loc. cit., p. 12.
[59] Ibid., p. 10.
[60] Ibid., pp. 12, 13.

war. Recovery in the early part of 1950 had resulted in a substantial shift from a $2.1 billion deficit (annual rate) in the last quarter of 1949 to an $8.3 billion surplus in the second quarter of 1950. The annual rate of Federal surplus on income and product account increased to $20.2 billion in the first quarter of 1951, before declining precipitously as the growth in receipts slowed markedly while expenditures rose at a more rapid rate (table 8–5, p. 286).

The major impact of the Korean war defense demands on the economy coincides very closely with the realization of these large budget surpluses. Department of Defense orders for hard goods rose from $0.6 billion in the first quarter of 1950 to $4.5 billion in the last quarter of the year. A further sharp increase in orders to $8.9 billion occurred in the first quarter of 1951, followed by a decline to $6.3 billion in the last quarter of 1951. Orders rose again sharply to $12.0 billion in the second quarter of 1952, fell to $9.3 billion in the third quarter, and then began a precipitous drop to $0.4 billion in the last quarter of 1953. New orders in durable manufacturing rose sharply from the beginning of 1950 to the first quarter of 1951, while defense orders were increasing very rapidly; civilian demands probably contributed heavily to this rise. The decline in defense orders after the first quarter of 1951 coincides with a decline in new orders in durable manufacturing, and the subsequent rise in defense orders to the second quarter 1952 peak is associated with a rise, though of more modest proportions in new orders in durables. With the sharp drop in defense orders thereafter to the end of 1953, total durable manufacturing new orders fell off by a substantial amount (table 8–4, p. 284).

Unfilled orders in durable goods manufacturing, similarly, parallel roughly the change in defense orders for hard goods. These unfilled orders rose from $20.0 billion in the first quarter of 1950 to a peak of $75.1 billion in the third quarter of 1952. Thereafter, they fell off quite steadily with the decline in total new orders for durables and defense orders for hard goods. Durable goods industries inventories show a similar pattern, with a lag of about 1 year (table 8–4, p. 284).

Plant and equipment outlays also rose sharply during the period. In constant 1954 dollars, these capital expenditures rose to $28.9 billion in the third quarter of 1953. In current prices, the rise was even more substantial, from $17.9 billion to $28.8 billion, from the last quarter of 1949 to the third quarter of 1953 (table 8–9, p. 303).

In short, during the period of sharpest rise in defense demand the rise in revenues was rapidly outpassing actual outlays. Very substantial budget surpluses, therefore, served to curb the inflationary impact of the increase in defense orders. While orders rose again sharply from the end of 1951 to the middle of 1952, the rise was brief and not sustained during this period in which surpluses gave way to deficits. During the period of sharp decline in orders, from mid-1952 to the end of 1953, the deficit rose sharply. Budget surpluses, therefore, gave way to deficits at the time when, first, the expansionary impact of the Korean defense program was moderating, and second, expansionary impact was giving way to contractionary influence as defense demands were sharply reduced.

The timing of surpluses and deficits in relation to changes in the rate of defense demand appears to have contributed materially to mod-

erating the potential inflationary impact of the Korean war. The sharp increase in consumer purchases in the third quarter of 1950 has been generally characterized as a speculative move, financed in considerable part by a sharp reduction in the rate of personal savings. As experience had repeatedly demonstrated during the early postwar years, budgetary surpluses, even though quite substantial, were inadequate to restrain expansion of consumer demand during periods of rising personal income and high liquidity. But after this speculative surge, budgetary surpluses appeared to exert a more nearly adequate constraint on the growth in total demand and on the rise in the price level.

Gross national product, in constant 1954 dollars, rose $61.2 billion from the first quarter of 1950 to the second quarter of 1953, an average annual rate of more than 6 percent. Of this increase, however, almost two-thirds represented the increase in Federal purchases of goods and services. In constant prices, all other purchases increased by only $21.2 billion during this 3-year period, or at an average annual rate of less than 2½ percent (table 8–3, p. 280).

During the same period, the implicit price deflators for gross national product increased from 87.9 (1954=100) to 98.8, a rise of about 4 percent. All but a small portion of this increase had occurred by the middle of 1951; from the second quarter of 1951 to the second quarter of 1953, the deflators rose by only 2.8 points. Moreover, after a sharp rise from mid-1950 to mid-1951, consumer prices were relatively steady, rising only 2.7 points from the third quarter of 1951 to the second quarter of 1953. Consumer durable prices as measured by the deflators, declined during this period, while nondurable prices fluctuated within a very narrow range. Services, however, continued to rise without interruption. Producers' durable equipment prices were also stable after the mid–1950 to mid–1951 upsurge (table 8–6, p. 294).

During this period, from mid-1950 to mid-1953, unemployment fell to extremely low levels. From a seasonally adjusted rate of 5.6 percent in the second quarter of 1950, unemployment declined rapidly to 3.2 percent a year later, and continued to fall, reaching a low of 2.7 percent in the first three quarters of 1953 (table 8–1, p. 275).

In retrospect, the period of Korean hostilities, mid-1950 to mid-1953, may be regarded as the highwater mark of postwar fiscal policy. The very large and sharp increase in defense demands, coming on top of a rapid recovery in total demand, represented a major disturbance originating in the Government sector. Compensatory fiscal action was both prompt and more nearly adequate than at any other time in the postwar era. Moreover, the discretionary tax actions taken during the first half of the Korean war period provided a framework in which the subsequent automatic movement of Federal Government receipts relative to expenditures would tend to compensate for a diminution in the disturbing impact originating in defense demands.

The Korean war period was marked by a very high rate of use of the labor force and by both a substantial increase in total output and a significant shift in its composition. Yet the price level, following an initial and relatively short surge, was remarkably stable.

We may speculate on the reasons for the signal success of fiscal policy during this period, despite its less sparkling performance in

the earlier postwar period. Selective control devices, including price and wage controls and consumer installment and mortgage credit, undoubtedly contributed to achieving the price-level stabilization objective in the face of rapidly rising and changing total demand and employment. But these controls, at least the price and wage limitations, were relatively weak throughout the Korean war. Part of the explanation undoubtedly lies in the fact that the early postwar period was characterized by working off of very large backlogs of war-deferred consumer and business demands, particularly for durables, the stock of which had grown little over a long period of time prior to 1946, whereas this process had been largely achieved by the time of the outbreak of hostilities in Korea. In addition, the high levels of consumer outlays relative to disposable income and the rapid increase in business expenditures in the early postwar period had been supported by an extremely high degree of liquidity in the private sectors. By the time the Korean war broke out, however, the rise in real output and in the price level had substantially reduced liquidity relative to levels of national output.[61] The impact of changing fiscal results on monetary conditions and on private spending, therefore, may well have been considerably greater than in the earlier postwar era.

4. The 1953–54 recession

Hostilities in Korea ended on July 27, 1953. Although defense demands on the economy had been declining for about a year, they fell off at a precipitous rate with the termination of hostilities. Federal purchases of goods and services for defense purposes dropped from an annual rate of $50.5 billion in the second quarter of 1953 to $47.6 billion in the last quarter of the year (table 8–2, p. 276). Defense Department orders for hard goods also fell, from $4.6 billion in the first quarter of 1953 to $0.4 billion in the last quarter of the year. New orders and unfilled orders in durable goods manufacturing also fell sharply during this period; durable goods inventories also declined after a half-year lag (table 8–4, p. 284).

In mid-1953, the economy turned abruptly from strong growth in gross national product to sharp recession. From its second quarter 1953 peak, gross national product in current prices fell $10 billion in a year's time. (In constant 1954 dollars the decline was even sharper, $13.7 billion.) While consumer, new construction, and producer durable equipment outlays were quite stable, nonfarm business inventories moved from accumulation at an annual rate of $4.0 billion in the second quarter of 1953 to liquidation at an annual rate of $3.2 billion in the second quarter of 1954. Over the same period, Federal purchases fell $11.8 billion while State and local purchases rose $3.0 billion. In short, the recession appears quite clearly to have been a direct result of the cutback in the defense program and the associated liquidation of nonfarm business inventories (tables 8–2 and 8–3, pp. 276 and 280).

Unemployment more than doubled between the second quarters of 1953 and 1954. Prices, on the other hand, did not weaken but continued to rise moderately through the recession (tables 8–1 and 8–6, pp. 275 and 294).

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[61] Cf. the forthcoming study paper by John G. Gurley, "Financial Aspects of Postwar Economic Development in the United States."

Fiscal policy in the 1953–54 recession, which resulted primarily from a sharp reduction in Federal demands, was much less successful than it had been earlier in dealing with the potentially severe inflationary disturbance originating in the Korean war-associated increase in Federal demands. This is not to suggest that defense demands and expenditures should have been maintained on a wartime basis following the termination of hostilities in Korea. But the potential impact of a sharp and substantial reduction in defense demands on total economic activity was not properly appraised, nor were the compensatory fiscal actions which were called for taken on a timely basis or in adequate volume.

The last Truman budget, presented January 9, 1953, shortly before President Eisenhower assumed office, called for an $8 billion decline in new obligational authority for fiscal 1954, about $7 billion of which was to be the reduction for military services. Expenditures, primarily for military services and for international security, on the other hand, were expected to rise to a peak level in fiscal 1954, after which they were expected to decline before leveling off at—

> * * * the amounts necessary to maintain these [the Armed] Forces and to replace current equipment with new and better items as they are developed.

The eventual decline in Federal expenditures was estimated to be in the neighborhood of $15 billion.[62]

In the light of these prospects, President Truman, while avoiding specific tax policy recommendations, nevertheless urged that—

> * * * it would not be wise to plan for a large budget deficit during a period when business activity, civilian employment, and national income are reaching unprecedented heights. The course of prudence and wisdom would be to continue to strive for a balanced budget and a pay-as-we-go policy in our rearmament program.[63]

Inferentially, therefore, President Truman not only opposed allowing the scheduled expiration in the excess profits tax (June 30, 1953), the reduction in individual income tax rates (December 31, 1953), and the reduction in the corporation normal tax from 30 to 25 percent and in excise rates (March 31, 1954), to take effect, but favored further taxes to reduce the prospective deficit in fiscal 1954.

The budget prospects facing the Eisenhower administration as it assumed office were anything but rosy. It sought vigorously to reduce appropriations and obligations in order to effect a near-term and substantial reduction in expenditures and in tax rates. Its success in reducing obligational authority and expenditures was substantial. President Eisenhower reported in a message to the Congress on May 20, 1953, that in its 4 months in office, his administration had already succeeded in reducing recommended requests for new appropriations by about $8.5 billion and planned expenditures for fiscal 1954 by about $4.5 billion.[64] In his budget message in January 1954, the President estimated that fiscal 1954 new obligational authority would be $11.1 billion less than President Truman had estimated for the year, or a drop of $19.5 billion from fiscal 1953. Expenditures for fiscal 1954 were estimated at $70.9 billion, $7 billion less than Presi-

[62] Budget message of the President for fiscal 1954, pp. M–6, M–7, A–5, and A–6.
[63] Ibid., p. M–10.
[64] Message from the President, May 20, 1953, transmitting recommendations for tax legislation, in Annual Report of the Secretary of the Treasury for Fiscal 1953, p. 204.

dent Truman's estimate. A deficit of $3.3 billion was predicted for fiscal 1954 rather than the $9.9 billion estimated a year earlier.[65] Moreover, further substantial reductions in obligational authority and in expenditures were proposed for fiscal 1955.

The administration appeared to be unmindful of the seriously destabilizing impact which might result from such sharp reductions in Federal demands on the economy and the likely need for compensating action. Thus, when the issue of the extension of the excess profits tax arose early in 1953, the administration focused on budgetary rather than economic stabilization considerations and urged a 6 months' extension of the tax. This position was reinforced by action taken early in the year by the Committee on Ways and Means to advance the date for termination of the individual income tax rate increase, provided by the Revenue Act of 1951, to June 30, 1953. Allowing the excess profits tax to expire as scheduled would probably have served to dislodge the committee's bill from the House Rules Committee, and would have resulted in a compounded revenue loss. As matters turned out, had both reductions been made effective in mid-1953, the subsequent recession might very well have been largely avoided.

In a message to the Congress on May 20, 1953, President Eisenhower set forth his proposals for tax-rate adjustments. First noting a substantial prospective deficit in the coming fiscal year (1954), then the high levels of business activity prevailing at the time, he observed that tax reduction would have inflationary consequences. His specific recommendations were for (1) extension of the excess profits tax 6 months beyond its scheduled expiration date, (2) rescission of the five-point reduction in the corporation normal tax rate, scheduled for April 1, 1954, (3) a 1-year postponement, from January 1, 1954, to January 1, 1955, of the scheduled one-half percentage point increase in the old-age and survivors insurance contribution rate, (4) rescission of the reduction in excises scheduled for April 1, 1954, and (5) allowing the 1951 Revenue Act individual income tax rate increases to terminate, as scheduled, on December 31, 1953. The latter, the President asserted, would be justified—

> * * * only because of reductions in proposed expenditures which the present administration has already been able to make and because of additional economies we expect to achieve in the future.

Finally, the President noted that the Secretary of the Treasury would make extensive recommendations for tax reform by the end of the year.[66]

At the time these proposals were formulated, the administration underestimated the economic impact of the substantial economy measures it was then undertaking. As the President noted, economic activity was indeed at high levels in the spring of 1953. To foresee that cutbacks in defense orders and purchases of the scale contemplated could exert a significant recessionary influence when vastly more substantial cuts following the termination of World War II had not might have called for a more rigorous appraisal of the many differ-

[65] Budget message of the President for fiscal 1955, p. M–7.
[66] Cf. Annual Report of the Secretary of the Treasury for fiscal year 1953, pp. 204–207.

ences in the circumstances of the economy than the new administration could muster. It would, moreover, have been inconsistent with the prevalent view that business confidence had been greatly bolstered by the election results of the preceding fall and would not be shaken by the results of the promised termination of the Korean conflict.

With the exception of the proposed rescission of the termination of the Korean war excise rates (selective excise rate reductions were effected in March 1954), and the 1-year deferral of the Old Age and Survivors Insurance contribution rate increase, the President's tax proposals were adopted. Thus, the expiration of the excess profits tax and of the 1951 Revenue Act individual rate increases came 6 months late.

As matters stood the automatic fiscal stabilizers were again called upon to bear much of the brunt for compensating for the disturbing reductions in Federal demands. Transfer payments rose by $2 billion (annual rate) between the second quarters of 1953 and of 1954. While corporate profits tax liabilities fell $4.3 billion (annual rate) from the second quarter to the fourth quarter of 1953, individual liabilities declined only by $0.1 billion in the same period. After the first quarter of 1954, however, individual liabilities fell $3.3 billion to the second quarter of 1954; about $0.6 billion of this decline was offset by the increase in personal contributions for social security. This tax reduction, with the rise in transfer payments, more than offset the decline in total personal income; disposable income continued to rise, as did personal consumption expenditures following a brief and modest drop in the last quarter of 1953. Moreover, corporate profits tax accruals began to rise again in the second quarter of 1954 as corporate profits improved (tables 8–5, 8–7, 8–11, pp. 286, 298, and 305).

On income and product account, the Federal deficit fell from $7 billion in the second quarter of 1953 to $5.6 billion in the third quarter of the year, before rising sharply to $11.8 billion in the last quarter (annual rate). Despite the tax reductions effective during the first quarter of 1954, the deficit shrank to $5.4 billion in the second quarter of the year, when the recession trough was reached. This perverse movement, of course, resulted from the fact that reductions in Federal expenditures, particularly purchases, substantially exceeded the decline in revenues during the downturn.

There is little to be said in extenuation of the poor performance of fiscal policy during the 1953–54 recession, except to refer first to the lag in information concerning economic developments and, second, to the repeatedly expressed confidence of the administration that the downturn would be mild and of short duration. As had the Truman administration before it, the Eisenhower administration explicitly rejected tax reductions, beyond those scheduled, as an antirecessionary measure.[67] In this respect, both administrations were, fortuitously, well served by tax reductions enacted in advance of the recession. As the Truman administration before it, the Eisenhower administration failed to assess properly the recessionary impact of reductions in Federal demands effected in a relatively short period of time. And like its predecessor, the Eisenhower administration apparently felt

[67] See, for example, the address telecast and broadcast by the President, Mar. 15, 1954, on the tax program, in annual report of the Secretary of the Treasury, for fiscal 1954, pp. 221–224.

compelled to gear its tax program to budgetary considerations rather than to those of economic stabilization.

5. Recovery and boom: 1954–55

(a) Recovery in 1954

In mid-1954, the economy turned from recession to recovery. Consumption expenditures continued to gain, as did new construction, particularly residential in the nonfarm sector. At the same time, inventory liquidation tapered off and the decline in Federal purchases of goods and services slowed very considerably (table 8–2, p. 276).

In the last quarter of the year, vigorous recovery was under way. Consumption outlays were rising more sharply than at any time since the last quarter of 1952, residential construction was expanding rapidly, a relatively substantial increase occurred in net exports of goods and services, and inventory liquidation gave way to accumulation. Government purchases again declined as Federal purchases for national defense continued to contract, but the reduction was modest compared with that at the beginning of the year.

Gross national product in current prices reached a new peak at an annual rate of $370.8 billion in the last quarter of 1954. Unemployment, which had reached a recession high of 5.9 percent, seasonally adjusted, in the third quarter of 1954, had declined to 5.4 percent in the last quarter of the year. As measured by the implicit price deflators, movements in the price level were quite limited. The gross national product deflator had risen from 98.8 in the second quarter of 1953 to 99.9 in the first quarter of 1954; it fell slightly in the second quarter of the year and rose to 100.2 in the last quarter (tables 8–1, 8–2, 8–3, and 8–6, pp. 275, 276, 280, and 294).

It was in this recovery phase that the fourth tax reduction of calendar year 1954 was enacted, on August 16, 1954. The expiration of the excess-profits tax and the individual rate reductions, effective January 1, 1954, together with the excise reductions effective April 1, 1954, had reduced revenues, on a full-year basis and at high income levels, by an estimated $6 billion. The Internal Revenue Code of 1954 added an estimated full-year revenue reduction of $1.4 to this amount.[68]

The Internal Revenue Code of 1954 was not intended as an antirecessionary measure. Work on this legislation had begun early in 1953, before recessionary influences were recognized or understood. The act, instead, was aimed at basic structural reform of the income tax to eliminate inequities and reduce obstacles to economic growth.[69] It provided no general rate reductions, although it did afford reductions in taxes for particular groups of taxpayers.[70]

Although the new code made numerous changes in the internal revenue laws, its principal substantive provisions (in the context of this discussion) were the substantial acceleration of depreciation allowances on new depreciable facilities and a limited exclusion and credit for dividends received by individuals from domestic corporations.

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[68] Since 1954 income was somewhat less than that on the basis of which these estimates were made, the estimated revenue loss was probably on the high side for the first three reductions. On the other hand, the full-year cost of the Revenue Code of 1954 was underestimated if for no other reason than that it failed to take into account the ultimate cost of the depreciation revisions it provided.

[69] Budget message of the President for fiscal 1955, p. M–15.

[70] For a detailed summary of the changes made by the Internal Revenue Code of 1954, see Annual Report of the Secretary of the Treasury for Fiscal 1954, pp. 246–286.

These provisions in particular characterized the tax revisions as directed principally toward easing the existing tax burden on private investment.

It is difficult to evaluate the effectiveness of these provisions in this regard. Accelerating depreciation allowances, presumably, will stimulate capital outlays both by increasing the after-tax rate of return on investment in depreciable facilities and by generating an expansion in the flow of internal business funds. No generalization can be made with respect to the extent of the former effect in the absence of detailed data on the useful life (for tax purposes) of the assets acquired following the effective date of the Internal Revenue Code of 1954. With respect to the latter effect, however, it is observable that the annual increase in corporate funds from depreciation increased markedly, in absolute terms, following the enactment of the accelerated depreciation provisions. For the years 1946 through 1953, the average annual increase in funds from this source (as found in the national income data) was about $1.1 billion. Since 1953 the average annual increase has been about $1.6 billion, roughly 50 percent greater.[71]

With the data now available, no close association is found between the use of the accelerated depreciation provisions and increases in capital outlays.[72] (Capital outlays did, indeed, increase rapidly following 1954, but such evidence as is available hardly supports the view that the 1954 code changes in depreciation were a major contributing influence).

The dividends-received exclusion and credit for individuals, although widely justified as equity measures aimed at reducing the double taxation of dividends, were also regarded as important measures to reduce the existing tax bias against equity financing and to improve the market for new corporate equity issues. In this respect, too, the evidence is inconclusive. While equity issues have indeed increased since 1954, year-to-year changes in the proportion of total sources of corporate funds derived from equity issues seem to be more closely associated with broad changes in economic conditions.[73]

In short, apart from the relatively limited amount of reduction in tax liabilities for calendar 1954 effected by the new code, its contribution in the short run to expansion of economic activity cannot be established. As already indicated, recovery from the recession was well underway by the time of enactment of the revision and was proceeding vigorously in the last quarter of the year before the new law became fully effective.

The expansion of personal income and corporate profits during the recovery resulted in a rising volume of Federal receipts (on income and product account). At the same time, Federal expenditures continued to decline, though at a much reduced rate. The result was a contraction of the Federal deficit from an annual rate of $10.6 billion in the first quarter of 1954 to $2.3 billion in the last quarter of the year (table 8–5, p. 286).

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[71] U.S. Income and Output, op. cit., p. 216.

[72] Cf. Federal Revenue System: Facts and Problems, materials assembled by the committee staff, joint committee print, Joint Economic Committee, 86th Cong., 1st sess., pp. 73–79.

[73] Federal Revenue System: Facts and Problems, op. cit., pp. 28–30, and Gurley, op. cit.

(*b*) *The 1955 boom*

As the year 1955 began, the President and his Council of Economic Advisers noted the recovery in economic activity and forecast continued economic expansion in 1955.[74] The fiscal program recommended for this expansion phase was continued reductions in Federal expenditures which, when achieved, would make possible additional tax reductions. The target was to balance the cash budget in 1955, with the prospect that continuing economic expansion with further expenditure cuts would make possible additional tax reductions in 1956. Accordingly, it was recommended that the scheduled reduction in corporation income tax and excise rates be deferred for a year.[75]

Since the President's report explicitly set forth the desirability of compensatory fiscal action for purposes of economic stabilization,[76] the inference to be drawn from these fiscal recommendations is that the administration anticipated a period of steady, noninflationary expansion of the economy in which reductions in Federal expenditures with matching tax reductions would be compensated for by increases in demand elsewhere. These anticipations, however, underestimated the strength and failed to appraise accurately the character of the expansionary developments in 1955 and, therefore, the consequent challenges facing fiscal policy in the ensuing years.

From the last quarter of 1954 to the last quarter of 1955, gross national product in current prices increased by $38.1 billion, or by 10.3 percent. The expansion occurred on virtually an across-the-board basis, with the minor exception of net exports of goods and services (table 8–2, p. 276).

The decline in Federal purchases of goods and services came to a halt at the beginning of the year; national defense purchases leveled off until mid-1956, while other purchases fluctuated moderately within a narrow range, reflecting changes in Commodity Credit Corporation and similar purchases and Government sales.

Defense orders for hard goods, however, were lower in the first three quarters of 1955 than in the same period of the preceding year, but then began a strong rise which continued into 1956. New orders in durable manufacturing rose very rapidly, primarily in response to rising civilian demands. Unfilled orders and inventories also rose very rapidly in 1955 (table 8–4, p. 284). In the second quarter, plant and equipment outlays began the strong rise which was to characterize the next 2 years as those of investment boom (table 8–9, p. 303).

In short, the year 1955 was marked by a very rapid expansion in total spending, originating primarily in the private sector, to which defense demands contributed at the end of the year. More important than the increase in the aggregate volume of demand, however, was the strong growth in demand for durables and the consequent raising of horizons for capital outlays. Developments in 1955, therefore, augured a strong sectoral shift in demand continuing beyond the immediate boom period.

Although the Council of Economic Advisers had noted the probability of differential rates of expansion in the various sectors of the

[74] January 1955 Economic Report of the President, p. 24.
[75] Ibid., pp. 48–50.
[76] Ibid., p. 49.

economy,[77] it failed to take into account the possibility of inflationary developments arising out of these sectoral demand shifts. In this, of course, the Council was not alone. Lags in information, as always, served to becloud economic prospects. The strength and duration of the increase in private investment demand certainly exceeded expectations.

Apart from the administration's proposals to continue reducing expenditures wherever possible and its requests for deferral of scheduled tax reductions, fiscal policy was to rely primarily on the built-in stabilizers to limit the expansion of total demand to proportions consistent with economic stabilization objectives. Federal receipts, on income and product account, responded to the expansion of economic activity, increasing in the aggregate by $10.2 billion from the fourth quarter of 1954 to the corresponding quarter of 1955. Although Federal expenditures also rose during this period, the Federal Government income and product account shifted from a deficit of $2.3 billion to a surplus of $5.6 billion (table 8–5, p. 286).

The increase in Federal and State and local personal tax payments, however, offset only 13 percent of the increase in personal income. At the same time, the rate of personal saving fell during the first three quarters of 1955 (table 8–7, p. 298). Built-in flexibility in the individual income tax was inadequate to curb the substantial increase in consumer outlays, particularly in the face of a strong demand for automobiles and other durables and easy consumer credit.

Corporate profits tax accruals responded more vigorously, offsetting close to 43 percent of the increase in profits before tax. Nevertheless, corporate profits after tax rose to $24.9 billion in the last quarter of 1955 (annual rate), a level exceeded in the postwar period only in the two quarters immediately following the outbreak of Korean hostilities (table 8–11, p. 305). The increase in taxes was inadequate to prevent a rising level of dividend distributions and capital outlays.

The immediate inflationary consequences of the expansion of total demand in 1955 were not particularly striking. In the fourth quarter of 1955, the overall implicit price deflator for gross national product was 101.9, compared with 100.2 a year earlier (table 8–6, p. 294). Nevertheless, the 1955 rise in prices was strong relative to that occurring in the preceding 2½ years, during which the deflator had risen by the same aggregate amount.

While prices rose moderately, unemployment fell to slightly more than 4 percent in the last quarter of 1955, where it leveled off for the next seven quarters (table 8–1, p. 275). Employment conditions, therefore, did not show the same inflationary pressures, at least when measured against earlier postwar years.

6. Inflation on the level: 1956–57

At the beginning of 1956, the administration noted with pride the accomplishments of the economy in the preceding year. "Full employment, rising incomes, and a stable dollar have been cherished goals of our society. The practical attainment of these ideals during 1955 was the year's great economic achievement." [78]

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[77] Ibid., pp. 24–25.
[78] January 1956 Economic Report of the President, p. III.

Continuing expansion at a high rate of use of the labor force and production capacity was envisaged for 1956. This expansion, it was explicitly noted, would in all probability involve significant shifts in the composition of demand.[79]

The prospect of general inflationary movements becoming strong in 1956 was nowhere suggested in the President's economic report. The outlook, therefore, was continuing expansion, though at a slower rate than in the preceding year, with stability in the general price level.

In this setting, fiscal policy was to aim at achieving budgetary balance. This called for again deferring the scheduled reductions in corporate income and excise tax rates. The expansion of income was to produce a sufficient increase in revenues to allow some gain on the moderate increase in expenditures anticipated at the time. Should any surplus develop, it was to be devoted to debt retirement rather than tax reduction.[80]

Measured in current prices, economic expansion continued at a vigorous pace through 1956 and the first three quarters of 1957. From the last quarter of 1955 through the third quarter of 1957, the average annual rate of increase of gross national product was 5.3 percent. Moreover, the expansion was widespread; a moderate decline in outlays for residential construction was more than offset by the increase in other construction outlays. Virtually the only major component of gross national product to register a decline, in current prices, was the change in business inventories (tables 8–2, p. 276).

The principal feature of this expansion of demand was the rise in outlays for plant and equipment. In current prices, these expenditures had increased from a seasonally adjusted annual rate of $25.7 billion in the first quarter of 1955 to $31.5 billion in the last quarter of that year. They continued to rise, to a peak rate of $37.8 billion in the third quarter of 1957 (table 8–9, p. 303).

On the other hand, measured in constant 1954 dollars, the average annual rate of increase in gross national product over the same period was about 1.4 percent, and virtually all of this growth occurred in the last quarter of 1956 and the first two quarters of 1957. The increase was in consumer expenditures for nondurables and services, in net exports of goods and services, and in State and local government purchases (table 8–3, p. 280).

Seasonally adjusted plant and equipment outlays in constant dollars rose more modestly than the current price series indicates. From the first quarter of 1955 through the third quarter of 1957, the increase was $7.1 billion, virtually all of which had occurred by the third quarter of 1956 (table 8–9, p. 303).

The divergence between the two measures of gross national product, of course, represents the rise in prices occurring during this period. From the last quarter of 1955 through the third quarter of 1957, the overall implicit price deflator for gross national product rose from 101.9 to 109.1. Although significant increases occurred in every component of aggregate demand, they were most pronounced in the case of consumers' and producers' durables and in Government purchases (table 8–6, p. 294).

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[79] Ibid., pp. 43–50.
[80] Ibid., pp. 72–76.

While total demand and prices continued to rise and output leveled off, employment rose with the increase in the labor force. Seasonally adjusted, the quarterly rate of unemployment varied only slightly between 4.1 and 4.3 percent during this period (table 8–1, p. 275). But major shifts were occurring in the composition of employment. The increase in employment in manufacturing was quite small, although substantial increases were made in State and local government employment and services. Moreover, within manufacturing, a marked increase occurred in nonproduction worker employment while employment of production workers declined.[81] Similar shifts were occurring in the composition of production.[82] In short, while total output was growing at a very slow rate, major shifts were occurring in the level of activity among the major sectors of the economy.

According to Professor Schultze, the overall growth of money demand in this period was not excessive. The strong and widespread upward price movements in this period were attributable, rather, to the substantial changes in the composition of demand and changing employment patterns. In general, price increases originated in sectors in which demand was rising and spread to other sectors by raising their costs. By virtue of the downward rigidities of wages and prices, the original upward price impulses were not offset by equivalent downward price movements in sectors in which demand was contracting. In addition, associated with the investment boom was a substantial increase in employment of so-called overhead labor, i.e., research and other technical and administrative personnel. Since real output increased at a very slow rate, unit costs of output rose, adding to the upward pressure on prices.[83]

In retrospect, fiscal and monetary policies were poorly suited to deal with the problems of economic stabilization and growth during this period, if the thesis presented in chapter 5 of this report and by Professor Schultze is correct. Throughout this period, during which monetary restraints became increasingly rigorous,[84] no effort was made to direct such restraints to the specific sectors of the economy in which rising demand was effecting significant price disturbances, even though it was widely conceded that general credit contraints might well impinge with varying degrees of force on the different sectors.

The record indicates that the principal impact of monetary and credit restraints was on housing and associated consumer durables, the decline in which affected outlays for plant and equipment only after a considerable lag. A considerable part of the general upward price pressure of the period, however, stemmed from the rise in plant and equipment outlays which were only tardily affected by monetary restraints. In other words, to the extent that monetary constraints served to restrain the increase in money demand, they did so, apparently, without curbing the increases in demand in the particular sectors in which price increases originated. Moreover, according to Schultze, the restraint on expansion of aggregate demand, particularly in the latter part of this period, served to promote more widespread price increases by limiting the expansion of real output to levels at which

[81] Cf. Schultze, op. cit., p. 122.
[82] Ibid., p. 101.
[83] Ibid., pp. 1–16. See also chapter 5 of this report.
[84] According to Gurley's measure of liquidity, the ratio of liquid assets to gross national product declined markedly between 1954 and 1957. Cf. Gurley, op. cit.

unit costs were greater than they would have been at higher rates of production.[85]

Fiscal policy, on the whole, made little contribution to economic stability during this period, and probably contributed significantly to inflationary strains. Individual and corporation income tax rates, it is true, were maintained, while the social security contribution rate was increased for calendar years 1957 and 1958. In addition, increases were made in excise rates on gasoline and diesel fuels, trucks and highway-vehicle tires and new excises were imposed on tread rubber and on highway use by trucks in connection with the financing of the highway program inaugurated in 1956. From the last quarter of 1955, Federal receipts on income and product account rose $7 billion through the third quarter of 1957. Over the same period, however, Federal expenditures rose by $9.6 billion, reducing the income and product account surplus from $5.6 billion in the fourth quarter of 1955 to $3 billion in the third quarter of 1957 (table 8–5, p. 286).

The composition of the changes in Federal expenditures, rather than their magnitude, appears to be at the source of the inflationary impact of Federal fiscal developments during this period. National defense purchases of goods and services rose by $5.8 billion and gross civil purchases, other than those by the Commodity Credit Corporation and similar outlays, increased by $1.7 billion, reflecting, primarily, the increased activity in highway construction under the Federal Aid Highway Act of 1956. (State and local government expenditures were also rising during this period, reflecting the rising level of capital programs, including schools and highways, in these jurisdictions. See tables 8–5 and 8–10, pp. 286 and 304).

In addition, defense obligations for hard goods also rose very sharply in 1956, during the height of the investment boom. These orders rose from a total of $7.9 billion in calendar 1955 to $18.5 billion in 1956, and from a quarterly rate of $0.7 billion in the third quarter of 1955 to $5.9 billion in the second quarter of 1956. Activity in the durable goods industries was at a postwar peak rate in 1956, as measured by new orders received and unfilled orders. Inventories in these industries also rose sharply. Defense obligations and durable goods industries activity declined after the end of 1956, although inventories continued to rise until the middle of 1957 (table 8–4, p. 284).

Increases in Federal demands, therefore, were concentrated in the very sectors in which total demand was rising and in which strong upward price pressures were developing, and at the very time at which private demand was at a peak. On the other hand, apart from the increase in highway excises, the expansion of Federal revenues, both discretionary and automatic, was concentrated in the consumer sector, in which the price increases (as measured by the implicit gross national product deflators) were relatively modest and lagged behind those in producers' durables and construction.

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[85] Schultze, op. cit., pp. 1–12. Schultze concludes that "Even should aggregate demand rise no more rapidly than the supply potential of the economy, however, inflation can still take place if the composition of demand changes sharply. Faced with this situation we can attempt to alter the composition of demand by using selective controls or we can accept the moderate price increases which will otherwise occur. In either event, the problem cannot be solved by a further repression of demand through general monetary and fiscal policy" (p. 3).

Fiscal developments, therefore, were as poorly oriented, from the point of view of their sectoral impact, as monetary policy during this period, in terms of the price-level stabilizing objective. Fiscal and monetary constraints of a general character could have been imposed with sufficient severity to limit aggregate money demand to noninflationary levels. In view of the substantial sectoral shifts in demand, to which Federal demands contributed, the very limited increase in real output, and the stability of employment rates, however, such rigorously restrictive policies would have resulted in lower levels of real output and employment. As matters stood, these constraints were not adequate to curb inflation but sufficiently rigorous to limit the growth in real output to very small proportions.

Schultze's analysis does not suggest that less restrictive monetary and fiscal policies during this period would have materially reduced the extent of price increases, but it does argue that such policies would not have materially increased inflationary pressures. At the same time, a more pronounced growth in real output might have been achieved.

Economic developments in this period illustrate the kind of dilemma with which public policies aimed at economic growth, high employment, and price level stability may be faced. Dynamic changes in the composition of demand and in optimum combinations of inputs may in themselves give rise to inflationary pressures in an economy in which resource mobility is not very high, even if aggregate demand is not excessive. Should public policy seek to curb these price pressures? If so, should it seek to do so by direct limitations of the dynamic impulses toward reallocation of resources, i.e., by checking the increases in demands in expanding sectors through selective credit and fiscal devices? To do so would be to improve the position of fixed-income groups and economic units which will not benefit immediately and directly from the dynamic shifts. This will be at the cost of the welfare of the rest of the economy which stands to gain from the changes in economic activity and possibly at the expense of all, over a longer period of time, as a result of a slower rate of expansion of capacity to produce the goods and services most desired. Alternatively, should public policy seek to curb price pressures, in this type of situation, by general fiscal and monetary restraints on the expansion of demand? To do so might well require levels of activity so low as to involve substantial unemployment and a materially reduced rate of growth in productive capacity. The final alternative is to focus primarily on expansion of total product and productive capacity, while minimizing impediments to dynamic adjustments in resource use, and to accept the cost of this dynamic expansions in terms of some upward movement in the general level of prices.[86]

The basic failure of public policy in this period is not that it chose among these alternatives contrary to the wishes of the Nation as a whole, but that it failed to assess the problem correctly and to make an explicit choice among alternative policies to cope with it. The result was inflation and an unduly limited growth in real output.

[86] Cf. Schultze, op. cit., p. 15. See also N. B. Ture, "Economic Growth and Federal Tax Policy." Proceedings of the 51st Annual Conference of the National Tax Association, 1958, especially pp. 388–391.

7. Recession again: 1957–58

In the fourth quarter of 1957, the economy began a sharp decline which continued into the first quarter of 1958. In constant 1954 dollars, the drop in gross national product was at an annual rate of $19.6 billion from the third quarter of 1957 to the first quarter of 1958. The decline occurred across the board with the exception of consumer outlays for services, new residential (nonfarm) construction, and Government purchases of goods and services. It was most pronounced, in real terms, in plant and equipment outlays and in inventories (table 8–3, p. 280).

In current prices, much the same pattern is to be observed (table 8–2, p. 276). Prices continued to rise in most of the broad sectors of gross national product throughout the recession and subsequent recovery (table 8–6, p. 294).

Unemployment in this period rose from a seasonally adjusted rate of 4.3 percent in the third quarter of 1957 to 6.5 percent in the first quarter of 1958. While real output and current money demand turned up in the second quarter of 1958, the rise in employment lagged. Unemployment continued to rise to a peak rate of 7.4 percent in the third quarter of the year (table 8–1, p. 275).

The recession beginning in the latter part of 1957 appears to have originated primarily in the leveling off of business demands for plant and equipment after the third quarter 1956 peak, a sharp drop in exports following the rise in 1956 associated with the Suez crisis, the moderate decline in total construction in real terms, and a declining rate of increase in consumer outlays.[87] Federal fiscal developments also contributed to the decline.

From mid-1956 through the third quarter of 1957, defense orders for hard goods declined substantially, after a sharp rise in the preceding year. Those orders had increased from $0.7 billion in the third quarter of 1955 to $5.9 billion in the second quarter of 1956. They fell to $2.2 billion in the third quarter of 1957. Moreover, this decline in defense orders coincided very closely with the decline in total new orders for durable manufacturing industries. These had reached a post-Korean peak of $44.9 billion in the last quarter of 1955, thereafter they fluctuated moderately around an average of $43.3 billion in 1956 and then skidded sharply to $36.1 billion in the last quarter of 1957. Unfilled orders in the durable goods industries fell from $61 billion in the last quarter of 1956 to $48.1 billion a year later. Inventories continued to rise to mid-1957, and then turned down sharply (table 8–4, p. 284).

The impact of the cutback in defense hard goods orders was particularly severe in the aircraft industry. Total new orders, civilian as well as military, in this industry were $6.5 billion in the second half of 1956 but fell to $3.7 billion in the first half of 1957. Virtually all of this decline was in new orders for military aircraft (including missiles).[88]

These simple magnitudes do not convey the full significance of this cutback. Because of the rapidly changing technology in military hard goods, any given change in the volume of orders for such equip-

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[87] Cf. January 1958 Economic Report of the President, ch. 2.

[88] Cf. U.S. Department of Commerce, Office of Business Economics, Survey of Current Business, November 1959, pp. 4–6.

ment is likely to result in a substantially magnified change in total new orders for durable goods. Defense contractors receiving new orders are likely often to have to place new orders for production facilities, to a substantial extent because new defense orders increase the rate of obsolescence of highly specialized plant and equipment. Although the change in defense orders relative to the change in total new orders in durable goods industries may appear to be relatively small, it seems quite likely that the defense component of total new orders is, on the whole, the most significant in determining trends in activity in these industries.

In the prior postwar recessions, the sluggishness of discretionary policy changes to curb the downturn could fairly be ascribed, in considerable measure, to the tardiness of information concerning economic developments. While this data lag had by no means disappeared, it was substantially reduced in the 1957–58 turn. Thus, the January 1957 Economic Report of the President noted explicitly some of the ingredients which made for uncertainty concerning the economic outlook for 1957. Among these were the loss in liquidity in business and among financial institutions, the possibility of either a downturn or a slower rate of increase in capital outlays, and uncertainties in the international situation affecting net exports of goods and services.[89]

In addition, the economy wave in Federal Government appropriations touched off by the Secretary of the Treasury in January 1957 upon the presentation of the budget for fiscal 1958 augured a reduced rate of increase in Federal outlays if not an actual decline in the latter half of calendar 1957. The determined effort by the administration at midyear to avoid having to apply to the Congress for an increase in the debt ceiling by vigorous efforts to curb increases in outlays must also have suggested diminishing support for economic expansion from this sector.

Explicit recognition of the downturn in fact was not long delayed. The Federal Reserve's national summary of business conditions in its successive releases for the months of September through December 1957 noted the leveling off and downturn in real output and employment at the middle and end of the third quarter of the year.[90] So indeed did Economic Indicators. In addition, the Federal Reserve's action to reduce the discount rate on November 15 was a clear signal of change in outlook. The January 1958 Economic Report of the President and the budget message also specifically acknowledged the decline in activity then underway.[91]

Timely recognition of the downturn did not lead to any major improvement in compensatory fiscal action. The administration requested a further extension of the corporate income tax and excise tax rates. While various administration officials suggested that tax rate reductions might become necessary if the decline accelerated rather than moderated, the issue was avoided by the adoption of a "let's see next month's indicators" attitude. In addition, the magnitude of the deficit anticipated as a result of the automatic decline in receipts and the decision to increase expenditures must surely have appeared

[89] Loc. cit., pp. 44–46.
[90] Cf. the September through December 1957 issues of the Federal Reserve Bulletin.
[91] Loc. cit., pp. III and M–9, respectively.

frightening to both the administration and congressional leaders who apparently assumed a "Let George do it" attitude.[92]

The principal antirecession measures were Federal extension of exhausted State unemployment benefits, acceleration of procurement programs, emergency Federal aids for housing, an increase, partly retroactive, in salaries of Federal employees, and suspension of certain spending limitations under the Federal-aid highway program.

In other words, although some compensatory spending action was taken (the extension of unemployment compensation benefits was an important policy advance in this regard), tax policy was relegated to a passive role. The administration-congressional position against reducing taxes for stabilization purposes was adhered to in the face of widespread support for tax cuts and a determined effort on the part of a small group in the Congress.[93]

The limitations which prevail against the use of antirecessionary tax adjustments were suggested in the introduction to this chapter. In connection with the 1958 recession, it seems clear that the major obstacle to compensatory tax cuts was a preference for expenditure increases, particularly since appropriations had been cut back vigorously in 1957, though with little short-run effect on actual outlays.[94]

The fiscal results, measured in the income and product account, during the downturn evidences the substantial limitations on the effectiveness of the built-in tax stabilizers, particularly in the individual income tax. Total Federal receipts declined from an annual rate of $82.7 billion in the third quarter of 1957 to a recession low of $75.2 billion in the first quarter of 1958. Of this $7.5 billion decline, personal taxpayments accounted only for $1.4 billion, excises for $0.5 billion, and contributions for social insurance for only $0.1 billion. Corporate profits tax accruals, on the other hand, dropped by $5.5 billion (table 8–5, p. 286).

Excluding transfer payments, personal income fell from an annual rate of $332.7 billion in the third quarter of 1957 to $327.8 billion in the first quarter of 1958. The decline in Federal personal tax liabilities offset 28.6 percent of this decline (table 8–7, p. 298). While this ratio is not lower than that in the preceding recession, it is clear that the built-in decline in personal tax liabilities made only a limited contribution toward arresting the recession. The drop in corporate taxes, on the other hand, was substantial relative to the change in corporate profits (table 8–11, p. 305). Although reduction in corporate profits taxes contributed to improvement in net working capital during this period, it was of no apparent significance in limiting the decline in capital outlays.

During this period of decline, Federal expenditures increased from an annual rate of $79.7 billion in the third quarter of 1957 to $83.2 billion in the first quarter of 1958. Of this $3.5 billion increase, $2.3 billion was the rise in transfer payments (table 8–5, p. 286).

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[92] See Norman B. Ture, "Limitations On the Use of Anti-Recessionary Tax Policy," Virginia Law Review, vol. 44, No. 6, 1958, pp. 964 ff.

[93] Efforts were made to amend the excise rate extension bill to provide income tax reduction. While these efforts failed, the excise on transportation of property was repealed, at a revenue loss estimated at $485 million annually. In addition, the small business provisions of the Technical Amendments Act of 1958 provided income tax benefits to small business in an estimated amount of $260 million.

[94] Cf. Ture, "Limitations on the Use of Anti-Recessionary Tax Policy," op. cit.

Together with the change in receipts, a net change of $11 billion from surplus to deficit was realized between the third quarter of 1957 and the first quarter of 1958 (table 8–5, p. 286).

Two major conclusions may be drawn from the 1957–58 recession. In the first place, individual tax liabilities (as currently estimated) are quite insensitive to substantial declines in employment, so long as personal money income is sustained. Since substantial stability in money income appears to be quite consistent with serious losses in employment and output, the responsiveness of personal taxes to the former but not to the latter substantially vitiates their effectiveness as an automatic counterrecessionary device.

Secondly, the 1957–58 recession demonstrated the inadequacies of relying on increases in expenditures—other than transfer payments—to counter recessionary forces. In the rapid decline of activity from the third quarter of 1957 through the first quarter of 1958, Federal purchases increased only by $0.4 billion. Although the downturn ended in the first quarter of 1958, Federal purchases continued to rise, by an additional $4.1 billion, through the last quarter of the year. This continued rise in outlays certainly contributed to support of the recovery; it arrived too little and too late, however, to prevent or even substantially to moderate the downturn.

8. Recovery and expansion, mid-1958 and mid-1959

The administration's confidence that the recession would be short lived was justified. In the second quarter of 1958, economic decline gave way to recovery. Personal consumption outlays and Government purchases of goods and services rose while the rate of inventory liquidation fell off and the decline in other private investment substantially moderated. By the last quarter of the year, gross national product in constant 1954 dollars had reached a new peak; consumption outlays were at an all-time high, producers' durable equipment expenditures had begun to rise from their third quarter low, inventory liquidation had given way to accumulation; and residential (nonfarm) construction was up sharply from the level of 1957. Government purchases had reached a level exceeded during the postwar era only in 1953, when Korean war expenditures were at a peak rate (table 8–3, p. 280).

Throughout the period of both decline and recovery, however, the price level, as measured by the implicit price deflators, continued to rise, and at a rate only moderately lower than during the 1956–57 upsurge (table 8–6, p. 294). In this respect, therefore, the 1957–58 contraction differed from the prior postwar recession in which the price level either declined or stabilized.

The strong recovery of the latter half of 1958 was noted in the President's January 1959 Economic Report. In highly hedged language, the report hinted that further expansion might occur in 1959 as a result of further possible increases in plant and equipment outlays, residential construction, exports, Government outlays, consumption expenditures, and the end of inventory liquidation.[95]

On the basis of this outlook, the report called for support of the budget proposals for fiscal 1960, envisaging a balance of receipts and expenditures at an estimated $77 billion level. Since this estimate involved a $9.1 billion increase in net budget receipts and $3.8 billion

[95] Loc. cit., pp. 30–32.

reduction in net budget expenditures over the fiscal 1959 budget results (as estimated in January 1959), the President was in effect anticipating a restrictive shift in fiscal position. Adoption of these budget proposals, it was estimated, would result in a shift from a conventional budget deficit of $12.9 billion in fiscal 1959 to a surplus of $0.1 billion in fiscal 1960. An even more pronounced shift of $13.8 billion was estimated for the consolidated cash budget.[96] Apart from relatively modest increases in certain Government service charges and in the gasoline excise, about two-thirds of the shift in fiscal posture was to result from automatic increases in revenues in response to rising levels of income; both automatic and discretionary reductions in expenditures were to account for about 30 percent of the shift.[97] The magnitude of this shift is oddly in contrast with the timidity of the forecast of rising economic activity.

Economic expansion proceeded at a vigorous rate during the first half of 1959. Measured in current prices, gross national product was 11.5 percent higher in the second quarter of 1959 than a year earlier and 6 percent higher than in the last quarter of 1958. In constant 1954 dollars, the increases were about 10 percent and 5 percent, respectively.[98] The expansion, moreover, was very broadly based, although the change in nonfarm business inventories was certainly the most pronounced element in the rise. Although unemployment declined from the 7.4 percent seasonally adjusted quarterly rate in the 3rd quarter of 1958, it remained relatively high through mid-1959 (table 8–1, p. 275).

Defense orders for hard goods appear to have contributed significantly to the expansion of economic activity after the late 1957-early 1958 decline. These orders, which had fallen from a total of $18.5 billion in 1956 to $13.3 billion in 1957, rose to $19 billion in 1958. New orders received in durable goods manufacturing also rose sharply from the first quarter 1958 low through the second quarter of 1959. Unfilled durable goods orders began to rise in the last quarter of 1958 after a precipitous decline from the end of 1956. The decline in durable goods inventories came to a halt 6 months after the end of the drop in new orders and rose strongly through mid-1959 (table 8–4, p. 284).

On income and product account, the Federal budget shifted from a $10.9 billion deficit in the second quarter of 1958 to a surplus of $0.4 billion in the second quarter of 1959. This shift resulted from a $15.2 billion increase in receipts, offset by a $3.9 billion rise in expenditures. Over half of the increase in revenue stemmed from the rapid rise in corporate profits tax accruals. Two-thirds of the rise in expenditures resulted from increases in purchases.

The 1958–59 recovery and expansion also affords considerable substantiation of the view that defense orders for hard goods are the critical component of the demand for durable goods. As noted, new orders received in the durable goods manufacturing industries began to rise in the second quarter of 1958. Defense orders had begun to rise in the last quarter of 1957. Nondefense demands for consumer durables, for producers' durables and for new construction, which were

[96] Ibid., pp. 197, 199.
[97] Cf. the January 1959 budget message of the President for fiscal 1960, pp. 725 ff.
[98] U.S. Department of Commerce, Survey of Current Business, November 1959, p. 11.

still falling in the second quarter of 1958, did not therefore contribute to the rise in new orders received in durable goods manufacturing industries beginning in that quarter. Nor does the rise in new orders appear to have been an effort to stabilize the inventory position in durable goods manufacturing. These inventories, it is true, had been declining since the second quarter of 1957, but the decline through the end of that year was slight.

B. SECULAR CHANGES IN THE FEDERAL FISCAL FRAMEWORK

Changes in the structure of the Federal fiscal system should be expected, over time, to influence trends in the composition of total economic activity and the rate of its growth. The strength of this influence, of course, will depend on many factors, many of the most important of which are outside the immediate purview of government policy.[89]

As indicated in the introductory discussion in this chapter, these fiscal policy influences are at the heart of basic economic policy objectives. The Employment Act of 1946 is generally construed as placing considerable emphasis on the growth of productive capacity and total output. Our review of postwar fiscal policy in this section, therefore, is aimed at appraising its secular influence with respect to these central objectives of public economic policy.

In the following discussion we examine the influence of trends in Federal fiscal policy on the rate of expansion of total demand. In addition, we are concerned with the influence of the Federal fiscal structure on saving and investment. While our focus is primarily on fiscal developments, changes in monetary and credit conditions are also considered in the context of the interrelationships of these major components of public economic policy.

The major conclusions emerging from this survey are:

(1) *Federal fiscal policy has tended to become less restrictive with respect to the expansion of total demand.*

On the whole, there has been a pronounced upward trend in Federal outlays, although this movement has been quite irregular. Federal receipts show a similar upward trend, but at a less rapid rate overall. Accordingly, Federal surpluses on income and product account at high levels of economic activity have tended to diminish over the postwar period while deficits have tended to increase during periods of recession.

(2) *The trend toward a less restrictive fiscal policy was accompanied by a secular movement toward increasingly tight monetary and credit conditions.*

Liquidity in the private sectors of the economy evidences a pronounced secular decline, interrupted moderately and briefly during periods of recession. Liquid assets and the money supply grew quite steadily and strongly, but at a considerably slower rate than gross national product in current prices. The mix of fiscal and monetary policies throughout the postwar period has changed in the direction of fiscal ease and monetary restraint.

(3) *The changing mix of monetary and fiscal policies was, on the whole, unfavorable to private investment.*

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[89] Cf. Ture, "Economic Growth and Federal Tax Policy," op. cit.

The declining secular trend in Federal surplus on income and product account is associated with a slight secular decline in gross national saving in relation to gross national product and a somewhat more pronounced decline in the ratio of net national saving to gross national product. Reflecting the steady rise in capital consumption allowances, the long-run increase in gross private saving relative to gross national product offsets a substantial part, but not all, of the declining contribution of Federal surpluses to total saving. Net private saving, excluding capital consumption allowances, rose much more modestly relative to the increase in gross national product.

(4) *For the postwar period as a whole, no major change has occurred in the distributional impact of the Federal tax structure.*

Such relatively modest changes as have occurred in the distribution of tax burdens by income level are attributable largely to the steady rise of State and local government taxes relative to total government incomes. The relative weight of Federal taxes on consumption and saving, similarly, shows no pronounced secular trend.

(5) *Federal expenditure trends have been in the direction of encouraging increases in productive capacity and in productivity.*

This reflects primarily the rising importance of defense activities and associated research and development programs, which have had a large impact on the private sectors of the economy in terms of civilian byproducts and improvements in production technology.

(6) *Changes in Federal expenditures have contributed to economic instability; continuation of post-Korean trends in the composition of Federal outlays suggests an increased tendency toward economic fluctuation.*

Although the rate of increase in gross Federal expenditures is the same in the pre-Korean and post-Korean periods, the rate of increase in defense demands in the former was much more moderate than in the latter years. As we have seen, changes in defense outlays are associated with substantially greater changes in activity in the durable goods manufacturing industries. Fluctuations in levels of output and employment throughout the economy, in turn, are significantly influenced by activity in durables. An offsetting factor is that fluctuations in defense purchases relative to trend have been substantially less in the post-Korean than in the pre-Korean years. Should changing defense requirements lead to greater variability in defense demands in the future, however, the destabilizing consequences of these changes in demand are likely to be greater than formerly.

1. The decline in fiscal restraint

As the earlier discussion pointed out, a rise in Government outlays, even when matched by an increase in revenues, will add to total demand, other things being equal. From the middle of 1946 through the end of 1958, gross expenditures [1] of the Federal Government increased at an average annual rate of 9.1 percent (table 8–10, p. 304); Federal revenues, however, rose at an annual rate averaging 6.7 percent (table 8–5, p. 286.)[2] The trend, therefore, has been toward a declining rate of surplus.

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[1] Federal expenditures, on income and product account, before deducting Federal sales.
[2] Growth rates in this discussion are computed from regression equations derived by the least squares method from quarterly data at seasonally adjusted annual rates, except where otherwise noted.

Major differences occurred in the trends of receipts and expenditures in the pre-Korean and post-Korean periods. In the former period (mid-1946 to mid-1950) expenditures increased at an average annual rate of 8.5 percent while receipts declined 0.7 percent annually. During this period, however, Federal receipts (on income and product account) exceeded expenditures by more than $23 billion. In the latter period, 1955 through 1958, the average annual increase in expenditures was 8.5 percent, as in the pre-Korean period, while receipts rose, on the average, at an annual rate of 3 percent. For these years, however, the excess of receipts over expenditures was only $2.8 billion. In short, while expenditures tended to rise much more rapidly relative to receipts in the former than in the latter period, the changes in receipts and expenditures in absolute terms resulted in a substantially lower surplus in the latter compared with the former period.

The composition of the changes in expenditures, as well as the rate of change in the aggregate, had an important bearing with respect to the influence of Federal fiscal activities on the expansion of total demand. In the pre-Korean period, defense purchases rose, over the period as a whole, at an average annual rate of 0.4 percent; all Federal purchases, including civil purchases, increased at a rate averaging 3.1 percent annually. In the years 1955 through 1958, on the other hand, defense purchases rose annually by 4.9 percent and all purchases by 5.2 percent, on the average. Since purchases generally have a larger and more immediate impact on demand then do other Government expenditures, increase in Federal outlays in the post-Korean period were more expansionary than in the pre-Korean years, despite the fact that the rate of increase of total Federal expenditures was the same in both periods. Moreover, as the discussion in section II–A of this chapter indicates, increases in defense purchases are likely to have a disproportionately large impact on demand in the private sector of the economy. The much more pronounced increase in these purchases after Korea than in the early postwar years affords additional evidence of the more expansionary influence of Federal fiscal policy in the post-Korean compared with the pre-Korean period.

Differences in the impact of fiscal policies on the expansion of demand cannot be inferred merely from comparison of budget results in different periods.[3] A budget deficit or surplus of a given size will have a different impact on total demand in a $450 to $500 billion gross national product economy from that in a $250 to $300 billion economy. The relationship of the budget surplus or deficit to gross national product, therefore, must be considered, not merely the absolute size of the surplus or deficit. In addition, changes in private spending patterns will also affect the expansionary or contractionary influence of net budget results. The greater the proportion of disposable income likely to be spent in the private sector, the greater will be the impact on total demand of any given change in Government surplus or deficit.

An admittedly rough measure of the expansionary impact of secular changes in the Federal fiscal structure is the relationship between the ratio of budget surplus (or deficit) to gross national product and the rate of employment of the labor force.[4] Excluding the third quarter

[3] See discussion in sec. I–C, above.

[4] This assumes a fairly stable set of relationships between changes in output and employment and between changes in demand and in output.

of 1951 through the fourth quarter of 1953, when extraordinary changes occurred in the volume and character of Federal outlays, time series showing the rate of employment and the ratio of Federal surplus (or deficit) to gross national product moved closely together. (See tables 8–12 and 8–13, p. 307.) Table 8–14, p. 308, shows the computed values of the ratio of surplus (or deficit) on income and product account to gross national product at various rates of unemployment in the two periods indicated.

The differences between these relationships in the pre-Korean and post-Korean periods are considerable. In the pre-Korean period, a substantially higher surplus to gross national product ratio is found when unemployment is low than in the post-Korean years. Changes in the ratio of surplus or deficit to gross national product associated with changes in the employment rate were also greater in the pre-Korean period than in the later years. The same pattern is seen in table 8–15, relating the ratio of cash budget surplus (or deficit) to gross national product with rates of unemployment.

The relationships in these tables offer further evidence that fiscal policy was more restrictive in the pre-Korean than in the post-Korean period. In addition, the wider range in the ratio of surplus (or deficit) to gross national product from very low to very high unemployment rates in the earlier than in the latter period strongly suggests that fiscal policy was more responsive to economic fluctuation before Korea than after.

Finally, Federal purchases of goods and services were a more substantial component of gross national product in the post-Korean years than in the pre-Korean period. For the years 1946 through mid-1950, total Federal purchases were 7.8 percent of gross national product; in the years 1954 through 1958, the proportion was 11.6 percent. Had surpluses in the later period also been larger in relation to gross national product, the higher rate of purchases would not necessarily indicate a more expansionary fiscal influence. Since, in fact, surpluses were lower in relation to gross national product after Korea, the expansionary effect of the higher rate of purchases was even greater than the difference in percentages suggests.

2. The change in mix of fiscal and monetary policies

While fiscal restraints on the expansion of demand have tended to weaken, monetary conditions have become more restrictive. The introductory discussion in this chapter of the mechanics of fiscal policy indicated, in general terms, the interrelationship between budget results and monetary conditions, in the absence of compensatory monetary action. The declining ratio of surplus to gross national product, therefore, automatically tended to reduce the supply of loanable funds relative to demands therefor in the private sectors of the economy.

On the other hand, the post-Korean period has been characterized by increasing emphasis in the formulation of public policy on the use of monetary constraints to limit the expansion of demand to noninflationary proportions and decreasing emphasis on fiscal devices. In contrast with the pre-Korean period during which the administration's fiscal proposals called for holding the line on taxes while reducing outlays, fiscal proposals after 1954 have been oriented primarily to restraining the increase in outlays in order to be able to devote some of the rise in revenues, resulting from economic expansion, to tax reduction.

Very great changes in the basic circumstances of the economy assuredly have contributed to this change in policy orientation. During much of the pre-Korean period, reductions in defense outlays were regarded as feasible; the modest rise, in actual dollar value, which occurred in this period was associated to a substantial extent, with the defense aspects of the European recovery program. Since the end of the Korean war, however, defense requirements have expanded continuously. Moreover, the limitations on monetary restraints, resulting from the Federal Reserve's commitment to support the prices of Federal debt instruments, in the pre-Korean period required placing principal emphasis on budgetary surpluses as an anti-inflationary policy. The freeing of monetary policy since the Federal Reserve-Treasury accord permitted deemphasis of fiscal policy for economic stabilization purposes.

Changes in monetary and credit conditions over the postwar period have been delineated elsewhere in this report. Using Gurley's measure of liquidity in the private sector of the economy, the increasing restraint of monetary policy over the entire postwar period is quite marked.[5]

With the change in the mix of monetary and fiscal policies, there has been a secular trend toward a lower rate of expansion of real gross national product. From the first quarter of 1947 through the second quarter of 1950, gross national product in constant 1954 dollars increased at an average annual rate of 3.6 percent. From the first quarter of 1954 through the last quarter of 1958, the increase averaged 2.8 percent.[6]

The change in the mix of monetary and fiscal policies is also associated with a secular trend toward a lower ratio of both gross and net national saving to gross national product. From mid-1946 to mid-1950, gross national saving averaged 15.4 percent of gross national product in current prices. In the years 1955 through 1958, gross national saving was 14.4 percent of gross national product.[7] Gross private saving was a higher proportion of gross national product in the latter than in the former period. The decline in Federal surplus, however, resulted in an overall reduction in the Nation's saving-income ratio.

Gross national saving includes capital consumption allowances, which show a strong secular increase, substantially unaffected by the postwar recession. If this component is eliminated, the resulting measure of net national saving shows a more marked decline relative to gross national product in the post-Korean period compared with the pre-Korean years. From mid-1946 to mid-1950, net national saving averaged 9.3 percent of gross national product; in the years 1955 through 1958, the ratio was 7 percent (table 8–17, p. 311).

The influence of the decline in Federal surplus on the ratio of saving to gross national product is clearly seen in table 8–17. In the pre-Korean period, Federal surpluses contributed 15 percent of gross national saving and 24.8 percent of net national saving. In the post-

[5] Cf. Gurley, op. cit.

[6] These rates were computed as the percentage change between the respective terminal dates.

[7] Gross national saving is the sum of gross private saving and government (including Federal, State, and local) surplus on income and product account. For the major components of gross private saving, see U.S. Income and Output, op. cit., table V–1.

Korean years, on the other hand, the ratios are 1.1 percent and 2.3 percent, respectively.

As a general proposition, secular changes in the ratio of total saving to gross national product reflect trends in the allocation of resources between satisfaction of current demands and increasing productive capacity for the future. In the national income accounting system, this relationship is explicitly shown as the equality between gross national saving and gross investment, consisting of gross private domestic investment plus net foreign investment. The principal components of gross private domestic investment which bear on the increase in the economy's productive capacity are outlays for producers' durable equipment and for new construction other than residential. Measured in constant 1954 dollars, the sum of producers' durable equipment, and new, nonresidential construction outlays represent a smaller proportion of gross national product in the post-Korean than in the pre-Korean years.[8]

In qualification of this observation, it should be borne in mind that expansion of the Nation's capacity to produce is also fostered by a wide range of activities undertaken by the Federal, State, and local governments. These activities are not included as investment in the national income accounts, even though their effects on productivity may well be more consequential over the long run than many business expenditures for tangible production facilities. To the extent, therefore, that diminishing surpluses, hence a falling rate of national saving, has resulted from increases in growth-generating Government expenditures, the decline in the saving-income relationship, as measured in the national income accounts, does not accurately reflect the impact on economic growth of changes in the fiscal structure and of the mix of fiscal and monetary policies. Nevertheless, the change in policy mix has been associated with a decline in private investment activity in the private sectors of the economy, relative to gross national product.

Federal expenditures for research and development activities have increased very substantially over the postwar years, particularly since the end of the Korean war.[9] These expenditures have a significant impact on investment activities in the private sector of the economy, through their effects on the development of new products and on advances in production technology.[10]

In addition, the secular rise in defense outlays has also contributed to private capital formation. As indicated in section II–A, the rapid rate of technological innovation in defense often results in a relatively great increase in demand for new production facilities by defense contractors.

3. Secular trends in the Federal tax structure

For the postwar period as a whole, no significant trend is found in the importance of personal tax and nontax payment and corporate profits tax accruals relative to total Federal receipts on income and product account (table 8–18, p. 312). In 1950 and 1951, corporate

[8] Cf. U.S. Income and Output, op. cit., table 1–5.
[9] Cf. The Budget for Fiscal Year 1960, special analysis H, pp. 989–999.
[10] See chapter on Long-term Economic Growth: Record and Analysis in this report.

profits tax accruals (including excess profits tax) rose at an extraordinarily rapid rate in response to the high level of corporate profits resulting from the recovery from the 1949 recession and the subsequent upward spurt in activity following the outbreak of hostilities in Korea. Apart from these 2 years, however, personal tax payments have contributed between 41.5 and 47 percent of total Federal receipts, and corporate profits tax accruals have ranged between 22 and 29 percent of the total. Federal indirect business tax and nontax accruals, on the other hand, declined quite steadily over the postwar period, while contributions for social insurance have tended to increase relative to total receipts in the post-Korean period.

Taking State and local government receipts into account, the stability of various revenue sources relative to total Government receipts is striking.

As the introductory discussion in this chapter suggests, changes in the revenue structure may have significant consequences for the composition of total economic activity. These effects may stem from changes in the distribution of tax burdens by income level, if consumption and saving proclivities vary significantly at different levels of income. Numerous studies indicate, however, that the influence of changes in tax burden distribution by income level is very slight, except insofar as the changes are drastic and significantly shift the distribution of disposable income to or from the extreme upper end of the income range.[11]

More consequential in terms of the impact on consumption and investment outlays is the change in the distribution of tax burdens as among different kinds of shares of income, that is, compensation to labor and returns to investment. Other things being equal, a shift in tax burden distribution from the returns on investment to labor income will result in a relative increase in the proportion of current income claims for investment purposes and a decrease in claims for consumption.[12] In addition, because of the higher saving rate in the business sector, such a shift will raise the volume of saving out of any given level of income and therefore increase the amount of loanable funds available for financing capital outlays.

The available evidence suggests that the changes which have occurred in the Federal tax structure since the end of World War II have had little consequence for the distribution of Government tax burdens by income level or for the more immediate impact of taxes on consumption or investment. With respect to the former, table 8–19 shows that the distribution of total (Federal, State and local) tax burdens by income levels has changed hardly at all since 1948. Table 8–20 indicates a general rise in effective tax rates at each of the indi-

[11] For example, see Harold Lubell, "Effects of Income Redistribution on Consumers' Expenditures," American Economic Review, vol. XXXVII, March 1947, pp. 154–170 and December 1947, p. 930. See also, Milton Friedman, A Theory of the Consumption Function, National Bureau of Economic Research, Princeton University Press (Princeton, 1957).

[12] This assumes, of course, that the total volume of taxes relative to expenditures is such as to provide the same overall rate of use of available resources as before the shift in taxes occurred. The proposition may, therefore, require a larger Government deficit (or smaller surplus), than would be needed to maintain the same rate of resource use in a higher consumption economy. Cf. Fellner, "Relative Emphasis in Tax Policy on Encouragement of Consumption or Investment," in Federal Tax Policy for Economic Growth and Stability, papers submitted by panelists appearing before the Subcommittee on Tax Policy, Joint Committee on the Economic Report, 84th Cong., 1st sess. (Joint Committee Print, 1955).

cated income levels during the same period, but the differences in the increases do not appear to be significant with respect to overall progressivity in burden distribution. Tables 8–21 and 8–22 (p. 313) show that the factors which have contributed to the relatively greater increase in effective rates at the bottom than at the top of the income distributions are, first, the rising level of money income and, second, the increasing relative weight of State and local taxes. The first factor, with a stable Federal rate structure, particularly since 1954, served to move the whole income distribution up with respect to the Federal individual income tax rate schedule; because of the personal exemption system, the most pronounced effect of such an income movement is the rise in effective income tax rates at the bottom of the income scale. The increasing relative importance of State and local taxes, because of their heavy reliance on relatively regressive tax sources, probably had a greater influence in increasing effective tax rates at the lower end of the income scale than at the upper end.[13]

Table 8–23, p. 314, shows that there has been virtually no change in the relative weight of the Federal tax structure on saving compared with consumption during the postwar years. Within the period, particularly in connection with the Korean war tax changes, an increase in the burden of Federal taxes on saving compared with consumption is to be seen, but this increase was modest and short-lived.

4. Implications of secular trends in Federal expenditures for economic stability

As our earlier discussion points out, national defense purchases have grown more rapidly over the whole postwar period than any other major component of Federal expenditures. Moreover, this growth accelerated in the post-Korean compared with the pre-Korean war period. The relatively great impact of defense demands on activity in durable goods manufacturing and on plant and equipment outlays has also been discussed at an earlier point in this chapter.

The postwar record strongly suggests that changes in defense orders for hard goods are closely associated with relatively large fluctuations in total demand for durable goods and in plant and equipment expenditures. Other things being equal, therefore, we might expect that continuing acceleration in the expansion of defense demands is likely to exert an adverse influence on the stability of employment and output rates.

An important qualification of this surmise, however, is suggested by table 8–24, p. 314, which shows a stability index for broad categories of Federal expenditures during the postwar period. National defense purchases, it is seen, not only grew more rapidly than other major components of Federal outlays but fluctuated more widely from their growth trend. Much of both their growth and instability, however, is associated with the defense buildup and cutback associated with the Korean war. In addition, although virtually no growth occurred from the beginning to the end of the pre-Korean period, these purchases were highly unstable during those years because of the initial postwar reductions in defense outlays, followed by the expansion and contraction in connection with the Marshall plan. Since the end of the Korean war, however, national defense purchases have

[13] Prof. Richard Musgrave provided the calculations shown in tables 8–19 through 8–22.

been relatively stable; civil purchases since the beginning of 1955 have been more volatile than any other of the major categories of Federal expenditures.

A relatively limited fluctuation in the volume of defense purchases, in itself, does not eliminate their destabilizing impact. Nevertheless, a continuation of the much more even rate of growth of these outlays in the post-Korean period would certainly moderate their adverse consequences for stability in the rate of growth of activity elsewhere in the economy.

III. Improving Federal Fiscal Policy for Economic Growth and Stability

To date, Federal fiscal policy has not been used as effectively as theory suggests it might be to moderate economic instability. The decline in the relative emphasis in public policy on fiscal policy compared with monetary policy since the Korean war, moreover, has tended to weaken the contribution of fiscal policy to economic expansion and further to limit its use for promoting economic stability.

Both economic analysis and postwar history suggest material improvements which could be made in Federal fiscal policy in order to enhance its contribution to achievement of the Employment Act's objectives. These are listed and discussed in summary form below.

A. Increasing the Contribution of Federal Fiscal Policy to Economic Stability

In the introduction to this chapter, a distinction was made among the public policy objectives of increasing the rate of growth of the economy, stabilizing the rate of employment, and stabilizing the general level of prices. Although these distinctions are necessary in order to evaluate the performance of fiscal policy under varying circumstances, at this point it should be noted that the objectives are not independent of each other. Recessions, with attendant losses of output and employment, involve not only the immediate loss of goods and services which could be used for increasing productivity and productive capacity but also may unfavorably affect future private capital outlays through adversely affecting anticipations of investors. Quick spurts in private capital outlays may contribute to instability if total demand does not increase commensurately with the increase in productive capacity. Inflationary trends, even of the moderate degree observable over much of the postwar period, may also contribute to instability in the rate of employment by promoting anticipatory capital accumulation at rates in excess of that at which total demand, as conditioned by sluggish public policies, will be adequate for high rates of use of capacity.

Greater economic stability may well be a basic requirement for a higher rate of economic growth. Indeed, several staff papers and other chapters of this report maintain that instability is a major source of inflation and also, over time, a major constraint on growth. Mitigating economic instability, therefore, is an important objective not only from the point of view of limiting the immediate losses in welfare it involves but also as a means of increasing the Nation's material well-being over the long run.

1. *More rapid growth, if it is to be maintained, increases the desirability of prompter and more effective stabilization policies. At the same time, achieving a higher rate of economic growth may involve greater tendencies toward economic instability.*

The various ingredients of the growth process have been discussed above and elsewhere in this report. Whatever the relative emphasis placed on any of these, faster growth in a private-enterprise economy will certainly demand a relatively larger volume of private capital outlays.

Broadly generalizing, an economy with a relatively high private investment component of gross national product should be expected to show a greater tendency toward economic fluctuation than one with a relatively low investment component. Investment in the United States in the postwar years has been considerably more volatile than consumption. Increasing the rate of private capital accumulation relative to total output, therefore, should be expected to increase economic fluctuations.

As suggested above, however, greater economic instability may frustrate private efforts to expand productive capacity more rapidly. A corollary of public policy aimed at promoting more rapid growth, therefore, is greater alertness in public policy to economic fluctuations and greater vigor in moderating them.

2. *Under some circumstances, public policy may have to choose between the price level and the rate of employment as the stabilization objective. In such circumstances, greater emphasis should be placed on stabilizing the rate of employment.*

Most people have a strong bias against inflation. Supporting this bias by rigorous analysis, however, is difficult when the inflation is moderate and is associated with a slow rate of growth in total output and with an overall unemployment rate which is relatively high by historical standards.

This choice between stabilization objectives will be presented when inflationary strains originate in sectoral demand changes rather than in generally excessive demand. Attempting to use general fiscal and monetary controls to hold back such price developments will be at the expense of employment and output. It is debatable whether the net gain in welfare from maintaining stability in the general level of prices while reducing employment and output exceeds that which would result from allowing these moderate upward price movements to occur in response to dynamic shifts in economic activity while high rates of employment and output are maintained overall. Pursuing the former course may actually reinforce inflationary pressures over wide sectors of the economy by raising unit costs of output.[14]

Moreover, the strength of a private-enterprise economy is derived to a substantial extent from the favorable climate it provides for dynamic changes in the composition of demand and in methods of production. Attempting to curb these dynamic impulses either by general controls which depress the economy as a whole—and thereby contribute to weakening dynamic changes—or by more selective controls to slow the adjustment to these impulses in effect represents trading off some of the basic sources of economic strength of the economy

[14] This is not to suggest that the choice between stabilization objectives should hinge on the small and frequent changes in employment and price level indexes. Index movements cannot replace informed judgments by those responsible for formulating and executing public policies.

as a whole for the benefit of the economic units who would otherwise be the losers in the income-transfer process by which adjustments are made in a free market system.

On the other hand, the character of the recent inflation does not necessarily betide a conflict between stabilization objectives in the future. Generally excessive or insufficient demand, with generally rising or weakening prices have plagued the economy in the postwar era more than once. The occasion for general fiscal action aimed, at one and the same time, at stabilizing both employment rates and the price level can hardly be ruled out as a thing of the past.

3. *Tax policy should be used more promptly and more vigorously to offset economic fluctuations than it has throughout the postwar period.*

As we have seen, tax-rate reductions have never been deliberately made to curb recessionary pressures in the entire postwar period. The tax reduction in 1948 was made, on the contrary, in the face of what generally appeared to be inflationary strains, although it undoubtedly assisted materially, as well as fortuitously, in moderating the ensuing recession of 1949. Tax reductions at the first of 1954 were the result of legislation in 1951. They took effect 6 months after the recession of 1953–54 was well underway. Tax cuts were proposed and explicitly rejected as an antirecessionary policy instrument in the recession of 1957–58. (In the latter recession, however, the discretionary increase in unemployment compensation benefits represented a real advance in public policy for economic stabilization.)

Use of tax rate changes for stabilization purposes raises the question in our highly diverse Federal revenue system as to what tax rates should be changed. To avoid delay (possibly complete inertia), it has been suggested that tax changes for stabilization purposes should be completely divorced from considerations of long-term structural changes in the tax system. A frequent suggestion is that stabilizing tax action should be confined to changing the rate applicable to the first bracket in the individual income tax. An alternative proposal is that a "basket" of changes be designated, with opportunity to vary the mix of the changes within this basket as specific stabilization considerations would appear to warrant. Putting any such changes into effect, it is further proposed, should be the responsibility of the administration and should therefore bypass the normal legislative routine (although the Constitution would at the very least require subsequent legislative approval of any such change).

Although adoption of this proposal would assuredly expedite tax changes for stabilization purposes, the fundamental constitutional and political issues involved preclude judgment at this point with respect to either its desirability or practicability.

In any event, the annual budget process affords the occasion for specific evaluation of short-term economic prospects and desirable tax adjustments to be made in the interests of economic stability. A clearer recognition of this fact by both the executive and legislative branches might materially reduce the sluggishness of tax policy.

The 1957–58 recession offers persuasive evidence of the ineffectuality of increasing public expenditures to deal with recession. Although enacted early in the recession, many of these increases did not in fact occur until recovery was well along.

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In short, more vigorous fiscal policy for economic stability calls for principal emphasis on tax rate changes and minimum reliance on expenditure changes, apart from unemployment compensation.

This recommendation is entirely consistent with a change in public policy mix toward greater emphasis on fiscal restraints and easier monetary conditions. A large budget surplus at high levels of employment, therefore, does not preclude a substantial reduction in the surplus relative to the fall in gross national product as an antirecessionary measure.

4. *Automatic fiscal stabilizers should be strengthened, particularly with a view toward increasing their sensitivity to changes in employment.*

Over the postwar period as a whole, substantially greater reliance has been placed on the automatic stabilizers in the fiscal system than on discretionary fiscal action to curb economic instability. The automatic stabilizers, however, have only a limited function to perform: they can damp down fluctuations but they cannot prevent them. Nevertheless, until discretionary fiscal action, which generally involves lags, can be taken, automatic fiscal responses to changing economic conditions are important in moderating the cumulation of destabilizing influences.

Of the built-in tax responses, that of the corporation income tax is by far the most pronounced. Its effect in stabilizing corporate outlays, however, does not appear to be particularly great. Changes in individual income tax liabilities, on the other hand, seem to be associated with relatively substantial changes in consumption outlays. The automatic responsiveness of these liabilities to changes in employment conditions, however, appears quite slight relative to its responsiveness to changes in personal money income. Since the 1957–58 recession demonstrated that a substantial increase in unemployment and loss in output may occur while personal income fluctuates only moderately, the effectiveness of the individual income tax as an automatic stabilizer appears to be limited.

To the extent that fiscal policy for stabilization purposes is to be more closely oriented to employment rates, greater emphasis should be placed on the unemployment compensation system. The dangers in excessive liberalization of unemployment insurance benefits have been frequently cited; many of them are very real indeed. Nevertheless, there is considerable room for increasing the duration and amount of benefits without courting these perils.

Numerous proposals have been offered for semiautomatic fiscal stabilizers, that is, tax rate reductions which would become effective automatically when unemployment exceeded some specified rate, and tax rate increases which would go into effect when the price level, as measured presumably by the Consumer Price Index, rose a specified number of points within some designated period of time. It seems clear, however, that if the executive and legislative branches of the Federal Government could agree upon satisfactory legislation to provide such semiautomatic stabilizers, the occasion for them would automatically have disappeared. A government so disposed could be counted on to take prompt and vigorous discretionary tax action to curb both recessionary and inflationary developments.

Moreover, if the inflationary movement did not reflect generally excessive demand but sectoral changes in demand, use of this semi-automatic stabilizer might well result in depressing total demand and employment below desired levels.

5. *Decisions with respect to the volume and character of defense procurement should be made on the basis of judgments about the Nation's long-term military posture. They should be divorced from short-run budgetary considerations and prospects concerning the level of economic activity. On the other hand, these decisions should be a major consideration in formulating stabilization policies.*

The destabilization potential of changes in defense demands has been repeatedly cited in this chapter. To adjust the level of these demands to considerations of the debt limit or budget balancing, therefore, is to run a significant risk of increasing economic instability as well as impairing the effectiveness of defense preparations.

In view of the rapid rate of technological advance, however, frequent changes in defense procurement should be expected. It should be recognized that these changes may have serious consequences for the level of activity in important sectors of the economy. Public policy should be prepared to make compensatory adjustments, primarily in taxes, on a timely basis in response to these disturbances originating in changes in defense demands. Timely adjustments, moreover, should be oriented primarily to changes in defense *orders* rather than to defense *expenditures*, at least to the extent that disbursements lag behind orders.

6. *Reducing the information lag is an important condition for increasing the speed and vigor of discretionary fiscal responses to economic fluctuations.*

Major improvements have been made in the postwar period in this respect. Indeed, the promptness with which the 1957 turn to recession was recognized was one of the few heartening aspects of public policy in this period.

One of the principal deficiencies in the present statistical inventory is the lack of an anticipatory series concerning Defense Department obligations for hard goods. As the postwar record shows, fluctuations in the volume of these orders are associated with greatly enlarged fluctuations in the volume of activity in durable-goods manufacturing and in plant and equipment outlays. Indeed, defense hard-goods orders are the principal destabilizing components of the Federal fiscal system. Data showing likely changes in these orders for the coming several quarters would materially assist in clarifying economic prospects and in timely formulation of public-policy proposals aimed at economic stabilization.

