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SOVIET ECONOMIC PERFORMANCE: 1966–67

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LETTERS OF TRANSMITTAL

MAY 29, 1968.

To the Members of the Joint Economic Committee:

Transmitted herewith for the use of the Joint Economic Committee and other Members of Congress is a study entitled "Soviet Economic Performance: 1966–67" prepared for our Subcommittee on Foreign Economic Policy. As Chairman Boggs' letter indicates, this is largely a statistical report updating earlier reports by the subcommittee on economic performance of the Soviet economy.

WILLIAM PROXMIRE,
Chairman, Joint Economic Committee.

MAY 27, 1968.

Hon. WILLIAM E. PROXMIRE,
Chairman, Joint Economic Committee.

DEAR SENATOR PROXMIRE: Transmitted herewith is a study of current economic developments in the U.S.S.R. titled "Soviet Economic Performance: 1966–67." This report, more largely statistical, is designed to supplement and update the comprehensive study published by the Joint Economic Committee in July 1966 under the title of "New Directions in the Soviet Economy."

The present study has been prepared on the basis of invited contributions by a number of specialists on the Soviet economy in various Departments of the Federal Government, academic institutions, and private research organizations. The subcommittee is indebted in this connection to the following agencies of the Government: The Department of Agriculture, the Bureau of the Census, and the Central Intelligence Agency. The subcommittee also wishes to express its appreciation of the cooperation of the State University of New York at Binghamton, Duke University at Durham, N.C., the Research Analysis Corp. of McLean, Va., and the Radio Liberty Committee of New York.

The subcommittee is especially indebted to the individual contributors who have given generously of their valuable time and best professional effort to record latest findings and to provide the necessary economic perspective on various aspects of the Soviet economy: Keith Bush, Stanley H. Cohn, Murray Feshbach, Dmitri M. Gallik, Ann S. Goodman, John P. Hardt, Jerome A. Levine, Stephen Rapawy, Ritchie H. Reed, Vladimir G. Treml.

The Legislative Reference Service of the Library of Congress has been particularly helpful in making available the services of Leon M. Herman, senior specialist in Soviet economics, who assumed responsibility for planning the scope of the present study and coordinating the required research contributions.

Sincerely,

HALE BOGGS,
Chairman, Subcommittee on Foreign Economic Policy.

SOVIET ECONOMIC PERFORMANCE: 1966–67

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SOVIET ECONOMIC PERFORMANCE: 1966–67

INTRODUCTION: THE U.S.S.R. ENTERS THE EIGHTH FIVE-YEAR PLAN

The economy of the Soviet Union has been operating within the formal guidelines of a new 5-year plan since the beginning of 1966. However, at the political level, responsibility for the formulation of national policy in the U.S.S.R. has been exercised by a new team of political leaders over a somewhat longer period of time—since October 1964. The latest 5-year plan may, therefore, be legitimately regarded as the economic program of the new leadership, represented by L. Brezhnev, the General Secretary of the Communist Party, and A. Kosygin, the Chairman of the Council of Ministers of the U.S.S.R. Formal ratification of the current 5-year plan, covering the period 1966–70, was provided by the 23d Congress of the Communist Party of the Soviet Union, at its meeting in Moscow during March–April 1966.

I. THE BURDEN OF INHERITED PROBLEMS

The economic climate in which the policy objectives and quantitative targets of the new plan were developed was unique in a number of ways. It was a climate heavily influenced by an array of troublesome economic problems left behind by the excessively ambitious 7-year plan, initiated by an overconfident Nikita Khrushchev in 1959 and brought to conclusion, after his removal from power, at the end of 1965. While there were a number of prominent areas of disappointing performance in evidence at the conclusion of the 7-year plan, the failure of the agricultural sector to come up to announced official expectations was most conspicuous. For the new leaders, it must have been a sobering exposure to economic reality to realize that the per capita output of farm products in 1965 remained at the 1958 level, and that, furthermore, in the 3-year period of 1963–65 the U.S.S.R. had to import more than $1½ billion worth of grain from non-Communist countries. The average annual growth rate in agriculture during the 7-year plan period was 1.6 percent, far below the planned yearly rate of 7.0 percent.

Apart from agriculture, there were a number of other economic problems that the new leaders inherited at the time of their accession to power. One especially serious cause for concern, from their vantage point, was the measurable slowdown in the rate of economic growth, a new phenomenon which began to manifest itself in the early years of the present decade. Thus, the gross national product, according to the Western concept, grew during the 7-year plan at an average annual rate of 5.4 percent, as compared with a planned growth rate of 7.4 percent.

Another disturbing development that could not be ignored by the Brezhnev-Kosygin team was the fact that the industries producing

consumer goods were not meeting their production targets, while purchasing power in the hands of the population was rising more rapidly than provided for by the planners. This difficulty was reflected in the fact that per capita consumption had fallen short of the target set for it by the 7-year plan, having achieved a rate of growth of 2.7 percent, as against the projected annual increase of 4.9 percent.

The plan for investment, as may be seen in table 1, also fell short of meeting its goal, showing an average yearly margin of growth of 7.5 percent, instead of the anticipated 9.0 percent.

TABLE 1.—*U.S.S.R.: Indicators of economic growth during the 7-year plan, 1959–65 (plan versus actual)* [1]

AVERAGE ANNUAL RATE OF GROWTH

[In percent]

	1959–65	
	Plan	Actual
Producing sectors:		
Gross national product	7.4	5.4
Industry [2]	8.6	7.8
Agriculture	7.0	1.6
Principal claimants:		
Consumption (per capita)	4.9	2.7
Investment (total)	9.0	7.5
Industry	(3)	9.9
Agriculture	(3)	11.3
Housing and services	(3)	4.9

[1] 1958 is the base year for the calculations.
[2] The plan indicator is for total industrial output. The indicator for actual growth is for civilian output only.
[3] Not available.

In the field of urban housing, the new leaders also inherited a record of frustrated expectations. New dwelling space built during the 7-year plan came to an average of 80 million square meters yearly, as compared to the 93 million square meters per annum promised by the plan. Moreover, the shortfall of performance, as compared with specific plan targets, was reflected more generally by incontrovertible evidence of a steady decline in the efficiency of the national economy. A variety of calculations made by both Soviet and Western economists clearly indicated that the yield on new capital investment in industry, for example, was considerably lower during the first half of the sixties than in the comparable period of the fifties. During the same period, as shown by the calculation contained in chapter I of this study, the productivity of the labor force also showed a weaker growth trend in the economy as a whole as well as in the major sectors of production.

These indicators have been generally interpreted by Soviet economists as reflecting a widespread condition of inertia and indiscipline at the level of the industrial enterprise toward such basic economic criteria as the effectiveness of the production processes in use, technological standards of manufacturing, and quality of the finished product. This condition, in turn, had been traced by the Soviet economic press to the preoccupation of plant managers with the quantitive goals of their production assignments, on which, after all, their reputation and their bonus earnings had come to depend. There was, above all, discouraging evidence of the state of affairs in regards to the efficient operation of heavy industry. The evidence

available to the economists showed that the producer goods sector was continuing to devour a growing proportion of its output (over 80 percent) for use in the process of its own expansion, thus releasing an ever smaller share of plant, equipment, and material for consumer goods production. Only 18 percent of the output of the producer goods sector was made available to the consumer goods sector of industry in 1964, as compared with 28 percent in 1950.

For the new leadership, this raised a host of serious problems, pointing to an urgent need to create a better system of incentives for managers and workers alike in order to encourage them to seek more advanced, more sophisticated, and more productive models of equipment for their operations and, ultimately, to show a higher degree of responsibility for the quality and utility of the products manufactured by their enterprise. In light of this need, the Brezhnev-Kosygin political leadership enacted a comprehensive system of economic reform measures in September-October 1965, the main thrust of which was to help improve the system of economic incentives and to make the managers relatively more independent of their superior agencies, more responsible for maintaining a profitable production operation, and better motivated to turn out high quality, salable products.

II. The Shape of New Economic Policies

Against this background of inherited economic problems the Brezhnev-Kosygin leadership has found it necessary, from the beginning of their tenure of high office, to engage in a far-ranging effort to evolve a new economic policy that would not only regain the economic momentum of the 1950's but would also promise to be more effective in enforcing their own political priorities. However, as soon as they began to cope with the task of formulating a policy reflecting their own preferences, especially in the crucial areas of resource allocation among the recognized major claimants—investment, consumption, and defense—they discovered how intricately these economic decisions were intertwined with the whole fabric of domestic and foreign policy issues. They became aware at once of the hard fact, for example, that a decision on their part to build up the military power of the country at a more rapid tempo would inevitably have a direct negative impact on the consumer, involving not only his current level of economic well-being but also the general long-range outlook for progress toward the improvement of the nation's standard of living. Similarly, it was soon brought home to the Brezhnev-Kosygin regime that by sacrificing present investment in economic growth they could indeed achieve a notable increase in military power in the near term, but not without running the very real risk of having fewer resources at their command to satisfy all claimants, including the military, in the more distant future.

The main economic policy objectives of the new leadership began to reveal their distinctive shape in the provisions of the preliminary draft of the eighth 5-year plan (1966–70), which was discussed and adopted at the 23d Party Congress meeting, in March-April 1966. The new plan, as it finally evolved, was manifestly directed toward the pursuit of the following major goals: (1) obtaining an acceleration in economic growth over the comparatively low rates of increase of annual gains of the

early 1960's by increasing productivity in the use of resources; (2) restoring domestic self-sufficiency in regard to the supply of major farm products, especially food grains; and (3) achieving conspicuous gains in the annual supply of goods and services for all principal claimants.

By itself, however, the act of formulating a set of broad economic objectives, through the medium of a new draft plan, did not advance the Soviet regime very far toward meeting the whole range of its rather urgent immediate resource requirements. The evidence is rather clear, for example, that until quite recently the political high command of the country had not made up its collective mind on priorities in the distribution of scarce resources. The vague, oracular language in which allocational policy was discussed throughout 1966 suggested that, if anything, the leadership was anxious to evade certain painful decisions by the simple device of assigning high priorities to several competing goals, including defense, economic growth, and consumption. Thus, for example, Kosygin and other leaders stated on a number of occasions that each of the following constituted "the" most important economic objective: (1) strengthening national defense, (2) raising agricultural production, (3) modernizing industry and raising its efficiency, and (4) improving the lot of the consumer.

In the course of 1967, the continued postponement of action on the adoption of the "final version" of the 1966–70 plan was accompanied by increasing overt signs of controversy, tending to support the presumption that the continued delay in action reflected some serious behind-the-scenes dispute over allocational policies. If, indeed, nearly 2 years were required to hammer out some hard-and-fast decisions about "who gets what," it helps to provide a practical illustration of how difficult it is for a collective political leadership in the Soviet Union to act promptly and effectively in cases involving the resolution of substantive issues.

Events of the more recent past, however, have brought to the foreground a body of evidence to suggest that a consensus of some sort has been reached at the level of the Soviet political high command concerning its shortrun priorities in resource allocation. Although much of the evidence is still sketchy in detail, an examination of the available data at this stage indicates the establishment of the following pattern of resource allocation for 1968, with a probable continuation into 1969–70: (1) a marked increase in outlays for military and space programs; accompanied by a measurable increase in the overall share of GNP allocated to these programs, (2) immediate and large additions to consumer money incomes, (3) a further deceleration in the growth of investment, and (4) a marked cutback in the original plan to allocate large quantities of additional resources to agriculture during 1966–70.

This pattern of distribution of economic resources appears to have gained the approval of a number of top civilian leaders, and thus reflects the required agreement within the leadership on shortrun priorities only—say, for the year 1968—without involving any commitments on longer range priorities. The very evident lack of consistency between the fragmentary data released in connection with the announced plans for 1968 and those for 1969–70 would tend to support the above assumption.

If the Soviet political leaders agreed that the rapid rise in the defense budget at the expense of economic growth should be tempo-

rary in duration, military expenditures would then be expected to come under close scrutiny again in the near future. The men in power would then once more be looking for ways and means to channel more resources into industrial investment and growth. As a matter of record, a number of recent public pronouncements concerning economic policy seem to imply continued disagreement, in particular as to the most appropriate pattern of allocating resources in the interest of expanding consumption. At least one Politburo member, First Deputy-Premier D. Polyansky, wants to support consumer welfare programs by increasing substantially the resources allocated to agriculture. At the same time, other leaders, including Kosygin, apparently feel that the current modest progress in expanding the agricultural resource base is quite adequate, and that consumer-oriented investment should be channeled more directly to the industries producing apparel, food, and consumer durable goods.

The following sections will discuss in more detail recent policy developments as they affect the outlook in regard to several major sectors of the economy—military and space, consumption, industry, agriculture—as well as the implementation of the economic reform program of the Brezhnev-Kosygin leadership. The possible impact of recent shifts in domestic economic policy on the foreign economic relations of the U.S.S.R. will also be briefly considered.

A. MILITARY AND SPACE ALLOCATIONS

The recent increase in military and space outlays has been signaled to the domestic public as well as to the outside world by the rather substantial additions, in the first instance, to the explicit defense expenditures included in the state budget. [See sec. VII of this study.] Other sizable but unidentified appropriations for defense are assumed to be provided for in lesser budgetary categories, expecially in financing "science," an element in the budget which is scheduled to be 11 per cent higher this year than in 1967. In addition, a significant increase in the production of military and space hardware is implied by the contrast between the indicated ambitious plan for total machinery output and the rather modest goal for the category of capital investment, which is the major nonmilitary consumer of machinery and equipment.

B. CONSUMER WELFARE

Until mid-1967, the consumer welfare program of the present leadership, spelled out in the directives of the 23d party congress, was pursued with conspicuous official caution. Hard and fast dates for implementing the generous, though carefully hedged, promises were avoided. In its broadest terms, the regime's original welfare policy promised (1) an increased supply of quality consumer goods—meat, milk, clothing, and durables; as well as (2) sizable additional money incomes to the population, particularly to the most disadvantaged groups—collective and state farmers, unskilled urban workers, and pensioners.

Largely as a consequence of two good crop years, consumption of goods and services in the Soviet Union expanded during 1966–67 at about twice the rate recorded during the preceding 5 years. Against this favorable background of an improved supply of food, the regime

has been emboldened to set in motion a series of wage and welfare reforms that is certain to expand substantially the flow of money to consumers. Over and above that, additional increases in incomes will accrue as a result of the general wage creep associated with rising labor productivity and the normal acceleration of welfare benefits in the form of pensions and other transfer payments. Altogether, money incomes are planned to grow 9 percent in 1968, twice the rate of 1967.

During 1966–67, large increases in these articles of food went a long way to absorb rising money incomes. For example, the annual rate of increase in milk, meat, and other livestock products averaged 9 percent during the 2-year period, which was three times the average annual rate of growth achieved during the first half of the decade. Presumably, the regime is hopeful that the forward momentum achieved in farm output during the past 2 years will be maintained and that the consumer's desire to improve the quality of his diet will thereby be satisfied.

C. AGRICULTURE

One of the predictable effects of the improved performance of the farm sector during 1966–67 was to take some of the steam out of Brezhnev's urgent and many-faceted program "to get agriculture moving again." In particular, the present regime was apparently encouraged by the fact that it was able to effect a notable increase in the output of livestock products and, at the same time, to rebuild the country's depleted grain stocks. Meat output, for example, increased by nearly one-fourth between 1965 and 1967. In addition, the authorities appear to have been able to restore strategic reserves of grain to some 20 to 25 million tons, an amount equivalent to one-half year of the country's requirements for food grains. To no one's surprise, in light of these developments, the marked improvement in the agricultural situation, especially the welcome accumulation of some reserve stocks, presented the military leaders with an irresistable temptation to press their own case for a more generous defense budget.

In order to avoid a recurrence of the grim necessity to import large quantities of wheat, faced by the nation during 1963–65, the new leaders had incorporated in the original plan directives for 1966–76 a number of generous provisions for expanding the production base of the farm sector. These called for large increases in the deliveries of farm machinery above the levels of 1961–65, as well as for a doubling of the supply of mineral fertilizer, and for the irrigation and draining of more than 20 million acres of land. In reality, however, these plans are at present conspicuously behind schedule.

Given the level of performance in 1966–67, and the lack of evidence of a major acceleration for the 3 remaining years, the growth of investment in agricultural machinery and equipment for the revised 1966–70 plan may be as much as one-third down from the level of the original plan. A concrete example of how this shortfall in investment can impinge on the resource base in agriculture is provided by the progress made to date in expanding available inventories of farm machinery. During the first 2 years of the present plan period the inventories of the major types of machinery have increased at an average annual rate of about 2.5 percent. If the present depressed tempo of growth continues over the next 3 years, then the aggregate

increase in the total inventories of machinery for the 5-year period will come to only 30 percent of the total increase in inventories originally planned for 1970.

D. INDUSTRY

The current policy of maintaining a low rate of growth in industrial investment during 1966–67, and with no evidence thus far of a substantial change for 1968, may be expected to induce a slowdown in the growth of the national stock of plant and equipment. As shown by the earlier record, when the rate of investment in new plant and equipment slackened in 1961–65, the Soviet authorities nevertheless managed to maintain a fairly steady growth (some 11 percent per year) in the stock of industrial plant and equipment. This was accomplished in the main by reducing substantially the rate of retirement of older facilities, and by stepping up the outlay on their repair instead. Although these devices had the effect of maintaining a high growth rate of the industrial plant and equipment over the short run, these are obviously stopgap measures. By now their potential for maintaining a steady growth in capital stock, under conditions of a lower growth rate in investment, has doubtless been exhausted.

In light of this series of measures, current policy with respect to maximizing industrial growth over the next year or two appears to be directed toward: (1) concentrating investment primarily on projects already under construction in order to step up the completion of new capacity, (2) drawing down on stocks of uninstalled equipment stored at construction sites, and (3) improving the utilization of existing capacity.

The first two of these three measures are "old hat" in the sense that they have been tried all too often in the past, generally without notable success. Indeed, during 1965–66 the backlog of unfinished construction and the stock of uninstalled equipment—instead of declining—actually increased at an average annual rate of about 8 percent, and there is no sign of any reversal in this regard for 1967. Efforts to insure fuller utilization of capacity have probably produced some moderately good results in the last 2 years. However, this approach—like that of reducing retirement rates—can be counted on to yield a one-time gain only.

Thus, with a retirement rate already reduced to the minimum, and the average annual growth of investment down from 7 percent in 1961–65 to about 5 percent in 1966–67, the future growth of the national economy's capital stock—plant and equipment—will predictably drop well below the average rate of 11 percent achieved during 1961–65.

One noteworthy shift in the industrial investment priorities of the new leadership has clearly taken place; namely, from chemicals to metals. A large boost of 23 percent in investment for the steel industry has been announced for 1968. This drastic measure is fully consistent with recent policy statements, calling for the continued rapid growth in output of metal—"the solid foundation of the economy"—and tending further to deemphasize the development of plastics and other chemical substitutes for metals. Thus, the Breshnev-Kosygin regime, which took a firm step in 1966 to reduce drastically Khrushchev's

program for the "chemicalization" of the U.S.S.R., has continued to scale down investment in the long-neglected chemical industry. If the newly revised plan for outlays on chemical plant and equipment remains unchanged, the reduction of the original Khrushchev goal in the chemical field will prove to be as large as one-third.

As would be expected, the added emphasis on expanding military output in 1966 and again in 1967, has had an adverse effect on the growth of civilian machinery. The depressing effects on civilian machinery production were particularly felt in the important fields of investment goods, where the growth rate fell off sharply during 1966–67. Agricultural machinery, chemical equipment, power-generating machinery, and other types of producer goods essential for supporting the expansion of the economy, failed to maintain the momentum necessary to sustain the major growth programs in civilian industry. Apparently, the squeeze on the available supply of metal—both in quantity and quality—was one notable cause of the slowdown in the growth of civilian machinery output in general and the stagnation of deliveries of equipment to agriculture in particular.

TABLE 2.—*U.S.S.R.: Indicators of economic growth, 1966–67 and 1966–70 plan*[1]

	Average annual rate of growth (percent)	
	1966–67 actual	1966–70 plan
Producing sectors:		
Gross national product	6.0	6.3
Industry[2]	7.6	8.0–8.4
Agriculture	3.7	4.7
Principal claimants:		
Consumption (per capita)	4.8	5.0
Investment (total)	7.4	8.0
Industry	5.0	8.0
Agriculture	7.7	15.0–16.0
Housing and services	10.0	5.0–6.0

[1] 1965 is the base year for the calculations.
[2] The plan indicator is for total industrial output. The indicator for actual growth is for civilian output only.

E. ECONOMIC REFORMS

The current program of administrative reform measures, initiated for gradual adoption by Soviet industry during the autumn of 1965, continues to be implemented by stages, more or less in keeping with the official timetable. This program provides for some decentralization of economic decisionmaking and for a change in the existing pattern of managerial incentives. Under the new dispensation, enterprise managers are allowed somewhat more authority in making decisions of the kind that were formerly made by a higher echelon of officialdom. In addition, they are under instruction to be guided in making these decisions by such criteria as volume of sales, profit, and rate of return on capital. As operational flaws in the reform measures, or obstacles to their implementation, come to the surface, they are often highlighted in the Soviet press with a view to finding solutions and carrying out the needed adjustments.

As expected, there have been occasional reports of opposition to the reform program on the part of elements within the upper strata of the economic bureaucracy (who may be deprived of a share of their power), and even within the structure of the Communist Party. But there is

no firm evidence to suggest that a faction within the Politburo may be opposed to the reform. Whether or not support of the reform is universal or wholehearted, however, it appears that the transfer of industrial enterprises to the new system of management will be completed as scheduled by the end of 1968. During 1966, a group of 704 enterprises, accounting for 8 percent of total industrial production, were transferred to the new system. But by the end of the third quarter of 1967, 5,500 enterprises, accounting for a third of industrial production had been transferred; by the end of 1967 nearly 6,000 enterprises were working under the new system.

Although it is doubtful at this stage whether any shift in personal power at the level of the political high command—occasioned, say, by the weakening of the position of Kosygin—might lead to the abandonment of the reform program, it is conceivable that such a shift could bring about the ascendancy of individual leaders who would be inclined to limit the influence of the reform. In such an event, the transfer of enterprises to the new system would in all likelihood be completed but the reform would probably not continue to develop in time according to its full scope, as previously projected. At the operational level, in that case, the mechanism of central control over the allocation of material inputs, as well as over the planning of product assortment, would not be dismantled, and the newly granted rights of enterprise managers to initiate investment projects might be reduced in actual practice.

F. FOREIGN ECONOMIC RELATIONS

The recent shifts in domestic resource allocation have not generated any perceptible changes in the foreign economic relations of the U.S.S.R. Trade with the West has continued to expand at a brisk pace. Commercial exchanges with other areas have been equally active, and there has been no attempt to postpone fulfillment of outstanding economic aid commitments.

As a matter of fact, developments in Soviet trade with the countries of the non-Communist world in 1965–67 have provided the foreign commercial officials of the nation with greater freedom of maneuver. Their success in increasing traditional exports to hard currency countries, while holding the level of imports from rising, has resulted in an observable improvement in the balance of trade. The pressing deficits in hard currency, which have been characteristic of Soviet commodity trade since the beginning of the decade, were reduced considerably in 1967.

By now, the unfavorable effects of the heavy grain purchases of 1963–65 have been largely offset, with the aid of an increase of more than 50 percent in Soviet exports to the industrial West between 1965 and 1967. Although the flow of such exports is not likely to increase at the same rate over the next few years, the sharp cutback in grain imports should permit the U.S.S.R. to maintain its improved balance-of-payments position.

Regardless of the decision of the Soviet leadership to accept in its latest plan a lower rate of increase in investment for 1968, there is no evidence of a slackening in the level of new machinery orders from the West. Excluding the 1966 Fiat and Renault deals, the value of new orders for Western-built plant and equipment increased from about $450 million in 1966 to roughly $600 million in 1967. While it is too

early to obtain an impression of the expected level of new machinery orders for 1968, it is a fair assumption that the volume of these orders will not change significantly from that attained during the year 1967.

New extensions of economic aid to the less-developed countries were unusually small in 1967, having dropped to less than $100 million from a level of $1,200 million recorded for 1966. The decline, however, in all likelihood reflects the current effort on the part of the Soviet Government to reduce the backlog of unused credits. There is also the additional factor of reduced opportunities in the field, following 3 years of record high extensions of foreign aid. In any event, the low level of new commitments cannot be taken to reflect a change in Soviet foreign aid policy. At present, the U.S.S.R. appears to be pressing the recipients in its aid program to draw down their accumulated credits at a more rapid pace. Nevertheless, drawings on economic aid in 1968 will probably not be much higher than they have been in recent years; namely, at a level of about $300 million per annum.

I. COMPARATIVE GROWTH RECORD OF THE SOVIET ECONOMY

1. The general performance of the Soviet economy during the 2 most recent years, in terms of aggregate growth, was consistent with the trend established in the first half of the present decade. Viewed separately, however, the 2 recent years disclose a rather divergent record of performance. For the year 1966, the margin of new growth measured an impressive 7.1 percent. During the following year, according to present provisional calculations, aggregate economic output advanced by an unspectacular 4.3 percent.

2. As happened so often in the past, the difference in the overall performance of the economy was strongly influenced by the sharp disparity in the contribution made by the agricultural sector. The farm sector enjoyed optimal climatic conditions during the growing season of 1966, as a result of which the year's output of field crops and animal products rose by 10 percent. In the following year, however, weather conditions were far less favorable, thereby inducing a decline in the Nation's farm output by 3 percent. This decline, in turn, had a depressing effect on general economic growth, thus underscoring once more the critical role which agriculture continues to play in the Soviet economy.

3. If we abstract from the agricultural cycle in order to gain perspective on longer run trends, the results of the last 2 years tend to distribute themselves neatly around a longer run trend for Soviet GNP (table 1). Specifically, by dividing the postwar period into several significant periods, we may observe that the growth of the Soviet economy, which reached a high-water mark during 1955–58, has proceeded by a lower average rate since 1958, appearing to have leveled out at rates between 5 and 5.5 percent.

TABLE 1.—*U.S.S.R.: Annual and period growth rates of GNP for selected years, 1951–67*

Year	rate	Period [1]	Rate
1958	9.4	1951–55	6.9
1959	4.9	1956–58	7.4
1960	5.2	1959–61	5.8
1961	7.0	1962–67	5.4
1962	4.2	----------	----------
1963	2.8	----------	----------
1964	7.9	----------	----------
1965	6.2	----------	----------
1966	7.1	----------	----------
1967	[2] 4.3	----------	----------

[1] Average annual rate.
[2] Preliminary estimate.

SOURCES: See Note on Derivation of Index of Soviet Gross National Product.

4. In regard to its standing in the international growth league, moreover, the position of the Soviet Union is no longer one of leadership, as it was in the early and middle 1950's, but it is still relatively

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strong. While the performance of the United States, for example, has greatly improved since 1961, those of several other major economies, like Germany, Italy, and the United Kingdom, have deteriorated, so that the relative position of the U.S.S.R. has remained unchanged (table 2).