Another important deficiency is the lack of a series showing seasonally adjusted cash receipts from and payments to the public. This report at various points has stressed the interrelationships between fiscal and monetary developments and the desirability of formulating policy proposals with respect to each in the light of conditions in the other. In many important respects, Federal cash receipts and expenditures are potentially the most useful indicators of the impact of Federal fiscal operations on monetary conditions. These cash receipts and outlays have significant seasonal factors, adjustment for which is desirable if trends are to be readily discernible. At the

present time, however, only unadjusted cash receipts and expenditure data by major components are available.

A historical series, showing quarterly totals of cash receipts and expenditures, seasonally adjusted at annual rates for the years 1946 through 1958, was made available to the staff by the Bureau of the Budget. This series, presented in this chapter as table 8–16, page 309, is an important contribution to analysis of the economic impact of Federal fiscal operations on the economy. It is hoped that further progress in development of this adjusted series, particularly to show major components of receipts and expenditures, will be made and will become part of the regularly published Economic Indicators.

7. *Federal budget accounting should be revised to show more clearly the economic impact of Federal fiscal activities.*

In its "Report on Federal Expenditure Policies for Economic Growth and Stability," [15] the Joint Economic Committee's Subcommittee on Fiscal Policy noted the importance of budgetary revision for the purpose of facilitating appraisal of the Federal Government's fiscal programs in relation to economic developments.

The conventional budget in recent years has tended increasingly to depart from the consolidated cash statement and from national income accounting of expenditures and receipts. Separate budgetary accounting for trust funds obscures both the aggregate volume and composition of Federal expenditures and receipts, and, therefore, the impact of Federal activities on the economy during the period covered by the budget. Moreover, the principal purpose of these devices appears to be to evade the statutory debt ceiling. Many public finance experts assert that no such ceiling should be or need be imposed in a responsible self-governing nation. Whatever the merits of this argument, the use of budgetary gimmicks to avoid political embarrassment can hardly contribute to effective fiscal policy.

8. *The statutory debt ceiling should be eliminated.*

As indicated above, the desire to avoid the embarrassing request for raising the debt ceiling has, in the recent postwar period, occasioned reductions in certain Federal outlays which in turn have contributed significantly to economic instability. A responsible, representative government needs no such arbitrary legislative curb as is imposed by the debt ceiling. Moreover, the principal effect of the ceiling appears to be to encourage budgetary ingenuity rather than to impose a significant limitation on the growth of Federal expenditures relative to receipts.

B. CHANGES IN THE FRAMEWORK OF FEDERAL FISCAL POLICY IN THE INTEREST OF A HIGHER RATE OF GROWTH

Increasing the Nation's rate of economic growth is a widely accepted objective of public policy. Achieving this objective, particularly in a dynamic context, will be neither free nor painless. This discussion, however, is not concerned with whether a higher rate of growth is desirable, and if so, how much higher a growth rate is desired or possible.[16] In this section, therefore, the objective is assumed to be given.

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[15] Joint committee print, 85th Cong., 2d sess., Jan. 23, 1958, pp. 13–15.
[16] See Ture, "Economic Growth and Federal Tax Policy," op. cit., pp. 388–401.

1. *Federal fiscal policy should aim at substantially greater surpluses for any given level of desired restraint on demand than have been realized during the post-Korean period.*

Achieving a higher rate of economic growth requires allocating a larger proportion of available resources to activities which increase productive capacity and productivity. In other words, a higher growth rate requires a reduction in real personal consumption *relative* to real total product and a *relative* increase in real gross national saving (in an expanding economy, this proposition is perfectly consistent with an *absolute* increase in consumption). Without an increase in the saving rate, a rising rate of growth-generating activity will very likely result in inflation. If more rapid growth is desired, the alternative to a higher saving rate is relying on the inflationary process to effect the necessary reallocation of resources, assuming that this process will indeed result in a greater proportional allocation of available resources to those activities whose growth-generating potential is the greatest.

In general, fiscal surpluses and monetary constraints may be conceived as alternative public policy devices to achieve the increase in the rate of saving required for a higher rate of economic growth.

An increase in fiscal surplus at any given level of income and with any given saving propensity, serves, by definition, to increase the amount of the total current income which is saved. Channeling these savings into appropriate uses is another problem of fiscal policy. If the policy preference is for relying on capital formation in the private sectors of the economy in order to raise the growth rate, the saving represented by the surplus must be made available to those economic units in the private sector demanding loanable funds for investment purposes. In general, this will be accomplished through retirement of the public debt. On the other hand, to the extent that the capital to be accumulated is in the public sector, e.g., schools, roads, research facilities, etc., the surplus must be devoted to financing such investments. (Under present budget accounting, this would be shown as an increase in Government outlays matched by an increase in revenues, i.e., a surplus of receipts over *noncapital* outlays of the Government.)

Monetary constraints operate by limiting the expansion of the supply of money and credit relative to the demand therefor as total demand increases. The result is an increase in interest rates which serves in varying degree to limit demands for loanable funds and to induce people to save a larger proportion of their current incomes. The extent to which either of these general effects will in fact obtain depends on the specific saving and spending patterns of the numerous and highly varied economic units of the economy. A change in the structure of interest rates may have widely divergent effects on the

borrowing of different groups in the economy. There is little evidence to suggest that the saving response will be significant through a broad range of interest rates at any given level of total income and in any given set of circumstances.

Raising the rate of economic growth without inflation presents the broad policy alternatives of substantial budget surpluses at high employment with relatively "easy" conditions in the credit and money markets as opposed to small budget surpluses or deficits and relatively restrictive monetary conditions combined with some shift in the distribution of tax burdens from saving to consumption. The policy decision should rest on which combination of fiscal and monetary policies is more likely to serve the desired objectives of economic growth, high employment, and a stable price level with the least violence to other social, political, and economic objectives of the Nation.

Increasing the fiscal surplus is quite evidently the more certain way of effecting an increase in the ratio of gross national saving to gross national product. To the extent that a higher rate of economic growth in the future will require a higher rate of saving, public policy should shift toward easier monetary conditions and greater fiscal restraint.

2. *If a higher rate of capital formation in the private sectors of the economy is desired, tax burdens may have to be shifted to bear less heavily on investment and saving and more heavily on consumption over the long run.*

Whatever the decision about the relative weight to be placed on fiscal or monetary efforts to provide a level of saving adequate for a higher rate of growth, there remains the question of the effects on saving of alternative distributions of tax burdens. Any given budget surplus or deficit may be realized, given Government outlays, with widely varying systems of taxation, the initial impact of which on investment and consumption outlays will, presumably, vary as well. If it is desired to devote a larger proportion of a high-employment income to private capital formation, it is clear that shifting a larger part of the tax burden to the return on investment and easing the relative burden of taxes on consumption will require a higher rate of surplus (or lower rate of deficit), given monetary conditions. Other combinations are also possible and may be necessary to serve other goals, such as more equal distribution of income and wealth. But with the presumptions set forth above, shifting the tax burden relatively from consumption to investment without the corollary change in budget surplus or monetary restraint will tend to defeat the postulated growth objective, unless recourse is had to inflation.

The principal means for effecting a shift in the relative weight of tax burdens from investment and saving to consumption is a reduction in taxes on business income, particularly in the corporate sector, *relative* to personal income taxes. In effect, this involves a shift in tax burden distribution from returns on investment to the labor share of national income. Corporate saving represents a substantially larger proportion of corporate profits after tax than does personal saving relative to disposable personal income.

There is no necessary implication in these conclusions that the *absolute* tax burden on the labor share of national income need be increased at any given time even if its *share* must rise. The total volume of Federal tax receipts necessary to achieve the desired increase in surplus (or reduction in deficit) will depend on numerous factors, including the level and composition of Federal expenditures. It is quite conceivable that the above prescription would be perfectly consistent with general tax reduction, under certain circumstances.

There is little evidence to suggest that a change in the degree of progression in the personal income tax will have any major consequence for shifting the burden of taxes from investment and saving to consumption. On the contrary, with the present pattern of pretax personal income distribution, the change in saving or consumption in response to a given change in disposable income seems to vary little among income levels throughout all but the extreme ends of the income distribution.

Changes in the degree of progression of the personal income tax, in either direction, may be desirable on the basis of other considerations. Such changes are likely to be insignificant in respect to the rate of economic growth.

3. *Reform of the Federal tax structure, particularly the income and estate and gift taxes, is a concomitant of a shift in policy mix toward higher levels of budgetary surpluses.*

A greater fiscal burden demands that the tax system be made as fair as possible. The 1955 study by the Tax Policy Subcommittee of the Joint Economic Committee and the 1959 study by the Committee on Ways and Means have detailed the numerous provisions of the Federal tax system which afford differential tax treatment for identical amounts of income, depending on the source of the income or the disposition made of it. Such "horizontal" inequities, in addition to their adverse effects on the allocation of resources, increase the barriers against discretionary action to increase taxes relative to expenditures. Increasing tax *rates*, in other words, will bear heavily on taxpayers with limited access to tax devices which reduce the effective burden of taxes, and much less heavily, if at all, on taxpayers who can arrange their affairs to take advantage of the preferential provisions in the tax laws.

Tax reform, particularly of the individual and corporation income taxes, to make the respective tax bases as uniform as possible, therefore, may well be the most important prerequisite for a change in the mix of monetary and fiscal policies, and for any shift in the distribution of tax burdens by distributive shares of national income. Such reform would make possible substantially lower *rates* of tax than at present to produce any given revenue yield. Moreover, while eliminating inequities, it would afford the opportunity for increasing *effective* progression in the distribution of personal tax burdens by income level.

4. *Government expenditure programs should be revised to place greater emphasis on activities which increase productivity and make possible increases in productive capacity and to reduce outlays supporting inefficient use of resources.*

Studies cited elsewhere in this report have stressed the contribution, over the long run, to economic growth made by public efforts in the field of education, health, natural resource development and conservation, and research and development. Government outlays in these fields have risen strongly since the end of World War II. Their continued rise at an accelerated rate may be fundamental if a higher rate of economic growth is to be achieved and maintained.

The relative responsibilities of the private sectors, of the State and local governments, and of the Federal Government in promoting activity in these fields is an important policy question. Ideally this question should be resolved on the basis of the comparative advantages of each sector with respect to these activities. In fact, however, numerous institutional constraints impede assignment of responsibilities on this basis. Basically, the policy problem may resolve to choosing between a lower rate of expansion of these activities and therefore of economic growth while preserving present proportional responsibilities and disregarding institutional and political considerations by transferring greater responsibility for these activities to the Federal Government.

To date, the problem with respect to research and development activities has been submerged by virtue of the close association of Federal efforts in this field with the defense program. The productivity of these research and development activities in World War II and following, as detailed by several studies, is so impressive as to indicate that, if the required resources are available, very substantial increases in Federal outlays in this area would represent the major contribution the Federal Government could make in promoting expansion in the private sectors of the economy. Increasing Federal responsibility in this area, therefore, is consistent with expansion of

the private sector of the economy relative to the public. Similar, although perhaps less dramatic, evidence has been presented with respect to public outlays in the fields of education, health, and natural resource conservation and development.

Expansion of Federal activities in these fields need not involve an increase in total Federal demands relative to gross national product. Numerous Federal expenditure programs are aimed primarily at supporting the income and wealth position of economic units in the face of the declining relative value of their products or services as determined in the market. Humanitarian considerations and dicta about social "goals" and "needs" are frequently adduced in justification of these governmental outlays. Such considerations cannot be disregarded in a free and representative society, but their cost in terms of losses in output resulting from misallocation of resources should not be obscured in public policy formulation. In view of the overall budgetary constraints, elimination or reduction of these activities may be essential if the Federal Government is to elaborate activities the productivity of which is substantial.[17]

5. *Accurate appraisal of long-term trends in Federal expenditures requires reform of budgetary accounting.*

The Fiscal Policy Subcommittee's Report on Federal Expenditure Policy for Economic Growth and Stability [18] emphasized the desirability of long-range projections of the costs of Federal programs. One of the major barriers to careful analysis of the longrun impact of Federal expenditures on the economy is the fact that important activities of the Federal Government are not included in the conventional budget. The highway trust fund is a major illustration, since both Federal expenditures on highway construction and receipts allocated to the financing of these expenditures are excluded from the conventional budget totals. Similarly, extrabudgetary transactions such as the use of trust fund assets to finance various expenditure programs lying outside the purview of the fund can only obscure the magnitude and impact of budget proposals on the economy, both in the near future and in the long run. The current exchange by the Federal National Mortgage Association of some of its mortgage holdings for specified nonmarketable debt issues of the Federal Government are another case in point. The principal purpose of these exchanges is to reduce the *budget* expenditure for FNMA; the actual availability of

[17] See the report of the Subcommittee on Fiscal Policy, Joint Economic Committee, on Federal Expenditure Policy for Economic Growth and Stability, op. cit.
[18] Op. cit.

funds to the mortgage market, however, is not changed by this extra-budgetary manipulation.[19]

Continued erosion of the conventional budget by such devices will further reduce its usefulness as a means of controlling Federal fiscal operations.

This study has unfortunately not been able to focus on the implications of State and local government fiscal developments for the Nation's economic growth and stability. The States and localities have been called upon to assume increasing responsibility in providing the public services, such as education, health, and public utilities, which a rapidly growing population demands. The adequacy of their fiscal resources to discharge these responsibilities is therefore of considerable significance for the Nation's long-run economic growth. In addition, the increasing importance of State and local government finances has important implications for the effectiveness of stabilization policies pursued by the Federal Government. The heavy reliance by States and localities on sales taxes, excises, property taxes, and other relatively insensitive revenue sources, tends to reduce the automatic responsiveness of all government revenues to changes in economic conditions.

These remarks indicate that the relationship of State and local government fiscal policies to the Employment Act's objectives is an important area of inquiry. It is to be hoped that further studies of intergovernmental fiscal relations will focus on this area.

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[19] Cf. hearings before the Joint Economic Committee on the January 1959 Economic Report of the President, 86th Cong., 1st sess., pp. 418–422, 770–775.

TABLE 8-1.—*Unemployment as a percent of the civilian labor force, by quarters, seasonally adjusted annual rates, 1946–59*

Year and quarter	Unemployment rate (percent)	Year and quarter	Unemployment rate (percent)
1946:		1953:	
1st	4.7	1st	2.7
2d	4.2	2d	2.7
3d	3.6	3d	2.7
4th	3.4	4th	3.7
Total	3.9	Total	2.9
1947:		1954:	
1st	3.8	1st	5.3
2d	4.1	2d	5.7
3d	4.1	3d	5.9
4th	3.7	4th	5.4
Total	3.9	Total	5.6
1948:		1955:	
1st	3.8	1st	4.8
2d	3.7	2d	4.4
3d	3.7	3d	4.2
4th	4.0	4th	4.2
Total	3.8	Total	4.4
1949:		1956:	
1st	4.7	1st	4.1
2d	5.8	2d	4.3
3d	6.5	3d	4.2
4th	7.1	4th	4.1
Total	5.9	Total	4.2
1950:		1957:	
1st	6.5	1st	4.1
2d	5.6	2d	4.1
3d	4.6	3d	4.3
4th	4.2	4th	4.9
Total	5.3	Total	4.3
1951:		1958:	
1st	3.5	1st	6.5
2d	3.2	2d	7.2
3d	3.2	3d	7.4
4th	3.4	4th	6.3
Total	3.3	Total	6.8
1952:		1959:	
1st	3.1	1st	5.9
2d	3.1	2d	4.9
3d	3.2	3d	5.1
4th	2.8		
Total	3.1		

NOTE.—For concepts of the labor force and of unemployment, see January 1959 Economic Report of the President, p. 159.

Source: Department of Labor, Department of Commerce, and Council of Economic Advisers.

TABLE 8–2.—*Gross national product or expenditure, seasonally adjusted quarterly totals at annual rates, 1946–58*

[Billions of dollars]

Line		1946					1947					1948				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	198.0	206.3	217.1	221.2	210.7	226.0	230.0	235.6	245.1	234.3	249.5	257.7	264.0	265.9	259.4
2	Personal consumption expenditures	137.3	143.0	152.7	155.4	147.1	159.4	163.9	167.2	171.2	165.4	174.7	177.5	180.2	180.8	178.3
3	Durable goods	12.7	14.9	17.4	18.6	15.9	19.1	20.3	20.8	22.1	20.6	21.6	22.6	23.6	23.1	22.7
4	Nondurable goods	80.8	82.6	87.7	88.1	84.8	90.7	93.0	94.2	95.7	93.4	98.1	98.7	99.0	99.2	98.7
5	Services	43.9	45.5	47.5	48.7	46.4	49.6	50.6	52.2	53.4	51.4	55.0	56.2	57.6	58.5	56.9
6	Gross private domestic investment	22.1	29.0	29.6	31.8	28.1	29.8	29.2	29.6	36.7	31.5	39.9	43.2	45.2	43.9	43.1
7	New construction	8.5	10.8	12.2	12.6	11.0	13.3	13.8	15.6	17.9	15.3	18.4	19.8	20.1	19.4	19.5
8	Residential nonfarm	3.5	4.6	5.3	5.6	4.8	6.2	6.3	7.6	9.6	7.5	9.7	10.5	10.4	9.7	10.1
9	Other	4.9	6.2	6.9	7.0	6.3	7.0	7.4	8.0	8.3	7.7	8.6	9.2	9.7	9.7	9.3
10	Producers' durable equipment	7.7	9.4	11.4	14.5	10.7	16.1	16.4	16.7	17.4	16.7	18.2	18.3	19.0	20.1	18.9
11	Change in business inventories—total	5.9	8.8	6.1	4.7	6.4	.4	−1.0	−2.7	1.4	−.5	3.3	5.1	6.1	4.3	4.7
12	Nonfarm only	6.0	8.7	5.9	4.8	6.4	1.5	1.5	−.3	2.4	1.3	2.3	2.9	3.9	2.8	3.0
13	Net exports of goods and services	3.8	4.5	6.5	4.9	4.9	9.0	9.4	9.9	7.9	9.0	4.8	3.3	2.8	3.0	3.5
14	Exports	11.1	12.4	14.4	13.2	12.8	17.4	18.4	18.5	17.2	17.9	15.5	14.2	14.2	14.1	14.5
15	Imports	7.3	7.9	7.9	8.3	7.9	8.5	9.0	8.6	9.3	8.9	10.7	10.9	11.5	11.0	11.0
16	Government purchases of goods and services	34.9	29.7	28.3	29.1	30.5	27.8	27.5	28.8	29.4	28.4	30.1	33.7	35.8	38.2	34.5
17	Federal	25.9	20.2	18.1	18.1	20.6	15.9	15.1	15.9	15.7	15.6	15.9	19.0	20.3	22.1	19.3
18	National defense	24.5	19.4	16.3	15.0	18.8	13.0	10.3	10.7	11.5	11.4	11.2	11.3	11.8	12.1	11.6
19	Other	3.9	4.4	4.9	4.8	4.5	4.3	6.1	6.1	5.1	5.4	5.8	8.1	8.8	10.2	8.2
20	Less Government sales	2.5	3.6	3.1	1.7	1.7	1.4	1.3	.9	.9	1.1	1.1	.4	.3	.2	.5
21	State and local	8.9	9.5	10.2	11.0	9.9	11.9	12.4	12.9	13.7	12.7	14.2	14.7	15.6	16.1	15.2

TABLE 8–2.—*Gross national product or expenditure, seasonally adjusted quarterly totals at annual rates, 1946–58*—Continued

[Billions of dollars]

Line		1949					1950					1951				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	259.8	256.4	258.8	257.0	258.1	265.8	274.4	293.2	304.3	284.6	317.8	326.4	333.8	338.1	329.0
2	Personal consumption expenditures	179.0	181.1	180.5	184.0	181.2	185.7	189.9	204.4	200.1	195.0	211.5	205.5	208.8	213.4	209.8
3	Durable goods	22.4	24.5	25.1	26.3	24.6	26.8	27.9	35.5	31.2	30.4	33.0	28.0	28.5	28.4	29.5
4	Nondurable goods	97.8	97.1	95.3	96.3	96.6	96.2	97.7	103.3	102.0	99.8	110.2	108.1	109.5	112.7	110.1
5	Services	58.8	59.5	60.1	61.5	60.0	62.6	64.3	65.7	66.9	64.9	68.3	69.4	70.8	72.3	70.2
6	Gross private domestic investment	36.8	30.8	33.7	30.6	33.0	39.8	46.9	51.1	61.4	50.0	56.9	61.6	56.3	51.0	56.3
7	New construction	18.5	18.2	18.6	19.9	18.8	21.6	23.6	25.6	25.3	24.2	25.7	25.0	24.5	24.5	24.8
8	Residential nonfarm	9.0	8.9	9.6	10.9	9.6	12.2	13.8	15.4	14.4	14.1	14.1	12.5	11.8	12.1	12.5
9	Other	9.4	9.3	9.0	9.0	9.2	9.4	9.8	10.3	10.9	10.1	11.6	12.5	12.7	12.4	12.3
10	Producers' durable equipment	18.3	17.9	16.8	16.0	17.2	15.7	18.4	20.6	21.1	18.9	20.7	21.3	21.6	21.5	21.3
11	Change in business inventories—total	0	−5.3	−1.7	−5.3	−3.1	2.5	4.9	4.9	15.0	6.8	10.5	15.2	10.2	4.9	10.2
12	Nonfarm only	.6	−4.1	−.6	−4.7	−2.2	2.2	4.2	3.8	13.8	6.0	9.3	14.0	9.1	3.8	9.1
13	Net exports of goods and services	4.6	4.6	3.7	2.1	3.8	2.0	1.1	−.6	−.2	.6	−.2	1.7	3.9	4.2	2.4
14	Exports	15.2	15.0	13.6	12.1	14.0	12.5	12.4	13.4	14.2	13.1	15.9	17.7	18.9	18.9	17.9
15	Imports	10.6	10.3	9.9	10.0	10.2	10.5	11.3	14.0	14.4	12.5	16.1	16.0	15.0	14.8	15.5
16	Government purchases of goods and services	39.5	39.9	40.9	40.3	40.2	38.4	36.5	38.2	43.0	39.0	49.5	57.7	64.9	69.5	60.5
17	Federal	22.5	22.3	22.6	21.6	22.2	19.1	17.2	18.4	22.7	19.3	28.7	36.1	42.9	47.4	38.8
18	National defense	13.5	13.7	14.1	13.0	13.6	12.6	12.0	14.1	18.3	14.3	24.3	31.2	38.1	41.8	33.9
19	Other	9.3	8.9	8.6	8.7	8.9	6.6	5.2	4.4	4.5	5.2	4.5	5.1	5.2	6.0	5.2
20	Less Government sales	.3	.2	.1	.1	.2	.1	.1	.1	.2	.1	.2	.2	.4	.4	.3
21	State and local	17.0	17.6	18.3	18.7	17.9	19.3	19.3	19.8	20.3	19.7	20.9	21.6	21.9	22.1	21.7

TABLE 8–2.—*Gross national product or expenditure, seasonally adjusted quarterly totals at annual rates, 1946–58*

[Billions of dollars]

Line		1952					1953					1954					1955				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	341.0	341.3	347.0	358.6	347.0	364.5	368.8	367.1	361.0	365.4	360.0	358.9	362.0	370.8	363.1	384.3	393.0	403.4	408.9	397.5
2	Personal consumption expenditures	214.6	217.7	219.6	227.2	219.8	230.9	233.3	234.1	232.3	232.6	233.7	236.5	238.7	243.2	238.0	249.4	254.3	260.9	263.3	256.9
3	Durable goods	27.7	29.1	27.5	32.1	29.1	33.2	33.4	33.6	31.2	32.9	31.2	32.2	32.3	33.9	32.4	38.2	39.1	41.4	39.8	39.6
4	Nondurable goods	113.3	113.9	115.9	117.2	115.1	118.1	118.6	117.8	117.4	118.0	117.9	118.8	119.6	121.0	119.3	121.2	123.7	126.1	128.1	124.8
5	Services	73.6	74.7	76.2	77.9	75.6	79.6	81.2	82.8	83.7	81.8	84.6	85.5	86.9	88.3	86.3	90.0	91.6	93.4	95.3	92.5
6	Gross private domestic investment	52.2	45.6	49.1	52.6	49.9	52.0	52.9	51.1	45.2	50.3	46.6	47.2	48.8	52.3	48.9	58.8	63.1	65.4	67.6	63.8
7	New construction	25.2	25.4	25.4	26.1	25.5	26.9	27.8	27.7	27.9	27.6	27.8	28.9	30.2	31.6	29.7	33.9	34.9	35.4	35.4	34.9
8	Residential nonfarm	12.4	12.7	12.8	13.4	12.8	13.7	14.0	13.8	13.7	13.8	13.7	14.7	15.8	17.0	15.4	18.5	18.9	18.9	18.4	18.7
9	Other	12.8	12.7	12.6	12.7	12.7	13.2	13.8	14.0	14.2	13.8	14.1	14.2	14.4	14.6	14.3	15.4	16.0	16.5	17.0	16.2
10	Producers' durable equipment	21.9	22.4	19.4	21.2	21.3	22.5	22.0	22.6	21.9	22.3	21.4	20.9	20.7	19.9	20.8	20.5	22.1	24.4	25.4	23.1
11	Change in business inventories—total	5.1	−2.2	4.3	5.3	3.1	2.5	3.1	.7	−4.6	.4	−2.6	−2.7	−2.1	.8	−1.6	4.4	6.1	5.7	6.7	5.8
12	Nonfarm only	4.0	−3.3	3.4	4.7	2.1	3.0	4.0	1.5	−4.3	1.1	−2.8	−3.2	−2.8	.2	−2.1	3.8	5.7	5.5	6.7	5.5
13	Net exports of goods and services	3.1	2.8	.1	−.7	1.3	−.3	−.7	−.8	.0	−.4	.3	.8	.4	2.3	1.0	1.5	.7	1.3	.9	1.1
14	Exports	19.0	18.3	16.0	16.4	17.4	16.5	16.5	16.7	16.7	16.6	16.0	17.9	17.3	18.7	17.5	18.7	18.6	20.0	20.3	19.4
15	Imports	15.9	15.5	16.0	17.1	16.1	16.7	17.2	17.5	16.7	17.0	15.7	17.1	16.8	16.5	16.5	17.2	17.9	18.7	19.4	18.
16	Government purchases of goods and services	71.1	75.2	78.2	79.5	76.0	81.8	83.3	82.7	83.5	82.8	79.4	74.4	74.1	73.0	75.3	74.6	74.9	75.8	77.1	75.6
17	Federal	48.5	52.1	55.0	55.8	52.9	57.4	58.9	57.7	57.8	58.0	52.9	47.1	45.9	44.4	47.5	45.1	44.7	45.3	46.1	45.3
18	National defense	43.0	46.2	47.0	49.3	46.4	49.8	50.5	49.3	47.6	49.3	44.8	41.5	40.0	38.4	41.2	39.2	38.8	39.2	39.1	39.1
19	Other	5.8	6.2	8.1	6.7	6.7	8.0	8.7	8.7	10.5	9.0	8.4	5.9	6.2	6.2	6.7	6.2	6.2	6.5	7.4	6.9
20	Less Government sales	.3	.3	.2	.2	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4
21	State and local	22.5	23.1	23.2	23.7	23.2	24.4	24.3	24.9	25.7	24.9	26.5	27.3	28.2	28.7	27.7	29.5	30.2	30.5	31.0	30.3

TABLE 8–2.—*Gross national product or expenditure, seasonally adjusted quarterly totals at annual rates, 1946–58*—Continued

[Billions of dollars]

Line		1956					1957					1958				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	410.6	415.0	421.0	430.0	419.2	437.7	442.4	447.8	442.3	442.5	431.0	434.5	444.0	457.1	441.7
2	Personal consumption expenditures	265.6	268.2	270.4	275.6	269.9	279.8	282.9	288.2	288.1	284.8	287.3	290.9	294.4	299.1	233.0
3	Durable goods	38.8	38.2	37.7	39.4	38.5	40.3	40.3	40.9	39.7	40.3	36.9	36.7	37.1	39.8	37.6
4	Nondurable goods	129.7	131.0	131.7	133.3	131.4	135.4	136.8	139.7	139.0	137.7	139.5	141.5	143.1	143.6	141.9
5	Services	97.1	98.9	101.0	102.8	100.0	104.1	105.8	107.6	109.4	106.7	111.0	112.7	114.2	115.7	113.4
6	Gross private domestic investment	67.1	66.9	67.3	68.1	67.4	66.9	68.3	67.9	63.2	66.6	52.4	51.3	54.2	61.3	54.9
7	New construction	35.1	35.7	35.7	35.5	35.5	35.8	36.0	36.2	36.1	36.1	35.5	34.6	35.4	37.3	35.8
8	Residential nonfarm	17.8	18.0	17.6	17.3	17.7	17.1	16.9	17.0	17.1	17.0	17.1	16.9	18.0	19.9	18.0
9	Other	17.3	17.7	18.1	18.2	17.8	18.7	19.1	19.3	19.0	19.0	18.4	17.7	17.4	17.4	17.7
10	Producers' durable equipment	25.8	26.7	27.6	28.6	27.2	28.8	28.6	29.0	27.7	28.5	23.8	22.6	22.2	23.2	22.9
11	Change in business inventories—total	6.2	4.4	4.0	4.0	4.7	2.2	3.6	2.7	−.6	2.0	−6.9	−5.8	−3.4	.8	−3.8
12	Nonfarm only	6.6	5.2	4.4	4.1	5.1	1.9	2.9	1.7	−1.7	1.2	−8.1	−7.0	−4.5	−.1	−4.9
13	Net exports of goods and services	1.4	2.6	3.5	4.3	2.9	6.0	5.1	5.1	3.5	4.9	2.0	1.2	1.6	.2	1.2
14	Exports	21.4	22.6	24.1	24.5	23.1	27.0	26.4	26.6	24.9	26.2	22.2	22.3	23.1	22.7	22.6
15	Imports	20.0	20.0	20.5	20.2	20.2	21.0	21.3	21.5	21.3	21.3	20.2	21.1	21.5	22.5	21.3
16	Government purchases of goods and services	76.6	77.3	79.8	82.0	79.0	84.9	86.1	86.6	87.4	86.2	89.3	91.1	93.8	96.5	92.6
17	Federal	44.8	44.5	46.2	47.5	45.7	49.1	49.7	49.7	49.1	49.4	50.1	51.3	53.1	54.2	52.2
18	National defense	39.1	39.2	41.0	42.1	40.4	43.7	44.9	44.9	43.9	44.3	44.0	44.3	44.5	45.3	44.5
19	Other	6.1	5.7	5.4	5.7	5.7	5.8	5.2	5.3	5.7	5.5	6.6	7.5	8.9	9.4	8.1
20	Less Government sales	.3	.4	.3	.3	.3	.4	.3	.5	.5	.4	.5	.5	.3	.6	.5
21	State and local	31.7	32.8	33.7	34.5	33.2	35.8	36.5	36.9	38.3	36.8	39.2	39.7	40.8	42.2	40.5

Source: Department of Commerce, Office of Business Economics, U.S. Income and Output, 1958, Survey of Current Business, July 1959.

TABLE 8–3.—*Gross national product or expenditure, seasonally adjusted quarterly totals at annual rates, in constant dollars, 1947–58* [1]

[Billions of 1954 dollars]

Line		1947					1948					1949				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	278.4	280.4	282.9	287.2	282.3	286.4	293.3	295.6	297.3	293.1	291.5	290.3	295.6	293.0	292.0
2	Personal consumption expenditures	192.5	196.1	196.9	197.0	195.6	198.1	199.0	199.4	200.6	199.3	199.9	203.6	204.8	209.0	204.0
3	Durable goods	21.8	23.1	23.5	24.7	23.3	24.0	24.8	25.2	24.3	24.6	23.7	26.0	27.1	28.5	26.3
4	Nondurable goods	104.7	106.4	105.8	104.3	105.3	105.3	104.9	104.3	105.8	105.1	105.9	106.4	105.6	107.3	106.3
5	Services	65.9	66.5	67.5	68.0	67.0	68.9	69.3	69.9	70.4	69.6	70.4	71.2	72.1	73.2	71.7
6	Gross private domestic investment	40.6	39.3	39.2	46.4	41.5	47.4	50.7	51.3	49.5	49.8	41.9	35.8	39.8	36.4	38.5
7	New construction	18.4	18.3	20.2	22.3	19.9	22.0	23.1	23.0	22.2	22.7	21.3	21.4	22.5	23.9	22.3
8	Residential nonfarm	8.6	8.2	9.6	11.6	9.6	11.4	12.0	11.6	10.6	11.4	10.1	10.3	11.5	12.8	11.2
9	Other	9.9	10.0	10.5	10.7	10.3	10.7	11.2	11.5	11.6	11.2	11.2	11.1	11.0	11.1	11.1
10	Producers' durable equipment	21.5	21.6	21.6	22.1	21.7	22.8	22.6	22.5	23.3	22.8	21.0	20.4	19.3	18.5	19.8
11	Change in business inventories—total	.6	−.5	−2.5	2.0	−.1	2.7	4.9	5.8	4.1	4.4	−.4	−6.0	−2.0	−6.0	−3.6
12	Nonfarm only	1.4	1.8	−.3	2.9	1.4	1.9	3.1	4.1	3.0	3.0	.4	−4.6	−.8	−5.4	−2.6
13	Net exports of goods and services	8.5	8.7	8.8	6.2	8.0	2.9	1.7	1.4	1.9	2.0	3.4	3.4	2.8	.9	2.6
14	Government purchases of goods and services	36.8	36.3	38.0	37.6	37.2	37.9	42.0	43.5	45.3	42.1	46.3	47.4	48.2	46.8	47.2
15	Federal	19.6	18.7	20.0	19.1	19.4	19.2	22.9	24.1	25.6	22.9	25.6	25.8	25.9	23.8	25.3
16	State and local	17.2	17.6	18.0	18.5	17.8	18.7	19.1	19.4	19.7	19.2	20.7	21.6	22.4	23.0	21.9

TABLE 8–3.—*Gross national product or expenditure, seasonally adjusted quarterly totals at annual rates, in constant dollars, 1947–58* [1]—Continued

[Billions of 1954 dollars]

Line		1950					1951					1952				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	302.7	312.0	325.6	331.6	318.1	334.0	340.0	346.3	346.9	341.8	349.6	349.3	352.6	362.3	353.5
2	Personal consumption expenditures	210.7	214.2	225.6	217.0	216.8	222.3	214.5	217.5	219.8	218.5	220.0	222.7	223.8	230.2	224.2
3	Durable goods	29.0	29.8	37.3	32.2	32.1	33.0	27.8	28.1	27.7	29.2	27.0	28.4	27.0	31.6	28.5
4	Nondurable goods	107.9	108.9	111.9	108.1	109.2	112.0	109.2	110.9	112.7	111.2	113.2	114.1	115.8	116.7	115.0
5	Services	73.8	75.4	76.3	76.7	75.5	77.2	77.6	78.6	79.4	78.2	79.8	80.2	81.0	81.9	80.8
6	Gross private domestic investment	46.2	53.8	56.5	66.3	55.9	59.1	62.7	57.7	51.9	57.7	52.7	46.0	49.5	53.2	50.4
7	New construction	25.3	27.3	28.3	28.0	27.4	27.6	26.2	25.6	25.3	26.0	25.7	25.8	25.7	26.5	26.0
8	Residential nonfarm	14.0	15.5	16.5	15.4	15.5	14.8	12.9	12.0	12.1	12.9	12.4	12.6	12.8	13.4	12.8
9	Other	11.3	11.8	11.8	12.6	11.9	12.8	13.4	13.5	13.2	13.2	13.3	13.2	13.0	13.1	13.2
10	Producers' durable equipment	18.2	21.1	23.0	22.8	21.3	21.5	22.0	22.3	22.2	22.0	22.5	22.9	20.0	21.8	21.8
11	Change in business inventories—total	2.7	5.4	5.2	15.5	7.2	10.0	14.5	9.8	4.5	9.7	4.6	−2.7	3.8	4.9	2.6
12	Nonfarm only	2.4	4.8	4.1	14.5	6.5	9.2	13.7	9.2	3.9	9.0	4.0	−3.3	3.3	4.7	2.2
13	Net exports of goods and services	1.1	.6	−.7	.0	.2	.0	1.8	3.6	3.6	2.2	3.5	2.8	−.2	−1.1	1.2
14	Government purchases of goods and services	44.6	43.5	44.2	48.3	45.1	52.5	61.1	67.6	71.6	63.3	73.4	77.7	79.5	80.0	77.7
15	Federal	21.1	20.0	20.7	24.7	21.6	28.8	36.9	43.3	47.4	39.3	49.1	53.2	55.2	55.3	53.3
16	State and local	23.6	23.5	23.5	23.6	23.5	23.8	24.1	24.2	24.1	24.1	24.3	24.5	24.4	24.7	24.5

See footnote at end of table, p. 283.

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TABLE 8–3.—*Gross national product or expenditure, seasonally adjusted quarterly totals at annual rates, in constant dollars, 1947–58* [1]

[Billions of 1954 dollars]

Line		1953					1954					1955				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	368.9	373.2	370.2	363.9	369.0	360.4	359.5	362.1	370.1	363.1	382.2	389.5	397.5	401.1	392.7
2	Personal consumption expenditures	234.0	236.2	236.0	234.1	235.1	233.4	236.4	239.0	243.2	238.0	248.7	253.7	259.9	261.8	256.0
3	Durable goods	33.0	33.5	33.7	32.1	33.1	31.2	32.2	32.4	33.9	32.4	37.9	39.0	41.5	39.9	39.6
4	Nondurable goods	118.1	119.2	118.1	117.7	118.3	117.4	118.6	119.8	121.5	119.3	121.6	124.3	126.7	128.9	125.4
5	Services	82.8	83.6	84.1	84.3	83.7	84.9	85.6	86.8	87.9	86.3	89.2	90.4	91.7	92.9	91.0
6	Gross private domestic investment	52.8	53.0	51.0	45.4	50.6	46.9	47.0	48.9	52.2	48.9	58.5	62.3	63.9	65.2	62.5
7	New construction	27.1	27.6	27.6	27.8	27.6	27.9	28.9	30.2	31.5	29.7	33.5	34.0	34.2	33.7	33.9
8	Residential nonfarm	13.6	13.8	13.5	13.5	13.6	13.7	14.8	15.8	16.9	15.4	18.3	18.5	18.2	17.6	18.2
9	Other	13.5	13.8	14.1	14.3	14.0	14.2	14.1	14.4	14.6	14.3	15.2	15.5	16.0	16.1	15.7
10	Producers' durable equipment	23.1	22.2	22.6	22.2	22.5	21.5	20.9	20.7	19.9	20.8	20.3	21.7	23.7	24.4	22.5
11	Change in business inventories—total	2.6	3.2	.7	−4.6	.5	−2.5	−2.9	−2.0	.8	−1.6	4.7	6.5	6.0	7.1	6.1
12	Nonfarm only	3.2	4.1	1.5	−4.3	1.1	−2.6	−3.4	−2.7	.1	−2.1	3.9	5.8	5.4	6.6	5.4
13	Net exports of goods and services	−.8	−1.1	−1.2	−.5	−.9	−.1	.9	.6	2.4	1.0	1.5	.4	1.2	.7	.9
14	Government purchases of goods and services	83.0	85.1	84.4	84.9	84.3	80.1	75.2	73.6	72.2	75.3	73.4	73.1	72.6	73.5	73.2
15	Federal	57.9	60.0	58.8	58.7	58.8	53.1	47.7	45.5	43.9	47.5	44.3	43.4	42.9	43.6	43.5
16	State and local	25.1	25.1	25.6	27.2	25.5	27.0	27.5	28.1	28.3	27.7	29.2	29.7	29.7	29.9	29.7

Line		1956					1957					1958				
		I	II	III	IV	Year		II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	398.8	398.9	400.2	405.5	400.9	408.7	410.1	410.6	403.8	408.3	391.0	393.1	400.9	410.8	399.0
2	Personal consumption expenditures	263.2	263.7	263.4	266.9	264.3	268.7	270.0	273.0	271.6	270.8	268.7	271.1	275.0	278.4	273.3
3	Durable goods	38.9	38.0	37.1	38.2	38.0	38.8	38.4	38.9	37.7	38.5	35.2	35.0	35.3	37.5	35.7
4	Nondurable goods	130.2	130.3	129.7	130.9	130.3	131.8	132.3	133.8	132.6	132.6	131.3	132.7	135.3	135.6	133.7
5	Services	94.2	95.3	96.7	97.8	96.0	98.2	99.3	100.3	101.3	99.8	102.2	103.4	104.4	105.3	103.8
6	Gross private domestic investment	62.8	61.5	61.4	61.3	61.7	59.6	60.3	59.2	54.9	58.5	45.0	44.2	46.6	53.0	47.3
7	New construction	32.7	32.6	32.3	31.8	32.3	32.0	31.8	31.9	31.7	31.9	31.3	30.5	31.2	32.6	31.5
8	Residential nonfarm	16.6	16.5	16.0	15.7	16.2	15.5	15.3	15.3	15.4	15.4	15.4	15.3	16.3	17.8	16.2
9	Other	16.1	16.1	16.3	16.0	16.1	16.5	16.5	16.6	16.3	16.5	15.9	15.1	15.0	14.8	15.2
10	Producers' durable equipment	24.3	24.7	25.2	25.5	25.0	25.2	24.8	24.9	23.6	24.6	20.1	19.0	18.6	19.3	19.3
11	Change in business inventories—total	5.8	4.1	3.9	4.0	4.5	2.3	3.7	2.5	−.5	2.0	−6.4	−5.3	−3.2	1.1	−3.5
12	Nonfarm only	6.4	5.0	4.3	3.9	4.9	1.6	2.6	1.4	−1.4	1.1	−7.2	−6.1	−4.2	0	−4.4
13	Net exports of goods and services	.9	2.2	3.1	3.8	2.5	4.9	4.2	3.9	2.3	3.8	.8	.1	.5	−1.4	0
14	Government purchases of goods and services	71.8	71.5	72.1	73.5	72.3	75.4	75.5	74.5	75.0	75.1	76.5	77.7	78.9	80.8	78.4
15	Federal	41.8	40.9	41.5	42.5	41.7	43.5	43.4	42.4	41.9	42.8	42.8	43.9	44.3	45.2	44.1
16	State and local	30.0	30.6	30.7	31.0	30.6	31.9	32.1	32.1	33.1	32.3	33.7	33.8	34.6	35.5	34.4

[1] Implicit price deflators are shown in table 8–6.

Source: Department of Commerce, Office of Business Economics, U.S. Income and Output, 1958, Survey of Current Business, July 1959.

TABLE 8–4.—*Defense obligations for hard goods and new and unfilled orders and inventories in durable goods manufacturing industries, quarterly, 1946–59*

[Billions of dollars]

	Defense obligations for hard goods [1]	Durable goods industries		
		New orders received [2]	Unfilled orders [3]	Inventories [4]
1946:				
1st	(n.a.)	16.0	22.6	9.3
2d	(n.a.)	18.5	27.0	10.1
3d	(n.a.)	18.3	29.4	11.1
4th	.5	18.5	29.5	12.0
1947:				
1st	.4	18.3	29.1	13.1
2d	1.4	18.0	27.0	13.9
3d	.4	18.7	26.2	14.1
4th	.4	21.4	25.5	14.2
Total	2.6			
1948:				
1st	.8	21.7	25.2	14.5
2d	1.2	24.1	25.1	14.8
3d	.7	23.6	25.9	15.1
4th	1.1	22.4	24.2	15.7
Total	3.8			
1949:				
1st	.7	20.1	21.9	16.3
2d	1.3	18.2	18.4	15.5
3d	.6	20.2	17.6	14.3
4th	.6	20.6	18.4	14.0
Total	3.2			
1950:				
1st	.6	23.3	20.0	14.2
2d	1.3	27.2	21.7	14.7
3d	4.2	38.6	32.1	14.9
4th	4.5	34.6	36.6	16.8
Total	10.6			
1951:				
1st	8.9	45.1	50.2	18.3
2d	8.5	39.3	57.3	20.2
3d	6.8	33.8	61.9	21.6
4th	6.3	33.9	64.1	22.8
Total	30.5			
1952:				
1st	7.9	35.3	67.8	23.9
2d	12.0	35.7	71.4	23.8
3d	9.3	34.6	75.1	23.4
4th	4.0	34.7	73.2	24.4
Total	33.2			
1953:				
1st	4.6	37.9	73.6	25.1
2d	3.2	37.0	71.2	26.1
3d	.8	30.2	64.9	26.2
4th	.4	27.3	57.1	26.3
Total	9.5			
1954:				
1st	1.2	29.1	52.1	25.6
2d	3.3	29.5	46.9	24.6
3d	2.3	30.2	45.0	23.4
4th	4.5	33.1	44.1	24.1
Total	11.3			

See footnotes at end of table.

TABLE 8–4.—*Defense obligations for hard goods and new and unfilled orders and inventories in durable goods manufacturing industries, quarterly, 1946–59*—Con.

[Billions of dollars]

	Defense obligations for hard goods [1]	Durable goods industries		
		New orders received [2]	Unfilled orders [3]	Inventories [4]
1955:				
1st	1.7	39.0	46.1	24.4
2d	2.4	40.8	46.6	24.8
3d	.7	41.5	49.7	25.1
4th	3.1	44.9	53.4	26.6
Total	7.9			
1956:				
1st	4.5	43.0	55.6	28.2
2d	5.9	44.3	57.3	29.3
3d	3.9	41.6	60.5	29.2
4th	4.2	44.3	61.0	30.6
Total	18.5			
1957:				
1st	3.7	42.7	60.3	31.5
2d	3.4	41.0	57.2	31.7
3d	2.2	37.2	53.2	31.3
4th	4.0	36.1	48.1	31.1
Total	13.3			
1958:				
1st	4.8	33.0	45.1	30.2
2d	6.4	35.1	43.7	28.7
3d	2.6	35.8	43.6	27.7
4th	5.2	40.6	44.0	27.9
Total	19.0			
1959:				
1st	4.4	45.1	47.2	29.1
2d	5.3	47.9	47.0	30.2
3d		41.8	47.9	29.6

[1] For the 4th quarter of 1946 through the 2d quarter of 1950, includes only obligations for major procurement. Thereafter, hard goods orders by the Department of Defense includes (1) major items of equipment such as aircraft, missiles, ships, tanks, vehicles, ammunition, weapons, artillery, electronics, communications, etc.; (2) maintenance spares and spare parts for such equipment; and (3) organizational equipment and supplies. It excludes subsistence, petroleum products, and clothing.

[2] Not adjusted for seasonal variation.

[3] Unfilled orders at end of quarter not adjusted for seasonal variation.

[4] Book value of inventories at end of quarter. Not adjusted for seasonal variation.

Source: Economic and Fiscal Analysis Division, Office of Assistant Secretary of Defense (Comptroller), Monthly Report on the Status of Funds by Budget Category, and Department of Commerce, Office of Business Economics, "Survey of Current Business."

TABLE 8–5.—*Government receipts and expenditures, seasonally adjusted quarterly totals at annual rates, 1946–58* [1]

[Billions of dollars]

Line		1946					1947					1948				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Federal Government receipts	35.1	37.8	41.0	42.9	39.2	43.5	42.8	42.5	44.5	43.3	45.0	43.2	42.8	42.6	43.4
2	Personal tax and nontax receipts	16.2	17.0	17.5	17.9	17.2	19.3	19.4	19.7	20.2	19.6	21.1	18.7	18.0	18.2	19.0
3	Corporate profits tax accruals	5.7	7.4	10.0	11.6	8.6	10.8	10.3	10.3	11.3	10.7	11.6	12.1	11.9	11.6	11.8
4	Indirect business tax and nontax accruals	7.5	7.8	8.1	8.2	7.9	7.8	7.6	7.7	8.3	7.9	7.8	8.1	8.3	8.2	8.1
5	Contributions for social insurance	5.7	5.6	5.4	5.3	5.5	5.5	5.5	4.7	4.7	5.1	4.5	4.4	4.5	4.6	4.5
6	Federal Government expenditures	44.4	37.1	33.7	32.8	37.0	30.6	29.6	33.7	30.6	31.1	31.1	34.7	37.0	38.8	35.4
7	Purchases of goods and services	25.9	20.2	18.1	18.1	20.6	15.9	15.1	15.9	15.7	15.6	15.9	19.0	20.3	22.1	19.3
8	Transfer payments	10.9	9.8	9.0	8.4	9.5	8.3	7.9	11.4	8.4	9.0	8.6	9.0	9.7	9.5	9.2
9	To persons	10.5	9.6	8.8	8.0	9.2	8.3	7.8	11.1	8.2	8.9	8.0	7.8	7.4	7.4	7.7
10	Foreign (net)	.5	.2	.3	.4	.3	.0	.1	.2	.2	.1	.6	1.2	2.3	2.2	1.6
11	Grants-in-aid to State and local governments	1.0	.9	1.2	1.4	1.1	1.5	1.8	1.8	1.8	1.7	1.8	1.9	2.1	2.1	2.0
12	Net interest paid	4.1	4.2	4.2	4.2	4.2	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.3	4.3	4.3
13	Subsidies less current surplus of government enterprises	2.5	2.0	1.2	.8	1.6	.7	.6	.5	.5	.6	.6	.6	.7	.7	.6
14	Surplus or deficit (−) on income and product account	−9.3	.7	7.3	10.1	2.2	12.9	13.2	8.7	13.9	12.2	13.9	8.5	5.8	3.8	8.0
15	State and local government receipts	12.2	12.6	13.4	13.9	13.0	14.6	15.3	15.8	16.3	15.5	17.0	17.7	18.1	18.4	17.
16	Personal tax and nontax receipts	1.5	1.5	1.6	1.6	1.6	1.7	1.8	1.9	1.9	1.8	2.1	2.1	2.2	2.2	2.1
17	Corporate profits tax accruals	.3	.4	.5	.6	.5	.6	.6	.6	.6	.6	.7	.7	.7	.7	.7
18	Indirect business tax and nontax accruals	9.0	9.2	9.6	9.8	9.4	10.1	10.6	11.0	11.4	10.8	11.8	12.2	12.5	12.7	12.3
19	Contributions for social insurance	.4	.5	.5	.5	.5	.6	.6	.6	.6	.6	.7	.7	.7	.7	.7
20	Federal grants-in-aid	1.0	.9	1.2	1.4	1.1	1.5	1.8	1.8	1.8	1.7	1.8	1.9	2.1	2.1	2.0

21	State and local government expenditures	10.0	10.6	11.6	12.3	11.1	13.2	13.9	14.9	15.6	14.4	16.7	17.2	18.0	18.2	17.6
22	Purchases of goods and services	8.9	9.5	10.2	11.0	9.9	11.9	12.4	12.9	13.7	12.7	14.2	14.7	15.6	16.1	15.2
23	Transfer payments to persons	1.5	1.5	1.8	1.8	1.6	1.8	2.1	2.6	2.5	2.2	3.0	3.0	2.9	2.6	2.9
24	Net interest paid	.3	.3	.3	.3	.3	.3	.3	.2	.2	.3	.3	.3	.3	.3	.3
25	Less current surplus of government enterprises	.8	.7	.7	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8	.8
26	Surplus or deficit (−) on income and product account	2.2	2.0	1.8	1.6	1.9	1.3	1.4	.9	.7	1.1	.4	.4	.2	.3	.3

TABLE 8–5.—*Government receipts and expenditures, seasonally adjusted quarterly totals at annual rates, 1946–58* [1]—Continued

[Billions of dollars]

Line		1949					1950					1951				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Federal Government receipts	39.7	38.5	39.4	38.7	39.1	43.1	47.3	53.6	56.9	50.2	67.7	63.8	61.7	64.6	64.5
2	Personal tax and nontax receipts	16.3	16.2	16.2	16.1	16.2	16.7	17.3	17.9	20.8	18.2	25.5	25.9	26.2	27.5	26.3
3	Corporate profits tax accruals	10.5	9.2	9.8	9.6	9.8	12.6	15.5	19.6	20.7	17.1	25.1	21.6	19.3	20.3	21.6
4	Indirect business tax and nontax accruals	7.9	8.2	8.5	8.1	8.2	8.0	8.8	10.2	9.1	9.0	10.1	9.2	9.2	9.7	9.5
5	Contributions for social insurance	5.0	4.9	4.9	4.9	4.9	5.7	5.7	5.9	6.3	5.9	7.1	7.1	7.0	7.2	7.1
6	Federal Government expenditures	41.1	42.4	42.2	40.8	41.6	47.0	39.0	36.6	41.6	41.0	47.5	55.7	62.0	67.0	58.0
7	Purchases of goods and services	22.5	22.3	22.6	21.6	22.2	19.1	17.2	18.4	22.7	19.3	28.7	36.1	42.9	47.4	38.8
8	Transfer payments	11.5	12.9	12.0	11.6	12.0	20.1	13.7	10.2	10.7	13.7	10.4	11.0	10.8	11.1	10.8
9	To persons	8.5	8.9	9.0	8.7	8.8	17.2	10.3	7.8	8.2	10.9	8.3	8.7	8.8	8.8	8.7
10	Foreign (net)	3.0	4.0	3.1	2.9	3.2	2.9	3.4	2.4	2.5	2.8	2.1	2.3	2.0	2.3	2.1
11	Grants-in-aid to State and local governments	2.1	2.1	2.4	2.3	2.2	2.4	2.5	2.2	2.3	2.3	2.5	2.6	2.2	2.6	2.5
12	Net interest paid	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.6	4.5	4.6	4.7	4.8	4.8	4.7p
13	Subsidies less current surplus of government enterprises	.6	.7	.8	.9	.7	1.0	1.1	1.2	1.3	1.2	1.3	1.3	1.3	1.2	1.3
14	Surplus or deficit (−) on income and product account	−1.4	−3.9	−2.8	−2.1	−2.5	−3.8	8.3	17.0	15.3	9.2	20.2	8.1	−.3	−2.4	6.4
15	State and local government receipts	19.0	19.2	19.9	20.1	19.6	20.6	21.3	21.8	22.0	21.4	23.2	23.3	23.3	24.1	23.5
16	Personal tax and nontax receipts	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.7	2.7	2.6	2.9	2.9	3.0	3.0	2.9
17	Corporate profits tax accruals	.6	.6	.6	.6	.6	.6	.7	.9	.9	.8	1.0	.9	.8	.8	.9
18	Indirect business tax and nontax accruals	13.0	13.3	13.6	13.9	13.5	14.2	14.5	15.0	15.1	14.7	15.8	15.8	16.2	16.6	16.1
19	Contributions for social insurance	.8	.8	.8	.8	.8	.9	.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1
20	Federal grants-in-aid	2.1	2.1	2.4	2.3	2.2	2.4	2.5	2.2	2.3	2.3	2.5	2.6	2.2	2.6	2.5

21	State and local government expenditures	19.1	19.7	20.6	21.2	20.2	22.1	22.6	22.4	22.7	22.4	23.1	23.7	24.0	24.2	23.8
22	Purchases of goods and services	17.0	17.6	18.3	18.7	17.9	19.3	19.3	19.8	20.3	19.7	20.9	21.6	21.9	22.1	21.7
23	Transfer payments to persons	2.7	2.8	2.9	3.1	2.9	3.4	3.9	3.3	3.1	3.4	3.0	2.9	2.9	2.9	2.9
24	Net interest paid	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
25	Less current surplus of government enterprises	.9	.9	.9	.9	.9	.9	.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1
26	Surplus or deficit (−) on income and product account	−.1	−.5	−.7	−1.0	−.6	−1.4	−1.3	−.6	−.7	−1.0	.1	−.3	−.7	−.1	−.3

TABLE 8–5.—*Government receipts and expenditures, seasonally adjusted quarterly totals at annual rates, 1946–58*—Continued

[Billions of dollars]

Line		1952					1953					1954					1955				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Federal Government receipts	67.4	66.8	67.0	69.6	67.7	71.6	72.3	71.1	66.3	70.3	63.2	63.3	63.1	65.5	63.8	69.3	71.7	74.3	75.7	72.8
2	Personal tax and nontax receipts	30.8	30.8	31.3	31.7	31.2	32.1	32.5	32.5	32.3	32.4	29.1	29.0	29.1	29.4	29.2	30.6	31.3	31.9	32.3	31.5
3	Corporate profits tax accruals	19.2	18.0	17 9	19.4	18.6	20.7	21.0	20.0	15.9	19.4	15.7	16.1	16.3	17.7	16.5	19.3	19.9	21.7	22.6	20.9
4	Indirect business tax and nontax accruals	10.0	10.6	10.5	11.0	10.5	11.3	11.3	11.3	10.9	11.2	10.3	10.1	9.7	10.1	10.1	10.5	11.3	11.2	11.2	11.0
5	Contributions for social insurance	7.4	7.3	7.3	7.5	7.4	7.5	7.5	7.3	7.2	7.4	8.1	8.0	8.1	8.2	8.1	8.9	9.2	9.6	9.6	9.3
6	Federal Government expenditures	66.5	70.9	74.3	74.7	71.6	76.7	79.4	76.8	78.1	77.7	73.8	68.7	68.2	67.8	69.6	68.5	68.1	68.8	70.1	68.9
7	Purchases of goods and services	48.5	52.1	55.0	55.8	52.9	57.4	58.9	57.7	57.8	58.0	52.9	47.1	45.9	44.4	47.5	45.1	44.7	45.3	46.1	45.3
8	Transfer payments	9.6	10.4	11.0	10.5	10.4	11.4	11.4	10.7	11.6	11.3	12.2	12.7	13.2	14.0	13.0	14.2	14.0	13.7	14.1	14.0
9	To persons	8.5	8.5	9.2	9.3	8.9	9.6	9.5	9.5	10.2	9.7	10.8	11.6	11.8	12.5	11.6	12.2	12.5	12.5	12.7	12.5
10	Foreign (net)	1.1	1.9	1.7	1.2	1.5	1.8	1.9	1.2	1.4	1.6	1.4	1.2	1.4	1.5	1.4	1.9	1.5	1.2	1.4	1.5
11	Grants-in-aid to State and local governments	2.5	2.6	2.7	2.8	2.6	2.2	3.4	2.7	2.9	2.8	2.9	2.8	2.9	2.9	2.9	2.9	3.0	3.2	3.1	3.0
12	Net interest paid	4.8	4.7	4.7	4.7	4.7	4.8	4.8	4.9	4.9	4.8	5.0	5.0	5.0	5.0	5.0	4.9	4.9	4.9	5.0	4.9
13	Subsidies less current surplus of government enterprises	1.1	1.0	1.0	.9	1.0	.9	.8	.8	.9	.8	.9	1.0	1.2	1.5	1.2	1.4	1.6	1.7	1.8	1.6
14	Surplus or deficit (−) on income and product account	1.0	−4.2	−7.2	−5.1	−3.9	−5.1	−7.0	−5.6	−11.8	−7.4	−10.6	−5.4	−5.1	−2.3	−5.8	.8	3.5	5.5	5.6	3.8
15	State and local government receipts	24.6	25.3	25.7	26.4	25.5	26.3	27.8	27.5	27.9	27.4	28.5	29.0	29.3	29.7	29.1	30.5	31.2	32.3	33.0	31.7
16	Personal tax and nontax receipts	3.1	3.2	3.2	3.3	3.2	3.3	3.4	3.5	3.5	3.4	3.7	3.8	3.8	3.9	3.8	4.1	4.2	4.3	4.3	4.2
17	Corporate profits tax accruals	.8	.8	.8	.9	.8	.9	.9	.8	.7	.8	.7	.7	.8	.8	.8	.9	.9	1.0	1.0	1.0
18	Indirect business tax and nontax accruals	17.0	17.5	17.8	18.2	17.6	18.5	18.8	19.2	19.5	19.0	19.7	20.0	20.2	20.4	20.1	20.9	21.5	22.2	22.8	21.8
19	Contributions for social insurance	1.2	1.2	1.3	1.3	1.2	1.3	1.3	1.4	1.4	1.4	1.5	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7
20	Federal grants-in-aid	2.5	2.6	2.7	2.8	2.6	2.2	3.4	2.7	2.9	2.8	2.9	2.8	2.9	2.9	2.9	2.9	3.0	3.2	3.1	3.0

21	State and local government expenditures	24.7	25.4	25.5	26.0	25.4	26.7	26.7	27.3	27.9	27.1	28.8	29.6	30.6	31.1	30.1	32.0	32.9	32.9	33.4	32.7
22	Purchases of goods and services	22.5	23.1	23.2	23.7	23.2	24.4	24.3	24.9	25.7	24.9	26.5	27.3	28.2	28.7	27.7	29.5	30.2	30.5	31.0	30.3
23	Transfer payments to persons	3.0	3.2	3.1	3.2	3.1	3.1	3.2	3.3	3.2	3.2	3.3	3.3	3.4	3.4	3.4	3.5	3.6	3.5	3.5	3.5
24	Net interest paid	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5
25	Less current surplus of government enterprises	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.5	1.4	1.5	1.6	1.6	1.7	1.6
26	Surplus or deficit (−) on income and product account	−.1	−.1	.2	.4	.1	−.4	1.2	.3	.0	.3	−.3	−.7	−1.3	−1.4	−.9	−1.5	−1.4	−.6	−.4	−1.0

TABLE 8–5.—*Government receipts and expenditures, seasonally adjusted quarterly totals at annual rates, 1946–58*—Continued

[Billions of dollars]

Line		1956					1957					1958				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Federal Government receipts	76.5	77.2	76.9	79.7	77.5	82.8	82.2	82.7	79.9	81.9	75.2	76.1	79.3	83.0	78.4
2	Personal tax and nontax receipts	34.5	35.1	35.3	35.8	35.2	37.1	37.4	37.6	37.4	37.4	36.2	36.3	37.1	37.4	36.7
3	Corporate profits tax accruals	20.6	20.4	19.3	20.5	20.2	21.4	20.2	20.4	18.3	20.1	14.9	15.7	17.9	20.8	17.3
4	Indirect business tax and nontax accruals	11.1	11.3	11.6	12.4	11.6	12.1	12.5	12.3	12.0	12.2	11.8	12.0	11.7	12.1	11.9
5	Contributions for social insurance	10.2	10.4	10.7	10.9	10.6	12.1	12.2	12.4	12.2	12.2	12.3	12.2	12.6	12.7	12.5
6	Federal Government expenditures	69.8	70.5	72.6	74.6	71.8	78.0	80.1	79.7	80.5	79.5	83.2	87.0	89.3	90.8	87.4
7	Purchases of goods and services	44.8	44.5	46.2	47.5	45.7	49.1	49.7	49.7	49.1	49.4	50.1	51.3	53.1	54.2	52.2
8	Transfer payments	14.3	15.0	15.0	15.5	14.9	16.0	17.8	17.2	18.6	17.4	19.5	21.6	22.1	21.9	21.2
9	To persons	13.0	13.5	13.7	13.9	13.5	14.6	16.0	16.0	17.2	15.9	18.3	20.3	20.9	20.4	19.9
10	Foreign (net)	1.3	1.6	1.3	1.6	1.5	1.4	1.8	1.2	1.4	1.5	1.2	1.3	1.2	1.5	1.3
11	Grants-in-aid to State and local governments	3.1	3.1	3.4	3.4	3.3	4.1	3.8	4.2	4.3	4.1	4.8	5.3	5.5	6.0	5.4
12	Net interest paid	5.0	5.2	5.3	5.4	5.2	5.5	5.7	5.7	5.6	5.6	5.7	5.6	5.5	5.5	5.5
13	Subsidies less current surplus of government enterprises	2.5	2.7	2.7	2.8	2.7	3.2	3.1	3.0	2.9	3.0	3.1	3.1	3.2	3.2	3.1
14	Surplus or deficit (−) on income and product account	6.7	6.7	4.3	5.1	5.7	4.8	2.2	3.0	−.6	2.4	−8.0	−10.9	−10.1	−7.8	−9.1
15	State and local government receipts	34.1	34.8	35.7	36.2	35.2	37.8	38.1	39.2	39.5	38.7	40.3	41.4	42.4	43.7	41.9
16	Personal tax and nontax receipts	4.7	4.8	4.9	5.0	4.8	5.2	5.3	5.4	5.5	5.4	5.7	5.8	5.9	6.0	5.8
17	Corporate profits tax accruals	1.1	1.0	1.0	1.0	1.0	1.1	1.0	1.0	.9	1.0	.7	.8	.9	1.0	.9
18	Indirect business tax and nontax accruals	23.4	23.9	24.3	24.7	24.1	25.2	25.7	26.2	26.4	25.9	26.5	26.9	27.4	27.9	27.2
19	Contributions for social insurance	1.9	2.0	2.1	2.1	2.0	2.2	2.3	2.3	2.4	2.3	2.5	2.6	2.7	2.8	2.7
20	Federal grants-in-aid	3.1	3.1	3.4	3.4	3.3	4.1	3.8	4.2	4.3	4.1	4.8	5.3	5.5	6.0	5.4

21	State and local government expenditures	34.2	35.3	36.1	37.1	35.7	38.5	39.2	39.7	41.2	39.6	42.3	42.8	43.8	45.4	43.5
22	Purchases of goods and services	31.7	32.8	33.7	34.5	33.2	35.8	36.5	36.9	38.3	36.8	39.2	39.7	40.8	42.2	40.5
23	Transfer payments to persons	3.7	3.7	3.7	3.8	3.7	4.0	4.0	4.2	4.3	4.1	4.5	4.5	4.5	4.6	4.5
24	Net interest paid	.5	.5	.5	.5	.5	.5	.5	.6	.6	.6	.6	.6	.6	.7	.6
25	Less current surplus of government enterprises	1.7	1.7	1.8	1.8	1.7	1.8	1.9	1.9	2.0	1.9	2.0	2.1	2.1	2.2	2.1
26	Surplus or deficit (−) on income and product account	−.1	−.5	−.4	−.8	−.5	−.7	−1.1	−.6	−1.7	−1.0	−1.9	−1.4	−1.4	−1.7	−1.6

Source: Department of Commerce, Office of Business Economics, U.S. Income and Output, 1958, Survey of Current Business, July 1959.

TABLE 8–6.—*Implicit price deflators for seasonally adjusted quarterly gross national product or expenditure, 1947–58*

[Index numbers, 1954=100]

Line		1947					1948					1949				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	81.2	82.0	83.3	85.3	83.0	87.1	87.9	89.3	89.5	88.5	89.1	88.3	87.6	87.7	88.2
2	Personal consumption expenditures	82.8	83.6	84.9	86.9	84.6	88.2	89.2	90.4	90.2	89.5	89.5	88.9	88.1	88.1	88.7
3	Durable goods	87.7	87.9	88.6	89.4	88.4	90.1	91.0	93.6	94.9	92.4	94.6	94.3	92.7	92.5	93.5
4	Nondurable goods	86.6	87.4	89.0	91.8	88.7	93.1	94.1	94.9	93.8	94.0	92.4	91.2	90.2	89.7	90.9
5	Services	75.2	76.0	77.3	78.5	76.8	79.9	81.2	82.4	83.1	81.7	83.5	83.5	83.4	84.0	83.6
6	Gross private domestic investment															
7	New construction	72.0	73.2	77.6	80.3	76.6	83.3	85.4	87.3	87.3	85.9	86.5	85.0	82.5	83.3	84.3
8	Residential nonfarm	72.9	77.0	79.2	82.8	78.4	85.4	87.9	90.4	90.9	88.6	89.2	86.7	83.5	84.9	85.9
9	Other	71.2	74.2	76.1	77.6	74.8	81.2	82.7	84.2	84.0	83.1	84.1	83.5	81.4	81.4	82.6
10	Producers' durable equipment	74.9	76.2	77.5	78.6	76.8	80.1	81.1	84.7	86.6	83.1	87.2	87.6	86.8	86.3	87.0
11	Change in business inventories															
12	Net exports of goods and services															
13	Government purchases of goods and services	75.7	75.8	75.9	78.1	76.4	79.7	80.7	82.8	84.7	82.0	85.2	84.2	84.8	86.3	85.1
14	Federal	81.1	80.9	79.5	81.9	80.8	83.1	83.4	84.6	86.5	84.4	87.7	86.5	87.2	90.7	88.0
15	State and local	69.9	69.3	72.3	74.6	71.5	76.3	77.6	80.7	82.4	79.3	82.1	81.3	81.9	81.5	81.7

Line		1950					1951					1952				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	87.8	87.9	90.1	91.8	89.5	95.1	96.0	96.4	97.5	96.2	97.6	97.7	98.4	99.0	98.1
2	Personal consumption expenditures	88.1	88.7	90.6	92.2	89.9	95.2	95.8	96.0	97.1	96.0	97.5	97.8	98.1	98.7	98.0
3	Durable goods	92.5	93.5	95.0	96.9	94.6	100.0	100.7	101.5	102.3	101.1	102.7	102.6	101.9	101.7	102.2
4	Nondurable goods	89.2	89.7	92.3	94.3	91.4	98.4	99.1	98.8	100.0	99.0	100.1	99.8	100.1	100.5	100.1
5	Services	84.8	85.2	86.1	87.3	85.9	88.4	89.4	90.1	91.1	89.8	92.2	93.1	94.0	95.0	93.6
6	Gross private domestic investment															
7	New construction	85.4	86.7	90.4	90.5	88.3	93.2	95.4	95.7	97.0	95.3	98.0	98.5	98.6	98.4	98.4
8	Residential nonfarm	87.0	89.5	92.9	93.5	90.9	95.5	97.2	97.9	99.7	97.5	100.4	100.3	100.5	100.1	100.3
9	Other	83.4	83.0	86.9	86.8	85.1	90.5	93.6	93.8	94.5	93.1	95.8	96.8	96.8	96.6	96.5
10	Producers' durable equipment	86.3	87.1	89.3	92.6	89.0	96.2	96.9	96.9	97.1	96.8	97.5	97.9	97.2	97.4	97.5
11	Change in business inventories															
12	Net exports of goods and services															
13	Government purchases of goods and services	85.9	84.0	86.4	89.1	86.5	94.3	94.5	96.0	97.2	95.5	96.8	96.6	98.2	99.3	97.8
14	Federal	90.5	86.2	89.1	91.9	89.6	99.3	97.3	98.6	99.5	98.7	98.8	97.8	99.5	100.8	99.2
15	State and local	81.9	82.2	84.0	86.2	83.7	88.1	89.7	90.9	92.1	90.2	93.1	94.3	95.8	96.1	94.8

TABLE 8–6.—*Implicit price deflators for seasonally adjusted quarterly gross national product or expenditures, 1947–58*—Continued

[Index numbers, 1954=100]

Line		1953					1954					1955				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	98.8	98.8	99.2	99.2	99.0	99.9	99.8	100.0	100.2	100.0	100.5	100.9	101.5	101.9	101.2
2	Personal consumption expenditures	98.7	98.7	99.2	99.2	99.0	100.1	100.0	99.9	100.0	100.0	100.3	100.2	100.4	100.6	100.4
3	Durable goods	100.5	99.8	99.8	97.4	99.4	100.1	100.1	99.7	100.1	100.0	101.0	100.1	99.8	99.6	100.1
4	Nondurable goods	100.0	99.5	99.7	99.7	99.7	100.5	100.2	99.8	99.6	100.0	99.6	99.5	99.5	99.4	99.5
5	Services	96.2	7.2	98.3	99.3	97.7	99.6	99.8	100.1	100.5	100.0	100.8	101.3	101.8	102.6	101.7
6	Gross private domestic investment															
7	New construction	99.1	100.6	100.4	100.2	100.1	99.7	99.9	100.0	100.3	100.0	101.1	102.7	103.6	105.0	103.1
8	Residential nonfarm	100.7	101.3	101.8	101.3	101.3	100.5	99.3	99.9	100.3	100.0	101.1	102.4	103.8	104.9	103.0
9	Other	97.6	99.8	99.1	99.1	98.9	99.0	100.6	100.1	100.3	100.0	101.1	103.0	103.5	105.1	103.2
10	Producers' durable equipment	97.8	99.3	100.1	99.0	99.0	99.8	100.0	100.1	100.1	100.0	101.1	101.8	102.7	104.4	102.6
11	Change in business inventories															
12	Net exports of goods and services															
13	Government purchases of goods and services	98.6	97.9	97.9	98.4	98.3	99.1	98.9	100.6	101.2	100.0	101.5	102.4	104.4	104.9	103.3
14	Federal	99.3	98.3	98.2	98.7	98.6	99.5	98.7	100.8	101.1	100.0	101.9	103.1	105.7	105.8	104.1
15	State and local	97.2	97.0	97.5	98.1	97.5	98.5	99.5	100.5	101.4	100.0	101:1	101.4	102.7	103.7	102.2

Line		1956					1957					1958				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Gross national product	103.0	104.0	105.2	106.0	104.6	107.1	107.9	109.1	109.5	108.4	110.2	110.5	110.7	111.3	110.7
2	Personal consumption expenditures	100.9	101.7	102.6	103.2	102.1	104.1	104.8	105.6	106.1	105.1	107.0	107.3	107.1	107.5	107.2
3	Durable goods	99.8	100.6	101.8	103.2	101.3	103.9	104.8	105.0	105.3	104.8	104.7	104.9	105.2	106.0	105.2
4	Nondurable goods	99.6	100.5	101.5	101.9	100.9	102.8	103.4	104.5	104.8	103.9	106.3	106.6	105.8	106.0	106.1
5	Services	103.1	103.8	104.5	105.1	104.1	106.0	106.6	107.3	108.0	107.0	108.6	109.0	109.3	109.9	109.2
6	Gross private domestic investment															
7	New construction	107.4	109.6	110.5	111.8	109.8	111.9	113.3	113.7	113.8	113.2	113.4	113.5	113.3	114.4	113.7
8	Residential nonfarm	107.1	109.0	109.6	110.1	109.0	110.4	110.9	111.2	110.9	110.8	111.2	110.2	110.8	111.9	111.1
9	Other	107.7	110.2	111.4	113.5	110.7	113.4	115.5	116.0	116.5	115.3	115.6	116.9	115.9	117.5	116.4
10	Producers' durable equipment	105.9	108.1	109.6	112.2	109.0	114.2	115.4	116.4	117.4	115.8	118.2	119.0	119.3	119.7	119.0
11	Change in business inventories															
12	Net exports of goods and services															
13	Government purchases of goods and services	106.6	108.1	110.7	111.5	109.2	112.6	114.0	116.3	116.5	114.9	116.8	117.2	119.0	119.4	118.1
14	Federal	107.2	108.6	111.2	111.8	109.7	112.8	114.4	117.3	117.0	115.4	117.2	116.9	119.7	119.9	118.4
15	State and local	105.7	107.4	109.9	111.1	108.6	112.3	113.6	115.0	115.9	114.2	116.3	117.6	117.9	118.9	117.7

Source: Department of Commerce, Office of Business Economics, U S. Income and Output, 1958, Survey of Current Business, July. 1959.