TABLE 2.—*U.S.S.R. and market economies: Comparative growth rates of gross national product for selected years, 1956–67*

[Percent]

Country	Annual rates						
	1961	1962	1963	1964	1965	1966	1967 [1]
U.S.S.R.	7.0	4.2	2.8	7.9	6.2	7.1	4.3
France	4.4	7.1	4.8	6.0	3.5	4.9	3.8
Germany	5.4	4.2	3.4	6.6	4.6	2.6	—1.0
Italy	7.8	6.2	5.5	2.7	3.4	5.8	5.5
United Kingdom	3.5	1.1	4.4	5.6	2.4	1.6	1.5
Japan	15.3	7.8	6.1	15.6	4.0	9.7	12.5
United States	1.9	6.6	4.0	5.3	5.9	5.8	2.6

	Period rates (average annual)		
	1956–61	1962–66	1962–67 [1]
U.S.S.R.	6.4	5.6	5.4
France	4.9	5.4	4.8
Germany	6.2	4.3	3.2
Italy	6.2	5.1	5.0
United Kingdom	2.9	3.0	3.1
Japan	10.9	8.6	9.5
United States	2.1	5.6	5.1

[1] Preliminary estimates.

SOURCES: U.S.S.R.: See note on derivation of index of Soviet gross national product. Market economies: OECD, *National Accounts Statistics, 1955–64*. European Economic Community, *General Statistical Bulletin* No. 7–8, 1967. OECD, *National Accounts Statistics, 1956–65*. OECD, *OECD Observer*, June 1967. OECD, *Economic Outlook*, December 1967, p. 8.

5. What is more significant at this juncture, however, is the observable relative decline in the ability of the U.S.S.R. to exploit its resources efficiently. In light of this development, a lower rate of growth of GNP, irrespective of its relative international performance, means fewer additional resources made available to the regime at a time when its commitments have proliferated.

6. For the moment, though, the bountiful harvest of 1966 has muted the consequences of overcommitment by providing the wherewithal for rapid increases in consumption in 1966 and 1967. The unusually large rate of increase in the agricultural raw materials base, which is so crucial to the welfare of the Soviet consumer, has enabled the regime to let the rate of increase in the output of consumer goods nearly equal that of producer goods to 1967, according to official estimates, and to plan for consumer goods production to grow more rapidly than capital goods for the first time since comprehensive planning was introduced 40 years ago. In addition to the foregoing developments the consumer has also benefited from a sharp increase in the rate of investment in housing construction.

7. A less auspicious trend in resource allocation was occurring during these years. Outlays for defense purposes, which had been almost

unchanged since 1962, rose dramatically in 1966 and 1967. Whatever the motives for this new preoccupation with national security, it boded ill for investment prospects because in the overcommitted Soviet economy there were no unutilized resources to serve as a cushion. As a result, the rates of increase in actual investment have been below planned targets for the Five-Year Plan for 1966–70. Since 1964 the rate of increase in investment has been steadily declining, especially in industry. Even the ambitious agricultural investment plans of the Brezhnev-Kosygin regime have been forced to yield in the face of competitive resource claims by the military (table 3).

TABLE 3.—*U.S.S.R.: Annual rates of increase in capital investment, 1961–67*

Sector	1961	1962	1963	1964	1965	1966	1967 [1]
Industry	3.5	6.4	6.8	12.1	5.7	4.7	.....
Agriculture	10.2	10.8	10.6	18.1	9.3	6.6	.....
Transportation and communication	5.5	8.4	6.8	7.4	7.4	3.6	.....
Science and education	.....	7.5	0.5	9.9	8.3	9.7	.....
Housing	-4.8	-1.9	-0.2	-4.1	11.2	9.7	.....
Economy	4.2	4.8	5.1	9.0	8.2	7.2	[2] 7.7

[1] Not available.
[2] Planned total investment.

SOURCES: *Narodnoe Khoziaistvo SSSR v 1961 Godu*, pp. 541 and 545, *Narodnoe Khoziaistvo SSSR v 1965 Godu*, pp. 452 and 455, *Narodnoe Khoziaistvo SSSR v 1954 Godu*, pp. 513–14 and 516, *Narodnoe Khoziaistzo SSSR v 1965 Godu*, pp. 531–32 and 534, *Strana Sovetov za 50 Let*, pp. 199 and 203, *Pravda*, Oct. 13, 1967, *Ekonomicheskaia Gazeta*, No. 4, 1968, p. 5.

LONG-RUN PERSPECTIVE

8. As noted in the preceding section, the Soviet growth trend has been asymptotic (flattening) for the past 9 years. During this period as the economic aspect of the general liberalization of Soviet life in the post-Stalin era, greater heed has been paid to consumer welfare without any commensurate diminution in the resource demands of the two traditional priority claimants—growth and defense. Yet, as time passes, even this reduced annual growth rate of 5 to 5.5 percent is being maintained only through greater effort.

9. If the growth record of the Soviet Union in recent years is compared with that of the principal market economies, a striking feature is the particular dependence of the U.S.S.R. on rapid additions to its active labor force and to its productive plant and equipment, as distinguished from its ability to use its basic productive resources efficiently. Since 1961 the rate of increments to the employed labor force has risen significantly compared to the 1955–61 period and has been much the highest of any of the major industrial powers (table 4). At the same time, there has been a sharp reduction in the rate of increase in output per worker, expressed either in terms of average annual employment or man-years. Whereas Soviet labor productivity in man-hour terms was rising more rapidly than elsewhere, except for Japan, in the earlier period, since 1961 the record has been below that of all the major economies, other than the United States. Moreover, the rate of deterioration has been much higher in the U.S.S.R. than elsewhere.

TABLE 4.—*U.S.S.R. and market economies: Comparative labor productivity trends, 1956–61 and 1962–66*

[Annual average rates]

Country	Period	GNP	Employment	Output per worker	
				Annual average employment	Man-years
U.S.S.R.	1956–61	6.6	1.4	5.0	6.9
	1962–66	5.6	2.3	2.3	2.3
France	1956–61	4.9	0.1	4.7	4.4
	1962–66	5.4	0.6	4.8	4.9
Germany	1956–61	6.2	1.6	4.5	5.9
	1962–66	4.3	0.3	3.9	4.7
Italy	1956–61	6.2	0.6	5.6	5.7
	1962–66	5.1	−1.3	6.5	7.0
United Kingdom	1956–61	2.9	0.5	2.4	3.1
	1962–66	3.0	0.7	2.3	3.1
Japan	1956–61	10.9	1.6	9.2	8.6
	1962–66	8.6	1.4	7.1	7.9
United States	1956–61	2.1	1.0	1.1	1.6
	1962–66	5.6	1.8	3.7	2.9

SOURCES: GNP—See table 2. Employment and hours: U.S.S.R.—See App. C in Joint Economic Committee *New Directions in the Soviet Economy*, pp. 130–131.
Market Economies—OECD, *Manpower Statistics*, 1954–64, OECD, *Main Economic Indicators*, April and October 1967, United Nations, *Monthly Bulletin of Statistics*, Angus Maddison, *Economic Growth in the West*, Twentieth Century Fund, 1964, table G–1, OECD, *Economic Surveys by the OECD—Japan*, July 1964, OECD, *OECD Observer*, February 1968.

10. A similar unfavorable trend emerges in an international comparison of the efficiency in the use of productive capital. In the 1955–61 period the U.S.S.R. had a relatively low incremental capital-output ratio; i.e., relatively less investment was required to obtain an additional unit of national product than in the other major economies, except for Japan (table 5). The same conclusion is also applicable if the effect of increases in the labor force on growth is removed from the comparison by comparing rates of increase in capital with changes in GNP per employee (columns headed "output per employee" in table 5).

TABLE 5.—*U.S.S.R. and selected market economies: Comparative incremental capital-output ratios*

Country	Aggregate [1]		Output per employee [2]	
	I—1954–60 O—1955–61	I—1960–65 O—1961–66	I—1954–60 O—1955–61	I—1960–65 O—1961–66
U.S.S.R.	2.6	3.6	2.5	6.0
France	2.8	2.8	2.9	3.1
Germany	2.9	4.5	3.0	4.7
Italy	2.4	3.3	2.4	2.3
United Kingdom	4.1	5.6	6.9	3.6
Japan	1.6	2.8	1.9	3.1
United States	6.3	2.1	11.5	4.1

[1] Increase in fixed nonhousing investment required to obtain a unit increase in gross national product. A lag of a year between a unit of investment (I) and of output (O) has been assumed. Thus, investment for the 1954–60 period is assumed to affect output for the period 1955–61. Similarly, investment for the period 1960–65 is compared with putout for 1961–66. The ratio is increased to the extent that unutilized productive capacity exists. Thus, the high U.S. ratio in the earlier period reflects idle capacity in the depressed year of 1961. A similar phenomenon inflates the German ratio in 1936.
[2] Same as the aggregate measure except for investment.

SOURCES: See sources to table 2.

11. Since 1961 capital-output ratios have generally risen for most industrialized economies, the United States and France being the only exceptions.[1] If no adjustment is made for changes in employment, the rise in the Soviet ratio was not unusually large, but if this adjustment is taken into account, the increase in the Soviet ratio was over double, far larger than in any other major economy. This disparate result indicates an attempt to sustain growth through a continued large infusion of manpower with rapidly diminishing returns.

12. This combination of a declining rate of increase in investment and a rising capital-output ratio bodes ill for the future growth of the Soviet economy. So long as defense expenditures continue to rise at a rapid rate, the investment growth rate will be depressed. Furthermore, there are built-in factors of a locational and structural nature which will contribute to an inexorable rise in the capital-output ratio.[2] Compounding this unattractive prospect are rising consumer inflationary pressures. Between 1961 and 1966 retail sales increased by 37 percent, but personal savings accounts rose by 221 percent, or nearly six times as fast![3] The spread between disposable personal incomes and personal savings appears to be widening at an increasing rate. Since such a high rate of savings is unprecedented in an economy with the per capita income level of the U.S.S.R., the phenomenon reflects rising unsatisfied consumer demands. Persistence of such trends will imperil the work incentives of a labor force with rapidly rising skill levels.

13. In part the decision of the regime to allow consumer goods production to grow more rapidly than that of capital goods may be a response to these worsening consumer income pressures. However, there has also been the aforementioned permissive situation of an unprecedented agricultural harvest in 1966. Should the 1966 cutback in the agricultural investment effort persist (table 3), it would be difficult for the regime to fulfill its accelerated consumer goods production intentions.

COMPARATIVE SIZE AND FUTURE TREND OF GNP

14. Currently the dollar value of Soviet GNP is around 48 percent of the U.S. level. The Soviet Union occupies a strong second position among the economies of the world, some 2½ times the size of Germany and Japan, the economies in third and fourth positions (table 6). In per capita terms the Soviet position is relatively lower, with a level some 40 percent that of the United States and about two-thirds of the major economies of Northwestern Europe. Within reasonable margins of error, per capita GNP in the U.S.S.R. is about matched by those of Italy and Japan. This comparison does not apply to any measurement of personal consumption, for the U.S.S.R. would rank lower, given the high proportions of GNP allocated to investment and defense.

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[1] Investment in housing is excluded from definition of capital in the comparison.

[2] For examples of conclusions by perceptive Soviet economists in this point, see A. N. Nikol'skaia, "Analysis of the Dynamics of Capital-Output Ratios in the Basic Branches of the U.S.S.R. National Economy," *Ekonomika i Matematicheskie Metody*, #2, 1966, p. 188. Also T. Khachaturov, "Economic Effectiveness of Capital Investment," *Kommunist*, #13, September 1966, p. 66.

[3] Joint Economic Committee, *New Directions in the Soviet Economy*, 1966, p. 515 (article of David Bronson and Barbara Severin) and *Strana Sovetov za 50 Let*, 1967, pp. 250 and 254.

TABLE 6.—*U.S.S.R. and selected market economies: Comparative dollar value of gross national product in 1966*

[Market prices; 1966 U.S. dollars]

Country	Ranked by GNP (billions)	Country	Ranked by per capita (dollars)
United States	743	United States	3,777
U.S.S.R.	357	Germany	2,382
Germany	142	France	2,217
Japan	134	United Kingdom	2,047
United Kingdom	113	U.S.S.R.	1,532
France	110	Italy	1,408
Italy	73	Japan	1,352

SOURCES AND METHODOLOGY:

West European countries: 1966 GNP is originally expressed in the countries' own currencies, obtained from sources noted in table 2. Ratios for converting these estimates are initially based on the 1955 ratios in Milton Gilbert and Associates, *Comparative National Products and Price Levels*, OECD, 1958. The geometric means of U.S. and European weights are used. The ratios are moved to 1966 by indexes of European prices divided by those of U.S. prices. The price indexes can be obtained from the sources used to make the original estimates.

Japan: The same methodology is followed for Japan. 1966 yen estimates are obtained from the sources cited in table 2. A 1960 geometric conversion ratio has been constructed by Irving Kravis in the *Journal of Political Economy*, August 1963, p. 327. The ratio is expressed in 1966 prices by the same procedure used for the West European economies.

U.S.S.R.: The same methodology is followed for the U.S.S.R. The base year ruble estimate for Soviet GNP is obtained from Morris Bornstein and others, *Soviet National Accounts for 1955*, Center for Russian Studies, University of Michigan, 1961, pp. 71–72. The 1955 estimate is moved to 1966 by means of the GNP index computed in the appendix of this article. The 1955 geometric conversion ratio has been obtained from Morris Bornstein, "A Comparison of Soviet and U.S. National Product," in Joint Economic Committee, *Comparisons of the U.S. and Soviet Economies*, 1959, pp. 385-386. The ratio is moved to 1966 by ratio of computed Soviet and US price indexes.

15. As a proportion of the U.S. economy, the greatest gains made by the Soviet economy were accomplished during the fifties. Since 1961 Soviet GNP has reached a proportionate plateau of around 46 to 48 percent. In terms of the absolute margin of the U.S. economy over the Soviet, the minimum difference was reached in 1958. Since then the dollar gap between Soviet and United States GNP has been widening (table 7).

16. The economic significance of the gap depends on the variable being measured. If GNP is considered as a rough quantification of general economic potential, the comparison in table 7 is appropriate. If the concern is with some concept of consumer welfare, the dollar gap between the two economies would be limited to a comparison of consumption and would show an even wider divergence. If the concern is military potential, the best indicator would be industrial production, in which case the gap would continue to narrow.

TABLE 7.—*U.S.S.R. and United States: Comparative trends in dollar values of GNP in market prices*

[In 1966 U.S. dollars]

Country	1950	1955	1958	1961	1965	1966	1967 [1]
United States	414	508	519	575	711	743	762
U.S.S.R.	132	185	229	272	330	357	372
Difference	282	323	290	303	381	386	390
U.S.S.R. GNP as a percent of United States	31.9	36.4	44.1	47.3	46.4	48.0	48.8

[1] Preliminary.

SOURCES: United States—U.S. Department of Commerce, *Survey of Current Business*. U.S.S.R.—1966 dollar estimate of table 5 moved by GNP index computed in appendix.

17. The future prospects for the growth of the Soviet economy ultimately depend on the availability of new productive resources and upon the increased efficiency with which they are utilized. Through 1975 it will be assumed that the maximum increase in employment will be set by the projected annual average increase in the number of adults of working age, 1.6–1.7 percent.[4] The rise in capital stock will, as a maximum, be determined by the investment target of 7.9 percent annually of the current 5-year plan.[5] After making provision for a retirement rate of about 2.5 percent per year, a net increase in assets of about 7.5 percent per year is projected.

18. Projections of labor and capital productivity are based on recent historical analogs. Use of these analogs assumes continuation of the same institutional environments which have prevailed since Stalin's demise. The best productivity performance in the post-Stalinist years occurred in the midfifties, a period of liberalization and correction of the worst Stalinist errors. The least favorable period was during the late Khrushchev years, when the institutional environment became static. If the limits of productivity growth rates are set by the historical experiences of these two eras and the figures be combined with the assumptions of growth in the principal factors of production, employment and capital stock, a GNP growth range of 4.8 to 6 percent per year is obtained. This range should be regarded as a maximum and will likely not be attained if investment continues to fall below plan. A young Soviet mathematical economist using econometric techniques has projected a 5.4 percent growth rate for the period,[6] midway within my growth range.

19. Recent estimates for the United States project the annual rate of growth of GNP through 1975 in a range of 4 to 4.5 percent.[7] The envisaged differential rates of growth between the two economies are thus minor and will likely be narrowed if full employment and technological progress are sustained in the United States and if the over-commitment of resources and institutional stagnation continue to plague the Soviet Union.

NOTES ON DERIVATION OF INDEX OF SOVIET GROSS NATIONAL PRODUCT

The index of Soviet GNP is composed of the net output indexes of the seven component sectors of origin, weighted according to their respective value-added for 1959. The weights, which represent factor payments in the form of wages, incomes in kind, interest, and rent and depreciation charges, have been derived in a separate publication by the author.[8] The separate sector indexes have been obtained as follows:

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[4] Ritchie Reed, *Estimates and Projections of the Labor Force and Civilian Employment in the U.S.S.R.: 1950–75*, Bureau of the Census, 1967, p. 15.

[5] T. Khachaturov, "Kapital'nye Vlozhenila i Kapital'noe Stroitel'stvo v SSSR za 50 Let" (Capital Investment and Capital Construction in the U.S.S.R. over 50 Years), *Voprosy Ekonomiki*, No. 8, 1967, p. 8.

[6] B. N. Mikhalevskil, "Makroekonomicheskala Proizvodstvennala Funktsila kak Model' Ekonomicheskogo Rosta" (Macroeconomic Production Function as a Model of Economic Growth), *Ekonomika i Matematicheskie Metody*, No. 2, 1967, p. 218.

[7] U.S. Congress, Joint Economic Committee, *U.S. Economic Growth to 1975: Potentials and Problems*, 1966, p. 13.

[8] Stanley H. Cohn, *Derivation of 1959 Value-added Weights for Originating Sectors of Soviet Gross National Product*, Research Analysis Corporation (TP–210), 1966, p. 20.

Industry.—See Ch. II, table 1. Machinery uniquely military is not included.

Construction.—Indexes in 1955 prices of state and cooperative investment (p. 44) and private housing (pp. 188–189) from Tsentral'noe Statisticheskoe Upravlenie, *Kapital'noe Stroitel'stvo v SSSR,* 1961, for data through 1960. 1961 to 1965 estimates from *Narodnoe Khoziaistvo SSSR v 1965 Godu,* pp. 528–529. 1966 estimates from *Strana Sovetov za 50 Let,* pp. 197–198.

Agriculture.—See Ch. III, table 1.

Transportation.—Norman M. Kaplan, *Soviet Transport and Communications Output Indexes, 1928–62,* Rand Corporation, (TM–4264–PR), 1964, p. 55 and supplement of November 1965, p. 7. 1964–67 estimates obtained by adjusting link relatives for volume of freight (annual issues of *Narodnoe Khoziaistvo SSSR* and *Strana Sovetov za 50 Let*) by 1955–63 relationship between index of freight volume and Kaplan's computed freight output index.

Communications.—Norman Kaplan, *op. cit.,* pp. 7 and 55. 1964 to 1967 indexes obtained by adjusting 1964 link relative for employment (see contributions of Murray Feshbach to Joint Economic Committee compendia on the Soviet economy) by the 1955–62 relationship between index of employment and Kaplan's index of employment and revenue.

Commerce.—Index moved by trend in employment in trade, procurement, and supply (Ch. IX) times an assumed increase in productivity per worker of 0.7 percent per year. This increase in output per employee was computed for service sectors in the United States for the period 1929–61 (Victor Fuchs, *Productivity Trends in the Goods and Services Sectors 1929–61,* National Bureau of Economic Research, 1964, p. 13). In lieu of indigenous information this trend is also presumed to apply to noncommodity sectors in the Soviet economy.

Services.—The index for this sector is comprised of the weighted indexes for the component subsectors: Defense (military personnel costs), education, health, public administration, science, and housing and communal services. These six sectors comprised over 97 percent of total outlays for services in 1959 (Stanley H. Cohn, *Derivation of 1959 Value-added Weights for Originating Sectors of Soviet Gross National Product,* Research Analysis Corporation (TP–210), 1966, pp. 15 and 17). The weights for each subsector are the summed cost elements of wages and supplements, interest, and depreciation charges. The wage bills are 1959 average annual wages per employee (*Narodnoe Khoziaistvo SSSR v 1964 Godu,* p. 555) times 1959 employment in the subsector (*Ibid.,* p. 547). The other cost elements are obtained from notional distribution of remaining costs obtained from Stanley Cohn, *op cit.*

The indexes for the subsectors, except for housing and communal services, are based on employment trends, adjusted for the assumed 0.7 percent annual productivity increase. The defense manpower estimates are obtained from Joint Economic Committee, *Dimensions of Soviet Economic Power,* p. 43, the column on million man-years and from Ch. IX in this compendium. The employment indexes for the other sub-sectors are obtained from same chapter. The housing index is based on estimates underlying the time series on consumption in Ch. XI, table 2.

II. INDUSTRIAL PRODUCTION

1. The growth of civilian industrial production in the Soviet Union continued during 1966–67 at about the same pace as in the first half of the decade—at an average annual rate of 7½ percent. This rate of expansion stands in sharp contrast to that of the 1950's, when growth averaged about 10 percent per year. Although the growth rate of the aggregate civilian industrial product remained almost unchanged during the two periods of the 1960's, the pattern of growth among the major sectors of Soviet industry varied somewhat. After dropping off by more than 1½ percentage points during 1961–65 compared to the last half of the 1950's, the average annual growth rate of civilian machinery output dropped by almost as much again in 1966–67. On the other hand, the growth of nondurable consumer goods accelerated in 1966–67, largely offsetting the drop in the growth of machinery. Annual increases in output of industrial materials averaged slightly less in 1966–67 than in the first half of the decade.

U.S.S.R.: Average annual rates of growth of civilian industrial output by major sector,[1] *1951–67*

[In percent]

	1951–55	1956–60	1961–65	1966–67
Total industry	10.7	9.5	7.6	7.4
Industrial materials	10.4	9.3	7.0	6.8
Civilian machinery, including electronics	12.4	13.0	11.3	9.8
Nondurable consumer goods	10.0	6.9	4.8	5.8

[1] The base year for the calculations shown in each column is the year before the stated initial year of the period, i.e., the average annual rate of increase for 1951–55 is computed by relating production in 1955 to base year 1950.

2. Because data on armaments production are not available, the change in *overall* industrial production between 1961–65 and 1966–67 cannot be measured independently. If armaments could be included, however, the average annual rate of growth of total industrial output in 1966–67 probably would have been above that for 1961–65. The moderate rise in the explicit Soviet defense budget in 1966 and the sharp rise in 1967 probably reflected increased procurement (and production) of armaments. This supposition is buttressed by the fact that the official Soviet index for gross output of machinery (including armaments) held up in 1966–67, while growth of civilian machinery (as measured by the index shown in table 1) declined rather sharply (see discussion in paragraph b, 7, below).

Significant Developments in 1966–67

A. INDUSTRIAL MATERIALS

3. The fuels and power industry suffered a significant setback in growth in 1966–67—from 6½ percent annually in 1961–65 to 4½ percent in 1966–67. The slowdown affected all principal branches of the industry. A sharp decrease in growth of electric power generation occurred mainly because of the failure of some power-intensive users (chemicals, metallurgy) to meet production goals, thereby consuming less than their planned quotas of electric power. The fuels sector grew more slowly during 1966–67, partly because of the dropoff in demand from its major consumer—the electric power industry—but also because of constraints on the distribution and use of liquid fuels and gas resulting from lack of adequate pipeline capacity and users' equipment.

4. The output of metals during 1966–67 grew at a slightly higher average annual rate than the 8 percent achieved in the first half of the decade. During 1966–67 the share of nonferrous in total output of metals continued to rise as production accelerated by about one percentage point to an average annual rate of more than 9 percent. On the other hand, growth in output of ferrous metals fell slightly from the annual rate of 8 percent averaged in 1961–65. In spite of passing the important milestone of producing 100 million tons of crude steel, the ferrous metals industry in 1967 lost some of the momentum it had picked up in 1966. Rolled steel production, which increased 8 percent in 1966, was up by only 6½ percent in 1967. Growth of ferrous metals production slowed down both because of setbacks in the investment program and because of problems associated with an attempt to effect simultaneously a major shift in assortment and an improvement in quality.

5. Among the materials branches whose growth accelerated in 1966–67 were forest products, paper products, and construction materials. The forest products branch grew at a rate considerably below that of the materials sector as a whole, while paper products and construction materials exceeded the sector average. Chemicals registered an average growth of nearly 9½ percent in 1966–67—the highest growth rate of any branch in the materials sector but nevertheless a significant drop from the 11 percent averaged in 1961–65.

B. CIVILIAN MACHINERY

6. A significant development in 1966–67 was the decline in the growth of civilian machinery, including total electronics production.[1] Electronics production is probably the fastest growing branch of Soviet industry, registering an average annual growth of 21 percent during 1961–67. Without the inclusion of this fast-paced branch, civilian machinery production would have increased at an average annual rate of only 7 percent during 1961–67 instead of 11 percent. The per-

[1] To the extent that some general-use items, such as trucks, as well as intermediate products made by the electronics industry find their way into final use by the defense establishments, defense items not uniquely military in character are reflected in the index of civilian machinery.

formance of other components of civilian machinery was far less spectacular. In 1967 there were absolute declines in the production of some major items (turbines, oil refinery equipment, electric and diesel locomotives) and very small increases in others (metalcutting machine tools, chemical equipment, agricultural implements).

7. Because civilian machinery consists largely of investment goods, the trends indicated in this index can be checked against official Soviet data on investment in equipment (see chapter VI on Investment). Both indexes show rather sharp decreases in rates of growth in 1966–67 compared with 1961–65. The index of civilian machinery also may be compared with the official Soviet index of machinery output, which includes armaments. Although the Soviet index greatly overstates growth of output over time, its trend, in the short term, is probably a reasonably reliable indicator of the fluctuation in output of total machinery. Its use in conjunction with the independently derived index for civilian machinery enables us to say something about trends in armaments production. As noted in paragraph 2, above, the official Soviet machinery index shows no slowdown in growth in 1966–67 compared with 1961–65. Because the civilian index, including total electronics, shows a dropoff of 1½ percentage points in 1966–67, this difference may be due to an acceleration in growth of armaments (excluding electronics).

C. NONDURABLE CONSUMER GOODS

8. A small fillip to industrial growth in 1966–67 came from the nondurable consumer goods sector, which increased its growth rate by one percentage point from the low 5-percent annual increase averaged during 1961–65. The growth of this segment of Soviet industrial production is closely bound to the vicissitudes of agriculture. The lean years of the early 1960's in farm output were followed during 1964–67 by 3 relatively good years out of 4, and the output of nondurable consumer goods increased significantly. Indeed, by 1967 the Government was procuring more foodstuffs than it could process; spoilage of perishable goods such as meat, dairy products, fruits, and vegetables was reportedly widespread, due to a shortage of processing capacity in the food industry. In contrast to 1961–65, growth of soft goods production remained relatively high and steady during 1966–67 as demand—especially for leather footwear and clothing—rose in the wake of rising disposable income in the pockets of the consumer, price reductions in rural stores, and some improvement in the assortment and quality of goods offered to the public (see chapter XI on Consumer Welfare for fuller discussion). The rise in production of soft goods from an average annual growth of 3 percent in 1961–65 to 7 percent in 1966–67 was facilitated by increased supplies of natural and synthetic raw materials.