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TABLE 8–7.—*Personal income and its disposition, seasonally adjusted quarterly totals at annual rates, 1946–58*

[Billions of dollars]

Line		1946					1947					1948				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Personal income	171.4	176.7	182.9	186.0	179.3	188.6	186.0	193.8	197.8	191.6	202.7	209.6	214.8	214.4	210.4
2	Wage and salary disbursements	106.5	110.2	113.6	116.8	111.9	119.6	121.0	123.1	127.5	122.8	130.5	133.3	138.0	138.6	135.2
3	Commodity-producing industries	40.2	44.9	48.4	50.6	46.0	52.7	53.4	54.3	56.8	54.3	58.1	59.7	61.7	61.4	60.3
4	Manufacturing only	31.5	35.9	38.3	40.2	36.5	41.2	42.0	42.3	44.4	42.5	45.1	46.1	47.4	47.1	46.5
5	Distributive industries	28.1	30.9	31.8	32.7	30.9	33.7	34.2	35.7	36.9	35.2	38.0	38.3	39.5	39.5	38.8
6	Service industries	13.5	14.1	14.6	15.1	14.3	15.4	15.9	16.3	16.4	16.0	16.8	17.2	17.7	17.7	17.3
7	Government	24.8	20.3	18.8	18.5	20.6	17.8	17.4	16.8	17.3	17.3	17.7	18.1	19.2	20.0	18.8
8	Other labor income	1.8	1.8	1.9	2.0	1.9	2.1	2.3	2.4	2.5	2.3	2.6	2.7	2.7	2.8	2.7
9	Proprietors' income	34.0	35.8	38.4	38.0	36.6	37.2	33.6	34.8	36.3	35.5	37.4	41.3	41.7	40.4	40.2
10	Business and professional	20.7	21.7	21.8	21.0	21.3	20.1	19.8	19.6	20.3	19.9	21.4	22.2	22.9	23.1	22.4
11	Farm	13.3	14.1	16.6	17.0	15.3	17.1	13.9	15.2	16.0	15.5	16.0	19.1	18.8	17.3	17.8
12	Rental income of persons	5.9	6.1	6.2	6.6	6.2	6.5	6.2	6.4	6.9	6.5	7.0	7.1	7.4	7.6	7.3
13	Dividends	5.3	5.6	5.9	6.4	5.8	6.6	6.3	6.4	6.8	6.5	6.9	7.1	7.4	7.6	7.2
14	Personal interest income	7.4	7.5	7.6	7.8	7.6	7.9	8.1	8.3	8.5	8.2	8.6	8.6	8.7	8.9	8.7
15	Transfer payments	12.5	11.7	11.1	10.3	11.4	10.8	10.6	14.4	11.4	11.8	11.7	11.5	11.1	10.7	11.3
16	Old-age and survivors insurance benefits	.3	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.6	.6	.6
17	State unemployment insurance benefits	1.5	1.2	.9	.7	1.1	.9	.9	.8	.6	.8	.8	.8	.8	.8	.8
18	Veterans' benefits	7.7	6.8	6.6	5.8	6.8	5.8	5.5	9.2	6.4	6.7	6.5	6.1	5.6	5.0	5.8
19	Other	3.0	3.2	3.2	3.3	3.2	3.6	3.8	3.9	3.9	3.8	4.0	4.1	4.2	4.4	4.2
20	Less personal contributions for social insurance	2.1	2.1	2.0	1.9	2.0	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2
21	Less personal tax and nontax payments	17.8	18.6	19.0	19.5	18.7	21.1	21.2	21.5	22.1	21.5	23.2	20.8	20.2	20.4	21.1
22	Federal	16.2	17.0	17.5	17.9	17.2	19.3	19.4	19.7	20.2	19.6	21.1	18.7	18.0	18.2	19.0
23	State and local	1.5	1.5	1.6	1.6	1.6	1.7	1.8	1.9	1.9	1.8	2.1	2.1	2.2	2.2	2.1
24	Equals disposable personal income	153.6	158.2	163.9	166.5	160.6	167.5	164.8	172.3	175.7	170.1	179.5	188.8	194.7	194.0	189.3
25	Less personal consumption expenditures	137.3	143.0	152.7	155.4	147.1	159.4	163.9	167.2	171.2	165.4	174.7	177.5	180.2	180.8	178.3
26	Equals personal saving	16.3	15.1	11.2	11.0	13.5	8.1	.9	5.1	4.5	4.7	4.8	11.4	14.4	13.2	11.0
27	Addendum: Disposable personal income in constant (1954) dollars	215.5	218.1	207.4	200.1	209.9	202.3	197.1	202.9	202.2	201.1	203.5	211.7	215.3	215.1	211.5

Line		1949					1950					1951				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Personal income	209.3	208.9	207.2	207.9	208.3	220.2	221.5	230.8	241.2	228.5	248.1	255.2	258.7	264.3	256.7
2	Wage and salary disbursements	136.0	135.0	133.3	133.2	134.4	136.0	142.0	150.0	157.3	146.4	164.3	170.0	172.1	176.2	170.7
3	Commodity-producing industries	59.0	57.3	56.1	55.3	56.9	57.1	61.2	65.7	69.8	63.5	72.6	75.1	75.3	76.4	74.9
4	Manufacturing only	45.7	44.0	43.3	42.5	43.9	44.5	47.4	51.2	54.6	49.4	56.7	58.5	58.5	59.4	58.3
5	Distributive industries	39.2	39.5	38.7	38.7	39.0	39.2	40.5	42.3	43.2	41.3	44.8	46.0	46.2	46.8	46.0
6	Service industries	17.7	17.9	17.9	18.2	17.9	18.5	19.0	19.6	20.0	29.3	20.6	20.8	21.2	21.6	21.1
7	Government	20.1	20.3	20.6	21.0	20.5	21.1	21.3	22.4	24.3	22.3	26.4	28.1	19.4	31.4	28.8
8	Other labor income	2.8	3.0	3.1	3.2	3.0	3.4	3.7	4.0	4.2	3.8	4.5	4.7	4.9	5.1	4.8
9	Proprietors' income	36.4	35.9	35.1	35.0	35.6	35.5	36.2	38.8	39.7	37.5	41.5	42.2	42.4	43.2	42.3
10	Business and professional	22.7	23.0	22.7	22.3	22.7	22.2	23.1	24.5	24.4	23.5	25.9	25.9	26.0	26.2	26.0
11	Farm	13.7	12.9	12.4	12.7	12.9	13.3	13.2	14.2	15.3	14.0	15.6	16.3	16.4	17.0	16.3
12	Rental income of persons	7.9	8.1	8.4	8.7	8.3	8.8	8.9	9.1	9.2	9.0	9.3	9.3	9.5	9.7	9.4
13	Dividends	7.4	7.3	7.3	7.8	7.5	7.9	8.3	9.5	11.1	9.2	8.9	8.7	9.0	9.3	9.0
14	Personal interest income	9.1	9.3	9.5	9.7	9.4	9.9	10.1	10.4	10.6	10.3	10.9	11.1	11.4	11.6	11.2
15	Transfer payments	11.9	12.5	12.7	12.6	12.4	21.4	15.0	11.9	12.2	15.1	12.3	12.6	12.7	12.7	12.6
16	Old-age and survivors insurance benefits	.6	.7	.7	.7	.7	.7	.8	.8	1.5	1.0	1.8	1.9	1.9	1.9	1.9
17	State unemployment insurance benefits	1.5	1.8	1.9	1.8	1.7	1.9	1.6	1.1	.9	1.4	.8	.8	.9	1.0	.8
18	Veterans' benefits	5.2	5.3	5.0	4.9	5.1	5.1	5.4	4.6	4.4	4.9	4.3	4.0	3.7	3.6	3.9
19	Other	4.6	4.8	5.1	5.2	4.9	13.8	7.2	5.4	5.3	7.9	5.5	6.0	6.2	6.2	6.0
20	Less personal contributions for social insurance	2.3	2.2	2.2	2.2	2.2	2.8	2.8	2.9	3.1	2.9	3.4	3.4	3.3	3.4	3.4
21	Less personal tax and nontax payments	18.7	18.7	18.6	18.6	18.7	19.3	19.9	20.6	23.5	20.8	28.3	28.8	29.2	30.5	29.2
22	Federal	16.3	16.2	16.2	16.1	16.2	16.7	17.3	17.9	20.8	18.2	25.5	25.9	26.2	27.5	26.3
23	State and local	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.7	2.7	2.6	2.9	2.9	3.0	3.0	2.9
24	Equals disposable personal income	190.6	190.2	188.6	189.3	189.7	200.9	201.7	210.2	217.7	207.7	219.8	226.4	229.5	233.8	227.5
25	Less personal consumption expenditures	179.0	181.1	180.5	184.0	181.2	185.7	189.9	204.4	200.1	195.0	211.5	205.5	208.8	213.4	209.8
26	Equals personal saving	11.6	9.1	8.1	5.3	8.5	15.2	11.8	5.8	17.6	12.6	8.2	20.9	20.7	20.4	17.7
27	Addendum: Disposable personal income in constant (1954) dollars	212.9	213.9	214.0	214.9	213.8	228.0	227.3	232.0	236.1	231.0	230.9	236.3	239.1	240.8	237.0

TABLE 8–7.—*Personal income and its disposition, seasonally adjusted quarterly totals at annual rates, 1946–58*—Continued

[Billions of dollars]

Line		1952					1953					1954					1955				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Personal income	266.1	269.7	275.6	280.6	273.1	285.4	288.7	289.8	289.7	288.3	287.4	287.6	289.7	294.2	289.8	298.5	307.5	313.8	319.7	310.2
2	Wage and salary disbursements	180.3	181.8	185.1	191.9	184.9	195.8	198.9	199.7	198.1	198.1	195.4	195.4	195.4	198.7	196.3	202.4	208.9	214.1	218.1	210.9
3	Commodity-producing industries	78.6	78.5	79.7	85.1	80.5	87.6	88.9	88.8	87.0	88.1	84.7	83.9	82.8	84.9	84.1	87.2	90.8	92.5	95.0	91.4
4	Manufacturing only	61.1	61.3	62.1	67.2	63.0	69.5	70.9	70.5	68.6	69.9	66.7	65.9	64.9	66.7	66.1	68.8	71.7	73.1	75.5	72.3
5	Distributive industries	47.6	48.1	49.2	50.1	48.7	50.7	51.7	52.4	52.3	51.8	52.0	52.1	52.4	52.8	52.3	53.5	55.0	56.7	57.7	55.8
6	Service industries	22.1	22.4	22.8	23.2	22.6	23.6	24.2	24.5	24.8	24.3	24.8	25.2	25.6	26.2	25.5	26.7	27.4	28.2	28.8	27.8
7	Government	32.0	32.8	33.4	33.5	32.9	33.8	34.0	34.1	34.0	33.9	33.9	34.2	34.6	34.8	34.4	34.9	35.6	36.8	36.6	36.0
8	Other labor income	5.1	5.2	5.4	5.5	5.3	5.8	5.9	6.1	6.2	6.0	6.1	6.1	6.2	6.4	6.2	6.7	7.0	7.3	7.5	7.1
9	Proprietors' income	41.2	42.4	43.9	41.4	42.2	41.2	40.7	40.3	40.7	40.7	40.6	39.6	40.9	40.6	40.4	41.1	42.4	42.6	42.5	42.1
10	Business and professional	26.4	26.8	26.8	27.5	26.9	27.6	27.5	27.4	27.3	27.4	27.1	27.6	27.8	28.5	27.8	29.3	30.4	30.9	31.0	30.4
11	Farm	14.7	15.6	17.1	13.9	15.3	13.7	13.2	12.9	13.3	13.3	13.6	12.0	13.1	12.1	12.7	11.8	12.1	11.7	11.5	11.8
12	Rental income of persons	9.9	10.1	10.3	10.4	10.2	10.4	10.5	10.6	10.7	10.5	10.8	10.9	10.9	10.9	10.9	10.8	10.7	10.6	10.7	10.7
13	Dividends	9.0	8.9	9.0	9.0	9.0	9.3	9.4	9.4	9.4	9.2	9.4	9.5	9.7	10.1	9.8	10.2	10.5	10.9	12.2	11.2
14	Personal interest income	11.8	11.9	12.2	12.5	12.1	12.9	13.2	13.5	13.8	13.4	14.1	14.4	14.7	15.0	14.6	15.3	15.6	15.9	16.3	15.8
15	Transfer payments	12.7	12.9	13.5	13.7	13.2	14.0	14.1	14.2	14.8	14.3	15.4	16.1	16.5	17.2	16.2	17.1	17.5	17.6	17.7	17.5
16	Old-age and survivors insurance benefits	2.0	2.0	2.1	2.6	2.2	2.7	3.0	3.1	3.1	3.0	3.3	3.5	3.6	4.2	3.6	4.4	4.9	5.1	5.2	4.9
17	State unemployment insurance benefits	1.1	1.1	1.0	.8	1.0	.9	.8	.9	1.3	1.0	1.7	2.2	2.3	2.2	2.0	1.5	1.3	1.3	1.2	1.4
18	Veterans' benefits	3.5	3.5	4.3	4.1	3.9	3.9	3.7	3.7	3.6	3.7	3.7	3.8	3.9	4.1	3.8	4.2	4.3	4.3	4.3	4.2
19	Other	6.0	6.3	6.1	6.2	6.2	6.5	6.5	6.5	6.8	6.6	6.7	6.7	6.7	6.8	6.7	6.9	7.0	6.9	7.1	7.0
20	Less personal contributions for social insurance	3.8	3.7	3.8	3.8	3.8	3.9	4.0	4.0	3.9	3.9	4.5	4.5	4.6	4.7	4.6	5.0	5.1	5.3	5.3	5.2
21	Less personal tax and nontax payments	33.9	34.0	34.5	35.0	34.4	35.5	35.9	36.0	35.8	35.8	32.7	32.8	32.9	33.3	32.9	34.7	35.5	36.2	36.6	35.7
22	Federal	30.8	30.8	31.3	31.7	31.2	32.1	32.5	32.5	32.3	32.4	29.1	29.0	29.1	29.4	29.2	30.6	31.3	31.9	32.3	31.5
23	State and local	3.1	3.2	3.2	3.3	3.2	3.3	3.4	3.5	3.5	3.4	3.7	3.8	3.8	3.9	3.8	4.1	4.2	4.3	4.3	4.2
24	Equals disposable personal income	232.1	235.6	241.1	245.6	238.7	250.0	252.8	253.8	253.8	252.5	254.6	254.8	256.8	260.9	256.9	263.8	272.0	277.7	283.0	274.4
25	Less personal consumption expenditures	214.6	217.7	219.6	227.2	219.8	230.9	233.3	234.1	232.3	232.6	233.7	236.5	238.7	243.2	238.0	249.4	254.3	260.9	263.3	256.9
26	Equals personal saving	17.5	17.9	21.5	18.4	18.9	19.0	19.6	19.7	21.6	19.8	21.0	18.3	18.0	17.7	18.9	14.4	17.8	16.8	19.8	17.5
27	Addendum: Disposable personal income in constant (1954) dollars	238.1	240.9	245.8	248.8	243.6	253.3	256.1	255.9	255.9	255.0	254.4	254.8	257.0	260.9	256.9	263.0	271.5	276.5	281.4	273.4

Line		1956					1957					1958				
		I	II	III	IV	Year	I	II	III	IV	Year	I	II	III	IV	Year
1	Personal income	323.8	330.9	335.4	341.1	332.9	344.7	350.7	354.5	352.8	350.6	352.2	355.0	363.4	366.3	359.0
2	Wage and salary disbursements	221.6	226.6	228.7	233.4	227.6	235.9	238.7	240.9	238.6	238.5	234.6	235.4	242.3	245.1	239.4
3	Commodity-producing industries	95.9	98.3	98.7	101.9	98.7	102.2	102.8	102.9	100.8	102.2	96.3	95.8	98.2	100.9	97.8
4	Manufacturing only	75.7	77.1	77.4	80.6	77.7	80.8	81.2	81.1	79.5	80.6	75.8	74.9	76.9	79.1	76.7
5	Distributive industries	59.1	60.3	60.8	61.2	60.3	62.2	63.3	64.3	63.7	63.4	63.4	63.1	64.1	64.5	63.8
6	Service industries	29.5	30.2	30.8	31.5	30.5	32.0	32.6	33.0	33.3	32.7	33.7	34.3	34.9	35.3	34.6
7	Government	37.1	37.8	38.4	38.9	38.0	39.4	39.9	40.6	40.7	40.2	41.2	42.2	45.2	44.3	43.2
8	Other labor income	7.7	8.0	8.2	8.5	8.1	8.8	9.1	9.3	9.5	9.1	9.3	9.3	9.3	9.4	9.3
9	Proprietors' income	42.7	43.3	44.4	44.5	43.7	43.9	44.3	45.3	44.5	44.5	46.1	45.9	46.8	47.4	46.6
10	Business and professional	31.5	32.1	32.3	32.5	32.1	32.6	32.9	32.9	32.4	32.7	31.6	32.0	32.6	33.2	32.4
11	Farm	11.2	11.2	12.1	12.0	11.6	11.2	11.5	12.3	12.1	11.8	14.6	13.9	14.2	14.1	14.2
12	Rental income of persons	10.7	10.8	11.0	11.1	10.9	11.3	11.4	11.5	11.7	11.5	11.7	11.8	11.9	11.9	11.8
13	Dividends	11.7	12.0	12.3	12.0	12.1	12.6	12.7	12.8	12.2	12.5	12.7	12.6	12.6	12.0	12.4
14	Personal interest income	16.7	17.2	17.7	18.2	17.5	18.8	19.4	19.8	20.0	19.5	20.2	20.3	20.5	20.8	20.4
15	Transfer payments	18.2	18.7	19.0	19.4	18.8	20.2	21.8	21.8	23.2	21.7	24.4	26.6	27.1	26.8	26.1
16	Old-age and survivors insurance benefits	5.3	5.6	5.8	5.9	5.7	6.3	7.7	7.5	7.8	7.3	7.9	8.6	8.7	8.8	8.5
17	State unemployment insurance benefits	1.3	1.4	1.5	1.5	1.4	1.6	1.6	1.7	2.4	1.8	3.1	4.2	4.8	4.2	3.9
18	Veterans' benefits	4.3	4.3	4.1	4.2	4.2	4.3	4.3	4.3	4.5	4.4	4.6	4.6	4.5	4.5	4.6
19	Other	7.3	7.4	7.6	7.8	7.5	8.1	8.2	8.3	8.5	8.3	8.9	9.2	9.1	9.3	9.1
20	Less personal contributions for social insurance	5.7	5.8	5.8	6.0	5.8	6.7	6.7	6.8	6.7	6.7	6.9	6.9	7.1	7.1	7.0
21	Less personal tax and nontax payments	39.2	39.8	40.2	40.8	40.0	42.3	42.7	43.1	42.9	42.7	41.9	42.1	42.9	43.4	42.6
22	Federal	34.5	35.1	35.3	35.8	35.2	37.1	37.4	37.6	37.4	37.4	36.2	36.3	37.1	37.4	36.7
23	State and local	4.7	4.8	4.9	5.0	4.8	5.2	5.3	5.4	5.5	5.4	5.7	5.8	5.9	6.0	5.8
24	Equals disposable personal income	284.6	291.1	295.2	300.3	292.9	302.5	308.0	311.5	309.9	307.9	310.3	312.9	320.4	322.9	316.5
25	Less personal consumption expenditures	265.6	268.2	270.4	275.6	269.9	279.8	282.9	288.2	288.1	284.8	287.3	290.9	294.4	299.1	293.0
26	Equals personal saving	19.0	22.9	24.8	24.7	23.0	22.6	25.1	23.3	21.8	23.1	22.9	22.0	26.0	23.7	23.5
27	Addendum: Disposable personal income in constant (1954) dollars	282.0	286.2	287.7	291.0	286.9	290.6	293.9	295.0	292.1	292.9	290.0	291.6	299.2	300.4	295.2

Source: Department of Commerce, Office of Business Economics, U.S. Income and Output, 1958, Survey of Current Business, July 1959.

TABLE 8–8.—*Consumer and wholesale price indexes, all items, quarterly 1946–58*
[1947–49=100]

Year and quarter	Consumer price index	Wholesale price index
1946:		
1st	77.8	70.0
2d	79.1	72.3
3d	86.1	81.8
4th	90.7	89.8
Total	83.4	78.7
1947:		
1st	92.5	93.5
2d	93.7	94.4
3d	96.4	96.6
4th	99.0	100.9
Total	95.5	96.4
1948:		
1st	100.6	103.1
2d	102.2	103.8
3d	104.5	105.9
4th	103.5	104.5
Total	102.8	104.4
1949:		
1st	102.0	101.5
2d	101.9	98.9
3d	101.6	98.1
4th	101.3	97.7
Total	101.8	99.2
1950:		
1st	100.5	98.1
2d	101.2	99.3
3d	103.6	105.0
4th	105.7	110.0
Total	102.8	103.1
1951:		
1st	109.5	115.8
2d	110.6	115.7
3d	110.0	113.7
4th	112.6	113.5
Total	111.0	114.8
1952:		
1st	112.5	112.5
2d	113.0	111.4
3d	114.1	111.9
4th	114.1	110.4
Total	113.5	111.6
1953:		
1st	113.5	109.7
2d	114.0	109.5
3d	114.9	110.4
4th	115.0	110.0
Total	114.4	110.1
1954:		
1st	114.9	110.5
2d	114.8	110.5
3d	114.9	110.2
4th	114.4	109.6
Total	114.8	110.3
1955:		
1st	114.2	110.1
2d	114.2	110.1
3d	115.0	110.9
4th	114.8	111.3
Total	114.5	110.7
1956:		
1st	114.5	112.3
2d	115.4	114.0
3d	116.8	114.6
4th	117.7	115.8
Total	116.2	114.3
1957:		
1st	118.5	116.8
2d	119.6	117.1
3d	120.8	118.1
4th	121.3	118.0
Total	120.2	117.6
1958:		
1st	122.6	119.1
2d	123.5	119.2
2d	123.6	119.0
4th	123.6	119.0
Total	123.5	119.2

NOTE.—Quarterly indexes represent averaged monthly totals.

Source: Department of Labor.

TABLE 8–9.—*Expenditures for new plant and equipment (excluding agriculture) seasonally adjusted quarterly totals at annual rates, in current prices and constant (1954) dollars, 1947–58*

Year and quarter	Weighted price deflator [1]	Expenditures for new plant and equipment (billions of dollars)	
		Current prices	Constant (1954) dollars
1947:			
1st	73.7	19.7	26.7
2d	75.5	20.3	26.9
3d	77.0	21.0	27.3
4th	78.3	21.3	27.2
Total	76.1	20.6	27.1
1948:			
1st	80.5	22.4	27.8
2d	81.6	21.8	26.7
3d	84.5	21.9	26.0
4th	85.7	22.3	26.0
Total	83.1	22.1	26.5
1949:			
1st	86.2	21.1	24.4
2d	86.2	19.7	22.8
3d	85.0	18.9	22.2
4th	84.7	17.9	21.0
Total	85.5	19.3	22.6
1950:			
1st	85.3	18.4	21.6
2d	85.7	19.2	22.4
3d	88.5	21.0	23.8
4th	90.7	23.3	25.7
Total	87.7	20.6	23.5
1951:			
1st	94.3	23.7	25.2
2d	95.8	25.5	26.6
3d	95.9	26.5	27.6
4th	96.2	26.6	27.6
Total	95.6	25.6	26.8
1952:			
1st	96.9	27.0	27.9
2d	97.5	26.6	27.3
3d	97.1	25.7	26.4
4th	97.1	26.7	27.5
Total	97.2	26.5	27.3
1953:			
1st	97.7	27.8	28.5
2d	99.5	28.1	28.2
3d	99.8	28.8	28.9
4th	99.0	28.5	28.8
Total	99.0	28.3	28.6
1954:			
1st	99.5	27.5	27.6
2d	100.2	26.9	26.9
3d	100.1	26.8	26.8
4th	100.2	26.2	26.1
Total	100.0	26.8	26.8
1955:			
1st	101.1	25.7	25.4
2d	102.2	27.2	26.6
3d	103.0	29.7	28.8
4th	104.6	31.5	30.0
Total	103.1	28.7	27.8
1956:			
1st	106.5	32.8	30.8
2d	108.8	34.5	31.7
3d	110.2	35.9	32.6
4th	112.6	36.5	32.4
Total	109.6	35.1	32.0
1957:			
1st	113.9	36.9	32.4
2d	115.4	37.0	32.1
3d	116.3	37.8	32.5
4th	117.1	36.2	30.9
Total	115.6	37.0	32.0
1958:			
1st	117.3	32.4	27.6
2d	118.3	30.3	25.6
3d	118.2	29.6	25.1
4th	119.0	30.0	25.2
Total	118.1	30.5	25.9

[1] Derived (by Joint Economic Committee Staff) by weighting the implicit price deflator for gross national product for producers' durable equipment and new construction (other than residential nonfarm) with weights of ⅞ and ⅛ respectively.

Source: Securities and Exchange Commission, and Department of Commerce.

TABLE 8–10.—*Selected items of Federal expenditures and purchases, seasonally adjusted quarterly totals at annual rates, 1946–58*

[Billions of dollars]

Year and quarter	Gross expenditures	Gross Federal purchases	National defense purchases	Gross Federal civil purchases less acquisitions of capital items	Transfer payments to persons	Gross domestic civil expenditures less transfer payments to persons and less acquisitions of capital items
1946: 1st	$46.9	$28.4	$24.5	$5.0	$10.5	$12.5
2d	40.7	23.6	19.4	5.9	9.6	13.0
3d	36.8	21.2	16.3	5.2	8.8	11.7
4th	34.5	19.8	15.0	5.0	8.0	11.3
1947: 1st	32.0	17.3	13.0	5.1	8.3	11.5
2d	30.9	16.4	10.3	6.2	7.8	12.8
3d	34.6	16.8	10.7	5.6	11.1	12.1
4th	31.5	16.6	11.5	4.6	8.2	11.2
1948: 1st	32.2	17.0	11.2	5.5	8.0	12.7
2d	35.1	19.4	11.3	7.2	7.8	13.9
3d	37.3	20.6	11.8	6.7	7.4	13.7
4th	39.0	22.3	12.1	7.9	7.4	15.0
1949: 1st	41.4	22.8	13.5	7.2	8.5	14.3
2d	42.6	22.5	13.7	6.9	8.9	14.0
3d	42.3	22.7	14.1	7.2	9.0	14.7
4th	40.9	21.7	13.0	7.1	8.7	14.7
1950: 1st	47.1	19.2	12.6	6.0	17.2	13.8
2d	39.1	17.3	12.0	5.4	10.3	13.6
3d	36.7	18.5	14.1	6.2	7.8	14.2
4th	41.8	22.9	18.3	5.7	8.2	14.0
1951: 1st	47.7	28.9	24.3	5.5	8.3	14.0
2d	55.9	36.3	31.2	6.1	8.7	14.7
3d	62.4	43.3	38.1	5.7	8.8	14.0
4th	67.4	47.8	41.8	6.2	8.8	14.7
1952: 1st	66.8	48.8	43.0	6.2	8.5	14.6
2d	71.2	52.4	46.2	5.7	8.5	14.1
3d	74.5	55.2	47.0	6.3	9.2	15.8
4th	74.9	56.0	49.3	6.0	9.3	14.4
1953: 1st	77.1	57.8	49.8	4.9	9.6	12.8
2d	79.7	59.2	50.5	5.4	9.5	14.5
3d	77.1	58.0	49.3	5.4	9.5	13.8
4th	78.4	58.1	47.6	6.0	10.2	14.7
1954: 1st	74.1	53.2	44.8	5.2	10.8	13.9
2d	69.0	47.4	41.5	5.3	11.6	14.1
3d	68.5	46.2	40.0	4.9	11.8	14.0
4th	68.1	44.7	38.4	5.1	12.5	14.6
1955: 1st	68.8	45.4	39.2	5.3	12.2	14.6
2d	68.5	45.1	38.8	5.1	12.5	14.6
3d	69.2	45.7	39.2	5.4	12.5	15.2
4th	70.5	46.5	39.1	5.1	12.7	15.0
1956: 1st	70.1	45.1	39.1	5.7	13.0	16.3
2d	70.9	44.9	39.2	6.1	13.5	17.0
3d	72.9	46.5	41.0	6.4	13.7	17.9
4th	74.9	47.8	42.1	6.2	13.9	17.6
1957: 1st	78.4	49.5	43.7	5.7	14.6	18.6
2d	80.4	50.0	44.9	6.5	16.0	19.0
3d	80.2	50.2	44.9	6.8	16.0	16.6
4th	81.6	49.6	43.9	5.5	17.2	18.3
1958: 1st	83.7	50.6	44.0	5.9	18.3	19.5
2d	87.5	51.8	44.3	6.1	20.3	20.2
3d	89.6	53.4	44.5	6.7	20.9	20.8
4th	91.4	54.8	45.3	6.8	20.4	21.6

Source: Department of Commerce, Office of Business Economics, U.S. Income and Output, 1958, tables III–3 and I–3. Acquisitions of capital items estimated by staff, Joint Economic Committee, Survey of Current Business, July 1959.

TABLE 8–11.—*Corporate profits before and after tax, seasonally adjusted quarterly totals at annual rates, 1946–59*

[Billions of dollars]

	Corporate profits and inventory valuation adjustment	Profits before taxes	Profits tax liability	Profits after tax	Inventory valuation adjustment
1946:					
1st	13.5	14.7	6.0	8.8	−1.2
2d	16.5	19.3	7 8	11.5	−2.8
3d	17.9	26.0	10.5	15.5	−8.1
4th	21.2	30.2	12.2	18.0	−8.9
Total	17.3	22.6	9.1	13.4	−5.3
1947:					
1st	20.2	29.8	11.4	18.4	−9.7
2d	23.8	28.5	10.9	17.6	−4.7
3d	24.5	28.5	10.9	17.6	−4.0
4th	26.0	31.2	11.9	19.3	−5.2
Total	23.6	29.5	11.3	18.2	−5.9
1948:					
1st	29.6	32.4	12.3	20.2	−2.9
2d	30.9	33.8	12.8	21.0	−2.9
3d	30.6	33.4	12.6	20.7	−2.8
4th	32.4	32.4	12.3	20.2	−.1
Total	30.8	33.0	12.5	20.5	−2.2
1949:					
1st	29.6	28.2	11.1	17.1	+1.4
2d	27.6	24.7	9.7	15.0	+2.8
3d	29.6	26.6	10.5	16.1	+3.0
4th	26.2	26.0	10.2	15.8	+.2
Total	28.2	26.4	10.4	16.0	+1.9
1950:					
1st	29.4	30.1	13.2	16.8	−.7
2d	33.5	36.8	16.2	20.6	−3.3
3d	39.2	46.5	20.4	26.0	−7.3
4th	40.6	49.2	21.6	27.5	−8.5
Total	35.7	40.6	17.9	22.8	−5.0
1951:					
1st	40.4	49.1	26.2	23.0	−8.7
2d	41.1	42.1	22.4	19.7	−1.0
3d	41.2	37.8	20.1	17.7	+3.5
4th	41.1	39.6	21.1	18.5	+1.5
Total	41.0	42.2	22.4	19.7	−1.2
1952:					
1st	39.1	37.9	20.1	17.8	+1.3
2d	36.6	35.5	18.8	16.7	+1.2
3d	36.0	35.3	18.7	16.6	+.7
4th	38.9	38.1	20.2	17.9	+.8
Total	37.7	36.7	19.5	17.2	+1.0
1953:					
1st	40.5	40.9	21.6	19.3	−.4
2d	39.8	41.4	21.9	19.6	−1.6
3d	37.5	39.5	20.9	18.7	−2.0
4th	31.4	31.4	16.6	14.8	0
Total	37.3	38.3	20.6	18.1	−1.0
1954:					
1st	32.5	32.5	16.5	16.1	0
2d	33.3	33.3	16.9	16.5	0
3d	33.0	33.7	17.1	16.7	−.7
4th	36.1	36.6	18.5	18.1	−.5
Total	33.7	34.1	17.2	16.8	−.3

TABLE 8–11.—*Corporate profits before and after tax, seasonally adjusted quarterly totals at annual rates, 1946–59*—Continued

[Billions of dollars]

	Corporate profits and inventory valuation adjustment	Profits before taxes	Profits tax liability	Profits after tax	Inventory valuation adjustment
1955:					
1st	40.3	41.4	20.2	21.3	−1.1
2d	41.9	42.8	20.8	22.0	−.9
3d	44.4	46.6	22.7	23.9	−2.2
4th	45.8	48.6	23.6	24.9	−2.8
Total	43.1	44.9	21.8	23.0	−1.7
1956:					
1st	42.7	45.7	21.7	24.0	−2.9
2d	41.5	45.2	21.5	23.7	−3.7
3d	41.5	42.7	20.3	22.4	−1.2
4th	42.3	45.3	21.5	23.8	−3.1
Total	42.0	44.7	21.2	23.5	−2.7
1957:					
1st	43.8	46.2	22.5	23.7	−2.4
2d	42.0	43.5	21.2	22.3	−1.5
3d	42.7	44.0	21.4	22.5	−1.3
4th	38.5	39.4	19.2	20.2	−1.9
Total	41.7	43.3	21.1	22.2	−1.5
1958:					
1st	31.5	32.0	15.7	16.3	−.4
2d	33.8	33.6	16.5	17.1	+.2
3d	38.0	38.3	18.8	19.5	−.3
4th	43.5	44.6	21.9	22.7	−1.1
Total	36.9	37.1	18.2	18.9	−.4
1959:					
1st	45.5	46.5	22.6	23.8	−.9
2d	51.0	52.6	25.6	27.0	−1.6

Source: Department of Commerce, Office of Business Economics, U.S. Income and Output, Table I–9, and Survey of Current Business, July 1959, and November 1959.

TABLE 8–12.—*Employment as percent of civilian labor force, and Federal surplus or deficit on income and product account as percent of gross national product, quarterly, seasonally adjusted at annual rates, 1946, 3d quarter to 1951, 2d quarter, and 1954, 1st quarter to 1958, 3d quarter.*

Year and quarter	Employment rate [1]	Surplus as a percent of gross national product	
		Actual	Computed
1946:			
3d	96.6	3.4	5.0
4th	96.2	4.6	4.2
1947:			
1st	95.9	5.7	3.6
2d	95.9	5.7	3.6
3d	96.3	3.7	4.4
4th	96.2	5.7	4.2
1948:			
1st	96.3	5.6	4.4
2d	96.3	3.3	4.4
3d	96.0	2.2	3.8
4th	95.3	1.4	2.5
1949:			
1st	94.2	−.5	.4
2d	93.5	−1.5	−1.0
3d	92.9	−1.1	−2.2
4th	93.5	−.8	−1.0
1950:			
1st	94.4	−1.4	.7
2d	95.4	3.0	2.7
3d	95.8	5.8	3.4
4th	96.5	5.0	4.8
1951:			
1st	96.8	6.4	5.3
2d	96.8	2.5	5.3
1954:			
1st	94.3	−2.9	−1.4
2d	94.1	−1.5	−1.6
3d	94.6	−1.4	−1.1
4th	95.2	−.6	−.2
1955:			
1st	95.6	.2	.6
2d	95.8	.9	1.1
3d	95.8	1.4	1.1
4th	95.9	1.4	1.3
1956:			
1st	95.7	1.6	.9
2d	95.8	1.6	1.1
3d	95.9	1.0	1.3
4th	95.9	1.2	1.3
1957:			
1st	95.9	1.1	1.3
2d	95.7	.5	.9
3d	95.1	.7	−.3
4th	93.5	−.1	−2.0
1958:			
1st	92.8	−1.9	−2.0
2d	92.6	−2.5	−2.0
3d	93.7	−2.3	−1.9

[1] This series lags the actual and computed surplus: gross national product ratios by one quarter. See note to table 8–14.

Source: Table 8–1, 8–2, 8–5, and 8–14.

TABLE 8–13.—*Employment as percent of civilian labor force, and excess of Federal cash receipts from the public over payments to the public as percent of gross national product, quarterly, seasonally adjusted at annual rates, 1946, 3d quarter to 1951, 2d quarter, and 1954, 1st quarter to 1958, 4th quarter.*

Year and quarter	Employment rate	Surplus as a percent of gross national product	
		Actual	Computed
1946:			
3d	96.4	2.4	2.8
4th	96.6	3.4	3.0
1947:			
1st	96.2	3.1	2.5
2d	95.9	2.2	2.1
3d	95.9	1.8	2.1
4th	96.3	3.7	2.6
1948:			
1st	96.2	5.0	2.5
2d	96.3	4.3	2.6
3d	96.3	2.5	2.6
4th	96.0	.9	2.2
1949:			
1st	95.3	−.7	1.2
2d	94.2	−1.6	−.3
3d	93.5	−.6	−1.2
4th	92.9	−.6	−1.9
1950:			
1st	93.5	−1.6	−1.2
2d	94.4	−.9	0
3d	95.4	1.6	1.4
4th	95.8	2.4	1.9
1951:			
1st	96.5	2.6	2.9
2d	96.8	1.1	3.3
1954:			
1st	94.7	−.1	−.6
2d	94.3	−.8	−.9
3d	94.1	−1.7	−1.1
4th	94.6	−1.1	−.7
1955:			
1st	95.2	−.6	−.1
2d	95.6	.1	.3
3d	95.8	−.4	.6
4th	95.8	0	.6
1956:			
1st	95.9	1.6	.7
2d	95.7	2.3	.5
3d	95.8	1.6	.6
4th	95.9	.1	.7
1957:			
1st	95.9	−.2	.7
2d	95.9	.3	.7
3d	95.7	.4	.5
4th	95.1	.5	−.2
1958:			
1st	93.5	−.3	−1.5
2d	92.8	−1.3	−1.8
3d	92.6	−2.2	−1.8
4th	93.7	−2.6	−1.4

Source: Tables 8–1, 8–2, 8–15, and 8–16.

TABLE 8–14.—*Relationship of Federal surplus on income and product account as percent of GNP to seasonally adjusted rate of unemployment, 1946, 3d quarter, to 1951, 2d quarter, and 1954, 1st quarter; to 1958, 3d quarter.*

Unemployment rate	Income and product account surplus or deficit (−) as percent of GNP		Unemployment rate	Income and product account surplus or deficit (−) as percent of GNP	
	1946_3–1951_2	1954_1–1958_3		1946_3–1951_2	1954_1–1958_3
3.0	5.7	4.5	5.5	0.9	−1.2
3.5	4.8	2.9	6.0	0	−1.7
4.0	3.8	1.6	6.5	−1.0	−2.0
4.5	2.9	.4	7.0	−2.0	−2.0
5.0	1.9	−.5	7.5	−3.0	−1.9

NOTE.—Values of the ratio of surplus to GNP for given rates of unemployment were computed from the following regression equations, fitted by the least-squares method to the quarterly time series for unemployment and surplus: g.n.p. ratio for the periods 1946_3–1951_2 and 1954_1–1958_4:

1946_3–1951_2: $Y_{t_0}=11.3153-1.8352X_{t_1}-.0092X^2_{t_1}$; and 1954_1–1958_3: $Y_{t_0}=18.4575-5.9541X_{t_1}+.4324X^2_{t_1}$,

where Y_{t_0}=ratio of surplus or deficit to g.n.p. in a given quarter t_0, and X=seasonally adjusted rate of unemployment in the following quarter, t_1.

TABLE 8–15.—*Relationship of Federal "cash budget" surplus*[1] *as percent of GNP to seasonally adjusted rate of unemployment, 1946, 3d quarter to 1951, 2d quarter and 1954, 1st quarter to 1958, 4th quarter.*

Unemployment rate	Cash budget surplus or deficit (−) as percent of GNP		Unemployment rate	Cash budget surplus or deficit (−) as percent of GNP	
	1946_3–1951_2	1954_1–1958_4		1946_3–1951_2	1954_1–1958_4
3.0	3.6	2.3	5.5	.1	−.8
3.5	2.9	1.5	6.0	−.5	−1.2
4.0	2.2	.8	6.5	−1.2	−1.5
4.5	1.5	.2	7.0	−1.8	−1.7
5.0	.8	−.3	7.5	−2.4	−1.9

[1] Excess of Federal Government cash receipts from the public over payments to the public.

NOTE.—Values of the ratio of cash budget surplus to GNP for given rates of unemployment were computed from the following regression equations fitted by the method of least squares to the quarterly times series for unemployment and surplus: g.n.p. ratios for the periods 1946_3–1951_2 and 1954_1–1958_4:

1946_3–1951_2: $Y=8.2464-1.6197X+.0262X^2$, and

1954_1–1958_4: $Y=8.2956-2.4581X+.1471X^2$

where Y=ratio of cash surplus or deficit to gross national product and X=seasonally adjusted rate of unemployment.

TABLE 8–16.—*Federal cash receipts from and payments to the public, quarterly, calendar years 1947–59, before and after seasonal adjustment*

[Millions of dollars]

Year and quarter	Unadjusted			Adjusted [1]			Adjusted [2]		
	Receipts from the public	Payments to the public	Surplus or deficit (−)	Receipts from the public	Payments to the public	Surplus or deficit (−)	Receipts from the public	Payments to the public	Surplus or deficit (−)
1946:									
1st	12,749	12,244	505	9,887	12,888	−3,001	10,537	13,005	−2,468
2d	9,514	12,015	−2,501	10,945	11,586	−641	10,810	10,890	−80
3d	9,720	8,449	1,271	10,382	8,635	1,747	10,512	9,188	1,324
4th	9,652	8,691	961	10,999	8,865	2,134	10,902	9,012	1,890
Total	41,635	41,399	236	42,213	41,974	239	42,617	41,935	682
1947:									
1st	14,354	9,163	5,001	11,319	9,518	1,801	11,137	9,406	1,731
2d	9,860	10,629	−768	10,952	9,951	1,001	11,091	9,837	1,254
3d	10,224	10,288	−64	10,977	10,465	512	11,076	10,028	1,048
4th	9,881	8,536	1,345	11,262	8,694	2,568	11,357	9,073	2,284
Total	44,319	38,615	5,704	44,510	38,628	5,882	44,784	38,459	6,329
1948:									
1st	15,049	8,641	6,408	11,884	8,882	3,002	11,740	8,644	3,096
2d	10,248	9,033	1,215	11,531	8,386	3,145	11,377	8,582	2,795
3d	10,097	8,735	1,362	10,752	8,936	1,816	10,789	9,135	1,654
4th	9,576	10,488	−912	10,907	10,546	361	10,760	10,168	592
Total	44,970	36,897	8,073	45,074	36,750	8,324	44,666	36,529	8,137
1949:									
1st	13,131	9,964	3,167	10,321	10,261	60	10,044	10,487	−443
2d	8,823	11,389	−2,566	9,148	10,738	−1,590	9,598	10,591	−993
3d	10,146	10,528	−382	10,671	10,852	−181	10,426	10,831	−405
4th	9,274	10,762	−1,488	10,603	10,745	−142	10,572	10,943	−371
Total	41,374	42,643	−1,269	40,743	42,596	−1,853	40,640	42,852	−2,212
1950:									
1st	12,242	10,760	1,482	9,686	11,174	−1,488	9,940	11,013	−1,073
2d	9,309	11,105	−1,796	9,729	10,514	−785	9,885	10,537	−652
3d	10,499	9,351	1,148	11,176	9,705	1,471	11,144	9,980	1,164
4th	10,401	10,754	−353	12,313	10,638	1,675	12,464	10,607	1,857
Total	42,451	41,970	481	42,904	42,031	873	43,433	42,137	1,296
1951:									
1st	18,062	11,179	6,883	14,067	11,651	2,416	13,973	11,864	2,109
2d	14,475	14,521	−46	14,855	13,692	1,163	14,671	13,761	910
3d	14,009	15,270	−1,261	15,115	15,816	−701	14,926	15,779	−853
4th	12,790	17,064	−4,274	15,407	16,910	−1,503	15,712	16,884	−1,172
Total	59,336	58,034	1,302	59,444	58,069	1,375	59,282	58,288	994
1952:									
1st	21,894	16,921	4,973	17,053	17,763	−710	17,721	17,420	301
2d	19,399	18,701	698	19,589	17,601	1,988	18,724	17,825	899
3d	15,369	17,921	−2,552	17,233	18,439	−1,206	17,443	18,356	−913
4th	14,735	19,436	−4,701	18,336	19,215	−879	17,870	18,799	−929
Total	71,397	72,979	−1,582	72,211	73,018	−807	71,758	72,400	−642
1953:									
1st	22,548	18,166	4,382	17,605	19,008	−1,403	17,626	19,180	−1,554
2d	18,693	21,037	−2,344	17,189	19,812	−2,623	17,576	19,383	−1,807
3d	15,356	18,216	−2,860	17,740	18,528	−788	17,803	18,910	−1,107
4th	13,472	18,511	−5,039	17,261	18,492	−1,231	17,319	18,397	−1,078
Total	70,069	75,930	−5,861	69,795	75,840	−6,045	70,324	75,870	−5,546
1954:									
1st	23,694	16,425	7,269	18,443	17,217	1,226	17,417	17,486	−69
2d	19,085	18,641	444	16,527	17,619	−1,092	17,007	17,712	−705
3d	13,516	18,585	−5,069	15,800	18,621	−2,821	16,349	17,926	−1,577
4th	12,268	16,184	−3,916	15,872	16,170	−298	16,004	17,002	−998
Total	68,563	69,835	−1,272	66,642	69,627	−2,985	66,777	70,126	−3,349

See footnotes at end of table.

TABLE 8–16.—*Federal cash receipts from and payments to the public, quarterly, calendar years 1947–59, before and after seasonal adjustment*—Continued

[Millions of dollars]

Year and quarter	Unadjusted			Adjusted [1]			Adjusted [2]		
	Receipts from the public	Payments to the public	Surplus or deficit (−)	Receipts from the public	Payments to the public	Surplus or deficit (−)	Receipts from the public	Payments to the public	Surplus or deficit (−)
1955:									
1st	21,302	17,175	4,127	17,070	17,968	−898	17,052	17,646	−594
2d	20,750	18,589	2,161	18,489	17,738	751	17,984	17,904	80
3d	15,330	18,589	−3,259	17,719	18,569	−850	17,795	18,206	−411
4th	14,067	17,837	−3,770	18,081	17,967	114	18,186	18,196	−10
Total	71,449	72,190	−741	71,359	72,242	−883	71,017	71,952	−935
1956:									
1st	24,085	17,113	6,972	19,395	17,922	1,473	19,542	17,941	1,601
2d	23,602	19,076	4,526	20,693	18,293	2,400	20,613	18,204	2,409
3d	17,139	18,280	−1,141	20,153	18,136	2,017	20,304	18,629	1,675
4th	15,504	20,338	−4,834	20,231	20,421	−190	20,081	19,935	146
Total	80,330	74,807	5,523	80,472	74,772	5,700	80,540	74,709	5,831
1957:									
1st	24,617	19,814	4,803	20,425	20,728	−303	20,655	20,863	−208
2d	24,846	21,574	3,272	21,711	20,917	794	21,324	20,966	358
3d	18,653	21,099	−2,446	21,363	20,846	517	21,348	20,879	469
4th	16,404	20,839	−4,435	21,225	20,820	405	21,234	20,746	488
Total	84,520	83,326	1,194	84,724	83,311	1,413	84,561	83,454	1,107
1958:									
1st	23,618	19,626	3,992	20,141	20,585	−444	20,237	20,545	−308
2d	23,219	21,850	1,369	19,934	21,266	−1,332	20,018	21,418	−1,400
3d	18,274	23,789	−5,515	20,841	23,411	−2,570	20,647	23,069	−2,422
4th	16,618	23,750	−7,132	21,133	23,651	−2,518	20,891	23,917	−3,026
Total	81,729	89,015	−7,286	82,049	88,913	−6,864	81,793	88,949	−7,156
1959:									
1st	22,615	22,721	−106	19,387	23,834	−4,447	20,503	23,898	−3,395
2d	24,031	24,283	−252	21,363	23,676	−2,313	21,117	23,334	−2,217

[1] These quarterly figures are a summary of the seasonally adjusted monthly data. Monthly data were adjusted by applying the Univac II procedure of the Bureau of the Census, described by Julius Shiskin in "Electronic Computers and Business Indicators," Occasional Paper 57, National Bureau of Economic Research, Inc., 1957, appendix A.

[2] These adjusted quarterly data are a 5-month moving average of the final seasonally adjusted monthly data.

NOTE.—The monthly adjusted data for the period prior to 1955 are based on concepts which differ slightly from those used in the officially published annual series, giving rise to some differences between the above totals and the official totals.

Source: Bureau of the Budget.

TABLE 8–17.—*Gross and net national saving related to gross national product, seasonally adjusted quarterly totals at annual rates, 1946–58*

	Gross national savings as a percent of gross national product	Net national savings as a percent of gross national product	Federal surplus or deficit as a percent of gross national saving	Federal surplus or deficit as a percent of net national saving
1946:				
1st	11.3	6.2	−41.5	−75.6
2d	14.8	9.7	2.3	3.5
Total	13.1	8.0	−16.3	−26.6
3d	15.0	10.0	22.4	33.5
4th	16.6	11.5	27.5	39.8
1947:				
1st	16.1	10.8	35.4	52.7
2d	15.2	9.6	37.7	59.7
3d	14.9	9.3	24.7	39.7
4th	16.5	10.9	34.4	52.9
1948:				
1st	17.8	11.9	31.2	46.8
2d	18.2	12.2	18.2	27.1
3d	17.5	11.6	12.6	18.9
4th	17.3	11.2	8.3	12.7
1949:				
1st	14.5	8.2	−3.7	−6.6
2d	12.4	6.8	−12.2	−26.2
3d	13.1	6.3	−8.3	−17.1
4th	11.0	4.0	−7.4	−20.6
1950:				
1st	13.8	6.8	−10.4	−20.9
2d	17.0	10.1	17.8	30.0
Total	15.4	9.3	15.0	24.8
3d	17.2	10.7	33.7	54.1
4th	19.8	13.2	25.5	38.0
1951:				
1st	17.3	10.8	36.7	58.9
2d	18.4	11.8	13.5	21.0
3d	16.5	9.8	−.5	−.9
4th	15.1	8.3	−4.7	−8.6
1952:				
1st	15.2	8.4	1.9	3.5
2d	13.6	6.6	−9.0	−18.6
3d	13.3	6.3	−15.7	−32.9
4th	13.4	6.5	−10.6	−21.8
1953:				
1st	13.4	6.3	−10.5	−22.1
2d	13.1	6.0	−14.5	−31.7
3d	13.2	5.9	−11.6	−26.0
4th	11.8	4.2	−27.8	−78.1
Total	15.0	8.1	1.8	3.4
1954:				
1st	12.4	4.6	−23.8	−63.5
2d	13.3	5.3	−11.3	−28.3
3d	13.0	4.9	−10.9	−28.5
4th	13.9	5.8	−4.5	−10.7
Total	13.1	5.2	−12.3	−31.1
1955:				
1st	14.2	6.2	1.5	3.4
2d	15.9	7.9	5.6	11.3
3d	15.9	7.9	8.6	17.2
4th	16.6	8.5	8.2	16.0
1956:				
1st	16.7	8.5	9.8	19.2
2d	17.2	9.0	9.4	11.4
3d	17.2	9.0	5.9	13.5
4th	17.0	8.8	7.0	
1957:				
1st	16.4	8.1	6.7	13.5
2d	16.0	7.7	3.1	6.4
3d	16.0	7.6	4.2	8.8
4th	14.5	6.0	−.9	−2.3
1958:				
1st	12.6	3.9	−14.8	−47.9
2d	12.1	3.5	−20.7	−72.2
3d	13.0	4.5	−17.5	−51.0
4th	13.7	5.2	−12.5	−32.6
Total	14.4	7.0	1.1	2.3

Source: Department of Commerce, Office of Business Economics, U.S. Income and Output, table V–2, and Survey of Current Business, July 1959, p. 29.

TABLE 8–18.—*Percentage distribution of Federal, State, and local government receipts by source, 1946–58*

Year	Federal, State, and local government receipts					Federal				
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance
1946	100	36.6	17.8	33.9	11.7	100	43.8	22.1	20.1	14.0
1947	100	37.6	19.8	32.7	10.0	100	45.4	24.7	18.2	11.8
1948	100	35.7	21.2	34.4	8.8	100	43.8	27.2	18.6	10.4
1949	100	33.1	18.4	38.4	10.2	100	41.5	25.0	20.9	12.6
1950	100	30.0	25.8	34.3	9.9	100	36.2	34.0	18.0	11.8
1951	100	34.2	26.3	30.0	9.6	100	40.8	33.5	14.8	11.0
1952	100	37.9	21.5	31.1	9.5	100	46.0	27.5	15.5	10.9
1953	100	37.7	21.3	31.8	9.2	100	46.0	27.6	15.9	10.5
1954	100	36.6	19.1	33.5	10.8	100	45.7	25.8	15.8	12.7
1955	100	35.2	21.5	32.4	10.8	100	43.3	28.7	15.2	12.8
1956	100	36.5	19.4	32.6	11.5	100	45.4	26.0	15.0	13.6
1957	100	36.7	18.1	32.7	12.5	100	45.6	24.5	14.9	15.0
1958	100	37.0	15.8	34.0	13.2	100	46.9	22.1	15.1	15.9

Source: Table 8–5.

TABLE 8–19.—*Percentage distribution of total (Federal, State, and local) taxes by quintiles of personal money income*

Year	I	II	III	IV	V	Total
1948	3.8	8.3	13.0	23.0	51.9	100
1954	4.0	9.0	13.0	21.8	52.2	100
1958	3.9	8.7	13.5	23.6	50.3	100

Source: See source note, table 8–22.

TABLE 8–20.—*Effective rate of tax (combined Federal, State, and local) by quintiles of personal money income*

Year	I	II	III	IV	V	All
1948	22.5	26.9	25.3	28.5	31.8	29.5
1954	25.0	28.6	27.8	35.8	34.6	33.0
1958	29.1	28.5	31.2	38.3	36.1	34.7

Source: See source note, table 8–22.

TABLE 8–21.—*Dollar limits of quintiles on personal money income*

Year	I	II	III	IV	V
1948	0–1,450	1,450–2,500	2,500–3,400	3,400–4,700	4,700 and over
1954	0–1,700	1,700–3,200	3,200–4,400	4,400–6,200	6,200 and over
1958	0–2,060	2,060–3,878	2,060–5,333	5,333–7,514	7,514 and over

Source: See source note, table 8–22.

TABLE 8–22.—*Relation weights of Federal compared with State and local taxes*

Year	Federal	State and local	Total
1948	75.4	24.6	100.0
1954	72.4	27.6	100.0
1958	70.1	29.9	100.0

Source: R. A. Musgrave et al., "Distribution of Tax Payments by Income Groups: A Case Study for 1948," National Tax Journal, March 1951; R. A. Musgrave, "The Incidence of the Tax Structure and Its Effects on Consumption," Federal Tax Policy for Economic Growth and Stability, papers submitted by panelists appearing before the Subcommittee on Tax Policy, joint committee print, 84th Cong., 1st sess., November 1955.

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TABLE 8–23.—*Estimated relative weight of Federal taxes on saving and consumption, 1946–57* [1]

Year	Percent of total Federal taxes falling on—			
	Consumption		Saving	
	Assumption 1	Assumption 2	Assumption 1	Assumption 2
1946	71.1	75.7	28.9	24.3
1947	68.9	75.0	31.1	25.0
1948	65.8	72.6	34.2	27.4
1949	68.7	74.9	31.3	25.1
1950	59.9	68.5	40.1	31.5
1951	60.4	68.8	39.6	31.2
1952	66.1	73.0	33.9	27.0
1953	66.3	73.2	33.7	26.8
1954	67.9	74.0	32.4	26.0
1955	64.6	71.8	35.4	28.2
1956	66.9	73.4	33.1	26.6
1957	68.4	74.2	31.6	25.8

[1] Indirect business tax and nontax accruals and contributions for social insurance (national income account concepts) were treated as falling entirely on consumption outlays. The relative weights of personal tax and nontax receipts on consumption and saving were estimated by distributing these receipts proportionally to the Statistics of Income distribution of individual income tax liabilities by adjusted gross income classes for the respective years and applying thereto an average saving function as follows:

Income class	Average saving rate (percent)
Under $7,500	0
$7,500 to $10,000	.12
$10,000 to $20,000	.26
More than $20,000	.40

Corporate profits tax accruals were treated (1) as falling entirely on saving, and (2) as falling to the extent of 75 percent of these accruals on saving.

Source: Table 8–5 and Treasury Department and Internal Revenue Service, Statistics of Income.

TABLE 8–24.—*Measures of stability* [1] *in broad categories of Federal expenditures, selected periods, 1946–58*

	1946 I–55 IV	1946 I–50 I	1950 I–53 IV	1954 I–54 IV	1955 I–58 IV
Gross expenditures	11.6	6.3	8.7	1.6	1.7
Gross Federal purchases	21.6	10.3	14.2	2.1	1.7
National defense purchases	29.0	9.2	17.1	.8	1.9
Gross Federal civil purchases, less acquisition of capital items	10.2	11.3	5.7	2.2	5.6
Transfer payments to persons	12.1	13.8	2.1	1.0	3.7
Gross domestic civil expenditures, less transfer payments and acquisition of capital items	6.5	4.7	3.3	.9	3.0

[1] Arithmetic means of percentage deviations of observed quarterly values (seasonally adjusted at annual rates) from the trend for each category in each period. Growth trends were derived from logarithmic equations, computed by use of the least-squares method from time series of the quarterly values, seasonally adjusted at annual rates for each component.

Source: Table 8–10.

CHAPTER 9. MONETARY POLICY AND DEBT MANAGEMENT[1]

In recent years, especially since 1953, we have placed major reliance on the monetary policies of the Federal Reserve System in our effort to maintain high levels of employment, reasonable stability of price levels, and a satisfactory rate of economic growth. In this chapter, we shall study the functioning of the monetary and financial mechanism and its impact on the economy, paying particular attention to the problems we have encountered in trying to make flexible monetary policy an effective instrument for achieving the goals of economic growth and stability, and the problems that have arisen in connection with the management of the public debt. In addition, we shall consider the implications for monetary policy and debt management of the other findings of this report concerning the structure of our economy and the nature of the problems we are faced with. And, finally, we shall advance some suggestions for increasing the effectiveness of monetary policy and debt management.

I. Monetary Policy and Debt Management Since 1946

In order to establish a point of departure and to provide the reader with the necessary background for this chapter, we shall begin with a systematic survey of developments in the field of monetary policy and debt management since World War II. We shall take up first the period prior to the Treasury-Federal Reserve accord of March 1951 and then turn to a somewhat more detailed consideration of post-accord developments. We shall attempt to draw a few broad generalizations concerning our experience, saving detailed analysis and criticism for later sections of this chapter.

A. Preaccord monetary-debt policy

The wartime background.—During the period of U.S. participation in World War II, the Federal Reserve System directed its energies almost entirely to the support of Treasury financing operations. Early in 1942, the Treasury and the Federal Reserve agreed upon a mutually acceptable wartime structure of interest rates on Treasury securities. Yields were to be held at three-eighths of 1 percent on 3-month Treasury bills, seven-eighths of 1 percent on 9 to 12 month maturities, and ranging up to 2½ percent on the longest term Treasury bonds.[2] The Federal Reserve agreed to buy all Treasury bills offered to it at the three-eighths percent rate, with the seller having a repurchase option at the same rate. A preferential discount rate of one-half percent was established for borrowings by member banks col-

[1] Main responsibility for the drafting of this chapter rested with Warren L. Smith.
[2] See H. C. Murphy, "The National Debt in War and Transition" (New York: McGraw-Hill Book Co., 1950), ch. 8, and L. V. Chandler, "Inflation in the United States, 1940–48" (New York: Harper & Bros., 1951), ch. IX.

lateraled by Government securities maturing within 1 year.[3] By means of these devices, together with direct purchases in the market, the agreed interest rate structure was maintained.

The rationale of war finance can be explained roughly as follows. As large a portion of the funds as seemed economically and politically feasible was raised through taxation, as much more as possible was borrowed (at the predetermined structure of interest rates) from the nonbank public, and the residual financing to make ends meet was done through the banking system with the support of the Federal Reserve.[4] As a result of these operations, the total Federal debt held outside the Treasury investment accounts increased by $196.9 billion (from $54.7 billion to $251.6 billion) between the end of 1941 and the end of 1945. Federal Reserve holdings increased by $22 billion, holdings of commercial banks increased by $69.4 billion, and holdings of nonbank investors increased by $105.5 billion.[5]

Table 9–1 shows the factors affecting the money supply during the period from the end of 1941 to the end of 1945. The chief factor generating an increase in the money supply was the increase of $97.8 billion in bank holdings of Government securities; bank loans increased by only $3.8 billion.[6] Part of the funds generated by this huge expansion of bank credit went toward building up Treasury deposits in the banks (which increased by $22.8 billion) and time deposits (which increased by $20.7 billion). An outflow of gold, together with other miscellaneous factors, offset a small amount of the expansion. The net result was that the money supply (publicly held demand deposits and currency) increased by $53.7 billion.[7]

TABLE 9–1.—*Factors affecting money supply, Dec. 31, 1941, to Dec. 31, 1945*

[In billions of dollars; (+) denotes increase, (−) decrease in money supply]

Decrease in gold stock	−2.7
Increase in bank loans	+3.8
Increase in bank holdings of Treasury obligations	+97.8
Federal Reserve banks	+22.0
Commercial banks	+68.8
Mutual savings banks	+7.0
Increase in Treasury deposits in banks	−22.8
Increase in time deposits	−20.7
Other factors net	−1.7
Change in money supply [1]	+53.7

[1] Money supply-demand deposits adjusted plus currency outside banks.

Source: Federal Reserve Bulletin.

[3] Murphy, "The National Debt in War and Transition," pp. 98–99, 127; Chandler, "Inflation in the United States, 1940–48," pp. 189–191.

[4] For the fiscal years 1940 to 1946, covering the defense and war periods, total expenditures amounted to $391.1 billion, of which $176.1 billion (or 45 percent) was covered by taxation and the remaining $215 billion (or 55 percent) by borrowing. $133.6 billion was borrowed from nonbanks, $60.2 billion from commercial banks, and $21.2 billion from Federal Reserve banks. Murphy, "The National Debt in War and Transition," pp. 256–261.

[5] Unless otherwise indicated, the statistics used in this chapter are taken from readily available published sources, such as the Federal Reserve Bulletin, the Survey of Current Business and its various supplements, and Economic Indicators.

[6] The expansion of $68.8 billion in commercial banks' holdings of Government securities shown in table I differs from the amount of $69.4 billion, referred to in the text, because the former is book value while the latter is face value.

[7] The reserves needed to support this expansion were provided chiefly by the purchase of $22 billion of Government securities by the Federal Reserve and by a reduction of $1.6 billion in excess reserves, which were relatively large at the beginning of the period. The expansion of deposits required $5.1 billion of additional reserves; most of the rest were used up through an expansion of $17.4 billion in currency in circulation, with the loss of gold and other miscellaneous factors accounting for the remainder.

From the last quarter of 1941 to the last quarter of 1945, the gross national product (seasonally adjusted annual rate) increased from $138.7 billion to $197.1 billion. The price level was kept under reasonably satisfactory control by means of direct price controls and rationing; the implicit price deflator for the gross national product rose by 28.5 percent between 1941 and 1945. As a result of the controls, together with patriotic exhortations, the rate of personal saving was exceptionally high—amounting to $126.4 billion, or 23.1 percent of disposable income for the years 1942–45. Between the end of 1941 and the end of 1945, the money supply (demand deposits and currency) increased from $48.6 billion to $102.3 billion, the total of outstanding savings deposits and savings and loan shares increased from $32.6 billion to $55.8 billion, and the total publicly held debt (i.e., debt held outside the Treasury investment accounts and the Federal Reserve) increased from $52.4 billion to $227.3 billion. Income velocity of monetary circulation declined from 2.80 to 1.93 per year between the last quarter of 1941 and the last quarter of 1945—and it was at a low level at the beginning of the period as a result of depressed business conditions.[8] Outstanding consumer debt declined from $9.2 billion to $5.7 billion and total outstanding mortgage debt from $37.6 billion to $35.5 billion between the end of 1941 and the end of 1945.

The immediate postwar situation.—Thus by 1946 the economy was extremely liquid and characterized by widespread excess demands which were held in check by price controls.[9] Price controls were weakened by restrictive legislation in June and then removed almost entirely later in the year. Beginning at midyear, the price level began a steep rise, with the Consumer Price Index rising by 15 percent between June and December. The price level continued to rise during 1947 and 1948, although at a somewhat moderated pace.

After the war ended, the Federal Reserve continued to maintain the interest rate structure that had prevailed during the war itself, although gradually some flexibility was introduced into the short-term end of the market. The preferential discount rate on loans to member banks secured by Government securities maturing within 1 year was removed in the spring of 1946. In July 1947 the Federal Reserve eliminated the posted buying rate of three-eights of 1 percent on Treasury bills, and the rate rose gradually to a little over 1 percent by the end of 1948. The certificate rate was also freed later in 1947. Prices of long-term bonds rose sharply in early 1946, as heavy wartime borrowing came to an end and investors were doubtful whether the volume of private security offerings would be sufficient to absorb savings. However, by April 1946 a decline had set in, as the private demand for funds began to climb and many classes of investors began to sell Government securities in order to obtain funds for private lending. A gradual rise in long-term interest rates occurred in 1946 and 1947; in December 1947, the Federal adjusted the support price downward slightly. However, not until the Treasury-Federal Reserve accord

[8] Income velocity is computed by dividing the gross national product (seasonably adjusted annual rate) by the money supply (demand deposits adjusted and currency outside banks, seasonally adjusted). It represents the number of times (per annum rate) that the average dollar of money is spent on final output during the period/

[9] For an interpretation of the way in which the large volume of liquid assets built up during World War II and the continued expansion of liquid assets in the postwar period have complicated the problems of the monetary authority, see the forthcoming study paper by John G. Gurley entitled "Financial Aspects of Postwar Economic Developments in the United States."

of March 1951 did the Federal Reserve let the prices of long-term Treasury securities fall below par or their yields rise above 2½ percent.

With stocks of consumer durable goods and of producers' plant and equipment deteriorated and inadequate and with income levels high under conditions of full employment, private demands for credit of all kinds were very strong. Nearly all investor groups were heavily loaded with Government securities as a consequence of the financing of the war. During the 1946–48 period, banks, insurance companies, and nonfinancial corporations sold large blocks of Government securities in order to expand their private loans and investments or to finance their own expenditures on plant and equipment and inventories. Under the prevailing policy of supporting the prices of Government securities, the Federal Reserve had to buy considerable quantities of these securities. Such purchases created bank reserves and tended to produce an inflationary increase in total bank credit and money supply. However, while the money supply increased substantially (by nearly $8 billion) in 1946, the increase in 1947 and 1948 was quite moderate—from $110 billion at the end of 1946 to $111.6 billion at the end of 1948, a rise of $1.6 billion, or 1.4 percent. The explanation is partly that the Federal Reserve displayed considerable skill in offsetting its purchases in some maturity sectors by sales in others and also that the Treasury had large cash surpluses in 1947 and 1948 which it used for debt retirement, thus taking a considerable amount of debt off the market. The cash surplus was $5.7 billion in 1947 and $8 billion in 1948, and the publicly held debt declined by $5.3 billion in 1947 and $7.8 billion in 1948.[10] Thus, the inflation in 1947 and 1948 was financed largely by an increase in the velocity of the existing money supply rather than by the creation of new money. Income velocity increased from 2.01 in the fourth quarter of 1946 to 2.38 in the last quarter of 1948, a rise of 18.4 percent.

It should also be noted that in the immediate postwar period scarcely anyone questioned the wisdom of maintaining the wartime pattern of interest rates or, at any rate, of "pegging" the prices of long-term bonds at the wartime level. Various reasons were given for this—obviously not all held by the same people—including the fear of unemployment during the period of reconversion to peacetime activity and the feeling that the economy might revert to the state of chronic unemployment that had characterized the 1930's, the dislike of rising Treasury interest costs, the fear of a catastrophic collapse in the government bond market if "weak" holders should try to dump their securities in a falling market, and the feeling that rising interest rates and tightening money would do little good in combating inflation anyhow.

Monetary-debt policy in 1947–48.—With open market policy perverse or at least inoperative as a stabilization device, the Federal Reserve tried to rely on its other weapons in 1947 and 1948. The discount rate was raised to 1 percent with the elimination of the preferential rate on loans collateraled by short-term Government securities in April 1946 and was later increased to 1¼ percent in January 1948

[10] The amount of debt retirement (or borrowing) in any period is not necessarily equal to the surplus (or deficit) in the cash budget, due partly to changes in the Treasury's cash balance and partly to the fact that the cash budget includes transactions of certain Government agencies which issue their own securities.

and to 1½ percent in August 1948. However, these increases probably had very little effect, since member banks had little reason to borrow from the Federal Reserve. During the war reserve requirements for demand deposits were maintained at 20 percent for central reserve city and reserve city banks and 14 percent for country banks, while time deposit reserve requirements were maintained at 6 percent. These were the maximum levels permissible by law except in the case of demand deposits at central reserve city banks.[11] During 1948, these latter reserve requirements were raised first to 22 and then to 24 percent, and in August 1948 Congress passed legislation giving the System temporary authority to raise reserve requirements above the normal maximum levels. Limited use was made of this authority, which expired in June 1949. Reserve requirement increases had little restrictive effect under the existing circumstances, since banks could readily obtain funds to meet the added requirements by selling Government securities which had to be bought by the Federal Reserve if the sales tended to depress their prices. Of course, the raising of reserve requirements combined with bank sales of Government securities tended to reduce bank liquidity somewhat, but bank liquidity was so redundant and the scope for increases in reserve requirements was so small that the effects can hardly have been significant.

Consumer credit controls under regulation W of the Board of Governors, which had been established in 1941 by Executive order of the President, were removed in November 1947. The controls were temporarily reimposed, upon authorization by Congress, in August 1948 and were again abolished when the authority expired in June 1949. Under the circumstances existing at that time, many economists favored reliance on selective controls, such as those applying to consumer credit, as a substitute for general controls which were rendered inoperative by the bond support policy. Consumer credit controls probably helped to abate the inflationary pressures during the times they were in effect.

Several proposals were advanced during the 1946–48 period which were designed to separate the Government securities market from the markets for private debt in order to permit the Federal Reserve to control credit in the interest of economic stability while at the same time supporting the prices of Government securities.[11a] The most widely discussed of these proposals was the so-called security reserve plan. This scheme would have established, in addition to regular cash reserve requirements, a secondary legal reserve requirement which could be satisfied by holding short-term Government securities and which could be varied within limits by the Board of Governors. One version (referred to as the "Eccles plan") received the support of the Federal Reserve in 1947 and was put before the Congress although no action was taken on it.[12] The purpose of the proposal was to tie down Government securities in the banking system so that the Federal Reserve could restrict credit without having to contend with bank sales of Governments. However, it is doubtful whether such a plan

[11] Reserve requirements for central reserve city (New York and Chicago) banks were reduced below the maximum level of 26 percent, because of the fact that the pattern of wartime borrowing and spending tended to drain funds out of these financial centers.

[11a] For a brief summary of the various proposals, see E. A. Goldenweiser, 'American Monetary Policy" (New York: McGraw-Hill Book Co., Inc., 1951), pp. 51–63.

[12] See "Proposal for a Special Reserve Requirement Against the Demand and Time Deposits of Banks," Federal Reserve Bulletin, January 1948, pp. 14–23.

would have helped much since it would not have prevented banks from selling longer-term securities from their portfolios in order to obtain funds for lending. Nor would it have dealt with the problem of insurance companies and other investors who were selling Government securities for the same purposes.

Debt management in 1947 and 1948 placed considerable emphasis on the reduction of bank-held debt, on the ground that the monetization of debt increases the money supply and is inflationary and therefore that demonetization of debt must be anti-inflationary. Accordingly, in using the substantial cash surpluses of 1947 and 1948 for debt retirement, the Treasury emphasized the retirement of bank-held debt. Measured against its objective, the policy was eminently successful—commercial bank holdings of Government securities declined from $74.8 billion at the end of 1946 to $62.6 billion at the end of 1948, a drop of $12.2 billion.[13] However, it is at least doubtful whether, under the circumstances, this helped much in the fight against inflation, since commercial banks were able to expand their loans and holdings of other securities by $12.5 billion during this period despite the fact that the money supply increased only very moderately, as indicated above. The banks were unloading their holdings of Government securities and using the proceeds to expand loans, a process that was almost certainly highly inflationary and helped to cause the increase in velocity that occurred. By taking the securities off the hands of the banks through debt retirement, the Treasury undoubtedly facilitated this operation. It should be noted, however, that, the pressure of loan demand being what it was, the banks would undoubtedly have been selling Government securities anyhow, and if the Treasury had not retired as much debt thus absorbing securities, the sales by banks (and other investors) would have depressed security prices, thus making it necessary for the Federal Reserve to buy more in order to maintain the structure of interest rates. Since System purchases of securities would have resulted in increases in member bank reserves, thus permitting multiple expansion of credit, this process would have been highly inflationary. Thus, under these conditions, debt retirement probably strengthened anti-inflationary policy, although the emphasis on retiring bank-held debt was of little importance.

In 1947 and 1948, Federal Reserve policy was approximately neutral in the sense that the money supply was held approximately constant. However, the supply of money and other liquid assets was very large relative to income, and, as a consequence, it was possible to finance large increases in the level of expenditures by drawing on existing cash balances with only slight increases in short-term interest rates which almost certainly had very little restrictive effect on expenditures. Consumer credit controls may have had some slight anti-inflationary effect after they were reimposed in August 1948, but to the extent that there was an effective anti-inflationary policy during this period, it

[13] The public debt reached its highest level on February 28, 1946. From that date until the end of 1946, the Treasury retired $20.3 billion of debt. This reduction in the debt, at a time when there was a small budget deficit, was accomplished by drawing down Treasury deposits at commercial banks by $21.8 billion. Of the $20.3 billion of debt retirement, $18.8 billion came from the commercial banks. Since Treasury deposits at commercial banks were not subject to reserve requirements at that time, this debt retirement was without economic significance, merely representing the cancellation of unneeded Treasury deposits against an equal amount of excess borrowing from the banks. See Murphy, "The National Debt in War and Transition," pp. 227–228.

was chiefly the fiscal policy which produced substantial cash surpluses in 1947 and 1948.

The 1949 recession.—The first postwar recession set in at the begining of 1949 and lasted throughout that year. Gross national product in current dollars (seasonally adjusted annual rate) fell from $265.9 billion in the fourth quarter of 1948 to $257 billion in the fourth quarter of 1949, a decline of 3.4 percent. However, prices fell somewhat, and as a result gross national product valued at constant prices fell less than 1.5 percent. The implicit price deflator for gross national product declined by 2.0 percent, while the consumer price index declined by 2.3 percent and the wholesale price index by 6.8 percent between December 1948 and December 1949.

As a result of both an increase in expenditures and a fall in tax receipts, the Federal cash budget shifted from a surplus of $8 billion in the calendar year 1948 to a deficit of $1.3 billion in 1949, thus serving to moderate the impact of the recession. However, monetary policy played a rather neutral role during the recession as it had during the preceding expansion of 1947–48. The money supply declined by $400 million or less than one-half of 1 percent in 1949, while income velocity dropped by 2.5 percent. Member bank reserves requirements were reduced in several steps during the year from 26 to 22 percent at central reserve city banks, from 22 to 18 percent for reserve city banks, from 16 to 12 percent for country banks, and from 7½ to 5 percent for time deposits. Altogether these reserve requirement reductions released about $3.7 billion of member bank reserves. However, the Federal Reserve System reduced its portfolio of Government securities by $4.4 billion during 1949, and, as a result, total member bank reserves declined from $20.5 billion to $16.6 billion, a drop of $3.9 billion, thus offsetting the expansive effect of the reductions in reserve requirements. Interest rates, for the most part, declined moderately during the year, but the declines were probably not large enough to have much stimulative effect. Consumer credit controls were relaxed in March 1949 and then removed at midyear as the temporary authority to impose them expired.

Monetary policy in 1949 probably had little effect in either prolonging the recession or in promoting recovery. Moreover, in view of the fact that the economy was still well supplied with liquidity as a holdover from World War II, it is doubtful whether more aggressive monetary expansion would have done any good in stimulating recovery.

Recovery and the beginning of the Korean war.—A strong expansion in the economy set in at the beginning of 1950 which was destined to continue until the middle of 1953. Gross national product rose sharply in the first half of 1950. By the second quarter it had risen by $17.4 billion from the level of the last quarter of 1949. The driving force behind this expansion was investment, which rose by $16.3 billion, with a swing from negative to positive in inventory investment, accounting for $10.2 billion. This expansion occurred in the face of a decline of $4.4 billion in Federal Government purchases of goods and services. Prices rose only slightly in the first half of the year.

Thus, the economy seemed to be well on its way to a healthy recovery when the Korean war began in June 1950. The fear of inflation connected with the war, together with the possibility of shortages and

rationing, appears to have set off a wave of spending. By the fourth quarter, gross national product had risen by another $30 billion above the level of the second quarter, reaching $304.3 billion. Nearly all sectors—including households, business, and government—contributed to the expansion in the second half of 1950 by increasing their expenditures. There was a further large increase in inventories. Prices rose sharply, the consumer price index rising by 5.1 percent and the wholesale price index by 11.4 percent between June and December.

The inflationary burst in the last 6 months of 1950 was fed by an exceptionally large expansion of bank credit, which served to facilitate the tremendous inventory accumulation that occurred during that period. Commercial banks expanded their private loans and securities by $8.6 billion, while selling Treasury securities to the extent of $3.7 billion, and the money supply grew by $7.4 billion. However, monetary measures to restrain the expansion began to be taken before the end of 1950. Under the authority of the Defense Production Act of 1950, consumer credit controls were reimposed in September and selective controls establishing minimum downpayments and maximum maturities for real estate mortgage loans were put into effect for the first time. The discount rate was raised from 1.5 to 1.75 percent in August. In January 1951, reserve requirements were raised by two percentage points for demand deposits at all classes of banks and one percentage point for time deposits.

The Treasury-Federal Reserve controversy and the Douglas committee report.—For some time the Federal Reserve System had been growing restive concerning the policy of "pegging" long-term bond prices. While System officials had accepted the policy as necessary during the immediate postwar period, they had for some time been urging greater flexibility of monetary policy in the interest of economic stability. In the course of time, the System had gained numerous adherents to its position on this matter. In January 1950, the Subcommittee on Monetary, Credit, and Fiscal Policies of the Joint Committee on the Economic Report, which had conducted extensive studies during the previous year, submitted its report. This document, known as the Douglas committee report, after Senator Paul H. Douglas, of Illinois, the chairman of the subcommittee, strongly supported the Federal Reserve's position. The report said that "an appropriate, flexible, and vigorous monetary policy, employed in coordination with fiscal and other policies, should be one of the principal methods used to achieve the purposes of the Employment Act." In pursuance of the objective of achieving a flexible monetary policy, the report contended that "the primary power and responsibility for regulating the supply, availability, and cost of credit in general [should] be vested in the duly constituted authorities of the Federal Reserve System and that Treasury actions relative to money, credit, and transactions in the Federal debt [should] be made consistent with the policies of the Federal Reserve." [14]

The Treasury, however, in the interest of keeping down the cost and minimizing the complications connected with the management of the debt continued to prefer a policy of low and stable interest rates.

[14] "Monetary, Credit, and Fiscal Policies," Report of the Subcommittee on Monetary, Credit, and Fiscal Policies of the Joint Committee on the Economic Report, 81st Cong., 2d sess., Doc. 129 (Washington: Government Printing Office, 1950), pp. 1–2.

The controversy between the Federal Reserve and the Treasury came to a head in August 1950 when the Federal Reserve raised the discount rate from 1½ to 1¾ percent at the same time that the Treasury offered holders of $13.4 billion of maturing certificates and bonds an issue of 1¼ percent 13-month notes in exchange. These exchange terms were the same as those offered in another exchange a few months earlier, and in view of the rise in the discount rate they were no longer attractive to investors. As a result, the exchange offering was a resounding failure, and it was necessary for the Federal Reserve to come to the assistance of the Treasury by purchasing nearly $8 billion of the maturing issues while selling some $7 billion of other securities in order to offset as much as possible the effects on bank reserves.

The Treasury-Federal Reserve accord of March 1951.—The controversy continued in late 1950 and early 1951, with the Federal Reserve pressing for freedom to let the prices of long-term bonds fall and interest rates rise in order to combat the inflationary situation. The matter was finally settled in March 1951 in the famous accord between the Treasury and the Federal Reserve System that established spheres of action for the two agencies somewhat along the lines suggested by the Douglas committee report.[15] The Federal Reserve was set free to conduct monetary policy in the interest of economic stability, while the Treasury was to adjust its debt management policies to the interest rates established by the Federal Reserve.

Summary of monetary policy before the accord of March 1951. Monetary policy prior to the accord may be characterized briefly as follows:

1. As a result of the methods used to finance the war, the economy was extremely liquid at the beginning of the postwar period. The policy of maintaining a relatively fixed yield structure, which had been adopted during the war, was carried over into the postwar period.

2. During 1946, Federal Reserve actions were perversely expansive and contributed to the inflation.

3. In 1947 and 1948, the authorities managed, by skillful use of their credit control instruments and with an assist from Treasury fiscal policy, to maintain a relatively neutral position in the sense of keeping the money supply from increasing; the inflationary developments of these years were, however, reflected in a sharp increase in income velocity.

4. During the 1949 recession, monetary policy was again neutral but in view of the large existing supply of liquidity, monetary expansion could probably not have helped much in stimulating recovery anyhow.

5. During the recovery in early 1950, and especially after the outbreak of the Korean war at midyear, the bond-support policy resulted in an undesirable monetary expansion which contributed to the inflation.

6. The Federal Reserve became increasingly restive with the policy of "pegging" long-term bond prices and in March 1951 an accord was reached with the Treasury which set the System free to follow a flexible monetary policy in the interest of stability.

[15] See Board of Governors of the Federal Reserve System, Annual Report, 1951, pp. 3–8, 98–102.

7. During the entire preaccord period, the Treasury made no serious effort to issue longer term securities, and debt maturities shortened continuously due to the passage of time.

B. Monetary-debt policy since the Treasury-Federal Reserve accord

Immediate postaccord policies.—Federal Reserve policy was quite cautious in the period immediately following the accord, since there was considerable uncertainty concerning the market's reaction to greater flexibility of interest rates. Nevertheless long-term interest rates were permitted to break through the 2½-percent ceiling that had prevailed since the early days of World War II. The price level stabilized immediately following the accord; however, price controls became effective at about the same time, and there is little reason to think that the accord was responsible for the stabilization of prices. During the remainder of 1951, the wholesale price index declined gently but steadily, while consumer prices rose only a little. In fact, prices in general were quite stable throughout 1951 and 1952, although this stability was largely the resultant of falling agricultural prices together with a compensating rise in industrial prices.

The 1950 boom in residential construction.—One of the factors responsible for the boom in 1950 was a powerful expansion in residential construction. Private nonfarm housing starts rose from 989,000 in 1949 to a record level of 1,352,000 in 1950. Unlike the later housing boom in 1955, however, the 1950 boom does not appear to have been due primarily to financial factors. The major causes appear to have been the high rate of household formation, the large accumulation of unhoused families, the rapid increase in incomes, and the availability of large and widely distributed liquid assets. However, mortgage market developments, including the relaxation of credit terms in the Housing Acts of 1948 and 1950, the heavy support operations of the Federal National Mortgage Association, and the general decline of interest rates in 1949–50, undoubtedly served to accentuate the boom.[16]

When the problem of inflation became serious immediately after the outbreak of the Korean war, one of the first areas to which restrictions were applied was residential construction. In July 1950, the FHA and the VA tightened the requirements for insured and guaranteed mortgages within the framework of existing legislation. The Defense Production Act of 1950 authorized the control of real estate credit as a means of conserving materials for defense use and to protect the economy against inflation. The President delegated authority to control terms on conventional mortgages to the Board of Governors of the Federal Reserve System and similar authority relating to mortgages insured or guaranteed by the Government to the Housing and Home Finance Agency. In October 1950 the Board of Governors issued regulation X establishing minimum downpayments and maximum maturities applicable to conventional mortgages, and the HHFA put into effect similar controls applicable to FHA-insured and VA-guaranteed mortgages.

These selective controls over mortgage credit were slow to exert their effects. One reason for this was that the regulations were anticipated

[16] See W. L. Smith, "The Impact of Monetary Policy on Residential Construction, 1948–58," in "Study of Mortgage Credit," Subcommittee on Housing, Committee on Banking and Currency, U.S. Senate, 85th Cong., 2d sess. (Washington: Government Printing Office, 1958), pp. 244–64.

and financing arrangements which were exempt from regulation were entered into prior to the application of the controls. Thus, there was a very large backlog of liberal financing arrangements to be worked through before the controls could exert their effects.

In 1951 housing starts declined from the record level of the previous year to about 1 million units and remained at about that level in 1952 and 1953. This fall is partly due to some decline in the rate of family formation and in real per capita disposable income, but it was also undoubtedly caused to some extent by the tightening of credit terms and the rise in interest rates that followed the accord.

In addition to selective controls over consumer and real-estate credit, the Board of Governors early in 1951 instituted a program of so-called voluntary credit restraint. Such a program was provided for in the Defense Production Act of 1950, and the President delegated the authority to implement it to the Board of Governors. Working through committees composed of representatives of various lender groups, the program sought to discourage financing of nonessential, deferrable, and speculative projects and to help assure adequate financing for defense and defense-related activities.

Monetary policy in 1951–52.—1951 and 1952 were years of relatively stable prosperity, although there was a slight dip in the second quarter of 1952. The Federal Reserve permitted the money supply to expand substantially during this period—from $117.7 billion at the end of 1950 to $124.5 billion at the end of 1951 and $129 billion at the end of 1952, an expansion of $11.3 billion or 9.6 percent over the 2-year period. However, demands for funds were rising strongly, and, in consequence, interest rates rose gently but steadily. The reserves needed to support the monetary expansion were provided by open-market purchases of securities; the discount rate remained at 1¾ percent throughout 1951 and 1952, and no further changes in reserve requirements were made after the increases of January–February 1951, referred to above.

Selective controls on consumer credit, which had been instituted in 1950, were suspended in May 1952, and the authority of the Board of Governors to control such credit was repealed by the Defense Production Act amendments in June. Selective control of mortgage credit, which had also been put into effect in 1950, was eased in June 1952 and finally suspended in September when the rate of new housing starts fell below the level at which the Defense Production Act amendments of 1952 required the controls to be suspended. The voluntary credit restraint program, which had been established in early 1951, was suspended in May 1952, and the authority to conduct such a program was terminated by the Defense Production Act amendments in June. Except for controls over margin requirements for security loans which have been used from time to time, the Federal Reserve has relied entirely on so-called general credit-control weapons—open-market operations, variation of member-bank reserve requirements, and changes in discount rates—since 1952.

The 1953 changes in open market policy: the adoption of "bills-only."—Early in 1953 some important changes were made in the System's techniques of monetary control. In 1952, the Federal Open Market Committee, which is responsible for the conduct of the System's open market operations, established an ad hoc subcommittee on

the Government securities market which was directed to make a study of the market with a view to determining the operating techniques most conducive to effective monetary policy. The ad hoc subcommittee made its report to the Open Market Committee in November 1952, and the recommendations of this report formed the basis for important changes in the conduct of open-market operations which were adopted by the Open Market Committee in March 1953.[17] Three important changes were made:

1. Open-market operations for the purpose of effectuating stabilizing monetary policy were henceforth to be confined to the short-term market, chiefly Treasury bills.

2. The System's policy with respect to the market for Government securities was changed from one of "maintaining orderly conditions" to a weaker one of "correcting a disorderly situation" should one arise. In effectuating this aspect of open-market policy, however, transactions in whatever maturity sector seemed most appropriate were to be permissible.

3. During periods of Treasury financing, the System was to refrain from purchasing (*a*) maturing issues for which an exchange was being offered, (*b*) when-issued securities, or (*c*) outstanding issues of comparable maturity to those being offered in exchange.[18]

In recommending these changes in operating techniques, the ad hoc subcommittee emphasized its contention that they would add to the "depth, breadth, and resiliency" of the Government securities market and thus make this market function more effectively. In addition, the Open Market Committee itself seemed to emphasize the fact that the policy of dealing only in short-term securities in the conduct of stabilizing monetary policy would free the System from the problem of determining the structure of interest rates and would minimize the degree of interference with market forces. The practice of confining open market operations to the short-term market has come to be known as the "bills only" policy and has been the subject of considerable controversy both within the Federal Reserve System and outside.[19] We shall reserve a critical analysis of the bills-only policy until later in this chapter.