Note to Tables on Indexes of Industrial Output

The analysis of civilian industrial growth in the U.S.S.R. is based largely on the index shown in table 1. This index is intended to approximate a value-added weighted index such as that of the Federal Reserve Board index of industrial production in the United States. Information for constructing value-added weights is available only for the major branches of industry shown in the table. Commodities within major sectors are weighted by prices, i.e., the individual branch indexes represent the summation of the value of sample commodities in July 1, 1955 prices. The various branch indexes are aggregated with value-added weights that are the summation of wages and an imputed charge for capital. The latter is comprised of depreciation charges and an interest allowance based on the use of an 8-percent interest rate applied to the stock of reproducible productive fixed capital stock. It should be noted that the value-added weights in table 1 are for 1960 rather than 1955 as shown in previous Joint Economic Committee compilations of statistical materials on the Soviet Union—e.g., *Annual Economic Indicators for the U.S.S.R.* (1964), and *Current Economic Indicators for the U.S.S.R* (1965). As a result of the revision of weights, the inclusion of an explicit charge for capital, and changes in estimates of the production of individual products the growth rates in table 1 differ somewhat from those shown previously. For a more detailed description of the indexes (sources of data, coverage of commodity sample and deficiencies of the index), see Joint Economic Committee, *Dimensions of Soviet Economic Power*, p. 131–134.

TABLE 1.—*U.S.S.R.: Indexes of civilian industrial production, 1960–67*

[1960=100]

	1960 value added weights (percent)	1960	1961	1962	1963	1964	1965	1966	1967[1]
Industrial materials	55.2	100	106.2	114.1	121.6	130.3	140.1	149.5	159.8
Electric power	4.7	100	112.1	126.5	140.7	156.4	172.2	185.3	200.3
Coal	11.9	100	100.0	102.4	105.4	109.7	114.5	116.7	118.8
Petroleum products and natural gas	3.7	100	112.3	127.4	142.3	154.2	169.2	184.8	201.7
Ferrous metals	8.1	100	109.2	118.5	126.6	136.8	146.6	160.0	170.4
Nonferrous metals	4.0	100	108.9	118.5	128.0	137.8	149.6	162.7	178.4
Forest products	10.2	100	101.3	105.2	111.2	116.4	118.4	120.9	128.6
Paper products	.9	100	106.0	113.4	119.7	128.7	145.2	160.7	172.0
Construction materials	7.2	100	110.8	120.3	126.6	134.7	147.4	161.9	174.9
Chemicals	4.5	100	108.2	119.9	128.5	144.5	167.7	182.8	200.2
Civilian machinery, including electronics[2]	23.5	100	110.9	125.8	140.4	155.5	170.8	187.0	205.7
Nondurable consumer goods	21.3	100	105.4	110.4	112.0	117.2	126.1	132.7	141.0
Soft goods	12.4	100	103.3	107.5	109.8	114.4	117.1	125.8	134.3
Processed foods	8.9	100	108.4	114.6	115.0	121.0	138.5	142.0	150.3
Aggregate civilian industrial production	100.0	100	107.2	116.1	124.0	133.4	144.3	154.7	166.6

[1] Preliminary.
[2] Machinery uniquely military in character (e.g., munitions) are excluded from the index shown in the table.

TABLE 2.—*U.S.S.R.: Annual rates of growth in industrial production, 1960–67*

[In percent]

	1960	1961	1962	1963	1964	1965	1966	1967
Industrial materials	7.8	6.2	7.4	6.5	7.2	7.6	6.7	6.9
Electric power	10.2	12.1	12.8	11.2	11.2	10.0	7.6	8.1
Coal	2.2	0	2.4	3.0	4.0	4.4	1.9	1.8
Petroleum products and natural gas	13.9	12.3	13.5	11.6	8.4	9.7	9.2	9.1
Ferrous metals	8.9	9.2	8.5	6.8	8.0	7.2	9.1	6.5
Nonferrous metals	9.1	8.9	8.8	8.0	7.7	8.6	8.8	9.6
Forest products	1.0	1.3	3.9	5.7	4.7	1.7	2.1	6.4
Paper products	4.5	6.0	7.0	5.6	7.5	12.8	10.7	7.0
Construction materials	15.3	10.8	8.6	5.3	6.4	9.4	9.9	8.0
Chemicals	19.8	8.2	10.8	7.2	12.4	16.1	9.0	9.5
Civilian machinery, including electronics	11.3	10.9	13.4	11.7	10.8	9.8	9.5	10.0
Nondurable consumer goods	4.3	5.4	4.8	1.4	4.7	7.6	5.2	6.3
Soft goods	5.8	3.3	4.1	2.2	4.2	2.3	7.4	6.7
Processed foods	2.2	8.3	5.7	.4	5.3	14.5	2.6	5.8
Aggregate civilian industrial production	7.8	7.2	8.3	6.8	7.6	8.2	7.2	7.7

TABLE 3.—*U.S.S.R. and United States: Production of selected industrial commodities in the U.S.S.R., 1960–67, and in the United States, 1966* [1]

	Unit	U.S.S.R.								United States, 1966
		1960	1961	1962	1963	1964	1965	1966	1967	
Fuels and power:										
Primary energy [2]	Million metric tons	666.9	710.9	770.4	829.9	892.6	959.3	1,018.0	1,063.0	1,809.9
Electric power	Billion kilowatt-hours	292.3	327.6	369.3	412.4	458.9	506.7	544.6	589.0	1,326.9
Coal	Million metric tons	509.6	506.4	517.4	531.7	554.0	577.7	585.6	595.0	492.6
Crude oil	do	147.9	166.1	186.2	206.1	223.6	242.9	265.1	288.0	409.2
Natural gas [3]	Billion cubic meters	45.3	59.0	73.5	89.8	108.6	127.7	143.0	157.0	487.2
Ferrous metals:										
Pig iron	Million metric tons	46.8	50.9	55.3	58.7	62.4	66.2	70.3	74.8	83.6
Crude steel	do	65.3	70.8	76.3	80.2	85.0	91.0	96.9	102.2	121.6
Rolled steel	do	51.0	55.3	59.3	62.5	66.7	70.9	76.7	81.6	90.0
Nonferrous metals:										
Aluminum (primary)	Thousand metric tons	640.0	890.0	900.0	960.0	1,000.0	1,075.0	1,220.0	1,360.0	2,688
Copper (refined)	do	490.0	530.0	590.0	640.0	700.0	770.0	825.0	915.0	1,997
Lead (primary)	do	324.0	343.0	364.0	385.0	408.0	433.0	463.0	495.0	409.0
Tin (primary and secondary)	do	16.2	16.7	16.7	19.7	19.7	19.7	21.5	23.5	3.9
Zinc (refined primary)	do	364.0	377.0	403.0	419.0	436.0	504.0	557.0	610.0	1,008
Construction materials:										
Cement	Million metric tons	45.5	50.9	57.3	61.0	64.9	72.4	80.0	84.8	67.0
Bricks	Million units	35,500.0	36,692.0	35,979.0	35,183.0	35,939.0	36,923.0	37,800.0	36,000.0	8,376
Chemicals:										
Mineral fertilizers [4]	Million metric tons	13.9	15.3	17.3	19.9	25.6	31.3	35.9	40.1	62.4
Mineral fertilizers [5]	Thousand metric tons	3,281.0	3,593.0	4,078.0	4,647.0	6,009.0	7,389.0	8,438.0	9,400.0	13,745
Sulfuric acid (100 percent)	do	5,398.0	5,718.0	6,132.0	6,885.0	7,647.0	8,518.0	9,367.0	9,740.0	25,834
Soda ash (100 percent)	do	1,793.0	2,009.0	2,215.0	2,418.0	2,603.0	2,727.0	2,815.0	3,011.0	6,194
Caustic soda (100 percent)	do	704.0	825.0	884.0	965.0	1,061.0	1,199.0	1,282.0	1,403.0	6,661
Plastics	do	311.6	383.7	451.7	567.2	698.7	801.5	974.0	1,112.0	6,192
Rubber tires	Thousand units	17,225.0	18,996.0	20,846.0	22,563.0	24,361.0	26,434.0	27,656.0	29,600.0	183,229
Chemical fiber	Thousand metric tons	211.2	250.4	277.3	308.4	361.1	407.3	458.3	511.0	1,627.2
Machinery and equipment:										
Metal-cutting machine tools	Thousand units	155.9	165.8	176.9	182.7	183.8	185.8	192.1	196.0	78.72
Metal-forming machine tools	do	29.9	30.7	33.4	34.2	34.4	34.6	38.4	41.0	47.0
Electric generators	Thousand kilowatts	7,915.0	9,450.0	11,022.0	11,838.0	12,791.0	14,390.0	13,447.0	14,600.0	[6] 18,633
Trucks and buses	Thousand units	384.8	406.4	411.5	413.9	417.9	415.1	445.1	477.4	[7] 1,731.1
Tractors	do	238.5	263.6	287.0	325.3	329.0	354.5	382.5	405.0	[8] 298.3

Consumer goods:										
Durables:										
Passenger cars	do	138.8	148.9	165.9	173.1	185.2	201.2	230.2	251.4	[7] 8,598.3
Refrigerators	do	529.0	686.0	838.0	911.0	1,134.0	1,675.0	2,205.0	2,697.0	4,685
Washing machines	do	896.0	1,286.0	1,797.0	2,282.0	2,861.0	3,430.0	3,869.0	4,300.0	4,408
Television sets	do	1,726.0	1,949.0	2,168.0	2,473.0	2,927.0	3,655.0	4,415.0	5,000.0	12,402
Radios and radio-phonographs	do	4,165.0	4,228.0	4,251.0	4,796.0	4,766.0	5,160.0	5,842.0	6,400.0	[9] 25,329
Soft goods:										
Cotton fabrics	Million linear meters	6,387.0	6,425.0	6,454.0	6,619.0	6,976.0	7,080.0	7,238.0	7,488.0	8,107
Rayon and acetate fabrics	do	755.0	771.0	906.0	921.0	940.0	897.0	970.0	[10] 1,027.0	1,500
Footwear [11]	Million pairs	419.3	443.2	456.3	462.7	474.7	486.0	522.0	561.0	646.9

[1] With the exception of estimates for nonferrous metals, production data for the U.S.S.R. are official Soviet figures; 1967 data are preliminary.

[2] Data are for coal, crude oil, natural gas, and hydroelectric power expressed in terms of coal equivalents (calorific value of 7,000 kilocalories per kilogram) but exclude minor fuels such as peat, shale, and fuel wood.

[3] Data for the U.S.S.R. are for gross production less losses and waste, whereas data for the United States are for net marketed production.

[4] In Soviet standard units.

[5] In terms of pure nutrient. Figure for the United States is for production between July 1, 1966 and June 30, 1967.

[6] Shipments of units 4,000 kilowatts and larger.

[7] Factory sales.

[8] Data for wheel-type tractors are shipments.

[9] Data for radio-phonograph combinations are factory sales.

[10] Plan figure.

[11] Shoes and slippers.

III. DEVELOPMENTS IN THE AGRICULTURAL SECTOR

The Post-Khrushchev Program for Agriculture

1. The Brezhnev-Kosygin leadership of the Soviet Union inherited an ailing agricultural economy from their predecessors. The farm sector had suffered for decades because of under-investment, excessive central direction, and lack of incentives. In his appearance before a Party Plenum in March 1965, General Secretary Leonid Brezhnev announced a new program of economic and administrative measures designed to overcome the condition of stagnation that had befallen Soviet agriculture since 1958 and was, in turn, adversely affecting the growth of the economy as a whole. The approach proposed by Brezhnev can be grouped into three main categories: (1) an increase in investment; (2) improvement of agricultural management; and (3) raising rural incomes and living standards. The Brezhnev program was subsequently translated into more specific measures, at the 23d Party Congress in 1966, when the targets for the Five Year Plan, 1966–70, were announced. Emphasis was placed on the intensive development of agriculture, especially on attaining increased productivity per hectare of arable land.

2. The average annual rate of growth in net agricultural production in 1966–67 was almost one-fourth larger than the average growth rate in 1961–65 (see table 1). The increase came about as a result of more favorable weather, enlarged supplies of fertilizer and other inputs, and improved financial incentives. The relative successes attained in Soviet agriculture during 1966–67, which coincided with increased demands for defense expenditures, have led to a perceptible cutback in the original agricultural investment program, with the result that the agricultural sector has been somewhat downgraded as a priority recipient in the allocation of resources. Although the proponents favoring a continuance of a high priority for agricultural investment appear to have suffered a setback, as things stand at present, the issue remains a subject of disagreement and discussion at the highest level of political authority.

3. Increased supplies of mineral fertilizer in the countryside are playing a key role in raising Soviet crop yields. Average annual deliveries of fertilizer to agriculture in 1966–67 increased more than three-fourths over the average annual deliveries in 1961–65. Increased applications of lime, expanded irrigation facilities, and improved seed varieties have complemented the more active use of mineral fertilizer.

4. Measures were initiated, starting in 1965, to increase the earnings of farms and of farmworkers, especially collective farmers. This has resulted, as was expected, in some improvement in overall farm management as well as in better economic incentives for individual agricultural workers. Prices on obligatory sales of grains and livestock products to the state were increased, substantial premiums for above-obligatory sales of grain and several other commodities were brought into play, while firm and specific plans were established for several

years in advance. Along with the above, income taxes as well as prices on machinery and electricity purchased by farms were lowered. At the same time, debts of weak farms were canceled, and some additional land improvement costs were assumed by the state.

5. Whereas much of the increased farm income was channeled into investment, some of the increase was used to augment the incomes of individual farmworkers. Labor payments of collective farmers reportedly increased by 16 percent in 1966 and by an additional 6 percent in 1967. As one important recent innovation, guaranteed minimum monthly payments to collective farmers are being introduced on a current basis, although their total income from communal farming still depends on the farm's aggregate output. Old-age pensions were established for collective farmers in mid-1964. More recently, some retail price discrimination in rural areas was eliminated.

6. The private sector in agriculture continues to be important in the Soviet Union, contributing almost one-third of gross agricultural output in recent years. Its relative importance is declining, however, as output from the socialized sector grows more rapidly. One of the first acts of the Brezhnev-Kosygin leadership was to ease some of the regulatory restrictions imposed by Khrushchev on private plot activity. Nevertheless, an initial spurt in 1965 in the area of holdings of private plots and in the number of family-owned livestock has been followed by only small gains in this respect in subsequent years.

Production of Crops and Livestock Products

7. The average level of grain production during 1966–67 was more than 20 percent above the average production during 1961–65. Exceptionally favorable weather was the dominant factor in the record crop harvested in 1966—estimated at about 140 million metric tons. In 1967, a year with a more normal weather pattern, grain production moved downward to an estimated 120 million tons—but was still some 10 to 15 percent above the average annual level achieved in 1961–65. Increased wheat production in 1966–67—with an average annual level almost 40 percent above the previous 5-year average annual production—enabled the Soviet Union to avoid the large purchases that were necessary during 1963–65, and a considerable reserve of wheat appears to have been stockpiled.

8. The level of production of the major technical crops rose sharply during the 1960's. Record or near-record harvests of cotton, sugar beets, and sunflower seeds were achieved in 1967. Recent gains in the production of these crops have enabled the Soviet Union to step up its exports of commodities such as cotton, sugar, and vegetable oil. The production of potatoes and vegetables—important items in the average Soviet diet—also reached near-record levels in 1967.

9. An uneven flow in the feed supply which was characteristic of Soviet agriculture during the 1960's strongly affected trends in livestock numbers with the result as shown in table 3, although the effects varied among the major categories of livestock. As of January 1, 1968, numbers of livestock were at the following levels compared with 1960: cattle, 131 percent; hogs, 95 percent; sheep and goats, 100 percent. A 12-percent drop in hog numbers in 1967 appears to have been at least partly the result of a planned cutback, carried out in recognition of the relatively low level of concentrates available for feeding

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in the Soviet Union, even in years of above-average feed supplies. Hence, a reduction in inventories of livestock probably achieved better feed-livestock ratios with resulting improvement in feeding efficiency. Production of all major livestock products was at record levels in 1967, reflecting the good feed reserves accumulated from the 1966 crops. As table 3 shows, however, production has fluctuated in recent years, depending primarily on animal numbers and changes in feed supplies.

TABLE 1.—*U.S.S.R.: Trends in net agricultural production, 1960–67*

A. INDEXES [1]

	1960	1961	1962	1963	1964	1965	1966	1967 [2]
Total	100	109	107	102	113	116	128	124
Crops	100	108	103	95	127	115	137	133
Livestock	100	109	111	108	101	117	121	117

B. AVERAGE ANNUAL RATES OF GROWTH (PERCENT)

	1956–67 [2]	1956–60	1961–65	1961–66	1961–67 [2]	1966–67 [2]
Straight annual average [3]	3.3	3.5	3.0	4.2	3.1	3.7
Moving average for 3 years [4]	[5] 3.5	4.2	3.0	3.0	.....	.....

[1] For previous years and for the methodology used in computing the index see the following reference: U.S. Congress, Joint Economic Committee, New Directions in the Soviet Economy, 1966, pp. 339–381.
[2] Preliminary data for 1967.
[3] The base year for the calculations shown in each line is the year before the stated initial year of period; i.e., the average annual rate of increase for 1956–60 is computed by relating production in 1960 to base year 1955.
[4] Average annual rates of growth were computed by relating the 3-year average for the terminal year (for example, using the average for 1959, 1960, and 1961 as output for 1960) to a similar 3-year average for the base year (1955).
[5] Terminal year is 1966.

TABLE 2.—*U.S.S.R.: Production of the major crops, 1960–67*

	1960	1961	1962	1963	1964	1965	1966	1967 [1]	1961–65 average	1966–67 [1] average
	Million metric tons									
Total grain: [2]										
Estimated	93.0	110.0	109.0	92.0	120.0	100.0	140.0	120.0	106.0	130.0
Soviet official	125.5	130.8	140.2	107.5	152.1	121.1	171.2	147.6	130.3	159.4
Wheat:										
Estimated	46.0	55.0	57.0	40.0	58.0	48.0	85.0	63.0	52.0	72.0
Soviet official	64.3	66.5	70.8	49.7	74.4	59.7	100.5	[3]	64.2	[3]
Potatoes [4]	84.4	84.3	69.7	71.8	93.6	88.7	87.9	95.0	81.6	91.4
Vegetables [4]	16.6	16.2	16.0	15.2	19.5	17.6	17.9	19.8	16.9	18.8
Sugar beets (factory use) [4]	57.7	50.9	47.4	44.1	81.2	72.3	74.0	86.8	59.2	80.4
Sunflower seeds:										
Estimated	3.65	4.37	4.41	3.94	5.57	5.01	5.66	6.1	4.66	5.9
Soviet official	3.97	4.75	4.80	4.28	6.06	5.45	6.15	6.6	5.07	6.4
Seed cotton [4]	4.29	4.52	4.30	5.21	5.28	5.66	5.98	6.0	4.99	6.0
	Thousand metric tons									
Flax fiber [4]	425	399	432	380	346	480	461	[3]	407	[3]

[1] Preliminary.
[2] Including pulses.
[3] Not available.
[4] Soviet official data.

TABLE 3.—*U.S.S.R.: Livestock numbers and production of major livestock products, 1960–67*

A. LIVESTOCK NUMBERS ON JAN. 1 (MILLION HEAD)

	1960	1961	1962	1963	1964	1965	1966	1967[1]	1968[1]	1961–65 average	1966–67[1] average
Cattle:											
Total	74.2	75.8	82.1	87.0	85.4	87.2	93.4	97.1	97.1	.....	.....
Cows	33.9	34.8	36.3	38.0	38.3	38.8	40.1	41.2	41.6	.....	.....
Hogs	53.4	58.7	66.7	70.0	40.9	52.8	59.6	58.0	50.8	.....	.....
Sheep and goats	144.0	140.3	144.5	146.4	139.5	130.7	135.3	141.0	143.9	.....	.....

B. PRODUCTION OF MAJOR LIVESTOCK PRODUCTS[2]

	1960	1961	1962	1963	1964	1965	1966	1967[1]	1968[1]	1961–65 average	1966–67[1] average
Meat:[3]											
Official	8.7	8.7	9.5	10.2	8.3	10.0	10.8	11.4	.....	9.3	11.1
Adjusted[4]	7.4	7.4	8.1	8.9	7.3	8.8	9.5	10.0	.....	8.1	9.8
Milk:[5]											
Official	61.7	62.6	63.9	61.2	63.3	72.6	76.0	79.3	.....	64.7	77.6
Adjusted[6]	55.5	56.3	58.1	56.3	59.5	68.2	71.4	74.5	.....	59.7	73.0
Eggs[7] (in billions)	27.4	29.3	30.1	28.5	26.7	29.1	31.7	33.7	.....	28.7	32.7
Wool[7][8] (thousand metric tons)	357	366	371	373	341	357	371	395	.....	362	383

[1] Preliminary data, except for livestock numbers of Jan. 1, 1967.
[2] Million metric tons except as noted.
[3] Slaughter weight basis, including slaughter fats, edible by-products, poultry, and miscellaneous meats.
[4] Official data reduced by 12–15 percent to arrive at estimated amount of meat actually produced.
[5] Includes milk fed to calves and pigs.
[6] Official data reduced by 6–10 percent to arrive at estimated amount of milk actually produced.
[7] Soviet official data.
[8] Grease basis.

IV. AGRICULTURE IN THE UNITED STATES AND THE U.S.S.R.: A STATISTICAL COMPARISON

1. The statistical materials in this study present a comparison of the structure, resource allocation, and performance of agriculture in the U.S.S.R. and the United States. These indicators provide, at best, only general guidelines for judging agricultural performance. Data on geographic and climatic conditions, soil, farm management techniques, and institutional and political frameworks are not presented, but are reflected in these comparative tables.

2. The main Soviet farm area extends further north than the U.S. grain belt; the Ukraine is at a latitude approximately the same as the spring wheat belt in the northern United States and Canada. This latitudinal position, coupled with low precipitation, results in a sometimes severe and dry, as well as capricious Russian climate. This has been a great limiting factor to expanding farm output since the growing and pasturing seasons are short with consequent low and unstable crop yields.

3. Landownership is basically different in the two countries. All land in the U.S.S.R. is Government property; nearly all land is socialized. The functions of agricultural production are guided by a central state plan operating through a complex of large collective farms, state farms, and auxiliary farm units attached to state enterprises. The collective farms occupy over one-half the total sown acreage; most of the remaining acreage is on state farms. The private sector, about 3 percent of total agricultural land, consists mainly of small plots tilled by collective and state farm members in their spare time. About one-third of total agricultural production comes from these plots and the produce is either consumed by the farmers' families or sold to the state or on farmers markets. American farms are small by comparison with the Soviet complexes; most are operated by the farmowner and his family, sometimes with one or two hired workers.

4. The functions of management are difficult to compare, given the differences in the size of Soviet and American farms. Soviet collective farm chairmen and state farm directors probably bear the closest resemblance to managers of American corporate-type farms. However, Soviet farm managers are not fully responsible for making economic decisions directly affecting the output and profits of the enterprises. Their position is to respond to directives rather than to make independent decisions. Recent Soviet interest in economic accountability suggests a trend toward more managerial autonomy in the actual production process. The difficult job of pricing farm products, however, remains in the Government's domain rather than as a function of consumer demand. Although the U.S. Government helps shape the broad activities of production, marketing, pricing, and trade through support of farm prices, income, and foreign trade expansion, internal operations are conducted, with minor exception, by private farmers.

5. Measures have been taken by the present Soviet regime to increase the level of inputs to agriculture and to improve incentives of the rural labor force. Financial concessions granted to farmers, more emphasis on livestock products in the Soviet diet, and greater inputs (fertilizers, pesticides, irrigation, and drainage) to improve yields

and output are measures to provide greater efficiency in agriculture than in the past.

6. Although the Soviets have recently narrowed the gap in many areas of agricultural efficiency, production, and performance, many deficiencies are still evident in the following tables. The United States uses less labor and land but more capital to achieve greater output. Farm efficiency, measured in terms of output per unit of input, is much higher in the United States than in the U.S.S.R. for land, livestock, and labor. Yields per acre of most crops are lower in the U.S.S.R. than in the United States.

7. Foreign trade in farm commodities is much more important for the United States, the world's largest exporter and second largest importer of agricultural products, than for the U.S.S.R. Both countries have adequate food supplies, in terms of calories per person, but the structure of the respective diets is very different. The Soviet diet still places great emphasis on cereal products and potatoes, whereas American diets are, to a great extent, composed of vegetables, fruits, foods of animal origin.

8. A single year comparison between the U.S.S.R. and the United States may be misleading because of yearly weather variations. Almost ideal weather in 1966 in both winter and spring grain regions of the U.S.S.R. resulted in a bumper grain output far above the previous record of 1964. The United States, however, experienced several periods of adverse weather which, along with reduced planted acreage, resulted in a slight decline from the 1965 record output of grains.

TABLE 1.—*United States and Soviet Union: Agricultural resources*

Item	Year	Unit	United States	Soviet Union	U.S.S.R. as percentage of United States
Population, July 1	1966	Millions	[1] 196.9	[2] 233.2	118
Civilian labor force (work experience)	1966	do	[3] 86.3	[4] 118.4	137
Annual average employment	1966	do	[5] 72.9	[4] 110.0	151
Annual average employment in agriculture	1966	do	[6] 5.2	[4] 39.8	765
Farm share of total employment (annual average).	1966	Percent	7.1	36.2	510
Sown cropland	1966	Millions of acres	[7] 298	[8] 511	171
Sown cropland per capita	1966	Acres	1.5	2.2	147
Tractors on farms, Jan. 1	1967	Thousands	[9] 4,815	[10] 1,660	34
Motor trucks on farms, Jan. 1	1967	do	[9] 3,100	[10] 1,017	33
Grain combines on farms, Jan. 1	1967	do	[9] 880	[10] 531	60
Agricultural consumption of electricity	1966	Billions of kilowatt-hours.	[11] 29.1	[12] 23.2	80
Use of commercial fertilizer in terms of principal plant nutrients:					
Total	1966	1,000 short tons	[13] 12,445	[14] 7,707	62
Per acre of sown area	1966	Pounds	84	30	36

[1] U.S. Department of Commerce, "*Statistical Abstract of the United States: 1967*," 88th edition, Washington, D.C., 1967, p. 5.
[2] U.S.S.R. Central Statistical Directorate, *Narodnoye khozyaystvo S.S.S.R. v 1965 g.*, Mosocow, 1966, p. 7.
[3] U.S. Department of Labor, "*Work Experience of the Population in 1966*," Washington, D.C., October 1967, p. 4.
[4] U.S. Department of Commerce, "*Estimates and Projections of the Labor Force and Civilian Employment in the U.S.S.R., 1950–75*," Washington, D.C., June 1967, p. 15.
[5] *Statistical Abstract* * * * op. cit., p. 221.
[6] U.S. Department of Agriculture, "*Agricultural Statistics 1967* " Washington, D.C., 1967, p. 528.
[7] "*Agricultural Statistics*" * * * op. cit., p. 531.
[8] U.S.S.R. Central Statistical Directorate, "*Strana sovetov za 50 let*," Moscow, 1967, p. 129.
[9] "*Agricultural Statistics*" * * * op. cit., p. 522.
[10] *Strana sovetov* * * * op. cit., p. 157.
[11] USDA, Statistical Reporting Service, "*Agricultural Prices*," Washington, D.C., December 1967, p. 25. Average consumption in June times 12.
[12] *Strana sovetov* * * * op. cit., p. 154.
[13] USDA, Statistical Reporting Service, "*Consumption of Commercial Fertilizers in the United States*," Washington, D.C., May 1967, p. 16.
[14] *Strana sovetov* * * * op. cit., p. 161.

TABLE 2.—*United States and Soviet Union: Farm numbers and size, and selected data per farm, 1966*

Item	Unit	U.S. farms	Soviet Union	
			Collective farms	State farms
Total	Number	[1] 3,239,000	[2] 36,493	[2] 12,196
Land area per farm	Acres	[1] 351	[3] 31,425	[3] 120,632
Sown area per farm	...do	[4] 92	[5] 6,919	[5] 18,038
Workers per farm	Number	[6] 1.6	[7] 417	[7] 651
Land area per worker [8]	Acres	219	75	185
Sown area per worker [9]	...do	58	17	28

[1] USDA, SRS, *Number of Farms and Land in Farms*, Washington, D.C., Jan. 10, 1968, p. 1.
[2] U.S.S.R. Central Statistical Directorate, *SSSR v tsifrakh v 1966 godu*, Moscow, 1967, p. 112.
[3] *Strana sovetov* * * * op. cit., p. 127. Total land area divided by number of farms. State category includes land of state farms and other state agricultural enterprises.
[4] Total sown area divided by number of farms.
[5] *Strana sovetov* * * * op. cit., p. 117.
[6] Average annual employment divided by number of farms.
[7] *Strana sovetov* * * * op. cit., p. 117. Households per collective farm and workers per state farm.
[8] Land area per farm divided by workers per farm.
[9] Sown area per farm divided by workers per farm.

TABLE 3.—*United States and Soviet Union: Crop acreage, 1966*

Crop	United States [1] (thousand acres)	Soviet Union [2] (thousand acres)	U.S.S.R. as percentage of United States
Corn, grain	56,933	7,907	14
Wheat	49,867	172,970	347
Rye	1,275	33,606	2,636
Oats	17,861	17,791	100
Barley	10,205	47,937	470
Sorghum grain in United States; pulses in U.S.S.R.	12,813	14,579	114
Rice	1,967	[3] 598	30
Cotton	9,552	6,079	64
Soybeans for beans	36,546	[4] 2,088	6
Sunflowers	[5] 73	12,355	16,924
Peanuts harvested for nuts	1,418	[6]	
Flax [7]	2,576	3,459	134
Sugar beets	1,161	9,390	809
Sugarcane, for sugar and seed	625	[6]	
Tobacco	977	[8] 348	36
Potatoes	1,464	20,756	1,418
Sweet potatoes	157	[6]	
Vegetables [9]	3,421	3,459	101
Fruits (including citrus), grapes, berries, and nuts	[10] 3,046	[11] 6,323	208
Citrus	[12] 932	[8] 20	2
Hay, all	[13] 65,140	[14] 79,072	121

[1] USDA, SRS, "*Crop Production, 1967 Annual Summary*," Washington, D.C., Dec. 19, 1967, pp. 37–40, unless otherwise noted. Area harvested.
[2] *SSSR v tsifrakh*, op. cit., pp. 84–85, unless otherwise noted. Sown area after completion of spring planting.
[3] *Sel'skaya zhizn'*, June 7, 1967.
[4] RSFSR Central Statistical Directorate, *Narodnoye khozyaystvo RSFSR v 1965 g.*, Moscow, 1966, p. 191; Data are for RSFSR, where almost all soybean area is located.
[5] USDA, Economic Research Service (ERS), "*Fats and Oils Situation*," FOS-239, Washington, D.C., Sept. 28, 1967, p. 27. Data are for Minnesota and North Dakota, where most commercial production is located.
[6] Negligible.
[7] Flaxseed in the United States; fiber flax in the U.S.S.R.
[8] USDA estimate.
[9] Commercial acreage only of 27 crops in the United States; total acreage of all vegetables, except melons, in the Soviet Union.
[10] *Agricultural Statistics*, op. cit., pp. 275, 298, for major berries. *Crop Production*, op. cit., p. 46, for other fruits, nuts, and grapes. Total includes bearing area or commercial area harvested of 26 major fruits, grapes, berries, and nuts.
[11] *Narodnoye khozyaystvo SSSR*, op. cit., p. 349. 1965 data on bearing area.
[12] *Crop Production*, op. cit., p. 46. Bearing area.
[13] *Ibid.*, p. 66.
[14] *Strana sovetov*, op. cit., p. 129. Sown annual and perennial grasses, including grain cut for green feed.

TABLE 4.—UNITED STATES AND SOVIET UNION YIELD PER ACRE AND PRODUCTION OF MAJOR CROPS 1966

Crop	Unit	Yield per acre		U.S.S.R. as percentage of United States	Unit	Production		U.S.S.R. as percentage of United States
		United States [1]	Soviet Union [2]			United States [1]	Soviet Union	
Corn, grain	Bushels	72.3	33.9	47	1,000 bushels	4,117,355	[3] 267,702	7
Wheat	do	26.3	18.1	69	do	1,311,102	[3] 3,123,155	238
Rye	do	21.8	14.1	65	do	27,775	[3] 472,416	1,701
Oats	do	44.9	29.0	65	do	801,327	[3] 516,705	64
Barley	do	38.5	23.0	60	do	393,186	[3] 1,102,296	280
Sorghum grain in United States; pulses in U.S.S.R.	do	55.8	15.9	28	do	714,992	[3] 231,812	32
Rice, rough	Pounds	4,322	2,354	54	1,000 short tons	4,251	[3] 704	17
Cotton, lint	do	480	[4] 738	154	1,000 bales	9,575	[5] 9,341	98
Soybeans for beans	Bushels	25.4	10.5	41	1,000 bushels	928,481	[3] 21,900	2
Sunflower seed	Pounds	[6] 894	1,008	113	1,000 short tons	[6] 33	[6] 6,228	18,873
Peanuts harvested for nuts	do	1,700	(7)		do	1,205	(8)	
Flaxseed	Bushels	9.1	[9] 5.2	57	1,000 bushels	23,390	[9] 22,400	96
Sugar beets	Short tons	17.5	8.7	50	1,000 short tons	20,342	[5] 81,570	401
Sugarcane for sugar and seed	do	39.2	(7)		do	24,515	(8)	
Sugar production					do	[10] 6,187	[11] 10,736	174
Tobacco	Pounds	1,933	1,161	60	1,000 pounds	1,888,497	[3] 404,100	21
Fiber flax	do	(7)	294		1,000 short tons	(7)	[5] 508	
Potatoes	Hundredweight	210	84	40	1,000 hundredweight.	306,902	[3] 1,744,059	568
Sweet potatoes	do	87	(7)		do	13,697	(8)	
Vegetables [12]	Short tons	[13] 5.7	5.7	100	1,000 short tons	19,650	19,731	100
Citrus	do	[14] 12.4	(7)		1,000 boxes	[15] 11,553	(7)	
Grapes	do	(7)	(7)		1,000 short tons	[15] 3,734	[16] 3,724	100
Total fruits (including citrus) grapes, berries, and nuts.	do	(7)	(7)		do	[17] 22,370	[16] 8,603	38
Hay	do	[18] 1.86	[19] .67	36	do	[18] 121,027	[19] 53,350	44

[1] *Crop production* * * * op. cit., pp. 3–5, unless otherwise noted. Area harvested.
[2] Derived from production and area unless otherwise noted.
[3] U.S. Department of Agriculture estimate.
[4] Entire area is irrigated.
[5] *Strana sovetov* * * * op. cit., p. 131.
[6] *Fats and Oils* * * * op. cit., p. 27. Data are for Minnesota and North Dakota, where most commercial production is located.
[7] Not available.
[8] Negligible.
[9] U.S. Department of Agriculture, Foreign Agricultural Service (FAS), *World Agricultural Production and Trade*, Washington, D.C., February 1968, p. 31.
[10] Continental beets and cane, including Hawaii, Puerto Rico, and Virgin Islands.
[11] *Strana sovetov* * * * op. cit., p. 102. Production from domestic beets and imported Cuban raw sugar.
[12] Commercial production of 27 crops in the United States; total output of all vegetables, except melons, in the Soviet Union.
[13] Derived from production and area.
[14] *Crop production* * * * op. cit., p. 40. Data are for 4 major citrus fruits.
[15] Ibid., p. 44. Data are for 6 major citrus fruits.
[16] *Strana sovetov* * * * op. cit., p. 147.
[17] *Crop Production* * * * op. cit., pp. 43, 45. Includes 24 major fruits, grapes, berries and nuts.
[18] *Ibid.*, p. 66. All hay.
[19] Sown area only. Production datum is U.S. Department of Agriculture estimate.

TABLE 5.—UNITED STATES AND SOVIET UNION: LIVESTOCK NUMBERS, BEGINNING OF YEAR

Livestock	Year	United States [1] (million head)	Soviet Union [2] (million head)	U.S.S.R. as percentage of United States
All cattle	1967	108.5	97.1	89
Cows	1967	[3] 49.8	[4] 41.2	83
Hogs	1967	51.0	58.0	114
Sheep	1967	23.7	135.5	572
Poultry	1966	[5] 399.9	[6] 490.5	123

[1] *Agricultural Statistics* * * * op. cit., pp. 362–406.
[2] *Strana sovetov* * * * op. cit., p. 150, unless otherwise noted.
[3] Cows, 2 years and older, included in cattle.
[4] All cows included in cattle.
[5] Chickens and turkeys only, excluding commercial broilers.
[6] *Narodnoye khozyaystvo S.S.S.R.* * * * op. cit., p. 375. All poultry.

TABLE 6.—UNITED STATES AND SOVIET UNION: PRODUCTION OF LIVESTOCK COMMODITIES, 1966

Commodity	Unit	United States	Soviet Union	U.S.S.R. as percentage of United States
Beef and veal	Million pounds	[1] 20,604	[2] 8,245	40
Pork	do	[1] 11,328	[2] 7,440	66
Mutton, lamb, and goat	do	[1] 650	[2] 1,587	244
Poultry meat	do	[3] 7,596	[2] 1,764	23
Lard [4]	do	1,932	1,800	93
Tallow and grease [4]	do	5,026	[4] 530	11
Margarine and shortening	do	[5] 5,291	[6] 1,321	25
Milk (cows)	do	[7] 120,230	[2] 147,990	123
Butter	do	[8] 1,128	[2] 2,297	204
Eggs	Billion	[9] 66.4	[10] 31.7	48
Wool [11]	Million pounds	[12] 250	[10] 818	327

[1] *Agricultural Statistics*, op. cit., p. 418.
[2] USDA estimate.
[3] *Agricultural Statistics*, op. cit., p. 492. Total production certified under Federal inspection.
[4] USDA, FAS, *Foreign Agriculture Circular*, FFO 9–67, Washington, D.C., October 1967, pp. 24–25.
[5] *Agricultural Statistics*, op. cit., pp. 170–171.
[6] *Strana sovetov*, op. cit., p. 102.
[7] *Agricultural Statistics*, op. cit., p. 445.
[8] USDA, ERS, *Dairy Situation*, DS–318, Washington, D.C., Nov. 6, 1967, p. 18.
[9] *Agricultural Statistics*, op. cit., p. 501.
[10] *Strana sovetov*, op. cit., p. 149.
[11] Greasy basis.
[12] *Agricultural Statistics*, op. cit., p. 412.

TABLE 7.—UNITED STATES AND SOVIET UNION: AREA OF MAJOR GRAINS, 1961–65 AVERAGE, 1966

Item	1961–65 average			1966		
	United States [1] (1,000 acres)	Soviet Union [2] (1,000 acres)	U.S.S.R. as percentage of United States	United States [1] (1,000 acres)	Soviet Union [3] (1,000 acres)	U.S.S.R. as percentage of United States
Corn, grain	56,658	14,544	26	56,933	7,907	14
Oats	21,162	17,989	85	17,861	17,791	100
Barley	11,135	45,269	407	10,205	47,937	470
Sorghum grain and pulses [4]	12,131	19,657	162	12,813	14,579	119
4 feed grains	101,086	97,459	96	97,812	88,214	90
Wheat	48,017	164,569	343	49,867	172,970	347
Rye	1,655	40,277	2,434	1,275	33,606	2,636
Buckwheat	[5] 46	4,537	9,863	(6)	4,695	----------
Rice	1,742	393	22	1,967	598	30
4 food grains	51,460	209,776	408	[7] 53,109	211,869	399
Total, 8 grains	152,546	307,235	201	[7] 150,921	285,504	189

[1] *Crop Production*, * * * op. cit., p. 36.
[2] *Narodnoye khozyaystvo SSSR 1965* * * * op. cit., p. 284, and *Narodnoye khozyaystvo SSSR 1966*, p. 247.
[3] *SSSR v tsifrakh* * * * op. cit., p. 84.
[4] Sorghum grain for United States; pulses for U.S.S.R.
[5] 1961–64 only.
[6] Not available.
[7] Excludes buckwheat in United States.

TABLE 8.—UNITED STATES AND SOVIET UNION: YIELDS PER ACRE OF MAJOR GRAINS, 1961–65 AVERAGE, 1966

Item	1961–65 average			1966		
	United States [1] (bushels)	Soviet Union [2] (bushels)	U.S.S.R. as percentage of United States	United States [1] (bushels)	Soviet Union [2] (bushels)	U.S.S.R. as percentage of United States
Corn, grain	66.3	25.2	38	72.3	33.9	47
Oats	45.2	20.3	45	44.9	29.0	65
Barley	36.2	17.9	49	38.5	23.0	60
Sorghum grain and pulses [3]	45.0	12.6	28	55.8	15.9	28
4 feed grains [4]	2,881	882	31	3,222	1,111	34
Wheat	25.3	11.2	44	26.3	18.1	69
Rye	19.7	13.3	68	21.8	14.1	65
Buckwheat	[2] 19.5	7.1	36	([5])	8.1	----------
Rice	86.5	43.3	50	94.5	51.8	55
4 food grains [4]	1,582	681	43	1,670	1,029	62
Total, 8 grains [4]	2,438	744	31	2,662	1,107	42

[1] *Crop Production* * * * op. cit., p. 39, unless otherwise noted.
[2] Derived from tables 7 and 9.
[3] Sorghum grain for United States; pulses for U.S.S.R.
[4] Pounds per acre.
[5] Not available.

TABLE 9.—UNITED STATES AND SOVIET UNION: PRODUCTION OF MAJOR GRAINS, 1961–65 AVERAGE, 1966

Item	1961–65 average			1966		
	United States [1] (million bushels)	Soviet Union [2] (million bushels)	U.S.S.R. as percentage of United States	United States [1] (million bushels)	Soviet Union [2] (million bushels)	U.S.S.R. as percentage of United States
Corn, grain	3,758	367	10	4,117	268	7
Oats	953	365	38	801	517	65
Barley	398	810	204	393	1,102	280
Sorghum grain and pulses [3]	548	248	45	715	232	32
4 feed grains [4]	145	43	30	158	49	31
Wheat	1,214	1,844	152	1,312	3,123	238
Rye	33	535	1,621	28	472	1,686
Buckwheat	[5] .9	32	3,556	([6])	38	----------
Rice	151	17	11	189	31	16
4 food grains [4]	41	71	173	[7] 44	109	248
Total, 8 grains [4]	186	114	61	[7] 202	158	78

[1] *Crop Production* * * * op. cit., p. 41.
[2] U.S. Department of Agriculture estimate.
[3] Sorghum grain for the United States; pulses for U.S.S.R.
[4] Million short tons.
[5] 1961–64 only.
[6] Not available.
[7] Excludes buckwheat in the United States.

V. FREIGHT TRANSPORTATION

1. Although taxed severely at times, the Soviet transportation system continues to provide the required support to national economic growth. In 1961–67 total freight traffic increased by almost 8 percent a year, outstripping the growth in GNP.

2. The workhorse of the Soviet transport system, the railroad network, leads the world in rail freight density. In 1967, the railroads carried an average of 16.2 million ton-kilometers per kilometer of route (133,300 kilometers) and accounted for more than two-thirds of total ton-kilometers. By comparison U.S. railroads in 1966 handled only 3.3 million ton-kilometers of freight per kilometer of route (338,900 kilometers) and accounted for 43 percent of total intercity freight as measured in ton-kilometers. In recent years, however, traffic on other modes of Soviet transport—especially pipeline, maritime, and air transport—has been growing much more rapidly than rail traffic (table 1). Motor transport handles a huge volume of short-haul freight while water, rail, and pipeline carriers are favored for the long distance movement of bulky, heavy commodities. As a result the relative standing of the various modes differs greatly when measured by tons carried rather than ton-kilometers moved. Because of differences in the nature of the traffic, the average revenue per ton-kilometer of freight also varies considerably among the different modes of transportation. In the period since 1960, however, a value-weighted index of growth in freight transportation (table 2), grew at about the same rate as an index based on ton-kilometers.

U.S.S.R.: Freight traffic by mode, 1966

	Tons carried (million)	Average length of haul (kilometers)	Ton-kilometers (billion)	Percent	
				Tons carried	Ton-kilometers
Railroads	2,482	812	2,106	17	69
Maritime	131	3,375	443	1	15
Oil pipelines	248	666	165	2	6
Motor transport	11,446	14	155	78	5
Inland water	279	494	138	2	5
Air	1	1,082	1	(1)	(1)
Total	14,587	----------	2,918	100	100

(1) Negligible.

3. Since 1956 the U.S.S.R. has been engaged in an intensive program of replacing steam locomotives with electric and diesel locomotives. By 1967 routes served by electric and diesel locomotives represented 72 percent of the total and handled 92 percent of all rail freight traffic; electrified railroads alone accounted for 22 percent of the route length and carried about 45 percent of rail freight traffic. The acquisition of new locomotives and rolling stock has taken about half of all investment funds allocated to the railroad system since 1960. Con-

siderable investment also has been devoted to the construction of new railroads. About 7,100 kilometers of new rail lines were commissioned during 1961–67.

High priority has been given to construction of rail lines to two new oil-producing areas, one located on the Mangyshlak Peninsula on the Caspian Sea, the other in Tyumen Oblast in Western Siberia. Other rail lines are being built to new sources of timber and to other areas of new development.

4. One of the most significant developments in Soviet transportation during this decade has been the phenomenal growth of the merchant fleet. In 1960 the fleet consisted of about 650 ships of 4 million deadweight tons (DWT) and stood 13th among the world's merchant fleets in terms of deadweight tonnage. At the end of 1967 the fleet consisted of about 1,200 ships of 10 million DWT and had moved up to seventh place. To keep pace with the growth of the fleet and expanding foreign trade, seaports are being improved and modernized rapidly. At present about 50 percent of the U.S.S.R.'s seaborne foreign trade is carried on Soviet ships.

5. By the end of 1967 the network of oil pipelines in the U.S.S.R. had increased to 32,200 kilometers, almost double the length in service at the end of 1960. Priority has recently been given to the construction of gas pipelines as part of the drive to substitute cheap natural gas for coal in the economy. At the end of 1967 the U.S.S.R. had 52,800 kilometers of gas pipelines, an increase of 31,800 kilometers compared with 1960. Despite this rapid expansion, the Soviet Union's network of oil and gas pipelines is still dwarfed by the U.S. network, which at the end of 1966 amounted to 321,900 kilometers of oil pipelines and 420,000 kilometers of gas pipelines. Among the most important new Soviet oil pipelines being built are those intended to serve the new oil producing regions in West Siberia and the Mangyshlak peninsula. Another pipeline is also being constructed parallel to the westernmost portion of the existing Friendship pipeline to share in the delivery of Soviet crude oil to Eastern Europe.

6. Societ civil aviation has grown extremely rapidly in recent years. In 1967 Aeroflot carried more than 53 million passengers on domestic and foreign routes, three times the number in 1960 but far below the 129 million passengers carried by U.S. airlines in 1967. At the end of 1967 Aeroflot operated over 500,000 kilometers of scheduled routes, of which more than 115,000 kilometers were international. Aeroflot's international routes—the fastest growing part of its network—have increased 125 percent since 1960. The U.S.S.R. now has air agreements with 57 countries; in 1966–67, agreements were concluded with Canada, Japan, Switzerland, and the United States as well as with several of the less developed Free World countries. Direct service between the United States and the U.S.S.R. probably will begin by mid-1968, and service to South America and Australia is being planned. Over the past 2 years Aeroflot has increased significantly the proportion of jet and turboprop aircraft in its inventory. In September 1967, a new Soviet long-range jet—the Ilyushin 62—entered international service on the Moscow-Montreal route. The IL–62 has subsequently been introduced on the Moscow-Rome, Moscow-Paris, and Moscow-London routes.

7. While pressing ahead in other areas of transportation, the U.S.S.R. has neglected the development of a modern road system. At the end of 1966 the total length of surfaced roads in the Soviet Union was only 405,600 kilometers; the United States had almost 6 million kilometers. The underdevelopment of Soviet road transport is also apparent in the difference in the size of the United States and Soviet truck parks. At the end of 1967 the U.S.S.R. had about 4 million trucks in civilian use, and by the end of 1966 there were over 15.5 million trucks in the U.S. civilian inventory. Although the U.S.S.R. recognizes that the lack of good roads is a real handicap to its economy, particularly in the agricultural sector, the progress in road construction has been relatively slow. In 1961–66 about 22,500 kilometers of hard surface roads were added per year. About 13,000 kilometers of new construction is planned for 1968; an equal length of hard surface roads may be added by surfacing existing dirt roads.

Note to Tables on Freight Transportation

The data on freight traffic in the following tables are taken from Soviet statistical publications. It should be noted, however, that traffic reported for motor transport includes traffic carried by both common carrier transport organizations and other organizations and enterprises.

In constructing the index of the value of total freight traffic in table 2, the individual ton-kilometer indexes were weighted by the estimated average revenue per ton-kilometer in the various modes of transport. Although it can be argued that an alternative set of weights based on unit costs would be more appropriate, an index of the value of total freight traffic based on such unit cost weights does not differ appreciably from the index presented in table 2.

Table 1.—*U.S.S.R.: Growth of freight traffic by type of carrier, 1960–67*

	All carriers	Railroads	Motor transport	Oil pipelines	Inland water	Maritime	Air
	Billion ton-kilometers [1]						
1960	1,885.7	1,504.3	98.5	51.2	99.6	131.5	0.563
1961	1,998.2	1,556.6	105.7	60.0	106.0	159.1	.802
1962	2,116.9	1,646.3	111.9	74.5	109.9	173.4	.890
1963	2,301.7	1,749.4	119.7	90.9	114.5	226.3	.913
1964	2,521.5	1,854.1	132.1	112.1	124.5	297.6	1.141
1965	2,764.0	1,950.2	143.1	146.7	133.9	388.8	1.338
1966	2,918.0	2,016.0	155.1	165.0	137.7	442.8	1.445
1967 [2]	3,180.0	2,162.0	166.0	183.0	144.0	523.0	1.68
	Index (1960=100)						
1960	100	100	100	100	100	100	100
1961	106	104	107	117	106	121	142
1962	112	109	114	146	110	132	158
1963	122	116	122	178	115	172	162
1964	134	123	134	219	125	226	203
1965	147	130	145	287	134	296	238
1966	155	134	157	322	138	337	257
1967	169	144	169	357	145	398	298

[1] Data for 1960–66 are from official Soviet statistics. (U.S.S.R. Central Statistical Administration. *Strana Sovetov za 50 let*, Moscow, 1967, pp. 169, 182, and *Transport i svyaz' SSSR*, Moscow, 1967, pp. 25, 220.)

[2] Figures for all carriers except motor transport are based on figures and percentage relationships to 1966 data reported by the U.S.S.R. Central Statistical Administration in the Soviet press. (*Pravda*, Jan. 26, 1968, p. 2.) A minor adjustment was made in the railroad figure to include an estimate for traffic on narrow-gage railroads. The figure for motor transport is an estimate which assumes that the plan of 162,200,000,000 ton-kilometers was overfulfilled by about 4,000,000,000 ton-kilometers, because common carrier motor transport overfulfilled its plan. (*Strana Sovetov za 50 let*, Moscow, 1967, p. 180; and *Pravda*, Jan. 25, 1968, p. 2.)

TABLE 2.—*U.S.S.R.: Value and volume indexes of the growth of total freight traffic, 1960–67*

	Value [1]		Volume	
	Million rubles	Index (1960=100)	Billion ton-kilometers	Index (1960=100)
1960	16,379	100	1,885.7	100
1961	17,462	107	1,998.2	106
1962	18,468	113	2,116.9	112
1963	19,827	121	2,301.7	122
1964	21,723	133	2,521.5	134
1965	23,535	144	2,764.0	147
1966	25,117	153	2,918.0	155
1967	27,073	165	3,180.0	169

[1] Expressed in terms of new rubles at 1955 prices. Sum of the value of production for each carrier. This was obtained by multiplying ton-kilometers by estimated average revenue for 1955 (new kopeks per ton-kilometer) as follows:

Railroads, 0.448 (1).
Motor transport, 8.78. Calculated from the rate per ton for class 2 freight (presumed typical) at the average haul distance in 1955, according to rates established July 1, 1955 (2).
Pipelines, 0.20. Estimated same as cost per ton-kilometer, which was calculated from ton-kilometers and total costs (3).
Inland water, 0.387. Cost plus profit (4).
Maritime, 0.297. Estimated same as cost per ton (5).
Air, 20.

SOURCE:
(1) Minsker, S. S., compiler. *Razvitiye zheleznodorozhnogo transporta v semiletii, sbornik statey*, Moscow, 1960, p. 320.
(2) USSR Ministry of Automobile Transport and Highways. *Spravochnik yedinykh tarifov na perevozku gruzov avtomobil 'nym transportom*, Moscow 1955, p. 5.
(3) Akademiya Nauk SSSR, Institut Kompleksnykh Transportnykh Problem. *Transportnyye izderzhki v narodnom khozyaystve SSSR*, Moscow, 1959, p. 34.
(4) USSR Central Statistical Administration, *Transport i svyaz' SSSR*, Moscow, 1957, p. 24, *Rechnoy transport*, no. 2, 1957, p. 7.
(5) USSR Central Statistical Administration. *Transport i svyaz' SSSR*, Moscow, 1957, p. 24.

VI. CAPITAL INVESTMENT

1. During the 1960's the rate of growth of Soviet investment has fallen drastically from that registered in the decade of the 1950's. The construction component of investment, because of its very large weight, is the dominant influence determining the growth of total investment.[1] Much of the decline in growth of total investment in 1961–63, for example, was due to yearly cutbacks in the absolute volume of housing construction. The acceleration of growth in 1964–65 was associated with a growing volume of agricultural and services construction in 1964–65 and a resurgence of housing construction in 1965 (see table 4). The growth rate of investment in 1966–67, though somewhat below that of 1964–65, has been buoyed up by further expansion of construction work in agriculture, services, and housing. Conversely, growth of the equipment component slumped badly beginning in 1965, and continued to depress the growth of total investment in 1966–67 (see table 1).

U.S.S.R.: Average annual rates of growth of gross fixed investment, 1951–67 [1]

[In percent]

	1951–60	1961–63	1964–65	1966–67
Total investment	12.7	4.8	8.6	7.4
Construction	13.0	1.5	7.3	8.1
Equipment	11.6	11.8	10.3	5.7

[1] The base year for the calculations shown in each column is the year before the stated initial year of the period; that is, the average annual rate of increase for 1951–60 is computed by relating investment in 1960 to base year 1950.

2. The absence of 1967 investment data for most sectors of the economy, including individual branches of industry (see tables 2 and 5), precludes a precise analysis of trends in the 2-year period. Based on the pattern of investment in 1966 together with bits of evidence obtained from press reports in 1967, however, it appears that in 1966–67 there was a continuation of the rise (begun in 1965) in the share of total investment allocated to consumer-oriented sectors (see table 4). [2] The surge in investment in the housing and services sectors in 1965–66 caused the average annual rate of growth in investment of direct benefit to consumers to more than double in comparison with 1961–64. Nevertheless, investment in the important agricultural sector grew much more slowly during 1966–67 than in 1961–65 and at only about half the rate originally scheduled for 1966–70. Especially noteworthy is the failure so far to carry out the massive increases of investment in agricultural equipment called for by the Brezhnev program promulgated in 1965. Outlays for agricultural equipment in 1966–67 stagnated near the 1965 level. Except for the construction industry—whose development was vital to implementing the construction programs described above in paragraph 1—investment in the producer-oriented sector grew very little in 1966; invest-

[1] Under Soviet classification, construction (including all assembly and installation work) accounts for about 60 percent of total investment, acquisition of equipment for about 33 percent, and other capital outlays (a category including project designing and similar items) for about 7 percent.