The new administration's attitudes toward debt management.— Some changes were also made in the Treasury's approach to debt management at the beginning of 1953. Since the end of World War II, the Treasury had made relatively little effort to sell longer term securities either for cash or in exchange offerings. As shown in table 9–2 the total publicy held marketable debt amounted to $120.7 billion at the end of 1952 as compared with $147.0 billion at the end of 1946. However, during this period the amount of debt maturing within 1 year had risen from $32.4 billion or 22 percent of the total to $42.1 billion or 34.9 percent. On the other hand, debt maturing beyond 10

[17] The full text of the Ad Hoc Subcommittee report was published in "United States Monetary Policy: Recent Thinking and Experience," hearings before the Subcommittee on Economic Stabilization of the Joint Committee on the Economic Report, 83d Cong., 2d sess. (Washington: Government Printing Office, 1954), pp. 257–307.

[18] Board of Governors of the Federal Reserve System, Annual Report, 1953, pp. 86–90.

[19] At a meeting of the Open Market Committee in June 1953, Allan Sproul, then President of the Federal Reserve Bank of New York and an opponent of the "bills only" policy, succeeded in inducing the Committee to rescind the March decision. At the next meeting in September 1953, however, the Committee reversed itself again and adopted the same policies that had originally been adopted in March. See ibid., pp. 94–96 and 99–100. The matter has since been discussed at meetings of the Open Market Committee on several occasions, but the policy has remained in effect.

years had fallen from $49.6 billion or 33.7 percent of the total to $27.2 billion or 22.5 percent. The only bonds other than regular savings bonds that were sold between the Victory loan of November-December 1945 and the end of 1952 were $970 million of investment series A nonmarketable bonds sold for cash in September–October 1947,[20] $13.6 billion of convertible investment series B bonds which were offered in a voluntary exchange for outstanding marketable Treasury bonds at the time of the accord in March 1951,[21] and two offerings of shorter term marketable bonds, one sold for cash and one included in an exchange operation in 1952.[22]

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[20] The investment series A bonds paid interest at 2½ percent, and were nonmarketable and noncallable before maturity in 1965, but were redeemable on 30 days' notice at a specified schedule of redemption values, depending on how long they had been held.

[21] The investment series B bonds bear interest at 2¾ percent, become callable in 1975 and mature in 1980. They are nonmarketable but are convertible into marketable 1½ percent 5-year Treasury notes at the option of the owner on Apr. 1 or Oct. 1 of each year. They were offered in exchange for two issues of bank-restricted 2½ percent marketable bonds of June and December 1967–72.

[22] $0.6 billion of 2½ percent 7-year bonds was issued in an exchange operation in March 1952, and $4.2 billion of 2⅜ percent bonds was sold for cash in June of the same year.

TABLE 9–2.—*Composition of the publicly held Federal debt, 1946–59*

[Dollars in billions]

End of year	Total publicly held debt [1]	Marketable debt										Convertible bonds [2]	Other nonmarketable and miscellaneous debt [3]
		Total	Percent of total	Maturity class									
				Within 1 year	Percent of total	1 to 5 years	Percent of total	5 to 10 years	Percent of total	Over 10 years	Percent of total		
1946	$205.3	$147.0	100.0	$32.4	22.0	$38.2	26.0	$26.7	18.2	$49.6	33.7	----------	$58.3
1947	200.0	138.0	100.0	30.6	22.2	48.2	34.9	9.5	6.9	49.5	35.9	----------	62.0
1948	192.3	128.7	100.0	36.3	28.2	40.6	31.5	9.7	7.5	41.9	32.6	----------	63.6
1949	198.9	130.9	100.0	44.2	33.8	33.0	25.2	16.6	12.7	37.1	28.3	----------	68.0
1950	196.7	126.3	100.0	41.9	33.2	31.9	25.3	16.0	12.7	36.5	28.9	----------	70.4
1951	193.4	116.8	100.0	34.7	29.7	37.7	32.3	8.7	7.4	35.7	30.6	$7.9	68.7
1952	196.8	120.7	100.0	42.1	34.9	30.5	25.3	20.9	17.3	27.2	22.5	9.1	67.0
1953	201.0	125.2	100.0	56.1	44.8	23.0	18.4	18.5	14.8	27.6	22.0	8.6	67.2
1954	204.3	129.4	100.0	43.3	33.5	26.4	20.4	32.2	24.9	27.5	21.3	8.3	66.6
1955	204.3	134.2	100.0	39.5	29.4	36.3	27.0	29.9	22.3	28.5	21.2	7.9	62.2
1956	197.8	130.5	100.0	45.5	34.9	39.9	30.6	16.6	12.7	28.4	21.8	7.5	59.8
1957	195.6	133.6	100.0	51.7	38.7	43.3	32.4	10.9	8.2	27.6	20.7	6.6	55.4
1958	202.3	142.6	100.0	50.9	35.7	46.7	32.7	17.3	12.1	27.7	19.4	5.6	54.1
1959 [4]	208.2	149.3	100.0	55.7	37.3	51.3	34.4	16.7	11.2	25.7	17.2	5.0	53.9

[1] Publicly held debt excludes securities held by the Treasury investment accounts and Federal Reserve banks.

[2] Investment series B 2¾ percent nonmarketable Treasury bonds of 1975–80, convertible into marketable 1½ percent 5-year Treasury notes at option of owner on Apr. 1 or Oct. 1 of each year.

[3] Includes a small amount of non-interest-bearing and matured debt.

[4] As of July 31.

Source: Federal Reserve Bulletin and Treasury Bulletin.

The new administration which came into office at the beginning of 1953 expressed great concern at the shortening of debt maturities which had been taking place and indicated that one of its objectives would be to reverse this process by selling longer term securities. It seemed to be the view of the new officials in the Treasury that debt management could contribute significantly to economic stabilization by lengthening the debt during periods of inflation in order to preempt funds from the long-term market and reduce liquidity and by shortening the debt during recessions in order to avoid reducing the supply of funds available for investment and in order to add to liquidity.

Monetary-debt policies in the first half of 1953.—By the beginning of 1953, the expansion of the economy which had been going on continuously since early 1950 began to generate significant inflationary pressures. Wholesale prices which had been declining for nearly 2 years, leveled off, and consumer prices began to rise sharply. Accordingly, the Federal Reserve intensified the restrictive measures which it had been applying rather gently and cautiously during 1952. The discount rate was raised from 1¾ percent to 2 percent in January 1953, and the system sold securities to put pressure on member banks. As indicated in figure 9–1, negative free reserves made their first appearance of the postwar period in late 1952 and remained at a level of about $650 million during the first 4 months of 1953.[23] The Treasury issued $0.6 billion of bonds having a maturity of 5 years and 10 months, as an optional exchange offering in February, and then made the first serious move in its avowed program to lengthen debt maturities in May when it sold $1.2 billion of 30-year 3¼ percent bonds for cash.[24] This offering was oversubscribed nearly five times and was probably priced more generously in relation to the market than was necessary. In any case, this unaccustomed move on the part of the Treasury, coming at a time when interest rates, as shown in figure 9–2, were rising more rapidly and to higher levels than at any time since World War II, probably contributed to the disorder in the capital market in May and June. At this point, the Federal Reserve purchased Government securities in the open market in order to relieve the strain on the capital market and then in July it reduced reserve requirements by 2 percentage points at central Reserve city banks and 1 point at Reserve city banks, thus freeing about $1.2 billion of reserves. While these moves toward easier credit were taken chiefly to ease pressures on the capital market and to provide reserves for seasonal expansion in the second half of the year, it soon became apparent that they had occurred at an opportune time from the standpoint of economic stabilization, since indications that business activity was entering a declining phase soon began to appear.

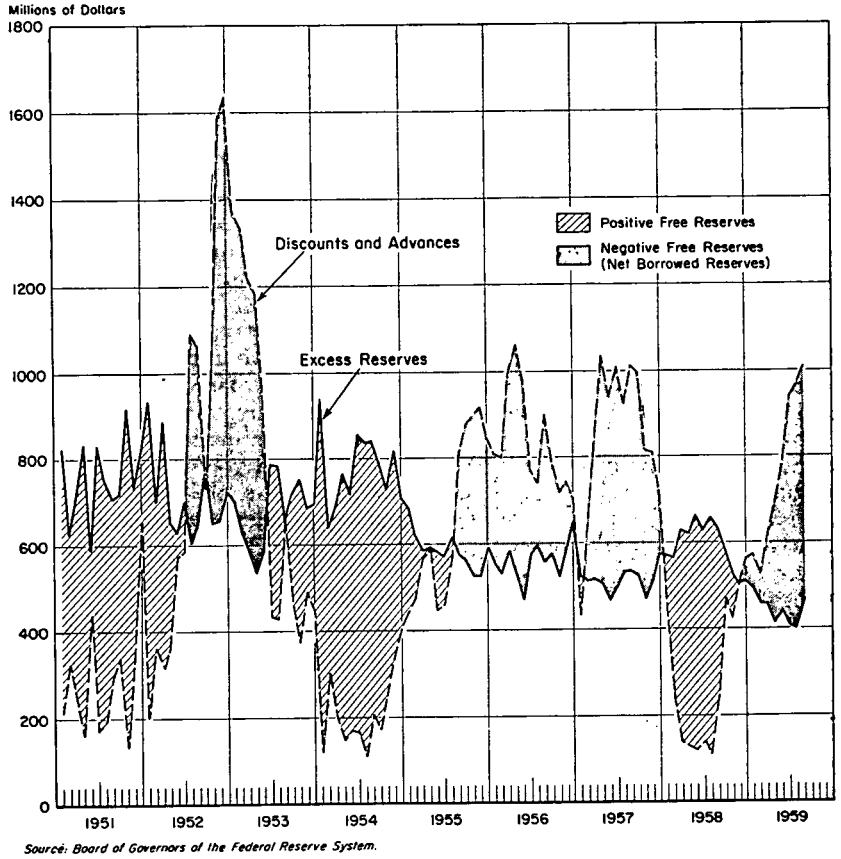
The recession of 1953–54.—Gross national product fell from a peak level of $368.8 billion in the second quarter of 1953 to a low point $358.9 billion in the second quarter of 1954 and then began to rise. The Federal Reserve acted vigorously to counteract the recession. In addition to the reduction of reserve requirements in mid-1953, the

[23] "Free reserves" is the difference between aggregate member bank excess reserves and discounts and advances (member bank borrowings from Federal Reserve banks). "Negative free reserves" (sometimes referred to as "net borrowed reserves") means a situation in which discounts and advances exceed reserves. The importance of free reserves stems from the fact that the Federal Reserve authorities place considerable emphasis on it as a measure of monetary pressures.

[24] Another $0.4 billion of the 3¼s was exchanged for maturing savings bonds.

CHART 9–1

EXCESS RESERVES, DISCOUNTS AND ADVANCES, AND FREE RESERVES
1951–1959



Source: Board of Governors of the Federal Reserve System.

System bought $1.2 billion of Government securities in the second half of the year, and, after allowing for the offsetting effects of other factors, member bank reserves increased by $0.6 billion. The money supply expanded by $6.3 billion between June and December 1953. Commercial banks increased their loans by $2.6 billion (somewhat less than the normal seasonal expansion) and added $4.7 billion to their holdings of Government securities, while reducing their indebtedness, which had risen in the first half of the year to the highest levels since the end of World War II. As shown in chart 9–2 (p. 335), interest rates declined from the high levels reached in June, although the decline was rather sluggish, and free reserves had turned positive by midyear (see chart 9–1). The Federal Government had a cash deficit, partly seasonal and partly the result of the operations of automatic stabilizers, of $8 billion in the second half of 1953. Both the consumers and wholesale price indexes remained rather constant, and unemployment did not increase markedly until nearly the end of the year. The Federal Open Market Committee shifted the emphasis of its

policy from restriction in the early part of the year to what was described as a policy of "active ease" in September.[25]

In 1954 unemployment increased and business activity declined up to midyear when recovery began. Prices were generally quite stable throughout the year. The Federal Reserve continued the easy money policy which it had adopted in 1953. The discount rate which had remained unchanged throughout 1953, was lowered from 2 to 1¾ percent in January and from 1¾ to 1½ percent in April and May. Free reserves averaged $600 million from January through September, then declined slightly near the end of the year. Reserve requirements were reduced in several steps between June and August, freeing about $1.5 billion of reserves. The effects of the reduction in reserve requirements were partially offset by open market sales, but the money supply increased by $3.9 billion between December 1953 and December 1954. During the same period, commercial banks increased their loans by $3 billion and added $5.6 billion to their holdings of Government securities. Altogether, during the period of easy money from June 1953 to December 1954, commercial banks increased their holdings of Government securities from $58.6 billion to $69 billion, an increase of $10.4 billion. On a seasonally adjusted basis, income velocity declined from 2.93 in the second quarter of 1953 to 2.81 in the third quarter of 1954, a decline of 4.1 percent.

Debt management during the recession.—The Treasury took advantage of the easy money and ready availability of funds during the recession to press its program of lengthening debt maturities. As indicated in table 9–3, the Treasury put out six offerings of bonds aggregating $27.6 billion—all but the last one in the 5- to 10-year maturity range—between October 1953 and February 1955. As indicated in table 9–2, the debt had continued to shorten in 1953, so that by the end of the year $56.1 billion or 44.8 percent of the total publicly held marketable debt was scheduled to mature within 1 year. By the end of 1954, however, the amount of debt in the 1-year maturity range had been reduced to $43.3 billion or 33.5 percent of the total.

TABLE 9–3.—*Major debt-lengthening operations by the Treasury, October 1953 to February 1955*

Date	Description of security		Amount issued to public (million)[1]		
	Coupon rate (percent)	Maturity	Total	For cash	In exchange
October 1953	2¾	7 years, 10 months.	$2,189	$2,189	
November 1953[2]	2½	5 years, ½ month.	1,743		$1,743
February 1954	2½	7 years, 9 months.	11,167		11,167
August 1954	2⅛	6 years, 3 months.	3,796		3,796
December 1954	2½	8 years, 8 months.	6,755		6,755
February 1955	3	40 years	1,923		1,923
Total			27,573	2,189	25,384

[1] Not including amounts issued to U.S. Government investment accounts and Federal Reserve banks.
[2] Reopening of 2½ percent bond of Dec. 15, 1958, originally offered in an exchange in February 1953.

Source: Treasury Bulletin, October 1959.

[25] Board of Governors of the Federal Reserve System, Annual Report, 1953, pp. 96–98.

Easy money and the expansion in residential construction.—The easy money policies of 1953 and 1954 seem to have had a pronounced stimulative effect on residential construction. Private nonfarm housing starts increased from 1,068,000 units in 1953 to 1,202,000 units in 1954 and 1,310,000 units in 1955. Housing starts in 1955 were nearly as high as in the peak year 1950, and the volume of construction in real terms was 17 percent higher. Financial factors seem to have had a great deal of influence in producing this expansion. The real forces supporting housing demand were considerably weaker in 1954–55 than in the earlier boom in 1950. Most of the increase in housing starts between 1953 and 1955 is accounted for by units financed by VA-guaranteed mortgages. The main explanation for this seems to be the easing of credit terms—no-downpayment loans grew from 11 percent of the total in 1953 to 48 percent in 1955, and 30-year loans increased from 5 percent of the total in 1953 to 44 percent in 1955—and the increase in the supply of funds for financing. The increased availability of funds was due to an increase in the maximum permissible interest rate on VA-guaranteed mortgages from 4 to 4½ percent in April 1953, together with the general decline in open market interest rates due to the recession and the easy-money policy. These developments increased the attractiveness of VA-guaranteed mortgages to lenders and resulted in a plentiful supply of funds. Somewhat similar factors operated, although less strongly, in the case of FHA-insured mortgages.[26]

The beginning of restrictive monetary policy in early 1955.—By the end of 1954, it became apparent that the economy was entering a phase when inflation might quickly become a problem. Accordingly, at its January meeting, the Federal Open Market Committee shifted the emphasis of its policy directive away from the easy-money policy that had prevailed since September 1953 and toward a more neutral position.[27] This was the first move toward the application of a restrictive monetary policy which was to be applied continuously and with generally increasing intensity until late in 1957. In April 1955, the discount rate was raised from 1½ to 1¾ percent, the first in a series of five discount-rate increases which ultimately raised the rate to 3½ percent in August 1957.

A significant change in the Federal Reserve System's administrative procedure was made in 1955. In June, the Federal Open Market Committee, which consists of the seven members of the Board of Governors, together with five of the presidents of Federal Reserve banks, discontinued its executive committee.[28] The executive committee, which had consisted of three Board members and two Reserve bank presidents, had handled the administration of open market operations between meetings of the full committee, which normally met four times a year. Since the elimination of the executive committee, the full Open Market Committee has been meeting at intervals of approximately 3 weeks.

The year 1955 was a tremendously prosperous one. Gross national product valued at 1954 prices (seasonally adjusted annual rate) rose

[26] See Smith, "The Impact of Monetary Policy on Residential Construction, 1948–58," in "Study of Mortgage Credit," pp. 252–254.
[27] Board of Governors of the Federal Reserve System, annual report, 1955, pp. 89–90.
[28] Board of Governors, annual report, 1955, p. 48.

from $370.1 billion in the fourth quarter of 1954 to $401.1 billion in the fourth quarter of 1955, a rise of 8.4 percent. Unemployment declined from an average of 5.6 percent of the labor force in 1954 to 4.4 percent in 1955. The price level rose only slightly during the year—the implicit price deflator of the GNP and the wholesale price index each rose by slightly more than 1.5 percent, while the Consumer Price Index hardly changed at all. However, the stability of the general price level was the resultant of a decline in farm and food prices and a rise in the prices of services and manufactured goods.

Residential construction in 1955–57.—The expansion in 1955 was particularly spectacular in two sectors—residential construction and motor vehicles. It seems apparent that the easy credit and low interest rates of the recession year 1954 set off a rapid expansion in housing construction financed by VA-guaranteed and FHA-insured mortgages, particularly the former, as indicated above. The increase in housing starts began early in 1954 and had actually reached its peak by December of that year and then declined gradually during 1955. However, total nonfarm dwelling units started in 1955 were 8.8 percent above 1954, while total expenditures on residential construction valued at 1954 prices were up by 18.2 percent between the 2 years (due to the increase in the size and quality of houses), and total expenditures in current dollars were up by 21.4 percent (due to a rise of 3 percent in the prices of houses). Total nonfarm mortgage recordings of $20,000 or less amounted to $28.5 billion in 1955, and total mortgage debt outstanding on 1- to 4-family properties increased by $12.5 billion, or 16.5 percent, during the year.

By early 1955, it appeared that the expansion in housing, accompanied by very high levels of business and public construction, was pushing up construction costs sharply, and accordingly, measures were put into effect to restrain the housing boom. Selective measures included the tightening up of terms on FHA-insured and VA-guaranteed mortgages and limitations on borrowing by member savings and loan associations from Federal home loan banks for the purpose of making new mortgage commitments. In addition to these selective restrictions, the generally tight monetary policy of the Federal Reserve began to have some effect, with the result that by the end of 1955 housing starts had reached a seasonally adjusted annual rate of less than 1.2 million. Due to the decline in housing starts, the selective restrictions were short lived and were superseded before the end of 1955 by selective measures designed to stimulate housing construction.[29] However, by this time the rise in interest rates due to the generally restrictive monetary policy had begun to drain away the supply of funds available for VA-guaranteed and FHA-insured mortgages, with the result that the selective stimulants did little good and residential construction continued to decline in 1956 and 1957.

Consumer credit and the automobile boom in 1955.—The automobile industry also experienced a record year in 1955. Total factory sales of vehicles increased from 6.6 million units in 1954 to 9.2 million units in 1955, an increase of 38.9 percent. Consumer expenditures on automobiles and parts increased by 27.1 percent in real terms (at 1954 prices) and by 33.6 percent at current prices. This expansion was

[29] See Smith, "The Impact of Monetary Policy on Residential Construction, 1948–58," in "Study of Mortgage Credit," p. 254.

accompanied by a rapid growth in consumer credit. The proportion of automobile sales financed on credit increased substantially between 1954 and 1955. New credit extensions for automobile purchases increased from $11.8 billion in 1954 to $16.7 billion in 1955, a rise of 43.5 percent, while total automobile credit outstanding increased from $9.8 billion at the end of 1954 to $13.5 billion at the end of 1955, a rise of 37.3 percent. There was also a considerable expansion of both new extensions and outstanding credit in the case of consumer credit used for the purchase of durable goods other than automobiles.

The automobile industry experienced a sharp contraction after the record year 1955, with total factory sales of motor vehicles falling from the 1955 level of 9.2 million units to 6.9 million, 7.2 million, and 5.1 million units in 1956, 1957, and 1958, respectively. Credit conditions do not appear to have been an active causal force in the 1955 boom, although they were undoubtedly a permissive factor. Credit terms eased markedly in 1954 and 1955, insofar as downpayments and maturities of loans are concerned.[30] However, credit terms, if anything, appear to have eased still further in 1956 and 1957 while sales were falling, which suggests that the general credit tightening of those years was not responsible for the decline in automobile sales.

By 1955, the rapid growth of consumer credit became a subject of much concern among economists and public officials. The average annual rate of growth of outstanding installment credit from 1946 to 1955 was 27.5 percent, a rate which appeared to be unsustainable. The President suggested to the Congress in his Economic Report in January 1956 that it might be desirable to reestablish, at least on a standby basis, selective controls over consumer credit, and at about the same time, the Council of Economic Advisers requested the Board of Governors of the Federal Reserve System for an appraisal of the arguments for and against selective controls. Accordingly, the Board prepared an extensive study of consumer credit in all its aspects, which was published in early 1957.[31] Subsequent to the publication of this study and presumably based upon an analysis of its contents, the Board of Governors transmitted a statement to the interested congressional committees and to the Council of Economic Advisers expressing opposition to selective controls over consumer credit.[32]

Monetary and economic developments during 1955–57.—The Federal Reserve progressively tightened its general controls over money and credit during 1955, 1956, and most of 1957. In 1955, the money supply increased by 2.8 percent, only slightly less than the 3 percent of 1954. However, in 1956 the growth was only 1.1 percent, while in 1957 the money supply actually declined by just less than 1 percent. Thus, for the 2-year period 1956 and 1957 as a whole, the money supply was virtually unchanged. Free reserves, which had begun to decline in October 1954, continued to fall in early 1955, became negative in August, and averaged a negative $300 million for the last 5 months of the year, as indicated in chart 9–1. Free reserves re-

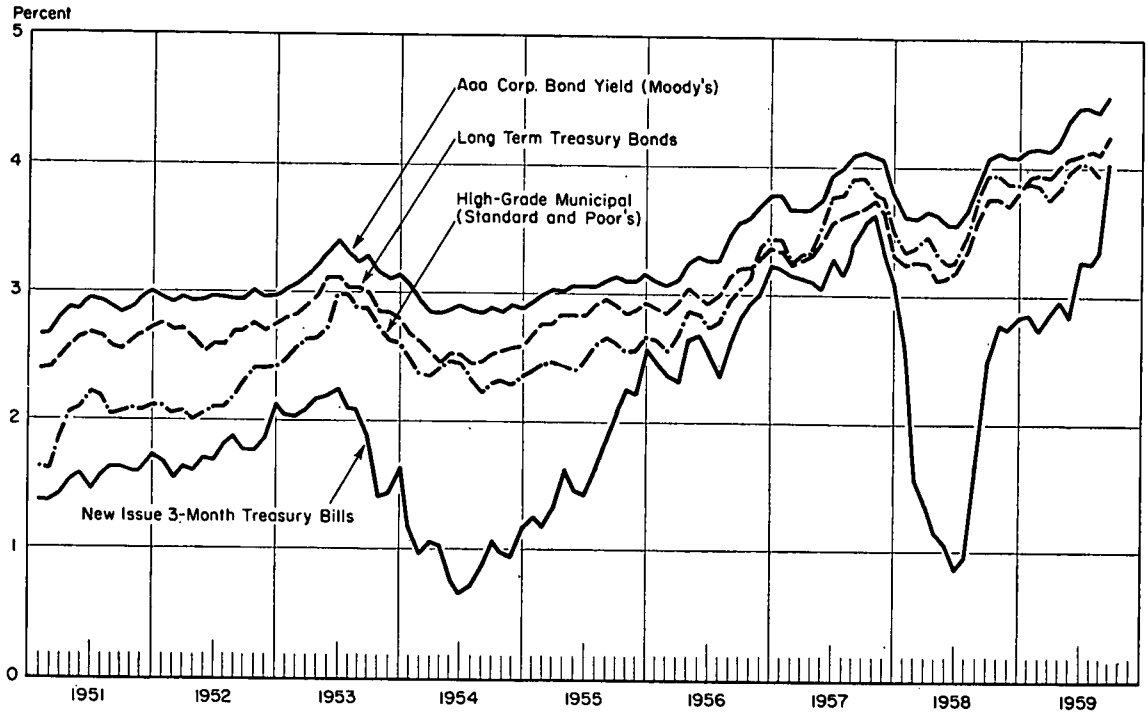
[30] See "Consumer Installment Credit" (full citation in footnote 31), pt. II, vol. 1, pp. 115–125.

[31] Board of Governors of the Federal Reserve System, "Consumer Installment Credit," 6 vols. (Washington: Government Printing Office, 1957). Pt. I, "Growth and Import" (2 vols.); pt. II, "Conference on Regulation" (2 vols.); pt. III, "Views on Regulation" (1 vol.); pt. IV, "Financing New Car Purchases: A National Survey for 1954–55" (1 vol.).

[32] See Federal Reserve Bulletin, June 1957, XLIII, 647–648.

CHART 9–2

SELECTED INTEREST RATES, 1951–1959



Source: Federal Reserve System and Department of Commerce

mained negative throughout 1956 and 1957, reaching a peak of about $500 million around the middle of the latter year.

Chart 9–2 indicates that interest rates rose gently during most of 1955, with the rate of increase accelerating in 1956 and 1957. Table 9–4 summarizes the increases in some of the more important interest rates between early 1955 and the peak level reached in 1957. The interest rate level reached in late 1957 just before the tide of credit restriction began to subside was the highest since the early 1930's.

TABLE 9–4—*Changes in selected interests rates, 1955–57*

Category of debt	Interest rate January 1955 (percent)	Peak level in 1957		Percentage increase, January 1955 to 1957 peak
		Month	Interest rate (percent)	
3-month Treasury bills [1]	1. 257	October	3. 591	185. 7
Long-term Treasury bonds [2]	2. 68	do	3. 73	39. 2
Corporate bonds, Aaa [3]	2. 93	September	4. 12	40. 6
Corporate bonds, Baa [3]	3. 45	November	5. 09	47. 5
High-grade municipal bonds [4]	2. 39	August	3. 91	63. 6
Bank rates on commercial loans [5]	[6] 3. 54	December	4. 85	37. 0

[1] Rate on new issues.
[2] Average of daily figures.
[3] Average of daily figures. Moody's Investors Service.
[4] Average of weekly figures (Wednesday) covering 15 high-grade municipal bonds. Standard and Poor's Corp.
[5] Average rates on short-term business loans in 19 large cities.
[6] March 1955.

Sources: Board of Governors of the Federal Reserve System and Department of Commerce.

In spite of the credit restrictions, business activity continued to expand until the third quarter of 1957. Gross national product continued to increase; GNP in current dollars rose from a seasonally adjusted annual rate of $370.8 billion in the fourth quarter of 1954 to $447.8 billion in the third quarter of 1957, an increase of 20.8 percent. However, the rise in GNP valued at 1954 prices during the same period was only 10.9 percent—from $370.1 to $410.6 billion—with the rest of the expansion being reflected in rising prices. Consumer prices rose by 2.9 percent in 1956 and at an annual rate of 3.6 percent for the first 9 months of 1957. The increases in the wholesale price index were 4.5 and 3.6 percent, while the increases in the GNP implicit price deflator were 4 and 3.9 percent.

Business expenditures on plant and equipment were a very important factor in the expansion, rising from a seasonally adjusted annual rate of $25.6 billion in the first quarter of 1955 to a peak level of $37.8 billion in the third quarter of 1957, an increase of 41.7 percent. While much of this expansion was financed internally from retained earnings and depreciation allowances, the amount of funds raised from external sources expanded sharply despite rising interest rates. New corporate security issues rose steadily from $9.4 billion in 1954 to $12.7 billion in 1957, an increase of 35.2 percent. As credit conditions tightened in 1956–57, interest rates on new offerings of corporate securities rose substantially above yields on existing securities of equivalent quality.

State and local governments also increased their expenditures sharply during this period. Their expenditures on construction rose steadily from $7.8 billion in 1954 to $9.7 billion in 1957, an increase of

25.5 percent. With tax revenues rising under the impetus of prosperity, an increasing amount of this spending was financed from that source, and the volume of securities sold by State and local governments declined during 1955–56 and then rose in 1957 to about the same level as in 1954.

It is interesting to note that, despite the very high levels of investment in plant and equipment in 1955–57, there was little if any increase in productivity for the economy as a whole after 1955. Real GNP (valued at 1954 prices) per full-time employed worker rose from about $6,800 in 1954 to about $7,200 in 1955, an increase of about 5½ percent, and then remained virtually unchanged in 1956–57. That is, the rise in output in 1956–57 did no more than keep pace with the rise in employment.

Commercial bank adjustments, 1955–57.—Despite the restrictive monetary policy, the banking system supplied a very large amount of credit to the private sector of the economy in 1955–57. As indicated in table 9–5, banks expanded their loans and holdings of securities other than Federal Government securities by $29 billion, or 27.4 percent between the end of 1954 and September 1957. The funds to carry out this tremendous expansion of credit at a time when the money supply was actually declining slightly were obtained primarily from two sources: liquidation of Government securities and expansion of time deposits. As can be seen from table 9–5, liquidation of Government securities was the more important source in the early stages of the expansion and became less important as the expansion proceeded, while growth of time deposits became increasingly important, especially in 1957, when an unusually large expansion of time deposits at commercial banks occurred.[33]

TABLE 9–5.—*Factors affecting the money supply, Dec. 31, 1954, to Sept. 25, 1957*

[In billions of dollars (+) denotes increase, (−) decrease in money supply]

	Entire period	1955	1956	1st 9 months of 1957
Increase in bank loans and holdings of private securities [1]	+29.0	+14.5	+9.9	+4.6
Reduction in holdings of Government securities by commercial and savings banks	−14.0	−7.7	−3.5	−2.8
Increase in time deposits	−12.4	−3.1	−3.8	−5.5
Commercial banks	−8.3	−1.5	−2.2	−4.5
Mutual savings banks [2]	−4.2	−1.6	−1.6	−1.0
Other factors, net	−3.7	+.1	−1.1	−2.7
Change in money supply [3]	−1.1	+3.8	+1.5	−6.4
Memorandum: Change in money supply seasonally adjusted [3]	+4.2	+3.5	+1.2	−.5

[1] Includes securities of State and local governments.
[2] Includes Postal Savings System.
[3] Money supply equals demand deposits adjusted plus currency outside banks.

Source: Federal Reserve Bulletin.

This large expansion of bank credit to the private sector appears to have constituted a serious leakage in the restrictive monetary policy

[33] The expansion of bank credit to the private sector in the first 9 months of 1957, as shown in table V, is not so moderate as it appears to be relative to the expansion in 1955–56, since the last quarter of the year is normally a period of strong seasonal expansion. In the last 3 months of 1957, such credit expanded by a further $2.9 billion, making a total expansion of $7.5 billion for the year.

that was being applied during the period. This leakage, together with a number of others that made their appearance during 1955–57, will be discussed at length later in this chapter. These leakages were part of a mechanism by which existing cash balances were dishoarded to provide funds for financing expanding economic activity in the face of a restrictive monetary policy. The dishoarding of cash balances shows up statistically in the form of an increase in velocity. Between the fourth quarter of 1954 and the third quarter of 1957, income velocity rose from 2.86 to 3.33, an increase of 16.4 percent.

Fiscal policy and debt management in 1955–57.—The Federal Government had a cash deficit of $0.7 billion during 1955, but, due to the operation of the various automatic stabilizers, the budget showed surpluses of $5.5 billion in 1956 and $5.6 billion in the first 9 months of 1957. Thus, for the entire period from the end of 1954 through September 1957, there was an aggregate cash surplus of $10.4 billion. In consequence, the net public debt (not including securities held by Government agencies and trust funds) declined by $10.1 billion during this period, as a result of outright retirement, together with purchases for the Treasury investment accounts. Such cash borrowing as the Treasury had to do during 1955–57 was chiefly tax anticipation financing for the purpose of filling seasonal gaps between receipts and expenditures. In its handling of refunding operations, the Treasury was forced—or persuaded—by the tightness of the market to confine itself almost entirely to short maturities. In July 1955, the 3-percent bond maturing in 1995, which was originally offered in a refunding operation in February 1955, was reopened for cash, and $800 million was sold. No further effort was made to sell longer term securities until October 1957, when $550 million of 4-percent 12-year bonds were sold for cash. As a result of the emphasis on short-term financing, the amount of debt maturing within 1 year had risen to $51.7 billion, or 38.7 percent of the total marketable debt, by the end of 1957, as shown in table 9–2.

The recession of 1957–58.—By the third quarter of 1957, it became apparent that business activity was entering a declining phase. Industrial production, as measured by the seasonally adjusted Federal Reserve index was practically constant for the first 9 months of the year, with a noticeable decline in October. Gross national product reached its peak in the third quarter and then began to decline.[34] Unemployment began to rise significantly during the fourth quarter and by December had reached 5 percent of the labor force on a seasonally adjusted basis. However, the price level continued to edge upward, and the Federal Reserve was accordingly cautious about reversing its restrictive policy. The first significant change was made at the Open Market Committee meeting on November 12, 1957, when the directive to the manager of the System open market account was changed from the emphasis on "restraining inflationary developments," which had been in effect for many months to a cautious "fostering sustainable growth in the economy, without inflation, by moderating pressures on bank reserves." [35] A few days later, the discount rate was reduced from 3½ percent (to which it had been raised in

[34] The National Bureau of Economic Research fixes the turning point in July 1957. See G. H. Moore, "Measuring Recessions," Occasional Paper 61, National Bureau of Economic Research, 1958.

[35] Board of Governors of the Federal Reserve System, annual report. 1957, pp. 54–55.

August) to 3 percent by several Federal Reserve banks, with the others following within the next couple of weeks. At the December 17 meeting of the Open Market Committee, the directive was again changed, this time to a more positive emphasis on "cushioning adjustments and mitigating recessionary tendencies in the economy." [36] The amount of negative free reserves (see chart 9–1) tapered off during the last 3 months of 1957, and free reserves became positive in January.

Further credit-easing measures were taken in early 1958. On March 4, the Open Market Committee again liberalized its directive to provide for "contributing further by monetary ease to resumption of stable growth of the economy." [37] The discount rate was lowered to 2¾ percent in January, to 2¼ percent in March, and 1¾ percent in April. Free reserves were permitted to increase to a level of nearly $500 million by March and remained at approximately that level through July. Reserve requirements for demand deposits were lowered by 2 percentage points for central reserve city banks, 1½ percentage points for Reserve city banks, and 1 point for country banks in several stages in February-April 1958, thus releasing about $1.4 billion of reserves. A portion of these reserves was reabsorbed through open market sales, however.

Interest rates fell rather sharply in late 1957 and early 1958, but the decline was much more pronounced in short-term than in long-term rates so that in the early months of 1958 the differential between long-term and short-term rates was exceptionally wide, as can be seen from chart 9–2. The yield on new issues of Treasury bills dropped from 3.591 percent in October 1957 to 0.881 percent in June 1958, while the average yield on long-term Treasury bonds fell from 3.73 percent in October to 3.12 percent in April. Yields on long-term corporate and municipal securities experienced declines similar to those in long-term Treasury bonds. The failure of long-term interest rates to decline more substantially is probably attributable in part to the fact that the volume of corporate and municipal borrowing remained high, as security issues whose issuance had been deferred during the preceding period of high interest rates came into the market, the funds so raised being used in many cases to pay off bank loans or other short-term temporary borrowings.

The beginning of recovery in 1958.—The decline in business activity was rather sharp but short-lived. Gross national product in current dollars fell from $447.8 billion in the third quarter of 1957 to $431 billion in the first quarter of 1958, a decline of 3.8 percent. Real GNP (in 1954 dollars) fell a bit more sharply—by 4.8 percent—as the price level continued to rise slightly. The seasonally adjusted unemployment rate rose steadily from 4.2 percent of the labor force in July 1957 to 7.5 percent in April 1958 and then remained approximately constant for several months. Plant and equipment expenditures declined quite sharply from a level of $37.8 billion in the third quarter of 1957 to a low point of $29.6 billion in the third quarter of 1958 and then increased only rather slowly. However, the major force at work during the recession period was a decline in nonfarm business inventory investment from a positive $1.7 billion in the third quarter of 1957 to a negative $8.1 billion in the first quarter of 1958, a swing of $9.8 billion.

[36] Ibid., pp. 60–61.
[37] Board of Governors of the Federal Reserve System, annual report, 1958, pp. 40–42.

The Federal Reserve continued with its relatively easy monetary policy until August 1958, several months after business activity began to turn upward in April, although interest rates began to rise sharply by June for reasons chiefly related to Treasury debt management actions. In August, the Open Market Committee shifted the tenor of its directive slightly in the direction of restriction,[38] the discount rate was raised from 1¾ to 2 percent by several Federal Reserve banks, and the level of free reserves began to decline. The discount rate has since been raised four times and by September 1959 had reached 4 percent. Free reserves declined sharply after August 1958, became negative in December, and by June 1959 were negative by more than $500 million, as shown in chart 9–1.

Debt management in 1957–58.—The year 1958 was a difficult one for the Treasury in its role as manager of the public debt. The Federal Government had a cash deficit of $7.3 billion, and the net public debt (outside the Treasury investment accounts) increased by $6.7 billion. The problem was accentuated by the fact that cash redemptions of savings bonds exceeded cash sales of new bonds by $2.6 billion, due chiefly to heavy redemptions of series F and G bonds, sales of which had been discontinued in 1952. Finally, the schedule of refunding operations for maturing marketable securities was unusually heavy, due in part to the fact that debt operations during the 1957 period of tight credit had been heavily concentrated in the short-term sector so that much of the 1957 borrowing rolled over and came due again in 1958. As in the 1953–54 recession, the Treasury took advantage of the decline in interest rates in late 1957 and early 1958 to engage in a program of debt-lengthening. As indicated in table 9–6, between September 1957 and June 1958 the Treasury sold seven issues of bonds either for cash or in exchange for maturing securities, the aggregate amount of securities placed with the public (i.e., outside the Treasury investment accounts and the Federal Reserve banks) amounting to $16 billion.

TABLE 9–6.—*Major debt-lengthening measures by the Treasury, September 1957 to June 1958*

[Dollar amounts in millions]

Date	Description of security		Amount issued to public [1]		
	Coupon rate (percent)	Maturity	Total	For cash	In exchange
September 1957	4	12 years	557	557	----------
December 1957	3⅞	16 years 11½ months	554	554	----------
February 1958	3	6 years	3,806	----------	3,806
February 1958	3½	32 years	1,645	----------	1,645
February 1958	3	8 years 5½ months	1,384	1,384	----------
June 1958	[2] 3¼	26 years 11 months	1,035	1,035	----------
June 1958	2⅝	6 years 8 months	7,033	----------	7,033
Totals	----------	----------	16,014	3,530	12,484

[1] Not including amounts issued to U.S. Government investment accounts and Federal Reserve banks.
[2] Issued at 100½.

Source: Treasury Bulletin, October 1959.

The speculative episode of mid-1958.—During late 1957 and early 1958, speculative activities came to play a prominent role in the Gov-

[38] Board of Governors, annual report, 1958, pp. 59–61.

ernment securities market, especially in connection with the marketing of new longer-term securities. With interest rates falling and bond prices rising, quick speculative profits were realized on new issues. Moreover, with short-term interest rates very low relative to long-term rates and credit in abundant supply, it became easy to borrow short-term funds at low costs and on thin (or nonexistent) margins for the purpose of speculating in Treasury securities. This situation culminated in a serious speculative outburst in connection with the 2⅝-percent bond of February 1965, which was offered in an exchange in June 1958. Prior to the financing, large speculative positions, financed on very thin margins through bank loans or repurchase agreements with nonfinancial corporations, were built up in "rights" (maturing securities). When the offering was actually made, the number of investors choosing to exchange for the 2⅝-percent bond rather than the shorter-term option available was unexpectedly large, and it was obvious that speculative interest was great.

At the time of the June 1958 refunding, we now know that recovery from the recession was already beginning, but due to the lag in the availability of business indicators, this did not become apparent to the market participants until shortly after the refunding. However, when the upturn in the economy and the accompanying prospect of a turnabout of Federal Reserve policy toward tighter credit and rising interest rates, together with the prospect of a large Federal deficit and heavy Treasury borrowing during the coming fiscal year, did become apparent to the market, a reaction set in. Heavy selling, including forced selling of thinly margined positions, caused a rapid fall in the price of the 2⅝-percent bonds, which spread to other Treasury as well as private securities. During June the Treasury bought up a small amount of the 2⅝-percent bonds for the Treasury investment accounts and for outright retirement in an effort to stabilize the market. In July the Federal Reserve bought some securities outside the short-term sector to "correct a disorderly condition in the Government securities market" and to facilitate Treasury refinancing (a temporary departure from the "bills only" policy).[39]

Interest rate adjustments in 1958–59.—Chiefly as a result of this speculative episode but also partly due to the general realization on the part of investors that a period of rising interest rates was in prospect, long-term interest rates rose sharply, and by September 1958—a relatively early stage in the period of recovery from the recession—had reached levels comparable with those prevailing at the climax of the period of tight credit in the fall of 1957. By the time the speculative pressures had eased, the tightening credit policy of the Federal Reserve was pressing interest rates still higher, and by mid-1959 long-term rates had reached such a high level that the Treasury found itself in the position of being unable to sell new long-term securities at interest rates below the legal ceiling of 4¼ percent applicable to Treasury securities having a maturity of more than 5 years. Under these circumstances, the question of an increase in, or elimination of, the interest-rate ceiling by congressional action became an important economic

[39] The speculative episode in the Government securities market in mid-1958 is described at length in "Treasury-Federal Reserve Study of the Government Securities Market," "Part II: Factual Review for 1958" (preliminary mimeographed version, 1959). Further material is included in pts. I and III of this study, which grew out of the 1958 episode.

and political issue. However, no action was taken on this matter during the congressional session ending in 1959.

The Congress did, however, take action in September 1959 to permit the interest rate on series E and H savings bonds (the only series currently being sold) to be raised as high as 4¼ percent. Taking immediate advantage of the legislative authorization, the Treasury raised the yield to maturity on these bonds from 3¼ to 3¾ percent.[40] Despite earlier improvements in the yields and other terms of savings bonds in May 1952 and April 1957,[41] the increases in other interest rates had reduced the attractiveness of the bonds, with the result that the savings bond program had been a source of serious cash drain on the Treasury for several years. In November 1959, the Treasury put into effect a plan which would permit investors who switch from E-bonds (which pay interest at maturity or when they are redeemed) to H-bonds (which pay interest every 6 months) to defer the payment of income tax on the accrued E-bond interest until the H-bonds mature. In addition, the Treasury offered holders of $1.6 billion of F- and G-bonds maturing in 1960 the opportunity to exchange for a 4¾-percent Treasury note maturing in 1964.[42] These measures were designed to stop the cash drain on the Treasury resulting from the excess of redemptions over sales of savings bonds.

The Treasury did manage to market two small offerings of bonds for cash in January and March 1959, but since that time the interest-rate ceiling has effectively put a stop to longer term financing. Two offerings of Treasury notes in the 4- to 5-year maturity range have been sold, however. The second of these, a 5-percent note maturing in August 1964, was sold for cash in October 1959 in the amount of $2.3 billion. This operation was heavily oversubscribed and spectacularly successful, with thousands of small but knowing investors, apparently attracted by the unprecedented 5-percent interest rate, putting in subscriptions.

Monetary policy in 1958–59.—During 1958, when monetary policy was generally on the easy side, with some tightening near the end of the year, the money supply seasonally adjusted increased by $6.2 billion, or 4.7 percent. Commercial banks increased their loans by $4.3 billion and their holdings of Treasury securities by $8.1 billion. During 1959 monetary policy has been much tighter, and the increase in money supply, seasonally adjusted, through September was very small. Nevertheless, repeating the pattern of 1955, commercial banks increased their loans by $9.6 billion during the first 9 months of the year, financing much of the increase by selling $7.2 billion of Treasury securities. Income velocity, which declined from 3.33 in the third quarter of 1957 to 3.22 in the second quarter of 1958, a fall of 3.3 percent, then began to rise and by the second quarter of 1959 had reached 3.45, 7.1 percent above its recession low.

The easy money policy of 1957–58 probably was a factor in the expansion in residential construction that got under way in early 1958. Private nonfarm housing starts, as noted earlier, began to decline

[40] For details, see Treasury Bulletin, October 1959, pp. A–2 ff.
[41] See Treasury Bulletin, May 1952, pp. A–1 ff., and May 1957, pp. A–1 ff.
[42] Business Week, Nov. 28, 1959, p. 146.

early in 1955, after reaching the highest levels on record. During 1956 and 1957, this decline continued, as rising interest rates on corporate and other securities continued to draw the supply of funds away from FHA-insured and VA-guaranteed mortgages, which are subject to fixed ceiling interest rates.[43] Due to the lag between mortgage commitments and housing starts, the decline in starts continued after credit conditions became easier in 1957, and starts reached a low of 915,000 units (seasonally adjusted annual rate) in February 1958. Thereafter residential building began to pick up, with starts reaching 1,432,000 units in December 1958. In addition to easier credit, liberalization of housing legislation in 1957 and 1958 was partly responsible for the expansion, as were increases in the maximum interest rate on FHA-insured mortgages from 5 to 5¼ percent in August 1957 and to 5¾ percent in September 1959, and increases in the rate on VA-guaranteed mortgages from 4½ to 4¾ percent in April 1958 and to 5¼ percent in July 1959. By August and September 1959, housing starts showed signs of a decline, and it appeared that tightening credit was again exerting a restrictive effect on housing as had happened in 1955–57.

An expansion in consumer credit has been developing in recent months. However, this expansion did not get underway until the early part of 1959, by which time credit conditions were already beginning to tighten, and for that reason it does not seem to be a response to the easy money policy of 1957–58. Rather it would appear that, as in the case of the automobile boom of 1955, the demand for consumer durables—especially automobiles—is again expanding for reasons autonomous to the credit markets, and that this development is causing an expansion in consumer credit in spite of tightening credit conditions.

Summary of monetary-debt policy since the accord. The Federal Reserve was rather cautious in implementing a flexible monetary policy during 1951 and 1952, and monetary controls probably did not exert a major influence on the economy. Since early 1953, however, monetary policy has been applied quite vigorously, and the actions and results may be characterized generally in the following way.[44]

1. The level of interest rates has risen substantially, as the effects of the restrictive policies applied in early 1953, 1955–57, and 1958–59 have outweighed the effects of the easy money policies which were in effect during the recessions of 1953–54 and 1957–58.

2. When restrictive policies have been applied, their general effectiveness does not appear to have been great, due to the fact that the slowing down of the growth of the money supply has been accompanied by induced increases in velocity.

3. Monetary policy has had greater effects on some sectors of the economy than on others, residential construction being the most obvious example of a sector that has been strongly affected.

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[43] For various reasons, the possibility of buying an FHA-insured or VA-guaranteed mortgage at a discount is not a fully satisfactory substitute for a higher interest rate. See Smith, "The Impact of Monetary Policy on Residential Construction," in "Study of Mortgage Credit."

[44] Some of these points are developed at considerable length in later sections of this chapter.

4. The Federal Reserve System has shown a strong preference for control instruments of the general and quantitative type and a clear antipathy toward selective controls.

5. Monetary policy has been more restrictive thus far in the 1958–59 than in the same phase in 1954–55. As in the earlier period, the effects on residential construction seem to be especially strong.

6. Treasury debt management policies have been directed, especially since 1953, toward lengthening of debt maturities. Debt-lengthening activities have been carried out mainly during recession periods and have not been sufficient to prevent the debt from shortening considerably during the period.

II. Some Limitations on the Overall Effectiveness of Monetary Policy

The United States possesses a highly complex and sophisticated financial system, including some 13,000 commercial banks and a myriad of other financial institutions. The variety, complexity, and sophistication of this system have increased greatly in recent years and can be expected to increase further in the years to come. In assessing the effectiveness of monetary controls in an economy possessing such a complex financial structure, it is important to bear in mind the simple fact that the basic function of financial institutions is the financing of economic activity and that the variety of channels through which such financing may be provided is very great. It is not surprising therefore to find that when credit conditions are tightened and the creation of new money through the banking system is restricted, pressures are automatically set up which cause the financial system to "hunt" for methods of mobilizing the existing money supply more effectively, thus permitting it to do part, or perhaps even most, of the work that would have been done by newly created money had credit conditions been easier.

The fact that there has been a considerable amount of "play" in our financial system is illustrated in table 9–7, which shows the changes in money supply and income velocity during alternating periods of business expansion and contraction since the first quarter of 1947. In each upward or downward movement, the change in velocity has been a more important factor than the change in the money supply, and velocity has consistently tended to rise during periods of expansion and credit restriction and to fall during periods of contraction and monetary ease. The last row of the table shows approximations of the changes in the quantity of money that would have been necessary to produce effects on GNP expenditures equivalent to the changes in velocity that occurred during each period.

TABLE 9–7.—*Comparison of changes in money supply and in income velocity during upward and downward movements of gross national product since the 1st quarter of 1947*

	Year and quarter							
	1947 I	1948 IV	1949 IV	1953 II	1954 II	1957 III	1958 II	1959 II
GNP [1]	226.0	265.9	257.0	368.8	358.9	447.8	434.5	484.5
Money supply [2]	108.2	109.3	108.6	125.9	126.6	134.6	134.8	140.6
Income velocity [3]	2.09	2.43	2.37	2.93	2.84	3.33	3.22	3.45
Percent change in GNP	+17.7	−3.4	+43.5	−2.7	+24.8	−3.0	+11.5	
Percent change in money supply	+1.0	−.7	+15.9	+.6	+6.3	+.1	+4.3	
Percent change in velocity	+16.3	−2.5	+23.6	−3.1	+17.3	−3.3	+7.1	
Absolute change in money supply (billions of dollars)	+1.1	−.7	+17.3	+.7	+8.0	+.2	+5.8	
Approximate monetary equivalent of change in velocity (billions) [4]	+17.6	−2.7	+25.6	−3.9	+21.9	−4.4	+9.6	

[1] Seasonally adjusted annual rate in billions of current dollars, Department of Commerce.
[2] Demand deposits adjusted plus currency outside banks in billions of dollars, seasonally adjusted, average for beginning and end of quarter. Board of Governors of the Federal Reserve System.
[3] GNP (row 1) divided by money supply (row 2).
[4] Estimated by multiplying the money supply for the previous period by the percentage change in velocity since that period (e.g., the $17,600,000,000 estimate for the period from the 1st quarter of 1947 to the 4th quarter of 1948 equals 108.2×0.163).

Some students of monetary matters have argued that the growth of the Government securities market and the increase in its efficiency, which have characterized the period since World War II, together with the increased importance of large financial institutions, have considerably strengthened the influence of the Federal Reserve by providing a sensitive medium which rapidly transmits the effects of its actions to all sectors of the economy. Moreover, large institutional investors are sensitive to small changes in interest rates and security prices, and it is said that the System can rely upon those sensitive reactions as a means of influencing the supply of funds these institutions are prepared to make available to the private sector of the economy.[45]

While there is probably some truth in these contentions, it appears that, on balance, the growth of the public debt, the increased efficiency of the Government securities market, and the expanded role of sophisticated financial institutions have reduced rather than increased the effectiveness of monetary policy. The existence of a large and widely held public debt traded in a highly efficient market has added greatly to the efficiency of the process of mobilizing existing funds in support of economic activity by providing a vehicle for the necessary transfers of funds among economic units. And the large financial institutions have proved to be exceedingly skilled and resourceful participants in

[45] See R. V. Roosa, "Interest Rates and the Central Bank," in Money, Trade, and Economic Growth: In Honor of John Henry Williams (New York, 1951); also Roosa's "Federal Reserve Operations in the Money and Government Securities Markets" (Federal Reserve Bank of New York, 1956).

this mobilization process. Let us consider some of the more important channels through which this process has worked in the last few years.

A. The effects of commercial bank portfolio adjustments

In our earlier discussion of the developments in monetary and debt management policy since 1946, the reader's attention was called on several occasions to shifts in the composition of bank portfolios from Government securities to loans in periods of credit restriction such as 1955–57 and to the building up of the Government security holdings of the banks in periods of easy money such as 1953–54 and 1957–58.[46] These adjustments in bank portfolios have been quite systematic in the last few years and appear to have weakened the overall effectiveness of monetary controls rather substantially. The facts are assembled systematically in table 9–8, which shows the major factors affecting the publicly held money supply (demand deposits and currency) for alternating periods of monetary restriction and monetary ease since late 1952.[47] The money supply has been reduced at least slightly in each period of restriction and has expanded substantially in each period of ease.[48] However, during the 1954–57 and 1958–59 periods of restriction, bank loans to the private sector and holdings of securities other than those of the Federal Government have continued to increase—in fact the rate of increase has accelerated substantially during such periods. The chief explanation for this is that banks have systematically added to their holdings of Government securities during periods when credit conditions have been easy and the supply of reserves has been large relative to private loan demands.[49] Then during periods of restriction, they have sold Government securities in the market or let them run off at maturity without replacement and used the funds to make loans.

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[46] There was also a sizable shift from Government securities to loans in 1947–48, but in the present discussion we shall confine our attention to the period of rather vigorous monetary policy since late 1952.

[47] The separation into periods of restriction and ease is based on an overall assessment of Federal Reserve policy. Doubtless, it would be possible to quarrel with the selection of dates, but reasonable changes in them do not affect the results significantly.

[48] It should be noted that the money supply figures in table 9–8 are not adjusted for seasonal variation; after such an adjustment is made, the money supply usually shows some increase even in periods of credit restriction.

[49] The other main factor explaining the rapid expansion of loans during periods of monetary restriction is the continued expansion of time deposits. This is discussed below.

TABLE 9–8.—*Factors responsible for changes in money supply during periods of monetary ease and restriction, Nov. 26, 1952, to Sept. 30, 1959*

[Billions of dollars]

	Restriction, Nov. 26, 1952 to May 27, 1953	Ease, May 27, 1953 to Dec. 31, 1954	Restriction, Dec. 31, 1954 to Sept. 25, 1957	Ease, Sept. 25, 1957 to Nov. 26, 1958	Restriction, Nov. 26, 1958 to Sept. 30, 1959 [1]
Expansive factors:					
Bank loans and private securities [2]	+2.8	+11.8	+29.0	+9.0	+13 8
Commercial banks [3]	+2.2	+7.1	+23.5	+5.9	+12.1
Mutual savings banks [3]	+1.1	+3.7	+6.5	+3.2	+1.7
Bank holdings of U.S. Government obligations	−5.8	+9.9	−14.0	+11.3	−8.5
Commercial banks	−5.8	+10.7	−13.1	+11.8	−8.5
Mutual savings banks	+.1	−.8	−.9	−.6	0
Total expansive factors	−3.0	+21.7	+15.0	+20.3	+5.3
Less: Contractive factors:					
Time deposits	+2.8	+7.7	+12.4	+9.1	+4.8
Commercial banks	+1.7	+5.1	+8.3	+7.0	+3.6
Mutual savings banks	+1.0	+2.5	+4.2	+2.0	+1.3
Other factors, net	−3.5	+4.1	+3.7	+3.8	+1.4
Total contractive factors	−.7	+11.8	+16.1	+12.9	+6.2
Equals: Change in money supply	−2.3	+9.9	−1.1	+7.4	−.9

[1] Preliminary.
[2] Including State and local government securities.
[3] The loan breakdown between commercial banks and mutual savings banks is on a different basis from the total for the banking system, so the components for some periods do not add to the total.

NOTE.—Details may not add to totals due to rounding.

Source: Federal Reserve Bulletin.

Monetary policy is commonly admitted to be of no more than limited value in stimulating recovery from recession; moreover, to the extent that it can do any good, there is nothing to prevent the authorities from pressing their policies more vigorously if necessary to overcome the tendency of the banks to use the influx of reserves to buy Government securities instead of expanding their loans. Accordingly, the portfolio adjustments referred to above are chiefly a problem in connection with restrictive policy—as are the other offsets discussed below—and we shall concentrate most of our attention on monetary policy as an anti-inflationary weapon.

A few years ago there was much concern about the inflationary effects of monetization of public debt by the banking system. By analogy, it might seem at first glance that demonetization of debt—shifting it out of the banking system—during periods of inflation would be effectively anti-inflationary. Or, looking a little more carefully and observing that the bank sales of public debt during such periods have been accompanied by increases in loans to the private sector, thus leaving total bank earning assets and the money supply unchanged, one might conclude that such operations would be approximately neutral in their effects. However, even this view is almost certainly incorrect. Taken by themselves, sales of Government securities by the banking system to other investors could be expected to have some restrictive effects, since they reduce the money supply and push up interest rates. Loan expansion, on the other

hand, is strongly inflationary, because it creates money which in most cases is promptly used to finance income-generating expenditures. The combined operation of liquidating securities and expanding loans will be inflationary on balance unless the security sales reduce income-generating expenditures as much as the loans increase them. To this extent, the active portion of the money supply is not increased—it is reduced by the security sales and increased by the lending—and the total amount of spending is little affected, although its direction may be changed. However, it does not seem reasonable to expect such results. Due to the apparent insensitivity of expenditures to interest rate changes, it is likely that, in effect, the deposits extinguished by the security sales will be largely idle deposits. These deposits are then recreated through lending and promptly inserted directly into the spending stream. The net result of the operation is to leave the money supply unchanged but to increase the velocity of monetary circulation by expanding the fraction of the money supply that is being actively spent at the expense of the fraction that is being held idle.[50]

One of the arguments that has been stressed in connection with monetary policy in recent years is that the fall in security prices caused by a restrictive credit policy will induce banks and other financial institutions to hold onto Government securities in order to avoid realizing capital losses, instead of selling such securities and using the proceeds to make private loans or buy private securities. This is an important one of the means by which a small rise in interest rates is supposed to reduce the supply of funds available to finance private spending. Under some circumstances, there is probably something to this so-called locking-in argument. For example, if investors expect the rise in interest rates to be reversed shortly, they will recoup their initial capital loss if they hold onto the securities, and accordingly they may require a higher interest rate on loans to make up for it. However, unless there is something to prevent loan interest rates from rising or unless the demand for loans is sensitive to interest rates, this is not likely to be important. Moreover, if interest rates are expected to go on rising for some time—as is often likely to be the case in the early stages of a boom—the effect may be turned in reverse and lenders may be particularly eager to shift into loans. Of course, in some cases, there may be a somewhat irrational desire to avoid showing losses on the lender's books, which may impede somewhat the tendency to shift out of Government securities during periods of rising interest rates.

In any case, it is apparent from the record that commercial banks have been quite willing to shift the composition of their portfolios in a destabilizing fashion. Whatever the merits of the "locking-in" argument, it does not appear to have affected banks, one reason probably being that banks normally hold large amounts of short-term securities whose prices fluctuate little and for which potential capital losses are therefore a relatively unimportant matter. In addition, the peculiar Federal tax provisions applicable to commercial banks, which permit them to deduct capital losses from ordinary income, while

[50] For an elaboration of this argument, see W. L. Smith, "On the Effectiveness of Monetary Policy," American Economic Review, XLVI, September 1956, pp. 588–606, especially pp. 600–604.

paying lower rates on capital gains, have the effect of encouraging frequent portfolio adjustments during periods of rising interest rates, since the tax savings on the capital losses exceed the tax liability on the capital gains which will accrue when security prices rise at a later time. These tax provisions do not provide any direct inducement to shift from Government securities to private debt, since the benefits can be obtained by reinvesting in Government securities similar to those sold (the wash sale rule prevents reinvesting in identical securities within 30 days of the sale). But the provisions undoubtedly encourage more frequent portfolio adjustments and thus indirectly promote shifting.[51]

Due mainly to the tremendous expansion of bank loans that has occurred in the last few years, Government security holdings of banks have been declining as a percentage of total loans and investments. In December 1952 Government security holdings of all commercial banks constituted 45 percent of their total loans and investments; by August 1959 this ratio had fallen to 32 percent. This suggests that the scope for destabilizing portfolio adjustments has been declining. However, the absolute amount of bank holdings of Government securities is now nearly as large as it was in 1952, and there does not seem to be any reason why the ratio cannot go much lower than it is now. Thus, while the bank portfolio adjustment mechanism may eventually tighten to the point where the importance of this loophole in monetary controls is greatly reduced, there is little reason to suppose that this problem will not be with us for some time to come. In support of this position, it may be noted that in the first 10 months (from the end of November 1958 to the end of September 1959) of the present period of credit restriction, the loan expansion of commercial and savings banks ($13.8 billion as shown in table 9–8) has actually been larger than the expansion ($10.1 billion) in the first 10 months (from the end of December 1954 to the end of October 1955) of the corresponding period of 1955–57. Banks sales of Government securities have also been larger ($8.5 billion) than in the earlier period ($6.3 billion).

B. Adjustments in corporate liquidity

While not nearly as serious a problem as the commercial bank adjustments just discussed, the way in which nonfinancial business corporations have managed their liquid reserves in recent years appears to have facilitated the mobilization of funds during periods of tight credit and to have weakened the Federal Reserve's controls somewhat. There has been a noticeable tendency recently for large corporate treasurers to manage their cash balances more carefully and to keep their surplus funds invested in short-term Government securities, particularly at times when short-term interest rates have been high.[52] As a result, changes in corporate liquidity positions have been re-

[51] For a good discussion of these tax provisions, see R. H. Parks, "Income and Tax Aspects of Commercial Bank Portfolio Operations in Treasury Securities," National Tax Journal, XI, March 1958, pp. 21–34.

[52] See C. E. Silberman, "The Big Corporate Lenders," Fortune, August 1956, pp. 111–114, 162–170. On the theory of optimum cash balance management and the resulting interest elasticity of demand for transactions balances, see W. J. Baumol, "The Transactions Demand for Cash: An Inventory Theoretic Approach," Quarterly Journal of Economics, LXVI, November 1952, pp. 545–556, and James Tobin, "The Interest Elasticity of the Transactions Demand for Cash," Review of Economics and Statistics, XXXVIII, August 1956, pp. 241–247.

flected mainly in changes in holdings of Government securities. These holdings are influenced by a number of variables, including interest rates, corporate profits, dividends, tax accruals, and investment in plant and equipment and inventories.

Despite the complexity of the factors involved, a fairly clear pattern seems to emerge on the basis of study of the last few years. From the second quarter of 1954 to the fourth quarter of 1955, corporate holdings of Government securities increased rather steadily from $16.4 billion to $24 billion, a rise of $7.6 billion. From the fourth quarter of 1955 to the second quarter of 1958 holdings declined, reaching $13.9 billion at the end of the period for a drop of $10.1 billion. At this point holdings began to rise again and by the second quarter of 1959 had reached $20 billion, $6.1 billion above the low point.[53] Thus, corporations have built up their holdings of Government securities in the early recovery periods (mid-1954 to the end of 1957 and mid-1958 to early 1959) and, at least in the 1956–58 period, reduced their holdings during the latter part of the expansion and during the decline. Table 9–9, which is compiled from Federal Reserve flow-of-funds data covering the nonfinancial corporate sector, shows the sources and uses of corporate funds on a quarterly average basis for the periods when corporations were accumulating and decumulating Government securities since mid-1954.[54]

TABLE 9–9.—*Sources and uses of funds for nonfinancial corporations by subperiods, June 30, 1954, to Mar. 31, 1959*

[Quarterly averages in billions of dollars]

	June 30, 1954, to Dec. 31, 1955	Dec. 31, 1955, to June 30, 1958	June 30, 1958, to Mar. 31, 1959
Excess of retained earnings and capital consumption allowances over investment in fixed capital and inventories	1.0	−1.9	2.0
Plus: Funds raised externally [1]	1.9	2.8	2.0
Less: Statistical discrepancy	.8	.5	1.2
Equals: Net acquisition of financial assets	2.1	.4	2.8
Federal obligations	1.2	−1.0	2.0
Currency and demand deposits	.7	−.2	.2
Trade credit [2]	−.1	1.0	.4
Other financial assets [3]	.3	.6	.3

[1] Funds raised by sale of corporate stocks and bonds and other forms of debt.
[2] Net trade credit extended by the nonfinancial corporate sector to other sectors. Borrowing and lending within the corporate sector is canceled out.
[3] Includes consumer credit, finance company paper, other miscellaneous financial assets, and time deposits.

Source: Federal Reserve Flow of Funds Accounts.

During the early period of recovery from mid-1954 to the end of 1955, corporate profits and depreciation allowances were rising faster than investment in plant and equipment and inventories so that there was an excess of about $1 billion per quarter of funds from internal sources over the requirements for financing investment. In addition, funds were being raised from external sources at a rate of nearly $2 billion per quarter. These funds from internal and external sources

[53] These data are taken from the statements of current assets and liabilities of corporations as compiled by the Securities and Exchange Commission and published in the Federal Reserve Bulletin.
[54] The data given in table 9–9 are not entirely consistent with the SEC estimates referred to above due to differences in sector coverage.

were used chiefly to build up corporate liquidity, partly in the form of cash balances but to a greater extent by accumulating Government securities at a rate of $1.2 billion per quarter. From late 1955 to mid-1958, the situation was reversed, with real investment running nearly $2 billion a quarter ahead of funds becoming available from internal sources. In addition, corporations were extending net book credit to their noncorporate customers at a rate of $1 billion a quarter. To meet these needs, corporations speeded up sales of securities and borrowings to obtain funds from external sources at a rate of $2.8 billion a quarter and at the same time liquidated Government securities at a rate of $1 billion a quarter. From the time the upturn in business activity began in mid-1958 through March 1959, the situation was again reversed, with funds available from internal sources exceeding investment needs, fund-raising from external sources slowing down, and Government securities accumulating at a rate of $2 billion a quarter. It may be noted that in the last few years corporations have been investing some of their surplus funds in liquid short-term instruments other than Government securities, such as repurchase agreements with Government security dealers and commercial paper issued by sales finance companies, although these operations are still much less important quantitatively than investments in Government securities.[55]

This pattern of corporate financial activities, particularly with respect to investment and disinvestment in Government securities increases the mobility of funds and probably reduces somewhat the ease with which the Federal Reserve can bring pressure to bear on the financial system. In the early stages of credit restriction, the increased supply of funds becoming available through corporations reduces the pressure on the banking system somewhat, since corporations may either buy securities being sold by banks that are in the process of shifting from Government securities to loans or may take some customers off the hands of the banks by providing funds to Government security dealers and sales finance companies.[56] At a later stage in the process, corporations may sell off their holdings which are taken up by other investors (including the Government itself which is likely to be retiring debt) and using the funds to finance their own expenditures or to lend to customers thus enabling them to escape the effects of the credit squeeze. In other words, these Government securities transactions make it possible to tap successive pools of funds in various parts of the economy which in the absence of such transactions might have been held idle.

C. Effects of financial intermediaries on velocity

There has been much controversy recently concerning the effects on monetary policy of the rapid growth of financial intermediaries, such as mutual savings banks, savings and loan associations, insurance companies, pension trusts, investment trusts, and the like. One school of thought has contended that the presence of such a large sector of the financial system outside the reach of Federal Reserve authority has seriously reduced the effectiveness of the traditional monetary con-

[55] Silberman, op. cit.

[56] During the 1958–59 recovery, the expanding corporate holdings of Government securities also helped to provide a market for new short-term securities for the Treasury, which was borrowing heavily to finance a deficit.

trols.[57] Others have disagreed, arguing either that the destabilizing effects of intermediaries do not appear to have been very important or that they are influenced powerfully, albeit indirectly, by the Federal Reserve's actions.[58]

There can be little disagreement concerning the fact that, at least since the end of World War II, financial intermediaries have grown much more rapidly than commercial banks. For the period prior to 1952, this growth is amply documented in the recent study by Raymond Goldsmith.[59] The Federal Reserve flow-of-funds studies show clearly that since 1952 the disparity in rates of growth between commercial banks and intermediaries has continued. Perhaps the best indication of this is that between 1952 and 1957, demand deposits increased by 7 percent while outstanding intermediary claims (including time deposits of commercial banks, since the savings banking activities of these banks should be treated as intermediary operations) increased by 47 percent.[60]

One question which has been the subject of considerable discussion has been whether the ability to expand credit which commercial banks are agreed to possess is shared by other types of financial institutions such as mutual savings banks and savings and loan associations which issue claims (savings deposits and savings and loan shares) that are close substitutes for money (demand deposits and currency). Since nearly all of the savings deposits and shares are held by the consumer sector and since most of the expansion of these claims appears to stem from bona fide saving out of current income, it appears that these institutions play a rather different economic role from that of commercial banks. To the extent that this is true, these institutions do not contribute to instability in aggregate spending, but merely serve to channel savings into investment, as their name implies. The expansion of commercial bank credit on the other hand is not linked directly with income growth but can proceed quickly and independently and therefore serve as a stimulant to income expansion. Moreover, commercial banks are not intermediaries since, when a part of income is saved and deposited in a commercial bank, no more funds are made available for investment than would have been provided if the income had been spent on consumption.[61]

If all the funds supplied to intermediaries were derived from current saving, as just pointed out, intermediaries would not be a destabilizing influence on aggregate demand—although, of course, they might cause trouble because of their effects on the allocation of

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[57] Pioneering work on financial intermediaries reflecting this point of view has been done by J. G. Gurley and E. S. Shaw. See their articles, "Financial Aspects of Economic Development," American Economic Review, XLV, September 1955, pp. 515–538, and "Financial Intermediaries and the Saving-Investment Process," Journal of Finance, XI, May 1956, pp. 257–276.

[58] See for example, Joseph Aschheim, "Commercial Banks and Financial Intermediaries: Fallacies and Policy Implications," Journal of Political Economy, LXVII, February 1959, pp. 59–71; Donald Shelby, "Some Implications of the Growth of Financial Intermediaries," Journal of Finance, XIII, December 1958, pp. 527–541; G. W. McKinley, "The Federal Home Loan Bank System and the Control of Credit," Journal of Finance, XII, September 1957, pp. 319–332; W. L. Smith, "Financial Intermediaries and Monetary Controls," Quarterly Journal of Economics, LXXIII, November 1959, pp. 533–553.

[59] R. W. Goldsmith, "Financial Intermediaries in the American Economy Since 1900" (Princeton: Princeton University Press, 1958).

[60] These calculations are based on mimeographed tabulations obtained from the Board of Governors of the Federal Reserve System.

[61] See J. M. Culbertson, "Intermediaries and Monetary Theory: A Criticism of the Gurley-Shaw Theory," and J. G. Gurley and E. S. Shaw, "Reply," American Economic Review, XLVIII, March 1958, pp. 119–138; also Smith, "Financial Intermediaries and Monetary Controls," pp. 533–538.

credit and the composition of demand. However, intermediaries may at times play a role in the process of activating or deactivating cash balances thus causing velocity to rise or fall and contributing to instability. To take the case of inflationary increases in velocity attributable to intermediary activities, there seem to be two ways in which these might come about.

1. When credit tightens and interest rates rise during inflationary periods, those intermediaries—such as savings banks and savings and loan associations—which issue claims that are close substitutes for money, may raise the interest rates or other incentives they offer to holders of their claims, the reason being that interest rates on the kinds of debt that intermediaries invest in are also increasing. To the extent that this induces members of the public to substitute intermediary claims for their holdings of demand deposits, the supply of credit is expanded, since reserve requirements applicable to intermediary claims are much smaller (in fact, virtually nonexistent in some cases) than reserve requirements applicable to demand deposits. When this happens, the intermediary, in effect, acts as an agent facilitating the process of dishoarding cash balances.

2. Intermediaries may liquidate a portion of their holdings of securities—particularly Government securities—and use the proceeds for lending to the private sector. This is very similar to the process of shifting from Government securities to private loans on the part of commercial banks, which was explained at some length earlier in this chapter. To the extent that the securities are purchased by holders of idle cash balances and the proceeds of the new loans are spent on current output, the intermediary again serves as an agent to facilitate dishoarding, and the process is inflationary. More accurately, in fact, it can be said that there is an inflationary effect unless the rise in interest rates caused by the security sales results in a reduction in expenditures somewhere in the economy which is as large as the new expenditures financed out of the loan proceeds. An inflationary effect equal to a substantial proportion of such operations seems very likely.

If the reactions just discussed were sizable and systematically destabilizing, they could substantially weaken the monetary controls of the Federal Reserve. For example, if when the Federal Reserve strove to restrict credit, savings institutions quickly began to raise their interest rates and this caused a large shift of funds from commercial bank demand deposits to savings and loan shares and time deposits, the release of reserves thus brought about could substantially undercut the effects of the restrictive action. And if at the same time, intermediaries were induced to sell large quantities of Government securities which were, in effect, bought by holders of idle cash balances which were then activated by intermediary lending, monetary controls would be further weakened.

The question then is whether these reactions on the part of intermediaries are large and systematically destabilizing to a degree which poses a serious threat to the monetary authorities. The systematic destabilizing aspect is particularly important—that is, intermediaries will presumably be a serious problem only if the public systematically shifts funds from demand deposits to intermediary claims during periods of tight credit and then shifts back to demand deposits when credit eases and if intermediaries systematically sell Government secu-

rities in order to expand their loans when credit tightens and then rebuild their Government security portfolios when credit eases, as commercial banks have shown a tendency to do. If intermediaries merely grow more rapidly than banks, they represent part of a stable environment to which presumably the Federal Reserve should have no great difficulty in adapting itself.

Table 9–10 shows the average amounts of credit extended to the private sector of the economy per quarter by intermediaries during alternating periods of credit restriction and credit ease between the end of 1952 and the end of 1958. The table indicates that the rate of credit extension by intermediaries speeded up noticeably during the 1955–57 period of tight credit and then slowed down during the subsequent period of easier money. Part of the credit acceleration in the 1955–57 period was due to the increased rate of flow through savings and loan associations, but this acceleration continued after credit turned easier instead of reversing itself. Funds obtained through the issuance of credit and equity market instruments rose by about $300 million per quarter between 1953–54 and 1955–57 and declined by an equivalent amount in the ensuing period. Much of this movement is accounted for by changes in the rate at which sales finance companies issued commercial paper and other debt instruments to obtain funds to finance consumer credit. These operations probably contributed to the movements of velocity. For example, in 1955–57, sales of finance company paper to investors—such as nonfinancial corporations—who gave up cash balances which might otherwise have been held idle or to banks, which sold more Government securities than they otherwise would have in order to be able to buy the paper, may have resulted indirectly in the dishoarding of cash balances and contributed to the rise in velocity.[62] In addition, intermediaries speeded up their sales of Government securities a little between 1953–54 and 1955–57 and then actually became net buyers of such securities in 1957–58, and these portfolio adjustments, like those of commercial banks, probably had some destabilizing effects. It may be noted that something over half the increase in the rate of flow of credit through intermediaries between 1953–54 and 1955–57 can be accounted for by the rise in personal saving assuming that intermediaries continued to obtain the same share of this saving. Thus, intermediaries contributed somewhat to instability in aggregate demand in this period, but it appears that most of the funds they received were derived from current saving.

[62] Sales finance companies differ considerably from most other intermediaries, since they sell few of their obligations directly to households, and much to their intermediation is in the flow of bank credit rather than in the direct flow of saving into investment (or consumption).

TABLE 9–10.—*Sources of funds supplied to the private sector by financial institutions other than commercial banks during periods of monetary ease and restriction,*[1] *Dec. 31, 1952, to Dec. 31, 1958*

[Quarterly averages in billions of dollars]

	Restriction (Dec. 31, 1952 to June 30, 1953)	Ease (June 30, 1953 to Dec. 31, 1954)	Restriction, (Dec. 31, 1954 to Sept. 30, 1957)	Ease (Sept. 30, 1957 to Dec. 31, 1958)
Total funds supplied to private sector [1 2]	4.2	4.3	4.9	4.6
Source of funds, total	4.2	4.3	4.9	4.6
Deposits in mutual savings banks	.5	.4	.4	.6
Savings shares [3]	1.0	1.1	1.3	1.6
Saving through life insurance	.7	.8	.8	.8
Saving through pension funds	.7	.7	.9	1.0
Issuance of credit and equity market instruments	.4	.5	.8	.5
Current surplus available for financial investment [4]	.6	.8	.6	.5
Sale of Federal obligations	(5)	.1	.2	−.2
Other sources, net, and statistical discrepancy	.2	−.2	(5)	−.2

[1] Includes mutual savings banks, savings and loan associations, credit unions, insurance companies (life and nonlife), private noninsurance pension, and retirement plans, sales finance companies, industrial and personal finance companies, mortgage companies, short-term business-finance companies, open-end investment companies, security and commodity exchange brokers and dealers, banks in U.S. territories and possessions, and agencies of foreign banks in the United States.

[2] Purchases of securities and other debt instruments of households, business firms, and state and local governments.

[3] Includes shares of savings and loan associations and credit unions.

[4] Includes premiums on life insurance and private pension plans, less benefit payments and policy dividends and less capital expenditures.

[5] Less than $50,000,000.

NOTE: Detail may not add to totals due to rounding.

Source: Federal Reserve flow-of-funds accounts.

Perhaps one reason for the absence of systematic shifting between demand deposits and intermediary claims is the fact that, as indicated in table 9–11, interest rates on time deposits and savings and loan shares have been rising steadily during the postwar period. When interest rates on other kinds of debt tend to fall, these interest rates continue to rise or at least fail to decline.

TABLE 9–11.—*Average interest rates paid on various types of fixed-value redeemable claims, 1946–58*

[Percent]

Year	Time deposits at commercial banks	Time deposits at mutual savings banks	Shares in savings and loan associations	Year	Time deposits at commercial banks	Time deposits at mutual savings banks	Shares in savings and loan associations
1946	0.8	1.7	2.4	1953	1.1	2.5	2.8
1947	.9	1.7	2.3	1954	1.3	2.6	2.9
1948	.9	1.8	2.3	1955	1.4	2.7	2.9
1949	.9	1.9	2.3	1956	1.6	2.8	3.0
1950	.9	2.0	2.5	1957	2.1	3.0	3.3
1951	1.1	2.1	2.6	1958	2.3	3.2	3.5
1952	1.1	2.4	2.7				

Source: Savings and Loan Fact Book, 1959.

As pointed out above, insofar as their savings banking activities are concerned, commercial banks should be regarded as financial intermediaries. Shifts of funds from demand deposits to time deposits in commercial banks induced by higher interest rates on the latter would permit an expansion of credit, because the reserve requirements for time deposits are lower than for demand deposits. In this connection, there is some indication that in early 1957 when the Federal Reserve was applying a restrictive policy, a sharp rise in interest rates on time deposits in commercial banks did induce a noticeable shift of funds from demand deposits to commercial bank time deposits. This shift occurred shortly after the Federal Reserve and the Federal Deposit Insurance Corporation raised the maximum interest rates that could be paid on time deposits by member banks and insured nonmember banks from 2½ to 3 percent effective January 1, 1957.[63] It is interesting to note that the rapid accumulation of time deposits at commercial banks continued—in fact, even accelerated—in late 1957 and in 1958 after monetary policy had shifted in the direction of ease and interest rates in general were declining.

We may conclude that while activities of intermediaries do have some destablizing effects, they do not seem to be as serious a problem in this regard as do portfolio adjustments by commercial banks.

D. Changes in holdings of Treasury securities by investor groups

The above discussion has stressed the way in which investment and disinvestment in Treasury securities, particularly by commercial banks and nonfinancial corporations and perhaps also to some extent by financial intermediaries have tended to weaken monetary controls. In this connection, it would be helpful to know who it is that buys the securities when these investor groups sell. This is a matter that deserves much more attention than it has received, but with the presently available breakdown of ownership of Treasury securities, a detailed analysis is not possible. What little evidence can now be adduced is set forth in table 9–12, which shows the changes in holdings of Treasury securities for the categories of investors included in the monthly Treasury Survey of Ownership during alternating periods of monetary restriction and ease during the period of actively flexible monetary policy since late 1952.[64]

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[63] For a discussion of this episode, see Smith, "Financial Intermediaries and Monetary Controls," pp. 540–546.

[64] Changes in holdings of commercial banks as shown in table 9–8 do not agree with those shown in table 9–12. One reason is that the changes are shown at book value in table 9–8 and at face value in table 9–12. Another reason is that securities held in trust departments are included in table 9–8, while they are not included in the "commercial banks" row (but are in the "individuals" row instead) in table 9–12.

TABLE 9–12.—*Changes in holdings of Treasury securities during periods of monetary ease and restriction, Nov. 30, 1952, to Aug. 31, 1959*

[Amounts in billions; (+) represents an increase in holdings, (−) a decrease]

Investor group	Restriction, Nov. 30, 1952, to May 31, 1953	Ease, May 31, 1953, to Dec. 31, 1954	Restriction, Dec. 31, 1954, to Sept. 30, 1957	Ease, Sept. 30, 1957, to Nov. 30, 1958	Restriction, Nov. 30, 1958, to Aug. 31, 1959
U.S. Treasury [1]	+2.1	−9.4	+10.1	−9.3	−7.5
Federal Reserve	+.4	+.7	−1.6	+2.9	+.5
Commercial banks	−5.7	+10.7	−10.9	+9.7	−7.2
Mutual savings banks	+.1	−.8	−.9	−.6	[2]
Insurance companies	−.1	−1.0	−2.8	−.1	[2]
Nonfinancial corporations	+.8	−2.5	−3.6	+2.3	+5.6
State and local governments	+.8	+2.1	+3.4	[2]	+1.6
Individuals	+1.0	−1.0	+4.3	−5.0	+2.4
Miscellaneous investors [3]	+.6	+1.1	+2.0	+.0	+4.6

[1] (+) represents net retirement (purchases) and (−) net issuance (sales) of securities by the Treasury including the Treasury investment accounts.
[2] Less than $500 million.
[3] Includes savings and loan associations, dealers and brokers, foreign accounts, corporate pension funds and nonprofit institutions.

Source: Treasury Bulletin.

A few patterns are discernible in table 9–12. For one thing, it may be noted that individual investors have consistently been selling securities when commercial banks have been buying, and buying when commercial banks have been selling. Thus, shifts of securities between commercial banks and individual investors appear to have facilitated the destabilizing changes in commercial bank portfolios referred to above. Another and more important pattern that is apparent in every period but the last one is that the Treasury has been operating at surpluses and retiring debt when commercial banks have been unloading securities and has been operating at deficits and issuing securities when commercial banks have been investing in them. Thus, Treasury debt management has facilitated the shifting of commercial bank portfolios. State and local governments and miscellaneous investors have been steadily increasing their holdings of Treasury securities. In the miscellaneous investor group, the most important absorber of Government securities has been foreign accounts, while savings and loan associations and corporate pension funds have been increasing their holdings rather slowly.

Nonfinancial corporations do not show a consistent pattern in table 9–12 for the reason that, as pointed out earlier, their behavior is out of phase in relation to the time periods used in this table. They tend to increase their holdings in the early stages of upswings in business activity and then begin to disinvest in the later stages of such periods.

E. Other offsets to monetary controls

In addition to the adjustments by commercial banks, nonfinancial corporations, and to some extent financial intermediaries just discussed, there are other ways in which cash balances can be economized

and velocity increased when credit is tightened. One way, which is undoubtedly very important but difficult to measure, is through the direct expenditure of previously idle cash balances on goods and services by households, business units, and State and local governments.

A number of specialized financial arrangements for economizing cash balances either have been developed or have come to be more widely used in recent years as a consequences of restrictive credit policy. For example, there has been a notable increase in participation in the Federal funds market by banks; this has economized the use of reserves and permitted a given amount of reserves to support a larger supply of credit.[65] Sales finance companies have developed a complex network for collecting funds, including credit lines with large numbers of banks and sales of commercial paper and debentures in the open market, which permit them to tap a considerable variety of lenders, and they have demonstrated great dexterity in shifting from one source to another in order to escape the effects of credit tightening.[66] Government security dealers have developed means, largely by the use of repurchase agreements, through which they can obtain funds from banks, business corporations, State and local governments, and other investors in all parts of the country in order to meet their constantly fluctuating needs for funds to finance their daily positions in Government securities.[67] State and local governments, like nonfinancial corporations, have become aware of the gains to be had from keeping their surplus funds more fully invested and have become much more active participants than formerly in the Government security and other financial markets. The recent participation of several thousand individual investors in a Treasury offering of a 5-percent note, in many cases apparently withdrawing funds from savings accounts to buy the securities, suggests that individual investors are becoming more sensitive to interest rates and interest rate differentials.[68] As a result of the increased participation of life insurance companies operating on a national scale as well as the easing of geographical restrictions on the investment of funds by savings and loan associations and the development of a secondary market for FHA-insured and VA-guaranteed mortgages, considerable progress has been made in broadening the market for mortgages and increasing the mobility of mortgage funds.

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[65] Although the Federal funds market has expanded considerably in the postwar as compared with the prewar period, it is still true that only a relatively small number of banks participate in it. For an extensive analysis, see Board of Governors of the Federal Reserve System, "The Federal Funds Market" (Washington, 1959). The argument that the increased use of the Federal funds market has economized reserves and increased velocity is developed in H. P. Minsky, "Central Banking and Money Market Changes," Quarterly Journal of Economics, LXXI, May 1957, pp. 171–187. The argument is actually a little dubious, since if banks did not use the Federal funds market as much as they do, they would probably borrow more from the Federal Reserve, thus increasing aggregate member bank reserves. If this is the case, the increased use of the Federal funds market may have strengthened rather than weakened monetary controls.

[66] On the fund-raising techniques used by sales finance companies, see the following sections of the Federal Reserve study, Consumer Installment Credit: "Consumer Installment Credit and the Credit Market," pt. I, vol. 1, ch. 13; and E. Shapiro and D. Meiselman, "The Financing of Consumer Credit Institutions;" D. P. Jacobs, "Sources and Costs of Funds of Large Sales Finance Companies;" and J. S. Earley, "Comment," pt. II, vol. 1, pp. 298–323, 324–413, and 414–423, respectively.

[67] Roosa, "Federal Reserve Operations in the Money and Government Securities Markets," (Federal Reserve Bank of New York, 1956), especially pp. 43–52.

[68] This 5-percent note, issued in October 1959 and maturing in August 1964 attracted 108,000 full-paid subscriptions for $25,000 or less, aggregating $941 million. For details, see Treasury Bulletin, October 1959, p. A–1.

In these and many other ways, under the pressure of the restrictive monetary policies and rising interest rates that have prevailed much of the time in the last few years, the managers of our financial system, with the help of an increasingly sensitive investing public, have devised many ingenious methods of getting more financial mileage out of the existing supply of funds. Moreover, most changes of this kind, once wrought, become a permanent part of the financial system—we will certainly never return to the simpler and less sophisticated arrangements that formerly prevailed.[69] In fact, in future periods of credit restraint, these methods of economizing funds are likely to be used even more widely than in the past, and we can trust the ingenuity of our financial managers to uncover still further economizing techniques.

There is not much that can be done about this propensity of the financial system to be ingenious. It is a matter of numerous small adjustments, frequently quantitatively unimportant individually, but cumulatively constituting a significant "slippage" in our monetary controls. Moreover, it would probably be unwise to interfere with these developments even if it were possible to do so, since they have served to increase the mobility of funds, reduced interest rate differentials, and caused the market mechanism to perform more efficiently its basic function of allocating capital. Some reduction in the effectiveness of monetary controls is probably not too high a price to pay for these improvements, particularly in light of the other weaknesses of monetary policy to be taken up shortly.

F. Why can't induced velocity changes be offset?

The above analysis has shown that when a restrictive monetary policy is applied through the use of general credit controls which reduce the supply of bank reserves, the decline in the supply of money relative to the demand for it tends to cause interest rates to rise, and this rise in interest rates triggers a series of adjustments, large and small, which result in more intensive use of the existing money supply and a rise in velocity. The obvious question is: Given the fact that there is a slippage through velocity, what is to prevent the monetary authorities from applying the controls with a sufficient intensity to compensate for the rise in velocity and thereby accomplish the desired objectives? There are several reasons why such an approach is not likely to be feasible.

1. *Need to keep the financial markets on an even keel.*—It is almost certainly true, in principle at least, that it would be possible in given circumstances to produce any desired degree of restriction of *aggregate* monetary demand (within reason) by forcing interest rates high enough (with attendant tightening of the other dimensions of credit contracts). However, such evidence as we possess strongly suggests that aggregate spending is not very sensitive to changes in interest rates.[70] For this reason, even rather small destabilizing autonomous increases in aggregate demand might require very large increases in

[69] Minsky ("Central Banking and Money Market Changes") refers to developments of the sort we have been discussing as "institutional changes" which shift the relation between velocity and the interest rate, making it possible to have a higher velocity than formerly with the same interest rate.

[70] This matter is discussed at some length, on a sector-by-sector basis, in the next section of this chapter.

interest rates to restore equilibrium, and, as we have seen, the slippages in the monetary machinery mean that a large volume of central banking activity—e.g., open market sales of Government securities—is required to produce a given effect on interest rates.[71] Under these circumstances, if the monetary authorities attempt by relentless pressure to bring about changes in both money supply and interest rates of the necessary magnitude within a short period of time, they run the risk of extreme congestion in the long-term capital markets, widespread cancellation of investment plans, a collapse of expectations, and a sharp decline in business activity. On the other hand, a slow, cautious policy designed to avoid these dangers may take so long to arrive at its destination as to be, for all practical purposes, rather ineffective.

2. *Debt management problems.*—In addition to its responsibility for the maintenance of a reasonable degree of general financial stability, the Federal Reserve has a special responsibility to the Treasury in connection with debt management. Except in a couple of instances, the Federal Reserve has not given direct support to the market at times of Treasury financing since late 1952,[72] but the System has had to relax the degree of its restriction at times when the Treasury has been in the market with large refunding or cash borrowing operations in order to give the Treasury a chance to complete its financing successfully. When debt management operations are large and frequent and employ the techniques now in use, the Federal Reserve may have difficulty working in the restrictive policy which it feels is necessary between Treasury trips to the market. It might be possible to alleviate this problem somewhat by the development of more effective debt management techniques—a matter which is discussed later in this chapter—but realistically it seems likely that it cannot be eliminated entirely.

3. *Uncertainty.*—A fact that is often overlooked but is a handicap to effective general monetary policy is that the authorities are seldom entirely certain what the near-term business outlook is. Even in periods when, in retrospect after all the facts are in, it is reasonably clear what the situation was, it is not necessarily true that at the time the outlook was clear to the authorities. A good example of this is to be found in 1956. In January of that year, the Federal Open Market Committee modified its policy, which had been directed chiefly at the prevention of inflation, to "take into account any deflationary tendencies in the economy." In the record of policy actions of the Open Market Committee, the explanation given for this action is that "the committee noted the currently reduced levels of farm prices and uncertainties in the housing and automobile markets; and it gave consideration to the view that the domestic economy after a year and a half of expansion might be nearing a cyclical peak and that a reaction might be in prospect before long."[73] Actually, as

[71] In simple Keynesian terminology, we have a case in which the elasticity of liquidity preference is high and the elasticity of marginal efficiency of investment low, so that the link between the money supply and the level of expenditures is rather weak.

[72] In late November 1955, the Federal Reserve bought $167 million of 2⅝ percent 1-year certificates of indebtedness on a when-issued basis to help the Treasury over a rough spot that developed unexpectedly in connection with a large refunding operation. (Board of Governors of the Federal Reserve System, Annual Report, 1955, pp. 8, 109–110.) And at the time of the speculative episode in connection with the refunding of June 1958, the Federal Reserve again gave some support to the market, as indicated earlier.

[73] Board of Governors, Annual Report, 1956, pp. 19–20.

it turned out, the peak was not reached for another year and a half in mid–1957. The modified policy of "taking account of deflationary tendencies" was dropped at the March meeting of the committee but was restored in May as uncertainties reappeared on the horizon and remained in effect until August when it was again eliminated.[74] Later in the fall, the development of the crisis in the Middle East introduced a new element of uncertainty into the picture.

These considerations suggest that until we are able to forecast near-term economic developments with more confidence than is presently possible, monetary policy will necessarily contain an element of hesitancy and caution which is natural in the case of officials charged with important responsibilities, uncertain as to exactly what kind of action the situation calls for, and concerned lest a mistake in policy might do serious harm to the economy.

4. *Uneven incidence of monetary policy.*—Another reason why monetary policy must be applied cautiously is that while its aggregate effects may not be very strong, there are differential impacts on different parts of the economy. Thus, an anti-inflationary policy that is not strong enough to do very much good from an aggregative standpoint may have serious effects on certain sectors. The problems this raises are partly political; vigorous complaints are likely to be elicited from the sectors that are unduly affected. In addition, however, social values may be at stake—the sectors that are affected may in some cases be those where from the standpoint of broad social policy it is most important that expansion continue.

Apart from these problems, the differential sectoral impacts of general monetary policy, taken in conjunction with some of the fundamental features of the structure of the American economy that are emphasized elsewhere in this report, are sufficient to raise some new and hitherto unexplored questions concerning the effectiveness of general monetary controls, particularly as a means of controlling inflation. These problems have little to do with the slippages in the monetary mechanism that were emphasized above but would be present even if general controls worked with much more precision than they do at the present time so that there was a reasonably close relation between the money supply and the *aggregate* level of expenditures. The basic question is whether, given the selective effects of general monetary controls and given the nature of the present-day inflationary process, such controls can deal effectively with the problem of inflation without creating severe unemployment and seriously slowing down the rate of economic growth.

Summary of Limitations on Overall Effectiveness of Monetary Policy

With a complex financial system such as ours, when the monetary authorities change the money supply, a number of reactions tend to occur which weaken the effects of the action on aggregate demand by inducing changes in holdings of idle cash balances and corresponding changes in monetary velocity. This tendency is especially troublesome in the case of restrictive policy designed to deal with inflation. Some of the major offsetting adjustments are as follows.

[74] Board of Governors, The Federal Reserve System, Annual Report, 1956, pp. 19–20.

1. Commercial banks tend to shift the composition of their portfolios systematically from Government securities to loans when credit tightens and from loans to Government securities when credit eases. A shift from Government securities to loans absorbs idle cash balances from the public and releases them into the spending stream, while a shift from loans to Government securities has the opposite effect.

2. Nonfinancial corporations have become important investors in Government securities, and they tend to build up their holdings of such securities in certain stages of the business cycle and to reduce them in other stages. Their actions appear to increase the flexibility of financial adjustments, thus weakening the impact of monetary policy.

3. The normal activities of financial intermediaries (such as life insurance companies, savings banks, etc.) serve merely to channel saving into investment and are not destabilizing in their effects on aggregate spending, although they may have troublesome effects on the composition of expenditures. To the extent that there are systematic shifts between demand deposits and claims against intermediaries or systematic shifts in the composition of intermediaries' portfolios, these institutions may facilitate destabilizing changes in the velocity of money. While these effects are present, available evidence suggests that they are less important than adjustments by commercial banks.

4. A number of changes in financial practice have been introduced in recent years, especially during periods of tight credit, which have improved the efficiency of the financial system and increased its resistance to Federal Reserve influence.

5. The increased flexibility of the financial system has weakened the effectiveness of the Federal Reserve, particularly in dealing with inflation. It is difficult for the System to increase the scope and speed of its actions to compensate for offsetting reactions, because it runs the risk of upsetting financial markets and of interfering unduly with the Treasury's debt management activities and because uncertainty about the business outlook frequently requires it to proceed cautiously. And finally the unevenness of the effects of monetary policy on different sectors of the economy (a) makes it difficult to proceed vigorously for fear of an undue impact on sensitive sectors, and (b) in light of the structure of the economy and the nature of present-day problems, renders exclusive reliance on general monetary controls an unsatisfactory way of achieving sound stabilization objectives.

III. The Effect of General Credit Controls on the Major Sectors of the Economy

In the last few years, with the minor exception of controls over margin requirements for loans to purchase and carry securities, the Federal Reserve has relied exclusively upon so-called general or quantitative credit control instruments. These instruments include open market operations, changes in member bank reserve requirements, and changes in the discount rates charged to member banks for borrowing from the Federal Reserve. These controls are said to be general because they enable the System to control, at least approximately, the total supply of money and credit in the economy, but do not interfere with the allocation of credit among uses, which is left

to the market to decide. Selective credit controls—of which the consumer credit controls used during World War II and on a few occasions since may be taken as typical—are designed to interfere with the allocation of funds without directly affecting the total supply available.

It is sometimes said—and the leading officials of the Federal Reserve System appear to adhere to this view—that the central bank should rely entirely (or almost entirely) on the general credit controls, since the only legitimate function of the central bank is to control the total supply of funds, leaving to the market the task of allocating credit. General controls, it is said, are impersonal and nondiscriminatory, whereas selective controls are explicitly designed to discriminate, and the central bank should not be a party to discrimination.

However, recent experience suggests that general credit controls have different effects on different classes of borrowers, depending on the extent to which they rely on internal funds for financing, the variety of sources of funds available to them, their bargaining power in dealing with lenders, the types of markets—competitive, oligopolistic, and so forth—in which they sell their products, and so on.

Of course, even in a highly competitive economy, general credit controls would not affect everyone equally (whatever that means). But in such an economy the differential effects on different types of borrowers could be defended on the ground that they were merely a reflection of differences in consumer tastes, differences in the productivity of resources applied to different uses, and differences in the evaluation of risks associated with different business undertakings. But our economy certainly does not fit this model even approximately, since there are market imperfections in nearly all areas. In fact, defenders of general monetary controls have themselves emphasized at times the fact that interest rates are sticky and that the effects of monetary policy may arise mainly from private credit rationing which is made possible partly by the existence of market imperfections.

Instead of distinguishing between general and selective controls on the basis of principle, it seems better to admit that each policy instrument—general as well as selective and monetary as well as fiscal—has its own peculiar incidence on the economy. This is an especially important, indeed necessary, way to approach the problem of policies for promoting growth and stability in the context of the present report, with its emphasis on other structural aspects of the economy. In accordance with this approach, we shall attempt as best we can to assess the effects that monetary policy has had and is likely to have upon some of the major sectors of the economy.

A. Residential construction

In the survey of monetary policy since 1946, reference was made at several points to the effects of monetary controls on residential construction, especially in the period since 1953. Residential construction is the area of the economy where there is clearest evidence that monetary policy has had a significant impact. Chart 9–3 shows private nonfarm housing starts monthly (seasonally adjusted annual rate) since 1947. It is quite clear that when credit has tightened housing starts have declined and when credit has eased starts have speeded up, although there has been a lag in the process. The

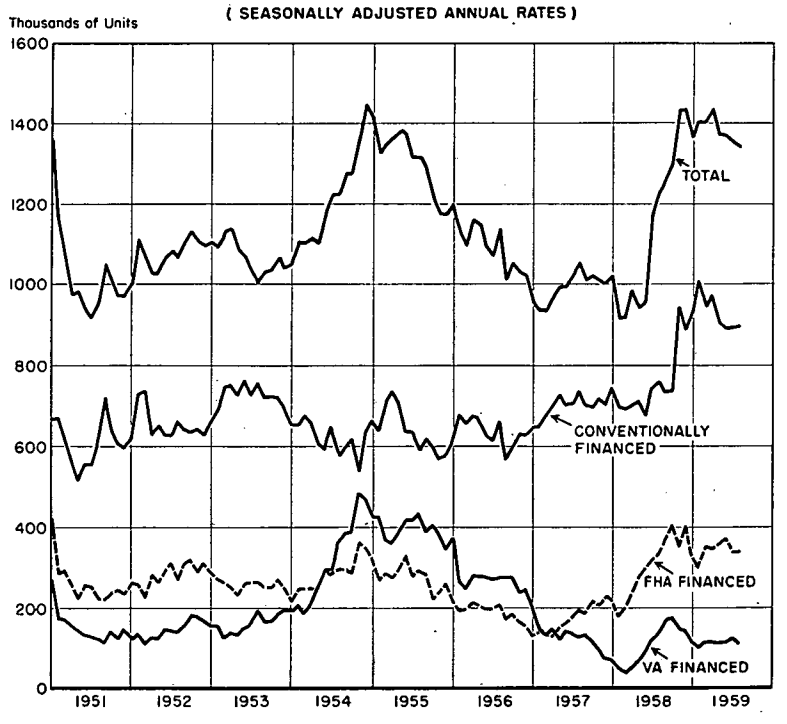
clearest case of the effect of monetary policy is perhaps to be found in the 1955–57 period. Housing starts began to rise under the stimulus of easy money and low interest rates during the 1953–54 recession, hit a peak of 1,443,000 units on a seasonally adjusted basis in December 1954, and then began to decline. The decline continued with some temporary interruptions throughout 1956 and 1957 as credit conditions became tighter and continued on into 1958, reaching a low point of 918,000 units in March of that year. At this point, chiefly due to the stimulus of easy credit and low interest rates, a pickup began which continued until April 1959, when the effects of high interest rates and tight money apparently began to have an effect once again. It is especially interesting to note that in the 1955–57 period of credit restraint, residential nonfarm construction was the only major category of GNP expenditures that showed a decline, dropping from $18.5 billion in the first quarter of 1955 to $17 billion in the third quarter of 1957, a drop of 8.1 percent. When valued at 1954 prices, such expenditures dropped much more—16.4 percent—due to a substantial rise in the prices of houses.

Housing starts have exhibited very marked year-to-year fluctuations throughout the postwar period. For example, starts increased by 37

CHART 9–3

PRIVATE NONFARM HOUSING STARTS, FINANCED BY CONVENTIONAL, FHA INSURED, AND VA-GUARANTEED MORTGAGES, 1951–1959

(SEASONALLY ADJUSTED ANNUAL RATES)



Source: Economic Indicators

percent from 1949 to 1950, dropped by 25 percent from 1950 to 1951, rose by 13 percent from 1953 to 1954 and by a further 9 percent from 1954 to 1955, fell by 17 percent from 1955 to 1956 and by another 9 percent from 1956 to 1957, and rose by 15 percent from 1957 to 1958. The volume of residential construction valued at constant prices has behaved in somewhat the same way as housing starts, although the fluctuations have been much less severe, due to the presence of a strong upward trend related to the propensity to build larger and more elaborate houses. The interesting thing about these fluctuations is that they have been distinctly anticylical, with residential construction rising when the rest of the economy was declining and declining when the rest of the economy was rising.

Prior to 1953, housing does not appear to have been influenced very much by general credit controls, for the simple reason that relatively little use was made of such controls. The pronounced impact on housing since 1953 is chiefly due to the existence of a rather peculiar but very simple mechanism. Due to ceilings on the interest rates that may be charged on mortgages insured by the Federal Housing Administration and guaranteed by the Veterans' Administration, a rise in yields on other competitive types of investments, such as corporate and Government securties, has tended to attract the supply of investment funds away from these mortgages. On the other hand, when credit conditions have eased and yields on competitive investments have fallen, the supply of investment funds has tended to flow back into the Government-supported mortgage programs. This is the essence of the mechanism, although the picture is clouded in detail by statutory and administrative changes in the interest rate ceilings and in the allowable terms (downpayments and maturities) on FHA-insured and VA-guaranteed mortgages, by the use of discounts as a means of giving some flexibility to the yields on insured and guaranteed mortgages, and by variations in the support given to the mortgage market by the Federal National Mortgage Association.[75]

Chart 9–3 shows starts financed by FHA-insured and VA-guaranteed mortgages on a seasonally adjusted basis.[76] Figure 9–4 shows the differentials between the Aaa corporate bond yield and the ceiling interest rates on (*a*) FHA-insured mortgages and (*b*) VA-guaranteed mortgages. A comparison of charts 9–3 and 9–4 brings out quite clearly the fact that when the differentials have narrowed, a decline in housing starts has tended to occur, although with a lag related to the time elapsing between the commitment of mortgage funds and the start of construction.

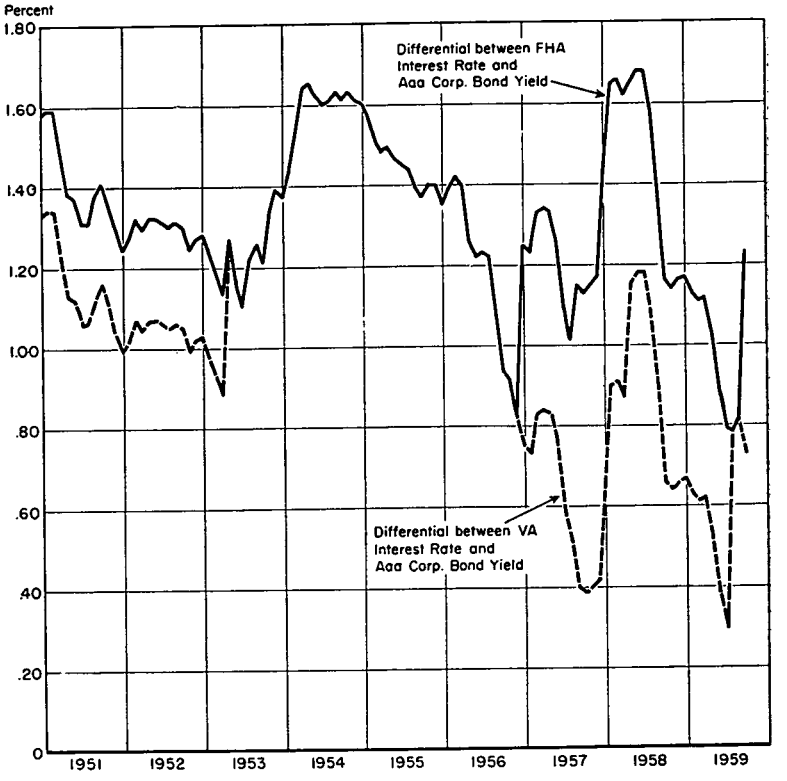
The working of the mechanism is very well illustrated in the period from early 1955 to early 1958. Total housing starts declined from 1,443,000 in December 1954 to 915,000 in February 1958, a drop of 37 percent. During this period the differentials shown in figure 9–4 declined very substantially due to a rise in the general level of in-

[75] For some of the details of these adjustments up to early 1958, see Smith, "The Impact of Monetary Policy on Residential Construction, 1948–58." in "Study of Mortgage Credit."

[76] Due to the fact that seasonally adjusted series for housing starts financed by FHA-insured and VA-guaranteed mortgages are not available separately, these seasonally adjusted series were constructed by assuming that the seasonal variations are the same as in the series for total private nonfarm housing starts.

CHART 9–4

DIFFERENTIALS BETWEEN YIELD ON HIGH-GRADE CORPORATE BONDS AND CEILING INTEREST RATES ON FHA-INSURED AND VA-GUARANTEED MORTGAGES, 1951–1959



Source: Federal Reserve Bulletin and Annual Reports of Federal Housing Administration and Veterans Administration

terest rates which was not fully compensated for by upward adjustments in the interest rate ceilings of the FHA and the VA. The fact that the decline in the rate differentials was the major factor in the decline in housing starts is suggested by the fact that during this period FHA-financed starts declined from 346,000 to 192,000, a drop of 45 percent, VA-financed starts declined from 462,000 to 37,000, a drop of 92 percent, while conventionally financed starts increased from 635,000 to 686,000, a rise of 8 percent. The fact that conventionally financed starts actually increased during this period is probably explained partly by the fact that there was some spillover of buyers who were unable to obtain FHA-insured or VA-guaranteed mortgages into the conventional mortgage market and partly by the fact that the most important single class of institutional investors in the mortgage market are savings and loan associations, and these institutions (*a*) were experiencing a large inflow of savings in this period and (*b*) have a strong preference for conventional mortgages over the FHA-insured or VA-guaranteed variety.

The expansion of residential construction which began in early 1958 was of a considerably different character from the expansion set off by easy money in 1953–54. Between February 1958 and April 1959, total housing starts (seasonally adjusted annual rate) rose from 915,000 to 1,434,000, a rise of 57 percent. FHA-financed starts rose from 192,000 to 358,000, an increase of 87 percent; VA-financed starts from 37,000 to 115,000, or 211 percent; and conventionally financed starts from 686,000 to 961,000, or 40 percent. By April 1959, total housing starts were almost exactly the same as in December 1954. FHA-financed starts were a little higher than in December 1954, but VA-financed starts, despite their relatively large increase from the low point of February 1958, were still 75 percent below the level of December 1954, while conventionally financed starts were 51 percent above the December 1954 level. Comparing the relative importance of the three forms of financing in December 1954 and April 1959, we find that FHA-financed starts had risen very slightly from 24 to 25 percent of total starts, VA-financed starts had dropped from 32 percent of the total to 8 percent, while conventionally financed starts had increased from 44 percent to 67 percent of the total.

Thus, while the interest rate ceilings on Government-supported mortgages in combination with flexible rates on competing investments appear to be the main explanation for the housing boom beginning during the 1953–54 recession and for the decline starting at the end of 1954, they appear to have been a less important factor in the housing pickup starting in 1958. The failure of the VA program to recover to a position of importance equivalent to the one it occupied in the previous housing boom can be attributed chiefly to an unfavorable interest rate relationship. As can be seen from figure 9–4, even in mid-1958 when the differential between the VA interest rate and the corporate bond yield was at its highest point of the 1957–58 recession, it was still far below the level of 1954 when the previous housing boom got under way and not much above the low point of mid-1953. Since mid-1958, bond yields have risen substantially, and despite the upward adjustment of the VA interest rate, the rate relationship has been very unfavorable to the program. In addition to the interest rate situation, the VA program has been handicapped by the fact that it possesses a smaller degree of discount flexibility than the FHA program,[77] the fact that the limits on the size of VA loans are less satisfactory relative to the prices of houses than they used to be, and perhaps some decline in the number of veterans eligible to take advantage of the program.

In any case, conventional mortgages have become a much more important factor than formerly. If this trend continues, it is possible that residential construction will eventually become less responsive to monetary policy. However, there are some institutional reasons on the supply side of the market for expecting more than average sensitivity—for example, even conventional mortgage rates are stickier than most open market interest rates and this may cause the mortgage

[77] Of course, discounts are smaller under the FHA program due to the higher nominal interest rate. In addition, FHA permits the discount to be passed on to the ultimate buyer of the property whereas VA attempts to prevent this. Under the VA program, for example, the builder of a house may absorb a discount on the sale of a mortgage to a financial institution, but he is not supposed to increase the price he charges the buyer of the house to recover the discount. The Veterans' Administration is presumably in a position to enforce this provision reasonably effectively through its appraisal procedures.

market to suffer when interest rates rise; moreover, commercial banks are subject to limits on the amount of mortgages they can hold which are related to their time deposits or capital accounts.

However, it would seem that if—as is frequently suggested—the ceilings on the interest rates that can be charged under the Government-supported programs are removed, the sensitivity of residential construction to monetary policy will depend primarily upon the interest elasticity of demand for residential housing. Unfortunately, we know nothing about this interest elasticity, and the existence of the interest rate ceilings impedes investigation of the question on the basis of recent historical data. Other factors would be involved too—including the preferences of institutional investors for mortgages as compared with competing investments under conditions in which interest rates are relatively free to move, and the elasticities of demand for funds on the part of borrowers (including corporations and municipalities) who compete with home buyers for funds. Little is known about these factors either, except for some indications, referred to below, that business investment demand appears to have little interest elasticity.

It does appear a reasonable conjecture that under a regime of freely fluctuating interest rates, unless some other selective control were substituted for the rate ceilings, residential construction would continue to show significant fluctuations. But instead of behaving in a contracyclical fashion, as has been the case in the last few years, it seems likely that the income effect would dominate and the fluctuations would be procyclical, thus contributing to overall instability. However, the cyclical pattern would be disrupted by changes in the rate of family formation and other factors only partially related to current business conditions.

To sum up, residential construction in the last few years appears to have been affected by monetary controls more than any other sector, and despite changes that have been occurring in this field recently, a continuing high degree of sensitivity seems likely as long as the ceilings on FHA and VA interest rates remain in effect.

B. Business plant and equipment expenditures: General

In the traditional way of looking at things, monetary policy is supposed to exert its main effects on the economy through its influence on business expenditures for fixed investment. For example, the tightening of credit raises interest rates, and businessmen are supposed to decide how much investment to carry out by comparing the expected returns on the investment with the cost (explicit or implicit) of the funds needed to finance it. The rate of interest is viewed as the cost of funds, and when this cost rises, some marginal investments that would otherwise have been carried through are ruled out since they do not promise a high enough return to cover the cost of the funds.

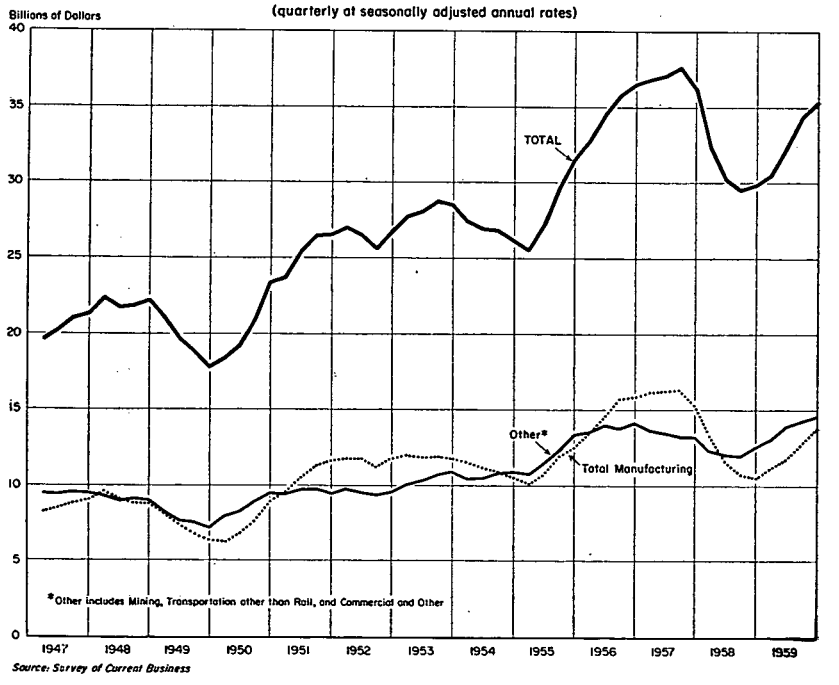
Investment in plant and equipment is a highly complicated phenomenon, and our knowledge of its determinants is far from satisfactory. However, there is a fairly impressive accumulation of evidence that investment is, in general, not strongly influenced by interest rates. Moreover, in view of the general nature of investment decisions, there are some lines of theoretical reasoning which would suggest a priori

that the effects might be expected to be weak. And, finally, there are some features of the institutional framework within which investment activity is conducted which tend to weaken the effects of interest rates on investment.

First let us take a rather crude look at the recent facts. Chart 9–5 shows the behavior of business expenditures on plant and equipment, by major industry groups and total, seasonally adjusted annual rate, quarterly, since 1947. Figure 9–6 shows the Aaa corporate bond yield on outstanding issues monthly since 1947, and, separately the Aaa yield on new issues since 1956. It may be noted that there is a marked tendency for the differential between new and outstanding issues to widen when credit tightens as in 1957. It is immediately apparent that plant and equipment expenditures have generally moved in the same direction as interest rates. The clearest example of this is in 1955–57; from the first quarter of 1955 to the third quarter of 1957, plant and equipment expenditures increased steadily, the net increase for the period amounting to $12.1 billion or 46 percent. During this same period, as shown in figure 9–6, the yield on outstanding issues of high-grade corporate bonds rose from 2.93 percent (in January 1955) to 4.12 percent (in September 1957), a relative increase of 41 percent, and from January 1956 (the first month for which data are available) to September 1957, the yields on newly issued corporate bonds of high quality rose even more—from 3.15 percent to 4.73 percent, a relative increase of 50 percent. As the defenders of monetary policy are always

CHART 9–5

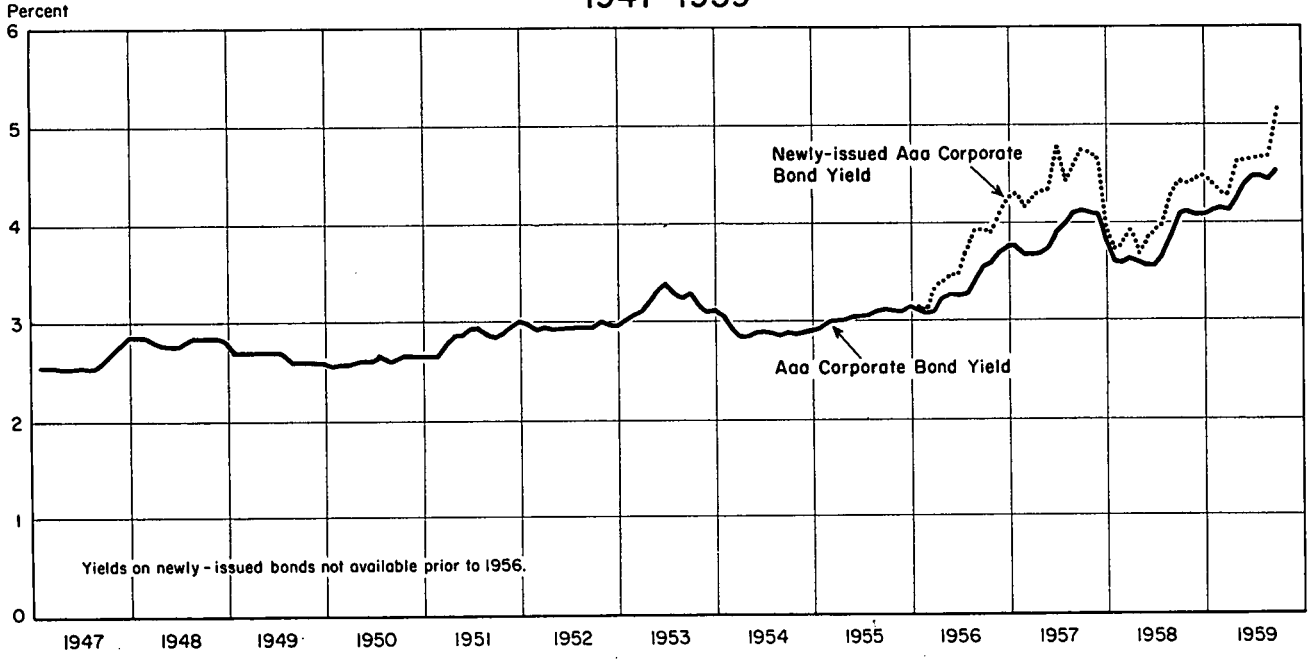
EXPENDITURES ON PLANT AND EQUIPMENT, 1947-1959



Source: Survey of Current Business

CHART 9–6

YIELDS ON OUTSTANDING AND NEWLY-ISSUED HIGH GRADE CORPORATE BONDS 1947-1959



Sources: Federal Reserve Bulletin and Moody's Investor's Bond Record.

quick to point out, this rapid and continuous growth of private investment at the same time that interest rates were rising substantially does not, by itself, demonstrate that credit restrictions did not have strong effects. Obviously, demand curves for capital goods were shifting outward under the impetus of the boom—this is evidenced by the very fact that there was simultaneously an increase in interest rates and an increase in investment expenditures. Conceivably investment would have increased much more rapidly than it did if credit had not tightened. One cannot prove anything by reference to crude statistics of this kind—nevertheless they are worth examining.

Such real evidence as there is concerning the sensitivity of investment to changing credit conditions lies elsewhere than in a consideration of the immediate statistics. In part, it can be found in a consideration of the nature of investment decisions, together with the institutional framework within which such decisions are typically made. In addition, there is a considerable amount of systematic empirical evidence which has been accumulated in recent years.

One fact, primarily institutional, which considerably weakens the effect of monetary policy on business investment is the predominance of internal financing. According to the Federal Reserve flow-of-funds estimates, for the corporate nonfinancial business sector, funds obtained from internal sources (capital consumption allowances and retained earnings) amounted to 68 percent of total funds obtained from internal and external sources for the period 1953–58. In 1955, 1956, 1957, and 1958, funds derived from internal sources amounted to 124, 86, 82, and 92 percent, respectively, of total plant and equipment outlays.[78] In principle, decisions to invest out of funds obtained internally might be influenced by interest rates if businesses weighed the expected returns from plant expansion against the returns that could be expected from outside investments, but in fact it seems certain that such decisions are almost entirely independent of interest rates. The chief reasons for this are (*a*) prospective returns from capital projects that might be under consideration are so high relative to returns on safe financial assets (such as Government securities) that the comparison is of little relevance, and (*b*) outside investments involving substantial risk require continuous attention and divert the energies of management away from the firm's main line of business.

It is doubtful whether even investment financed from external sources is very sensitive to interest rates. It is interesting to note—although, again, such statistics by themselves do not prove anything—that total funds obtained by nonfinancial corporations from bonds, stock, mortgages, and other loans increased even more rapidly than investment expenditures during the 1955–57 period. The amount increased from $5.7 billion in 1954 to $11.4 billion in 1956, a rise of 100 percent, and in 1957 remained at about the same level as in 1956. Business investment decisions involve forecasts of many factors extending over the prospective life span of the investment, including product demand, wage rates and raw material prices, technological changes, and possible obsolescence of the equipment, changes in the

[78] Federal Reserve Bulletin, August 1959, p. 1050, supplemented by tabulations for earlier years obtained from the Board of Governors of the Federal Reserve System. Retained profits in these tabulations are after deduction of inventory valuation adjustment.

competitive position of the firm, movements of general business, and so on, often for a period extending many years into the future. Obviously such forecasts are subject to a great deal of uncertainty. In view of this uncertainty, it is difficult to believe that returns can be estimated with sufficient accuracy so that a decision to invest would be likely to be affected by a change of 1 or 2 percentage points in the corporate bond yield.[79] Investments so marginal that their profitability would be imperiled by such changes in interest rates would scarcely have been under consideration in the first place.

A consideration of the methods that seem to be used by business firms—even large ones—in arriving at investment decisions also indicates little likelihood that their investment decisions will be affected in any clear way by the current rate of interest. Many firms use a so-called "payout period" type of analysis, under which investment projects are evaluated in accordance with the number of years that will be required to recover the initial investment, those investments with the shortest payout periods being ranked highest on the scale. In this kind of analysis, there is no place for the rate of interest. A more discriminating kind of evaluation involves the computation of an expected rate of return, which in its most sophisticated form represents the so-called "internal rate of return," i.e., the discount rate, which, when applied to the expected gross returns (before depreciation but after taxes) will make the discounted value of the project equal to its cost.[80] This kind of calculation leads to an estimate of the yield on the investment that could be—but apparently seldom is—compared with the rate of interest. If any interest rate is used as a standard, it appears to be a conventional rate which is seldom changed to bring it into line with current market conditions.[81] In fact, most of these calculations appear to be related to decisions as to how to allocate a given amount of funds among a number of potential investment projects rather than to decisions as to how much investment spending to do in total.

Another factor which reduces the sensitivity of investment to interest rate changes is the market structure and pricing policies that prevail in many of our largest industries. These industries, such as steel, automobiles, chemicals, and so forth, are characterized by oligopolistic market structures and rather rigid administered pricing practices which in many cases result in prices below levels which fully maximize short-run profits. The existence of unexploited monopolistic profit opportunities permits such companies to raise prices to their customers in order to pass along any increased interest costs they may incur.[82] The increases in prices needed for this purpose would ordinarily be rather slight, since interest is a quite unimportant element of cost in most cases.[83] Moreover, there would be at least a partially offsetting

[79] For a careful development of this argument, see G. L. S. Shackle, "Interest Rates and the Pace of Investment," Economic Journal, LVI, March 1946, pp. 1–17; also F. A. Lutz, "The Interest Rate and Investment in a Dynamic Economy," American Economic Review, XXXV, December 1945, pp. 811–830.

[80] For a good discussion of the problem of investment decisions from the businessman's standpoint, see J. G. McLean, 'How To Evaluate New Capital Investments," Harvard Business Review, 36, November–December 1958, pp. 59–69.

[81] Lutz, "The Interest Rate and Investment in a Dynamic Economy."

[82] This possibility is emphasized in J. K. Galbraith, "Market Structure and Stabilization Policy," Review of Economics and Statistics, XXXIX, May 1957, pp. 124–133.

[83] The unimportance of interest as an element of business costs is stressed in H. G. Moulton, "Can Inflation Be Controlled?" (Washington: Anderson Kramer Associates, 1958), pp. 61–67.

increase in aggregate demand due to the rise in interest incomes, which might be of some significance if during a period of rising interest rates many companies throughout the country increased their interest payments and passed the increases through into prices.

In addition to passing along the increased cost of funds obtained from external sources, firms possessing market control and unexploited monopolistics profit possibilities may raise prices, thus increasing profits, in order to have more funds available for internal financing of investment, either because they prefer internal to external financing or because external funds have become more expensive or difficult to obtain.[84] Moreover, in other cases, dividends may be reduced—or not increased as much as they might otherwise be—in order to acquire internal funds.[85]

Thus, there are a number of important reasons for expecting investment expenditures, in general, to be insensitive to interest rates. A considerable number of empirical studies seeking to isolate the determinants of business expenditures on plant and equipment have been carried out in recent years, and, by and large, they corroborate the expectation that interest rates are an unimportant factor.[86] These studies are predominantly of two types. One type has relied upon answers by businessmen to questions addressed to them either in personal interviews or through mailed questionnaires. The other type has employed econometric or statistical analysis as applied to time series covering past periods, in some cases combined with cross-section data relating to different firms. The purpose in each case has been to find out the variables—interest rates, profits, sales, liquidity, and so on—which seem to be significantly associated with investment. In the space available here, it is not possible to review in detail the results of these studies. It seems fair to say, however, that the burden of evidence supports the view that investment is little affected by interest rates.

A few qualifications concerning the methods employed and the results obtained in these studies need to be pointed out, however. The surveys have been legitimately criticized on the ground that they have generally not been very scientifically conducted.[87] Moreover, most of them—including the most widely known, the famous Oxford survey [88]—have elicited a few answers from businessmen indicating that interest rates or credit availability might, under some conditions, have

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[84] The strong preference of the steel industry for internal financing of investment, together with increasing capital costs, has been cited as the major cause of the inflation of steel prices in recent years. In this case, however, the higher profits which resulted from price increases created pressures which raised wages, thus setting off another round of price increases, and so on. See J. T. Dunlop, "Policy Problems: Choices and Proposals," in Wages, Prices, Profits, and Productivity (The American Assembly, 1959), pp. 137–160; also Otto Eckstein and Gary Fromm, "Steel and the Postwar Inflation," Study Paper No. 2, p. 33.

[85] Of course, the reduction in dividends would probably reduce consumption expenditures somewhat but not enough to offset the increase in investment. The total effect would be closely analogous to the so-called balanced budget multiplier effect produced by a simultaneous and equal increase in Government expenditures and taxes.

[86] For a very useful compilation of the results of empirical research on investment, see J. R. Meyer and Edwin Kuh, "The Investment Decision" (Cambridge: Harvard University Press, 1957), pp. 23–35.

[87] See W. H. White, "Interest Inelasticity of Investment Demand—The Case From Business Attitude Surveys Reexamined," American Economic Review, XLVI, September 1956, pp. 565–587.

[88] The results of this survey—really two surveys—made at Oxford University before World War II are reported in J. E. Meade and P. W. S. Andrews, "Summary of Replies to Questions on the Effects of Interest Rates," and P. W. S. Andrews, "A Further Inquiry Into the Effects of Rates of Interest," Oxford Economic Papers, October 1938, pp. 1–31, and February 1940, pp. 32–73, respectively. Much of this material is reprinted, together with comments of several economists, in T. Wilson and P. W. S. Andrews (editors), "Oxford Studies in the Price Mechanism" (Oxford, 1951), pp. 1–74.

some effect on investment, although these factors are seldom if ever placed high on the list of determinants. Some of the studies—notably the Oxford survey—suffer from the defect that they were conducted before the war when economic conditions were markedly different from the present. Despite their shortcomings, however, the surveys do provide some valid evidence that investment demand is quite insensitive to interest rates.

There are also some difficulties about the econometric studies. One technical statistical problem is that profits and sales, which are commonly found to be the most important explanatory variables, are strongly intercorrelated with interest rates—that is, high profits and high interest rates have a strong tendency to appear together—and this makes it extremely difficult to disentangle the effects of interest rates from those of the other variables. It seems fair to say, however, that a strong interest effect, if present, would show up in the analysis, and that if an interest rate effect is present, it is almost certainly weak. A second difficulty relates to lags in the relationship.[89] One study of investment in fixed capital in American manufacturing industries has come up with an interest rate effect but with a lag of 1 year. That is to say, according to this study, a change in the interest rate has an effect on manufacturing investment in plant and equipment a year later.[90] It is possible that the reason other studies have failed to find such a relationship is that they have failed to introduce the proper lags. However, it may be noted that the existence of a lagged relationship of this kind is not much of a consolation for the supporter of monetary policy, since it introduces grave problems in connection with the timing of monetary action.

Recently considerable emphasis has been placed on changes in credit availability as the means by which monetary policy makes itself felt. It is argued that when credit tightens lenders may raise their credit standards and the conditions under which they will make loans. As a result, borrowers—especially marginal ones—find themselves unable to obtain funds regardless of the interest rates they may be willing to pay. This argument has been applied especially to the commercial banking system.[91] Doubtless there is something to it, although it may be noted that to the extent that credit controls work through this channel, the pinch is especially likely to be felt by smaller and weaker borrowers, a matter which is taken up more extensively below. In any case, its effectiveness appears to be seriously weakened if institutional investors, especially the banking system, are in a position to shift the composition of their portfolios from Government securities to private loans, as indicated earlier.

In this connection, the results of two surveys conducted by the American Bankers Association in 1955 and 1957 are of some relevance.[92] The first of these surveys, in 1955, indicated only slight evidence of a tightening of lending standards, and it is not clear that

[89] The general problem of lags in the impact of monetary policy is discussed later in this chapter.

[90] Franz Gehrels and Suzanne Wiggins, "Interest Rates and Manufacturers' Fixed Investment," American Economic Review, XLVII, March 1957, pp. 79–92.

[91] See the excellent article by H. S. Ellis, "The Rediscovery of Money," in Money, Trade, and Economic Growth: In Honor of John Henry Williams, op. cit., pp. 253–69.

[92] The results of these surveys of banker opinions concerning monetary policy and credit conditions were reported in two articles by E. S. Adams, "Monetary Policy and the Present Credit Situation," and "Monetary Restraint and Bank Credit," which appeared in Banking, November 1955, pp. 36–41, 155, and September 1957, pp. 68–72, 142, respectively.

such tightening as had occurred was due to monetary policy. The second survey, taken after a restrictive policy had been in effect for 2½ years, suggested that bank lending policies had become somewhat more selective, although two-thirds of the bankers replying indicated that the "greater selectivity" which had allegedly occurred had affected the increase in their loans since 1955 "hardly at all," and only a very small minority estimated the effect at more than 10 percent.[93] The ensuing discussion seems to imply that such effect as there was must have been chiefly in the field of mortgage credit.

The fact is that the supply of funds available to the private sector seems to be quite expansible under pressure, and it is not certain that many spenders will find credit unavailable when they need it. Moreover, some of the factors discussed above—such as the predominance and expansibility of internal sources of funds—are applicable whether monetary policy works through interest rates or through availability. And finally, to the extent that econometric studies are able to sort out the effects of interest rates from those of other closely correlated variables (such as profits or sales), such studies should be able to detect the effects of monetary policy whether these effects work through interest rates directly or through availability. At times when credit standards are raised and credit availability is reduced as a result of a policy of credit restraint, interest rates also rise. In fact, interest rates might be taken as an indicator of the degree of credit availability. This being the case, there should be a relationship between interest rates and investment expenditures, although, of course, the explanation of this relation would be different from the classical explanation based on the interest rate as a cost factor. The fact, therefore, that there is little evidence from econometric studies of any significant relation between interest rates and investment casts some doubt on the availability doctrine as well as on the more orthodox arguments emphasizing interest rates.

It seems fair to conclude that while changes in interest rates and credit availability brought about by monetary policy have some marginal influence over business investment expenditures, these effects are so weak that they are commonly swamped by the dynamic forces of innovation, surging business activity, and rising profits which almost invariably underlie a rapid growth of investment.[94] For example, it is very doubtful whether restrictive monetary policy did more than touch the fringes of the private investment boom of 1955–57.

Interest rates and credit policy are likely to affect investment in some sectors more than in others. Two candidates for strong effects suggest themselves. One is public utilities which, being publicly regulated, are probably subject to somewhat less uncertainty than most other enterprises, and which employ a large amount of long-lived capital so that interest rates are a fairly large element of cost. The other is smaller business enterprises which are likely to be in a somewhat weaker position vis-a-vis the credit and capital markets than larger firms. Let us turn our attention to each of these sectors in turn.

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[93] Banking, September 1957, p. 71.

[94] This is one of the conclusions of a study paper now being completed by Sidney S. Alexander.

C. Plant and equipment: public utilities

Some investigations have been made of the determinants of investment in plant and equipment by electric power companies. One study by Lawrence Klein covering the interwar period (1921–41) found the interest rate to be a significant factor, along with profits and the stock of capital; Klein estimated the interest elasticity of investment in this industry to be 2.79, meaning that a relative decline of 1 percent (of itself) in the rate of interest would result in an increase of 2.79 percent in investment.[95] On the other hand, a recent study by Kisselgoff and Modigliani, covering approximately the same time period as Klein's, arrives at an even more satisfactory explanation of investment by privately owned electric power companies by relating it to the rate of change of demand for electric energy and without making use of the interest rate. In fact, the authors tried out various formulations of the investment equation including the interest rate without success, and they conclude:

> On the basis of our statistical analysis, we cannot reach a definite conclusion concerning the influence of interest rates on investment; however, the evidence strongly suggests that even in this industry, where fixed assets are of great longevity, the cost of borrowed funds was not an important factor.[96]

Another study by Michael Gort also suggests that the interest rate is not an important determinant.[97]

Thus, the evidence (what there is of it) is not conclusive one way or the other. If interest rates are in fact not important in public utility investment, the explanation probably lies in certain peculiar features of the industry. Public utilities are supposed to make their services available throughout the territory they encompass. Although the practices of various regulatory agencies in setting utility rates vary considerably, most authorities apparently take interest costs into account in one way or another in setting rates and deciding what is a "fair return on invested capital."[98] In view of the fact that the demand for electric power is apparently price inelastic in the short run for nearly all types of consumers,[99] it appears that a company which is forced to pay a higher rate of interest for funds can hope to secure a rate increase and that the increase in rates will not appreciably reduce its sales. Under these conditions, the need to build up capacity to meet a growing demand may be the dominant consideration governing investment decisions and the interest rate of decidedly secondary importance in the short run. At the same time, however, demand for electric energy is probably considerably more elastic in the longer run after households and businesses have had time to adapt their appliances and equipment to changed conditions. Thus, while the short-run effects of rising interest rates may be of little im-

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[95] L. R. Klein, "Studies in Investment Behavior," in Conference on Business Cycles (New York: National Bureau of Economic Research, 1951), pp. 233–303, especially pp. 277–281. The estimating equation is linear so that the elasticity would vary with the values of the variables; the estimate of 2.79 is the value at the point corresponding to the mean values of the variables for the period studied. In the same study, Klein found a significant interest elasticity for railroad investment.

[96] Avram Kisselgoff and Franco Modigliani, "Private Investment in the Electric Power Industry and the Acceleration Principle," Review of Economics and Statistics, XXXIX, November 1957, pp. 363–379 (quotation from p. 379).

[97] Michael Gort, "The Planning of Investment: A Study of Capital Budgeting in the Electric Power Industry," Journal of Business of the University of Chicago, XXIV, April 1951, pp. 79–95, and July 1951, pp. 181–202.

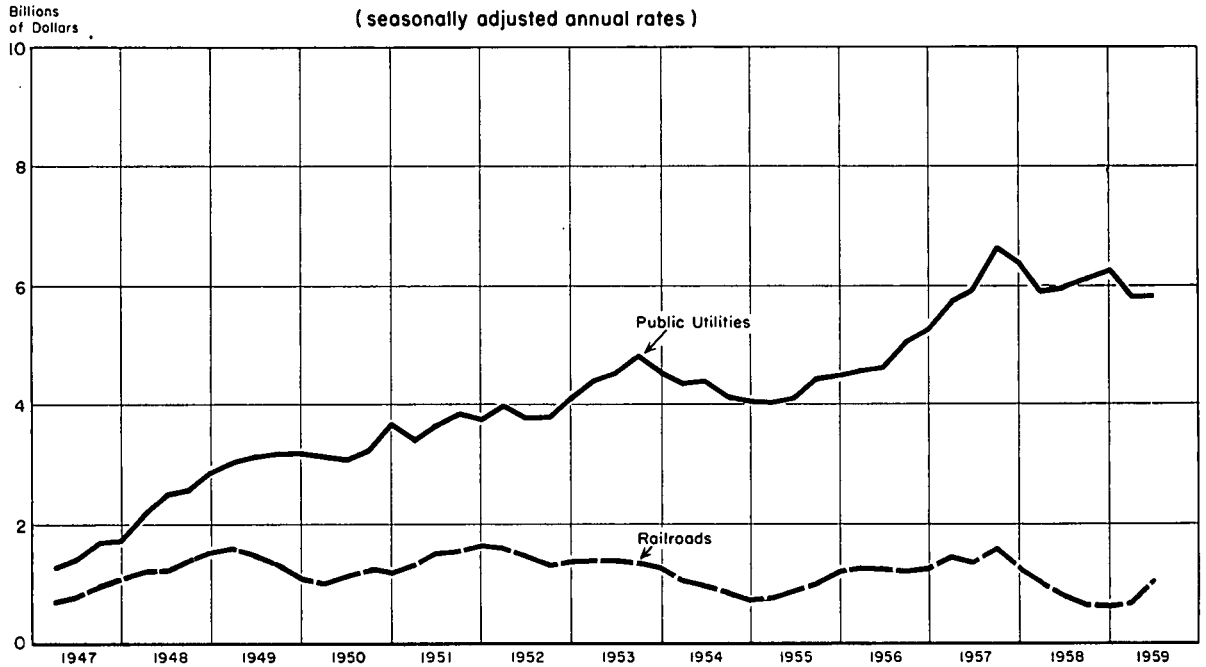
[98] Emory Troxel, "Economics of Public Utilities" (New York: Rinehart & Co., 1947), ch. 17.

[99] Troxel, "Economics of Public Utilities," pp. 429–431.

CHART 9-7

EXPENDITURES ON PLANT AND EQUIPMENT BY PUBLIC UTILITIES AND RAILROADS, 1947-1959

(seasonally adjusted annual rates)



Source: Survey of Current Business

56836—60—27

portance, a gradual upward drift of interest rates from one business cycle to another might significantly reduce investment by public utilities.

As can be seen from chart 9–7, investment in public utilities continued to rise in 1955–57 despite rising interest rates, and there is no obvious evidence that the increase in the cost of capital caused a reduction in investment. We may conclude that even in this field, where the conditions for a significant interest rate effect are, in some respects at least, unusually favorable, it is at least doubtful whether monetary policy has a very potent effect, particularly in the short run.

D. Effects on small versus large firms

Although general credit controls do not seem to affect business investment very much in the aggregate, there has been some discussion of the possibility that they may discriminate against smaller businesses. There are some plausible reasons for expecting such discriminatory effects, and some strong indications that under certain conditions they would be present. However, as to whether there has in fact been such discrimination in the last few years, the evidence is mixed, difficult to interpret, and highly unsatisfactory. It may be noted that there is considerable difficulty in deciding upon the proper definition of a small business—a subject which has generated a great deal of literature in the last few years—but we shall not worry about this problem in this necessarily brief discussion.

Fragmentary evidence suggests that smaller corporations rely upon external sources of funds somewhat more than do larger ones.[1] In the case of unincorporated enterprises, the difficulty of disentangling the affairs of businesses from those of their owners makes it virtually impossible to measure the amount of internal financing. To the extent that small firms raise funds externally, it is clear that they are more dependent on the banking system than large firms are, have fewer alternative sources of funds, and seem, in general, to be more vulnerable to the effects of tight credit.[2] To the extent that larger firms do need to use bank credit, they have access to a larger number of banks, and the competition among banks for their business strengthens their bargaining position and probably enables them to get better terms, as well as greater assurance of getting the funds they need. Moreover, large firms have access to the open market as a source of short-term funds and to the organized security markets for long-term funds. Smaller firms are limited in their ability to utilize the facilities of the capital market, because they are not well known to investors except perhaps within a limited geographical area. New firms, as well as small firms, suffer disabilities in raising funds for growth and expansion. Established and profitable firms are able to finance a large portion of their needs from earnings retention. New firms in their early years may not have the necessary profits to finance expansion and their lack of credit standing makes it difficult to obtain

[1] See V. L. Andrews, Seymour Friedland, and Eli Shapiro, "Who Finances Small Business?" in Financing Small Business, report to the Committees on Banking and Currency and the Select Committees on Small Business, U.S. Congress, by the Federal Reserve System, pts. 1 and 2, committee print, 85th Cong., 2d sess. (Washington: Government Printing Office, 1958), pp. 20–39.

[2] See Andrews, Friedland, and Shapiro, "Who Finances Small Business?" pp. 23–24, for an indication that unincorporated enterprises have limited access to the capital market and have to rely mainly on trade credit, banks, and other financial institutions for outside funds.

funds from external sources. These same factors probably make new enterprises more vulnerable than existing ones to the effects of tightening credit.[3] In addition, small (and new) firms which do not possess market control are likely to find it much more difficult to pass on increased interest rates to their customers through price increases than is the case with larger firms possessing a semimonopolistic market position. And they may similarly have more difficulty in raising prices in times of tight credit in order to obtain more funds from internal sources.[4]

A satisfactory test of the hypothesis that smaller businesses are unduly affected by tight credit would require a careful study of investment broken down according to size of firm during periods of tight and easy credit. Unfortunately, satisfactory data for making such a test are not available. However, there are one or two small bits of evidence. Table 9–13, drawn from the Federal Reserve flow-of-funds tabulations, shows fixed investment expenditures for nonfinancial business firms, broken down between corporations and unincorporated enterprises. The behavior of these sectors in the 1955–57 period of credit restraint is of some interest. Investment by unincorporated businesses approximately kept pace with that by corporations between 1954 and 1955, but in 1956 and 1957, the period in which credit became noticeably tight, unincorporated businesses fell behind. From 1955 to 1956, unincorporated businesses increased their investment spending less than corporations, so that their share of total investment declined, as indicated in table 9–13. And in 1957, while investment by corporations continued to increase, that by unincorporated enterprises actually declined.

TABLE 9–13.—*Expenditures on fixed capital investment by corporate and unincorporated business, 1952–58*

Year	Total		Corporate nonfinancial business sector		Noncorporate nonfinancial business sector	
	Amount (billion)	Percent of total	Amount (billion)	Percent of total	Amount (billion)	Percent of total
1952	$28.2	100	$20.9	74	$7.3	26
1953	30.4	100	22.5	74	7.9	26
1954	30.3	100	21.8	72	8.5	28
1955	34.3	100	24.2	71	10.1	29
1956	40.4	100	29.2	72	11.2	28
1957	41.7	100	32.0	77	9.7	23
1958	35.2	100	26.1	74	9.1	26

Source: Federal Reserve flow-of-funds accounts.

The quarterly financial reports for manufacturing corporations prepared by the Federal Trade Commission and Securities and Exchange Commission show gross property, plant, and equipment accounts by size classes of corporations. The increase in these accounts during any period of time is a rough measure of gross investment. The

[3] It should be noted that there are two more or less distinct questions concerning the financing of small and new businesses: (a) whether the facilities for financing such enterprises are adequate, and (b) whether they are unduly affected by credit restrictions implemented through general monetary controls. We are concerned only with the latter question.

[4] The difference in market position is stressed by Galbraith ("Market Structure and Stabilization Policy," Review of Economics and Statistics, XXXIX, May 1957, pp. 124–133), who argues that small firms are likely to be hit unduly hard by tight credit.

increase in these accounts for all corporations between the third quarter of 1953 and the fourth quarter of 1954—a period of relatively easy credit—amounted to $11 billion, of which $8.9 billion or 80 percent of the total occurred in corporations having total assets of over $50 million. In the period of tight credit extending from the first quarter of 1955 to the third quarter of 1957, the total increase was $33.4 billion, of which $29.4 billion or 88 percent of the total was credited to corporations with assets in excess of $50 million. Thus, these data suggest some gain in the relative position of large companies during the period of tight credit.[5]

Obviously, these data are very sketchy. Moreover, even if it were clearly established that large firms did grow faster than small firms in the 1955–57 period, and that growth speeded up more for large firms as compared with the previous period of easy credit, it would not prove that smaller firms were unduly affected by tight credit. It is quite possible that the nature of the expansion during this period favored large firms—i.e., that the demand for products produced primarily by large firms underwent a disproportionate expansion. A conclusive study of the problem would require a careful and intensive analysis of the nature of the shifts in demand and industrial structure that occurred during the period.

There is, however, some further evidence relating to the expansion of bank loans to small and large businesses during the 1955–57 period of credit restriction, derived from a detailed study by the Federal Reserve System. To summarize the results briefly, they indicate that business loans to large borrowers increased much more rapidly than loans to small borrowers during this period, although one cannot be sure whether this was due to a disproportionate effect of tight credit on the supply of funds to small businesses or to the fact that demands for funds on the part of large businesses were increasing more rapidly.[6] It does appear that during this period interest rates on loans to large businesses rose substantially more than interest rates on loans to small businesses. In a sense, this was favorable to small businesses, but basically it probably hurt them by making loans to small business less attractive than loans to larger concerns. The reason for the narrowing of interest rate differentials apparently is that there are approximate ceilings on interest rates on business loans of 6 to 8 percent due to usury laws and banking tradition in many parts of the country, and loans to small businesses, which involve more risk and expense, were closer to the ceilings at the beginning of the period so that they were able to rise only to a rather limited extent.[7]

One of the Federal Reserve studies suggests that one way of solving the dilemma of distinguishing between large and small businesses is to divide firms into those that are large enough and sufficiently well-established to be able to obtain funds in the national credit and capi-

[5] Federal Trade Commission and Securities Exchange Commission, Quarterly Financial Reports for Manufacturing Corporations. The shifting makeup of size classes over time makes the reliability of these data for our present purposes rather dubious, since it probably understates the growth in both periods for the under $50 million class, due to the fact that the largest and most rapidly growing concerns in this class in any period are likely to expand beyond the class limit and enter the over $50 million class.

[6] This is a summary of material presented in a study by D. P. Eastburn and J. J. Balles in "Financing Small Business," pp. 420–439.

[7] See the study prepared under the direction of R. A. Young and A. R. Koch, in "Financing Small Business," pp. 387–390.

tal markets and those that are not able to utilize such facilities. The study then points out that the first group of firms will be able to borrow on a short- or long-term basis virtually at will provided they are willing to pay the going price for funds and will seldom encounter a problem of availability. The smaller firms, on the other hand, will have to rely mainly on trade credit and bank loans, which they must obtain from a limited number of banks on a customer relationship basis.[8] This useful way of looking at the problem suggests, in view of the fact that the demand for credit appears to be quite inelastic within the range of rates we are accustomed to, that monetary policy is not effective unless it does have a strong impact on small business. *That is, if monetary policy works chiefly through availability and if availability is not a problem for large firms, it follows that when monetary policy is effective in curtailing business spending, its impact must fall mainly on small business.*

One final facet of the problem should be considered. Trade credit extended mainly by large firms to smaller firms is an important factor and may serve to reduce the pressure of credit restriction on smaller firms. In our consideration of liquidity adjustments of the nonfinancial corporate sector, we saw that during the 1955–58 period trade credit expanded very rapidly. Studies indicate that this is probably a systematic partial offset to whatever tendency there is for smaller firms to be unduly affected by restriction of bank credit.

E. State and local government expenditures

It has frequently been pointed out that State and local governments have been strongly affected by credit restrictions in recent years. Such restrictions would, of course, have their main effects on capital outlays of these governmental units, and probably the best available index of capital outlays is construction activity. Expenditures on new construction by State and local governments increased steadily during the period of tight credit in 1955–57—from $7.8 billion in 1954 to $9.7 billion in 1957. In 1958 they remained at about the same level as in 1957.[9] Chart 9–8 (p. 384) shows construction contracts awarded by State and local governments on a monthly basis since 1947, with a breakdown among highways, education, and all other types of construction.[10] This chart shows a steady upward trend in the total, although there has been a rather sharp decline during 1959, which is reflected in all three component series.

The amount of new State and local government security issues sold for cash amounted to $7 billion in 1954, declined sharply in 1955 and 1956, reaching $5.4 billion in the latter year, then rose to $7 billion in 1957 and $7.4 billion in 1958. Actually, these figures substantially overstate the net amount of funds obtained through the capital market, since they make no allowance for the substantial amounts of old securities retired out of tax revenues by some governmental units. Table 9–14 shows sources and uses of funds for State and local governments since 1954, organized in such a way as to throw light on the financing of construction expenditures. Expenditures on construc-

[8] See the review of the findings of the Federal Reserve surveys of the sources of small-business financing by G. W. Mitchell in "Financing Small Business," pp. 364–366.
[9] Economic Report of the President, January 1959, p. 176.
[10] In constructing this chart, centered 12-month moving averages were used as a means of making a crude adjustment for seasonal variation.

tion and land have been increasing about $1 billion per year. The current surplus—excess of tax receipts over other kinds of expenditures—increased each year up to 1958, so that it was possible to finance increasing construction expenditures in 1956 and 1957 while at the same time reducing the net amount of funds raised by borrowing. Holdings of financial assets have increased each year, but the increments in 1956 and 1957 were smaller than in other years.

TABLE 9–14.—*Sources and uses of funds, State and local governments, 1954–59*

[Billions of dollars]

	1954	1955	1956	1957	1958
SOURCES					
Current surplus [1]	7.6	8.0	9.7	10.4	10.4
Issuance of obligations	4.3	3.6	3.3	4.9	6.0
Total, sources	11.9	11.6	13.0	15.3	16.4
USES					
Construction and land	9.1	10.0	11.1	12.1	13.1
Net acquisition of financial assets [2]	3.7	2.2	2.6	3.5	3.6
Other and statistical discrepancy	−.9	−.6	−.7	−.3	−.3
Total, uses	11.9	11.6	13.0	15.3	16.4

[1] Excess of tax and other current receipts over expenditures other than for construction.
[2] Includes currency, deposits, and security holdings.

Source: Federal Reserve Bulletin, August 1959, p. 1051.

The high cost of funds and tightness in the capital market have unquestionably caused some borrowing by State and local governments to be canceled or postponed. A study by the Investment Bankers Association, covering the 9-month period July 1956 to March 1957, indicated that about $0.5 billion of bonds were not sold as scheduled, but a substantial portion of these were reoffered and sold at a later date during the period.[11] However, all studies of this kind necessarily cover only issues which reached the offering stage—no one knows the volume of issues canceled at earlier stages of the borrowing process.

It is very difficult to judge the extent to which the cancellation or postponement of bond issues results in a corresponding reduction or postponement of State and local government spending. The proceeds of some issues may be intended for repayment of bank loans or refunding of outstanding securities. To the extent that the proceeds are designed to finance income-generating expenditures, some of these expenditures may be financed by drawing down liquid assets or by borrowing from the banking system or other sources. Furthermore, there is a lag between the raising of funds and their expenditure, and the postponement of issues may serve mainly to shorten the length of this lag. There are strong indications, however, that while these various adjustments may absorb some of the impact, substantial postponements of offerings do have an effect on expenditures.

There are signs that in some instances State and local governments and perhaps the electorate in voting on bond issues for public improvements are becoming more sensitive to interest costs, but there are also

[11] IBA Statistical Bulletin, April 1957, pp. 1–4.

a great many instances where interest rates do not influence decisions at all. In some cases, there are legal ceilings on interest rates that can be paid by governmental units, but apparently these ceilings are commonly set at 5 or 6 percent and are thus high enough so that they do not interfere with the raising of funds. Apparently, however, there have been instances in which interest rate maximums fixed in specific referendums have proved to be too low to make borrowing possible by the time the securities were offered.

It will be noted from figure 9–8 that there has recently been some indication of a contracyclical movement in contract awards by State and local governments. Awards leveled off in mid-1957 and then rose sharply at the same time that interest rates fell in late 1957 and early 1958; then late in 1958 they began a sharp decline which coincided with rising interest rates. The increase that occurred in 1958 has been cited as evidence of contracyclical stabilizing behavior on the part of State and local governments expenditures.[12] A more complete study now in process finds evidence of systematic contracyclical behavior on the part of State and local government construction expenditures in recent years. This study, which considers security offerings, contract awards, and construction put in place, concludes that monetary policy has a contracyclical effect on State and local government construction expenditures which is approximately one-third to one-fourth as great as the effect on residential construction. It breaks expenditures into three categories—schools, water and sewer projects, and all other types of projects—and finds no substantial evidence of effects on schools and water and sewer projects, the entire contracyclical effect being felt in the "all other" category.[13]

Table 9–15 shows the annual increments to the school-age population (ages 5 to 17 years) since 1950. The large increments in this age group in recent years in conjunction with the fact, as shown in figure 9–8, that school construction contract awards have shown little increase since 1954 and have actually been declining since mid-1958, suggest that tight money may have had some differential impact on school building, in contrast to the conclusions of the study referred to above. School construction rose roughly in pace with other types of construction during the postwar period up to 1954, but since that time has lagged distinctly behind other types of construction. The lag in school construction in real terms has been substantially greater than is indicated in figure 9–8, due to the fact that construction costs, as measured by the Department of Commerce composite index, rose by 14 percent between 1954 and 1958. Thus, in a period in which school facilities were generally recognized as inadequate to begin with, in which there have been increasing increments to the school-age population, and in which construction costs have been rising sharply, we find an apparent decline in expenditures on school construction. One might surmise that the tight money that has prevailed during most of this period has had something to do with it.

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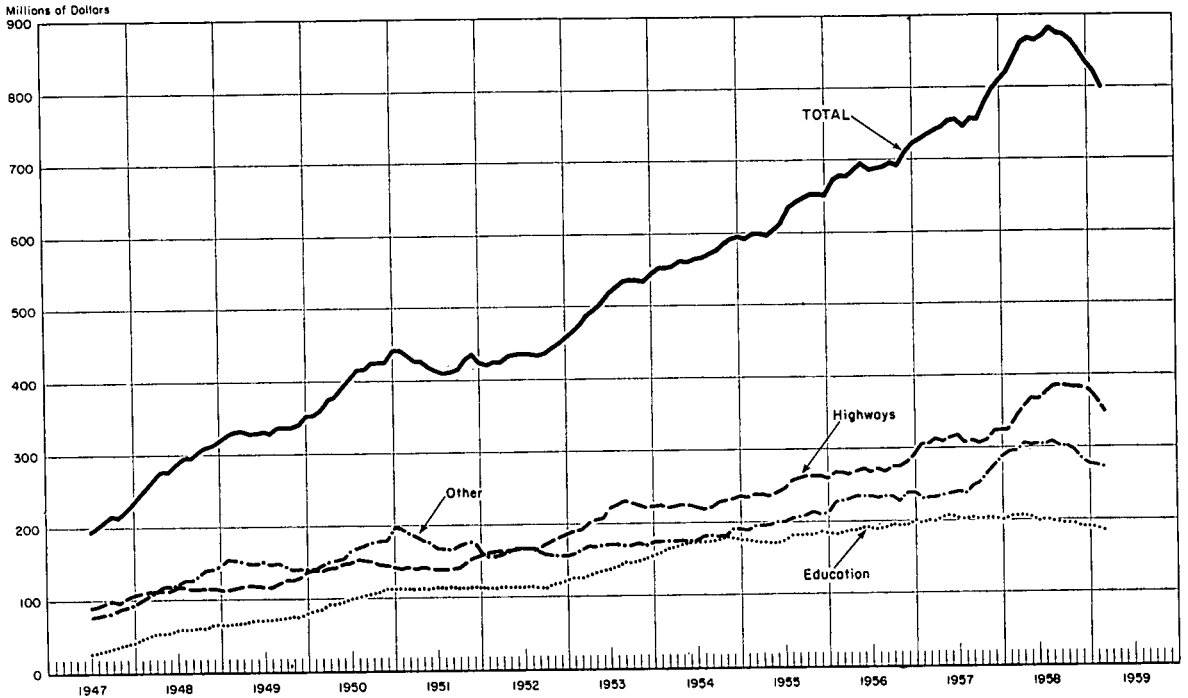
[12] See IBA Statistical Bulletin, January 1959, pp. 1–4.

[13] F. E. Morris, "An Empirical Study of the Impact of Monetary Policy on State and Local Governments," paper to be delivered at the annual meeting of the American Finance Association, December 28, 1959.

CHART 9-8

STATE AND LOCAL GOVERNMENT CONSTRUCTION CONTRACTS AWARDED

CENTERED 12-MONTH MOVING AVERAGES, 1947-1959



Source: Construction Review, U.S. Departments of Commerce and Labor.

TABLE 9–15.—*Increments to the school-age population, 1950–59*

Year:	*Increase in population ages 5 to 17 years (thousands)*	Year:	*Increase in population ages 5 to 17 years (thousands)*
1950	510	1955	1,369
1951	688	1956	1,430
1952	1,775	1957	1,458
1953	1,392	1958	1,551
1954	1,388	1959 [1]	1,566

[1] Projection.

Source: "Status and Trends: Vital Statistics, Education, and Public Finance," National Education Association, 1959.

During the last few years, yields on State and local government securities have been rising relative to yields on most other types of securities. (See chart 9–2). The chief reason for this is apparently the fact that such securities are exempt from the Federal income tax, and in order to market the greatly increased volume of issues during the postwar period, it has been necessary to appeal to investors in lower tax brackets to whom the tax exemption is of less value than to the wealthy investors who formerly constituted the bulk of the market for State and local government securities. It may be noted that commercial banks have in recent years become very important investors in these securities. It may be that tight money, by keeping the bank market from expanding more rapidly, has made it necessary for State and local governments to obtain funds from investors subject to lower tax rates than the 52 percent applicable to commercial banks.

F. Consumer durable goods

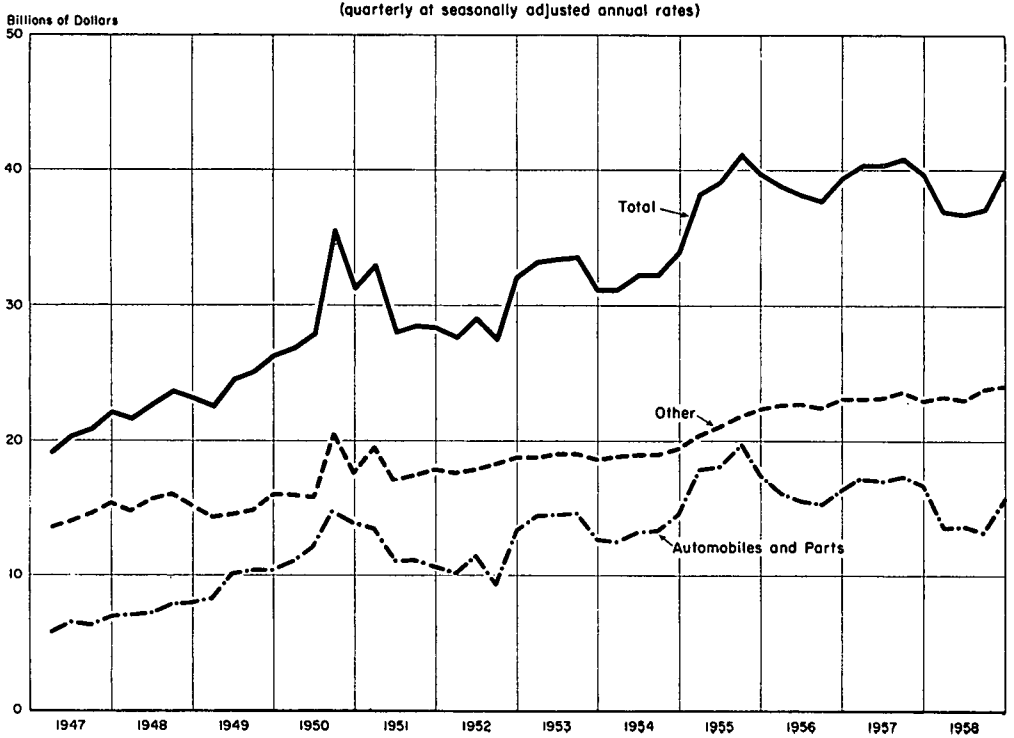
Consumer durable goods, particularly automobiles, have contributed significantly to economic instability during the postwar period. Chart 9–9 shows consumer expenditures on durable goods by quarters (seasonally adjusted annual rate) since 1947, separately for automobiles and parts and for other durable goods. It is clear that automobiles are responsible for most of the instability in consumer durables—the growth in the two series has been roughly parallel, but the fluctuations around the trend are much greater for automobiles.

The growth of outstanding consumer installment credit since 1947 is depicted in chart 9–10, again with a separation between credit for purchasing automobiles and credit related to purchases of all other consumer durables. Again, it is apparent that the fluctuations are substantially greater in the case of automobiles, although the trend of growth is about the same. The rate of growth of outstanding consumer installment debt has been large, the debt having grown from $2.5 billion at the end of 1945 to $33.9 billion at the end of 1958. Some students of the problem have been worried about this rate of increase, feeling that it could not continue indefinitely and that when it slows down it will create problems in maintaining aggregate demand especially for consumer durable goods. However, an analysis of the growth of consumer credit on the basis of a life-cycle model, in which each year a new group of consumer borrowers in the early stages of household formation enters the market and a (smaller) one leaves the market (i.e., pays off its debt), indicates that a continuous geometric rate of growth of the absolute increments to outstanding debt is not an

CHART 9–9

CONSUMER EXPENDITURES ON DURABLE GOODS, 1947–1958

(quarterly at seasonally adjusted annual rates)



Source: Survey of Current Business, U.S. Income and Output.

unreasonable possibility. In this situation, if we start from a condition in which the ratio of debt to income is very small (as was the case at the end of the war), this ratio will increase rapidly at first but the rate of increase in the ratio will gradually slow down and the ratio itself will eventually approach a constant. Apart from the fluctuations in consumer credit, the trend of growth since the end of World War II appears to be consistent with such a model.[14]

Thus, it appears that it is the instability—the rapid accelerations and decelerations—in the growth of consumer credit rather than the high average rate of growth per se that constitutes the problem. Consumer credit has contributed to most of the fluctuations in economic activity since 1929. In the early postwar years, however, markets for consumer durable goods were dominated by special factors, including wartime shortages and the resulting need for replacement, the initially low level of consumer debt, large holdings of liquid assets, the rising supplies of durable goods during the reconversion period, and the temporary applications of selective controls from September 1948 to June 1949 and from September 1950 to May 1952. As a result, installment credit and durable-goods expenditures did not bear their usual relation to income; for example, during the 1949 recession, both durable-goods expenditures and the net change in installment credit outstanding continued to increase. Thus, installment credit appears to have had a stabilizing effect during most of this period. Since 1952, the procyclical behavior of earlier years has been resumed.