[2] "Consumer-oriented" includes agriculture, light and food industry, housing, and services.

ment in heavy industry and transport and communications alike showed the smallest percentage increase since 1953. Preliminary evidence suggests that these trends probably continued in 1967.

3. Although data are incomplete, investment in chemicals and ferrous metallurgy apparently stagnated or even declined slightly in 1966–67, contrary to plan. Shortages of equipment as well as technical difficulties in design and construction appear to have been the primary reasons for the poor investment performance in these two industries. The modest gain in investment in the consumer goods industries (light and food) in 1966 was followed by a more sizable increase in 1967 as the result of an urgent Government campaign to increase the capacity of plants engaged in the industrial production of soft goods and processed foods.

4. The smaller increments of investment in industry and agriculture during 1965–66 were quickly reflected in a slowdown in growth of their total plant and equipment. And even these lower rates of growth were achieved only by reducing the rate of retirement of older facilities and stepping up expenditures on their repair. This policy, however, postpones retirement of the most obsolete and high-cost plant and equipment, thus counteracting the falling rate of investment at a high cost in terms of productivity.

U.S.S.R.: Average annual rates of growth of plant and equipment, 1961–67

[In percent]

	1961–64	1965	1966	1967
Industry	10.5	9.5	8.5–9.0	(1)
Agriculture	10.0	8.5	7.0	(1)

[1] Not available.

Note to Tables on Investment

Recent Soviet reporting of statistics on gross fixed investment tends to obscure the record of performance in many respects. The major problems are as follows: Information on actual investment in 1967 has not been reported in any detail; the official investment series was again revised in 1966 [1] and is available in revised form only for selected years; some investment categories apparently have been, or are being, reclassified; and press statistics on investment in various branches of industry are often unreliable indicators because of shifts in the mode of financing investment brought about by the economic reforms in industry.

Although the newly revised investment series is still said to be in estimate prices of July 1, 1955, the latest adjustment reflects reductions in 1962 of prices for project-survey work and of valuations for certain types of construction and installation work. In addition—and for reasons unexplained—the category of investment in "equipment for existing state institutions, schools, hospitals, kindergartens, and nurseries" was entirely eliminated from the investment series. The result was a downward revision in investment for 1964—the most recent year for which there are data from the original and revised series—of almost 1 billion rubles, half of which was due to elimination of the above-mentioned equipment category. The revision applied to state investment only; the series on collective farm investment and individual housing investment remain unaffected. Because of the revision, however, the figures in the accompanying tables generally differ from those published in the Joint Economic Committee reports, *Annual Economic Indicators for the U.S.S.R.* (1964) and *Current Economic Indicators for the U.S.S.R.* (1965). Although most of the figures in the present tables are based on data appearing in the Soviet yearbooks *Narodnoye khozyaystvo SSSR v 1965 g.* and *Strana Sovetov za 50 let*, a number of them are estimates based on inferences and data from other sources.

[1] For a brief discussion of a previous revision in 1964, see U.S. Congress, Joint Economic Committee, *Current Economic Indicators for the U.S.S.R.*, Washington, D.C. 1965, p. 51.

TABLE 1.—*U.S.S.R.: Gross fixed investment by function, 1950, 1955, and 1960–67* [1]

	Billions of rubles [2]									
	1950	1955	1960	1961	1962	1963	1964	1965	1966	1967 [3]
Total investment	10.9	19.6	35.9	[4] 37.4	39.3	41.3	45.0	48.7	52.2	56.2
Construction [5]	7.1	12.7	24.1	24.3	24.7	25.2	26.7	29.0	31.0	33.9
Equipment [6]	3.2	5.4	9.6	10.8	12.1	13.4	15.2	16.3	17.3	18.2
Other capital outlays [7]	0.6	1.5	2.2	2.4	2.5	2.7	3.1	3.4	3.9	4.1
	Rates of growth (percent)									
	1951–55 [8]	1956–60 [9]	1961	1962	1963	1964	1965	1966	1967 [3]	
Total investment [10]	12.4	12.9	4.2	5.0	5.2	8.9	8.3	7.1	7.7	
Construction	12.3	13.7	0.8	1.6	2.0	6.0	8.6	6.9	9.4	
Equipment	11.0	12.2	12.5	12.0	10.7	13.4	7.2	6.1	5.2	
Other capital outlays	20.1	8.0	9.1	4.2	8.0	14.8	9.7	14.7	5.1	

[1] Based on 1966 revised Soviet investment series appearing in *Narodnoye khozyaystvo SSSR v 1965 g.* (published 1966) and *Strana Sovetov za 50 let* (published 1967). The ruble values for total investment have been rounded from unrounded data accurate to the nearest million rubles (see table 2) in order to bring them into conformity with data on the functional components.
[2] New rubles expressed in prices of July 1, 1955.
[3] Estimates based on preliminary data.
[4] Sum of the rounded components exceeds the rounded total.
[5] Including assembly and installation work.
[6] Excluding assembly and installation work.
[7] For surveys, plans and designs, technical documentation, and the like.
[8] Average annual rate (1950 base).
[9] Average annual rate (1955 base).
[10] Computed from unrounded data shown in table 2.

TABLE 2.—*U.S.S.R.: Gross fixed investment in consumer-oriented and producer-oriented sectors of the economy, 1950, 1955, and 1960–67* [1]

[In millions of rubles [2]]

	1950	1955 [3]	1960	1961	1962	1963	1964	1965	1966	1967 [4]
Total investment	10,903	19,600	35,914	37,424	39,291	41,320	44,986	48,733	52,175	[3] 56,200
Consumer-oriented	5,598	10,800	20,737	21,315	22,174	23,055	24,617	27,081	29,415	([5])
Agriculture	1,657	3,800	5,155	5,680	6,288	6,946	8,201	8,967	9,557	[3] 10,400
Consumer goods industry [6]	512	900	1,945	1,752	1,827	1,908	2,074	2,181	2,313	[3] 2,500
Housing	2,007	3,800	8,209	7,821	7,671	7,654	7,334	8,162	8,956	([5])
Services	1,422	2,300	5,428	6,062	6,388	6,547	7,008	7,771	8,589	([5])
Producer-oriented	5,305	8,800	15,177	16,109	17,117	18,265	20,369	21,652	22,760	([5])
Construction industry	287	600	1,021	1,118	1,045	1,074	1,200	1,312	1,540	([5])
Heavy industry [7]	3,672	6,600	10,728	11,373	12,149	12,976	14,644	15,495	16,200	[3] 17,000
Transport and communications	1,346	1,600	3,428	3,618	3,923	4,215	4,525	4,845	5,020	([5])

[1] Based on 1966 revised Soviet investment series appearing in *Narodnoye khozyaystvo SSSR v 1965 g.* (1966) and *Strana Sovetov za 50 let* (1967). In this table (as well as in tables 3 and 4) sectors of the economy have been classified as consumer-oriented or producer-oriented according to the disposition of the bulk of their output (goods and services). Although such a distribution is rather arbitrary, it does provide a rough indicator of official allocational policies in the short run, i.e., investment in sectors directly benefiting consumers versus investment in sectors producing goods for future growth.
[2] New rubles expressed in prices of July 1, 1955.
[3] Estimated to the nearest 100,000,000 rubles.
[4] Preliminary.
[5] Not available.
[6] Essentially the light and food industries which are primarily engaged in producing nondurable consumer goods.
[7] Includes investment in facilities producing durable consumer goods such as passenger cars, radios, television sets, refrigerators, and washing machines.

TABLE 3.—*U.S.S.R.: Indexes of gross fixed investment in consumer-oriented and producer-oriented sectors of the economy, 1960–67* [1]

[In percent (1960=100)]

	1960	1961	1962	1963	1964	1965	1966	1967
Total investment	100	104.2	109.4	115.1	125.3	135.7	145.3	156.5
Consumer oriented	100	102.8	106.9	111.2	118.7	130.6	141.8	(2)
Agriculture	100	110.2	122.0	134.7	159.1	173.9	185.4	201.7
Consumer goods industry	100	90.1	93.9	98.1	106.6	112.1	118.9	128.5
Housing	100	95.3	93.4	93.2	89.3	99.4	109.1	(2)
Services	100	111.7	117.7	120.6	129.1	143.2	158.2	(2)
Producer oriented	100	106.1	112.8	120.3	134.2	142.7	150.0	(2)
Construction industry	100	109.5	102.4	105.2	117.5	128.5	150.8	(2)
Heavy industry	100	106.0	113.2	121.0	136.5	144.4	151.0	158.5
Transport and communications	100	105.5	114.4	123.0	132.0	141.3	146.4	(2)

[1] Based on data in table 2.
[2] Not available.

TABLE 4.—*U.S.S.R.: Rates of growth of gross fixed investment in consumer-oriented and producer-oriented sectors of the economy, 1951–67* [1]

[In percent]

	1951–55 [2]	1956–60 [3]	1961	1962	1963	1964	1965	1966	1967
Total investment	12.4	12.9	4.2	5.0	5.2	8.9	8.3	7.1	7.7
Consumer oriented	14.0	13.9	2.8	4.0	4.0	6.8	10.0	8.6	(4)
Agriculture	18.1	6.3	10.2	10.7	10.5	18.1	9.3	6.6	8.8
Consumer goods industry	11.9	16.7	−9.9	4.3	4.4	8.7	5.2	6.1	8.1
Housing	13.6	16.7	−4.7	−1.9	−0.2	−4.2	11.3	9.7	(4)
Services	10.1	18.7	11.7	5.4	2.5	7.0	10.9	10.5	(4)
Producer oriented	10.7	11.5	6.1	6.3	6.7	11.5	6.3	5.1	(4)
Construction industry	15.9	11.2	9.5	−6.5	2.8	11.7	9.3	17.4	(4)
Heavy industry	12.4	10.2	6.0	6.8	6.8	12.9	5.8	4.5	4.9
Transport and communications	3.5	16.5	5.5	8.4	7.4	7.4	7.1	3.6	(4)

[1] Based on data in table 2.
[2] Average annual rate (1950 base).
[3] Average annual rate (1955 base).
[4] Not available.

TABLE 5.—*U.S.S.R.: Gross fixed investment in industry, by branch, 1950 and 1960–67* [1]

[In millions of rubles] [2]

	1950	1960	1961 [3]	1962 [3]	1963 [3]	1964	1965	1966	1967
Industry, total	4,184	12,673	13,125	13,976	14,884	16,718	17,676	18,513	[4] 19,500
Ferrous metallurgy	456	1,192	1,296	1,380	1,415	1,395	1,554	[4] 1,500	(5)
Chemicals	166	890	1,040	1,137	1,433	1,948	1,924	[4] 2,000	(5)
Fuels and power	1,651	3,739	3,897	4,110	4,437	5,112	5,687	(5)	(5)
Machine building	631	1,787	2,018	2,362	2,405	2,580	2,775	(5)	(5)
Construction materials	128	997	1,003	918	939	841	857	(5)	(5)
Consumer goods	512	1,945	1,752	1,827	1,908	2,074	2,181	2,313	[4] 2,500
Others [6]	640	2,123	2,119	2,242	2,347	2,768	2,698	(5)	(5)

[1] Based on 1966 revised investment series appearing in *Narodnoye khozyaystvo SSSR v 1965 g.* (1966) and *Strana Sovetov za 50 let* (1967).
[2] New rubles expressed in prices of July 1, 1955.
[3] Estimated.
[4] Estimated to the nearest 100,000,000 rubles.
[5] Not available.
[6] Believed to include the following: nonferrous metallurgy; timber, paper, and woodworking; petrochemicals; abrasives; glass and porcelain; metalworking and repair; and peat and shale.

TABLE 6.—*U.S.S.R.: Indexes of gross fixed investment in industry, by branch, 1960–67* [1]

[In percent (1960=100)]

	1960	1961	1962	1963	1964	1965	1966	1967
Industry, total	100	103.6	110.3	117.4	131.9	139.5	146.1	153.9
Ferrous metallurgy	100	108.7	115.8	118.7	117.0	130.4	125.8	(2)
Chemicals	100	116.9	127.8	161.0	218.9	216.2	224.7	(2)
Fuels and power	100	104.2	109.9	118.7	136.7	152.1	(2)	(2)
Machine building	100	112.9	132.2	134.6	144.4	155.3	(2)	(2)
Construction materials	100	100.6	92.1	94.2	84.4	86.0	(2)	(2)
Consumer goods	100	90.1	93.9	98.1	106.6	112.1	118.9	128.5
Others	100	99.8	105.6	110.6	130.4	127.1	(2)	(2)

[1] Based on data in table 5.
[2] Not available.

TABLE 7.—*U.S.S.R.: Rates of growth of gross fixed investment in industry, by branch 1951–67* [1]

[In percent]

	1951–60 [3]	1961	1962	1963	1964	1965	1966	1967
Industry, total	11.7	3.6	6.5	6.5	12.3	5.7	4.7	5.3
Ferrous metallurgy	10.1	8.7	6.5	2.5	−1.4	11.4	−3.5	(2)
Chemicals	18.3	16.9	9.3	26.0	35.9	−1.2	4.0	(2)
Fuels and power	8.5	4.2	5.5	8.0	15.2	11.2	(2)	(2)
Machine building	11.0	12.9	17.0	1.8	7.3	7.6	(2)	(2)
Construction materials	22.8	0.6	−8.5	2.3	−10.4	1.9	(2)	(2)
Consumer goods	14.3	−9.9	4.3	4.4	8.7	5.2	6.1	8.1
Others	12.7	−0.2	5.8	4.7	17.9	−2.5	(2)	(2)

[1] Based on data in table 5.
[2] Average annual rate (1950 base).
[3] Not available.

VII. STATE BUDGET

1. The Soviet State Budget is a consolidated budget which encompasses national, republic, and local government activities. It is far broader than western national budgets; it includes, for example, funds for financing many kinds of investment that normally are financed by the private sector in capitalist countries. In rubles, it is almost half as large as the Soviet gross national product, a proportion about twice as great as that for U.S. budgets at all levels of government combined.

2. The budget is the chief vehicle for mobilizing and distributing the financial resources of the economy. Although an increasing share of total financing comes from nonbudgetary sources—retained profits, amortization funds, and bank credits—the budget remains the principal channel for allocating funds to economic enterprises and organizations. The construction and equipping of new enterprises, which accounts for about two-fifths of industrial investment, continues to be carried out from direct budget allocations. Budgetary resources are used to expand the credit funds of the banks, to finance a large share of social-cultural measures, and to finance defense.

3. The annual announcement of the budget plan, usually in December, provides an early indication of Soviet policies for the coming year and of fulfillment in the past year. In some years the possibility of discerning Soviet policy on allocation of resources through an examination of budget material is impaired by the paucity of detail on planned budgets and the absence of information on actual expenditures and revenues in preceding years. Furthermore, unannounced accounting changes and substantial divergence of actual from planned budgets may limit the value of announced budget plans as indicators of future economic policies.

4. The two major sources of budget revenue are the turnover tax—a differentiated sales tax on consumer goods that now amounts to about one-third of the total value of retail trade—and deductions from the profits of state-owned enterprises and organizations. Together they provide over two-thirds of total budget revenue. Both sources of revenue are obtained by setting the prices of goods at levels higher than cost of production and appropriating the difference. Although some profits are retained by the enterprise for its own use or are used to subsidize the planned losses of other enterprises, about 70 percent of total profits is remitted to the budget.

5. Other sources of revenue from the social sector provide about 20 percent of total budget receipts. Payments under State Social Insurance for pensions, sick benefits, children's homes, and the like are made to the budget by state enterprises as a fixed percentage of their wage bills. Income taxes levied on organizations come largely from collective farms. Other receipts from the social sector include income from forestry operations and from the sale or rent of state-owned properties, customs duties, entertainment tax, and various other taxes and fees paid by enterprises and organizations.

6. Revenues from the private sector account for less than 9 percent of total budget receipts. The largest of these is State Taxes on the Population; that is, income taxes on individuals. State Loans, representing individual purchases of interest-bearing bonds, and Money-Goods Lotteries; that is, lotteries with commodity prizes, provide small amounts of revenue.

7. On the expenditures side of the budget, allocations under the two major categories of Financing the National Economy and Social-Cultural Measures comprise four-fifths of total outlays. The largest single category, Financing the National Economy, accounted for 43 percent of total outlays in 1966–67. This category provides funds for capital investment, for planned increases in working capital, and for subsidizing planned losses of state enterprises and organizations in the various sectors of the economy.

8. The subcategory Industry and Construction accounts for almost half of all budget allocations under Financing the National Economy. The budget allocation provides about half of total financing for Industry and Construction, with the remainder financed from enterprise own funds, bank credits, and amortization allowances.

9. The allocation for state agriculture and maintenance of agricultural procurement organizations is the second largest item under Financing the National Economy. Like Industry and Construction, State Agriculture also receives about half of its total financing from nonbudgetary sources. "Nonstate agriculture;" that is, the collective farms, is not financed from the budget but covers its expenses by means of retained income and bank loans. Furthermore, if price subsidies are included, actual budget outlays for agriculture are considerably larger than indicated by the explicit allocation to Agriculture. Subsidies are included under the residual in Financing the National Economy.

10. The residual under Financing the National Economy probably includes allocations for geologic prospecting, state gold purchases, purchases of state reserves, and special accounts for price regulation. Price subsidies on state procurements of agricultural products have been a major item in recent years; subsidies for livestock products alone now exceed 4 billion rubles annually.

11. Expenditures for education, science, social welfare, and other social-cultural measures comprised about 38 percent of total budget outlays in 1966–67. The budget finances roughly 90 percent of all such measures, with the remainder covered by funds of state enterprises, collective farms, and trade unions.

12. Outlays for Defense comprised 13 percent of total budget expenditures in 1966–67 and are scheduled to increase slightly as a share of the total for 1968. The explicit item for Defense, however, does not include all military expenditures. For one, a substantial portion of military-space research is carried out under expenditures for science. Other defense-related activities may be financed elsewhere in the budget.

13. Budget expenditures for Administration include financing for all local and central government agencies such as planning and financial bodies, ministries, government departments, and the courts and judicial organs. The budget outlay does not include administrative expenses for managing branches of the national economy, which are usually charged to enterprise costs of production.

14. Loan Service to the population consists of payments of interest and principal on the public debt. It has been a minor sum since 1957, when a moratorium on the state loan was declared.

15. The Budgetary Expenditures Residual includes items such as budget allocations for increasing the credit resources of long-term investment banks and rebates to retail trade outlets when prices on inventories of consumer goods are changed. In plan budgets, the Residual also includes Reserve Funds to be used by the Council of Ministers for urgent unanticipated expenditures. In actual budgets the Reserve Funds are reclassified under the categories for which they were expended. They are usually spent under one or more subcategories of Financing the National Economy.

16. Soviet budgets since World War II show an annual surplus of revenues over expenditures. The surplus is used largely for increasing the credit resources of the State Bank. In general, it has a deflationary effect on the economy, offsetting the inflationary effect of extension of bank credit.

TABLE 1.—*U.S.S.R.: Expenditures of the State Budget 1960, 1965–67, and 1967–68 plans* [1]

[In billions of current rubles]

	1960	1965	1966	Plan 1967	Actual 1967	Plan 1968
Financing the national economy	34.13	44.92	45.18	46.92	49.9	50.19
Industry and construction	15.59	20.99	21.06	21.87	[2]	23.9
State agriculture and procurement	4.75	6.77	6.30	6.35	[2]	9.0
Trade (foreign and domestic)	3.59	2.27	2.84	3.17	[2]	4.0
Transportation and communications	2.81	2.83	2.61	2.67	[2]	2.3
Municipal economy and housing	3.22	4.23	4.53	4.08	[2]	[2]
Residual	4.17	7.83	7.84	8.78	[2]	[2]
Social-cultural measures	24.94	38.16	40.76	42.92	43.4	45.81
Education, science, and culture	10.31	17.51	18.73	19.67	19.9	21.0
Health and physical culture	4.84	6.67	7.10	7.40	7.4	7.6
Social welfare measures	9.79	13.98	14.93	15.85	16.1	17.1
Defense	9.30	12.78	13.40	14.50	14.5	16.70
Administration	1.09	1.28	1.41	1.44	1.5	1.53
Loan service	.7	.1	.1	.2	[3] (.2)	[3] (.2)
Budgetary expenditures residual	2.97	4.38	4.73	4.04	[3] (5.0)	[3 4] (9.17)
Total expenditures	73.13	101.62	105.58	110.02	114.5	123.60

[1] See text for definition and coverage of the major categories of expenditures listed in this table.
[2] Not available.
[3] Estimated.
[4] Including reserve funds of the Councils of Ministers.

TABLE 2.—*U.S.S.R.: Revenues of the State Budget, 1960, 1965–67, and 1967–68 plans*

[In billions of current rubles]

	1960	1965	1966	Plan 1967	Actual 1967	Plan 1968
Social sector	70.14	93.89	97.03	100.37	105.5	112.77
Turnover tax	31.34	38.66	39.31	40.70	40.9	42.2
Deductions from profits	18.63	30.87	35.68	37.18	39.6	43.8
Income tax on organizations	1.85	1.55	1.15	1.12	[1]	[1]
Social insurance receipts	3.74	5.56	6.00	6.29	[1]	[1]
Residual	14.58	17.25	14.89	15.08	[1]	[1]
Private sector	6.94	8.43	9.27	9.88	10.0	11.14
State taxes on the population	5.60	7.70	8.44	9.04	9.2	10.3
State loans	[2] .91	.18	.22	.26	[1]	[1]
Money-goods lotteries	.14	.19	[1]	.22	.2	.2
Residual [3]	.29	.36	[1]	.36	[1]	[1]
Total revenues	77.08	102.32	106.30	110.25	115.5	123.91

[1] Not available.
[2] Including loans from personal deposits in savings accounts. These were removed from the budget in 1964.
[3] Consisting of various local taxes.

SOURCES:
G. V. Darkov, ed. *Gosudarstvennyy byudzhet SSSR i byudzheti soyuznikh respublik*: statisticheskiy sbornik, Moscow, 1966, pp. 8, 10-11, 20–21, 53;
Tsentral'noye statisticheskoye upravleniye, *Narodnoye khozyaystvo SSSR v 1964*, Moscow, 1965, p. 770;
Tsentral'noye statisticheskoye upravleniye, *Narodnoye khozyaystvo SSSR v 1965*, Moscow, 1966, p. 781;
G. P. Kosyachenko, and others, eds, *50 let Sovetskikh finansov*, Moscow, 1967, pp. 333–34, 337;
Tsentral'noye statisticheskoye upravleniye, *Strana Sovetov za 50 let*, Moscow, 1967, pp. 39–40;
Ekonomicheskaya gazeta, no. 42, 1967, p. 3;
Pravda, 11 Oct 1967, pp. 4–5.
Finansy SSSR, no. 12, 1967, pp. 3-18.

VIII. POPULATION TRENDS

1. The serious study of demographic factors in national economic life is receiving increased attention in the Soviet Union today, after more than 30 years of virtual neglect. This strong new interest is largely due to two phenomena—a decreasing rate of population growth and an inability to cope with the problem of internal migration.

2. The study of the determinants of fertility, and particularly of the relationship between fertility and labor force participation by females in the prime reproductive ages, has become a topic of increasing interest to the demographic community.

3. The study of internal migration has for the most part taken the form of analyzing the data available and comparing population movements with changes in the demand for labor. These research efforts have disclosed that many areas of in-migration already have labor surpluses and many areas of out-migration in fact suffer from labor shortages. They have shown, too, that the total migration flows in certain regions, particularly the Far North and Eastern Siberia, are so large relative to the size of the population that they have caused high levels of labor turnover in these regions and further aggravated existing labor shortages. These problems are clearly of operational importance for Soviet economic planning.

4. Three tables giving recently available data on migration are presented here. The first, table 6, gives distributions of migrants to cities, by region of origin and region of destination in 1962. This table illustrates the part played by each region in supplying migrants to other regions and shows the region of destination for migrants leaving each region. The second, table 7, gives indicators of net migration in 1962 between any two regions and between any region and the rest of the Soviet Union. The indicators are ratios which tell us only whether there is net in-migration or net out-migration; they do not, however, tell us anything about the magnitude of either. The third, table 8, gives net migration by republic in absolute terms, for the years 1961–65. This table could be combined with table 7 to give total migratory flows for 1962 but for the fact that data in the two tables are inconsistent for the Urals, the Far East, and the Baltic republics. Both tables were prepared by persons highly respected in their fields in the Soviet Union and there is little basis for choosing one set of data over the other.

5. The above situation in the reporting system indicates a serious problem in Soviet migration studies—a lack of sufficient and reliable data. Information on total migration can at present be obtained only from registration data derived from reports to the authorities on changes of residence. Such data are poor for cities and even worse for

rural areas. Net migration is normally derived as the difference between total population change and the natural increase of the population—a method which leaves room for substantial errors.

6. Recent reports also help to shed some light on the question of how the 1970 census is to be used to gather more information needed by population, labor, planning, and other experts. The census was originally scheduled for January 1969, but has been delayed until 1970, without explanation. Plans for the census have been accompanied by a lively debate in the press and professional journals concerning how it should be conducted and what questions should be included. Economists and demographers have pointedly criticized the Central Statistical Administration for the meager amount of information derived from the 1939 and 1959 censuses. They maintain that not only more but also different questions need to be asked. For its part, the Central Statistical Administration agrees that more questions should be included, but it does not wish to add as many as have been recommended. Some changes will amount only to rephrasing questions in order to obtain more reliable responses; others will entail the addition of questions on fertility, housing, internal migration, and seasonality of employment.

7. Among the major changes under consideration for the forthcoming census is the use of self-enumeration rather than direct interview, and the use of sampling to collect detailed information. Originally, census officials proposed to conduct the census in the cities on the basis of self-enumeration, and to enumerate the population in rural areas by direct interview. A test census has been conducted in several areas of the U.S.S.R. using this new (for the Soviet Union) technique. Data for approximately 70 percent of the persons to be covered by self-enumeration were actually received, and for these persons nearly 50 percent of the responses to certain questions were incorrect. Such poor results, coupled with the sizeable amount of time needed for interviewers to distribute and explain the forms, may cause the Central Statistical Administration to discard the idea of self-enumeration for this census.[1]

8. Present plans are to ask more detailed questions on a sample basis. Most interested parties have agreed that this can best be done by taking a random sample of every fourth or fifth residence, a 20- or a 25-percent sample. This sampling technique has not been used in past Soviet censuses, although it has been used successfully in the United States. The publication of census results would be accelerated by using computers to process the data. This was the goal in 1959, but the computers arrived late and were reportedly defective.

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[1] P. Pod"yachikh, "Important Stage in the Preparation of the All-Union Population Census," *Vestnik statistiki*, no. 10, October 1967, pp. 80–82.

TABLE 1.—*Population of the U.S.S.R., by urban and rural residence, 1913–68*

[Population figures in millions]

Territory and date	Population			Percent		
	Total	Urban	Rural	Total	Urban	Rural
Interwar territory:						
1913	139.3	24.8	114.5	100	18	82
1917	143.5	25.8	117.7	100	18	82
1919	138.0	21.5	116.5	100	16	84
1920	136.8	20.9	115.9	100	15	85
Dec. 17, 1926	147.0	26.3	120.7	100	18	82
1929	153.4	28.7	124.7	100	19	81
1937	163.8	46.6	117.2	100	28	72
1938	167.0	50.0	117.0	100	30	70
Jan. 17, 1939	170.6	56.1	114.5	100	33	67
1940 territory: Jan. 1, 1939 [1]	190.7	60.4	130.3	100	32	68
Postwar territory:						
1913	159.2	28.5	130.7	100	18	82
1917	163.0	29.1	133.9	100	18	82
Jan. 1, 1950	178.5	69.4	109.1	100	39	61
Jan. 1, 1951	181.6	73.0	108.6	100	40	60
Jan. 1, 1952	184.8	76.8	108.0	100	42	58
Jan. 1, 1953	188.0	80.2	107.8	100	43	57
Jan. 1, 1954	191.0	83.6	107.4	100	44	56
Jan. 1, 1955	194.4	86.3	108.1	100	44	56
Jan. 1, 1956	197.9	88.2	109.7	100	45	55
Jan. 1, 1957	201.4	91.4	110.0	100	45	55
Jan. 1, 1958	204.9	95.6	109.3	100	47	53
Jan. 15, 1959	208.8	100.0	108.8	100	48	52
Jan. 1, 1960	212.3	103.8	108.5	100	49	51
Jan. 1, 1961	216.1	108.3	107.8	100	50	50
Jan. 1, 1962	219.7	111.8	107.9	100	51	49
Jan. 1, 1963	223.1	115.1	108.0	100	52	48
Jan. 1, 1964	226.2	118.5	107.7	100	52	48
Jan. 1, 1965	229.1	121.6	107.5	100	53	47
Jan. 1, 1966	231.9	124.8	107.1	100	54	46
Jan. 1, 1967	234.4	128.0	106.4	100	55	45
July 1, 1967	235.5	129.1	106.4	100	55	45
Jan. 1, 1968	237.0	[2]	[2]	[2]	[2]	[2]

[1] The figures shown are official Soviet estimates for the territory of the U.S.S.R., including the western oblasts of the Ukraine and Byelorussia, Moldavia, Lithuania, Latvia, and Estonia. The figures presumably apply to the interwar territory adjusted for the annexations of 1939 and 1940, but exclude the population in the territory retroceded to Poland at the end of the war.

[2] Not available.

SOURCE:

1913–63: U.S. Congress, Joint Economic Committee, *Annual Economic Indicators for the U.S.S.R.*, Washington, D.C., 1964, p. 3.

1964–66: Tsentral'noye statisticheskoye upravleniye pri Sovete Ministrov SSSR (TsSU), *Narodnoye khozyaystvo SSSR v 1965, statisticheskiy yezhegodnik*, Moscow, 1966, p. 7 (cited hereafter as *Nar. khoz. 65*).

1967: TsSU, *Strana sovetov za 50 let, sbornik statisticheskikh materialov*, Moscow, 1967, p. 15.

1968: *Trud*, Jan. 25, 1968, p. 2.

TABLE 2.—*Total, urban, and rural population of the Soviet Union, by administrative area, 1959, 1966, and 1967*

[In thousands]

Area	Jan. 15, 1959			Jan. 1, 1966			Jan. 1, 1967
	Total	Urban	Rural	Total	Urban	Rural	Total
U.S.S.R.	208,827	99,978	108,849	231,868	124,749	107,119	234,396
R.S.F.S.R.	117,534	61,611	55,923	126,561	75,069	51,492	127,312
Altay Kray	2,683	882	1,801	2,766	1,112	1,654	(1)
Gorno-Altay Autonomous Oblast	157	30	127	170	35	135	169
Other	2,526	852	1,674	2,596	1,077	1,519	(1)
Khabarovsk Kray	1,142	848	294	1,300	1,028	272	(1)
Jewish Autonomous Oblast	163	117	46	173	121	52	174
Other	979	731	248	1,127	907	220	(1)
Krasnodar Kray	3,762	1,462	2,300	4,218	1,942	2,276	(1)
Adygey Autonomous Oblast	285	96	189	360	139	221	366
Other	3,477	1,366	2,111	3,858	1,803	2,055	(1)
Krasnoyarsk Kray	2,615	1,296	1,319	2,919	1,703	1,216	(1)
Khakass Autonomous Oblast	411	222	189	460	276	184	462
Taymyr (Dolgano-Nenets) National Okrug	33	20	13	35	22	13	36
Evenki National Okrug	10	2	8	12	4	8	12
Other	2,161	1,052	1,109	2,412	1,401	1,011	(1)
Maritime Kray	1,381	928	453	1,607	1,156	451	(1)
Stavropol Kray	1,883	587	1,296	2,144	813	1,331	(1)
Karachay Cherkess Autonomous Oblast	278	66	212	327	100	227	330
Other	1,605	521	1,084	1,817	713	1,104	(1)
Amur Oblast	718	429	289	781	483	298	(1)
Arkhangel Oblast	1,276	675	601	1,404	932	472	(1)
Nenets National Okrug	46	26	20	38	19	19	37
Other	1,230	649	581	1,366	913	453	(1)
Astrakhan Oblast	702	365	337	801	462	339	(1)
Belgorod Oblast	1,226	240	986	1,249	346	903	(1)
Bryansk Oblast	1,550	540	1,010	1,564	659	905	(1)
Chelyabinsk Oblast	2,977	2,276	701	3,263	2,549	714	(1)
Chita Oblast	1,036	564	472	1,095	621	474	(1)
Ago Buryat National Okrug	49	----------	49	60	7	53	62
Other	987	564	423	1,035	614	421	(1)
Gorkiy Oblast	3,591	1,882	1,709	3,668	2,244	1,424	(1)
Ivanovo Oblast	1,322	876	446	1,355	983	372	(1)
Irkutsk Oblast	1,976	1,227	749	2,254	1,556	698	(1)
Ust-Orda Buryat National Okrug	133	20	113	155	28	127	154
Other	1,843	1,207	636	2,099	1,528	571	(1)
Kaliningrad Oblast	611	394	217	694	481	213	(1)
Kalinin Oblast	1,807	788	1,019	1,736	899	837	(1)
Kaluga Oblast	936	350	586	964	442	522	(1)
Kamchatka Oblast	221	141	80	261	199	62	(1)
Koryak National Okrug	28	6	22	37	11	26	37
Other	193	135	58	224	188	36	(1)

See footnote at end of table, p. 55.

TABLE 2.—*Total, urban, and rural population of the Soviet Union by administrative area, 1959, 1966, and 1967*—Continued

[In thousands]

Area	Jan. 15, 1959			Jan. 1, 1966			Jan. 1, 1967
	Total	Urban	Rural	Total	Urban	Rural	Total
R.S.F.S.R.—Continued							
Kemerovo Oblast	2,786	2,149	637	3,033	2,472	561	(1)
Kirov Oblast	1,916	704	1,212	1,775	896	879	(1)
Kostroma Oblast	920	366	554	870	425	445	(1)
Kuybyshev Oblast	2,258	1,397	861	2,559	1,759	800	(1)
Kurgan Oblast	999	328	671	1,081	414	667	(1)
Kursk Oblast	1,483	303	1,180	1,496	400	1,096	(1)
Leningrad Oblast	4,566	3,949	617	5,028	4,463	565	(1)
Lipetsk Oblast	1,141	344	797	1,214	458	756	(1)
Magadan Oblast	236	191	45	318	275	43	(1)
Chukchi National Okrug	47	27	20	84	66	18	89
Other	189	164	25	234	209	25	(1)
Moscow Oblast	10,949	8,577	2,372	11,799	9,930	1,869	(1)
Murmansk Oblast	568	523	45	714	684	30	(1)
Novgorod Oblast	736	281	455	724	357	367	(1)
Novosibirsk Oblast	2,299	1,276	1,023	2,468	1,521	947	(1)
Omsk Oblast	1,645	711	934	1,807	903	904	(1)
Orel Oblast	929	221	708	942	308	634	(1)
Orenburg Oblast	1,829	826	1,003	2,045	1,023	1,022	(1)
Penza Oblast	1,510	500	1,010	1,543	605	938	(1)
Perm Oblast	2,993	1,765	1,228	3,106	2,076	1,030	(1)
Komi-Permyak National Okrug	217	22	195	220	39	181	216
Other	2,776	1,743	1,033	2,886	2,037	849	(1)
Pskov Oblast	952	258	694	875	320	555	(1)
Rostov Oblast	3,312	1,899	1,413	3,730	2,334	1,396	(1)
Ryazan Oblast	1,445	433	1,012	1,444	581	863	(1)
Sakhalin Oblast	649	489	160	640	517	123	(1)
Saratov Oblast	2,163	1,164	999	2,386	1,425	961	(1)
Smolensk Oblast	1,143	366	777	1,098	466	632	(1)
Sverdlovsk Oblast	4,044	3,074	970	4,349	3,499	850	(1)
Tambov Oblast	1,549	408	1,141	1,529	494	1,035	(1)
Tomsk Oblast	747	360	387	782	446	336	(1)
Tula Oblast	1,920	1,160	760	1,964	1,322	642	(1)
Tyumen Oblast	1,092	347	745	1,292	587	705	(1)
Khanty-Mansi National Okrug	124	33	91	230	148	82	250
Yamalo-Nenets National Okrug	62	22	40	70	30	40	73
Other	906	292	614	992	409	583	(1)
Ulyanovsk Oblast	1,117	404	713	1,175	512	663	(1)
Vladimir Oblast	1,402	796	606	1,492	955	537	(1)
Volgograd Oblast	1,854	1,008	846	2,163	1,336	827	(1)
Vologda Oblast	1,308	453	855	1,308	574	734	(1)
Voronezh Oblast	2,369	821	1,548	2,477	1,047	1,430	(1)
Yaroslavl Oblast	1,396	814	582	1,395	936	459	(1)
Bashkir A.S.S.R	3,342	1,281	2,061	3,719	1,672	2,047	3,757
Buryat A.S.S.R	673	276	397	771	334	437	780
Chechen Ingush A.S.S.R	710	294	416	1,008	396	612	1,033
Chuvash A.S.S.R	1,098	263	835	1,177	368	809	1,192
Dagestan A.S.S.R	1,063	315	748	1,325	460	865	1,361
Kabardin Balkar A.S.S.R	420	166	254	518	228	290	530
Kalmyk A.S.S.R	185	39	146	241	78	163	248
Karelian A.S.S.R	651	409	242	700	495	205	707
Komi A.S.S.R	806	475	331	966	624	342	974
Mari A.S.S.R	648	183	465	652	237	415	653
Mordovian A.S.S.R	1,000	183	817	1,009	297	712	1,014
North Ossetian A.S.S.R	451	238	213	510	320	190	518
Tatar A.S.S.R	2,850	1,190	1,660	3,082	1,466	1,616	3,127
Tuvin A.S.S.R	172	50	122	213	79	134	217
Udmurt A.S.S.R	1,337	594	743	1,375	733	642	1,379
Yakut A.S.S.R	488	240	248	631	352	279	646

See footnote at end of table, p. 55a

TABLE 2.—*Total, urban, and rural population of the Soviet Union by administrative area, 1959, 1966, and 1967*—Continued

[In thousands]

Area	Jan. 15, 1959			Jan. 1, 1966			Jan. 1, 1967
	Total	Urban	Rural	Total	Urban	Rural	Total
Ukrainian S.S.R.	41,869	19,147	22,722	45,516	23,715	21,801	45,966
Cherkassy Oblast	1,503	345	1,158	1,506	504	1,002	(1)
Chernigov Oblast	1,554	350	1,204	1,586	509	1,077	(1)
Chernovtsy Oblast	774	203	571	828	264	564	(1)
Crimean Oblast	1,201	775	426	1,565	1,009	556	(1)
Dnepropetrovsk Oblast	2,705	1,899	806	3,145	2,375	770	(1)
Donets Oblast	4,262	3,656	606	4,788	4,200	588	(1)
Ivan-Franko Oblast	1,095	250	845	1,207	340	867	(1)
Kharkov Oblast	2,520	1,574	946	2,672	1,835	837	(1)
Kherson Oblast	824	332	492	958	491	467	(1)
Khmelnitskiy Oblast	1,611	305	1,306	1,620	393	1,227	(1)
Kiev Oblast	2,823	1,548	1,275	3,184	1,935	1,249	(1)
Kirovograd Oblast	1,218	376	842	1,268	493	775	(1)
Lugansk Oblast	2,452	1,944	508	2,764	2,341	423	(1)
Lvov Oblast	2,108	821	1,287	2,357	1,062	1,295	(1)
Nikolayev Oblast	1,014	400	614	1,092	502	590	(1)
Odessa Oblast	2,027	957	1,070	2,228	1,164	1,064	(1)
Poltava Oblast	1,632	484	1,148	1,677	604	1,073	(1)
Rovno Oblast	926	158	768	1,012	250	762	(1)
Sumy Oblast	1,514	485	1,029	1,516	600	916	(1)
Ternopol Oblast	1,086	180	906	1,149	257	892	(1)
Transcarpathian Oblast	920	265	655	1,031	304	727	(1)
Vinnitsa Oblast	2,142	363	1,779	2,133	441	1,692	(1)
Volyn Oblast	890	231	659	964	296	668	(1)
Zaporozhye Oblast	1,464	829	635	1,677	1,054	623	(1)
Zhitomir Oblast	1,604	417	1,187	1,589	492	1,097	(1)
Byelorussian S.S.R.	8,055	2,481	5,574	8,633	3,403	5,230	8,744
Brest Oblast	1,205	284	921	1,236	383	853	(1)
Gome Oblastl	1,357	389	968	1,483	537	946	(1)
Grodno Oblast	1,077	251	826	1,101	349	752	(1)
Minsk Oblast	2,037	793	1,244	2,260	1,110	1,150	(1)
Mogilev Oblast	1,132	360	772	1,214	465	749	(1)
Vitebsk Oblast	1,247	404	843	1,339	559	780	(1)
Uzbek S.S.R.	8,262	2,759	5,503	10,581	3,732	6,849	10,896
Andizhan Oblast	1,163	298	865	1,632	419	1,213	(1)
Bukhara Oblast	585	130	455	785	207	578	(1)
Fergana Oblast	1,139	333	806	1,266	397	869	(1)
Kashkadarya Oblast	(1)	(1)	(1)	674	98	576	(1)
Khorezm Oblast	381	64	317	483	87	396	(1)
Samarkand Oblast	1,025	298	727	1,314	359	955	(1)
Surkhan-Darya Oblast [2]	919	132	787	562	88	474	(1)
Syrdarya Oblast	512	71	441	670	151	519	(1)
Tashkent Oblast	2,028	1,294	734	2,576	1,729	847	(1)
Kara-Kalpak A.S.S.R.	510	139	371	619	197	422	638
Kazakh S.S.R.	9,154	4,037	5,117	12,129	5,786	6,342	12,413
Aktyubinsk Oblast	401	174	227	532	230	302	(1)
Alma-Ata Oblast	1,403	655	748	1,875	955	920	(1)
Chimkent Oblast	765	303	462	1,003	402	601	(1)
Dzhambul Oblast	562	202	360	716	271	445	(1)
East Kazakhstan Oblast	735	394	341	846	490	356	(1)
Guryev Oblast	288	162	126	385	232	153	(1)
Karaganda Oblast	1,019	798	221	1,488	1,204	284	(1)
Kokchetav Oblast	493	122	371	621	180	441	(1)
Kustanay Oblast	711	188	523	985	343	642	(1)
Kzyl-Orda Oblast	327	152	175	410	204	206	(1)
North Kazakhstan Oblast	457	156	301	562	190	372	(1)
Pavlodar Oblast	455	132	323	656	273	383	(1)
Semipalatinsk Oblast	520	228	292	663	281	382	(1)
Tselinograd Oblast	637	258	379	895	401	494	(1)
Uralsk Oblast	381	113	268	492	130	362	(1)

See footnotes at end of table, p. 55.

TABLE 2.—*Total, urban, and rural population of the Soviet Union by administrative area, 1959, 1966, and 1967*—Continued

[In thousands]

Area	Jan. 15, 1959			Jan. 1, 1966			Jan. 1, 1967
	Total	Urban	Rural	Total	Urban	Rural	Total
Georgian S.S.R.	4,044	1,713	2,331	4,548	2,140	2,408	4,611
Abkhaz A.S.S.R.	405	150	255	462	188	274	471
Adzhar A.S.S.R.	245	111	134	294	138	156	301
South Ossetian Autonomous Oblast	97	24	73	102	34	68	102
Other	3,297	1,428	1,869	3,690	1,780	1,910	3,737
Azerbaydzhan S.S.R.	3,698	1,767	1,931	4,660	2,328	2,332	4,802
Nakhichevan A.S.S.R.	141	38	103	182	46	136	189
Nagorno-Karabakh Autonomous Oblast	131	27	104	146	50	96	149
Other	3,426	1,702	1,724	4,332	2,232	2,100	4,464
Lithuanian S.S.R.	2,711	1,046	1,665	2,986	1,334	1,652	3,026
Moldavian S.S.R.	2,885	643	2,242	3,368	953	2,415	3,425
Latvian S.S.R.	2,093	1,174	919	2,262	1,400	862	2,285
Kirgiz S.S.R.	2,066	696	1,370	2,652	1,020	1,632	2,749
Osh Oblast	870	279	591	1,109	382	727	----------
Other	1,196	417	779	1,543	638	905	----------
Tadzhik S.S.R.	1,980	646	1,334	2,579	915	1,664	2,654
Gorno-Badakhshan Autonomous Oblast	73	8	65	91	11	80	93
Other	1,907	638	1,269	2,488	904	1,584	2,561
Armenian S.S.R.	1,763	882	881	2,194	1,210	984	2,253
Turkmen S.S.R.	1,516	700	816	1,914	940	974	1,966
Estonian S.S.R.	1,197	676	521	1,285	804	481	1,294

[1] Not available.
[2] Kashkadarya Oblast was organized in 1964 from part of Surkhan-Darya Oblast. The figures shown for Surkhan-Darya Oblast in 1959 include data for Kashkadarya Oblast.

SOURCE:
1959: James W. Brackett and John W. De Pauw, "Population Policy and Demographic Trends in the Soviet Union," in U.S. Congress, Joint Economic Committee, *New Directions in the Soviet Economy*, Part III, Washington, D.C., 1966, pp. 691–700.
1966: *Nar. khoz. 66*, pp. 14–25.
1967: TsSU, *Strana*, 1967, pp. 16, 17.

TABLE 3.—*Population of cities in the Soviet Union with 250,000 inhabitants or more in 1967, by rank order: 1939–67*

[Population figures in thousands. Figures for 1939 presumably relate to the beginning of the year; those for 1959 to the census of Jan. 15. Figures for other years are official estimates for Jan. 1]

City	1939	1959	1963	1965	1966	1967
1. Moscow	4,132	5,046	6,317	6,368	6,398	6,422
2. Leningrad	3,104	2,986	3,180	3,239	3,261	3,296
3. Kiev	847	1,104	1,248	1,332	1,371	1,413
4. Tashkent	550	912	1,029	1,090	1,127	1,239
5. Kharkov	833	934	1,006	1,070	1,092	1,125
6. Gorkiy	644	942	1,042	1,085	1,100	1,120
7. Novosibirsk	404	886	990	1,029	1,049	1,064
8. Kuybyshev	390	806	901	948	969	992
9. Sverdlovsk	423	779	869	919	940	961
10. Tbilisi	519	703	768	805	823	842
11. Donetsk	466	699	774	809	823	840
12. Chelyabinsk	273	689	767	805	820	836
13. Kazan	398	647	725	762	804	821
14. Dnepropetrovsk	527	660	738	774	790	816
15. Perm	306	629	722	764	785	796
16. Odessa	602	667	709	735	753	776
17. Omsk	289	581	674	721	746	774
18. Baku	544	643	700	731	756	772
19. Minsk	237	509	644	707	739	772
20. Rostov-on-Don	510	600	689	720	737	757
21. Volgograd	445	592	663	700	720	743
22. Saratov	372	581	644	683	699	720
23. Ufa	258	547	630	665	683	704
24. Riga	348	580	632	657	666	680
25. Yerevan	204	509	578	623	643	665
26. Alma-Ata	222	456	580	617	636	652
27. Voronezh	344	448	535	576	592	611
28. Zaporozhye	282	435	507	550	571	595
29. Krasnoyarsk	190	412	483	541	557	576
30. Lvov	340	411	469	496	502	512
31. Krivoy Rog	189	388	(1)	488	498	510
32. Karaganda	156	397	462	482	489	498
33. Yaroslavl	309	407	454	478	486	498
34. Novokuznetsk	166	377	(1)	475	484	493
35. Khabarovsk	207	323	377	408	420	435
36. Irkutsk	250	366	390	401	409	420
37. Makeyevka	242	358	(1)	399	410	414
38. Ivanovo	285	335	368	389	398	407
39. Krasnodar	193	313	368	385	395	407
40. Barnaul	148	305	357	382	395	407
41. Vladivostok	206	291	338	367	379	397
42. Frunze	93	220	326	355	370	396
43. Zhdanov	222	284	(1)	361	373	385
44. Nizhniy Tagil	160	339	(1)	370	375	377
45. Tula	272	316	351	366	371	377
46. Izhevsk	176	285	330	351	360	376
47. Astrakhan	254	296	324	342	361	368
48. Kemerovo	133	278	328	351	358	364
49. Magnitogorsk	146	311	(1)	348	352	357
50. Lugansk	215	275	314	330	339	352
51. Gorlovka	181	293	(1)	337	340	343
52. Tallin	160	282	311	328	335	340
53. Penza	160	255	296	315	324	333
54. Dushanbe	83	224	276	310	323	333
55. Groznyy	172	242	300	314	319	331
56. Orenburg	172	267	293	306	316	326
57. Tomsk	145	249	282	302	311	324
58. Kalinin	216	261	292	306	311	318
59. Vilnius	215	236	271	293	305	316
60. Ryazan	95	214	262	287	297	311
61. Arkhangelsk	251	256	286	303	308	310
62. Kirov	144	252	284	296	302	309
63. Kishinev	112	216	254	278	289	302
64. Nikolayev	169	226	263	280	289	300
65. Ulyanovsk	98	206	247	265	275	294
66. Prokopyevsk	107	282	(1)	291	291	290
67. Bryansk	174	207	249	267	276	288
68. Murmansk	119	222	254	272	279	287
67. Kaunas	152	214	(1)	269	276	284
70. Kaliningrad	(1)	204	238	253	261	270
71. Kursk	120	205	233	245	249	255
72. Lipetsk	67	157	205	226	237	253

[1] Not available.

Source: 1939, 1959, 1963, 1965: Brackett and De Pauw, "Population," 1966, p. 690. 1966: *Nar. khoz; 65*, pp. 30-39. 1967: P. F. Pigalev et al. (Eds.), *SSSR: Administrativno-territorial'noye deleniye soyuznykh respublik*, Moscow, 1967, pp. 592-603.

TABLE 4.—*Birth, death, and natural increase rates for the U.S.S.R., 1926–66*

[Rate per 1,000 population]

Year	Birth	Death	Natural increase	Year	Birth	Death	Natural increase
1926	44.0	20.3	23.7	1959	25.0	7.6	17.4
1939	36.5	17.3	19.2	1965	18.4	7.3	11.1
1950	26.7	9.7	17.0	1966	18.2	7.3	10.9

SOURCE:
1926, 1939: U.S. Congress, Joint Economic Committee, *Current Economic Indicators for the U.S.S.R.*, Washington, D.C., 1965, p. 26.
1950, 1959: Brackett and De Pauw, "Population," 1966, p. 657.
1965, 1966: TsSU, *Strana*, 1967, p. 257.

TABLE 5.—*Birth, death, and natural increase rates for the U.S.S.R., by republic and region, 1940–65*

[Rate per 1,000 population]

Area	1940			1950			1960			1964			1965		
	Birth	Death	Natural increase	Birth	Death	Natural increase	Birth	Death	Natural increase	Birth	Death	Natural increase	Birth	Death	Natural increase
U.S.S.R.	31.2	18.0	13.2	26.7	9.7	17.0	24.9	7.1	17.8	19.6	6.9	12.7	18.4	7.3	11.1
R.S.F.S.R.	33.0	20.6	12.4	26.9	10.1	16.8	23.2	7.4	15.8	16.9	7.2	9.7	15.8	7.6	8.2
Northwestern region	28.1	22.1	6.0	25.2	10.1	15.1	20.6	7.5	13.1	15.5	7.5	8.0	14.6	7.9	6.7
Central region	28.3	18.9	9.4	22.1	8.9	13.2	18.5	7.8	10.7	13.7	7.8	5.9	12.8	8.4	4.4
Volga-Vyatka region	33.7	25.4	8.3	27.2	10.8	16.4	24.6	8.0	16.6	17.1	7.6	9.5	15.9	8.1	7.8
Central Black Earth region	28.3	17.2	11.1	21.7	8.3	13.4	21.8	7.7	14.1	15.1	7.8	7.3	14.2	8.4	5.8
Volga region	34.7	21.7	13.0	26.0	9.8	16.2	25.6	7.6	18.0	19.0	7.2	11.8	17.8	7.6	10.2
North Caucasian region	33.1	16.0	17.1	22.1	7.7	14.4	24.0	7.2	16.8	18.8	7.0	11.8	18.0	7.4	10.6
Urals region	39.6	26.2	13.4	31.9	11.8	20.1	25.1	7.3	17.8	17.7	6.8	10.9	16.2	7.2	9.0
Western Siberia region	37.0	20.7	16.3	32.9	12.0	20.9	26.7	6.9	19.8	17.6	6.7	10.9	16.2	6.9	9.3
Eastern Siberia region	38.7	18.6	20.1	36.0	12.2	23.8	27.7	6.8	20.9	20.3	6.6	13.7	18.5	6.8	11.7
Far Eastern region	48.9	20.7	28.2	42.5	14.0	28.5	24.9	6.2	18.7	19.0	5.8	13.2	17.5	6.1	11.4
Ukrainian S.S.R.	27.3	14.3	13.0	22.8	8.5	14.3	20.5	6.9	13.6	16.5	7.0	9.5	15.3	7.6	7.7
Donets-Dnieper region	28.5	14.9	13.6	22.5	7.6	14.9	19.9	6.6	13.3	15.5	6.8	8.7	14.2	7.2	7.0
Southwestern region	25.8	13.7	12.1	23.3	9.6	13.7	21.3	7.2	14.1	17.4	7.3	10.1	16.1	8.0	8.1
Southern region	29.7	15.4	14.3	22.6	7.5	15.1	19.9	6.9	13.9	17.0	7.1	9.9	15.9	7.5	8.4
Western region	20.6	14.6	6.0	22.1	12.5	9.6	19.7	8.7	11.0	17.0	8.3	8.7	16.0	8.8	7.2
Lithuanian S.S.R.	23.0	13.0	10.0	23.6	12.0	11.6	22.5	7.8	14.7	19.1	7.5	11.6	18.1	7.9	10.2
Latvian S.S.R.	19.3	15.7	3.6	17.0	12.4	4.6	16.7	10.0	6.7	14.8	9.5	5.3	13.9	10.1	3.8
Estonian S.S.R.	16.1	17.0	−0.9	18.4	14.4	4.0	16.6	10.5	6.1	15.5	10.1	5.4	14.8	10.6	4.2
Kaliningrad Oblast	(1)	(1)	(1)	45.5	10.3	35.2	24.2	4.7	19.5	17.7	4.5	13.2	16.5	4.7	11.8
Transcaucasian region	30.4	12.0	18.4	27.9	8.5	19.4	34.6	6.6	28.0	30.8	6.7	24.1	28.9	6.5	22.4
Georgian S.S.R.	27.4	8.8	18.6	23.5	7.6	15.9	24.7	6.5	18.2	21.9	6.7	15.2	21.0	6.9	14.1
Azerbaydzhan S.S.R.	29.4	14.7	14.7	31.2	9.6	21.6	42.6	6.7	35.9	39.6	7.1	32.5	36.4	6.3	30.1
Armenian S.S.R.	41.2	13.8	27.4	32.1	8.5	23.6	40.3	6.8	33.5	30.7	5.9	24.8	29.1	5.8	23.3

Central Asian region	33.5	14.5	19.0	31.9	8.8	23.1	38.8	6.0	32.8	34.8	5.6	29.2	34.7	6.1	28.6
Uzbek S.S.R.	33.6	13.2	20.4	30.9	8.8	22.1	39.9	6.0	33.9	35.1	5.4	29.7	34.7	5.8	28.9
Kirgiz S.S.R.	33.0	16.3	16.7	32.4	8.5	23.9	36.8	6.1	30.7	31.4	6.3	25.1	31.0	6.4	24.6
Tadzhik S.S.R.	30.6	14.1	16.5	30.4	8.2	22.2	33.5	5.1	28.4	34.6	5.4	29.2	36.5	6.5	30.0
Turkmen S.S.R.	36.9	19.5	17.4	38.2	10.2	28.0	42.4	6.5	35.9	38.1	6.3	31.8	37.2	7.0	30.2
Kazakh region: Kazakh S.S.R.	41.1	21.6	19.5	37.6	11.7	25.9	36.7	6.5	30.2	27.8	5.7	22.1	26.2	5.8	20.4
Belorussian region: Byeloru-sian S.S.R.	26.8	13.1	13.7	25.5	8.0	17.5	24.5	6.6	17.9	19.0	6.4	12.6	17.9	6.8	11.1
Moldavian S.S.R.	26.6	16.9	9.7	38.9	11.2	27.7	29.2	6.4	22.8	22.5	6.1	16.4	20.4	6.2	14.2

[1] Not available.