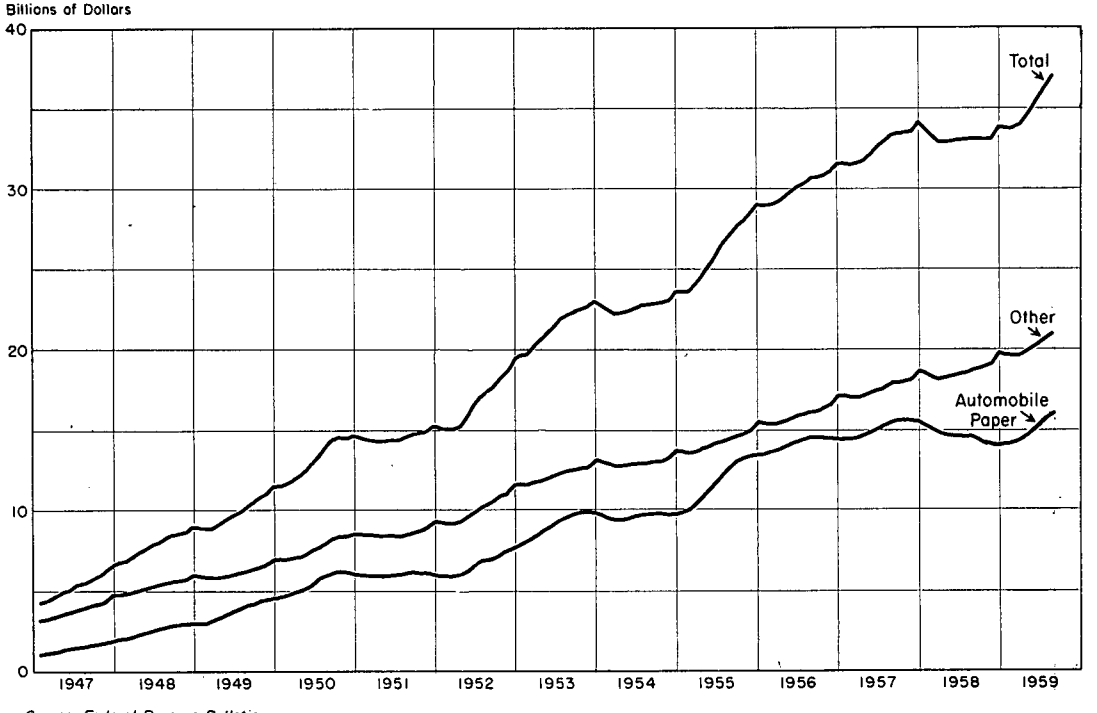
Fundamental to an explanation of the cyclical role of consumer credit appears to be the fact that such credit is largely used to finance the purchase of durable goods. The acceleration principle, applied in a somewhat loose fashion, provides a reasonably satisfactory explanation of the cyclical fluctuations in durable-goods buying. That is, if the demand for the services of durable goods is a function of the level of income, there will be an equilibrium stock of consumer durable goods corresponding to each income level. The demand for net additions to the stock will be a function not of the level but of the rate of change in income.[15] Combined with various other relationships, such a relationship is capable of contributing to (or even causing) cyclical fluctuations in economic activity. It seems likely that such a relationship (in a complex nonlinear form) does in fact exist and constitutes a basic explanation of the instability that characterizes the consumer-durable goods industries. The destabilizing effect of the accelerator is undoubtedly intensified in the downward direction by the fact that replacement can be postponed beyond the normal time and in the upward direction by the availability of consumer

[14] See Alain Enthoven, "The Growth of Installment Credit and the Future of Prosperity," American Economic Review, XLVII, December 1957, pp. 613–629.

[15] The combination of such an accelerator with an explanation of investment by industries producing consumer durable goods based on the acceleration principle would introduce an intensified cyclical tendency into the economy. Income would have to increase at an increasing rate in order to justify any net investment in consumer durable-goods industries.

CHART 9–10

CONSUMER INSTALLMENT CREDIT OUTSTANDING
1947–1959



Source: Federal Reserve Bulletin

credit which permits rapid expansion of purchases to make up for postponement of replacement during the downswing, and consumer credit probably further intensifies the instability in several other ways:

1. It increases the demand for consumer-durable goods and enlarges the sector to which the acceleration effect is applicable.
2. The tendency of lenders to ease credit terms in upswings and tighten them during downswings because of changes in the attitude toward the risks of consumer loans may increase the amplitude of the swings.
3. The attitudes of consumer borrowers toward incurring debt to buy durable goods (as distinct from their attitude toward the goods themselves) may shift in a destabilizing fashion over the business cycle.
4. Required repayment of outstanding debt may constitute a severe drag on the shrinking total of consumer purchasing power during a period of declining activity.
5. If consumers are overburdened with debt when income falls and are forced to default, the solvency of financial institutions may be imperiled.

Some of these influences are obviously not likely to be important except in the case of a serious decline. Moreover, not all fluctuations in the demand for consumer durable goods are to be explained in terms of an accelerator relationship. For example, the sharp rise in automobile demand in 1955 and its subsequent sharp decline in 1956 were clearly due chiefly to autonomous forces such as a change in consumer tastes perhaps related to the new models of 1955.

Consumer credit is more important in connection with the purchases of automobiles than it is in connection with the purchase of other durable goods. During 1955–58, consumer credit extensions on automobile paper were 96 percent of total consumer expenditures on automobiles and parts, while the ratio of credit extensions to consumer expenditures for all other durable goods combined was only 50 percent.[16] In view of the fact that automobiles have been more unstable than other durable goods, as pointed out above, this suggests that consumer credit does contribute to instability.

In view of the destabilizing fluctuations in consumer-durable goods and consumer credit, the question of the impact of general credit controls in this sector is an important one. There are a number of reasons for doubting the strength of the impact, although there are almost surely some effects. Several participants in the Federal Reserve study of consumer installment credit attempted to assess the sensitivity, and, although there were some differences in the conclusions arrived at, it seems fair to say that the consensus was that the effects of general controls are not very powerful in this sector. A high proportion of consumer credit emanates from commercial banks either directly or through the extension of bank credit to finance the activities of sales finance companies. As far as direct loans by the banks are concerned, the exceptional profitability of consumer loans, the possibility of selling Government securities in order to continue mak-

[16] This comparison admittedly exaggerates the role of credit in automobiles relative to other durable goods somewhat, since credit in connection with purchases of used goods is included, and the secondhand market is more important in automobiles than in other durables.

ing loans when credit tightens, the fact that many banks have consumer credit departments which are not profitable unless a large volume of credit operations is maintained, and the possibilities of pressure from dealers in automobiles and other durable goods to continue making credit available are factors making for insensitivity. For sales finance companies, the great skill of these institutions in shifting nimbly among different sources of funds makes it difficult for credit restrictions to slow down their lending activity. And finally, the apparent insensitivity of consumer demand for durable goods and credit to changes in interest rates gives lenders considerable room for making upward adjustments in interest rates as costs of funds to them rise without affecting the quantity of credit extended.[17] Consumers apparently are commonly quite ignorant of the finance charges they pay and seem to be mainly influenced by the monthly payment they have to make. Moderate changes in interest rates on consumer loans do not affect the monthly payment much; and if they do, the effect can be compensated for by a slight increase in the term of the loan.

There is some support for the view that general controls do have a significant impact on consumer credit and a little evidence in support of this position. A recent study, covering the period from mid-1955 to the end of 1956 when credit was tightening, compares the reactions of selected groups of banks (concentrating on banks which emphasize consumer lending) whose deposits increased during this period with other groups (similarly selected) whose deposits declined. The study finds that the declining-deposit banks—who by definition were under more pressure than the others—increased their consumer loans substantially less than the increasing-deposit banks. In general, the study shows that the declining-deposit banks reduced nearly all types of loans more than the other banks, while at the same time selling more securities, and that consumer loans were cut as much as other types.[18] What the study does not show, of course, is the extent to which borrowers turned down by these banks were able to obtain loans from other banks or from sales-finance companies. Nevertheless, the results are of some significance.

It seems reasonable to conclude that, while general controls almost certainly have some effects on consumer credit, these effects are probably not very great. Moreover, there is another problem that arises when the movements in durable goods get out of phase with the economy as a whole—as in 1956–57 when the automobile industry was depressed at the same time that general business conditions were reasonably good. In such a situation, it may be desirable to tighten credit generally without having an effect on the depressed sector.

G. Inventory investment

Changes in the rate of inventory accumulation and decumulation have been an important factor in business fluctuations in the United States during the postwar period. Inventory runups in boom times have set the stage for inventory disinvestment during periods of de-

[17] Contributions to the Federal Reserve study, "Consumer Installment Credit," bearing on the question of sensitivity to general credit controls, include the following: a Federal Reserve staff study in pt. I, vol. I, ch. 13, with further details presented in pt. I, vol. II, supp. II, pp. 43–140; and papers by Shapiro and Meiselman, Jacobs, and Earley, pt. II, vol. I, pp. 298–423. The Jacobs paper takes a somewhat more positive view of the effects of general controls than most of the others.

[18] Paul Smith, "Response of Consumer Loans to General Credit Conditions," American Economic Review, XLVIII, September 1958, pp. 649–655.

cline, and rapid inventory disinvestment has been an important factor in the recessions of 1949, 1953–54, and 1957–58. In the last recession, a decline in nonfarm business inventory investment (seasonally adjusted annual rate) from positive $1.7 billion to negative $8.1 billion—a drop of $9.8 billion—accounted for 58 percent of the drop in gross national product from the peak in the third quarter of 1957 to the trough in the first quarter of 1958.

The demand for inventory stocks in manufacturing appears to depend to a first approximation upon the current level of sales; this means that the change in inventories (which is inventory investment) depends upon the rate at which sales are changing. Thus, a decline in the rate of increase in sales can cause an absolute decline in inventory investment. Although the determinants of inventory investment are more complicated than this, the inventory demand relation is of this general type, and for this reason inventory investment is subject to exaggerated fluctuations which have a short-run destabilizing effect by magnifying fluctuations in final demand. From the point of view of economic stabilization, therefore, it would be desirable if inventory fluctuations could be damped. Since much inventory investment is financed by bank credit, some economists have put considerable emphasis on the role of monetary policy in regulating inventories. However, there is little evidence that monetary controls exert a strong influence on inventory investment. Inventories are usually held in order to maintain or increase output and sales or to profit from price speculation. In view of the short time periods for which they are commonly held, the interest rate is ordinarily a negligible element of cost.[19] Accordingly, businessmen are ordinarily willing, if necessary, to pay an increased interest rate on inventory loans. If banks were to "ration credit" by simply turning down borrowers rather than by raising interest rates, this could have an effect on inventory investment. But inventory loans are precisely the types that, according to traditional theories of commercial banking, are most appropriate for banks to make. Moreover, banks feel an obligation to meet the temporary working capital requirements of their customers. In addition, as we have seen, banks commonly have substantial secondary reserves of Government securities which they can sell to obtain funds for lending. Finally, it is not certain that even if banks credit were less available, inventory investment would be strongly affected, since businessmen might be able to finance inventory investment by liquidating cash balances or Government securities or by borrowing elsewhere.

A recent study of monetary policy in relation to inventories indicates, however, that inventories are sufficiently dependent on bank credit so that a policy that could effectively control bank loans might affect inventory investment.[20] However, in addition to the problem of effectively controlling loans, this study suggests some other difficulties. One is that the durable goods industries, which have larger inventory fluctuations than nondurable goods industries, do not rely upon bank credit as much for financing inventories, and large firms, in general,

[19] Moses Abramovitz, "Inventories and Business Cycles" (New York: National Bureau of Economic Research, 1950), pp. 125–126.

[20] Doris M. Eisemann, "Manufacturers' Inventory Cycles and Monetary Policy," Journal of the American Statistical Association, 53, September 1958, pp. 680–688.

have an unusually low ratio of loans to inventories. Moreover, in view of the timelag in making monetary policy effective and the difficulty of detecting the proper time for restricting inventory accumulation, the problem of timing monetary policy with a view to controlling inventories would be a difficult one.

In any case, there is certainly no evidence that monetary policy has had any appreciable effect on inventory investment and its fluctuations in the last few years.

H. Lags in monetary policy

Considerable evidence has accumulated in the last few years that whatever effects general monetary controls may have are likely to be realized only with relatively long timelags. A recent study covering 19 business cycles from 1879 to 1954 has uncovered consistent and rather long timelags between turning points in the time rate of change of the money supply and turning points in general business conditions. At upper turning points, the lag averaged 16 months and ranged between 13 and 24 months for specific cycles. The average lag at lower turning points was 12 months with a range of 5 to 21 months.[21] Another study has attempted to measure, on a sector-by-sector basis, the lags that are likely to be present between changes in interest rates and credit availability and the effects on production, income, and prices.[22] For example, for a construction project financed by borrowing, this lag would consist of the time elapsing between the raising of the funds and the accrual or payment of income to the factors of production. This would depend upon the speed with which orders were placed for materials, the extent to which the orders were filled out of existing inventories, the speed with which the rate of production was adjusted to make good the depletion of inventories and to keep pace with the change in sales, and a host of other factors, many of which would vary greatly from one industry to another and from one time to another, depending on business conditions. Furthermore, there would be secondary effects stemming from the spending of the income generated by the initial payments, and these effects would overlap those occurring in the first stage. The study referred to above estimates the lags at perhaps roughly 6 months for residential construction, something over a year for other types of construction, about 6 months for manufacturing equipment outlays, 2 months for consumer credit, and 3 months for inventories.

The lags are probably overstated in this study, although the inadequacy of the data, as well as conceptual difficulties, makes adequate appraisal difficult. In any case, the lags may well be long enough to be rather troublesome for monetary policy. Moreover, to the lags estimated in this study it is necessary to add the interval between the time when the monetary authorities take action and the time when this action affects interest rates and credit availability enough to produce a change in spending decisions; if our earlier analysis of the slippage in monetary policy is reasonably correct, this interval may also be substantial.

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[21] Milton Friedman, "The Supply of Money and Changes in Prices and Output," in the Relationship of Prices to Economic Stability and Growth, compendium of papers submitted by panelists appearing before the Joint Economic Committee (Washington: Government Printing Office, 1958), pp. 241–256.

[22] Thomas Mayer, "The Inflexibility of Monetary Policy," Review of Economics and Statistics, XL, November 1958, pp. 358–374.

It is often contended that the flexible administrative apparatus of the Federal Reserve gives monetary policy an advantage over fiscal or other stabilization policies because it is possible to take action quickly and to reverse the direction of policy without delay if it is necessary. However, this view overlooks the fact that in the case of monetary policy there may be a rather long lag between the time action is taken and the time its effects are felt.

It is possible that the effects of monetary policy are stronger than the analysis in the previous section of this chapter suggests, because most studies of the impact may not have made proper allowance for lags.[23] In any case, the existence of the lags obviously complicates greatly the problem of the proper timing of monetary actions.

I. Concluding comment

In order to appraise the impact of monetary policy on aggregate spending, it is necessary to combine the sectoral impacts discussed above. In addition, it is necessary to take account of secondary changes in spending resulting from the operation of the multiplier. As indicated in the above discussion, the effects are obviously quite irregular—with some sectors (such as residential construction) being affected strongly and other sectors (such as fixed investment by large corporations) being affected very little. But for a period in which credit tightens and interest rates rise as much as in the 1955–57 period, for example, it seems likely that the total effect would be a matter of some consequence. However, the irregularity as between sectors raises problems, as does the presence of lags. And it is especially important to bear in mind, in connection with our later discussion, that the effects seem to be weak in those sectors—such as plant and equipment expenditures, inventory investment, and consumer durable goods—that are prone to rapid expansion and contraction and are consequently important generators of instability.

Summary of effects of monetary policy on major sectors of the economy

1. *It is clear that by far the greatest impact of monetary policy in the past few years has been on residential construction. Restrictive policies during periods of inflation have tended to reduce the rate of housing construction, while easy money policies in recession have stimulated it. The effect has been mainly, but perhaps not entirely, due to the existence of interest-rate ceilings on FHA-insured and VA-guaranteed mortgages, which have served to channel the supply of funds to and from residential construction as interest rates on competitive investments fall and rise.*

2. *Aside from this sector, the effects of monetary policy have probably been greatest on State and local government construction expenditures and on capital outlays by smaller businesses, although the evidence in these cases is far from definitive. The effects on plant and equipment expenditures of larger business concerns appear to have been very slight, and, as a result, monetary controls have not been very effective in dealing with booms powered by increases in fixed invest-*

[23] It will be recalled that one study of fixed investment (Gehrels and Wiggins, "Interest Rates and Manufacturers' Fixed Investment," American Economic Review, XLVII, March 1957, pp. 79–92) did discover a significant interest-rate effect with a lag of 1 year.

ment, as in 1955–57. Even in the case of public utilities, where conditions appear to be most favorable for monetary policy there is little evidence of a strong effect on investment. There has probably been some effect on consumer credit, although the impact here appears to be quite weak. Inventory investment has been affected very little.

3. *It appears that such effects as monetary policy does have are felt by the economy only after fairly long timelags, although evidence on this matter is still rather sketchy. If the lags are as long as they appear to be, they create difficult problems in connection with the timing of monetary action.*

4. *Although the impacts are irregular as between sectors and appear with troublesome lags, the effect on aggregate spending resulting from vigorous credit tightening is a matter of some importance. However, the effects are weak in the sectors—including fixed investment, consumer durables, and inventories—which are subject to the greatest fluctuations and are the most serious generators of instability.*

IV. Possibilities of Making Monetary Policy More Effective

In light of the difficulties suggested by the above analysis of monetary policy, there are several approaches that might be taken to increase its effectiveness. Unfortunately, however, there is no panacea, one reason being that our knowledge is not adequate to enable us to say with certainty that the diagnosis of the difficulties is correct. One thing that can be said with assurance is that there should be more intensive study of the effects of monetary policy. In this regard, we may hope that the studies now being conducted by the Commission on Money and Credit will throw useful light on the problems. *However, the Federal Reserve System should be encouraged to devote substantial research effort to such studies and to make the results, regardless of their implications, available to scholars outside the System.*

A. Policies directed at stable growth of output

On the one hand, maintaining stability in a growing economy requires that aggregate demand should be permitted to grow in pace with the aggregate capacity; that is, the level of output that can be produced when the labor force is fully employed. At the same time, changes in the composition of demand are important, particularly in an economy many sectors of which are characterized by downward rigidity of prices, since under such circumstances there is an inflationary bias built into the mechanism which we rely upon to reallocate resources in response to changes in demand.[24]

In such an economy, large changes in demand which occur quickly cause considerable difficulties both in maintaining balance between the growth of capacity and the growth of demand and in preventing inflation. On the one hand, changes in demand tend to produce increases in the rate of investment as capacity is built up in the sector in which the demand has increased, and it becomes difficult to manage things in such a way that demand continues to grow in pace with capacity. Excess capacity tends to be built up in some sectors, and when demand fails to keep pace, the rate of investment slows down and unemploy-

[24] C. L. Schultze, "Recent Inflation in the United States," Study Paper No. 1.

ment results. In addition, prices tend to rise in the sectors to which demand has shifted, but, due to rigidities associated with market power, they fail to decline in the sectors where demand has declined. Instead, output and employment fall in these sectors. Policies which attempt to keep the price level stable by reducing aggregate demand may in turn strike areas where downward price rigidity prevails, and may be ineffective in dealing with inflation, and at the same time may result in further reductions in output and employment.

In this kind of economy, it is extremely difficult to design appropriate policies which will maintain stable growth of output and prevent inflation. One approach to the problem which may have merit within limits is to try to prevent some of the major shifts in demand which necessitate these complex adjustments. This approach cannot be pushed too far, since its extreme limit would be to keep the composition of demand constant. This would require a complex set of detailed controls, which, aside from being virtually impossible to administer effectively, would put the economy in a straitjacket and immobilize the machinery for reallocating resources to meet changing tastes and needs.

However, there are some changes in demand which it might be desirable to prevent or, more accurately, to check before they have been permitted to go too far. The record shows, for example, that investment in plant and equipment tends to develop in powerful surges, sometimes associated with expansion in one sector of the economy and sometimes another.[25] A recent example is the investment boom of 1955–57. These surges seem to feed upon themselves, because investment goods production begets the need for more investment to expand the capacity of the industries which produce capital equipment. Thus, they tend to cause inflation centered in capital goods, which, due to downward rigidities of prices and wages, it is difficult to prevent by means of general controls which do not strongly affect the demand for capital equipment itself. Secondly, when these investment booms proceed beyond a certain point, it becomes difficult to keep demand growing in pace with capacity and thus prevent overcapacity and unemployment from developing. In addition to surges in the demand for capital equipment that occur autonomously, there are surges in demand that occur as a result of the operation of acceleration effects in consumer durable goods and business inventories. Such shifts in demand—or increases in aggregate demand centered in specific sectors of the economy—tend to cause difficult inflationary problems in themselves, and they also tend, via further acceleration effects, to set off or to accentuate booms in the capital goods industries. A case in point is the rapid rise in automobile demand, fed by consumer credit, in 1955, which reached a pace that could scarcely be sustained and probably was partly responsible for the capital goods boom of 1955–57.

Thus, there may be something to be said for the development of controls which are capable of dealing with specific destabilizing sectors characterized by strong accelerator effects, such as plant and equipment, consumer durable goods, inventories, and residential construction. All of these sectors, except residential construction, appear to be relatively insensitive to general monetary controls, according to

[25] This is the major conclusion of a study paper by Sidney S. Alexander, now in process of completion.

our earlier analysis, and the effects on residential construction have been due primarily to peculiar institutional arrangements. Let us consider the possibilities for developing controls which come to grips with each of these sectors.

Plant and equipment.—One of the problems related to the control of plant and equipment is that if we are interested in having a rapid rate of growth, we want to encourage investment since it adds to our capacity. Spreading investment in plant and equipment reasonably evenly over time would mitigate the problem of instability in the growth of output and the problems of inflation, but it is not clear that we would want to achieve such an evening-out if it meant that the average level of investment would be lower. Moreover, at least up to a point, we want to follow policies that from a secular standpoint encourage a high level of investment. In this respect, the policies of the last few years, which have resulted in a secular upward drift of long-term interest rates from 2½ percent at the end of World War II to over 4 percent at the present time, seem rather dubious. It is quite possible that the sharp rises in interest rates in inflationary periods have been relatively ineffective in checking investment in the short run, while the gradual effects of the secular upward drift have weakened the general incentive to invest.[26]

In part, the problem of stopping the upward drift of interest rates or of reversing it before it seriously erodes the incentive to invest is a matter of the fiscal-monetary mix. If we really want a higher rate of growth, one way we might achieve it would be by raising taxes in such a way as to depress consumption and increase saving while at the same time following an easier monetary policy to keep down interest rates and encourage investment. The possibilities here are perhaps somewhat limited since the marginal investment projects which might be stimulated in the course of time by a lower rate of interest would presumably have a somewhat lower productivity than the current average productivity of investment. Moreover, we would have to pay a price in the form of a reduction in current consumption for an increased rate of growth obtained in this way.

What kinds of policies might we adopt which might permit us to limit the periodic upsurges in investment that occur, while also permitting us to stimulate investment effectively at times when it tends to decline? There are several possibilities which ought to be considered.

1. *Increasing the influence of the interest rate.*—There are several measures that could be taken that might increase the interest sensitivity of investment somewhat. One would be to eliminate, at least partially, the deductibility of interest under the corporate income tax. It is often said that the present 52-percent corporate income tax, by cutting the interest cost of funds approximately in half, reduces the sensitivity of investment to interest rates. On strictly rational grounds, this argument is open to question, since the tax reduces both the expected returns from investment and the interest cost in equal proportion, and one might expect its effects to wash out, at least ap-

[26] Stefan Valavanis-Vail found the interest rate to be a significant variable affecting investment in an econometric model using the decade as time unit and designed to explain the long-run growth of the American economy. See his paper, "An Econometric Model of Growth, U.S.A., 1869–1953," American Economic Review Papers and Proceedings, XLV, May 1955, pp. 208–221.

proximately. Nevertheless, the tax may reduce the interest sensitivity of investment somewhat, and to this extent the elimination of the deduction might strengthen monetary controls. It would also have another advantage, not clearly related to monetary policy, in that it would encourage greater reliance on equity financing.[27]

One of the major reasons for low interest sensitivity of investment, as indicated earlier, appears to be the heavy reliance on internal financing that characterizes corporate business. To the extent that this is the case, measures which would encourage a greater distribution of earnings to stockholders and a greater reliance on external sources of funds to finance investment might make the interest rate a greater influence. This suggests measures such as a tax on undistributed profits which would penalize the retention of earnings. Such a device would have a further advantage, since it would probably strengthen the position of new and small enterprises relative to that of large, established, and profitable concerns and would subject a greater proportion of investment decisions to the "test of the marketplace." On the other hand, it would almost certainly reduce the propensity to save, since a part of the extra dividends paid would be spent on consumption. It might also be a serious disturbing influence, since it would require drastic changes in the financing practices of corporate business.

An effort to resuscitate the interest rate as a means of controlling fixed investment would also require the abandonment of the so-called bills-only policy which the Federal Reserve System has adhered to since 1953. This policy was adopted for a number of reasons, the one most emphasized at the time being that it reduced the uncertainties faced by dealers in Government securities, thereby increasing their willingness to act as bona fide dealers (rather than merely brokers) and hold inventories of longer term securities. By strengthening the dealer market, it was felt that the financial mechanism would be improved and monetary policy made more effective.[28] Experience since 1953 makes it at least doubtful whether the functioning of the market has been improved. The bills-only policy is a self-imposed constraint on the Federal Reserve System, which should in any case be abandoned at least in its present rather rigid doctrinaire form. Particularly, if a serious effort were to be made to control fixed investment through the interest rate would it be necessary to deal directly in long-term securities. While dealing in short-term securities does affect long-term interest rates through the operation of arbitrage between the short- and long-term markets, the relationship is rather loose and uncertain.

If an effort is to be made to control fixed investment in this way, it would clearly be necessary to remove the ceiling on interest rates on FHA-insured and VA-guaranteed mortgages or else to recognize these interest rate ceilings as a selective control to be used to regulate the flow of credit into residential construction. As indicated below, it would probably be better to remove the ceilings and institute other types of selective controls.

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[27] See the proposal made by H. S. Houthakker in "Protection Against Inflation," Study Paper No. 8, pp. 131–133.

[28] See the report of the ad hoc subcommittee on the Government securities market, which recommended the adoption of the bills-only policy, in "United States Monetary Policy: Recent Thinking and Experience," hearings before the Subcommittee on Economic Stabilization of the Joint Committee on the Economic Report, 83d Cong., 2d sess. (Washington: Government Printing Office, 1954), pp. 257–307.

Two problems present themselves in connection with the use of interest rates to control fixed investment. One is the position of State and local governments, which even under present conditions, are probably affected more than most sectors by general monetary controls. Even if the other reforms suggested above were adopted, it is likely that the fluctuations in interest rates of the magnitude necessary to control fixed investment effectively would be so great as to intensify the problems of these governmental units. The second problem is that wider swings in long-term interest rates would produce large changes in the value of existing wealth, which would be upsetting and might result in the encouragement of undue speculative activity.

On the whole, the institutional changes required, together with the problems which would arise and the fact it is by no means certain that the controls, even under the best circumstances, would be effective, make the feasibility of this approach seem rather doubtful. Nevertheless, it is worthy of some consideration and attention.

2. *Other possibilities.*—It might be possible to control the flow of funds into fixed investments at the source by means of selective controls. For example, life insurance companies, who hold large amounts of corporate securities, could be required to hold deposits (which might bear interest at a specified rate) in the Federal Reserve banks equal to certain proportions of various types of assets in their portfolios. To restrict the availability of capital for business investment, the authorities could raise the reserve requirement applicable to corporate securities relative to the reserve requirement applicable to, say, Government securities, thus making Government securities relatively more attractive. Similar controls might be applied to other important holders of corporate securities. The ingenuity of the financial system being what it is, however, new sources of funds would probably develop outside the scope of the controls; moreover, controls of this kind might discriminate against smaller firms in a relatively unfavorable financial position.

Another possibility, also beset with difficulties, would be to develop fiscal controls over fixed investment. For example, a system of variable depreciation allowances could perhaps be developed for this purpose. Or adjustments in corporate income tax rates, by varying the supply of funds available from internal sources, might be capable of influencing investment spending. There are many difficulties in such schemes, perhaps the most serious being that the increased uncertainty introduced into business calculations might discourage investment generally.

We may conclude that, while the proposals referred to above and others as well are worthy of study, it is by no means clear that it would be either desirable or feasible to apply selective controls to business expenditures on plant and equipment. Some instability may be the price we have to pay for a generally high rate of capital development; moreover, it is by no means certain that controls would be effective in preventing instability.

Consumer durable goods.—The case for selective controls over consumer credit appears to be much stronger than the case for controls over investment.[29] A boom in consumer durable goods, especially

[29] For a cross-section of views on consumer credit controls, see the Federal Reserve study, "Consumer Installment Credit," pt. II, vol. 2.

automobiles, powered by a rapid growth of consumer credit, in 1955 seems clearly to have been a factor in the inflationary expansion of 1956 and 1957, both through its effect on profits and on the three-year wage settlement negotiated on the basis of them, and through its effects on other industries. Moreover, the excessive expansion in the automobile industry in that year set the stage for the unemployment and stagnation in that industry in the ensuing years. The shift of demand toward automobiles in 1955 and then away from them in 1956 and 1957 probably created an inflationary effect which was very difficult to deal with by means of general controls. And, finally, the automobile expansion of 1955 undoubtedly helped to power the boom in plant and equipment in 1956 and 1957, which eventually resulted in overcapacity and unemployment. While, as indicated earlier, the trend of growth of consumer credit does not appear to be a source of serious concern, its tendency to grow unevenly and to develop unsustainable bursts of expansion, as in 1955, is a cause of instability and inflation. A similar burst of growth has occurred in 1959, although the growth is not so great as in 1955 and it is less concentrated in automobiles. Nevertheless, this rapid expansion is a matter for concern.

Our past experience with consumer credit controls has been reasonably successful, although some students of the problem feel that it would be extremely difficult to enforce controls of the regulation W variety under normal peacetime conditions and that evasion would become an increasingly difficult problem.[30] Others disagree with this view, but in any case it would seem to be useful to consider other ways of applying controls. For example, controls applied to the supply of funds to sales finance companies by limiting their borrowings might be more satisfactory if combined with similar controls over the ability of commercial banks to make consumer loans.[31] Controls of this kind would have the advantage, as compared with regulation W, that they would not throw the entire burden of restriction on lower income families who benefit from easy credit terms.

Inventory investment.—Changes in the rate of business inventory investment and disinvestment have not been a serious initiating force in instability during the postwar period. However, they have constituted an accelerator mechanism which has magnified fluctuations set off by other forces. Effective control over the availability of bank loans should reduce the magnitude of the accelerator in this sector, but the ability of the banking system to shift the composition of its portfolios, as indicated earlier, has made it difficult to control the effective supply of bank credit. Serious thought should be given to the development of some device for making the control of bank credit more effective. One possibility would be the enactment of a variable secondary reserve requirement in the form of Government securities which could be increased or decreased as the situation required.

A more unorthodox scheme would be to base the reserve requirements of commercial banks on assets rather than liabilities, with different requirements for different types of assets.[32] Under this arrangement,

[30] See the comment by L. V. Chandler in "Consumer Installment Credit," pt. II, vol. 2, pp. 29–36.

[31] See, for example, the proposal advanced by J. S. Early in "Consumer Installment Credit," pt. II, vol. 2, pp. 151–156.

[32] This scheme is discussed briefly in E. A. Goldenweiser, "American Monetary Policy" (New York: McGraw-Hill Publishing Co., 1951), pp. 59–60.

reserve requirements on loans could be raised relative to those on Government securities at times when it was desirable to discourage the banks from selling Government securities in order to expand their loans. A greater degree of selectivity could be introduced by having different reserve requirements for different types of loans. This would provide a means, for example, of implementing consumer credit controls insofar as the banking system is concerned.

One possible difficulty with devices for controlling bank credit more or less directly is that a reduction in the availability of bank credit might not have a proportionate effect on expenditures—on inventory investment, for example—since alternative means of financing are frequently available. In fact, the ingenuity of the financial system being what it is, alternative means of providing credit might be opened up if this one were closed off. In addition, there is the danger that when bank credit was in short supply, it would be rationed by criteria other than interest rates, with the result that the disproportionate effect on smaller business concerns which, as we have seen, is probably present now, would be intensified.

Residential construction.—As we have seen, monetary controls have clearly had a significant impact on residential construction, although the effects appear to have been mainly due to the existence of ceilings on interest rates on FHA-insured and VA-guaranteed mortgages. As a result of the combined and at times somewhat accidental effects of general credit controls, legislative and administrative changes in the ceiling interest rates, in permissible credit terms, and in the amount of support given to the mortgage market by the Federal National Mortgage Association, residential construction has behaved in a contracyclical fashion and, in the aggregate at least, has contributed to economic stability. What we know about the behavior of prices and wages in the construction industry suggests, however, that the cutback in housing construction in 1956 and 1957 may not have contributed much directly to the prevention of inflation. And the high level of unemployment in the construction industry during this period seems to indicate that much of the labor released from housing construction failed to find employment in other branches of the industry. These considerations suggest that if mortgage credit had been more liberally available, we might have been able to have somewhat more residential construction without very much more inflation. To be sure, there would probably have been somewhat more pressure on the prices of certain building materials that were in short supply and there would have been some additional inflationary pressure from the respending of the additional income generated in residential construction, but there is little reason to suppose that these effects would have been large.

It is desirable to have some way of bringing restraint directly to bear on residential construction, however. If the interest rate ceilings were simply taken off, it is doubtful whether general credit controls would have a potent effect on this sector, although it does seem likely that the effects would be greater than in some other sectors. However, housing construction is capable of powering an inflationary boom which would affect other sectors of the economy, and there should be some way of preventing this. The question is whether it would be better to keep the present interest rate limitations, recognizing them frankly as a selective credit control, and manipulating

them accordingly, or to adopt another kind of selective regulation in the form of variable controls over downpayments and maturities of mortgages. On balance, it would probably be preferable to eliminate the interest rate ceilings and adopt the other form of controls, since the interest rate ceilings have peculiar allocational effects. For example, when the interest-rate ceilings are used as a selective control, those persons who are fortunate enough to obtain FHA-insured or VA-guaranteed mortgages at a time when credit is tight will pay a lower interest rate, at least in relation to rates being paid by other users of credit, than will persons who obtain such mortgages at times when credit is easy. Thus, the person who postpones buying a house until a time when his purchase contributes to economic stability pays a penalty. If explicit selective controls are to be introduced, their administration should be delegated to the Federal Reserve.

Summary.—Serious consideration should be given to the development of selective credit controls in sectors of the economy which are the major sources or potential sources of instability, such as consumer durable goods, inventory investment, and residential construction. From a technical standpoint, it appears to be feasible to develop controls which would be reasonably effective in these areas. In the case of plant and equipment, both the feasibility and the wisdom of selective controls seem much more doubtful. Moreover, effective controls in the other sectors would probably reduce somewhat the scope for booms in capital goods.

Admittedly it is very difficult to develop satisfactory criteria for the administration of selective controls. However, many other countries which have made successful use of monetary policy during the postwar period have employed selective controls without difficulty; in fact, it has often been selective rather than general controls which have been most effective. Moreover, it should be noted that reliance on so-called general controls does not get us away from sectoral problems, and the more effective general controls are, the more acute these problems become. For example, suppose that in 1956 and 1957 general credit controls had been highly effective in the field of consumer credit. Would the monetary authorities have tightened credit to deal with general inflation and thus have made life still harder for the already depressed automobile industry? It is quite plain that if general credit controls affected all sectors equally (in some sense), they would still be quite unsatisfactory as a stabilization device, because we do not want equal effects everywhere at all times. If we want to improve the performance of stabilization policy significantly, it is necessary to move in the direction of greater selectivity. This has been apparent for some time, but the other findings of this study should increase our awareness of it. General controls are a mirage and a delusion. It is perhaps just as well that monetary controls have not been very effective; if they had been, they might have been disastrous.

B. Monetary policy and inflation

In an economy characterized by flexible prices and mobile resources inflation is relatively easy to deal with. In such an economy, suppose the demand for services by consumers increases as a result of dishoarding of existing cash balances so that aggregate demand is in-

creased. If the monetary authorities tighten credit, the effect may not be appreciable in the service sector where prices are rising. But this does not matter, since if the impact falls, for example, on residential construction, the reduced demand in that sector will result in falling prices and wages, a flow of labor and other factors of production out of housebuilding into other sectors (perhaps including services), thus increasing the supply in these sectors and lowering prices. Thus, inflation is effectively dealt with no matter where the impact of the controls falls, and the strictures against general controls set forth at the end of the previous section do not apply.

In an economy in which prices are rigid in the downward direction the reactions are quite different. In this case, an increase in demand centered once again in services—or in some other sector—will tend to pull up prices in that sector. If credit is tightened and the impact falls on sectors where prices are rigid downward due to the existence of strong unions which effectively resist reductions in money wages or of a policy on the part of semimonopolistic firms of reducing production rather than prices, output and employment will decline but prices will not be affected. Thus, the direct impact of the controls will not push prices down and will make no contribution to offsetting the original price increase. It is true that the decline in output and employment will reduce incomes and as a result there presumably will be an induced decline in consumer expenditures. But to the extent that this decline in spending in turn falls on rigid price sectors, there will be no decline in prices but a further decline in output and employment. Only to the extent that a portion of either the original or the secondary effects falls upon flexible price sectors will any effective action against inflation be accomplished. If in addition, resources—particularly labor—are immobile and slow to move out of the sectors where the impact is felt, unemployment may develop which will be eliminated only slowly. Thus, it may be that tight money will be unsuccessful in preventing inflation but will at the same time create unemployment and underutilization of capacity and slow down the rate of growth of total output.

In this case, the inflation is due to the presence of market power which is able to prevent prices and wages from falling, combined with a shift of demand which set the inflationary mechanism off. It is also possible that the original rise in prices in a particular sector might be due to the exercise of market power to push up prices. In either case, controls—such as general monetary policy or fiscal policy—are powerless to prevent inflation, and, to the extent that the sectors in which their effects are felt are characterized by downward rigidity, there is danger that they will create unemployment even while they leave the price level virtually unaffected. Only if they are sufficiently selective so that they strike sectors where prices are flexible downward, or (in the case where the original inflation was caused by a rise in demand) if they are able to strike the sector where demand starts to rise and strike it so quickly as to nip the increase in demand in the bud and forestall the rise in prices, will they be effective.

Thus, we are back to the well-known proposition that general monetary and fiscal controls, acting on aggregate demand, are incapable of preventing inflation which stems from the exercise of market power without creating unemployment. But we now recognize that the

exercise of market power may take the form of preventing prices from falling as well as actively pushing them up, and that under these circumstances, shifts of demand among sectors may be a source of inflationary difficulties.

It appears that the American economy has recently been characterized by downward price rigidities in many of its sectors and that as a result shifts of demand have in fact been a cause of inflation. This kind of inflation can be controlled by monetary and fiscal policies only to the extent that such policies can, by acting quickly and selectively, forestall or minimize the shifts in demand. For example, controls on consumer credit which prevent excessively rapid buildups in the demand for durable goods may help to minimize inflationary pressures, while also preventing unsustainable expansions in particular sectors which are likely to result eventually in collapse and unemployment.

At the same time, of course, general monetary and fiscal policies which are too loose can result in general excess of demand which will pull prices up even more rapidly than they would be forced up by market power. But to prevent inflation entirely in such an environment by means of monetary and fiscal controls would require policy instruments so quick-acting and selective as to be completely unrealistic; moreover, if such instruments were available, their use would tend to immobilize the machinery for reallocating resources to keep pace with changing needs and tastes. If we really seriously want to deal with this kind of inflation, we must do so by preventing the exercise of market power; any attempt to deal with it by monetary and fiscal controls is likely to lead to unemployment and retarded growth while leaving the inflation relatively unaffected.

C. Alternative proposals for monetary policy

The proposals set forth earlier for introducing selective controls might be able to produce somewhat steadier growth of output and employment and moderate the inflationary drift somewhat, but for reasons just explained they would not be capable of getting at what appear to be the major sources of recent inflation. To many persons, moreover, they will be unpalatable due to the difficulty in establishing satisfactory criteria of administration. There are two other alternatives we might consider.

1. *Steady growth of the money supply.*—Some economists have recently advocated the complete abandonment of discretionary monetary policy—that is, the effort to manage the money supply and financial system through the use of judgment—and the adoption instead of a simple rule of action. The kind of rule commonly suggested is simply to permit the money supply to increase at a rate of x percent per year, x being selected to correspond with the prospective growth of real output, perhaps adjusted for the secular trend in monetary velocity. The money supply would be increased at this rate, come good times or bad.[33] The reasons advanced for adopting such a scheme are various—that it is better than past monetary policies which have vacillated between being too inflationary and too restrictive, that under such a rule everyone would know what the authorities would do so

[33] See E. S. Shaw, "Money Supply and Stable Economic Growth," in American Monetary Policy (The American Assembly, 1958), pp. 49–71: testimony of Milton Friedman in "Employment, Growth, and Price Levels," hearings before the Joint Economic Committee, 86th Cong., 1st sess., pt. 9A, pp. 3019 ff.

that stable expectations would be created, that the lags between the time action is taken and the time its impact is felt by the economy are so long in relation to our limited ability to forecast the future that the attempt to operate a discretionary policy is likely to do more harm than good.

It may be noted that if the money supply were increased at a constant percentage rate, corresponding approximately to the average rate of growth of real output, credit would tighten and interest rates rise during booms as the demand for credit grew faster than the supply, while credit would ease and interest rates fall during recessions as the demand for credit grew less rapidly than the supply (or possibly even declined). It is by no means clear that such a rule would be an improvement over the present system. The fact that everyone would know what would happen to the money supply does not necessarily mean that stable expectations would be created. Nobody cares what happens to the aggregate money supply. It is expectations about prices, incomes, and so forth, that matter, and knowing what would happen to the money supply would not make it appreciably easier to predict these variables. To create a stable expectational environment which would contribute to the maintenance of a stable economy, it is necessary to convince people that that stabilization policy will in fact be reasonably successful, so that movements of prices and incomes are regarded as self-limiting and likely to be reversed shortly. It is not clear that the adoption of a simple monetary rule would stabilize the expectations of the public in this regard; one might, in fact, justifiably predict the opposite. As far as timelags are concerned, the successive easing and tightening of credit produced under a system of constant monetory growth could have a perverse effect on economic stability, too, and it is not clear that we cannot time the changes in monetary policy better, even in our present inadequate state of knowledge, by using our best judgment, than we can by relying blindly upon a rule.

Thus, the case for the adoption of such a simple rule to govern the behavior of the money supply has not been convincingly demonstrated. In addition, such a rule, if adopted, would be bound to be abandoned at the first indication that discretion might be able to do a better job. Like the gold standard, it would be a "fair weather" rule, and fair weather would be unlikely to last very long.

2. *Continuation of present policies.*—Another possibility is to continue to rely, in a general way at least, upon the same kind of policies that we have been following in the last few years, trying as best we can to improve their performance. In fact, even if we should adopt, at least on an experimental basis, some of the selective controls suggested earlier, we would still have to employ controls of the present type to regulate the money supply and the aggregate supply of credit. Whether the present controls are relied upon by themselves or are supplemented by selective controls, some changes in emphasis and technique appear to be in order. For one thing, monetary policy should avoid the extreme anti-inflationary bias that has characterized its administration in the past few years. The vigorous anti-inflationary efforts have not been very effective in achieving their objective,

yet they did serve to reduce total demand, chiefly via their effect on housing. It appears that if demand had been somewhat stronger, we could have achieved a substantially higher rate of growth, and it is by no means clear that the price level would have risen much faster than it has. While an excessively tight fiscal policy is probably the main villain of the piece, tight money and the gradual upward drift of interest rates have undoubtedly had some effect.

It appears that monetary policy was too easy in 1955, facilitating the cumulative inflationary forces that got underway in that year. Then in 1956 and 1957 the authorities attempted to make up for the easy policy followed in 1955 by a strongly restrictive policy. The inflationary forces that developed in 1955 through excessive upward adjustments of wages established patterns for the following year, and the investment boom of 1956 and 1957 was pushed along by the earlier expansions in automobiles and residential construction. The resulting inflationary pressures were not of the sort that could be contained by general monetary controls. However, in view of the fact that there was almost no growth in real GNP in 1956 and 1957, despite the high rate of plant and equipment expenditures, it seems clear that the excessively tight fiscal and monetary policies of those years slowed the rate of growth, even though they failed to prevent inflation.

D. Techniques and administration of monetary controls

Apart from the matter of selective controls, there is some question whether the Federal Reserve System has made optimal use of the general credit control weapons now at its disposal: the discount rate, reserve requirements, and open market operations. In addition, some changes in the administrative organization of the System are worthy of consideration.

The discount rate.—In the last few years, the Federal Reserve has made increasing use of the discount rate. Sometimes discount-rate changes are apparently meant to serve as signals of the System's intentions, while at other times the rate is changed merely to keep it in alinement with prior changes in market rates of interest. It is not always clear when a change in the rate is meant to be a signal and when it merely represent a passive adjustment to the market. It should be remembered that when credit is tightened and banks react by borrowing from the Federal Reserve, this reaction is a partial offset to the original tightening, since it increases aggregate member bank reserves and permits multiple credit expansion. Since 1956 the Bank of Canada has kept its discount rate linked to open market interest rates by setting the rate each week one-quarter percent above the average issue rate at the most recent Treasury bill auction. This arrangement avoids the ambiguities that arise in connection with the interpretation of the significance of discretionary changes in the discount rate and automatically preserves a consistent relationship with other interest rates. It appears to have much to recommend it in the United States. An alternative that might be considered would be to get rid of rediscounting altogether and rely on interbank borrowing to perform the safety valve function now performed by borrowing from the Federal Reserve.

Reserve requirement changes.—The Federal Reserve has not raised member bank reserve requirements since 1951 and has lowered them

several times during the recessions of 1953–54 and 1957–58. Obviously, the authorities feel that reserve requirements have been too high and are gradually adjusting them downward to what they feel is a more satisfactory level. Reserve requirement adjustments are a rather cumbersome tool of short-run monetary policy, and there is very little that they can accomplish that cannot be done with more finesse by means of open market operations. However, it is not clear why the System has been adjusting reserve requirements downward secularly nor where it thinks they should eventually come to rest. Lower reserve requirements increase the leverage of monetary policy somewhat, and they improve the profit position of the banking system as compared with what it would have been had the same amount of reserves been supplied by open market purchases. However, open market purchases have some advantages over reserve requirement reductions in the sense that they absorb Government securities into the System portfolio, most of the interest on which is returned to the Treasury at the end of the year. The interest saving to the Treasury resulting from open market purchases is cumulative, and in the course of a few years could amount to a sizeable sum. The System should make clear what its objectives are with respect to member bank reserve requirements and why it is unwilling to make greater use of open market purchases in lieu of reserve requirement reductions as a means of meeting the secular need for bank reserves to support economic growth.

Open market operations.—Open market operations are the most flexible, effective, and generally satisfactory way of controlling the volume of member bank reserves, and clearly major reliance should be placed upon them for this purpose. The chief question here is the "bills-only" policy which has been in effect since 1953. As pointed out earlier, the record does not indicate that the adherence to bills-only has significantly improved the performance of the Government securities market. The policy should clearly be abandoned in its present rather doctrinaire form. A considerable part of the open market purchases and sales are designed to counteract the disturbing effects on the money market of changes in factors outside the Federal Reserve's control, such as the float of checks in the process of collection, the amount of currency in circulation, Treasury balances in the Federal Reserve banks, the monetary gold stock, and so on. For purposes of these adjustments, obviously purchases and sales of bills are the appropriate medium, at least ordinarily. For other purposes, transactions in longer maturities are more appropriate at times. The Federal Reserve should certainly take some responsibility for the structure of interest rates. For example, at the time of the June refunding in 1958, speculation in Government securities became a serious problem, and the Treasury and Federal Reserve in their later study of this episode have indicated that an important contributing factor was the fact that short-term interest rates were abnormally low relative to long-term interest rates, which encouraged speculators to borrow cheap short-term money to invest in newly issued longer term securities.[34] It should have been possible to prevent this de-

[34] Treasury-Federal Reserve Study of the Government Securities Market, pt. II (preliminary mimeographed version), pp. 23–25, 33–38.

velopment if there had been an appropriate concern about the structure of interest rates and willingness to act flexibly to correct the distortions.

As indicated above, there is an important question whether a more vigorous effort should be made in general to control the long-term rate of interest as a means of influencing plant and equipment expenditures. While dealings in Treasury bills affect long-term interest rates through a process of market arbitrage, it is quite clear that the connections between the short- and long-term markets are rather loose, and effective control of long-term rates requires operations directly in longer term securities. Even if a really vigorous policy of controlling long-term rates is not pursued, there are certainly times when direct action in the long-term market will be helpful, and doctrinaire adherence to a self-imposed limitation should not prevent the System from acting at such times.

Administrative arrangements.—The present administrative arrangements within the Federal Reserve seem to be unduly cumbersome. Primary responsibility with respect to the discount rate lies with the individual Federal Reserve banks; changes in reserve requirements are made by the Board of Governors; and open market policy is administered by the Federal Open Market Committee, which consists of the seven members of the Board of Governors plus five presidents of the Federal Reserve banks, chosen on a rotating basis, the President of the New York Reserve Bank always being on the Committee. The Open Market Committee serves as a clearinghouse for information within the System, and administration is quite well coordinated despite the confusing nature of the formal arrangements. Nevertheless, there seems to be no sensible reason for leaving the initiative with respect to the discount rate in the hands of the individual Reserve banks, assuming that discretionary discount rate changes continue to be employed. In fact, it would be desirable to put the administration of all of the credit control weapons in the hands of the same agency.

A more serious problem is the cumbersomeness of the administrative machinery, particularly the Open Market Committee. This body consists of 12 members. The group meets approximately every 3 weeks, and apparently the seven presidents of Reserve banks not currently on the committee, together with numerous members of the staffs of the Board of Governors and of the individual Reserve banks, attend the meetings. A body of 12 members is a rather cumbersome administrative organ, and the clumsiness is greatly increased by the presence of the numerous other persons. Some streamlining of this complex machinery would seem to be in order. It seems possible that some of the self-imposed limitations on the System's freedom of action, such as the bills-only policy, are the result of arriving at decisions on complex matters under such conditions. Perhaps a reduction of the size of the Board of Governors and the concentration of authority with respect to all of the policy weapons in the hands of this group, with representatives of the Reserve banks serving only in an unofficial advisory capacity (if at all) would be desirable. Some reform along these lines is vitally necessary if a more complex policy involving the use of selective controls is to be put into operation.

Summary of suggestions for making monetary policy more effective

1. The problem of achieving stable growth of output should be distinguished from the problem of controlling inflation. The maintenance of stable growth of output is a question of maintaining a balance between the growth of capacity and the growth of demand.

2. One phenomenon which has made the maintenance of stable growth difficult is the tendency for fixed investment to show surges of expansion as in 1955–57. Such expansions of investment make it difficult to manage things so that demand grows in pace with capacity, and excess capacity and unemployment tend to develop.

3. More effective control of fixed investment might be desirable, provided it could be achieved without reducing the average annual rate of investment. Study should be given to possible means of controlling investment, either by reforms which would increase its sensitivity to interest rates, together with abandonment of the "bills-only" policy of the Federal Reserve, or by means of selective monetary or fiscal controls. It is by no means clear at the present time, however, that effective control over investment would be either feasible or desirable.

4. Control over other unstable elements in the economy, including consumer credit, inventory investment, and residential construction, might facilitate the maintenance of stable growth. Selective controls that would affect these areas should be studied seriously. The present interest rate ceilings on FHA-insured and VA-guaranteed mortgages do constitute, in effect, selective controls over residential construction, but they have peculiar effects on the allocation of credit and should probably be replaced by other selective controls.

5. Much of the inflation of recent years appears to have been caused either by shifts in the composition of demand in an environment in which prices and wages in many sectors of the economy are relatively rigid in the downward direction due to the presence of market power, or else by the use of market power to push prices and wages upward. If general monetary controls are used to deal with these types of inflation, they are likely to reduce output and employment in sectors not related to the inflation problem without having much effect on the price level. However, if selective monetary controls could be effectively applied to sectors responsible for instability, such as consumer credit, inventories, etc., this might cut down the inflation problem somewhat by reducing the potential of some of the demand shifts. Beyond this, however, we can deal effectively with inflation due to the exercise of market power only by policies directed specifically at that aspect of the problem, such as more vigorous antitrust policies and the like.

6. The difficulties of finding appropriate criteria for the administration of selective controls are great. Other countries have used such controls to good effect, but we may prefer not to employ them. An alternative would be to continue present policies, attempting to improve upon them, and putting more emphasis on achieving economic growth. There will be considerable inflationary hazard; but present policies leave us with the dilemma of inflation or growth and our data

suggest that in recent years the United States has given up considerable growth for small effects on inflation.

7. As far as the present credit control techniques are concerned, the Federal Reserve should consider changing its method of handling the discount rate in order to eliminate the uncertainties resulting from it. Perhaps it would be desirable to tie the discount rate to open market interest rates, as is done in Canada, or to get rid of member bank borrowing entirely. The practice of reducing reserve requirements gradually to provide reserves for growth, which has prevailed for some years, should either be justified or discontinued. Open market purchases of securities have the advantage over reductions in reserve requirements that they reduce the Treasury's interest cost on the public debt. Open market operations should be made more flexible by abandoning the present doctrinaire form of the "bills only" policy.

8. Consideration should be given to some streamlining of the administrative organization of the Federal Reserve System. It might well be desirable for all of the credit control weapons to be administered by the same body within the System. The present Open Market Committee is unnecessarily cumbersome due to the participation in its deliberations of a large number of persons. Consideration should be given to simplifying the administrative apparatus by, for example, reducing the size of the Board of Governors and turning over full responsibility to this group. Some streamlining is necessary if an effort is to be made to implement a more selective monetary policy.

V. Debt Management [35]

The Treasury's problems in managing the public debt have been the subject of much attention and concern recently. Although debt management, as we shall define the term, is different from monetary policy, the two are closely related, since the way in which debt operations are handled may interfere with the Federal Reserve's freedom to conduct monetary policy and the structure of the debt may significantly influence the way in which monetary controls function. Moreover, under our definition, the Federal Reserve has some powers and responsibilities that come under the heading of debt management.

The size of the debt

There are several concepts of the public debt which are employed in discussions of debt management. As shown in table 9–16, on June 30, 1959, the "total gross debt" or "total Federal securities outstanding" amounted to $284.8 billion. The gross debt reached a level of $279 billion in February 1946 at the zenith of borrowing connected with the financing of World War II, then declined to $252.4 billion in June 1948 as a result of the immediate postwar budget surpluses and debt retirement. From mid-1948 to mid-1949 the gross debt grew by $32.4 billion.

[35] David I. Faud assisted in the drafting of this section. For a more detailed analysis of debt management, see the forthcoming study paper by Warren L. Smith.

TABLE 9–16.—*Relation between different concepts of the public debt, fiscal years 1946–59*

[Billions of dollars]

End of fiscal year—	Total gross debt [1]	Less: Held by U.S. Government agencies and trust funds	Equals: Held outside Federal Government	Less: Held by Federal Reserve System [2]	Equals: Publicly held debt [3]	Less: Publicly held nonmarketable debt	Equals: Publicly held marketable debt
1946	269.9	29.1	240.8	23.8	217.0	56.1	160.9
1947	258.4	32.8	225.6	21.9	203.7	59.0	144.7
1948	252.4	35.8	216.6	21.4	195.2	59.4	135.8
1949	252.8	38.3	214.5	19.3	195.2	62.7	132.5
1950	257.4	37.8	219.6	18.3	201.3	67.4	133.9
1951	255.3	41.0	214.3	23.0	191.3	77.2	114.1
1952	259.2	44.3	214.9	22.9	192.0	74.4	117.6
1953	266.1	47.6	218.5	24.7	193.8	72.5	121.3
1954	271.3	49.3	222.0	25.0	197.0	72.8	124.2
1955	274.4	50.5	223.9	23.6	200.3	69.7	130.6
1956	272.8	53.5	219.3	23.8	195.5	66.4	129.1
1957	270.6	55.6	215.0	23.0	192.0	62.8	129.2
1958	276.4	55.9	220.5	25.4	195.1	58.8	136.3
1959	284.8	54.6	230.2	26.0	204.2	56.3	147.9

[1] Includes guaranteed securities.
[2] Includes securities owned outright and held under repurchase agreements.
[3] Includes debt held by State and local governments.

Source: Treasury Department.

However, the gross public debt does not represent the true debt of the Federal Government. As shown in table 9–16, at the end of the fiscal year 1959, $54.6 billion of Treasury securities was held by Government agencies and trust funds, i.e., within the Federal Government itself. A further $26 billion was held by the Federal Reserve System. Since purchases and sales of Government securities by the Federal Reserve are made for the purpose of controlling bank reserves and the money supply in the interest of maintaining financial and economic stability and since approximately 90 percent of the interest payments made to the Federal Reserve are returned to the Treasury at the end of each year, this portion of the debt is also essentially intragovernmental.[36] The debt that is significant for most aspects of economic analysis is the publicly held debt—that is, debt held by households, business firms, commercial banks, and other financial institutions of the country. Changes in the amount and composition of the publicly held debt affect interest rates and the liquidity of spending units in ways to be discussed later and these effects may influence the level and composition of private expenditures. According to table 9–16 the publicly held debt increased by only $9 billion between 1948 and 1959, compared with the $32.4 billion increase in the gross public debt.

We shall define *debt management* to include all actions of the Government, including both the Treasury and the Federal Reserve, which affect the *composition* of the publicly held debt. When defined in this way, debt management includes: (1) decisions by the Treasury concerning the *types* of debt to be issued to raise new money, (2) decisions

[36] The System pays into the Treasury each year an amount equal to 90 percent of the net earnings of the Federal Reserve banks after payment of a 6 percent dividend on capital stock and an allowance designed to build up surplus to 100 percent of subscribed capital. This payment takes the form of interest on that portion of outstanding Federal Reserve notes not secured by gold certificates. See "Investigation of the Financial Condition of the United States," hearings before the Committee on Finance, U.S. Senate (Washington: Government Printing Office, 1957), pt. 3, pp. 1580, 1582–1585.

by the Treasury concerning the types of debt to be issued in connection with the refunding of maturing securities, (3) decisions by the Federal Reserve concerning the *types* of debt to be purchased and sold in the conduct of open market operations.

It should be noted that under this definition of debt management, the *amount* of new securities to be sold by the Treasury to cover budget deficits or to be retired with the proceeds of budget surpluses is not a matter of debt management but of fiscal policy. Moreover, decisions by the Federal Reserve which change the publicly held money supply, including changes in reserve requirements and the *amount* (but not the composition) of open market purchases and sales, fall under the heading of monetary policy.[37]

As can be seen from table 9–16, the publicly held debt has been in the neighborhood of $200 billion for the last few years and is $80 billion smaller than the gross public debt. The magnitude of our debt management problem is often greatly exaggerated, because there is a tendency to view it in terms of the gross public debt, which is much larger than the publicly held debt and has been growing more rapidly as a result of the accumulation of securities in the Government trust funds and the Federal Reserve.

Not only has the publicly held debt not grown greatly in absolute amount in the last decade but it has actually declined substantially in relation to other relevant economic magnitudes. The publicly held debt was equal to 86.9 percent of GNP at the end of 1947; by 1958, due to the rise in GNP, the percentage had fallen to 44.2. Of course a substantial part of this decline in the percentage is the result of inflation, but the fact remains that the debt is much smaller relative to our productive capacity than formerly, and to the extent that this is a measure of our ability to carry the debt, it should sit much more lightly on our shoulders than it did a decade ago. Furthermore, between 1947 and 1958 total net public and private debt outstanding rose from $394.8 billion to $743.9 billion. As a result of this large increase, the publicly held Federal debt declined from 50.8 percent of the total in 1947 to 27.7 percent in 1958. Thus, the relative importance of the Federal debt in our debt structure has declined very substantially.

Interest cost of the debt

There has been much concern about the rising cost to taxpayers of interest on the Federal debt. Again, however, as in the case of the size of the debt itself, it is important to use the right measure. Interest payments on the public debt included in budget expenditures rose from $6.4 billion in fiscal 1954 to $7.6 billion in fiscal 1959 and it is estimated that such payments will amount to $9 billion in fiscal 1960. However, these interest payments exaggerate the true magnitudes because they include interest paid on securities held by the trust funds. In fiscal 1958, for example, net interest paid by the Federal Government as included in the national income accounts amounted to only $5.6 billion, considerably less than the $7.7 billion of interest included in the administrative budget. Moreover, the payments by the

[37] In the framework we are using, all measures which change the publicly held money supply are included in monetary policy. Technically, therefore, the Treasury engages in monetary policy when it changes its cash balances and also to the extent that the gold stock and Treasury currency change, since each of these factors alters the publicly held money supply.

Federal Reserve to the Treasury, which have been running at about a half billion dollars a year recently, should also be deducted.

Nevertheless, interest costs on the public debt do represent a sizable sum and are a matter for concern. And since the administrative budget is frequently used as a tool of fiscal policy, for some purposes the interest included in this budget is the important thing. For fiscal 1960, interest payments in this budget are estimated at $9 billion, more than 11 percent of total budget expenditures, nearly three times the estimated expenditures of the Department of Health, Education, and Welfare, and nearly 40 percent larger than those of the Department of Agriculture.

With the present emphasis on balancing the budget without raising taxes, a rise in the interest burden tends to cut into other badly needed types of Federal expenditures. Thus, there is good reason for trying to avoid unnecessarily heavy interest costs on the public debt. That is, unless the increased interest payments serve some useful economic function, we should try to reduce them.

Volume of debt operations

In addition to exaggerating the size of the debt itself and of the interest payments on it, the statistics commonly used overstate the magnitude of current debt operations. For example, in the calendar year 1958, the total amount of certificates, notes, and bonds issued by the Treasury both for cash and in exchange for maturing securities amounted to $61.2 billion. However, out of this total, $22 billion represented securities issued to the Treasury trust accounts and Federal Reserve banks—almost entirely automatic (and fictitious) transactions involving no problems of debt management—so that the amount of securities issued to the public amounted to only $39.2 billion. Similar large differences are present in other years. Proper evaluation of the current problems of managing the debt requires that the transactions within the Government be eliminated from the calculations.

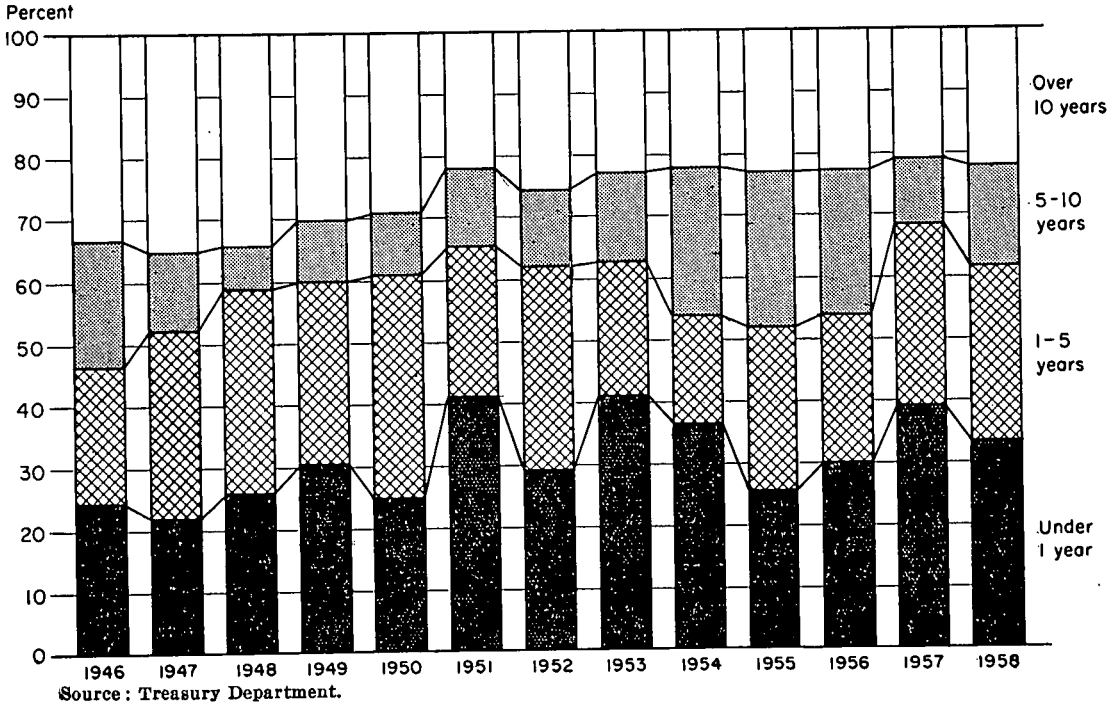
Composition of the debt

As shown in table 9–2, in July 1959, out of a total publicly held debt of $208.2 billion, $5 billion represented convertible bonds and $53.9 billion represented other nonmarketable and miscellaneous debt, chiefly savings bonds. The remaining $149.3 billion was marketable securities including Treasury bills, certificates of indebtedness, notes, and bonds. While there are problems connected with the savings bond program to which we will make brief reference later, our main concern will be the management of the marketable portion of the debt.

The maturity composition of the publicly held marketable debt at the end of each calendar year from 1946 to 1958 and in July 1959 is shown in table 9–2, and the percentage distribution by maturity brackets at the end of each fiscal year from 1946 to 1958 is shown in chart 9–11. The size of the publicly held debt was roughly the same in July 1959 as in 1946, but the maturity composition was substantially different. The percentage of the debt maturing in 1 year had risen from 22 in 1946 to 37.3 in 1959, while at the other end of the scale the percentage maturing beyond 10 years had fallen from 33.7 to 17.2. The maturity composition behaves in rather irregular manner as can be seen from both table 9–2 and figure chart 9–11. The reason for this is that the maturity composition tends to shorten if nothing is

CHART 9–11

PERCENTAGE DISTRIBUTION OF PUBLICLY-HELD MARKETABLE DEBT, BY MATURITY - FISCAL YEARS 1946-1958



Source: Treasury Department.

done merely due to the passage of time, while debt operations in the form of cash borrowing, refunding operations, and debt retirement, introduce elements of irregularity into the behavior of the composition. Each time the Treasury refunds a maturing security by offering a new issue in exchange, the average maturity of the debt increases at least a little because securities having a maturity of zero are removed from the the debt and replaced by other securities. Cash borrowings may increase or decrease the average maturity of the debt, depending on whether the securities being issued have a maturity longer or shorter than the existing average. Cash retirement of maturing securities lengthens the average maturity, because the securities removed from the debt have a maturity of zero. Consequently, the irregular pattern of debt operations makes the maturity structure and the average maturity behave in somewhat unpredictable fashion. Another factor, which makes the statistics in table 9–2 and chart 9–9 behave in an erratic way, is the fact that blocks of existing securities periodically move from one maturity class to another due to the passage of time. In spite of the difficulties of exact interpretation, however, it is quite clear that the maturity of the debt, however measured, has declined substantially in recent years.

The shortening of maturities has been a matter of concern to Treasury officials, and debt management policy in the last few years has concentrated on trying to lengthen maturities. The orthodox theory of debt management calls for the issuance of long-term securities during periods of inflation in order to preempt funds from the capital market and reduce liquidity, and the issuance of short-term securities in recession periods in order to increase liquidity and leave the maximum amount of funds available for long-term investment. However, the Treasury has had little success in following the precepts of orthodox debt management theory and has been forced—or induced—to sell long-term securities in recessions. Thus, such debt lengthening as has occurred in the last few years has taken place largely in the recession or early recovery periods of 1953–55 and 1957–58. The major debt-lengthening measures taken in these periods are shown in tables 9–3 and 9–6.

Ownership of the debt

Table 9–17 shows the holdings of Treasury securities by various types of investors at the end of each fiscal year since 1946. The holdings of the various investor groups have undergone substantial changes in recent years. With respect to debt ownership, investors may be divided into three broad categories.

1. *Investors whose holdings have declined steadily.*—This category includes insurance companies and mutual savings banks. As indicated in table 9–17, holdings of mutual savings banks declined by $4.7 billion from 1948 to 1959, while holdings of insurance companies declined by $10.8 billion during the same period. As a result of the prosperous conditions and heavy savings of the war period, these institutions grew rapidly during the war, and due to the limited private demand for funds, as well as pressures to assist the Treasury in war financing, most of the inflow of funds was invested in Government securities. In response to the heavy demands for funds which have characterized the postwar period, both of these types of institutions have steadily liquidated Government securities in order

to shift their funds into more lucrative private investments—chiefly mortgages in the case of mutual savings banks and corporate bonds and mortgages in the case of life insurance companies. Liquidation of Governments by these institutions has not shown any particularly strong tendency to speed up during periods of tight credit. The rate of liquidation appears to have slowed down somewhat as total portfolios have become smaller.

TABLE 9–17.—*Ownership of the publicly held Federal debt, fiscal years 1946–59*

[Billions of dollars]

End of fiscal year—	Total publicly held debt	Held by—								
		Commercial banks	Mutual savings banks	Insurance companies	Other corporations	State and local governments	Individuals [1]			Miscellaneous investors [2]
							Total	Savings bonds	Other securities	
1946	217.0	84.4	11.5	24.9	17.8	6.5	63.3	43.5	19.9	8.6
1947	203.7	70.0	12.1	24.6	13.7	7.1	66.6	45.5	21.1	9.6
1948	195.2	64.6	12.0	22.8	13.6	7.8	65.8	47.1	18.6	8.7
1949	195.2	63.0	11.6	20.5	15.8	8.0	66.6	48.8	17.8	9.6
1950	201.3	65.6	11.6	19.8	18.4	8.7	67.4	49.9	17.6	9.7
1951	191.3	58.4	10.2	17.1	20.1	9.4	65.4	49.1	16.3	10.7
1952	192.0	61.1	9.6	15.7	18.8	10.4	64.8	49.0	15.7	11.6
1953	193.8	58.8	9.5	16.0	18.6	12.0	66.1	49.3	16.9	12.8
1954	197.0	63.6	9.1	15.3	16.6	13.9	64.8	49.5	15.3	13.7
1955	200.3	63.5	8.7	14.8	18.8	14.7	65.3	50.2	15.1	14.4
1956	195.5	57.3	8.4	13.3	17.7	15.7	66.9	50.3	16 6	16.3
1957	192.0	56.2	7.9	12.3	16.1	16.9	66.7	49.1	17.1	16.0
1958	195.1	65.3	7.4	11.7	13.9	16.9	64.7	4890	16.7	15.2
1959	204.2	61.3	7.3	12.0	20.0	18.3	65.8	47.0	18.7	19.4

[1] Includes partnerships and personal trust accounts.
[2] Includes savings and loan associations, nonprofit institutions, corporate pension trust funds, dealers and brokers, and investments of foreign balances and international accounts in this country. Beginning in 1947, includes investments by the International Bank for Reconstruction and Development and the International Monetary Fund in special noninterest bearing notes.

NOTE.—Detail may not add to totals due to rounding.

Source: Treasury Department.

2. *Investors whose holdings have increased steadily.*—As can be seen from table 9–17, several classes of investors have steadily added to their holdings of Government securities in recent years. These include State and local governments and miscellaneous investors. The most important buyers of Government securities in the latter group are savings and loan associations and foreign accounts and international agencies.

3. *Investors whose holdings have fluctuated substantially.*—Table 9–17 indicates that investments in Government securities by commercial banks and by nonfinancial corporations have exhibited substantial fluctuations from year to year with no discernible trend during the last decade. As indicated earlier in this chapter, fluctuations in the holdings of these two groups have shown a systematic pattern related to changes in monetary policy and credit conditions, which has made the task of conducting monetary policy more difficult for the Federal Reserve.

The competitive position of Government securities

In recent years, the Treasury has had considerable difficulty in selling long-term bonds. During the period of nearly 7 years since the present administration came into office with the intention of ex-

tending debt maturities, only $9.4 billion of bonds with a maturity of more than 10 years has been sold to the public altogether, both for cash and in exchange operations. Thus, the average is less than $1.5 billion per year. Nearly all the investor groups—including savings banks, life insurance companies, pension funds, etc.—who have traditionally shown an interest in Treasury bonds have been reducing their holdings steadily or at most increasing them only very slowly. Certainly one important aspect of our debt management difficulties appears to be the declining popularity of Government securities, particularly of the longer-term variety.

There are several possible explanations of the apparent deterioration of the competitive position of long-term Treasury securities. One is the greatly increased variability in the prices of Government securities as monetary policy has been employed more vigorously. This increased variability has lowered the liquidity, particularly of longer-term Treasury securities, and reduced their attractiveness to many investors. Another reason is the increased attractiveness of corporate securities as investors' assessments of the risks associated with these securities have been reduced as a result of continued relatively prosperous business conditions. The increased importance of FHA-insured and VA-guaranteed mortgages has also cut into the market for longer-term Government securities, since these mortgages are about as safe investments as Governments and yield the investor higher net returns. The fact that yields on Government securities have risen relative to those on private debt during the last decade, at the same time that the size of the publicly held Federal debt has been declining relative to the amount of private debt outstanding, appears to corroborate the view that Government securities have become less attractive to investors.

Principles of debt management

As indicated earlier, we shall define debt management to include all operations which affect the composition of publicly held debt. On this definition, all debt management operations are reduced, in effect, to the sale of one type of security and the use of the proceeds to retire another type. Intelligent debt management requires that operations of this kind be conducted with a view to their effects on the economy. Suppose, for example, that the Treasury sells long-term bonds and uses the proceeds to retire short-term debt. According to the orthodox and widely accepted theory of debt management, such an operation would have restrictive or anti-inflationary effects, which may be classified under two headings: interest rate effects and liquidity effects. Let us examine each of these in turn.

1. *Interest-rate effects.*—A sale of long-term bonds and use of the proceeds to retire short-term debt would force up long-term interest rates and lower short-term interest rates. There would be secondary readjusments in the rate structure which would depend upon the nature of investors' expectations, but the net result would very likely be somewhat higher long-term rates and somewhat lower short-term rates. Whatever restrictive effect such an operation might have by way of interest rates would depend upon the restrictive effects of rising long-term interest rates exceeding the stimulative effects of falling short-term interest rates. The discussion of monetary policy

earlier in this chapter indicated that such evidence as is available suggests that interest sensitivity of expenditures is rather low. Since it is doubtful whether within moderate limits an increase in the general *level* of interest rates has strong effects, it becomes even more dubious whether the net effect of raising one rate and lowering another would amount to much. In fact, the presence of a net restrictive effect assumes that the interest elasticity of expenditures with respect to long-term interest rates is greater than the elasticity with respect to short-term interest rates, and, while one might suspect that this is true, there is really little evidence to support it. As far as the interest rate effects are concerned, debt management involves second-order adjustments of variables whose first-order importance is open to question.

2. *Liquidity effects.*—Since the liquidity of an asset depends upon the variability of its price and since prices of short-term securities ordinarily fluctuate less than prices of long-term securities, an operation of the type we are considering would decrease liquidity somewhat by reducing the liquidity of the buyers of long-term securities and increasing the liquidity of sellers of short-term securities by a lesser amount. However, the importance of the restrictive effect of this liquidity change is doubtful, since the total volume of liquid assets in the economy, as ordinarily defined, is not changed. It is merely the degree of the liquidity of assets that is affected. Empirical studies that have been made of the determinants of expenditures, including consumption and investment, have not produced clear evidence that the stock of liquid assets is an important variable affecting spending under normal conditions. This being the case, it is even more doubtful whether changes in the degree of liquidity of a given stock of assets are likely to have important effects. Again, as in the case of interest rates, the liquidity effects produced by debt management are of the second order of importance.

Thus, neither the interest rate nor the liquidity effects of marginal changes in the debt structure appear to be very important. Moreover, to the extent that such changes do have a net effect on the public's aggregate spending, it would appear that similar effects could be produced by the use of monetary policy. For this reason, it is difficult to see what can be accomplished by contracyclical debt management policy that cannot be accomplished more efficiently by Federal Reserve monetary policy. Debt management is a cumbersome instrument of stabilization policy, because it is difficult to time in a flexible way, and because the Treasury is almost unavoidably concerned about its success in raising money.

It seems better to think of marginal changes in the debt structure as a species of selective controls, since a change in the structure of interest rates (and also the structure of liquidity) probably has some effects on the pattern of expenditures; that is, the expenditures stimulated by a fall in short-term interest rates are likely to be different from those discouraged by a rise in long-term interest rates. Unfortunately, however, our knowledge concerning the effects on the expenditure pattern of changes in the interest structure is quite unsatisfactory. Moreover, to the extent that we may desire to use changes in the rate structure as a selective control, it is much more sensible to leave such operations to the Federal Reserve. It may be noted that

under our definition, to the extent that the Federal Reserve departs from the bills-only policy and engages in operations which change the maturity structure of its portfolio in order to produce selective effects, it is engaging in debt management.

It is useful to distinguish between the *debt structure at any particular time* and *marginal changes in the debt structure.* The above discussion deals entirely with marginal changes and suggests that their importance may not be particularly great. However, the debt structure at any particular time conditions the way in which the economy and particularly the financial system react to external disturbances. For example, if the public debt consists entirely of short-term securities, monetary controls may not take effect very strongly, because it is easy for financial institutions and other economic units to mobilize funds for spending through transactions in short-term securities. Since these securities are close substitutes for money it is likely to be possible to find buyers for them among holders of idle cash balances without producing sufficient changes in interest rates to have a strong restritcive effect on expenditures. We saw earlier in this chapter that such shift of Government securities among investor groups have considerably weakened the effects of Federal Reserve policy.

If investors hold predominantly long-term securities, their ability to shift their holdings to someone else when they need funds to lend or spend is likely to be somewhat less. The fact that long-term securities fluctuate in price more than short-term securities as interest rates change means that there is somewhat more friction set up to slow down this process of shifting.

This suggests that those responsible for debt management should concentrate more on trying to maintain a debt structure which contributes to economic stability without worrying so much about the timing of the marginal adjustments necessary to achieve and maintain this structure. It is impossible, however, in our present state of knowledge, to specify a principle which would help us determine the optimum debt structure. But at the present time it is quite clear that we have too much short-term debt and that the debt should be lengthened.

While the structure of the debt is a matter of some importance its influence should not be exaggerated. As suggested above, long-term debt may make the economy more resistant to external disturbances because it is more resistant to shifting, but we must remember that long-term debt can be shifted also. If expenditures are insensitive to interest rate changes, capital losses on sales of long-term debt by financial institutions can be compensated for by charging a higher interest rate on private debt. There is probably something to the "locked-in" effect, and the likelihood that investors will be locked in will be somewhat greater if they hold long-term debt. But it is a matter of degree.

Interest cost of the debt as a policy consideration

As indicated earlier, the interest cost on the public debt is a matter of some importance and unless the economic effects produced by the debt are worth the cost, there is no reason why interest has to be paid since it is always possible to turn debt into money. Consequently, debt management policy must in some sense measure the interest cost on the debt against its economic effects.

The problem of selecting the techniques for debt management which would reduce the Treasury's interest cost to a minimum is a difficult one, because it is necessary for the Treasury in this connection to look ahead and try to foresee future changes in interest rates. For example, from the point of view of minimizing interest costs, it would not necessarily be wise for the Treasury to engage in long-term borrowing at a particular time merely because long-term interest rates were below short-term interest rates. If the interest rate level was expected to fall shortly, it would be better to postpone long-term borrowing until the level had fallen, because long-term borrowing fixes interest cost for many years into the future.

The interest rate structure in periods of recession and easy money tends to be one in which the short-term interest rate is substantially below the long-term. As business conditions improve, credit tightens and interest rates rise, short-term interest rates normally rise substantially more than long-term interest rates so that in times of prosperity and tight credit it often happens, as has been the case recently, that short-term interest rates are higher than long-term. Although the movements of the interest rate structure are quite complex and difficult to predict in detail, when interest rates move in this way one thing is reasonably clear, namely, that from the standpoint of minimizing interest costs the Treasury should attempt to sell long-term securities and lengthen the debt in periods of recession when interest rates are low. Strictly speaking, of course, it should probably be raising some funds in many maturity sectors at most times since cost minimization requires the equalization of marginal costs of raising funds in all sectors, but minimization of interest costs would appear to require an increased emphasis on long-term borrowing when interest rates are low.

Combining economic stabilization and cost minimization

While our knowledge of the economic effects of debt and of the costs associated with various time patterns of debt operations is not sufficient to permit us to arrive at any very specific conclusions, the above considerations suggest that it would be desirable to lengthen debt maturities in order to achieve and maintain a more satisfactory debt structure and that the timing of marginal changes in the debt is not of major importance. There is something to be said for emphasizing debt lengthening operations in periods when interest rates are low in order to keep down the Treasury interest costs. If operations timed in this way should interfere with economic stability, the Federal Reserve System should be prepared to offset these effects by appropriate action. In this connection, it would be desirable for the Federal Reserve to abandon the bills-only policy and be prepared to offset in the most effective way possible any undesirable effects which might be produced by Treasury debt management operations following the suggested pattern.