Source: *Nar. khoz. 65*, 1966, p. 46.

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TABLE 6.—*Percent distribution of migrants to cities, by region of origin and settlement, 1962*

Region of origin	Region of settlement																		
	Northern	Northwestern	Central	Central Black-Earth	Volga-Vyatka	Volga	Northern Caucasus	Urals	Western Siberian	Eastern Siberian	Far Eastern	Ukrainian	Byelorussian	Trans-Caucasian	Central Asian	Kazakh	Moldavian	Baltic	U.S.S.R.
	Distribution of migrants to cities, by region of origin																		
Northern		10.3	5.2	4.5	6.2	3.3	3.8	2.8	1.5	1.5	1.0	5.1	4.1	1.4	1.1	1.3	2.3	3.7	3.5
Northwestern	12.3		9.0	6.6	5.8	3.8	4.6	3.7	2.7	3.2	5.0	6.9	13.4	4.4	2.4	2.2	3.0	27.8	5.3
Central	13.4	16.9		14.1	15.8	8.4	7.7	7.0	6.5	9.4	10.7	9.6	9.9	9.5	4.8	4.4	4.6	9.9	8.4
Central Black Earth	7.2	5.6	10.7		3.1	6.0	5.8	4.6	4.0	4.2	5.2	9.5	3.4	3.9	2.4	2.6	2.9	3.3	5.4
Volga-Vyatka	9.6	5.9	10.0	2.7		9.2	3.0	13.1	6.0	6.0	4.7	3.2	2.2	3.6	3.2	3.9	2.6	2.3	5.9
Volga	6.6	4.4	6.7	6.8	11.8		7.1	11.5	5.0	5.7	7.2	5.0	4.2	6.9	10.6	5.2	3.0	3.3	6.4
Northern Caucasus	7.2	5.9	5.7	7.5	4.1	10.7		5.7	5.5	6.8	10.6	10.4	4.1	22.1	7.6	4.3	3.7	3.0	6.7
Urals	6.7	6.2	8.6	9.7	16.7	16.3	10.0		12.4	10.4	8.8	8.3	7.6	6.5	16.4	15.5	7.6	4.6	9.6
Western Siberian	3.1	3.1	5.0	6.1	5.7	4.8	5.5	8.3		17.1	10.1	5.2	4.4	3.4	10.1	16.9	4.4	3.1	7.1
Eastern Siberian	2.4	3.5	6.5	5.7	6.3	5.5	6.2	6.8	16.2		14.5	5.4	5.3	2.7	5.6	5.1	3.9	5.0	6.2
Far Eastern	1.5	3.8	5.8	6.4	4.9	5.5	7.0	4.6	7.4	11.5		5.8	4.2	2.9	3.4	2.6	3.6	3.8	5.1
Ukrainian	19.7	11.8	11.5	17.1	6.8	9.4	17.3	8.9	7.8	9.5	11.2		17.5	16.8	7.5	18.3	41.0	11.1	10.9
Belorussian	3.2	8.5	3.6	2.2	1.4	2.4	2.1	2.1	1.8	2.4	2.0	4.9		2.3	1.2	3.8	2.0	9.7	3.2
Transcaucasian	.7	1.6	2.4	1.6	1.2	2.1	6.2	1.1	.8	.8	.7	2.8	1.6		3.2	1.2	1.7	1.2	2.0
Central Asian	.9	1.6	2.4	2.2	2.0	4.8	3.8	5.0	5.2	3.5	3.2	2.5	1.9	6.0		10.5	1.8	1.8	3.7
Kazakh	3.1	4.1	4.4	5.3	6.8	6.4	8.3	13.5	16.0	6.8	4.0	11.6	12.0	5.8	19.5		11.1	6.1	8.4
Moldavian	.6	.6	.5	.4	.3	.4	.6	.5	.5	.5	.3	2.3	.4	.4	.3	1.0		.3	.7
Baltic	1.8	6.2	2.0	1.1	1.1	1.0	10.4	.8	.7	.7	.8	1.5	3.8	1.4	.7	1.2	.8		1.5
U.S.S.R.	100.0	100.0	100.0	100.0	100.0	100.0	100.0[1]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Distribution of migrants to cities, by region of settlement

Northern		18.3	11.6	4.4	6.3	6.6	8.2	8.3	2.8	2.6	1.2	18.7	2.7	.6	1.8	3.3	.6	2.0	100.0
Northwestern	8.8		13.2	4.4	3.9	4.9	6.4	7.3	3.4	3.6	3.9	16.8	5.7	1.2	2.6	3.6	.5	9.8	100.0
Central	6.0	12.5		5.9	6.6	6.7	6.8	8.7	5.1	6.6	5.4	14.6	2.7	1.6	3.3	4.8	.5	2.2	100.0
Central Black Earth	5.0	6.4	15.5		2.0	7.5	7.9	8.7	4.9	4.7	4.0	22.5	1.4	1.0	2.5	4.4	.5	1.1	100.0
Volga-Vyatka	6.2	6.2	13.2	1.6		10.6	3.8	23.3	6.7	6.0	3.4	7.0	.8	.9	3.1	6.1	.4	.7	100.0
Volga	3.9	4.2	8.2	3.7	6.5		8.1	18.8	5.2	5.2	4.7	10.1	1.5	1.5	9.6	7.4	.4	1.0	100.0
North Caucasus	4.1	5.4	6.7	3.9	2.2	10.8		8.9	5.5	6.0	6.7	19.8	1.4	4.7	6.7	5.8	.5	.9	100.0
Urals	2.6	3.9	6.9	3.5	6.0	11.5	7.5		8.4	6.3	3.8	10.8	1.8	1.0	9.8	14.5	.8	.9	100.0
Western Siberian	1.6	2.7	5.4	3.0	2.8	4.6	5.6	12.0		14.1	5.9	9.2	1.4	.7	8.2	21.4	.6	.8	100.0
Eastern Siberian	1.5	3.5	8.1	3.2	3.6	6.0	7.3	11.4	17.3		9.8	11.0	1.9	.6	5.2	7.5	.6	1.5	100.0
Far Eastern	1.1	4.6	8.9	4.4	3.4	7.3	10.1	9.5	9.6	13.3		14.6	1.9	.8	3.9	4.5	.7	1.4	100.0
Ukrainian	6.8	6.7	8.2	5.5	2.2	5.8	11.6	8.5	4.8	5.1	4.3		3.6	2.2	4.0	15.2	3.6	1.9	100.0
Belorussian	3.8	16.3	8.8	2.3	1.6	5.2	4.8	6.9	3.7	4.4	2.6	19.4		1.0	2.1	10.8	.6	5.7	100.0
Transcaucasian	1.4	5.0	9.4	2.8	2.1	7.3	23.1	5.8	2.7	2.3	1.5	18.0	1.8		9.3	5.5	.9	1.1	100.0
Central Asian	.9	2.6	5.1	2.1	1.9	8.6	7.5	13.9	9.2	5.5	3.6	8.4	1.1	2.3		25.7	.5	1.1	100.0
Kazakh	1.4	3.0	4.1	2.2	2.8	5.1	7.3	16.7	12.7	4.8	2.0	17.5	3.2	1.0	13.5		1.3	1.4	100.0
Moldavian	3.1	4.6	5.5	1.8	1.4	3.6	6.8	6.5	4.8	3.6	1.5	39.5	1.3	.8	2.6	11.9		.7	100.0
Baltic	4.4	26.1	10.2	2.7	2.6	4.7	5.1	5.3	2.9	3.0	2.3	13.5	5.8	1.3	2.6	7.0	.5		100.0
U.S.S.R	3.8	6.1	7.8	3.5	3.5	6.8	7.3	10.4	6.6	5.9	4.2	12.7	2.2	1.4	5.8	9.1	1.0	1.9	100.0

[1] Figures in this column sum to 109.4 percent.

Note: This table should be read as follows. The first column of the top section gives the percentage of immigrants to cities of the Northern Region supplied by each other region; i.e., 12.3 percent of all arrivals in cities of the Northern Region came from the Northwestern Region. The first row of the second section gives the percentage of emigrants from the Northern Region going to cities of each other region; i.e., 18.3 percent of those leaving the Northern Region went to cities of the Northwestern Region.

Source: V.I. Perevedentsev, *Migratsiya naseleniya i trudovyye problemy Sibiri* Novosibirsk, 1966, p. 77.

TABLE 7.—*Net interregional migration flows, 1962*

[Columns show departures per 100 arrivals; rows show arrivals per 100 departures]

Region	Northern	Northwestern	Central	Central Black-Earth	Volga-Vyatka	Volga	Northern Caucasus	Urals	Western Siberian	Eastern Siberian	Far Eastern	Ukrainian	Belorussian	Trans-Caucasian	Central Asian	Kazakh	Moldavian	Western	U.S.S.R.
Northern		73	126	173	167	111	97	89	120	104	137	115	130	145	57	103	107	95	109
Northwestern	137		148	149	176	104	108	97	107	115	111	82	172	157	70	129	117	75	116
Central	79	68		170	140	92	79	91	91	91	101	74	124	139	68	86	93	83	93
Central Black Earth	58	67	59		86	58	61	72	74	80	102	49	96	101	56	77	49	65	64
Volga-Vyatka	60	57	71	116		67	65	43	50	64	88	59	102	80	39	67	42	92	60
Volga	90	96	108	173	150		139	92	99	111	123	99	174	148	52	92	94	115	106
Northern Caucasus	103	93	126	163	153	72		123	109	113	115	96	162	145	63	156	143	134	110
Urals	112	103	110	139	233	108	81		105	117	131	88	127	124	55	100	67	91	107
Western Siberian	84	93	110	126	199	101	92	95		106	116	78	121	110	59	69	86	74	93
Eastern Siberian	97	87	110	125	157	89	88	86	94		111	82	117	120	64	87	73	47	95
Far Eastern	73	90	99	98	114	81	87	76	86	90		68	87	72	66	74	31	50	83
Ukrainian	87	121	136	203	171	101	104	113	128	121	158		156	150	72	89	75	97	117
Belorussian	77	58	80	104	99	57	62	78	83	86	115	64		113	61	79	53	48	71
Transcaucasian	69	64	72	99	124	67	69	80	91	83	139	67	89		47	76	40	84	72
Central Asian	175	144	147	180	257	191	159	183	169	158	151	138	163	215		118	110	113	155
Kazakh	97	78	116	130	149	109	64	100	145	115	135	112	126	128	85		84	92	108
Moldavian	93	85	108	204	239	107	70	150	117	136	324	134	188	252	91	120		147	129
Western	105	134	121	155	109	87	74	109	135	210	199	103	208	118	89	108	68		125
U.S.S.R.	91	86	108	155	167	94	91	93	108	105	121	86	141	139	64	93	78	80	100

NOTE: The table should be read as follows: The 2d line of the 1st column shows that 137 people left the Northern Region for the Northwestern Region, for every 100 leaving the Northwestern Region for the Northern Region; the last column of the 2d line shows that 116 people arrived in the Northwestern Region for every 100 leaving; and the last line of column 2 shows the converse of this—86 people left the Northwestern Region for every 100 arriving.

Source: Perevedentsev, *Migratsiya*, 1966, p. 78.

TABLE 8.—*Net migration, by republic and by region of the R.S.F.S.R., 1961–65*

[In thousands; a minus sign indicates net out-migration]

Area	1961	1962	1963	1964	1965	5-year total
R.S.F.S.R.	−231	−177	−61	−156	−236	−861
Northwestern region	24	14	46	35	−8	111
Central region	−119	−62	−64	−18	−39	−30
Volga-Vyatka region	−109	−122	−78	−73	−82	−464
Central Black-Earth region	−72	−31	−38	−68	−53	−262
Volga region	5	8	55	−15	−25	28
Northern Caucasus region	81	79	77	55	84	376
Urals region	−36	−27	−41	−69	−57	−230
Western Siberian region	−7	−40	−113	−96	−88	−344
Eastern Siberian region	−12	−11	20	8	−22	−17
Far Eastern region	25	24	63	78	49	239
Kaliningrad Oblast	−11	−9	12	7	5	4
Ukrainian S.S.R.	−101	33	114	37	67	150
Belorussian S.S.R.	−47	−29	−75	−29	5	−175
Moldavian S.S.R.	0	7	15	7	18	47
Estonian S.S.R.	7	3	9	7	7	33
Latvian S.S.R.	14	4	13	12	12	55
Lithuanian S.S.R.	9	−10	−17	7	7	−4
Georgian S.S.R.	−4	1	0	0	1	−2
Armenian S.S.R.	5	−6	10	13	10	32
Azerbaydzhan S.S.R.	3	−22	5	−9	4	−19
Kazakh S.S.R.	242	223	22	84	31	602
Turkmen S.S.R.	1	1	2	1	−5	0
Uzbek S.S.R.	40	39	−67	13	52	77
Kirgiz S.S.R.	31	−4	46	13	19	105
Tadzhik S.S.R.	24	17	11	66	21	139

NOTE: The data are derived as the difference between total and natural population growth for each republic and region. The source states that the columns do not sum to zero because of inexactness in the calculations.

SOURCE: A. I. Notkin (Ed.), *Struktura narodnogo khozyaystva SSSR*, Moscow, 1967, p. 166.

IX. LABOR AND WAGES

1. During the past 2 years Soviet officials have taken several significant steps in their continuing efforts to cope with pressing labor problems. One of the more noteworthy of these steps was the issuance in December 1966 of a joint decree by the Central Committee of the C.P.S.U. and the Council of Ministers U.S.S.R., which created state committees on labor resource utilization at the republic level, which were ordered to absorb the old organized recruitment (*orgnabor*) and resettlement administration.[1] The activities of this administration had been reduced greatly in recent years and there had been numerous articles urging [2] its abolition.

2. The new state committees, which have been placed under the central direction of the Labor Resources Department of Gosplan U.S.S.R., are responsible for labor recruitment and resettlement functions, as well as numerous other activities. One basic task given them is to develop measures and programs for retraining surplus labor and to arrange for its reassignment to enterprises, sectors, agencies, or regions which have a demand for labor. In addition, part of the new committees' responsibility in this area is to provide the public with information on available jobs. Another type of task is to recommend to the appropriate planning and economic agencies more rational methods for the utilization of labor resources, and particularly that portion of available manpower which is not now employed in the "socialized" sector.

3. One of the serious operational problems now facing the committees, which tends to embrace the full range of their responsibilities, has been recently outlined by K. A. Novikov, chairman of the state committee in the R.S.F.S.R. Novikov reports that regardless of the expected 50-percent increase in the number of young persons entering the able-bodied ages during the years 1966–70, some individual regions will experience difficulty in finding the needed supply of labor. In the aggregate, he says, the R.S.F.S.R. will require 700,000 persons over and above the expected increase in labor resources within the republic during the present 5-year plan.[3]

4. A view of this stringent labor situation in the U.S.S.R. as a whole can be obtained from the data in table 1.[4] Although the population 14 years old and over will grow by 9.3 percent between 1965 and 1970, and the total labor force will increase by 7.9 percent, employment is projected to grow by 10.3 percent. These figures, especially when

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[1] "On the Measures for Securing the Greatest Growth of Labor Productivity in Industry and Construction," *Byulleten' Ministerstva vysshego i srednego spetsial'nogo obrazovaniya SSSR*, No. 5, May 1967, pp. 5–13, especially p. 11.

[2] As described in Murray Feshbach, "Manpower in the U.S.S.R.: A Survey of Recent Trends and Prospects," in U.S. Congress, Joint Economic Committee, *New Directions in the Soviet Economy*, part III, Washington, D.C., 1966, pp. 739–740.

[3] K. Novikov, "Problems of Labor Resources," *Trud*, Aug. 6, 1967, p. 2, and K. A. Novikov, "Cadres of the Five-Year Plan Period," *Ekonomicheskaya gazeta*, no. 49, December 1967, p. 9.

[4] For detailed discussions of the taut labor situation in the U.S.S.R. during this 5-year plan period, see Feshbach, "Manpower," 1966, pp. 745–751, and Ritchie H. Reed, *Estimates and Projections of the Labor Force and Civilian Employment in the U.S.S.R.: 1950–1975*, U.S. Bureau of the Census, International Population Reports, Series P–91, no. 15, Washington, D.C. 1967, pp. 6–10, 19–21.

viewed in connection with an expected large increase in the proportion of persons in the pension ages and a planned increase in the number of full-time students, underscore the need for more efficient utilization of labor, particularly through reduction in labor turnover and seasonality.

5. Another recent step taken to resolve current labor problems was aimed at reducing the large amount of seasonality in the use of collective farm labor.[5] In April 1966 the party and Government issued a joint directive abolishing restrictions on nonbasic farm activities in order to permit the organization of industrial and other enterprises not connected with agricultural production on both collective and state farms.[6] Two months later, the Council of Ministers R.S.F.S.R. issued a directive recommending that collective farms, intercollective farm organizations, and state farms expand their subsidiary industrial activities. Wide use of cottage-industry-type workers (*nadomniki*) was specifically recommended.[7] By 1970, the subsidiary industry of collective and state farms of the Ukraine is expected to produce 680 million rubles of output—70 percent more than was produced in 1965.[8]

6. The Soviet Government has also modified its policy in respect to the publication of statistical information on labor during the past few years, as a result of which several interesting types of data have been released. In the agricultural sector, data on the so-called attached persons (*privlechenyye*) assigned to agricultural work from nonagricultural enterprises and organizations have been reported for the first time (table 1), and some useful adjustments can now be made to previously published estimates.[9] In addition, Soviet statistical authorities have explicitly defined the scope of "residual employment" in the private agricultural sector. It has been revealed that this category includes persons "solely" engaged in private agricultural activity on an annual average basis. Thus, the officially reported data, quite clearly, omit about half of the total labor input into this area.[10] New information on the detailed sectoral and branch distribution of members of producers' cooperatives, showing their status before they were abolished in October 1960, is given in tables 2 and 3.

7. A remarkable amount of data have recently become available on wages in the U.S.S.R., some of which are presented in tables 4–7. Table 4 shows wage data published in the statistical handbooks for all sectors of the national economy for selected years during the period 1940–66. Table 5 presents both reported and estimated wage data for all years in the period 1950–66 for selected sectors. Table 6 contains rankings of wages by branch of industry and table 7 provides estimates of average wages in industry, by class of worker, since 1950. All wage data in these four tables are in current rubles.

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[5] See discussion in Feshbach, "Manpower," 1966, p. 759, and more current data in A. I. Arkhipov, *Plan, sbyt i initsiativa sel'skokhozyaystvennykh predpriyatiy*, Moscow, 1967, p. 30.

[6] "On the Development of Subsidiary Enterprises and Trades in Agriculture," dated Apr. 14, 1966, in A. S. Pankratov (Ed.), *Zakonodatel'stvo o proizvodstve, zagotovkakh i zakupkakh sel'khozproduktov; sbornik ofitsial'nykh materialov*, Moscow, 1967, p. 45.

[7] "On the Development of Subsidiary Enterprises and Trades in Agriculture," dated June 18, 1966, in Yuridicheskaya komissiya pri Sovete Ministrov RSFSR, *Sistematicheskoye sobraniye zakonov RSFSR, ukazov Prezidiuma Verkhovnogo Soveta RSFSR i resheniy Pravitel'stva RSFSR, Razdel VIII. Sel'skoye khozyaystvo, Tom VI*, Moscow, 1967, pp. 100–103.

[8] L. Andriyenko, "Socialist Agriculture of the Ukraine," *Ekonomika sel'skogo khozyaystva*, No. 10, October 1967, pp. 31–32.

[9] See Tsentral'noye statisticheskoye upravleniye pri Sovete Ministrov SSSR (TsSU), *Strana sovetov za 50 let, sbornik statisticheskikh materialov*, Moscow, 1967, pp. 162–163; Feshbach, "Manpower," 1966, pp. 746–747 and 784; and Reed, *Estimates*, 1967, pp. 15, 27, and 30.

[10] TsSU, *Strana*, 1967, pp. 162–163, and Feshbach, "Manpower," 1966, pp. 750–751.

8. Recent major innovations in the field of wage legislation include: [11]
(1) Raising minimum monthly wages of workers and employees to 60–70 rubles per month, effective January 1, 1968; (2) raising average wage rates of machine-tool operators employed in all sectors by 15 percent, apparently designed to alleviate a shortage of such workers; [12] (3) introducing wage differentials for persons located in the Far East and European North and employed in the branches of industry and sectors of the national economy which were previously not entitled to this type of increment, in an attempt to reduce the high rate of turnover; [13] (4) raising the ratio of temporary disability payments to average wages to 100 percent for persons employed continuously over 8 years and to 80 percent for persons with 5 to 8 years of such tenure; and (5) reducing the minimum pension eligibility age of male collective farmers from 65 to 60 years and of female collective farmers from 60 to 55. This measure appears to be contrary to the intent of the 1964 collective farmer pension law of attracting more manpower into the socialized sector, but in fact permits greater opportunity for work on private holdings. At the same time, the regulation originally adopted in 1964 enabling pensioners who return to work to retain all of their pension is to remain in force for another year. This may be considered sufficient incentive for these farmers to continue working in the socialized sector.

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[11] "On Measures for the Greatest Raising of the Well-Being of the Soviet People," dated Sept 26, 1967, in *Sotsial'noye obespecheniye*, no. 11, November 1967, pp. 1–2.
[12] See Feshbach, "Manpower," 1966, pp. 741–742, and *Trud*, Sept. 28, 1967, p. 1, and Dec. 13, 1967, p. 2.
[13] See Feshbach, "Manpower," 1966, p. 731.

TABLE 5.—*Annual average money wages in selected sectors of the national economy, U.S.S.R., 1950–66*

[In rubles]

Year	National economy (workers and employees)	Nonagricultural sectors (workers and employees)	Industry		Construction		Health services (workers and employees)	Transport and communications (workers and employees)	State farms and subsidiary State agricultural enterprises (workers and employees)
			Workers and employees	Wage workers	Workers and employees	Wage workers			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1950	767	(1)	863	832	735	682	562	(1)	(1)
1951	784	(1)	881	849	765	711	573	(1)	(1)
1952	800	(1)	899	866	796	740	578	(1)	(1)
1953	825	(1)	917	874	826	769	578	(1)	483
1954	844	(1)	935	910	857	798	575	(1)	(1)
1955	858	(1)	953	920	887	838	594	(1)	(1)
1956	881	(1)	984	938	950	902	677	(1)	573
1957	915	875	1,014	991	1,020	976	683	941	600
1958	934	970	1,045	1,024	1,039	998	707	956	637
1959	948	983	1,069	1,052	1,056	1,015	707	973	654
1960	961	1,003	1,096	1,078	1,100	1,064	707	1,010	647
1961	1,001	1,044	1,130	1,112	1,162	1,121	719	1,088	696
1962	1,034	1,068	1,155	1,138	1,198	1,151	732	1,136	793
1963	1,051	1,085	1,181	1,158	1,219	1,180	744	1,154	805
1964	1,081	1,114	1,206	1,184	1,272	1,236	784	1,186	847
1965	1,147	1,182	1,240	1,216	1,313	1,278	947	1,213	889
966	1,190	1,223	1,282	1,253	1,357	1,320	968	1,263	950

[1] Not available.

SOURCE:

Columns 1, 3, 5:
1950–57, 1959, 1961–62: S. Joseph Cerniglia, *Wages in the U.S.S.R., 1950–1966: Construction*, U.S. Bureau of the Census, International Population Reports, Series P–95, No. 63, Washington, D.C., 1967, pp. 15, 17.
1958, 1963–65: *Nar. khoz. 65*, pp. 567–568.
1966: TsSU, *Strana*, 1967, p. 227.

Column 2: 1957–66: International Labour Office (I.L.O), *Yearbook of Labour Statistics 1967*, Geneva, 1967, p. 508.

Columns 4, 6:
1950–56: Cerniglia, *Wages*, 1967, pp. 15, 17.
1957–65: I.L.O., *Yearbook*, 1967, pp. 517 and 599.
1966: TsSU, *Strana*, 1967, p. 227.

Column 7:
1950–57, 1959, 1961–62: George H. Hoffberg, *Wages in the U.S.S.R., 1950–1966: Health Services*, U.S. Bureau of the Census, International Population Reports, Series P–95, No. 64, Washington, D.C., April 1968, p. 19.
1958, 1963–65: *Nar. khoz. 65*, pp. 567–568.
1966: TsSU, *Strana*, 1967, p. 227.

Column 8:
1957–65: I.L.O., *Yearbook*, 1967, p. 605. Despite an explicit statement in this source that these wage data exclude sea transport, estimates of the weighted average of *all* transport and communications wages in 1958, 1960, and 1963–66 given in the Soviet statistical handbooks indicate that sea transport is included. These estimates yield figures which are either exactly equal to or less than 1 ruble different from those shown in the I.L.O. data.
1966: TsSU, *Strana*, 1967, p. 227.

Column 9:
1953, 1956: Derived from an index of annual average wages given in Z. A. Samed-Zade, *Proizvoditel'nost' truda v sovkhozakh*, Baku, 1966, p. 112.
1957–65: I.L.O., *Yearbook*, 1967, p. 622.
1966: TsSU, *Strana*, 1967, p. 227.