In other words, we are suggesting (*a*) that the Treasury seek to extend the maturity of the public debt, (*b*) that efforts in this regard be conducted with the view to keeping down the interest costs, which means emphaszing long-term borrowing in periods of recession and low-interest rates, (*c*) that the Federal Reserve be prepared to intervene in a flexible and effective manner if the effects of Treasury

debt operation along these lines should prove undesirable, and (*d*), that the Federal Reserve be assigned full responsibility for managing the interest rate structure for the purpose of achieving economic stability. We do not mean that the Treasury should make no effort to borrow at long term at other times. It is merely suggested that if other policies are properly coordinated with debt management, long-term borrowing in recessions is likely to do little harm and may save the Treasury interest money.

A program of debt management along these lines would have another advantage, namely that debt operations in periods of prosperity and inflation would not emphasize debt lengthening but would be conducted in such a way as to minimize interference with effective Federal Reserve policy. That is, the Treasury would emphasize short-term borrowing at such times, which is less likely to require support from the Federal Reserve or a relaxation of a restrictive monetary policy. If stabilization policy requires it, the Federal Reserve should engage in sales of long-term securities.

In addition to the timing of debt management operations, the interest cost is influenced significantly by the techniques employed to sell securities. Every effort should be made to devise techniques which will permit the Treasury to conduct a given debt management policy in the most efficient and economical manner possible.

Present debt management techniques

The Treasury has recently shown some willingness to experiment with new techniques in debt management, although there are still a number of possibilities that might be tried. This is a matter we will discuss later. The following is a brief outline of the techniques of debt management now in use:

Bill financing.—The Treasury bill, which may have a maturity up to 1 year, has proved to be a very effective and useful debt instrument. Bills are sold at auction on a discount basis, and the bill auctions seem to interfere very little with the Federal Reserve's freedom of action. Until recently regular bill offerings were made only with maturity of 3 months. The Treasury has within the last year extended bill maturities first to 6 months and then to 1 year. At the present time, the Treasury has outstanding 13 issues of 3-month bills, 13 issues of 6-month bills, these two sets forming a pattern in which one issue matures and is replaced by a new bill offering each week. In addition, there are now four issues of 1-year bills maturing once each quarter in January, April, July, and October. The total amount of these regular bills (publicly held portion) was $28.7 billion at the end of July 1959, and this portion of the debt has been placed on a periodic rollover basis, which is efficient and economical and minimizes interference with Federal Reserve monetary policies. In addition to regular bill issues, the Treasury has recently been relying mainly on bills in its tax anticipation financing to meet seasonal gaps between receipts and expenditures.

Fixed-price issues.—The Treasury also borrows by issuing certificates of indebtedness, notes, and bonds, both to raise new cash to cover budgetary deficits and to refund maturing securities. Although refunding could be handled by selling new securities for cash and using the cash to retire the maturing securities, in practice refunding is

almost always handled by means of exchange offerings. Certificates, notes, and bonds are sold on a fixed-price basis.

Several decisions must be made before a fixed-price issue can be offered to the public. These include the choice of a maturity, other provisions such as call or redemption options, and the selection of the coupon rate to be placed on the securities. In deciding upon the maturity and terms of a particular offering, the Treasury is guided by the advice from market experts—particularly the advisory committees of the American Bankers Association and the Investment Bankers Association—by potential investors, and by its own independent study of market conditions. The choice of the coupon rate is made by examining the yield curve at the time of the offering. However, it is necessary to set the interest rate on the new security somewhat above the yield on outstanding debt of the same maturity in order to induce the market to absorb a substantial offering.

Underwriting of short-term cash offerings.—The Treasury does not make use of formal underwriting in marketing its issues, such as is provided by investment banking syndicates in the case of corporate offerings. However, it is customary in the case of short-term cash offerings, such as certificates and shorter-term notes, to permit commercial bank subscribers to pay for the issue by means of credits to Treasury tax and loan accounts, which means that banks are, in effect, able to obtain the securities by paying only a portion of the price equal to their reserve requirements until such time (commonly 2 to 3 weeks later) as the Treasury transfers the funds to its accounts at the Federal Reserve banks. The use of Treasury tax and loan account credits provides a kind of indirect underwriting.

The banks serve essentially as underwriters, reselling or distributing securities to other investors. The Treasury limits or discourages bank subscriptions on longer-term issues apparently on the ground that such securities are unsuitable investments for banks. In restricting bank subscriptions to longer-term issues, the Treasury is probably denying itself important support that could be of great help at times. The main underwriting device used by the Treasury to market long-term debt is to offer a rate sufficiently attractive to achieve the required sales.

Refunding operations.—Maturing securities are short-term liquid instruments and are likely to be in the possession of investors who are holding them for liquidity reasons. The securities being issued in exchange, on the other hand, if they are of intermediate or long maturity, are more likely to appeal to investors who want either permanent investments or prospective short-term speculative gains. The success of a refunding operation often depends, therefore, on the extent to which maturing securities have been shifted from their normal owners to investors desiring to obtain the new securities. This may require that the terms of the new security be sufficiently attractive to create a premium on the "rights" (i.e., the maturing issue) in order to induce the transactions in these "rights" that are needed to put them in the hands of investors who want the new issue.

Government security dealers buy and sell "rights" thus facilitating their distribution, and as soon as the subscription books open, the securities begin to trade on a "when issued" basis. During the subscription period dealers buy "rights" and sell "when issued" securities.

These dealer operations, which contribute to the success of the exchange and the proper placement of the new offering, are the closest thing there is to systematic underwriting in connection with refunding operations.

A program for improved debt management

There are a number of basic changes in policy and in debt-management techniques which might (*a*) reduce the magnitude of debt-management operations and problems and (*b*) make it possible to handle such operations as remain in more effective manner. Let us consider these two aspects of debt management in turn.

Reducing the magnitude of the problem.—There are a number of changes in monetary and fiscal policy, most of them recommended for other reasons elsewhere in this report, which would simplify the problems of debt management.

1. *Less restrictive monetary policy.*—It was suggested earlier in this chapter that an excessively restrictive monetary policy has had the effect of slowing the growth of the economy without coming to grips with the inflation problem it was supposed to deal with. The Federal Reserve authorities have been too concerned about preventing inflation—which the general credit control weapons they have been employing are not very effective in dealing with in any case—and have not been sufficiently concerned about healthy economic growth. Interest rates have been permitted to drift upward over the years and this has intensified the problems of debt management and increased the Treasury's interest cost. Therefore, a somewhat easier monetary policy would probably not result in a substantially greater rise in the price level, would encourage more rapid economic growth, and would yield a bonus in the way of saving Treasury interest cost and mitigating debt management difficulties.

2. *A better "mix" of monetary and fiscal policies.*—In addition to being generally too restrictive in our policy for controlling aggregate demand, we have relied more and more on monetary policy and less and less on fiscal policy. (See ch. 8.) To the extent that easier monetary policy over the long run results in lower interest rates, it may significantly encourage capital expansion and contribute to economic growth. To the extent, therefore, that we want to achieve a more rapid rate of growth, reduction in interest rates to encourage investment, compensated for, by increases in taxes which reduce consumption, will contribute to our objectives.

A generally easier monetary policy, compensated by a tighter fiscal policy, would in addition to promoting a more rapid rate of growth, yield us another bonus with respect to debt management. Such a change in our policies would reduce the magnitude of our debt problems in two ways: (*a*) Larger surpluses and/or smaller deficits in the cash budget would result in a lower rate of growth (or perhaps even a decline) in the size of the publicly held debt, and (*b*) lower interest rates resulting from easier monetary policies would save interest costs to the Treasury and would make effective debt management easier to achieve.

3. *Greater reliance on selective credit controls.*—In addition to changing the fiscal-monetary mix in such a way as to encourage a more rapid rate of economic growth, there is, as we pointed out above, much to be said for greater reliance on selective credit controls directed at

some of the sectors of the economy which have exhibited excessive instability. We suggested, for example, that serious consideration be given to selective controls in the area of consumer credit including housing, and perhaps more effective control over bank lending to stabilize inventory fluctuations. In addition to helping us to maintain stability of growth and employment, these controls might mitigate the inflation problem by reducing the magnitude of shifts in demand. In addition, more reliance on selective controls should yield us a third bonus in connection with debt management, since most types of selective controls exert their impact essentially by reducing the demand for credit directly, rather than through interest rates. That is to say, a monetary policy relying more on selective controls would presumably require smaller increases in interest rates to achieve a given restrictive effect than would a policy relying entirely on "general" controls. If this should prove to be the case, there would be some saving in interest costs to the Treasury.

It is very important to emphasize, however, that we should not adopt policies of the kinds just discussed merely because they save the Treasury interest money, reduce the public debt, and simplify the problems of debt management. We should select the proper combination of fiscal and monetary policies, on the one hand, and the proper mix of selective and "general" monetary controls on the other, on the basis of the impact these policies have upon the economy. *Debt management, while a matter of some importance, is distinctly subsidiary to the selection of proper monetary and fiscal policies.* It just happens that under present conditions, the adjustments in the policy mix that seem to be called for would incidentally reduce interest costs and simplify our debt management problems somewhat.

4. *Open market operations versus reserve requirements changes.*—In the conduct of its general monetary policy directed at control of the money supply, the Federal Reserve has a choice between the use of open market operations and changes in reserve requirements. In recent years, the System has relied on open market operations for short-run stabilization of the economy, but appears to be engaged in a program of secular reduction of member bank reserve requirements. Reserve requirements have been lowered several times during the recessions of 1953–54 and 1957–58, while they have not been increased since 1951. Thus, reserve requirements have been adjusted downward particularly during recession periods, apparently for the purpose of supplying the reserves needed to support economic growth.

The use of open market purchases of Government securities to supply reserves to the banking system has an advantage, from the standpoint of the Treasury, over reductions in reserve requirements, since open market purchases absorb securities into the Federal Reserve System's portfolio and since most of the interest on that portfolio is returned to the Treasury at the end of the year. There are, of course, other differences between open market purchases and lowering of reserve requirements. Lower reserve requirements clearly tend to result in larger profits for the commercial banking system. In addition, lower reserve requirements increase the amount of money and credit that can be created per dollar of additional reserves and thereby increase the leverage of Federal Reserve policy somewhat. Aside from these factors, it is difficult to see that there are any significant

observable differences in the impact of these two credit control weapons. On the other hand, studies that have been made indicate that there would be substantial savings in interest to the Treasury if the Federal Reserve would desist from further lowering of reserve requirements and supply the reserves needed to support growth by open market operations. It should be noted that these savings would be cumulative—that is, absorption of securities into the Federal Reserve portfolio this year in order to supply reserves to the banks would result in continuing interest savings in future years.

Unless it can be demonstrated that the other effects on bank earnings or on the leverage of monetary policy would be unduly harmful, there is much to be said for relying on open market operations to supply reserves in future years, leaving reserve requirements at their present levels.

Possible improvements in debt management technique

Given the mix between monetary and fiscal policy, the mix between general and selective monetary controls, and the mix between open market operations and reserve requirement adjustments in the conduct of general monetary policy, the approximate scope of the Treasury's debt management problems is determined. In the conduct of debt management within the framework set by these broad decisions about economic policy, the Treasury should attempt to manage its affairs in the most efficient way possible. While our knowledge of the impact of alternative debt management policies on the economy is decidely unsatisfactory, we concluded earlier that the Treasury should make an effort to achieve a debt structure of longer maturity than the present one, because such a structure would contribute somewhat to the effectiveness of monetary controls by (*a*) reducing the ability of holders of Government securities to turn them into cash for spending or lending when the Federal Reserve is trying to restrict credit, and (*b*) making it possible for the Treasury to come to the market less frequently, thus minimizing interference with the Federal Reserve's freedom of action. At the same time, it was suggested that the debt management authorities should give due attention to keeping down the cost in interest to the Treasury. This suggests some emphasis on the sale of long-term securities in periods when interest rates are low, provided the Federal Reserve stands ready to prevent undesirable effects on the economy if they should make their appearance. It also suggests that the techniques used in debt management should be, insofar as possible, the ones which permit the Treasury to sell the desired securities at minimum cost under any given circumstances. Several changes in technique which might be worthy of consideration can be suggested.

1. *Auctioning of longer term securities.*—The auction technique has proved to be highly successful in connection with the sale of Treasury bills, and there might be some advantages in extending it to long-term securities. One possible advantage would be that each block of securities would presumably be sold at the highest price its buyer would be willing to pay, and as a result the Treasury's interest cost might be reduced. There are other advantages and some disadvantages, one of which might be the greater risk imposed on the investor, which might mean that the auctions would be dominated by skilled market professionals so that the market would be narrowed

and collusive bidding might develop. Despite difficulties, the device seems promising enough to be worth extending to securities of longer maturity than bills.[38]

2. *Frequent small offerings.*—It is possible that small offerings of longer term securities made at frequent intervals would help the Treasury to secure a larger share of the current flow of saving. There are difficulties related to the fact that, in order to keep the number of issues from multiplying inordinately, it would be necessary to reopen existing issues, but there should be ways of solving this problem. At first glance, it might appear that such an approach to debt management would mean that the Treasury would be interfering with the Federal Reserve's freedom of action most of the time. However, the opposite might well be true—that the smallness of the offerings would result in a minimum of interference.

3. *Regularizing debt operations.*—A suggestion that has been made is that the Treasury take initial steps to attain a viable debt structure and then program a standard set of debt operations such as to maintain this debt structure and carry out such a set of operations each year, regardless of economic conditions. The objective of this proposal would be to attain a position of neutrality in debt management.[39] An alternative approach would be to establish a benchmark pattern of debt offerings to be made in a normal year when there was no reason for debt management to be either restrictive or expansive. Starting from this position, the volume of longer term offerings could be speeded up during inflationary periods and slowed down and replaced by shorter term offerings in periods of recession.[40] In practice it might prove very costly to put such schemes into effect, and it is not clear that the importance of debt management is great enough to justify the cost; moreover, it might simply prove very difficult at times to sell the required amount of long-term securities. And it is not certain that the advance programing of financing would not be playing into the hands of the market. With respect to the second proposal, it would seem that to the extent that stabilization policy relies upon changes in the interest rate structure, the Federal Reserve, with its greater flexibility of maneuver and more undivided responsibility for economic stabilization, would be the appropriate agency to take the responsibility.

4. *More effective underwriting.*—One of the Treasury's difficulties has been that it has had inadequate underwriting support, much less than is used in private financing. One possibility deserving of consideration would be to have the Federal Reserve banks perform the underwriting function for the Treasury, buying up part of a Treasury issue of long-term securities and reselling it to the public over a period of time. A procedure along these lines has been used successfully in England, where the amounts of long-term issues not subscribed by the public are subscribed by the Issue Department of the Bank of England

[38] The Treasury has called attention to numerous technical difficulties in auctioning longer term securities. See "Employment, Growth, and Price Levels," hearings before the Joint Economic Committee, 86th Cong., 1st sess., pt. 6C, pp. 1736–39.

[39] T. C. Gaines, "Techniques of Treasury Debt Management" (unpublished Ph. D. dissertation, Columbia University, 1959, ch. XII.

[40] J. M. Culbertson, "A Positive Debt Management Program," Review of Economics and Statistics, XLI, May 1959, pp. 89–98.

and then gradually resold to the public.[41] In the event it is felt that the Federal Reserve should confine itself primarily to economic stabilization, perhaps some other institutional arrangement could be made.

5. *Better selling organization.*—A more vigorous program for promoting the sale of Government securities by the Treasury might pay big dividends in broadening the market and reducing the Treasury's interest cost. The recent spectacular success of the 5 percent note maturing in August 1964, which attracted over 100,000 subscriptions of less than $25,000 each, aggregating nearly $1 billion, suggests that there is a market that has not been adequately tapped. The development of a more extensive selling organization by the Treasury to attract the interest of small investors as well as of smaller financial institutions far removed from the main centers of finance, would probably be well worth the cost. The facilities of the Federal Reserve banks might also be used.

6. *Elimination of erratic fluctuations in bond prices.*—As indicated earlier, it appears that the increased variation in the prices of Government securities in recent years has reduced their attractiveness to investors. There is little evidence that the "bills-only" policy has resulted in greater "depth, breadth, and resiliency" in the Government securities market, as its sponsors expected it would. It appears that dealer positions in Government securities are influenced chiefly by expectations concerning interest rate movements, that positions in longer term obligations rise sharply when a trend toward lower interest rates is clearly indicated, and that positions are reduced as quickly as possible when such a trend is reversed. Spreads between dealers' quoted bid and asked prices were generally larger on all types of Government securities in late 1956 and the first half of 1957 when price fluctuations were large and the risk of loss great, than at any time since the end of World War II.[42] In fact, it is obvious that dealers cannot afford to go counter to price trends without facing the risk of bankruptcy. The distortions in the interest rate structure in early 1958—when the excessive spread between short- and long-term interest rates encouraged speculation—and the ensuing gyrations of the bond market related to the June financing, could and should have been effectively resisted by a flexible program of open market operations by the Federal Reserve System. The bills-only policy should be abandoned in the interest of eliminating meaningless fluctuations of the prices of Government securities, as well as to increase the effectiveness of monetary policy.

7. *Advance refunding.*—Advance refunding means offering to holders of an existing security the option of turning it in for a newly issued security before maturity. As longer term securities approach maturity, they frequently fall into the hands of investors who are interested in them as liquidity instruments, and when they mature it is difficult to interest such investors in exchanging them for a long-term security. Judicious advance refunding would catch these securities before they left the hands of those who were holding them as investments and offer a new longer term security in exchange at that point. Legislation passed in the last session of Congress eliminated

[41] See "Report of the Committee on the Working of the Monetary System" (the so-called Radcliffe Report). London: Her Majesty's Stationery Office. 1959. pp. 36–38.

[42] These interpretations are based upon a study of materials made available by the Board of Governors of the Federal Reserve System.

technical obstacles and paved the way for the introduction of advance refunding. The Treasury has expressed strong interest in advance refunding as a means of dealing with a large volume of intermediate-term debt scheduled to mature in a few years.[43] Used carefully and in moderation, advance refunding could be a useful way of attaining a more viable debt structure.

8. *Call features.*—The presence of a call feature in a Treasury security gives the Treasury greater possibilities of being able to take advantage of favorable movements of interest rates in future years. The Treasury has issued no callable securities in the last few years. In view of the fact that call features are commonly included in corporate securities, it seems quite possible that inclusion of such a feature might frequently be well worth the extra immediate cost involved.

9. *Purchasing-power bonds.* It has been suggested recently that the Government might issue bonds whose redemption value (and interest payments, if any) are tied to the Consumer Price Index. The best candidate for this would be savings bonds, which have been a source of substantial cash drains to the Treasury in the last few years. The issue here is not one of saving interest cost, since there is no assurance that savings would result.[44] Rather it is a question of balancing equity considerations against the dangers of setting up expectations which might intensify the problem of inflation. On balance, there is much to be said for the view that it is a proper function of the Government to provide the small, unsophisticated investor with a form of investment which contains protection against the erosion of his wealth through inflation.[45]

The interest-rate ceiling

In recent months there has been much discussion of the desirability of raising or eliminating entirely the interest-rate ceiling of 4¼ percent applicable to marketable Treasury securities having a maturity of more than 5 years. The controversy concerning the interest-rate ceiling is the culmination of a period of nearly 10 years during which interest rates have drifted steadily upward with only brief interruptions. The tight-money periods of early 1953, 1955–57, and 1958–59 have greatly overbalanced the effects of easier money in the intervening periods. Even during 1958, while the economy was still in the midst of a recession, speculative activity in the Government securities market at mid year was permitted to drive interest rates up sharply, and restrictive monetary policy has driven them even higher in recent months. Clearly, tight money has not been effective in achieving its objective in stopping inflation. At the same time, even in such prosperous years as 1956 and 1957, growth has been slow or nonexistent.

This study suggests that our inflationary problems are of such a nature that tight money cannot deal with them effectively. At the same time, restrictive monetary policy has probably been partly re-

[43] See report of a speech by Julian B. Baird, Under Secretary of the Treasury for Monetary Affairs, to the stockholders of the Federal Reserve Bank of Boston, New York Times, Oct. 16, 1959.

[44] Whether there would be an interest saving from selling a given amount of bonds with a purchasing power guarantee as compared with selling the same amount of ordinary bonds would depend essentially upon whether the price level in fact rose less rapidly or more rapidly than buyers of the bonds expected it to at the time they bought them.

[45] For an argument in support of purchasing-power bonds, see H. S. Houthakker, "Protection Against Inflation," Study Paper No. 8.

sponsible for our slow growth. It would seem that there should be less emphasis on raising interest rates as a means of restraining demand. This does not mean that we should have unrestrained expansion of the money supply, but merely that quantitative credit policy should cease to be given responsibility for trying to deal with inflation arising from causes outside the range of its influence.

If, as suggested earlier, we follow a less restrictive monetary policy, achieve a better mix of monetary and fiscal policies, and if the Treasury and Federal Reserve attempt to develop more effective techniques, it might be possible to manage the debt effectively and still stay within the limits of the interest-rate ceiling. However, it is an arbitrary limitation with no analytical justification. While the interest-rate ceiling should be repealed, modification of the policies that led to the present situation is a matter of much more pressing importance. Whether the Congress will want to repeal it without basic reforms in fiscal, monetary, and debt management policy is a matter for it to decide.

Summary concerning debt management

1. The publicly held debt, which does not include the debt held by Government agencies and trust funds or the Federal Reserve System, is the proper concept to use in the analysis of debt management. It is substantially smaller than the gross public debt. The debt management problem is frequently exaggerated as a result of the use of improper statistics.

2. Debt management may be defined as all operations by the Treasury (and the Federal Reserve) which affect the composition of the publicly held debt.

3. The net effects on the level of expenditures resulting immediately from debt management operations (essentially selling securities of one maturity and using the proceeds to retire securities of another maturity) due to the changes they produce in the structure of interest rates and liquidity are probably not great.

4. Changes in the structure of interest rates may be regarded as a selective device, although our knowledge concerning the precise effects of such changes is not very extensive. To the extent that changes in the rate structure are desired for their selective stabilization effects, the responsibility for bringing them about should lie with the Federal Reserve, which can use open market operations in various maturity sectors for this purpose.

5. Debt management operations by the Treasury should be directed at achieving and maintaining a desirable debt structure. A debt consisting predominantly of long-term securities would be less readily shiftable and capable of facilitating the dishoarding of idle cash balances when the financial system and economy are subjected to external disturbances. Under present circumstances, the Treasury should direct its efforts toward the lengthening of debt maturities with due consideration for the interest cost involved. This suggests that efforts to sell longer-term securities should be emphasized in periods when interest rates are low. In addition to tightening up the financial system somewhat, lengthening of the debt would also permit a better distribution of maturities and thus minimize interference with the Federal Reserve's freedom of action.

6. The cost and difficulty of managing the debt in an effective way would be reduced if (a) monetary restrictions were relaxed somewhat, (b) fiscal policy was tightened and monetary policy relaxed still more,

thus producing a policy mix more conducive to growth, (c) more reliance in monetary policy was placed on selective controls which work directly on credit rather than by pushing up interest rates, and (d) the Federal Reserve stopped lowering reserve requirements to supply reserves needed to support economic growth and used open market purchases instead. Most of these measures would be desirable on other grounds, since they would encourage growth and might increase our effectiveness in dealing with instability.

7. The Treasury should explore various methods of improving its debt management techniques, including the auctioning of long-term bonds, more frequent small offerings of securities, improved methods of underwriting its offerings, an improved selling organization, and the judicious use of advance refunding. The Federal Reserve should abandon the bills only policy for a number of reasons, one of which is that such a step would permit the System to reduce erratic fluctuations in the prices of Government securities which have made these securities less attractive to investors. It might be desirable for the Treasury to introduce purchasing-power savings bonds in order to supply the small investor with protection against inflation.

8. The concern about high interest rates has its basis in disagreement about the appropriateness of policies for achieving our economic objectives. The 4¼-percent ceiling on interest rates on Government securities with a maturity of more than 5 years is an arbitrary limitation. While the interest rate ceiling should be repealed, modification of the policies that led to the present situation is a matter of much more pressing importance. Whether it wants to repeal the interest-rate ceiling before basic reforms in monetary, fiscal, and debt management policy are put into effect is a matter for Congress to decide.

CHAPTER 10. PUBLIC POLICY AND MARKET POWER [1]

The analysis of the postwar inflation presented in chapter V has indicated that at least some of the inflationary pressure of the past several years can be attributed to the exercise of market power by large industrial and labor groups. In addition, market power may well have contributed in some degree to the downward rigidity of both prices and wages during postwar recessions.

If this is so, an adequate public policy for dealing with inflation must contain some elements designed to reduce the impact of such power. This is necessary because the major alternative policy approaches through monetary and fiscal devices approach the problem primarily from the *demand* side of the market, whether in an aggregative or in a selective way. What evidence we have, however, indicates that this approach would probably be effective only at a cost, in terms of unemployment of labor and capital, which would be quite high. Public policy, therefore, must also deal *directly* with the problem of market power.

Market power is not only undesirable because of its impact on inflation; it can also have important adverse effects on the rate of economic growth of the country. Competitive markets permit consumers, through their choice of purchases, to determine the composition of output of consumers goods in the economy. Furthermore, competitive industry provides the environment in which new ideas are most likely to flourish and in which the firms with the greatest skill in responding to the wishes of consumers, in improving products and in reducing costs, will prosper and grow.

In order to have a more competitive environment in industry, it is not necessary that all business be small. In many fields, technology requires that the size of plants be large, and economies of mass production can be reaped through large-scale production. Large firms also are capable of supporting sizable research efforts, and of making the longrun commitments of capital that are sometimes necessary in the development of new products and new techniques.

However, the twin advantages of large-scale production and more competitive markets are not inconsistent objectives, as has often been supposed. Most of the giant corporations in industry enjoy no greater economies of production and provide no greater improvements through research than do firms one-quarter or one-eighth their size. But the presence of these giant firms does encourage the development of monopolistic pricing and other restrictive practices within industry. By the same token, the merger of already large firms into even greater ones typically provides little or no gains to society, but does provide more favorable conditions for limiting the operations of competitive market forces.

[1] Main responsibility for drafting this chapter rested with Harold M. Levinson.

Three Alternative Approaches

Essentially, there are three alternative lines of approach to this problem. First, we can attempt to reduce or eliminate, directly or indirectly, the source of the market power itself by policies designed to increase the degree of competition in the marketplace. Second, we can accept the existing situation as it stands, but attempt to induce those industries and unions which have considerable power to exercise it in a socially desirable—in this case, in a noninflationary—way. Or, third, we can provide for more active government participation in or control over the price and wage-setting process itself. The proposals of this latter group cover a wide range of possible approaches, the most important of which will be discussed briefly below. It should also be noted before proceeding that these alternatives are not necessarily mutually exclusive. It is quite possible to consider them as shorter versus longer run approaches, or as being applied variously to different types of industries and at different times. The basic alternative philosophies involved, however, are quite easily delineated.[2]

Policies To Reduce Market Power and Increase Competition

ANTITRUST ACTION

The most fundamental policy approach to deal with the problems raised by the existence of excessive market power has been through the application of the antitrust laws. This approach has the immense advantage of not only reducing this source of inflationary pressure, but also raising the effectiveness of the economy for growth, for reducing undesirable concentrations of power in private hands, and accomplishing all this without increasing the amount of government intervention in the private economy.

The basic legislative framework of our antitrust approach is embodied in the Sherman Act of 1890, and the Clayton and Federal Trade Commission Acts of 1914. In essence, the Sherman Act prohibits (1) every contract, combination, or conspiracy in restraint of trade, and (2) every attempt to monopolize any part of trade or commerce. In the 1914 legislation, Congress attempted to deal with the problem by proscribing certain activities which might *develop* into monopoly, particularly by prohibiting certain types of mergers, if the effects were substantially to lessen competition.

Undoubtedly, both the Sherman and Clayton Acts have had a profound and beneficial effect on the character of the American economy, insofar as they have prevented open cartelization and have undoubtedly limited the extent to which produceers have utilized their potential market power. Nevertheless, the enforcement of the antitrust laws on the whole has been disappointing in our history. The courts have often interpreted the meaning of the Sherman and Clayton Acts in ways which makes it virtually impossible to show that market power is being exercised in violation of the laws. The delays of legal processees have been long; and the remedies that the courts have imposed have often been either ineffective, or made long obsolete by

[2] For an excellent sample of several alternative proposals which fit into this general frame of reference, see the Joint Economic Committee, "Hearings on the Study of Employment, Growth, and Price Levels," pts. 6 and 7.

changing conditions in the industries. Finally, the resources of the Antitrust Division of the Department of Justice, and of the other responsible agencies in this field, have been hopelessly inadequate to cope with the tremendous responsibility and vital importance of the tasks they are attempting to perform.

Within the past few years, however, there has been some indication that the courts are becoming more aware of the wider economic implications of size as a factor in market power and have also broadened the frame of reference by which to judge the potential adverse effects of mergers upon competition in an industry or area. Thus, in the *Bethlehem-Youngstown* merger case of 1958, the courts ruled against the planned merger on the grounds that it threatened substantially to reduce the degree of competition in the sale of certain steel products. Since this decision, the Antitrust Division has placed considerable emphasis on early action to prevent the completion of planned mergers before the assets of the companies involved have become so intermingled as to make subsequent dissolution much more difficult to achieve.

Recommendations for strengthening antitrust

In general, *we recommend that the basic approach toward the problem of market power should be through a considerably expanded antitrust program.* Some of the most important specific recommendations in this area are the following:

1. The budget of the Antitrust Division should be very considerably expanded from its present meager level, even after recent increases, of less than $4.5 million. The Antitrust Division should be able to enlarge its professional staff considerably, and to establish a salary level which will prevent the present continual drain of experienced manpower into private industry.

2. Notification of proposed merger action to the Antitrust Division should be provided within some reasonable time prior to the date when the merger is to be effectuated. In this way, prior judgment can be made and effective action taken if it is believed that the proposed merger will substantially lessen competition.

3. Serious reevaluation should be given by the Congress to the existing policies of regulatory agencies in industries which are specifically granted major exemption from the antitrust laws. The activities and decisions of the Federal Power Commission, the Federal Communications Commission, the Civil Aeronautics Board, and the Interstate Commerce Commission should be reviewed in terms of their effect on competitive practices within their respective jurisdictions. A similar evaluation of the effects of the Federal Reserve Board's policies toward bank mergers would be desirable.

4. The Antitrust Division should be given greater power to subpena necessary records in civil cases. The existing limitations on this power are such as to circumscribe severely the ability of the Division to carry out its investigations effectively.

5. A more effective method should be developed for dealing with industries "in which a high degree of monopoly power over price and competitive opportunity is possessed and exercised through coordinated and interdependent economic actions by the companies involved, *without overt agreement*, but each acting with full awareness of what the others are doing or will do in response to the actions of any

one of the group. Such coordinated parallel action may take the form of price leadership, common adherence to a delivered price system, common distribution practices, common buying practices, and the like." [3] [Italics provided.]

The problems of establishing appropriate criteria in this area are most difficult. Nevertheless, it is in these industries where much of the market power with which we are concerned is concentrated. It may be desirable for Congress to make clear its intent that a record of consistent parallel policy, even without evidence of collusion, combined with some degree of concentration of *group* market share, is a presumptive violation of the Sherman Act. It is probably in this area, more than any other, that the record of judicial interpretation of our antitrust laws has failed to deal effectively with industrial developments of the past few decades.

REDUCTION OF TARIFFS

A tariff is essentially a protective device to minimize competition—in this case competition from foreign made goods. An increase in such competition from abroad can be and often has been a healthy stimulus to American producers to modernize their technology, increase their efficiency and productivity, and hold down their costs and prices in; in recent years, it has probably been the most effective constraint on the exercise of market power in several key indutsries. A continuation or increase in tariff levels on the other hand, would invite the charging of higher prices and the negotiation of higher wage settlements in this country. *It is therefore recommended that, as part of our overall policy measures to limit and if possoble reduce the role of market power in our economy, we should steadily continue to reduce tariffs.*

THE ANTITRUST LAWS AND LABOR UNIONS

Should the provisions of the antitrust laws be applied to labor union activities as well? This is an approach which has been very widely proposed in recent years. Yet the fundamental characteristics of the labor market are such that we do not feel that this approach would be desirable. This is not to say that the exercise of market power by strong unions has not been a factor in the inflation; it very probably has been, as chapter V has indicated. But an appropriate solution is not to be found in the antitrust laws.

Perhaps the most basic difficulty lies in the fact that, *strictly speaking*, the application of the antitrust laws to the labor market would strike at the very existence of unionism and collective bargaining itself. The very reason of unions for being is to limit the forces of competition, and the philosophy underlying our entire public policy toward collective bargaining has been that unions *per se* are desirable, because the unrestrained forces of a "free" competitive labor market place the individual worker at a grave disadvantage *vis-a-vis* the employer. We must presume, therefore, that the phrase "application of the antitrust laws to labor unions" is not to be construed literally to mean that *any* restraints on competition will be unlawful, since this is tantamount to stating that unions *per se* will be unlawful.

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[3] Quoted from a statement by E. V. Rostow, in the "Report of the Attorney General's Committee To Study the Antitrust Laws," Mar. 31, 1955, p. 40.

But if this is not what is meant, then it is necessary to specify in some detail those particular aspects of union policy which *will* be considered as a violation of the antitrust laws. To begin with, it should be noted that in at least a few areas, the present antitrust laws already apply. Where a union attempts to affect the price at which a product is sold *on the product market by direct collusion with the producer*, there is no doubt that such collusion is unlawful and proscribed by our present antitrust policy. Furthermore, there has been some tendency in recent years to expand the scope of applicability of antitrust to other areas.[4] In general, however, the activities of unions which are subject to antitrust restrictions are quite limited at the present time. In addition, several other union activities have been prohibited or severely restricted by the Taft-Hartley and Landrum-Griffin Acts. Among the most important of these have been the restrictions placed on the closed shop, secondary boycotts, jurisdictional disputes, and several others. The activities of labor unions today, therefore, are not as free of Government restraints as is sometimes suggested.

The fact remains, however, that these existing restrictions do not deal in a direct way with the great majority of situations in our present economy where union market power may be considered as excessive. Consequently, two additional specific recommendations have been widely suggested to attack the issue more directly, viz, to make industrywide bargaining unlawful, and to make national union participation in bargaining unlawful. Both of these, it will be noted, are directly related to the exercise of market power *in the wage setting process*, as contrasted to other areas of concern to unions, such as, seniority provisions, grievance procedure, etc.

Industrywide bargaining refers to situations in which the collective bargaining negotiations are carried on at one time for all or most of the firms and employees within an industry. Actually, there are very few industries in the United States where this type of bargaining occurs—railroads, steel, and coal, are the major ones. In the great majority of industries, bargaining is carried on between one company and representatives of the local and the national union in that company. There is no evidence to suggest that this latter type of bargaining results in any lower settlements than where industry bargaining occurs; in fact, most industrywide bargaining has developed as a device to strengthen the bargaining position of the *employer* rather rather than the union. The elimination of industrywide bargaining, therefore, would have little or no effect on the problem at hand.

The alternative approach—to greatly restrict or eliminate the role of the national union in bargaining—is much more far-reaching. This approach is based on the premise that it is the power of the national union which creates the upward pressure on wages, so that local union bargaining would result in less inflationary pressure.

This is again a doubtful premise; it may well be that in many instances, precisely the opposite is the case. Some of the strongest unions in the United States, where wages have risen at least as rapidly as elsewhere, place primary responsibility for bargaining on the local union, with the international union having virtually no

[4] For a discussion of these areas, see the testimony by R. A. Bicks, in hearings of the Joint Economic Committee, pt. 7.

role—the building trades' unions are a clear case in point. Of greater importance, however, is the fact that there is much evidence to suggest that local bargaining units may well be more aggressive in fighting for wage increases than are national union representatives. In general, national officers are more insulated from the internal political pressures of the membership and are more able to understand the broader economic problems of the industry. Local union bargaining, therefore, could create an atmosphere of interlocal rivalry which would accentuate rather than reduce the pressure for wage increases.[5]

We believe, therefore, that the antitrust approach to the problem of market power in the labor market is neither feasible nor desirable, and would create many more problems than it would solve. It may well be, nevertheless, that stricter antitrust enforcement in the *product* market, as well as a gradual lowering of tariff barriers, would have favorable *indirect* effects on wage pressures as well. The analysis of the wage setting process in chapter V indicated that wage adjustments in "key" industries were greatly affected by the level of profits and by the severity of competition in the industry. Thus, both profits and degree of competition are important variables in the wage setting process. If stronger competitive conditions and lowered profit margins could be achieved by a stronger antitrust approach and more foreign competition, it is likely that wage increases would also be dampened. In any case, however, additional legislation in this area should be considered with an understanding of the unique characteristics of collective bargaining rather than in the framework of antitrust.

POLICIES TO ENCOURAGE BUSINESSMEN AND LABOR TO RESTRAIN THEIR USE OF MARKET POWER

This approach attempts to deal with market power by inducing businessmen and labor unions to adopt a policy of self-restraint in reaching decisions on price-wage matters. Certainly it can be said that public admonitions and appeals by the President and other national leaders can do no harm and perhaps some good. But the experience of the United States in the past several years, as well as that in most other countries, casts serious doubts on the effectiveness of such a policy. Furthermore, reliance upon the "social consciousness" of large private power groups represents a highly questionable method of solving such a critical economic problem. A democratic society cannot place this degree of responsibility or power in the hands of private individuals.

Aside from such philosophical considerations is the fact that such an approach is most unlikely to succeed in the economic and social environment existing in the United States. Businessmen are expected to earn profits; in fact, the effectiveness of the economic system itself requires that they should if competitive conditions permit. An appropriate movement of prices and wages to reflect changing demand and cost conditions is an important mechanism by which resources are shifted from declining to expanding industries, or from declining to expanding occupations.

[5] For a discussion of this issue, see the testimony by John Dunlop in the hearings of the Joint Economic Committee, part 7.

The structure of the labor movement in the United States also makes it virtually impossible to expect that a self-imposed policy of "wage restraint" will be successful.[6] The greatest barrier to such a possibility is the very high degree of decentralization of power in American unions. Any policy of restraint, if it is to be effective, must be accepted by a very large proportion, if not all, unions; the more decentralized the power to affect wages, the less likely that such a broad acceptance will be obtained.[7] And if, as in the United States, there are strong internal rivalries between important union leaders, this likelihood becomes extremely small.

In recent months, a more specific proposal has been put forth suggesting an annual conference of business, labor, and Government leaders.[8] Such a conference, if it were held in the spring, could discuss the President's Economic Report, the hearings of the Joint Economic Committee, and the overall economic outlook. Advocates of such a conference suggest that as a result, price and wage decisions in important industries could be reached with a greater understanding of their possible impact on the economy as a whole. Such a conference approach would have to be managed most skillfully, however, if it were not to become a mere public forum for presenting the viewpoints of special interests. *Nevertheless, we believe such an annual conference could yield beneficial results, particularly over the longer run, if care is taken to avoid this danger.*

At least for the immediate future, however, we conclude, with Professor Redford, that it is "*too much to expect that management and labor will be able consistently to view specific questions of wages and prices in terms of public interests rather than of the interests of the groups which they are under compulsion to represent.*" [9]

GREATER GOVERNMENT PARTICIPATION IN THE PRICE-WAGE SETTING PROCESS

We turn, finally, to the whole spectrum of potential courses of action which involve a greater or lesser degree of Government participation in the price-wage setting process. Before proceeding with this, however, the point must be emphasized that, as a general rule, there should be a strong presumption *against* any type of Government interference or control unless the circumstances are such as to make it essential. There is always the danger that Government participation in the determination of wages and prices will interfere with the proper allocation of resources among industries, will have an adverse effect on the incentive of labor and capital in the industry, and will, particularly in the long run, create more serious problems than it solves. Nevertheless, society also has the right to impose limitations on the exercise of private market power, if it is felt that market power is

[6] According to a study by Mark Leiserson, the success of such policies has been quite limited in several European countries where the underlying economic and social environment was relatively much more favorable than in the United States. See his paper, "A Brief Interpretive Survey of Wage-Price Problems in Europe," study paper 11.

[7] This is essentially the same point as that made by Leiserson to the effect that voluntary restraint requires that all unions have a common national purpose. See ibid., p. 55.

[8] See, for example, the testimony by John Dunlop, hearings of the Joint Economic Committee, part 8.

[9] Emmette S. Redford, "Potential Public Policies To Deal With Inflation Caused by Market Power," study paper No. 10.

being used in a manner detrimental to the basic interests of society. Our studies suggest that market power has, in fact, contributed to the inflation of recent years. The problem of balancing these divergent considerations is, of course, a judgment only society can make.

If some approach of this kind were to be utilized, there are several degrees of Government participation which could be involved.[10] The mildest approach would be to establish a study group to advise the President on key price and wage changes which might threaten economic stability. Such a study group could recommend occasional intervention through factfinding procedures only in industries and at times when the threat of a serious inflationary impact was present. The ultimate decision regarding the initiation of factfinding procedures, however, should be left to the discretion of the President.

A somewhat more drastic step would require that certain clearly defined key industries notify the Government at the time prices and/or wages are raised. Hearings of the type already noted could then be initiated, at the discretion of the President.

A further and much stronger step in the direction of Government intervention would be to give the President, or some designated agency, the power to suspend price and/or wage increases for a brief period while hearings were being held.

Assuming some approach of this type were adopted, there is a question of the action which would follow after the factfinding board has completed its investigation. The weight of experience in this regard suggests that such a board should be given the power to make definite recommendations, though these should not be binding upon the parties (at least until considerably greater experience has been accumulated as to the desirability and effectiveness of the entire procedure). Unless recommendations are made, it is virtually impossible to bring to bear the pressure of public opinion. For the facts themselves are often difficult to interpret, let alone understand; and statistical data, no matter how impartially set forth, cannot be expected to convey any impression to the public as to the relative merits of the issues at hand. Furthermore, many of the most serious implications of a given price increase or wage settlement are not matters of fact, but of judgment—the potential indirect effects on other prices or wages, for example.

All these elements strongly suggest that any factfinding procedures, if initiated, should culminate in a series of specific recommendations in order to make the procedure effective.

There is finally the extreme possibility of an outright system of compulsory arbitration of labor-management disputes combined with compulsory regulation of prices similar to that now used in public utility industries. It must surely be presumed that such an approach would entail a far greater degree of public control than is either desirable or necessary at this time.

In sum, it would seem far better at this state of our knowledge and experience to confine our efforts in this area to the introduction of a factfinding procedure to be invoked at the discretion of the President and to result in the issuance of a report and recommendations regard-

[10] The discussion in this section draws heavily upon the study paper by E. S. Redford, op. cit.

ing the justification and desirability of proposed increases in wages and prices.

In the coming years, if the exercise of market power continues to constitute a serious problem, further steps may be deemed desirable.

SUMMARY

1. A vigorous antitrust program is fundamental to any attempt to reduce market power; in the long run, it is on this approach that we must rely. By making the economy more competitive, antitrust activities serve not only to reduce inflation, they also help encourage a more rapid rate of growth.

2. If the antitrust approach is to be relied on, it must be considerably strengthened. The professional staff of the Antitrust Division should be expanded, with a salary scale sufficient to attract and retain able personnel.

In addition, Congress should give serious consideration to several other aspects of our present antitrust enforcement procedures. Prenotification of proposed mergers would be desirable; greater power to subpena records in civil cases should be provided; and a more effective method for dealing with market power which is not based on overt collusion should be developed.

Finally, the present policies of our regulatory agencies should be reevaluated with particular regard to the effect of these policies on competitive practices within their respective jurisdictions.

3. We also recommend, as part of an overall program to limit and possibly reduce market power in the American economy, that tariffs be steadily reduced in exchange for concessions from other countries.

4. The antitrust approach to the problem of union market power is neither feasible nor desirable, except in instances where there is collusion between unions and firms to fix product prices. Making industrywide bargaining unlawful would be unwise; nor would it be sound policy to prevent national unions from participating in collective bargaining. This is not to say that union market power has not contributed to the inflation problem; it has. But increased competition in product markets, as the result of tariff reductions and a vigorous antitrust program, can do much to check the exercise of this power.

5. We do not believe that moral suasion can be relied upon to check the exercise of market power. We do believe, however, that an annual conference for business and labor leaders, at which they can be apprised of the economic outlook and the implications of their actions for this outlook, would yield some benefits and should, therefore, be instituted.

6. We believe there should be a presumption against Government intervention in wage and price determination, unless the circumstances involved make it necessary. If this approach were to be utilized, several alternatives are available, reflecting increasing degrees of intervention. These would include establishment of a study group to advise the President on important price and wage changes; the use of factfinding procedures, with or without the issuance of a report and recommendations; the requirements of prior notification to the Government of proposed price or wage increases in certain key industries;

the power to suspend such increases; and, finally, direct price and wage controls.

At this stage of our knowledge and experience, we believe that if such an approach were to be utilized, it should be limited to the establishment of factfinding procedures to be invoked at the discretion of the President and to result in the issuance of a report and recommendations regarding the justification and desirability of price or wage increases. In the coming year, historical developments will determine the extent to which such measures prove unavoidable.

CHAPTER 11. U.S. POSITION IN THE WORLD ECONOMY[1]

Introduction

During the past year Americans have become highly concerned about the condition of the U.S. balance of payments. Large drains of gold in 1958, followed by more losses in 1959, came as a rude shock to a people that had grown accustomed to the independence of action conferred by the "perennial dollar shortage" and had even learned to wear the burden of the implied responsibilities of such a state of grace. The fall from grace was as abrupt and unexpected as most falls from grace, and like them, has led to much soul searching. A number of explanations are currently being offered.

If agreement on a sound diagnosis of what has been happening in the balance of payments is not easily come by, there can be no doubt that a problem exists that merits the most thoughtful attention. We are now engaged in the hard but necessary task of reappraising in the light of recent developments the entire structure of American beliefs, aspirations, and governmental policies regarding the outside world. This is a good and useful thing. The world in which our previous structure of thought and action was created, and to which it had made its own workable accommodations, has changed and Americans have a lot of new thinking to do.

This chapter reviews the major aspects of this change and appraises alternative policies available to the United States in accommodating itself to this new situation.

The Postwar Behavior of the U.S. Balance of Payments

1. THE ACCOUNTING FRAMEWORK

As is true of all accounting systems, the balance of payments is an essentially arbitrary way to classify and record the results of a large collection of diverse and highly interrelated financial transactions. Although any formulation of the anatomy of the balance of payments involves as much art as science, these accounts are an indispensable beginning point for any analysis of a nation's international financial position. It is very important to keep in mind, however, that these accounts form a highly integrated whole, each aspect of which is interrelated with every other and which cannot be analyzed item by item, as if they did not affect one another. This fact weakens the validity of any conclusions which may be drawn from these data regarding causal influences upon its various elements.

The following discussion is based upon the balance-of-payments data published by the U.S. Department of Commerce. As the data are presented in greater detail than can be readily assimilated and in-

[1] Main responsibility for drafting this chapter rested with Padraic P. Frucht.

terpreted, their details have been condensed into a limited number of categories.

Table 11–1 presents these data, in seven categories, for the year from 1946 through 1958.

TABLE 11–1.—*Summary of the U.S. balance of payments, 1946–59* [1]

[Billions of dollars]

Year	Net export balance (goods and services), excluding military grants and investment income (1)	Private capital outflow balance (2)	Government foreign expenditure balance (3)	Errors and omissions (unrecorded receipts) (4)	Total net payments balance (deficit(−)) (5)	Foreign capital inflow (+) (6)	U.S. gold sales (+) (7)
1946	+7.6	−0.5	−5.8	−0.2	+1.6	−1.0	−0.6
1947	+11.1	+.8	−9.3	+.9	+1.9	+.3	−2.2
1948	+6.2	−.6	−5.6	+1.2	+1.2	+.4	−1.5
1949	+5.7	−.1	−6.3	+0.8	+ .1	+.1	−.2
Total 1947–49	+23.0	−1.5	−21.2	+2.9	+3.2	+.8	−3.9
1950	+1.1	−.5	−4.2		−3.7	+1.9	+1.7
1951	+3.5	−.1	−4.4	+.5	− .5	+.6	−.1
1952	+2.9	−.3	−4.3	+.5	−1.2	+1.6	−.4
Total 1950–52	+7.5	−.9	−12.9	+.9	−5.4	+4.1	+1.3
1953	+1.3	+.5	−4.4	+.3	−2.3	+1.1	+1.2
1954	+2.5	−.5	−3.9	+.2	−1.8	+1.5	+.3
1955	+2.7	+.1	−4.8	+.4	−1.5	+1.5	
Total 1953–55	+6.5	.0	−13.1	+.9	−5.6	+4.1	+1.5
1956	+4.4	−1.5	−5.2	+.7	−1.5	+1.8	−.3
1957	+6.4	−1.5	−5.5	+.7	+.1	+.7	−.8
1958	+3.1	−1.3	−5.7	+.4	−3.4	+1.2	+2.3
Total 1956–58	+13.9	−4.3	−16.4	+1.9	−4.9	+3.7	+1.2
Total 1946–58	+58.6	−7.2	−69.3	+6.8	−11.1	+11.6	−.5
January–June 1959	+.3	−.3	−4.1	+ .5	−3.6	+2.8	+.8

[1] Because of rounding, the numbers may not always add precisely to totals.

NOTE.—See note to table 2.

Source: Based on table 2.

Each of the categories is a net balance—the algebraic sum of all outflows and inflows—of the transactions covered by it. The first three columns represent the net recorded contributions of the American Government and its citizens to the U.S. payments position. The fourth column—errors and omissions—is an accounting balance item, to offset the net discrepancies in the recorded data so that the accounts will balance.

Column 5 expresses what is generally regarded as the overall net payments position of the United States. The remaining two columns—foreign capital inflow and U.S. gold sales—represent financial balancing items. In sum, they exactly equal the net U.S. payments balance and, in an accounting sense at least, may be regarded as the means whereby the U.S. net payment balance is financed.

The U.S. overall payments balance

This net balance of U.S. claims and payments obligations is the most useful measure of the U.S. total payments deficit or surplus. It equals the net sum of foreign capital inflow to the United States plus U.S. gold sales.

Though the total net payments balance in 1958 was the second most adverse of the postwar period, the average net deficit for the 3 years, 1956–58, was less than in two previous 3-year periods. The overall deficit had declined through the 3 years, 1953–55, largely as a result of increases in the export balance. The adverse turn of 1958 is attributable to a $3.3 billion decline in the export surplus from 1957. This decline, however, was a most natural development in the year which followed Suez.

It is well worth noting that the export surplus attained in the year 1958 was only $200 million less than its average value of $3.3 billion over the 1950–58 period. The most striking differences between the payment balances of 1958 and earlier years lie in the much higher private and public capital outflows of 1958. Not since 1949, when it was over $6 billion, had Government net foreign expenditures been so high. At $5.7 billion in 1958, this outflow, added to that of private capital ($1.3 billion), swamped the export surplus to generate a $3.4 billion deficit.

The gold drain

Though the U.S. payments were in deficit in every year from 1950 through 1956, and more heavily so in 1950 than in 1958, the gold outflow of 1958 was the largest of the postwar period. It may well be that fears of foreign currency depreciations in 1950 and fears of possible U.S. depreciation in 1958 explain these differences. It is true that the $3.4 billion net payments deficit of 1958 represented a sharp reversal from the $107 million surplus of 1957. The reversal of 1950 from the surplus of 1949 was similar in nature, but, though this earlier turn was greater, resulted in a much smaller outflow of gold. The main difference between the 2 years in the response of gold purchases from the United States has been ascribed to the fact that over 85 percent of the U.S. deficit for 1958 accrued to Europe while only 54 percent of the 1950 U.S. deficit had been against Europe in 1950. Non-European nations, by and large, have traditionally been prone to hold their foreign reserves in forms other than gold. Most European nations, on the other hand, traditionally have done so to a great extent.

Since dollars held by foreigners yield them interest, while gold reserves do not, a number of observers believe that at least a part of the large 1958 gold drain can be explained by the growth in economic strength of Europe. These countries could far better afford in 1958 to dispense with some interest earnings than they could in 1950.

Whatever explanation may be given for the large gold outflow of 1958, it cannot in any sense be termed a flight from the dollar. Not only did no trend develop toward exchanging previously earned dollars for gold, but foreign dollar holdings increased by $1.2 billion during 1958.

It seems remarkable that the U.S. monetary gold stock has not been drained a good deal more than it has in the postwar years. To a large

degree, the U.S. gold stock had been built up at the expense of the monetary gold reserves of other countries. Much of it came to the United States in response to fears created by the political instabilities of the immediately prewar and early postwar periods. In view of the fact that the bases of most of these fears are now past history, it might be expected that a general repatriation of this gold, which came to the United States for reasons that had little to do with economic balance of payments factors, would have taken place. Over the period 1946–58 taken as a whole, however, the United States had a net gold inflow of $497 million, while foreign dollar balances also rose, and sharply. The period from 1937 to 1946 had brought the United States a net gold inflow from abroad of $8.6 billion. In view of this fact, the failure of the rest of the world to attempt a withdrawal of at least a large part of this gold is somewhat surprising.

Despite the fact that recent sales of gold in themselves do not appear to justify current fears about the U.S. international position, some concern about this position is warranted. From 1950 through 1958, the United States incurred payments deficits totaling $14.3 billion. This figure calls for a careful review of the elements in U.S. balance of payments in light of the international economic context to which it has responded.

Before analyzing in detail the major developments in U.S. trade and payments, a brief review of table 11–2 will indicate which elements in the accounts have been subject to a general trend, favorable or unfavorable. The table presents 12 underlying series which make up the first 3 columns of table 11–1.

TABLE 11-2.—*Major elements within U.S. balance of payments*

[Billions of dollars]

Year	U.S. earnings on private foreign investments (1)	Foreign private earnings on investments in United States (2)	Net private earnings on foreign investment (1−2) (3)	U.S. private business capital outflow (4)	Private business capital balance (3+4) (5)	Private unilateral transfers (6)	U.S. Government net earnings on foreign investment (7)	Balance on Government military spending (8)	Government nonmilitary unilateral transfers (9)	Government capital outflow (10)	Balance on merchandise trade, excluding military grants (11)	Balance on services, excluding military and investment income (12)
1946	+0.8	−0.2	+0.6	−0.4	+0.2	−0.7	.0	−0.5	−2.2	−3.0	+6.6	+1.0
1947	+1.0	−.2	+.8	−1.0	−.2	−.7	+.1	−.5	−1.9	−7.0	+10.0	+1.1
1948	+1.2	−.3	+1.0	−.9	+.1	−.7	+.1	−.8	−3.8	−1.0	+5.6	+.5
1949	+1.3	−.3	+1.0	−.6	+.4	−.5	+.1	−.6	−5.1	−.7	+5.3	+.4
1947-49	+3.5	−.8	+2.8	−2.5	+.3	−1.9	+.3	−1.9	−10.8	−8.7	+20.9	+2.0
1950	+1.5	−.3	+1.2	−1.3	−.1	−.4	−.1	−.6	−3.6	−.2	+1.0	+.1
1951	+1.7	−.3	+1.4	−1.1	+.3	−.4	+.2	−1.3	−3.1	−.2	+2.9	+.5
1952	+1.6	−.3	+1.3	−1.2	+.1	−.4	+.1	−2.0	−2.1	−.4	+2.5	+.4
1950-52	+4.8	−.9	+3.9	−3.6	+.3	−1.2	+.2	−3.9	−8.8	−.8	+6.4	+1.0
1953	+1.7	−.4	+1.3	−.4	+.9	−.5	+.2	−2.3	−2.0	−.2	+1.3	.0
1954	+2.0	−.4	+1.6	−1.6	.0	−.5	+.2	−2.4	−1.8	+.1	+2.4	.0
1955	+2.2	−.4	+1.8	−1.2	+.6	−.4	+.2	−2.6	−2.0	−.3	+2.8	.0
1953-55	+5.9	−1.2	+4.7	−3.2	+1.5	−1.4	+.6	−7.3	−5.8	−.4	+6.5	.0
1956	+2.5	−.5	+2.0	−3.0	−1.0	−.5	.0	−2.8	−1.8	−.6	+4.5	−.1
1957	+2.7	−.5	+2.2	−3.2	−1.0	−.5	.0	−2.8	−1.8	−1.0	+6.1	+.3
1958	+2.6	−.5	+2.1	−2.8	−.7	−.5	+.2	−3.1	−1.8	−1.0	+3.3	−.2
1956-58	+7.8	−1.5	+6.3	−9.0	−2.7	−1.5	+.2	−8.7	−5.4	−2.6	+13.9	.0
1946-58	+22.8	−4.6	+18.3	−18.7	−.4	−6.7	+1.3	−22.3	−33.0	−15.5	+54.3	+4.0
January to June 1959	+1.2	−.3	+.9	−1.0	−.1	−.3	.0	−1.5	−.9	−1.8	+.4	−.1

NOTE.—Individual numbers may not always add to totals because of rounding of decimal figures.

Sources of data: 1946-56: Balance of payments, Statistical Supplement, OBE, U.S. Department of Commerce, 1958; 1957-59: Survey of Current Business, July 1959.

The export balance

For the postwar period as a whole, the U.S. export position has been very strong. The U.S. export balance averaged $4.6 billion for the 13 years and, despite the fact that this figure is strongly affected by the extraordinary surpluses of the very early postwar years, this same average level was achieved during the years 1956–58. In an accounting sense, at any rate, we cannot speak of any deterioration in U.S. export surpluses over this period. Whether or not a deterioration would have taken place in the absence of other factors in the balance of payments is a basic question calling for more detailed analysis and interpretation which is developed below.

Net governmental expenditures abroad

It takes only a cursory glance at the data to see that the major deficit item was that of governmental foreign expenditures. For the period as a whole, the U.S. Government spent abroad a net balance of over $69.3 billion, excluding another $20 billion that went into foreign military grants.[2]

Were the accounting data the whole story, virtually the whole blame for the U.S. deficits over the period could be laid at the door of government. The matter, however, is much more complex. Before the responsibility for the U.S. deficit of $11 billion incurred over the 13-year period (1946–58) can be even tentatively allocated, it is necessary to consider to what extent the export surplus of $58.6 billion resulted from the same governmental expenditure outflows.

Private capital balances

The same problem occurs when an attempt is made to assess the contribution of the total outflow of private capital over the period. Because of heavy U.S. private earnings on foreign investment—$22.8 billion—the net private business capital outflows totaled only $426 million over the 13-year period. The difference between this figure and the $7.2 billion negative private capital balance is accounted for by the very steady stream of remittances sent abroad by private citizens. Though these private unilateral transfers never ran as high as $700 million a year, they do add up to the tidy sum of $6.7 billion for the period 1946–58. (See table 11–2, p. 445.)

Errors and omissions

The errors-and-omissions figure is often regarded as an indicator of unrecorded short-term capital movements. When positive, it is assumed to mean a net inflow of capital—repatriation of American funds from abroad or flight of foreign capital into dollars. The figure might just as well represent unrecorded exports of American goods. It is evident that the figure is highly ambiguous, which creates problems about how it should be treated in the accounts. If the item is regarded as unrecorded exports of goods or services, it should be included in the overall U.S. payments balance; if it really does represent short-term capital inflows, perhaps it should not be so included. As these figures are substantial in size—totaling $6.8 billion for the 13-year period—their placement in the accounts makes a substantial difference in the

[2] Since this last item appears in exports as a plus factor and in unilateral transfers as a negative item, it does not affect the net balance payments position and has been eliminated from the tables.

overall net payments figure that is obtained. (If this item is left out when the overall U.S. payments balance is struck, the total of U.S. deficits for the period 1946–58 amounts to $17.9 billion; put in before the total is taken, this item reduces that deficit to $11.1 billion.) Following the more conventional treatment, this figure is included in the total before the net balance is taken, so that net U.S. deficits are recorded as the lower of the two figures.

It is somewhat puzzling that in every postwar year (save 1950, when it was a minus $30 million), the errors-and-omissions figures have had positive signs. On the assumption that a positive figure implies American capital repatriation and private foreign capital flight into the dollar, this evidence does not easily jibe with talk of lost confidence in U.S. currency. The recent behavior of this item is as strongly positive as it was on the average over the entire period. If anything, the trend here seems to be a rising one. It is unfortunate that it cannot be established whether this apparent trend reflects an increasing flight to the dollar during the past few years, or only a rising skimpiness in the statistical budgets of the U.S. Department of Commerce.

Net private capital flows

U.S. earnings on private foreign investments have steadily risen over the whole period, and by considerably more than foreign private earnings on investment in the United States. As a result, net U.S. private earnings on foreign investment has grown significantly. Private U.S. business net capital outflows have been growing much faster, however, and have exceeded net private earnings on foreign investment by an average of $900 million during the last 3 years of the period, 1956–58. This factor is not yet becoming of major significance, but, as there are indications that this outflow may be accelerating, it must be considered with some care.

Net Government capital outflows

Though Government earnings on its foreign loans have been consistently positive, the item is too small to affect the net payments balance very strongly; it totaled only $1.4 billion over the 13 years.

Since its low point in 1949, net governmental military spending abroad—excluding military grants—has been growing very steadily. It does not seem to have been affected by the U.S. payments position and more than equals the U.S. net deficit in many years. It was higher in the depression year of 1954 (at $2.4 billion) than in any previous postwar period and the same can be said of the $3.1 billion it reached in 1958. Of the 1958 total, $1.7 billion was spent in Europe, equaling more than half the U.S. payments deficit with Europe.

Nonmilitary governmental transfers have been the largest deficit item of the postwar period, totaling $33.1 billion over that time. However, they have been declining since 1949, and cannot therefore be regarded as having contributed to the continuance of large deficits thereafter. Indeed, it is doubtful whether these expenditures ever actually added much to the overall deficit, since, to a considerable extent, they represent the monetary value of direct shipments of supplies abroad.

Though, on the whole, Government capital outflows (foreign loans and repayments) were lower than foreign military expenditures and

Government unilateral grants, at a total of $15.4 billion for the period, they cannot be lightly regarded. These loans had declined very sharply after their high of $6.97 billion in 1947, until in 1954 they briefly reversed direction because repayments exceeded new loans. From 1954, however, these net outflows have been steadily increasing. Although their rate of increase fell sharply in 1958, these outflows nevertheless exceeded the 1957 level slightly ($966 million versus $958 million). Indications are that they are now accelerating, which suggests increased pressures on the payments balance may be expected from them unless a larger percentage of these loans is spent on dollar goods than has recently been the case. This is probably the reason for the recent shift by the U.S. Government toward tying Development Loan Fund expenditures to exports.

Turning to the movements of the series on goods and services exports, we find that the export balance on goods has held up strongly and shows—after 1949 at least—no tendency toward decline. The same cannot be said of the service balance; this has been declined very strongly over most of the period, though with major interruptions. This series was in surplus by over $1 billion in 1946, but by 1958 its net was a minus $159 million. Thanks to this decline, the payments balance is $1 billion poorer than it would be had this series maintained its 1946 level.

Summary on changes in the items in the balance of payments

This review has indicated four items which seem to be changing in a way as to increase adverse pressures on the U.S. balance of payments:

(1) Private business capital outflow,
(2) Government military expenditures abroad,
(3) Government foreign loans, and
(4) The balance on services.

These four items have been moving strongly in the adverse direction to much more than offset the apparently favorable behavior of merchandise exports, Government nonmilitary transfers, and net private earnings on foreign investment.

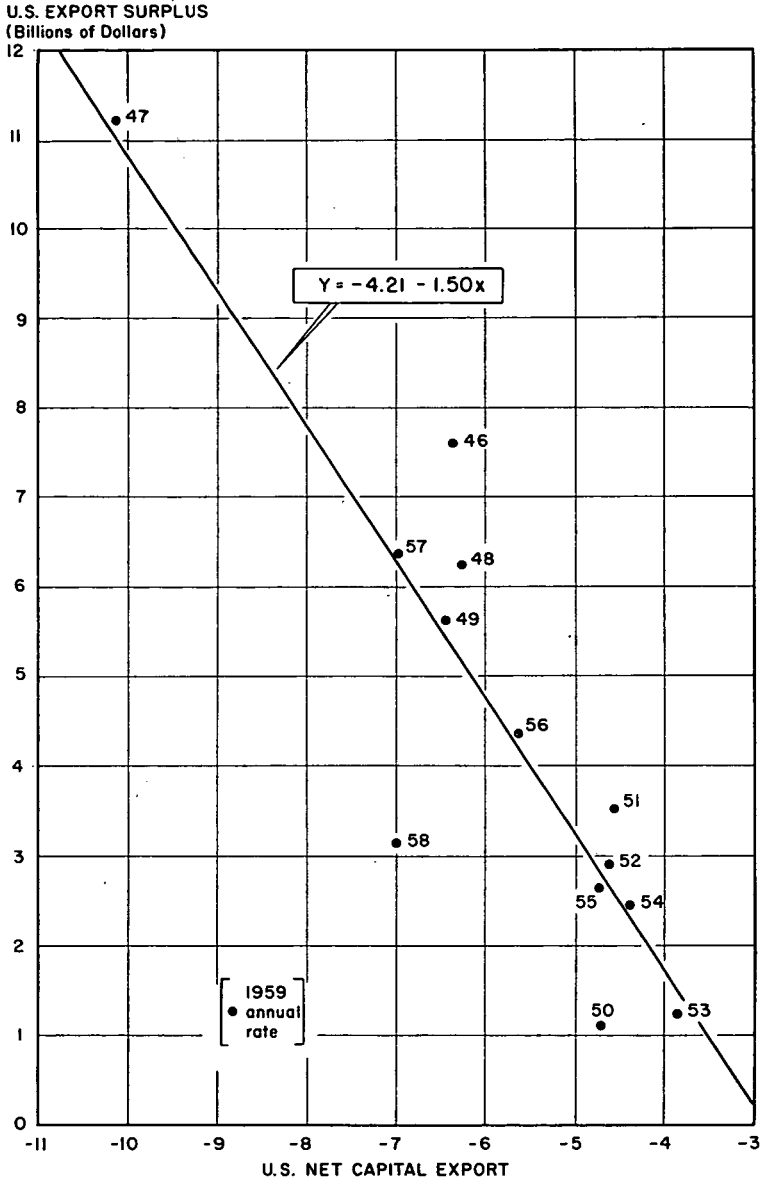
Some relationships among the items in the Balance of Payments

It would be incorrect, however, to place our main reliance on the movement of these accounting figures. The question arises as to why these individual deficit items recently have been reflected in larger payments deficits rather than in greater export surpluses. When we turn to the interrelations of these items, however, we find that from 1946 through 1957 the behavior of the sum of the private capital and Government spending balances is very closely in step with that of the export balance. In chart I these two capital outflow balances are plotted against the export balance and the general relationship between them is indicated by the line of regression.

The existence of some positive relationship between the U.S. export surplus and net U.S. capital outflows is strongly supported by a correlation coefficient of 0.89. Since for 13 pairs of items a correlation coefficient of as little as 0.70 would imply that so close a relationship could be expected to occur by chance only one time in a hundred, the coefficient obtained here is statistically significant, indicating a definite relationship.

CHART 11-1

THE RELATIONSHIP BETWEEN U.S. NET CAPITAL EXPORT AND THE U.S. TRADE SURPLUS, 1946-1958



Note: Plotted point for 1959 is at double the figures for Jan. to June 1959. It has not been included in the regression.

While the relationship between the U.S. export balance and public plus private capital outflows is statistically significant and should not be disregarded, it provides us with no proof of casuality. Inspection of the plotted points suggests that, were there enough observations available, at least two different sets of influences might be found to apply for different segments of the period.

Inspection of the chart brings out a number of interesting facts:

(1) The points for all of the years from 1946–49 lie on or above the line of regression, indicating that our export balance was more favorable than would be expected on the basis of the net additional dollars our capital exports made available to the rest of the world. Over these years the export surplus was more than 1½ times total U.S. capital outflows. In a period of heavy foreign economic demands, in which foreign countries draw on every means available to import foodstuffs, fuels, raw materials and capital goods, this behavior is as would be expected.

(2) Of the years after 1949, only 1951 lies significantly above the line. The Korean war probably explains the behavior of 1951, as it placed a serious strain on the resources of the U.S. allies. Net Government military spending abroad more than doubled from 1950 to 1951 and U.S. net service exports (mainly transportation) rose over 400 percent.

(3) The greatest departures from the regression line on the downside were in 1950 and 1958; 1950 was an unusual year in that a large number of currency depreciations were carried out during it (and the year before), and the Korean war began in 1950. These currency reforms sharply improved the balance-of-payments positions of most countries which carried them out, rendering them (temporarily) able to begin to build up substantial dollar reserves for the first time since the war.

The behavior of the points for 1958 strongly suggests that a situation analogous to that of 1950 had developed; that is, that the internal and external economic situations of most foreign countries had so strongly improved that they could step up their acquisition of foreign reserves without external strain or serious impediment to their economic development. The fact that in 1957, the year of Suez, the point is only on the regression line, rather than above it, suggests very strongly that the rest of the world had already sharply departed from the era of dollar shortage. On the basis of the evidence in the chart, the end of dollar shortage can be tentatively assigned to 1956.

(4) The data for January–June of 1959 were not used in calculating the regression, as they are not comparable to the annual data on which the calculation was based. It is suggestive, however, to note that a plot for the first 6 months of 1959 (the figures are plotted at double the amounts in the recorded data) suggests the possibility

that the factors responsible for the downward deviations of 1958 are either growing in intensity or are being buttressed by additional factors adverse to the U.S. export balance. Certainly, the behavior of recent years does not suggest that the road to higher export surpluses in the future lies in merely increasing the supply of dollars in foreign hands.

The U.S. Trade Position in the Postwar Period

1. THE OVERALL BEHAVIOR OF THE TRADE BALANCE

Extending an unbroken record of merchandise export surpluses that runs back to 1894, the balance of merchandise exports and imports from 1946–58 was consistently positive. Over this 13-year period, these surpluses totaled $54.3 billion, accounting for virtually all of the total net export balance of $58.3 billion. The remaining $4 billion was contributed by a net positive balance in service exports over imports over the period as a whole. The record of services, however, has been very spotty.

TABLE 11–3.—*U.S. exports and imports, 1946–58*

[Billions of dollars]

Years	(1) Merchandise, excluding military			(2) Services, excluding military and foreign investment income			(3) = (1+2) Merchandise and services		
	Exports	Imports	Export-import balance	Exports	Imports	Export-import balance	Exports	Imports	Export-import balance
1946	+11.707	−5.073	+6.6	+2.256	−1.213	+1.0	+13.96	−6.29	+7.6
1947	16.015	5.979	10.0	2.260	1.529	+1.1	18.28	7.51	11.1
1948	13.193	7.563	5.6	2.256	1.707	+0.5	15.45	9.27	6.2
1949	12.149	6.879	5.3	2.307	1.869	+0.4	14.46	8.75	5.7
1950	10.117	9.108	1.0	2.191	2.069	+0.1	13.31	11.18	1.1
1951	14.123	11.202	2.9	2.858	2.315	+0.5	16.98	13.52	3.5
1952	13.319	10.838	2.5	2.958	2.575	+0.4	16.28	13.41	2.9
1953	12.281	10.990	1.3	2.698	2.669	.....	14.98	13.66	1.3
1954	12.799	10.354	2.4	2.744	2.712	.....	15.54	13.07	2.5
1955	14.280	11.527	2.8	3.075	3.085	.....	17.36	14.61	2.7
1956	17.321	12.791	4.5	3.383	3.491	−0.1	20.70	16.28	4.4
1957	19.390	13.291	6.1	4.090	3.814	+0.3	23.48	17.11	6.4
1958	16.227	12.946	3.3	3.754	3.913	−0.2	19.98	16.86	3.1
Totals, 1946–58	+182.921	−128.541	+54.3	+36.830	−32.961	+4.0	+219.75	−161.50	+58.25
Annual averages:									
1946–58	+14.071	−9.888	+4.200	+2.833	−2.535	+0.300	+16.900	−12.420	+4.480
1950–58	14.428	−11.449	+3.000	+3.100	−2.730	+0.155	+17.610	−14.410	+3.100

Source: U.S. Department of Commerce: Survey of Current Business; Balance of Payments, Statistical Supplement, 1958.

Even eliminating the first 4 postwar years, during which the U.S. net merchandise export balance averaged $7 billion per year, more than 50 percent of merchandise exports, the U.S. record in merchandise trade over the period has been reasonably good. U.S. merchandise exports and imports have been growing at about the same rates since 1950. The ratio of these export surpluses to exports has shown no trend away from its 1950–58 average of 21 percent. Even in the strongly adverse circumstances of 1958, this ratio stood at 20.4 percent.

TABLE 11–4.—*Ratios of the merchandise export balances to merchandise exports, 1946–58*

Years	Ratios (percent)	Years	Ratios (percent)	Years	Ratios (percent)
1946	56.4	1951	20.5	1956	26.0
1947	62.4	1952	18.8	1957	31.5
1948	42.4	1953	10.6	1958	20.3
1949	43.6	1954	18.8		
1950	9.9	1955	19.6	1946–58 Average	29.7

NOTE.—Based on table 3.

Source: U.S. Department of Commerce: Survey of Current Business; Balance of Payments, Statistical Supplement, 1958.

Though the behavior of the ratio of the merchandise balance to exports from 1950 to 1958 shows no trend in direction, the balance has fluctuated a good deal from year to year. The ratio went to over 31 percent in 1957 and fell to about 10 percent in 1950 and 1953. This record does not suggest any tendency for the United States to be flooded with imports, at least through 1958. Furthermore, ratios of exports and imports to U.S. gross national product over the postwar years show no trend.

2. THE U.S. SHARE OF WORLD TRADE

The behavior of the U.S. share of world exports, 1950–58, followed a pattern similar to that of the U.S. merchandise export surplus. It shows no upward or downward trend, which indicates that, over this period, U.S. exports grew pretty well at the same pace as those of the rest of the world. The picture is the same for the U.S. share of world imports.

TABLE 11–5.—*U.S. exports as shares of world totals, selected years and 1950–58*

Year	World exports [1]	U.S. exports [1]	U.S. share	Year	World exports [1]	U.S. exports [1]	U.S. share
	Billions	*Billions*	*Percent*		*Billions*	*Billions*	*Percent*
1928	$33.2	$5.2	15.6	1953	$71.8	$12.3	17.1
1938	22.1	3.1	14.0	1954	75.7	12.9	17.0
1948	56.5	12.7	22.5	1955	83.5	14.3	17.1
1950	57.1	10.1	17.7	1956	92.4	17.3	18.7
1951	76.2	14.1	18.5	1957	99.6	19.3	19.4
1952	72.5	13.3	18.3	1958	94.5	16.3	17.2

[1] Exports are valued f.o.b. After 1950, U.S. shipments under military grants are not included in these data.

Source: International Financial Statistics (from a forthcoming study prepared for this committee by E. M. Bernstein).

TABLE 11–6.—*U.S. imports as shares of world totals, selected years and 1950–58*

Year	World imports [1]	U.S. imports [1]	U.S. share	Year	World imports [1]	U.S. imports [1]	U.S. share
	Billions	*Billions*	*Percent*		*Billions*	*Billions*	*Percent*
1928	$36.1	$4.4	12.2	1953	$73.4	$11.8	16.1
1938	24.9	2.2	8.8	1954	77.2	11.0	14.2
1948	63.2	8.1	12.8	1955	88.0	12.4	14.1
1950	59.7	9.6	16.1	1956	96.8	13.8	14.3
1951	81.1	11.9	14.7	1957	106.7	14.3	13.4
1952	78.8	11.7	14.8	1958	99.1	14.0	14.1

[1] Imports are valued c.i.f. After 1950, U.S. shipments under military grants are not included in world imports.

Source: International Financial Statistics (from a forthcoming study prepared for this committee by E. M. Bernstein).

This stability in the U.S. share of world trade does imply a declining position for U.S. trade relative to that of other industrialized nations. From 1951 to 1958, the shares of the other industrialized nations rose from 42.4 to 49.2 percent while the U.S. share fell, if only slightly, from 19.4 to 18.6 percent.

TABLE 11–7.—*Share of countries and groups of countries in world exports, 1951–58*

[Percent of total]

Years	Value of world exports [1] (billions of dollars)	United States [1] (percent)	United Kingdom (percent)	Germany and Japan (percent)	Remaining industrial countries (percent)	All industrial countries (minus United States)	All industrial countries (including United States)	All other countries (nonindustrial)
1951	77.2	19.4	9.6	6.4	26.4	42.4	61.8	38.2
1952	74.4	20.4	10.0	7.3	27.4	44.7	65.1	34.9
1953	75.3	21.0	9.8	7.8	26.8	44.4	65.4	34.6
1954	78.0	19.4	9.7	9.1	27.1	45.9	65.3	34.7
1955	84.8	18.4	9.7	9.8	28.1	47.6	66.0	34.0
1956	94.1	20.3	9.6	10.8	27.1	47.5	67.8	32.2
1957	101.0	20.7	9.3	11.5	27.3	48.1	68.8	31.2
1958	96.1	18.6	9.4	12.4	27.4	49.2	67.8	31.2

[1] Includes special category exports (military supplies, unidentified and undistributed for reasons of military security).

Source: U.N. Monthly Bulletin of Statistics, August 1959, pp. 96 ff. (Adapted from a forthcoming study prepared for the committee by E. M. Bernstein).

The rising share of the industrialized nations came mainly at the expense of the nonindustrialized countries of the world. While over these 8 years, world exports grew 19.7 percent, exports of the nonindustrialized group rose less than 2 percent. This widening gap between the export earnings of the industrial nations and the rest of the world is primarily due to the more rapid economic growth of the industrialized nations. In 1957, however, the terms of trade (the ratio of prices of export goods to prices of imports) turned strongly against the nonindustrialized nations as a group and have been declining since. This means that, in terms of their external purchasing power, the export earnings of the group rise more slowly than the volume of their exports. Their position is somewhat analogous to that of the American farmer.

It was very much to be expected that the period 1951–58 would show a decline in the U.S. export position vis-a-vis that of the other industrialized nations. If this improvement in their exports had not occurred, it would have meant that the enormous early postwar flood of American economic aid to those nations had been in vain. Their recovery from the ravages of World War II also provides solid economic grounds for justifying the hope that, just as the United States greatly helped them in making this impressive economic achievement, they will join the United States in attacking the more difficult economic problems of the underdeveloped countries.

3. DISTRIBUTION OF U.S. MERCHANDISE TRADE BY AREA, 1946–58

The most significant change in the area distribution of U.S. merchandise trade of the postwar period is the very large decline in the percent of U.S. exports to Europe and the even larger jump in the European share of U.S. imports. The percentage increases in European shares for the whole 12-year period are, however, far greater than for the 7 years from 1951 to 1958. If, however, we were able to add to Europe's imports from the United States the very substantial quantities of special category goods (military items, unidentified by nature or destination) it received over the period, we might find its share of our exports in recent years to be comparable to that of the first postwar years.

TABLE 11–8.—*U.S. exports and imports of merchandise, by continent, selected years, 1946–58*

Year or yearly average	Total (millions of U.S. dollars)	Percent of total						
		Northern North America	Latin America	Europe	Africa	Asia	Australia and Oceania	Undistributed
U.S. exports:								
1946–50	11,829	16.0	25.9	34.8	5.2	15.4	1.6	1.1
1951–54	15,278	18.2	22.5	22.4	3.6	13.5	1.4	18.3
1955	15,518	20.7	21.4	26.8	3.8	13.3	1.7	12.3
1956	18,987	20.9	20.5	27.1	3.4	14.1	1.2	12.7
1957	20,810	18.8	23.1	27.8	3.3	16.2	1.3	9.5
1958	17,858	19.1	24.0	26.6	3.4	14.8	1.4	11.6
U.S. imports:								
1946–50	6,659	21.5	36.5	15.2	5.6	18.7	2.5	----------
1951–54	10,693	22.2	33.6	20.0	5.6	16.1	2.5	----------
1955	11,382	23.3	31.7	21.6	5.4	16.4	1.5	----------
1956	12,590	23.0	31.3	23.5	4.7	15.8	1.6	----------
1957	12,978	22.4	31.9	24.2	4.5	15.3	1.7	----------
1958	12,788	20.9	31.5	26.0	4.4	15.5	1.6	----------

Source: Statistical Abstract of the United States, 1959.

As matters stand, in 1958, Europe still remained our best customer, purchasing at least 26.6 percent of our exports—30 percent of our identified exports. Latin America remained our next best customer, (24 percent of U.S. exports in 1958) and Canada closely followed with 19.1 percent—the largest individual customer of the United States.

U.S. trade with Asia has slightly declined in relative shares over the postwar period, but the decline in the share of U.S. exports going

to Asia considerably exceeds the reduction in the Asian share of U.S. imports. Exports to Asia fell only six-tenths of a percentage point from the 15.4 percent average over the 1946–50 period, but their share of U.S. imports fell 3.2 percentage points.

4. DISTRIBUTION OF U.S. MERCHANDISE EXPORTS BY KIND, 1946–50

The composition of U.S. exports in the postwar period has become increasingly dominated by finished manufactures, which rose from a 1946–50 average of 56 percent of total merchandise exports to 62 percent in 1958. U.S. imports of this type have grown even faster, however, as they have moved from 18 percent to 31 percent at the same time. This sharp growth in finished manufactures is largely due to the foreign car influx of the past few years. (From 1954 to 1958, our imports of machinery and vehicles rose 221 percent.)

TABLE 11–9.—*Percentage distribution of U.S. exports and imports, by kind; Averages for 1946–50, 1951–55, and selected years*

Year or yearly average	(I) Crude materials		(II) Crude foodstuffs		(III) Manufactured foodstuffs		(IV) Semimanufactures		(V) Finished manufactures	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
1946–50	14	30	8	19	10	11	11	22	56	18
1951–55	13	26	7	20	6	10	12	24	63	20
1954	13	24	5	21	6	11	12	23	65	21
1956	13	25	7	16	7	9	15	24	58	26
1958	12	22	7	15	6	12	13	21	62	31

Source: Statistical Abstract of the United States, 1959, p. 892.

Over the 12-year period, the position of some manufacturers remained largely unchanged. While our exports of manufactured foodstuffs have declined from 10 percent of U.S. exports to only 6 percent in 1958, our imports of them have held a rather steady share. The opposite is true for crude foodstuffs, in which the import share has fallen from 19 to 15 percent, though correspondingly, their share of exports has been very steady at 7 to 8 percent. Crude material imports have been substantially declining in importance (from 30 to 22 percent) with a smaller decline in share also occurring in our exports of them.

Using a more detailed classification, it is possible to obtain an instructive picture of recent changes in the pattern of U.S. commodity exports and imports. Table 11–10, which is based on a 10-fold classification of the Department of Commerce, presents the percentage and absolute changes in exports and imports in each class of commodities from 1954 to 1958.

TABLE 11–10.—*Absolute and percentage changes in U.S. commodity trade, 1954–58*

Commodity	Absolute changes (in $ millions)		Percentage changes	
	Exports	Imports	Exports	Imports
Foodstuffs and beverages	+722.6	+142.7	+48.1	+4.3
Animal and animal products, inedible	+15.4	+78.1	+6.3	+31.8
Vegetable products, inedible, except fiber and wood	+252.5	+15.5	+31.0	+2.5
Textile fibers and manufactures	−135.8	+107.0	−9.6	+13.5
Wood and paper	+105.0	+103.8	+3.0	+7.8
Nonmetallic minerals	+208.5	+932.3	+19.2	+75.6
Metals and manufactures	+336.0	+89.4	+28.1	+5.2
Machinery and vehicles	+1,210.5	+793.3	+29.9	+221.0
Chemicals and related products	+358.6	+32.8	+36.5	+13.1
Miscellaneous	+253.0	+280.1	+38.0	+77.2
Totals 1954 ($ billions)	12.3	10.2		
Totals 1958 ($ billions)	15.6	12.8		
Net changes in totals 1954–58 ($ billions)	+3.3	+2.6		
Percentage changes in totals 1954–58			27	25

Source: U.S. Department of Commerce, World Trade Information Service, "Statistical Reports."

From 1954 to 1958, our goods exports rose by 27 percent, while our imports rose only 24.8 percent. The largest export gains in percentage terms were scored by foodstuffs and beverages, miscellaneous products and vegetable products. All classes except textiles rose, though the percentage gains in wood and paper, and in animal and animal products were very small.

Very large percentage increases in imports were made in the machinery and vehicles, miscellaneous and nonmetallic minerals classes. Also, imports of animal and animal products rose a substantial 32 percent. Modest gains in imports were made in all the remaining groups.

The largest absolute gains in U.S. exports were machinery and vehicles, which rose by $1.2 billion. This, with the $723 million gain in foodstuffs and beverages, accounted for nearly two-thirds of the $3.3 billion rise in U.S. merchandise exports between the two periods. The most sizable rises in imports came in nonmetallic minerals—$932 million—and in machinery and vehicles—$793 million. The rise in imports of this last group, however, fell over $400 million short of the rise in exports from the same group.

5. CHANGES IN THE MARKET SHARES OF U.S. EXPORTS

Study of the behavior of U.S. export shares can shed a good deal of light on the question of our export price competitiveness even if a conclusive answer cannot be obtained thereby. A generally negative shift in these shares might well prove on closer analysis to be the result of factors other than U.S. export prices, such as: (1) artificial barriers imposed by governments against U.S. exports; (2) shifts in world demand away from items, within a given commodity classification,[3] in which the United States is strong to those in which it is weak; (3) lower shares of world imports for countries normally sup-

[3] This factor would reduce U.S. competitiveness, but the price differences here arise out of factors other than relative production costs and export prices, f.o.b.

plied by the United States; (4) increased availability to foreigners of supplies favored by lower transportation costs and shorter delivery times, etc. The same caveat would apply if U.S. export shares had risen. However, if the shares show a general tendency to behave differently in markets in which prices could be expected to have large effects on export shares than the shares do in other markets, in which nonprice factors have significant influences U.S. exports, such evidence would be valuable.

It should be kept in mind that the question under immediate investigation is whether or not the direct, underlying cause of the decline in U.S. exports in 1958 was a growing uncompetitiveness in U.S. exports. This thesis has been widely held to be self-evident on the basis of the behavior of the U.S. goods and services export balance. But, in many markets, extreme discriminations are placed against American goods—restrictions that in many cases could not be surmounted even if the U.S. goods were sold abroad at a fraction of their domestic prices. If U.S. exports are being held down relative to U.S. imports for such reasons as this, a decline in our export balance has different policy implications than otherwise.

In examining the behavior of U.S. export market shares for what they can tell us about U.S. competitiveness, it obviously is desirable to eliminate from direct consideration that part of the data most likely to be affected by discrimination. The industrialized nations as a group exercise far more dollar discrimination than do the nonindustrial nations. This distorting factor can be minimized, therefore, by concentrating our attention upon the behavior of U.S. market shares in the nonindustrialized markets. In most of these markets, we compete directly with the other industrialized nations for buyers whose lean economic circumstances make price important.

Before turning to the data, the analyst (and his critic) should decide what degree of shift in shares is to be regarded as significant—if this is done after looking at the data, a faint doubt as to the objectivity of the decision cannot but exist.

But it cannot be argued that any decline in share whatsoever proves uncompetitiveness, for this principle can too easily backfire. Too many distorting factors remain to obscure the results. The effect of credit policies, aid, etc., also distorts this test. Assessment of this evidence is also complicated by the fact that firm estimates of the normal variability in these market shares are not available. On these grounds, it is assumed here that a general decline in the U.S. export share of more than 5 percent would be needed to support the thesis that U.S. export competitiveness has declined. The pessimist who would accept a less-than-5-percent decline in the U.S. share as an unassailable proof of lessened U.S. competitiveness should ask himself whether he is also prepared to agree that a 5-percent increase in this share proves the contrary.

The data used for this test are taken from special computations made by the International Economic Analysis Division of the Bureau of Foreign Commerce of the U.S. Department of Commerce. To obtain U.S. export shares, the Division used United Nations' data on exports from the industrialized nations—Western Europe, Japan,

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and the United States—to the world and to its major markets. The U.S. domestic market is excluded from the world market totals.[4]

The share data available permit a choice between two bases from which to view the performance of 1958: an average of market shares for three years—1954–56—and 1957. As a base, this 3-year average has great advantages over 1957: it reduces variations in the comparative shares due to the operation of factors of purely temporary nature, which distort the outcome as they do not bear on competitiveness as such. Because of Suez, comparisons between 1958 and 1957 would particularly be subject to such biases. The analysis, accordingly, is carried out in terms of comparisons between the 1954–56 average and 1958.

TABLE 11–11.—*The U.S. share of totals of exports from the United States, Western Europe, and Japan to the nonindustrialized nations, 1954–56 and 1958*

Product	Total exports from U.S., Japan, and OEEC ($ millions)		Total U.S. exports ($ millions)		U.S. percent of total exports	
	1954–56 (average)	1958	1954–56 (average)	1958	1954–56 (average)	1958
(1) Total exports	17,384	20,097	5,912	6,704	34.0	33.4
(2) Nonmanufacturing	3,429	3,642	1,658	1,830	48.4	50.3
(3) Manufacturings	13,955	16,455	4,254	4,874	30.5	29.6
(4) Chemicals	1,489	1,794	554	621	37.2	34.6
(5) Machinery and transportation	6,054	7,890	2,283	2,808	37.7	35.6
(6) All other manufacturings	6,412	6,771	1,418	1,445	22.1	21.4

Source: U.S. Department of Commerce tabulations of U. N. data.

The above table tells the story very simply: the U.S. share of the total exports from the industrial nations to the nonindustrialized fell from a 34 percent average to 33.3 percent. The total exports to the nonindustrialized grew from a $17.4 billion base period average to $20.1 billion in 1958, or 15½ percent.[5] At the same time, the value of U.S. exports to this market rose from $5.9 billion to $6.7 billion, or 12 percent.

The behavior of U.S. export shares in these markets shows a good deal of variation when the total share is broken down into its parts. U.S. exports of nonmanufactured goods rose in share from 48.4 percent to 50.3 percent, while that of manufactures as a group fell from 30.5 percent to 29.6 percent—almost a 3-percent decline in the level of the U.S. base year share.

[4] These Commerce tabulations represent a significant advance in the development of international trade statistics by the U.S. Government. The great value of these data is that they make possible a direct comparison of U.S. market performance with those of other nations. This is not possible now on the basis of U.S. data and, unfortunately, publication of the underlying series behind these computations often is so delayed as to be of little current value. If such data were regularly received, processed on electronic equipment, and published as soon as available, they would be of enormous value to Government officials, businessmen, and other trade analysts.

A major advantage of these data is their exclusion, wherever Commerce statisticians found it possible to do so, of "special category items." These items, which may run as high as 10 percent of the total value of U.S. exports, are little responsive to commercial forces. Their omission increases the relevance of the data to the question at hand.

[5] Nonindustrial countries included in the tabulation are: Latin American Republics, Africa, Near East, Far East, excluding Japan, Australia, and New Zealand. Summary commodity totals include certain shipments not reported in finer detail by destination; also, consistency is slightly impaired by rounding and other minor statistical discrepancies.

The Commerce data break down the total of manufactured exports into three broad classes: chemicals, machinery and transport, and all other manufactures. These categories are then further separated into finer classes.

The decline in the U.S. share of manufactured exports carried through its three major categories. The largest decline occurred in chemicals, being 2.6 points in the share of the total and 6.9 percent of its level in the base period. The share decline in machinery and transport was 2.1 points, of 5.6 percent of its earlier level, and that of all other manufactures was 0.7 point, or 3.2 percent of what it was in 1954–56. The fact that these percentage declines all exceed that for manufactures as a whole is a strong indication of the significance of a qualification stated above: a total share may behave differently than the shares of its component parts.[6] The caveat, of course, applies at all levels of disaggregation.

Offsetting in part the declining export shares of five of the chemical classes were rises which occurred in the inorganic chemical export share and in the share of miscellaneous chemicals. The latter class, with the second largest total exports of the group, contains a great variety of chemicals, including such items as coal derivatives, dyeing and tanning materials, cosmetics, soaps, and explosives. The share decline with the greatest impact came in pharmaceuticals. Here, because of its leading position in total U.S. chemical exports, a decline of only 3.8 points in its base period share meant a larger negative impact on the total chemical share than the 8.8-point decline in the share of organic chemicals.

TABLE 11–12.—*U.S. share of total chemical exports by Western Europe, the United States, and Japan to the nonindustrialized nations—1954–56 and 1958*

	U.S. percentage shares	
	1954–56	1958
All chemicals	37.2	34.6
Inorganic chemicals	30.9	35.9
Organic chemicals	39.3	30.5
Pigments and paints	43.0	38.4
Pharmaceuticals	45.4	41.6
Manufactured fertilizers	27.3	24.2
Selected other chemicals [1]	23.1	24.1
Miscellaneous chemicals	41.2	37.0

[1] Includes mineral tar, crude chemicals from coal, dyeing and tanning materials, essential oils, cosmetics, soaps, and related preparations, and explosives.

Source: Department of Commerce tabulations of U.N. data.

[6] The decline in the shares of U.S. exports of manufacturers was partly offset by a rise in its share in nonmanufactured exports.

TABLE 11–13.—*U.S. share of total machinery and transport exports by Western Europe, the United States, and Japan to the nonindustrialized nations—1954–56 and 1958*

	U.S. percentage shares	
	1954–56	1958
Machinery and transport equipment, total	37.7	35.6
Power generating machinery	25.2	26.5
Agricultural machinery	56.0	50.6
Tractors	61.0	51.7
Office machinery	40.8	34.1
Metal working machinery	31.0	40.7
Industrial machinery, other	42.6	43.5
Electric machinery and appliances	25.9	27.4
Railway vehicles	24.5	39.6
Road motor vehicles	45.7	36.6
Aircraft	44.9	37.0
Transportation equipment, other	13.6	11.5

Source: U.S. Department of Commerce tabulations of U.N. data.

The pattern of changes in the export shares of the individual classes in the machinery and transportation category was mixed. Five classes gained in shares; six declined. Industrial machinery (other), the largest export class, gained slightly in share, while road motor vehicles, the second largest export class fell sharply—by 9.1 points or almost 20 percent of its previous level.

TABLE 11–14.—*U.S. share of total miscellaneous manufactures exports by Western Europe, the United States, and Japan to the nonindustrialized nations—1954–56 and 1958*

	U.S. percentage shares	
	1954–56	1958
Miscellaneous manufactures, total [1]	22.1	21.4
Rubber manufactures	36.8	32.1
Paper and paper manufactures	28.7	29.0
Cotton fabrics	17.6	15.9
Fabrics, other	14.1	10.1
Textile yarn and manufactures, excluding clothing	13.3	16.4
Iron and steel	20.2	18.2
Copper	29.7	22.5
Nonferrous base metals, other	13.8	15.6
Metal manufactures, excluding ordnance	19.7	21.4
Scientific and other instruments	30.5	31.5

[1] Includes items not shown separately.

Source: U.S. Department of Commerce tabulations of U.N. data.

In the miscellaneous manufactures category, five classes gained in export share and five declined. The largest percentage decline came in copper exports, of negligible weight in the total. A decline of 2 points (20.2 to 18.2 percent) in the share of iron and steel exports, however, was more costly, as it had much the largest total weight in the group.

While the U.S. export share of cotton fabrics fell slightly, the decline in exports of other fabrics was greater. These declines were not of great consequence, however, as total exports of these goods to the

nonindustrialized nations were small in 1954–56 and fell further by 1958.

On the basis of this evidence, it would not be easy to assert with much confidence that the United States is pricing its goods out of the world market. Had the U.S. share in exports to the nonindustrialized nations held at 30.5 percent, only an estimated $129 million would have been added to total U.S. exports of $6,704 million to those markets. An alternative estimate prepared by the Department of Commerce on a sampling of 45 groups of commodities in the same markets showed that maintenance of the U.S. export shares would have added about $280 million to U.S. exports.

As has been already noted, changes in exports cannot be a decisive test of price competitiveness by itself, even if the percentage changes are large. In this case, the changes are so small that it would be altogether unreasonable to assume from this evidence alone that any significant change in overall U.S. competitiveness has occurred.

This evidence on U.S. export shares seems all the more impressive when it is remembered that the period under review witnessed a very rapid rise in the availability of supplies of competing export goods from newly recovered, industrialized economies. In view of this evidence, therefore, the charge of "uncompetitiveness" cannot be regarded as substantiated, as is also true, of course, of its opposite.

Wage-Price Comparisons

If our evidence on the U.S. export share in nonindustrialized markets appears inconsistent with the "pricing ourselves out of the world market" thesis, it would be wise also to consider the available evidence on relative price developments among the industrialized nations. If the record shows that U.S. prices have moved significantly out of line from those of its major competitors, the share evidence would have to be discounted. On the other hand, if this evidence fails to show clearly that U.S. prices had risen more sharply from 1954–56 to 1958, than those of its rivals, the negative implications of the evidence on U.S. export shares for the "uncompetitiveness" thesis are reinforced. For this purpose, price and wage indexes for five of the leading members of this competing group were examined for comparison with series for the United States.

Much has been made of the supposed "fact" that relatively excessive U.S. wage increases have been responsible for the U.S. balance-of-payments problem. In some instances, this may well be a valid basis for explaining adverse trade shifts in *particular* products, but such evidence could hardly establish generally a thesis to the effect that U.S. wage increases have forced American product prices out of line with European prices.

Comparative hourly earnings could not be expected to tell very much about "competitiveness" because they leave too much out of account:

(1) They don't take account of fringe benefits to wage earners, which are very large parts of labor incomes in most industrial countries. As a result, variations in the combination of fringe benefits and money wages among countries and industries create distortions in the analysis of the implications of comparative money wage data.

(2) This data, even if it could be perfectly adjusted for fringe benefits, takes little account of changes in productivity.

(3) Unless hourly earnings data are specifically drawn from export industries, their relative movements may tell us little of value about comparative export strength.

It is just for the record, then, that the following table of changes in hourly earnings is presented. The most interesting fact about the table is its well-nigh perfect inconsistency with so much that has been said about general U.S. wage levels versus those of Europe. The only cases shown of faster moving wages in the United States occurred during or prior to 1955. But these data prove little except the trivial point that increases in general U.S. wage levels per se cannot reasonably be blamed for U.S. balance-of-payments problems.

TABLE 11–15.—*Percentage changes in hourly earnings in the United States and 5 European countries, 1950–58*

	1953/1950	1955/1953	1958/1955	1958/1953	1958/1950
United States (manufacturing)	+21	+6	+13	+20	+46
United Kingdom (manufacturing)	+25	+15	+19	+37	+71
Germany (manufacturing and building)	+29	+9	+28	+39	+80
France (manufacturing)	+53	+14	+31	+50	+129
Italy (industry and building)	+18	+9	+16	+26	+48
Belgium (not specified)	(1)	+5	+25	+31	(1)

[1] Not available.

Source: Percentages calculated from hourly wage data published in General Statistics, OEEC Statistical Bulletin No. 5, September 1959.

Somewhat more relevant data are presented for the same nations. In order to eliminate the fringe benefit problem and to allow for productivity factors, indexes of unit industry wage costs are given for each country. Ratios have been taken of these price indexes for 1958 to those of the averages for 1954 through 1956. To take direct account of the prices of exports, similar ratios are given for indexes of the value of total exports. Ratios reflecting changes in wholsesale and consumer prices are also given on the same basis.

TABLE 11–16.—*Ratios of 1958 indexes of percent increases in wages and prices to average indexes for 1954–56*

	Wage costs for industry [1]	Average value of total exports [2]	Consumer prices [2]	Wholesale prices [2]
Belgium	107.4	101.0	105.9	100.7
France	108.9	121.5	120.3	121.1
West Germany	107.8	104.8	107.5	105.3
Italy	97.9	104.0	111.4	100.7
United Kingdom	117.8	107.2	111.5	107.7
United States [3]	103.0	105.3	107.1	106.6

[1] UN "Economic Survey of Europe," 1958.
[2] OEEC Statistical Bulletins, "General Statistics," May 1959.
[3] Data from computations by Charles W. Schultze to be published by the Committee for Economic Development, Washington, D.C.

The behavior of these ratios shows how tricky it is to look at one kind of price data, for the picture changes from one column to the next. The unit wage cost indexes place the United States in the second lowest position of the group. Of the five European countries, only in Italy, a land which carries an oppressive burden of unemployment, did unit wage costs rise more slowly than those of the United States. Of course, data of this sort are subject to hosts of qualifications of both a statistical and a conceptual nature. There must always be grave doubt as to their comparability—that is, the question of whether the data all refer to the same sort of thing. There is a real question as to whether "unit wage costs" could ever possibly have meaning. If such indexes are composed of items that are similar, however, analysis of their movements over time is less subject to such reservations. The fact that most of the data has been gathered by one agency, OEEC,[7] suggests that the data are obtained according to relatively uniform procedures, removing a major question mark.

The data on average value of exports puts the U.S. increase fourth from the top, though only a shade higher than West Germany. Nothing here would suggest any significant problem for U.S. exports. Though such indexes often do understate the extent of price increases, there is no reason to assume that such biases run only in favor of the United States.

In comparative consumer price movements the United States makes its best showings. Of the five European nations only Belgium had a better record, though West Germany was not far ahead of the United States. But the U.S. standing in its wholesale price indexes is not nearly as good as in consumer prices. Belgium, Italy, and West Germany had better records, both Belgium and Italy having achieved almost perfect constancy in their wholesale prices—at least for the time-periods compared. The showing of West Germany is, as in the unit value of its exports, only slightly better than that of the United States.

This review of the four indexes cannot be termed conclusive, but it does present data that are considered, and is, relevant for the question at hand. The five European nations concerned include the three largest industrial competitors of the United States. The total value of U.S. exports in 1958 was less than two-thirds of the exports of these five countries.

It still remains a possibility that U.S. balance-of-payments difficulties are due to weakened export competitiveness, but, if so, the fact is not obvious. The analysis thus far has looked into the literal aspects of the question. After some inquiry into other facets of the balance-of-payments problem, the matter of U.S. "competitiveness" will be given a second look.

THE SPECIAL CASE OF STEEL

It is evident that, so long as prices within an economy are free to shift position within the price structure, the export market shares of individual products can improve or decline regardless of the nature

[7] The Organization for European Economic Cooperation was founded in 1948 to work toward the coordination of economic policies among the European nations, 17 of which are members.

of general movements in prices within and among nations. This may hold regardless of changes in real income and employment also.

Comparative price data for steel for a number of major steel producing countries suggests forcefully that, in this instance, prices could hardly be competitive abroad unless price discrimination were resorted to by U.S. exporters. Of course, this data may yield a distorted picture of the prices ruling in actual sales. Where list or posted prices are used as the basis for price indexes, the behavior of these indexes may deviate greatly from the actual basis of the prices.

Nevertheless, the behavior over time of an index provides a much more accurate picture of the trend than of where actual prices are at any point in time. Thanks to OEEC, steel price indexes are available for the United States and the four major European steel producers.

TABLE 11–17.—*Wholesale prices of steel: 5 countries, 1950–58*

[1953=100]

Country	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Belgium	78	155	138	100	93	112	121	130	104	97
France	60	78	96	100	98	99	107	112	105	101
Germany	57	70	96	100	96	98	100	105	109	109
United Kingdom	66	74	96	100	100	102	103	121		
United States	76	80	82	100	104	108	125	128	134	136

Source: OEEC; Statistical Bulletins, General Statistics, No. 4, July 1959.

It would be difficult to draw any conclusion from these data other than one of excessive price rises relative to those of these European steel producing nations. Previous data indicated no general tendency for U.S. export or wholesale prices to depart from those of its European competitors.

The behavior of the U.S. export share in steel is about what one would expect on the basis of the above data: while the total U.S. share in world exports dropped from 31.9 percent for 1954–56 to 29.8 percent in 1958, the share of iron and steel fell from 20 to 15.1 percent.

The share of iron and steel exports performed much better in the nonindustrialized markets than in markets closer to their competitors. The iron and steel share fell only from 20.2 to 18.2 percent, a 10-percent decline in the position as compared with the 25-percent cut in the world market as a whole. Of course, the 10-percent drops in share is five times that of the total U.S. export share in these markets, but the discrepancy is far less than the share of world totals would suggest.

THE FINANCIAL STRUCTURE OF U.S. PRIVATE FOREIGN INVESTMENT, 1946–58

The anatomy of U.S. net private capital outflows presented below shows a large jump in 1956. This increase was almost matched in rate by direct investment, though the rise in portfolio investments was faster, as was the growth in net short-term foreign balances. The flow of direct investment held up through 1957, but fell sharply in 1958, though total private capital outflows fell only slightly.

TABLE 11–18.—*U.S. net private capital outflow, 1946–58*

[Million dollars]

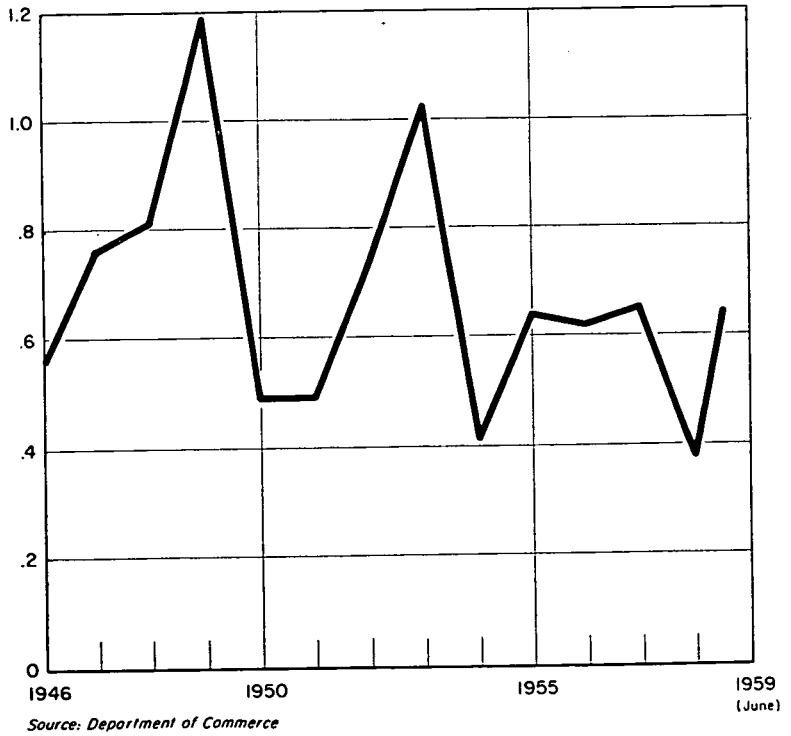
Year	Total	Direct investment, net	New security issues	Redemption of old issues	Other long-term, net	Short-term-net	Ratio of direct investment to total private investment
1946	413	230	85	−308	96	310	0.56
1947	987	749	396	−295	−52	189	.76
1948	906	721	150	−62	−19	116	.81
1949	553	660	118	−103	65	−187	1.19
1950	1,265	621	254	−301	542	149	.49
1951	1,068	528	491	−113	59	103	.49
1952	1,158	850	286	−66	−6	94	.73
1953	369	721	270	−139	−316	−167	1.02
1954	1,619	664	309	−124	135	635	.41
1955	1,211	779	128	−190	303	191	.64
1956	2,990	1,859	453	−174	324	563	.62
1957	3,175	2,058	597	−179	441	624	.65
1958	2,844	1,094	955	−85	574	341	.38

NOTE.—Absolute data taken from forthcoming study by E. M. Bernstein.

Source: Balance of Payments, Statistical Supplement, and Survey of Current Business.

CHART 11–2

RATIO OF DIRECT U.S. PRIVATE INVESTMENT TO TOTAL U.S. PRIVATE INVESTMENT, 1946-1959



Source: Department of Commerce

The proportion of direct to total private investment is a matter of some consequence for the U.S. balance-of-payments position. Direct investments by American business firms usually are accompanied by American capital goods, the proportion depending upon the nature of the project and its location. The building of an oil refinery in Venezuela would mean considerable accompanying exports of capital equipment, though establishment of a similar plant in Europe might involve a great deal less exports, since more of the needed equipment would be obtained on the spot.

Changes in the proportion of direct to private foreign investment mean changes in the net payments situation of the Nation. When capital outflows are matched by exports, no payments problem, at the time at least, is generated. As the ratio of induced exports to capital outflows falls, however, extra dollar claims pile up in the hands of foreigners. If the flood of dollars abroad exceeds what is desired for liquidity purposes and exceeds what would-be foreign importers from the United States are willing or able to pay for in their own currencies, a problem can easily be created through no fault of the U.S. domestic economy.

TABLE 11–19.—*Total of U.S. private investment, direct investment, and ratios of direct to total investment by groups of years, 1946–1958*

[Monetary figures in billions]

Period	Total U.S. private investment	Direct foreign investment	Ratio of direct investment to total
1946–49	$2.84	$2.36	0.83
1950–53	3.86	2.72	.70
1954–58	11.83	6.43	.54

The table above shows that the share of direct investment in total foreign investment has fluctuated sharply over the postwar period. Twice it went over 100 percent, as redemptions of long-term portfolio investments and repatriations of short-term foreign balances to the United States reduced net total investments by more than other positive net outflows. As the ratios fluctuated a good deal over the 13-year period covered in the table, no trend in them is apparent. But, if the period is broken up into three parts the evidence suggests such a tendency as does chart 11–2, or at least shows that in recent years the outflow of private capital has probably put greater strains upon the balance of payments than it did previously because of the fall in the proportion attributable to direct investment.

U.S. FOREIGN INVESTMENT IN THE POSTWAR PERIOD

Despite the fact that the U.S. net private business capital outflows were very small on net balance over the postwar period ($426 million, 1946–58), business capital outflows totaled $18.5 billion. These outflows, which were almost entirely offset by net U.S. private earnings

on foreign investment, now are threatening to surpass these offsets at an accelerating pace. From the balance-of-payments point of view the dual for supremacy between the outflow seeking profits abroad and the inflows of those profits would be fascinating were the race not so crucial. To the extent that homecoming profits fall behind these capital outflows, added strains are put on an already topheavy balance-of-payments condition.

For the period 1946–58, the great majority of private U.S. investments took the form of direct investment—wholly or partly U.S. owned and managed enterprises; $11.5 billion of the $18.5 billion total went into this form. Portfolio investments (purchases of foreign bonds, stocks, and other securities) netted out at only $4.5 billion for the period as a result of redemptions and other repatriations which occurred. In 1946 and 1953, U.S. foreign portfolio investment reversed altogether, giving us net inflows in this account. In recent years, this kind of investment has been gowing very fast. Canada receives the largest amounts of these funds and there is much interest in European securities.

U.S. net private short-term balances abroad grew only $2.5 billion over the period. These funds are essentially only working balances of business firms and individuals and rise as their requirements rise.

TABLE 11–20.—*Value of direct private investment of U.S. investment abroad by industry groups* [1]

[Millions of dollars]

Area	Year	Mining and smelting	Petroleum	Manufacturing	Public utilities	Trade	Agriculture and other	Total
All areas	1950	1,128	3,390	3,831	1,425	762	1,251	11,788
	1954	2,078	5,270	5,711	1,547	1,166	1,855	17,626
	1955	2,195	5,792	6,322	1,588	1,289	2,000	19,313
	1956	2,391	7,244	7,088	1,694	1,444	2,257	22,118
	1958	2,856	9,681	8,485	1,897	1,760	2,396	27,075
Canada	1950	334	418	1,897	284	240	406	3,579
	1954	792	1,152	2,592	302	358	676	5,871
	1955	862	1,329	2,834	318	384	738	6,494
	1956	938	1,752	3,186	338	426	840	7,480
	1958	1,083	2,410	3,696	364	480	896	8,929
Latin America	1950	628	1,408	780	1,042	242	635	4,735
	1954	1,001	1,689	1,240	1,120	405	789	6,244
	1955	1,022	1,779	1,366	1,132	440	817	6,608
	1956	1,090	2,227	1,515	1,192	495	889	7,408
	1958	1,327	3,005	1,740	1,175	600	883	8,730
Western Europe	1950	21	424	932	27	186	130	1,720
	1954	35	668	1,451	30	253	202	2,639
	1955	40	761	1,630	35	292	229	3,004
	1956	44	994	1,835	45	311	264	3,493
	1958	51	1,256	2,308	58	396	313	4,382
Africa, Middle East, and others	1950	145	1,140	222	72	95	80	1,753
	1954	311	1,834	428	112	164	189	2,872
	1955	300	1,924	491	103	173	216	3,207
	1956	319	2,272	553	119	210	264	3,737
	1958	291	3,010	742	278	285	303	5,034

[1] Statistical Abstracts of the United States, and Surveys of Current Business.

THE VALUE OF U.S. DIRECT FOREIGN INVESTMENTS, 1950–58

All but $2.4 billion of the $11.5 billion total of direct foreign investment outflows for the postwar period were made from 1950 to 1958. The book value of these holdings rose by $15.3 billion in those last 8 years, indicating a $6.1 billion increase in worth beyond the value of the outflows. These capital gains largely represent the plowing

back of undistributed earnings of the foreign workers and probably understate the growth in the market values of these corporate assets.

The bulk of U.S. direct investments went into petroleum and manufacturing, which accounted together for 61 percent of the value of all U.S. direct foreign investments in 1950 and grew to 67 percent in 1958. The largest gain in value, both relatively and absolutely, was in oil. It rose to $9.7 billion from $3.4 billion in 1950. Though investments in manufacturing grew enormously, from $3.8 to $8.5 billion, its ratio of growth was less than the rise in total direct investments.

Changes in the area and industrial distribution of direct investments, as we have noted, can seriously affect the degree to which such outflows induce exports of goods. The area distribution of direct investments has been changing rapidly since 1950, with Africa and the Middle East, and Europe gaining at the expense of Latin America.

TABLE 11–21.—*Percentage distribution of direct private investment of U.S. investment abroad by industry groups and areas* [1]

(Percent of total)

Area	Year	Mining and smelting	Petroleum	Manufacturing	Public utilities	Trade	Agriculture and other	Total
								Millions of dollars
All areas	1950	9.6	28.7	32.5	12.1	6.5	10.6	11,788
	1954	11.8	29.9	32.4	8.8	6.6	10.5	17,626
	1955	11.4	30.2	33.0	8.3	6.7	10.4	19,313
	1956	10.1	32.8	32.0	7.7	6.5	10.2	22,118
	1958	10.5	35.7	31.3	7.0	6.5	8.8	27,075
Canada	1950	9.3	11.7	53.0	7.9	6.7	11.3	3,579
	1954	13.5	19.6	44.1	5.1	6.1	11.5	5,871
	1955	13.3	20.6	43.8	4.9	5.9	11.4	6,494
	1956	12.5	23.4	42.6	4.5	5.7	11.2	7,480
	1958	12.1	27.0	41.4	4.0	5.4	10.0	8,929
Latin America	1950	13.3	29.8	16.5	22.0	5.1	13.4	4,735
	1954	16.0	27.0	19.8	17.9	6.5	12.6	6,244
	1955	15.6	27.1	20.8	17.3	6.7	12.5	6,608
	1956	14.7	30.0	20.4	16.1	6.7	12.0	7,408
	1958	15.2	34.4	19.9	13.4	6.9	10.1	8,730
Western Europe	1950	1.2	24.6	54.2	1.6	10.8	7.6	1,720
	1954	1.3	25.3	55.0	1.1	9.6	7.6	2,639
	1955	1.3	25.3	54.2	1.2	9.8	7.7	3,004
	1956	1.3	28.4	52.5	1.3	8.9	7.5	3,493
	1958	1.2	28.7	52.7	1.3	9.0	7.1	4,382
Africa, Middle East, and others	1950	8.3	65.0	12.7	4.1	5.4	4.6	1,753
	1954	10.8	63.8	14.9	3.9	5.7	6.6	2,872
	1955	9.3	60.0	15.3	3.2	5.4	6.7	3,207
	1956	8.5	60.8	14.8	3.2	5.6	7.1	3,737
	1958	5.8	59.8	14.7	5.5	5.7	6.0	5,034

[1] Percentages based on table 10–20.

In 1950, as in 1958, the largest and still growing share of U.S. investments in Latin America was in petroleum, though our investments in other minerals, manufacturing, and trade were growing fast also. On the whole, however, U.S. investments in Latin America have been lagging behind other areas, a fact of some significance for U.S. relations with its southern neighbors. Our Canadian investments have risen faster and now surpass in value our investments to the south. Taken together, the two areas still hold the majority of U.S. direct investments, though their share of them fell from 70 to 66 percent over the 8-year period.

TABLE 11–22.—*U.S. direct investments by areas, selected years, 1950–58*

[Money figures in billions]

	World totals	Canada		Latin American Republics		Western Europe		Africa, Middle East, etc.	
		Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
1950	$11.8	3.6	30.4	4.7	40.2	1.7	14.6	17.5	14.9
1954	17.6	5.9	33.3	6.2	35.4	2.6	15.0	2.9	16.3
1955	19.3	6.5	33.6	6.6	34.2	3.0	15.6	3.2	16.6
1956	22.1	7.5	33.8	7.4	33.5	3.5	15.8	3.7	16.9
1958	27.1	8.9	33.0	8.7	32.2	4.4	16.2	5.0	18.6

Source: U.S. Department of Commerce, Survey of Current Business.

U.S. direct investments to Europe have been rising very fast, particularly in the Common Market countries. Only in the "Africa, Middle East, etc." have these U.S. investments grown faster.

TABLE 11–23.—*Distribution and book value of U.S. direct investments in Western Europe*

[Millions of U.S. dollars]

	1950	1953	1954	1955	1956	1957	1958 [1]
Common Market countries:							
Belgium	65	108	116	134	150	156	163
France	217	304	334	376	427	457	527
Germany	204	276	293	332	429	496	574
Italy	63	95	126	157	207	233	264
Netherlands	84	125	140	162	186	213	225
Total EEC	633	908	1,009	1,161	1,399	1,555	1,753
Rest of OEEC countries:							
Denmark	32	36	39	39	45	45	52
Norway	24	37	40	43	61	62	65
Sweden	58	74	83	96	115	118	119
Switzerland	25	31	37	41	48	55	60
United Kingdom	847	1,131	1,257	1,426	1,612	1,899	2,058
Other	70	107	124	140	177	194	206
Total OEEC-EEC	1,056	1,416	1,580	1,785	2,058	2,373	2,560
Other: Spain	31	45	50	58	62	65	68
Total U.S. direct investment in Western Europe	1,720	2,369	2,639	3,004	3,520	3,993	4,382

[1] Figures for 1958 are "preliminary."

Source: Survey of Current Business, September 1958 and August 1959.

The United Kingdom had almost half of United States direct European investments in 1950, and still is close to that figure, with $2.1 billion of the $4.4 billion European total. France and Germany follow the United Kingdom, but at a very respectable distance. While not yet large in size, our investments in Italy have been rising the fastest of the OEEC countries. They rose over 300 percent in the 8 years, from $63 to $264 million. U.S. capital inflows help a good deal to explain the blooming health of the Italian balance of payments in the last few years.

As the immediate effects on the net payments position of direct and other private foreign investments are quite different, so are the longer run effects. It would appear that the two types of investment have

opposite payments effects, both in regard to each other and in terms of their short- and long-run consequences.

Direct investments tend to minimize the payments train at the time they are carried out, though not all of these investments are "requited" (offset) by induced exports. Portfolio and short-term capital outflows are not requited and put maximum strains upon the balance of payments at the time they are carried out.

Over the long pull, however, the effects of the two types of investment reverse. Assuming that both types are comparably remunerative, they both will produce incomes for their holders, some of which, in both cases, will be returned to the United States. This long-run aspect of foreign investment is highly favorable to the U.S. payments position, since it increases the demand for dollars. If there should be a tendency to keep a larger share direct investment earnings abroad for reinvestment, long-term payment benefits of earnings on direct investment would be slower than those of portfolio investments in arriving; they would make up for this later, however, as the earnings base would thereby be increased.

On the side of payments benefits from long-term income repatriation, therefore, there seems little to choose between the two types of foreign investment, though portfolio investments are more liquid than direct investments so that portfolio investments can be drawn upon more readily if required for balance-of-payments stability. This is not the whole story, however, in all cases.

Assume that at a given time an American producer can export goods to a foreign market as profitably as he can produce them in that market, or more so. If his home production costs rise—actually or relative to those in the foreign market—it may prove to his advantage to move some of his production out of the United States to the foreign country. There is no problem in this, unless the change causes an abrupt and unexpected loss of employment at home. If the total domestic market is growing fast enough so as to permit the diversion of production without major local unemployment effects, there is no reason to be concerned about this development. Even if the change causes sizable layoffs of workers, the problem may not be serious if there are adequate alterantive employments for those laid off—or even if these are lacking, if there are adequate governmental programs to help such unemployed to secure jobs, provide retraining where necessary and productive (by increasing a worker's earnings over what it would otherwise be by enough to amortize a loan at low interest over the expected working life) and, if necessary, provide help in relocation.

If, however, these direct investments occur because of discriminations abroad, such adjustments raise difficult questions of policy.

U.S. Government Foreign Expenditure Balances

The overall Government expenditure balance shown below is the sum of U.S. military expenditures abroad, economic grants, and Government net capital outflows. Since the end of the war, U.S. Gov-

ernment foreign expenditure balances have totaled $69.3 billion. As might be expected, the largest net outflows occurred in the first 4 years after the war. After 1949, these outflows decreased to a low of $3.9 billion in 1954 and then increased again, reaching, by 1958, a level of $5.7 billion (table I). This upward trend has continued through the first half of 1959.

ECONOMIC GRANTS

Economic grants primarily refer to the value of physical exports sent abroad by the United States for the relief of economic distress. These grants went mainly to Europe in the early postwar years, but in recent years they have gone primarily to the underdeveloped countries as the recovery of Europe made grants less needed there. These grants have not created much of a problem for the U.S. balance of payment because they have almost always been met by equal increases in exports.

TABLE 11–24.—*Economic grants of the U.S. Government, by regions, 1946–58*

[Million dollars]

Year	Total	Western Europe	Latin America	Other countries	International institutions
1946	2,274	382	17	347	1,528
1947	1,897	672	43	595	587
1948	3,894	2,866	18	894	116
1949	4,997	3,951	30	912	104
1950	3,484	2,775	19	601	89
1951	3,035	2,317	17	657	44
1952	1,960	1,453	22	425	60
1953	1,837	1,138	28	578	93
1954	1,647	1,018	42	525	62
1955	1,901	807	68	945	81
1956	1,733	491	83	1,067	92
1957	1,616	317	112	1,103	84
1958	1,611	316	118	1,117	60

Source: Balance of Payments Statistical Supplement (1958) and Survey of Current Business, June 1959 (Taken from a forthcoming study by E. M. Bernstein for the committee.)

GOVERNMENT NET CAPITAL OUTFLOW

Foreign loans by the U.S. Government were largest in the early postwar days. These outflows were initiated by the Marshall Plan and aimed at providing large quantities of the physical resources needed for a rebuilding of the European economies. They also were used for the financing of the newly established international institutions ($3 billion of these outflows went to them). Though these outflows became negative in 1954, they increased following that year and reached $966 million in 1958. For the first 6 months of 1959, they totaled $1.8 billion, the highest since 1947.

TABLE 11-25.—*U.S. Government net capital outflow, 1946–58*

[Million dollars]

Year	Total	Western Europe	Latin America	Other countries	International institutions
1946	3,024	2,108	45	548	323
1947	6,969	3,668	176	63	3,062
1948	1,024	1,064	−54	11	3
1949	652	566	40	26	20
1950	156	82		52	22
1951	156	−141	94	191	12
1952	420	110	65	239	6
1953	218	−154	345	29	−2
1954	−93	−202	34	76	−1
1955	310	48	51	213	−2
1956	629	50	96	450	33
1957	958	372	146	436	4
1958	966	39	471	460	−4

Source: Balance of Payments Statistical Supplement (1958) and Survey of Current Business, June 1959. (Taken from a forthcoming study by E. M. Bernstein for the committee.)

U.S. MILITARY EXPENDITURES ABROAD

ward since 1946. The proportion going to Europe has been growing trend from those of government economic grants and net capital outflows. They were, in fact very low in the early years following the war, but, because of the cold war, their trend has been moving upward since 1946. The proportion going to Europe has been growing faster than that going to other regions and is now over 50 percent.

TABLE 11–26.—*U.S. military expenditures abroad, by regions, 1946–58*

[Million dollars]

Year	Total	Western Europe	Latin America	Canada	All other countries
1946	493	16	10	31	436
1947	455	164	8	8	275
1948	799	298	34	22	445
1949	621	305	16	20	280
1950	576	168	7	26	375
1951	1,270	313	34	38	985
1952	1,957	739	29	150	1,039
1953	2,535	1,171	27	192	1,145
1954	2,603	1,455	24	194	930
1955	2,823	1,647	21	217	938
1956	2,955	1,702	29	259	965
1957	3,165	1,809	37	288	1,031
1958	3,416	1,852	49	448	1,067

Source: Balance of Payments, Statistical Supplement (1958) and Survey of Current Business, June 1959. (Taken from a forthcoming study by E. M. Bernstein for the committee.)

DEFENSE EXPENDITURES ABROAD FOR GOODS AND SERVICES BY MAJOR CATEGORY

U.S. foreign expenditures for defense include expenditures by military and civilian personnel and their families as well as purchases of services and materiel and grants to foreign countries for these purposes. In 1957–58, about one-fourth of the total U.S. defense expenditures abroad were made in the form of personal outlays of military and civilian personnel and their families.

As has been indicated, the share of Western European and these defense outlays had grown to over 50 percent by 1954 and has remained in the range of 54–58 percent of the total since that time. The most consistent increases in these expenditures have gone to Western Germany, where they have grown from $239 million in 1953 to $656 million in 1958, making Germany the largest current recipient of these outflows. In view of these very large expenditures in Western Europe, the strongly adverse U.S. payments position with these countries is not difficult to understand, particularly in view of the fact that, in the last few years, these countries have been trying very hard to increase their liquid international reserves.

TABLE 11–27.—*Defense expenditures abroad for goods and services by major category,[1] January 1953 through June 1959*

[Millions of dollars]

	1953	1954	1955	1956	1957	1958	January–June 1959
Total	2,535	2,603	2,823	2,955	3,165	3,416	[2] 1,622
Expenditures by troops, civilian personnel, post exchanges, etc	820	797	812	845	845	877	[2] 462
Foreign expenditures for construction	323	278	313	370	372	314	[2] 116
Contributions to the NATO multilateral construction program (infrastructure)	91	69	84	68	65	81	22
Other expenditures for services	444	381	411	481	630	773	[2] 410
Offshore procurement under military assistance programs [3]	326	595	640	515	372	212	96
Purchases of equipment	71	70	36	40	54	49	[2] 20
Purchases of other materials and supplies	460	413	527	636	827	1,110	[2] 496

[1] Excludes cash grants under special military programs, such as programs originally defined as direct forces support and administered by the International Cooperation Administration.
[2] Preliminary.
[3] Includes military assistance programs for offshore procurement, including Lisbon offshore procurement; the weapons production program; and the mutual weapons development program.

Source: U.S. Department of Commerce, Office of Business Economics, from information made available by operating agencies; and Survey of Current Business, November 1959.

TABLE 11–28.—*Defense expenditures abroad for goods and services by major country,[1] January 1953 through June 1959*

[Millions of dollars]

	1953	1954	1955	1956	1957	1958	January–June 1959
Total	2,535	2,603	2,823	2,955	3,165	3,416	[2] 1,622
Western Europe	1,171	1,455	1,647	1,702	1,809	1,852	[2] 911
Austria	27	26	24	4	4	5	[3]
Belgium-Luxembourg	46	33	61	45	30	55	[3]
Denmark	20	22	[4] 31	[4] 38	[4] 34	[4] 40	[3]
France	408	519	566	447	396	367	[3]
Germany	239	227	280	345	458	656	[3]
Greece	3	15	23	31	20	15	[3]
Iceland	15	18	14	15	10	13	[3]
Italy-Trieste	103	174	162	151	163	118	[3]
Netherlands	37	34	32	39	42	39	[3]
Norway	8	15	20	15	14	17	[3]
Portugal	2	4	5	10	9	8	[3]
Spain	1	5	21	57	87	92	[3]
Switzerland	39	9	12	10	9	15	[3]
Turkey	10	17	29	43	36	42	[3]
United Kingdom	210	329	362	435	488	360	[3]
Yugoslavia	1	5	4	12	4	3	[3]
Other countries	2	3	1	5	5	7	[3]
Canada	192	194	217	259	288	448	[2] 211
Latin American Republics	27	24	21	29	37	49	[2] 19
All other countries	1,145	930	938	965	1,031	1,067	[2] 481
Azores	6	8	7	9	6	11	[3]
Bahrein	29	28	26	25	46	49	[3]
Bermuda	9	7	9	13	12	14	[3]
Japan	772	574	501	490	455	414	[3]
Korea	62	44	62	37	58	88	[3]
Libya	18	9	8	8	9	11	[3]
Morocco	55	48	47	43	48	38	[3]
Netherlands Antilles	33	29	55	60	78	97	[3]
Pakistan			1	4	13	18	[3]
Philippines	42	40	50	52	59	56	[3]
Ryukyu Islands	51	47	55	61	68	61	[3]
Saudi Arabia	28	35	38	49	40	43	[3]
Taiwan	8	9	15	13	13	15	[3]
Other countries	[4] 32	[4] 52	64	101	126	152	[3]

[1] Excludes cash grants under special military programs, such as programs originally defined as direct forces support and administered by the International Cooperation Administration.
[2] Preliminary.
[3] Not available.
[4] Includes Greenland.

Source: U.S. Department of Commerce, Office of Business Economics, from information made available by operating agencies; and Survey of Current Business, November 1959.

The Impact of Inadequate International Liquidity Upon the U.S. Balance of Payments

As is well known from the experience of the early 1930's, when international illiquidity reinforced or triggered off reactions which almost demolished the world trading system—as well as by inference from studies of the effects of changes in the volume of the domestic money supply upon domestic income and employment, the volume of international means of payments undoubtedly has important influence both upon the flow of international trade and upon the attitudes and policies of governments with regard to that flow. It is a well-established proposition that a failure of the domestic money supply to increase roughly in step with increases in the volume of goods and services produced may be expected to restrict the growth of output and otherwise distort the flow of domestic economic activity. Over time, as the studies of Milton Friedman and his Chicago associates strongly suggest,[8] a stable relationship between the growth in the size of the money supply and the rate of growth in economic activity exercises a sustaining and stabilizing influence upon that growth. This does not suggest, of course, that the relationship between these variables is a simple one, but few economists will challenge the proposition that an increase in the money supply will tend to be favorable to an increase in the volume of economic activity, or that a reduction in the money supply will have opposite consequencies.

Students of the international economy reason in the same manner about the relation between the volume of international trade and the supply of international reserves. As the volume of world trade increases, a reasonable presumption exists that holdings of international reserves must increase at least as fast if an increasing number of countries are not to find themselves in balance-of-payments difficulties owing to a shortage in international liquidity. It is obvious that the lower the world total of international reserves, for a given volume of trade and level of prices, the stronger is the probability that a given country will experience balance-of-payments troubles. Thus, any tendency toward tighteners in international liquidity can be expected to produce precautionary shifts among nations in the direction of external (or internal) restrictions upon the growth of trade. Though a general move in this direction cannot but be self-defeating the level of international economic activity can be drastically curtailed in the process, because of the decline in exports of each nation. This proposition, of course, subject to major reservations and qualifications. The problem of determining the most appropriate level of international liquidity is too vast and complex to admit of any precise measurement at the present stage of knowledge about its dimensions. Following the general approach suggested by Prof. Robert Triffin of Yale, a proportional increase in international liquidity as world imports rise might be a minimum requirement for a healthy international economy.[9]

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[8] Compare pt. IV, hearings on "Employment, Growth, and Price Levels."
[9] Compare pt. 9A, hearings on "Employment, Growth, and Price Levels," pp. 2905–2954, 1959.

TABLE 11-29.—*Gold, dollars, gold plus dollars, and imports for the world, the United States, and the world minus the United States* [2]

[Millions of dollars]

End of year	World				United States				World minus United States			
	Monetary gold	Dollars	Gold plus dollars	Imports	Gold	Dollars	Gold plus dollars	Imports	Gold	Dollars	Gold plus dollars	Imports
1923	9,800	3,100	12,900	30,600	4,150	----------	----------	4,400	5,650	3,100	[1] 8,750	26,200
1938	26,000	2,415	28,415	23,600	14,590	----------	----------	2,500	11,410	2,415	[1] 13,825	21,100
1948	32,800	350	33,150	60,000	[1] 24,399	----------	----------	8,000	10,400	350	[1] 14,989	52,000
1950	34,004	8,393	42,397	59,893	22,820	----------	----------	9,601	11,184	8,393	19,577	50,290
1951	34,134	8,271	42,405	82,113	22,873	----------	----------	11,882	11,261	8,271	19,532	70,231
1952	34,276	9,864	44,140	80,699	23,252	----------	----------	11,662	11,024	9,864	20,888	69,037
1953	34,694	10,825	45,519	76,959	22,091	----------	----------	11,792	12,603	10,825	23,428	66,167
1954	35,316	11,895	47,211	80,009	21,793	----------	----------	11,047	13,523	11,895	25,418	68,962
1955	35,908	13,028	48,936	89,534	21,753	----------	----------	12,358	14,155	13,028	27,183	77,176
1956	36,554	14,590	51,144	98,846	22,058	----------	----------	13,798	14,496	14,590	29,086	85,048
1957	37,780	14,861	52,641	108,374	22,857	----------	----------	14,297	14,923	14,861	29,784	94,077
1958	38,519	15,598	54,117	100,736	20,582	----------	----------	13,986	17,937	15,598	33,535	86,750
1959-(June)	38,423	16,776	55,199	107,000	19,746	----------	----------	16,699	18,677	16,776	35,453	90,301

[1] From Economic Almanac.

[2] Excluding the international institutions.

Sources: Triffin's statement before the Joint Economic Committee, in "Employment, Growth, and Price Levels," pt. 9A, p. 2016; International Financial Statistics of I.M.F. especially for years between 1950 and 1958; World Economic Almanac's Table on Foreign Gold Reserves and Dollar Holdings, International Reserves and Liquidity (I.M.F.).

TABLE 11–30.—*Annual rates of change*

	Average annual rate of change	
	1950–58	1928–58
	Percent	*Percent*
World:		
Annual increase in monetary gold for the world	1.58	4.7
Annual increase in world holding of U.S. dollars	8.0	5.5
Annual increase in world holding of U. S. dollars and gold	3.1	4.9
Annual increase in world imports	6.7	4.0
United States:		
Annual decrease in U.S. holding of gold	−1.3	+5.5
Annual increase in U.S. imports	+4.8	3.9
World minus United States:		
Annual increase of monetary gold for world minus United States	6.1	3.9
Annual increase of gold plus dollars for world minus United States	6.9	4.6
Annual increase in world minus U.S. imports	7.2	4.1

From 1928 to 1958, the average annual increase in world imports was 4 percent. During this same period, the world supply of monetary gold rose at an average annual rate of 4.7 percent. These figures do not suggest that, for the period as a whole, there was a significant decline in international liquidity due to inadequate increases of the monetary gold stock. On the other hand, the average annual increase in world monetary gold stocks for the period 1950–58 was only 1.58 percent. At the same time, world imports were growing at an average annual rate of 6.7 percent per year. Clearly, for this part of the 30-year period, it is not possible to conclude that the contribution of the growth in the monetary gold stock to international liquidity has been even remotely adequate. Indeed, the percentage of gold stocks to total world imports almost uninterruptedly declined from 1950 to 1958. In 1950 the ratio was 57 percent, in 1958 it was 38 percent, and in June of 1959 it had fallen to 36 percent. It seems clear, therefore, that, unless drastic and senseless appreciations of gold in terms of the world's currencies are carried out, perhaps repeatedly over time, international liquidity requirements must be met to a large and perhaps growing extent in some other manner.

TABLE 11–31.—*Ratio of reserves to imports*

Years	World			United States	World (—U.S.)		
	Gold as a percent of imports	Dollars as a percent of imports	Gold and dollars as a percent of imports	Gold as a percent of imports	Gold as a percent of imports	Dollars as a percent of imports	Gold and dollars as a percent of imports
1928	32	10.0	42	94	22	12.0	33
1938	110	10.0	120	584	54	11.0	66
1948	55	.6	55	305	20	.7	29
1950	57	14.0	71	238	22	17.0	39
1951	42	10.0	52	193	16	12.0	28
1952	43	12.0	55	199	16	14.0	30
1953	45	14.0	59	187	19	17.0	36
1954	44	15.0	59	197	20	17.0	37
1955	40	15.0	55	176	18	17.0	35
1956	37	15.0	52	160	17	17.0	34
1957	35	14.0	49	160	16	16.0	32
1958	38	15.0	53	147	21	18.0	39
June 1959	36	16.0	52	118	21	19.0	39

Source: Based on table 10–24.

The traditional (and still customary) method of supplementing monetary gold stocks in order to increase international liquidity is for nations to hold currencies of other nations as part of their international reserves. During the 1920's, the gold exchange standard flourished as a device for economizing on international monetary holdings of gold. This approach meant that each country adopting it shifted from holding its monetary reserves in the form of gold to holding them in the form of foreign currencies, which were backed by gold. Thus, the pound sterling became the reserve base of the central bank of India. India replaced nonearning assets with balances investible in the London money market, receiving as security the right to shift from pounds into gold on demand.

During the postwar period, a very large part of the increase of international reserves of the free world has been in the form of the strongest currency of the period, the American dollar. From 1950 to 1958, world holdings of U.S. dollars rose at an annual rate of 8 percent, thanks to policies of this Nation which were expressly designed to bring this about. They made it possible for the rest of the world to increase its dollar holdings from $8.4 billion in 1950 to $15.6 billion in 1958. Annual increases in world holdings in dollars and gold over the period averaged 3.1 percent. As a result (excluding the United States), the percentage of world gold and dollar reserves to imports was at the same level (39 percent) in 1958 that obtained in 1950, despite an increase in world (minus the U.S.) imports from $50 to $87 billion over the period.

The fact cannot be overemphasized that this very large increase in foreign dollar claims against the United States was brought about by deliberate American policy; that this policy significantly stimulated the very rapid increase which has occurred in the real volume of world trade and incomes is indisputable. To achieve such a dramatic increase in foreign dollar holdings, of course, the United States had to provide the rest of the world with more dollars than they spent on imports from the United States. In other words, to provide world economy with the increased liquidity it had to possess to expand, it was necessary for the United States to run overall balance-of-payments deficits.

It can also be stated confidently, regarding the postwar period, that the United States fully assumed and carried out the responsibility for providing the basis, via a flood of goods and services, on which the industrial nations who were ravished by the last war could rebuild their economics rapidly and on a sound basis. At present, while carrying a disproportionate share of the burden of military defenses of the free world on its shoulders, the United States is—without apparent success—trying to get the industrialized nations of the West to join the United States in attacking in force the economic problems of the underdeveloped nations.

Until 1957 there was a general decline in the ratio of foreign gold and dollar holdings to total world (minus the United States) imports. At 39 percent in 1950, this ratio had fallen to 32 percent by 1957. It may be significant that, by 1956, the 34 percent ratio was made up in equal parts of gold and dollars, each being 17 percent of world imports. In 1957 each of these ratios fell to 16 percent. Considering that, in 1950, the percentage of foreign gold to imports for the rest of

the world was 22 percent and that foreign-held dollars were only 17 percent of imports, it is evident that a major transformation had been brought about; for the rest of the free world dollar holdings had become as important a store of liquid national wealth as their holdings in gold. To a large extent, the so-called crisis of the dollar in 1958 and 1959 is the result of a reversal of this trend, on the part of the rest of the world for increasing its dollar holdings faster than its gold holdings. In 1958, the percentage of gold imports for the rest of the world rose to 21 percent from its 16-percent level of the previous year, while the percentage of dollar holdings to imports only rose from 16 to 18 percent. This overall rise in liquidity mainly reflected an 8 percent decline in the value of world imports.

The reversal in trend of gold and dollar holdings of 1957–58 cannot be reasonably disregarded in evaluating recent U.S. balance-of-payments history. This development can be very neatly described and analyzed in terms which turn on the key currency status of the United States.

It is axiomatic that, when foreign countries increase their stock of foreign reserves, they thereby forego some of the obvious economic yields from the resources which they might otherwise have purchased with these extra reserves. If a nation undergoes a deprivation of its real income and economic growth in order to increase its foreign reserves, it can be expected to be very much concerned about the security of such an investment. Stability in the value of a key currency, therefore, is the basic consideration for its foreign holders. Any development at all tending to cast doubt upon the exchange stability of a widely held currency will create tendencies toward shifts into more secure reserves. It is a necessary consequence of the adoption of a nation's currency as a key currency that the very same virtues that create the degree of foreign confidence required of a key currency must eventually work to undermine that confidence unless the key currency fails to do its job of providing adequate liquid reserves to other nations. Because the world monetary stock of gold has not kept pace with the growth in world imports, an increasing percentage of the world's reserves came to be held in the form of dollars. But this very increase in the world foreign dollar holdings could not but make the dollar increasingly vulnerable, as the total of dollar claims began to approach the level of total U.S. gold reserves. The possibility necessarily grew that a massive move by foreigners to exchange their dollars for gold would wipe out all, or virtually all, of the U.S. monetary base. In view of the fact that the outside world held almost $16 billion in dollar claims in 1958, it is understandable that the mere arithmetical possibility of a run against the dollar would cause a good deal of international uneasiness.

These considerations introduce a possible explanation of the U.S. gold outflow which is quite independent of the question of U.S. export competitiveness. The logic underlying this thesis is strongly rooted in the practical considerations of prudent central bank management.

The U.S. export balance dropped by more than 50 percent from 1957 to 1958. This event could hardly have caused alarm in view of the extraordinary events of Suez. Because of Suez, the United States ran a net payments surplus in 1957, exporting petroleum, coal, and many other goods to Europe at rates which no reasonable person would expect to be maintained following the crisis.

Post-Suez adjustments in the American export balance were then substantially worsened by three major developments related to the 1958 recession:

(1) Europe's imports fell sharply as its capital formation slowed and unemployment rates increased. Business tried to reduce inventories, cutting imports in the process.

(2) The terms of trade had shifted strongly against the primary producing nations, reducing their ability to import.

(3) American consumers, hit by rising unemployment, departed from previous depression behavior by maintaining their spending for imports at very high rates. U.S. imports in recession year 1958 fell only a quarter of a billion dollars below those of boom 1957.

The United States managed despite these handicaps to maintain a goods and services surplus of over $3.1 billion, a surplus larger than it developed in 5 other postwar years. In 1958, the U.S. Government acted to increase the total amount of dollars available to foreigners by stepping up its net outflow of spending by $200 million. This easing of the foreign supply of liquid reserves might have been expected to improve international confidence and contribute to a revival in world trade from its recession lows. That this did not happen may well have resulted from the fact that the sum total of foreign liquid dollar claims had placed the U.S. dollar in a zone of vulnerability. Of the $3.4 billion buildup in its net foreign claims against the United States in 1958, the rest of the world, for the first time since World War II, chose to take a larger proportion of its increased claims in the form of gold rather than in dollars. There was, of course, no "flight" from the dollar or run on Fort Knox. Foreigners continued to increase their holdings of dollars. It is noteworthy that, in the first three quarters of 1959, a very substantial payments deficit for the United States has resulted largely in increased dollar holdings and only very slightly in further outflows of gold. For the first 6 months of 1959, with a payments deficit of $3.6 billion, foreigners took $2.8 billion in the form of dollars and only $496 million in the form of gold. (The official payments data show a gold outflow of about $840 million for the first two quarters of 1959, the balance being due to U.S. gold contributions to the International Monetary Fund.)

It cannot be doubted that the problem of the dollar in the last year and a half is, to a large and perhaps to the full extent, the result of the U.S. attempt through the postwar period to provide the world economy with enough physical and financial resources to support the growth in world trade required for a sound recovery of the industrial nations and a basis for viable growth in underdeveloped economies. The problem of the dollar in the last 2 years should be taken as a warning. It forcefully suggests that the time has arrived to work out a general, collective solution that will end the possibility and danger of runs on strong currencies.

The Impact of Transitory Factors Upon the U.S. Balance of Payments, 1947–58

It is always difficult to evaluate the relative contribution of transitory factors to any given payments situation because, like death and taxes, they are always present and nonrecurring elements of favorable nature develop along with ones of adverse nature. Yet, the dramatic

reversal of the U.S. payments position which occurred over the 2 years, 1957–58, should not be explained without some reference to a number of very important events and circumstances of nonrecurring nature.

The most fundamental factor operating over the period to the disadvantage of the United States was the recession which began in late 1957 and continued through 1958. Had recession in the United States not been accompanied by recession abroad, all might have been well, as the experience of 1954 indicates. But depression did strike Europe and most of the other economies of the free world, and the onset of this very general slump occurred even before the U.S. recession got underway.

In its earliest stages, the European recession which was less profound than that of the United States had little effect on U.S. exports, because Suez-inspired needs in Europe persisted beyond that point. The strains which Suez had placed upon European balances of payments, however, made it certain that these nations would move to conserve their depleted stores of foreign exchange reserves when the crisis had eased.

There can be no serious doubt but that the period following the Suez debacle would bring a reduction in the U.S. export balance. This balance in 1957 had jumped to $6.4 billion, the largest export surplus developed by the United States since the $11.1 billion surplus of 1947.

In any event, therefore, post-Suez U.S. export surpluses could only go down. But to these adverse factors was added the exceedingly adverse impact of the general world recession which followed Suez.

For many years, it has been an axiom of international economics that U.S. depressions hurt the payments position of the rest of the world more than that of the United States. This conclusion was based on the observed fact that American imports typically declined a good deal faster during recessions than U.S. exports. This pattern was not upset in the first two postwar recessions in the United States, but, was sharply reversed in that of 1958. Europe and the rest of the world cut their imports sharply, while U.S. imports fell only by $260-odd million dollars. Thus, the decline in U.S. exports of $3.6 billion swamped the meager cut in U.S. imports, creating a decline in the U.S. export surplus of $3.3 billion. Nevertheless, despite the fact that 1958 was a recession year, U.S. exports fell below the $20.7 billion reached in the prosperous year 1956 by only $720 million.

Reinforcing the adverse effects of the 1958 recession upon the U.S. balance of payments position were a number of additional factors: The U.S. economy began to recover strongly in late 1958, but European recovery lagged behind by about 6 months. The U.S. recovery increased American imports in late 1958, but, despite its mildness, the continuing slump abroad held down U.S. exports. This situation arose in part from the fact that pressures on American producers to take up the slack in domestic markets by selling more abroad were sharply reduced in the fourth quarter of 1958, while analogous pressures upon European producers were growing in intensity as persisting excess capacity brought tightening business liquidity positions.

The depression in Canada very strongly affected Canadian imports which struck hard at the United States; American exports to

Canada run at well over 70 percent of total Canadian imports, while only about 60 percent of Canada's exports come to the United States. Thus, a decline in Canadian trade has strong adverse effects on the U.S. export balance—the net adverse effect in 1958 being roughly one-half billion dollars.

Other special factors of major importance

1. Cotton exports in 1958 declined by almost $500 million from 1957, primarily as a result of policies of the U.S. Government. Having reduced the cotton export subsidy in response to the (not unreasonable) protests of American textile producers, the Federal Government also let it be known that the subsidy would probably be later increased. As a result, foreign users of cotton turned to other sources of supply.

2. The sharp decline in U.S. automobile exports in 1958 and the remarkable rise in foreign car imports to the United States was costly to the export surplus. The gasoline shortages created by the Suez crisis had made Europeans very conscious of the very high gasoline consumption to mileage ratios of American cars. This fact, together with the extremely high cost of American cars, led an economically depressed Europe to cut back sharply on its American car imports. At the same time, American tastes for small European cars grew very fast in 1958. On balance, these developments cost the United States over $400 million of its export surplus. It cannot be argued, however, that this shift represents an overpricing of U.S. automobiles in comparison with foreign cars.

The U.S. automobile has simply become too much automobile for many foreign and domestic buyers. On a pound per pound basis, however, the U.S. car is far from overpriced relative to foreign cars. With the advent of the new, small cars, there is hope that American losses in the automobile trade balance may be reduced, in the near future if not right away.

3. The shift from propeller planes to jet aircraft for commercial use cut back U.S. aircraft exports sharply in 1958. This situation is particularly transitory, however, as American jet plane producers have received very large foreign orders which will favorably affect the U.S. export balance when deliveries and payments begin to take place.

On the whole, it would seem reasonable to ascribe a large part of the 1958 cut in the U.S. export surplus to special factors of the sort discussed above. Relief from these pressures probably will not come until 1960, when, assuming an end to the steel bargaining impasse, the overall trade position of the United States should sharply improve. Whether such an improvement can offset the effects of large continuing net private and public capital outflows is another matter, however.

The Growth of Regionalism

Spurred to a fever pitch by the formation—by West Germany, France, Italy and the three Benelux countries—of the European Common Market (the Economic Community of Europe), a large number of the nations of the free world are moving very fast in the same direction. Already, less than a year after the first collective economic actions were taken by the Common Market (hereafter referred to as the "Six"),

the United Kingdom and six other European nations have signed a treaty establishing a Free Trade Area Association. In South and Central America and in Asia, nations are hastening toward similar regional associations. These developments can affect in the most fundamental ways the position of the U.S. economy, the ability of the United States to influence the conduct of international affairs, and the relations between the East and West.

Though each existing and potential regional association differs from every other in significant ways, all such organizations share at least one vital common feature: The establishment of trade preferences in favor of member countries against the rest of the world.

There are many possible ways in which a regional association may implement the principle of preferential treatment of its member countries. The approach adopted by the European Common Market was for all its members to establish identical tariffs against the outside world, while progressively, reducing their tariffs against each other, so that within 12 to 15 years, trade among the members would be perfectly free of governmental restraint and complete economic integration can be approached.

The common external tariff is expected to go into effect early in 1960. Apart from several classes of exceptions, individual rates are to be derived by an arithmetic averaging of the rates of the member nations. As a result, in a number of markets, tariffs will be increased by the imposition of the common external wall. There are also biases in the averaging procedure which makes the common tariff a good deal more restrictive than the previous individual tariff levels were.

Apart from the question of how much the level of protection may be increased for member countries, the common external tariff means a far greater barrier to trade than this implies; the development of systematic and increasing differentials between the tariffs faced by the members in selling to one another and those facing outsiders selling within the Six. The Danes, for instance, can presently compete on even terms with Germany in the French market because, however high the French tariffs may be, they are the same for both exporters.

After the common tariff goes into being, with relatively lower tariffs applying to intra-Common Market trade, this will no longer be the case. The Danes will have to compete in the French market on a less favorable basis than the Germans, and will be in the similar position in all six countries. As about one third of Danish trade has been with the Six, it is understandable that the Danes have been concerned as to what to do about their situation.

Nor is the Danish position unique. Austria in 1956 had shipped over 49 percent of its exports to the Six; Greece 48 percent, and Switzerland 39 percent. Six outside members of OEEC exported over 30 percent of their total exports to the Common Market. Even the United Kingdom had cause for great concern, as it regards the 15 percent of its total exports sold to the Six as vital to its economic health. To Americans, accustomed to very low ratios of imports and exports to their gross national product (U.S. imports in 1956 were only 3 percent of its gross national product), the possibility of losing substantial slices of their export markets due to the Common Market may not seem terribly alarming. It must be realized, however, that most of the European countries are dominated by the necessity of trading in order to exist. Denmark's imports, for instance, run at

about one-third of its entire national income, which, of course, means a much larger percentage in terms of movable goods. For Norway, the percentage is the same. Indeed, for the whole of the OEEC membership outside the Common Market, the average percentage of imports to gross national product is 28 percent.

Being confronted with the choice of either (1) joining the Common Market and abandoning the United Kingdom and the British Commonwealth, or (2) staying outside the Common Market and attempting to exert pressure upon it toward minimizing the discriminatory features of this powerful regional block, the remaining OEEC members decided on the latter course. Recognizing the relative inability of individual European nations to bargain effectively on their own for concessions from the Common Market, seven of these nations have formed a new regional association of their own—the free trade area, often referred to as "the Outer Seven." This group includes the United Kingdom, Switzerland, Sweden, Portugal, Norway, Denmark, and Austria.

Unlike the Common Market, the Outer Seven do not aim at complete integration of external commercial policies. Although they propose to reduce internal tariffs within the group at the same rate as the Common Market reduces its intermember tariffs, the free trade area treaty allows full autonomy to each member in setting its individual tariffs against the rest of the world. This system eliminates the upward bias in tariffs created by Common Market averaging procedures.

Because the tariffs of some of the Outer Seven countries are extremely low, there will be serious problems for the group as a whole arising from attempts by outsiders to export into high tariff members by shipment through low tariff members. The problem here is termed the "problem of origin." In order to deal with this problem, the Outer Seven will establish a rule of thumb according to which products moving from one member to the other must carry certificates of origin attesting to the percentage of the value of the product created or added by the exporting member country. The rule of thumb will define goods as originating within the group when more than a given percentage, expected to be 50 percent, of the value of the product is added by a member exporting the goods.

Whether or not this second major regional organization proves successful in obtaining an effective reduction in the discrimination of the Common Market against its members (succeeds in building a "bridge" between the two groups) there can be no doubt that, to the rest of the world, the free trade area means significant additional walls of exclusion. In view of the fact that net world exports into the 17 OEEC countries in 1956 ran at $40 billion in value, it is evident that the non-European nations have reason to be alarmed.

The trading position of Latin America may be seriously damaged by these European regional associations. Both associations have important affiliates among primary producing nations. These affiliates will compete on more favorable terms within the regional associations than formerly which, of course, means unaffiliated primary producing countries will compete in these markets on less favorabe terms than before. Latin America sold almost 30 percent of its exports to Western Europe in 1956. With its export earnings already suffering as a result of adverse shifts in the terms of trade, this additional threat is ominous for Latin America. In the short run, the effect

upon Latin America may not be of enormous consequence because Latin America does not face strong competition from oversea affiliates of the regional groups in many product areas, as yet, but plans currently being worked out among the Six for promoting the rapid economic development of their oversea affiliates suggest that the adverse impact of this regional association upon the position of Latin America will increase with time rather than weaken. For self-protection, Latin Americans may be able to find no more effective alternative than to attempt to increase their bargaining power and strengthen the self-sufficiency of their internal economies by forming their own common markets. It is quite probable that Common Markets will be formed in Central America and in South America within the next year or two, although a number of serious barriers must be overcome along the way to their achievement.

Discussions are currently underway in southeast Asia to explore the possibility of forming a Common Market there.

It very much appears that the multilateral world trading system, toward the improvement of which American foreign policies since the 1930's have been directed, maybe threatened by the emergence of a regionalism which means the splitting up of this trading system into a limited number of powerful economic blocs.

The formation of economic blocs could well work out to be a step toward an elimination of narrowly conceived resistances against full-scale multilateralism, if the leadership of these blocs determines to bring this outcome to fruition. This possibility flows from the undeniable fact that regionalism tends to create a centralization of foreign economic policies which often (though not always) works toward greater decisiveness and cohesiveness in the formation of external economic policy. On the other hand, there is no reason of necessity to insure that the potentially increased powers derived from the policy coordination which is implicit in regionalism, will be used to bring about an increasing liberalization of world trade once the associations are solidly established. The enhanced power to move in a liberal direction is, unfortunately, accompanied by an equally enhanced power to move in the opposite direction.

The new problems created for U.S. foreign policy by the onset of regionalism may be illustrated by the plight of Japan: Japan is a nation which must import in order to exist. Unable to meet its minimal food needs on the basis of a domestic agriculture which is already as intensive as human ingenuity can render it, and dependent upon foreign sources for most of its industrial raw materials, Japan must export manufactures in order to pay for these primary commodities. If Japan cannot look forward to selling its manufactured products in Europe (and European attitudes do not suggest that grounds for optimism exist in the matter), it obviously must concentrate its attention on markets elsewhere in which it might be able to earn the foreign reserves required for its survival. In terms of the structure of Japanese commodity exports, the industrial nations are its most logical markets. The Japanese economy is heavily oriented toward goods of a secondary and tertiary nature; i.e., the Japanese are not, relatively speaking, important producers of basic producer durables. As is the case with most newly developed economies, the Japanese are strong in consumer goods of a sort for which markets primarily exist only in countries with high real incomes. At the present time, the Japanese

are attempting to hold back on their exports to the United States, for fear that this market may also be closed down on them, and are desperately trying to find new markets in Latin America and southern Asia. Should the Japanese be unable to find sufficient outlets in free world markets, there seems little doubt but that they will be forced to come to some kind of terms with the Chinese mainland, however painful this may be to the Japanese people.

Should the Japanese be driven into trading on an increasingly large scale with Red China, the strategic balance between the East and West will be most significantly affected in the process. The possibility of an eventual economic collaboration between Red China and Japan holds frightening potentialities for southeastern Asia and India. On the other hand, these same prospects might lead the Soviet Union to develop a heightened interest in making friends with the West.

There is little doubt that, however the effects of regionalism work out, it cannot, given the nature of the economic and political forces at work in the world of today, but carry with it implications for the West in general, and for the United States in particular, of the most significant sort.

A Review and Discussion of the Findings

It will probably be years before the forces underlying the behavior of the U.S. balance of payments will be fully understood and placed in a sound perspective. Yet, as with so many other important problems, decisions must be taken in the here and now on the basis of the best available evidence. The above discussion has attempted to weigh this evidence piece by piece. The principal aspects of the problem will here be assessed briefly.

1. The gold outflow

The gold outow in itself has not been a dangerous thing and has served the very useful function of alerting Americans to the fact that the world economy has graduated into a totally new situation. If the gold outflow of 1958 is interpreted to mean that the dollar was in trouble at that time, the very low withdrawals of 1959 suggest that the problem has significantly eased.

2. U.S. export competitiveness

The U.S. export position in 1958 does not, in itself, support the contention that the United States has become less competitive internationally due to excessive increases in wages and prices. That some U.S. industries have lost ground while others have gained is evident and could not be otherwise in a changing world. Some changes in the export shares of particular commodities can be attributed to changes in taste, others to changes in technological requirements, others to relatively high prices.

The adverse shift in the domestic and foreign position of American automobiles is a fair instance of what changing tastes can do to a great and powerful industry which, perhaps for a time, became a little too blinded by its own image of the market to pay attention to what was going on in it.

Technology explains the 1958 decline in the U.S. share of the world commercial aircraft market and will explain the 1960 rise in the share which is expected. Price explains the decline in the export share of fabrics other than cotton and that of steel.

The additional lack of interest of many American businesses in foreign markets, at a time when other countries are intensively promoting their exports, has probably also hurt the American balance of payments.

3. Dollar discriminations

Discrimination against the American dollar has been noted only in passing as a factor in the U.S. payments problem. Unfortunately, there is no readily available way to measure the consequences of the existing discriminations against the dollar on U.S. exports. There is no doubt that quotas, import licensing restrictions, and bilateral deals in violation of GATT principles have all conspired to hurt American exports.

It is a fact that the United States has until recently accepted this treatment with little complaint in order to provide the rest of the world the freedom to make the best use they thought possible of the dollars it made available to them. The United States took this stand with the firm understanding, signed in the GATT treaty by the nations of Europe, that dollar discriminations and many other kinds of specific discriminations would never be used by the signers except when their balance of payments were under great strains.

Although a great many industrialized nations, which are still receiving large supplies of American dollar aid, have developed extremely strong payments positions, and have built up large gold and dollar reserves, most of these same nations have not eliminated their dollar discriminations. It is true that these measures are steadily being relaxed, but the failure to eliminate them altogether suggests very strongly that they are being used for protective purposes and that the ones still in force must be of considerable importance. It is quite possible that many of these remaining restrictions will be held in effect until other discriminating methods and mechanisms can be set in motion to take their place.

4. Private business capital outflows

Taken by itself, the net contribution of private capital investments abroad cannot reasonably be accused of causing balance of payments problems. To say this, however, requires the setting against one another of private foreign investment outflows and private earnings on foreign investment. If, at this period, U.S. business stopped investing abroad, the balance of payments deficit would be reduced to a negligible amount. However, if the fruits of past private foreign investment were also eliminated, this proposition would be vitiated. It seems a more reasonable approach to take the net of these two flows, which gives private foreign investments to date a pretty clear bill of health.

5. Government foreign expenditures

There can be no doubt that a proximate cause of the U.S. payments problem lies in the behavior of this account. This is not an easy thing to assert, because the discussion above showed that the export-inducing efficiency of U.S. governmental expenditures was very high until 1956. In part, this reduced efficiency in generating exports may have been due to a shift in the distribution in kind of these disbursements from economic grants and loan toward defense expenditures. This point would be most difficult to establish, however. It appears much more

likely that the recent failure of U.S. exports to rise in accordance with government foreign expenditures is primarily a function of the growth in the ability of many countries to afford the costs of building international financial reserves to high levels.

Up to a point, such financial reserve stockpiling has many advantages for a nation. The possession of adequate reserves to permit substantial deficits to persist until it can be determined whether the deficits are temporary in nature, or if not, how they may best be adjusted to, is valuable. When reserve building goes far beyond such levels it becomes very much open to question.

6. The problem of international liquidity

The problem of international liquidity is a source of instability in the U.S. balance-of-payments. Such instability has already been used to justify very tight monetary policies and a significant departure from multilateral principles in the case of foreign economic aid. Therefore, it is of some importance that this destabilizing factor be reduced. Further collective action is desirable to provide a firm and dependable footing for international liquidity.

7. The problem of regionalism

There are great potential problems for the United States and its allies in this change in the structure of the world economy—there are also great potential benefits to be derived. American foreign economic policy should drive to assure that the rising regional groupings will represent a move toward a freer system of world-wide multilateral trade, rather than a new and strong form of protectionism.

8. Conclusions

While the changing position of the United States in the world economy cannot yet be wholly clarified the following points seem clear.

1. We have seen deficits in every year since 1950, other than 1957—the year of Suez. This is in part a reflection of the world's desire to increase its liquidity. The recent deficits are larger by somewhat less than $2 billion than they were in 1954–56.

2. An unusual accumulation of special adverse factors contributed to this increase. Some improvement is likely soon without any policy actions, because some of the adverse factors have weakened and new favorable factors can be discerned.

3. The very large stock of international reserves and the evident continued and strengthened confidence of the world in the dollar gives us time to adjust our thinking and our policies to a changed world. These changes include the greatly enhanced economic strength of other industrialized nations, and the inauguration of major, new regional trading blocs.

There is no reason to doubt the ability of the United States to cope effectively and forcefully with these new problems.

4. There is no reason for the United States to cut back on its responsibilities to her own people and to the rest of the world. However, the United States can begin to expect the newly strengthened economies of Western Europe to add their proper shares to the resources of the West in accomplishing the tasks we face together.

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