TABLE 4.—*Annual average money wages of workers and employees, by sector of the national economy, U.S.S.R., 1940–66*

[In rubles]

Sector of the national economy	1940		1945		1958		1960		1963		1964		1965		1966	
	Wages	Index	Wages	Index	Wages	Index	Wages	Index	Wages	Index	Wages	Index	Wages	Index	Wages	Index
Total	396.0	100.0	520.8	100.0	933.6	100.0	961.2	100.0	1,051.2	100.0	1,081.2	100.0	1,147.2	100.0	1,190.4	100.0
Industry (industrial-production personnel)	408.0	103.0	564.0	108.3	1,045.2	112.0	1,095.6	114.0	1,180.8	112.3	1,206.0	111.5	1,239.6	108.1	1,281.6	107.7
Wageworkers	387.6	97.9	540.0	103.7	1,023.6	109.6	1,077.6	112.1	1,158.0	110.2	1,184.4	109.5	1,215.6	106.0	1,252.8	105.2
Construction (construction-installation personnel)	406.8	102.7	495.6	95.2	1,039.2	111.3	1,100.4	114.5	1,219.2	116.0	1,272.0	117.6	1,312.8	114.4	1,357.2	114.0
Wageworkers	372.0	93.9	433.2	83.2	998.4	106.9	1,064.4	110.7	1,179.6	112.2	1,236.0	114.3	1,278.0	111.4	1,320.0	110.9
State farms and subsidiary state agricultural enterprises	262.8	66.4	255.6	49.1	637.2	68.3	646.8	67.3	805.2	76.6	847.2	78.4	889.2	77.5	957.6	80.4
Transport	416.4	105.2	578.4	111.1	986.4	105.7	1,040.4	108.2	1,191.6	113.4	1,226.4	113.4	1,266.0	110.4	1,315.2	110.5
Railroad transport	409.2	103.3	630.0	121.0	968.4	103.7	988.8	102.9	1,135.2	108.0	1,155.6	106.9	1,174.8	102.4	1,203.6	101.1
Water transport	490.8	123.9	591.6	113.6	1,174.8	125.8	1,272.0	132.3	1,539.6	146.5	1,579.2	146.1	1,608.0	140.2	1,672.8	140.5
Motor vehicle, urban electrical, and other transport; freight handling	414.0	104.5	490.8	94.2	981.6	105.1	1,053.6	109.6	1,195.2	113.7	1,236.0	114.3	1,286.4	112.1	1,342.8	112.8
Communications	337.2	85.2	424.8	81.6	696.0	74.6	747.6	77.8	870.0	82.8	879.6	81.4	886.8	77.3	904.8	76.0
Trade, public dining, procurement, and material-technical supply	300.0	75.8	322.8	62.0	697.2	74.7	703.2	73.2	774.0	73.6	788.4	72.9	898.8	78.3	951.6	79.9
Housing-Communal economy	313.2	79.1	372.0	71.4	663.6	71.0	691.2	71.9	751.2	71.5	774.0	71.6	861.6	75.1	906.0	76.1
Health services	306.0	77.3	472.8	90.8	706.8	75.7	706.8	73.5	744.0	70.8	783.6	72.5	946.8	82.5	968.4	81.4
Education (including cultural-enlightenment institutions)	387.6	97.9	566.4	108.8	832.8	89.2	838.8	87.3	903.6	86.0	942.0	87.1	1,123.2	97.9	1,146.0	96.3
Science and scientific services	560.4	141.5	770.4	147.9	1,270.8	136.1	1,250.4	130.1	1,316.4	125.2	1,344.0	124.3	1,387.2	120.9	1,423.2	119.6
Credit and insurance institutions	400.8	101.2	614.4	118.0	865.2	92.7	843.6	87.8	937.2	89.2	948.0	87.7	1,032.0	99.0	1,071.	90.0
Government and administration	465.6	117.6	604.8	116.1	1,010.4	108.2	1,027.2	106.9	1,123.2	106.8	1,149.6	106.3	1,256.4	109.5	1,324.8	111.3

SOURCE:
1940, 1945, 1966: TsSU, *Strana*, 1967, p. 227.
1958, 1963–64: *Nar. khoz. 65*, pp. 567–568.
1960, 1965: TsSU, *SSSR v tsifrakh*, 1967, pp. 147–148.

TABLE 1.—*Estimates and projections of population, labor force, and civilian employment, U.S.S.R., 1950–70*

[In thousands. Population and labor force figures are as of July 1]

Item	1950	1958	1960	1965	1966	1970
POPULATION						
Total population aged 14 and over	129,708	148,663	151,234	164,441	167,459	179,706
Male	53,633	63,403	64,825	71,900	73,532	80,220
Female	76,075	85,260	86,409	92,541	93,927	99,486
LABOR FORCE						
Total	97,005	108,961	108,621	119,906	121,079	129,422
Armed forces	4,600	3,800	3,300	3,000	3,000	3,000
Civilian labor force	92,405	105,161	105,321	116,906	118,079	126,422
Nonagricultural sectors	42,474	55,226	60,425	73,386	75,820	85,196
Agricultural sectors	49,931	49,935	44,896	43,520	42,259	41,226
Workers and employees	4,398	6,656	8,084	10,128	10,373	11,740
Collective farmers	35,709	32,863	28,852	24,453	24,065	20,908
Private sector	9,824	10,416	7,960	8,939	7,821	8,578
CIVILIAN EMPLOYMENT						
Total (annual average)	80,199	94,021	95,728	108,352	111,482	119,511
Nonagricultural sectors	36,983	49,810	54,909	67,751	70,304	80,721
Agricultural sectors	43,136	44,211	40,819	40,601	41,178	38,790
Workers and employees	3,437	5,695	7,123	9,167	9,412	10,779
Collective farmers	27,600	25,400	22,300	18,900	18,600	16,160
Attached workers	200	500	500	500	500	300
Private sector	11,899	12,616	10,896	12,034	12,666	11,551
Class of worker:						
Workers and employees	40,420	55,505	62,032	76,918	79,716	91,500
Collective farmers	27,600	25,400	22,300	18,900	18,600	16,160
Private sector	11,899	12,616	10,896	12,034	12,666	11,551
Attached workers	200	500	500	500	500	300

NOTE:

Labor force: This term refers to those persons who claim to have an occupation, even if they work only during part of the year. It is different from the U.S. concept in that it does not measure both employment and unemployment at a particular point in time. No allowance is made for recording unemployment as defined in U.S. statistics. Unemployment was "abolished" in the U.S.S.R. in 1930, and since that time no unemployment data have been collected. If a person does not claim to have an occupation, he is considered to be out of the labor force whether he is seeking work or not. If a person works at more than one job he is recorded as belonging to what he considers as his primary occupation.

Annual average civilian employment: This term refers to the annual average registered number of persons (*srednyaya spisochnaya chislennost' rabotnikov*). For the state sector, they are derived as the averages of 12 monthly averages which are, in turn, the averages of the daily numbers of persons listed on the rolls of the employing enterprise. A person appears on the rolls of his employing enterprise if he is paid by it, and he remains on the rolls during excused absences from work, holidays, etc. For the collective farm sector, the annual average is derived as the average of 12 monthly numbers of participants. Due primarily to seasonality, the average employment number will be smaller than the labor force number. For instance, a person working 6 months of the year is registered as 1 person in the labor force, but only as ½ of an annual average worker, employee, or collective farmer.

SOURCE:

Population: All years: James W. Brackett and John W. De Pauw, "Population Policy and Demographic Trends in the Soviet Union," in U.S. Congress, Joint Economic Committee, *New Directions in the Soviet Economy*, pt. III, Washington, D.C., 1966, pp. 662–674.

Labor force:

1950, 1958, 1960, 1965, 1970: Ritchie H. Reed, *Estimates and Projections of the Labor Force and Civilian Employment in the U.S.S.R.: 1950–1975*, U.S. Bureau of the Census, International Population Reports, series P–91, No. 15, Washington, D.C., 1967, p. 22. This source also gives data for other years of the period 1950–65.

1966: Estimated in the same manner as for the years 1950–65 in Reed, *Estimates*, 1967, p. 22. The annual average employment data used in making the estimates are cited below. The figure for the private sector was estimated on the basis of the employment figure for this category, which was derived from Tsentral'noye statisticheskoye upravleniye pri Sovete Ministrov SSSR (TsSU), *Strana sovetov za 50 let, sbornik statisticheskikh materialov*, Moscow, 1967, pp. 162–163.

Civilian employment:

1950, 1958, 1960, 1965, 1970: Reed, *Estimates*, 1967, p. 30. The 1950 and 1958 nonagricultural sector employment figures given in this source were adjusted to include members of producers' cooperatives. These figures were derived from data in column B for the appropriate year, table 2, below. The data for attached workers (*privlechenyye*), are reported for the years 1950, 1960, 1965, and 1966 in TsSU, *Strana*, 1967, pp. 162–163. The 1958 figure was assumed to be 500,000 and the 1970 figure, 300,000. Total employment figures given in Reed were changed to include these figures for attached workers. The attached workers are premanently employed in other sectors, and they are recorded in the labor force for these sectors, hence there is no labor force category for attached workers.

1966: Reported in TsSU, *Strana*, 1967, pp. 162–163, 218–219. Private sector employment was estimated in the same manner as in Reed, *Estimates*, 1967, p. 29, using the most recent data for agricultural holdings, which are found in *Trud*, Jan. 29, 1967, p. 2.

TABLE 2.—*Workers and employees, by sector of the national economy, U.S.S.R., 1940–66*

[Employment figures are annual averages and are in thousands; figures in parentheses are estimated]

Sector of the national economy	1940		1945		1950		1958		1960	1965	1966
	A	B	A	B	A	B	A	B	B	B	B
Total	31,192	33,926	27,263	28,566	38,895	40,420	54,605	[1] 56,005	62,032	76,918	79,716
Industry (industrial-production personnel)	10,967	13,079	9,508	10,665	14,144	15,317	19,675	20,807	22,291	27,056	28,105
Construction (construction-installation personnel)	1,563	1,620	1,515	1,527	2,569	2,603	4,421	4,442	5,143	5,617	5,768
Agriculture	2,976	2,983	(2)	2,930	3,881	3,881	6,562	6,562	7,482	9,568	9,821
Sovkhozy and other state agricultural enterprises	1,760	1,760	2,147	2,147	2,425	2,425	4,614	4,614	6,324	8,598	8,772
MTS/RTS	530	530	385	385	678	678	1,219	1,219	348	0	0
Unspecified agricultural establishments	407	413	(2)	199	334	334	362	362	451	568	640
Forestry	279	280	(2)	199	444	444	367	367	359	402	409
Transport and communications	3,903	4,009	3,537	3,552	4,624	4,659	6,332	6,345	7,017	8,259	8,437
Transport	3,425	3,525	3,111	3,126	4,082	4,117	5,668	5,681	6,279	7,252	7,364
Railroad transport	1,752	1,767	1,841	1,841	2,068	2,068	2,330	2,330	2,348	2,312	2,317
Water transport	203	206	190	190	222	222	320	320	322	348	347
Motor vehicle, urban electrical, and other transport; freight handling; and road economy	1,470	1,552	1,080	1,095	1,792	1,827	3,018	3,031	3,609	4,592	4,700
Communications	478	484	426	426	542	542	664	664	738	1,007	1,073
Trade, procurement, material-technical supply and sales, and public dining	3,303	3,351	2,462	2,445	3,325	3,360	4,190	4,190	4,675	6,009	6,261
Trade, procurement and material-technical supply and sales	2,519	(2)	1,747	(2)	2,666	(2)	3,231	(2)	[3] 3,606	4,532	4,724
Retail trade	1,382	(2)	(2)	(2)	1,308	(2)	1,888	(2)	[4] 2,226	[4] 2,974	[4] 3,128
Wholesale trade	(2)	(2)	(2)	(2)	(2)	(2)	(216)	(2)	[3] (249)	[5] (361)	(2)
Material-technical supply and sales	(2)	(2)	(2)	(2)	(2)	(2)	(537)	(2)	[3] (588)	[5] (679)	(2)
Procurement	(2)	(2)	(2)	(2)	(2)	(2)	(541)	(2)	[3] (496)	[5] (463)	(2)
Public dining	784	(2)	715	(2)	659	(2)	959	(2)	[4] 1,069	[4] 1,477	[4] 1,537
Health services and education	4,531	4,552	3,970	4,060	6,080	6,080	8,775	8,775	10,027	13,502	14,063
Health services	1,507	1,512	1,419	1,419	2,051	2,051	3,059	3,059	3,461	4,277	4,427
Education	3,024	3,040	2,551	2,641	4,029	4,029	5,716	5,716	6,566	9,225	9,636
Educational and cultural-enlightenment institutions	2,663	2,678	2,551	2,352	3,315	3,315	4,378	4,378	4,803	6,600	6,895
Science	361	362		289	714	714	1,338	1,338	1,763	2,625	2,741

"Other" sectors	3,949	4,332	(2)	3,387	4,272	4,520	4,650	4,884	5,397	6,907	7,261
Housing-communal economy	1,221	1,516	(2)	1,046	1,210	1,371	1,632	1,754	1,920	2,386	2,489
Administrative organs	1,825	1,837	1,645	1,645	1,831	1,831	1,294	1,294	1,245	1,460	1,546
State and economic administrative organs	(2)	(2)	(2)	(2)	(2)	(2)	(1,165)	(2)	[3] (1,120)	[6] (1,314)	[6] (1,391)
Administrative organs of cooperative and social organizations	(2)	(2)	(2)	(2)	(2)	(2)	(129)	(2)	[3] (124)	[6] (146)	[6] (155)
Credit and insurance organizations	262	267	197	197	264	264	260	260	265	300	313
Other residual	641	712	(2)	499	967	1,054	1,464	1,576	1,967	2,761	2,913
Capital repair of buildings and structures	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	[7] (929)	(2)
Drilling	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	[7] (175)	(2)
Project-survey organizations	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	[7] (547)	(2)
Literature and publishing	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	[7] (100)	(2)
Art	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	[7] (360)	(2)
Other unidentified	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	[7] (650)	(2)

[1] Includes 500,000 collective farmers transferred to the rolls of machine-tractor stations. See Feshbach, "Manpower," 1966, pp. 770–773.
[2] Not available.
[3] Feshbach, "Manpower," 1966, pp. 770–773.
[4] *Vestnik statistiki*, No. 12, December 1967, p. 77.
[5] Estimated from information in TsSU RSFSR, *Narodnoye khozyaystvo RSFSR v 1965 godu, statisticheskiy yezhogodnik*, Moscow, 1966, p. 394, and expanded to an All-Union total as described in Feshbach, "Manpower," 1966, p. 773, footnote 4.
[6] Estimated from information in TsSU RSFSR, *Nar. khoz. RSFSR 65*, 1966, p. 395, in the same manner as described in Feshbach, "Manpower," 1966, p. 773, footnote 5.
[7] Estimated from information in TsSU RSFSR, *Nar. khoz. RSFSR 65*, 1966, p. 395, in the same manner as described in Feshbach, "Manpower," 1966, p. 773, footnote 6.

NOTE: Figures in "A" columns exclude members of producers' cooperatives; figures in "B" columns include them. Beginning in 1960, employment figures reported in the statistical handbooks include the former members of producers' cooperatives in the workers and employees category.

SOURCE:
1940, 1945:
Column A: Feshbach, "Manpower," 1966, pp. 770–773.
Column B: TsSU, *Strana*, 1967, pp. 218–219.
1950, 1958:
Column A: Feshbach, "Manpower," 1966, pp. 770–773.
Column B: Tsentral'noye statisticheskoye upravleniye pri Sovete Ministrov SSSR (TsSU), *Narodnoye khozyaystvo SSSR v 1965 godu, statisticheskiy yezhogodnik*, Moscow, 1966, pp. 558–559. (Cited hereafter as *Nar. khoz. 65*.)
1960, 1966: TsSU, *Strana*, 1967, pp. 218–219.
1965: TsSU, *SSSR v tsifrakh v 1966 godu, kratkiy statisticheskiy sbornik*, Moscow, 1967, pp. 141–143.

TABLE 3.—*Industrial-production personnel and wageworkers, by branch of industry, U.S.S.R., 1940–66*

[Employment figures are annual averages and are in thousands]

Branch of industry	1940		1950		1958		1960	1964	1965	1966
	A	B	A	B	A	B	B	B	B	B
Total:										
Industrial-production personnel	10,967	13,079	14,144	15,317	19,675.0	20,807	22,291.0	25,933	27,056	28,105
Wageworkers	8,290	9,971	11,208	12,226	16,279.0	17,236	18,574.0	21,435	22,206	22,896
Machine building and metalworking:										
Industrial-production personnel	(1)	(1)	(1)	(1)	5,962.0	(1)	7,360.0	9,232	9,821	(1)
Wageworkers	2,395	2,575	3,216	3,332	4,932.0	5,017	5,655.0	7,249	7,579	7,885
Fuel:										
Industrial-production personnel	(1)	(1)	(1)	(1)	1,495.0	(1)	(1)	1,504	1,542	(1)
Wageworkers	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Coal:										
Industrial-production personnel	(1)	(1)	(1)	(1)	1,256.2	(1)	1,196.3	(1)	(1)	(1)
Wageworkers	436	436	732	733	1,071.0	1,071	1,031.0	988	1,016	1,011
Ferrous metallurgy:										
Industrial-production personnel	(1)	(1)	(1)	(1)	984.0	(1)	(1)	1,167	1,218	(1)
Wageworkers	405	405	604	605	812.0	815	886.0	1,009	1,037	1,060
Timber, woodworking, and paper:										
Industrial-production personnel	(1)	(1)	(1)	(1)	2,597.0	(1)	(1)	2,801	2,760	(1)
Wageworkers	(1)	1,594	1,678	1,828	2,148.0	2,262	2,236.0	2,310	2,314	(1)
Paper:										
Industrial-production personnel	(1)	(1)	(1)	(1)	150.6	(1)	154.0	(1)	(1)	(1)
Wageworkers	(1)	50	(1)	110	129.5	130	132.8	149	158	(1)
Food:										
Industrial-production personnel	(1)	(1)	(1)	(1)	2,068.1	(1)	2,146.0	2,438	2,543	(1)
Wageworkers	1,049	1,161	1,232	1,268	1,662.0	1,684	1,743.0	1,975	2,099	2,160
Chemical and rubber asbestos:										
Industrial-production personnel	(1)	(1)	(1)	(1)	610.0	(1)	(1)	(1)	1,136	(1)
Wageworkers	273	297	326	332	494.0	504	584.0	870	935	991
Light:										
Industrial-production personnel	(1)	(1)	(1)	(1)	2,943.7	(1)	3,893.5	4,171	4,323	(1)
Wageworkers	1,489	2,334	1,678	2,164	2,515.0	3,107	3,371.0	3,648	3,741	3,872
Textiles:										
Industrial-production personnel	(1)	(1)	(1)	(1)	1,602.8	(1)	1,814.0	1,898	1,953	(1)
Wageworkers	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Cotton textiles:										
Industrial-production personnel	(1)	(1)	(1)	(1)	727.2	(1)	776.0	787	802	(1)
Wageworkers	(1)	(1)	(1)	(1)	705.0	(1)	(1)	(1)	(1)	(1)
Wool:										
Industrial-production personnel	(1)	(1)	(1)	(1)	191.5	(1)	234.3	254	258	(1)
Wageworkers	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Flax (linen):										
Industrial-production personnel	(1)	(1)	(1)	(1)	131.4	(1)	137.7	146	(1)	(1)
Wageworkers	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Silk:										
Industrial-production personnel	(1)	(1)	(1)	(1)	(1)	(1)	110.0	120	124	(1)
Wageworkers	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Knitted wear										
Industrial-production personnel	(1)	(1)	(1)	(1)	200.7	(1)	254.0	289	329	(1)
Wageworkers	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

TABLE 3.—*Industrial-production personnel and wageworkers, by branch of industry, U.S.S.R., 1940–66*—Continued

[Employment figures are annual averages and are in thousands]

Branch of industry	1940		1950		1958		1960	1964	1965	1966
	A	B	A	B	A	B	B	B	B	B
Light—Continued										
Sewn goods:										
Industrial-production personnel	(1)	(1)	(1)	(1)	841.7	(1)	1,372.3	1,582	1,660	(1)
Wageworkers	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Leather, fur, and shoe:										
Industrial-production personnel	(1)	(1)	(1)	(1)	490.0	(1)	687.8	678	695	(1)
Wageworkers	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Construction materials:										
Industrial-production personnel	(1)	(1)	(1)	(1)	1,217.5	(1)	1,493.4	1,556	1,569	(1)
Wageworkers	252	295	547	577	1,072.0	1,099	1,310.0	1,365	1,392	1,433
Glass and chinaware:										
Industrial-production personnel	(1)	(1)	(1)	(1)	208.6	(1)	226.3	(1)	(1)	(1)
Wageworkers	(1)	(1)	(1)	(1)	181.0	(1)	(1)	(1)	(1)	(1)
Electric power:										
Industrial-production personnel	(1)	(1)	(1)	(1)	(1)	(1)	388.0	(1)	(1)	(1)
Wageworkers	(1)	108	(1)	131	(1)	223	265.0	351	381	(1)

[1] Not available.

NOTE: Figures in "A" columns exclude members of producers' cooperatives; figures in "B" columns include them. Beginning in 1960, employment figures reported in the statistical handbooks include the former members of producers' cooperatives in the workers and employees category.

SOURCE:
1940, 1950:
Column A: Feshbach, "Manpower," 1966, pp. 774–780.
Column B: *Nar. khoz. 65*, p. 140.
1958:
Column A: Feshbach, "Manpower," 1966, pp. 774–780, and estimates based on a percentage distribution of industrial production personnel given in N. N. Nekrasov et al. (editors), *Razvitiye i razmeshcheniye proizvoditel'nykh sil ekonomicheskikh rayonovy SSSR*, Moscow, 1967, p. 271.
Column B: *Nar. khoz. 65*, p. 140.
1960: Feshbach, "Manpower," 1966, pp. 774–780, and *Nar. khoz. 65*, p. 140.
1964: Feshbach, "Manpower," 1966, pp. 774–780; Nekrasov, *Razvitiye*, 1967, p. 169; and B. I. Kislyakov, *Legkaya industriya za 50 let*, Moscow, 1967, p. 159.
1965: Kislyakov, *Legkaya*, 1967, p. 159; *Nar. khoz. 65*, p. 140; and Nekrasov, *Razvitiye*, 1967, p. 271.
1966: TsSU, *Strana*, 1967, p. 62.

TABLE 6.—*Rank order and indexes of annual average money wages in Soviet industry, by branch of industry, 1950–66*

Branch of industry	1950		1955		1956		1959		1960		1962		1965				1966	
	Wageworkers		Wageworkers		Wageworkers		Wageworkers		Wageworkers		Wageworkers		Workers and employees		Wageworkers		Workers and employees	
	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index
All industry	(1)	100.0	(1)	(2)	(1)	100.0	(1)	100.0	(1)	(2)	(1)	(2)	(1)	(2)	(1)	100.0	(1)	(2)
Coal	1	170.0	1	100.0	1	162.1	1	182.7	1	(2)	1	(2)	1	(2)	(2)	(2)	1	100.0
Fish	(2)	(2)	4	79.6	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	1	166.1	2	92.0
Nonferrous metallurgy	(2)	(2)	2	92.4	2	144.0	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	2	147.1	3	79.0
Ferrous metallurgy	2	[3] 136.9	3	83.3	3	[3] 129.3	2	[3] 128.9	3	(2)	3	(2)	3	(2)	4	123.9	4	63.6
Coke-chemical	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	5	119.8	(2)	(2)
Iron ore mining	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	2	(2)	2	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Petroleum and gas	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	4	(2)	(2)	(2)	5	63.0
Petroleum	3	120.3	5	75.2	4	111.0	3	103.9	4	(2)	4	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Oil extraction	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	6	114.8	(2)	(2)
Oil refining	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	8	110.3	(2)	(2)
Gas	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	7	110.7	(2)	(2)
Peat	16	70.4	(2)	(2)	16	78.3	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	15	81.8	(2)	(2)
Timber	(2)	(2)	9	64.0	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	11	103.7	6	55.9
Timber and woodworking	12	84.8	(2)	(2)	9	93.7	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Electric power	6	101.7	8	65.1	8	99.1	(2)	(2)	8	(2)	5	(2)	5	(2)	10	106.6	7	55.3
Chemical	7	101.1	6	68.7	7	101.0	6	92.7	6	(2)	6	(2)	6	(2)	(2)	(2)	8	55.1
Mining chemical	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	3	134.2	(2)	(2)
Basic chemical	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	9	108.2	(2)	(2)
Synthetic rosins and plastics	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	13	98.7	(2)	(2)
Wood chemical and hydrolysis	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	14	95.4	(2)	(2)
Rubber-asbestos	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	11	103.7	(2)	(2)
Cement	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	9	53.9
Machine-building and metalworking	4	108.0	7	68.0	6	104.1	5	99.8	7	(2)	8	(2)	8	(2)	(2)	(2)	10	51.7
Paper	5	104.5	10	[4] 62.3	5	107.0	4	102.7	5	(2)	7	(2)	7	(2)	12	103.3	11	51.3
Construction materials (excluding cement)	9	[5] 88.4	11	[5] 62.1	11	[5] 89.5	(2)	(2)	(2)	(2)	(2)	(2)	[5] 9	(2)	(2)	(2)	12	50.1
Glass and chinaware	10	87.7	(2)	(2)	10	90.4	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	13	45.9
Woodworking	13	81.5	(2)	(2)	14	84.0	7	85.7	9	(2)	9	(2)	10	(2)	(2)	(2)	14	45.7
Printing	8	95.8	(2)	(2)	12	86.5	(2)	(2)	13	(2)	10	(2)	(2)	(2)	(2)	(2)	15	43.3
Textile	11	85.5	(2)	(2)	15	83.5	9	78.8	(2)	(2)	(2)	(2)	13	(2)	(2)	(2)	16	40.0
Cotton textile	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	12	(2)	12	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Food (excluding fish industry)	15	[6] 72.7	13	[7] 47.3	18	[6] 75.0	10	[6] 73.8	[6] 16	(2)	(2)	(2)	[6] 11	(2)	(2)	(2)	17	38.6
Milk and milk products	(2)	(2)	14	46.0	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Meat	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	16	78.0	(2)	(2)

Light (excluding textile)	(2)	(2)	12	[8] 55.2	17	[8] 78.0	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	18	37.4
Flax	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	14	(2)	14	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Sewn goods	17	68.6	(2)	(2)	(2)	(2)	11	65.8	17	(2)	(2)	(2)	14	(2)	18	69.0	(2)	(2)
Wool	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	11	(2)	11	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Leather, fur, and shoes	14	78.4	(2)	(2)	13	84.3	8	82.9	[9] 10	(2)	[10] 13	(2)	[11] 12	(2)	17	75.2	(2)	(2)
Shoes	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	15	(2)	15	(2)	(2)	(2)	(2)	(2)	(2)	(2)

[1] Not applicable.
[2] Not available.
[3] Explicitly includes ore mining industry.
[4] Includes woodworking.
[5] Probably includes cement industry.
[6] Probably includes fish industry.
[7] Includes fish industry but excludes milk and milk products industry. The latter industry is cited as "meat and dairy" in the source; this is considered to be erroneous.
[8] Includes textile industry.
[9] Excludes leather and shoe industry.
[10] Excludes shoe industry.
[11] Excludes fur industry.

SOURCES:

1950, 1956, 1959: U.S. Congress, Joint Economic Committee, *Annual Economic Indicators for the U.S.S.R.*, Washington, D.C. 1964, p. 67.
1955: L. A. Kostin, *Wages in the U.S.S.R.* (in English), Moscow, 1960, p. 17. Apparently for wageworkers alone.
1960: D. N. Karpukhin, *Sootnosheniye rosta proizvoditel'nosti truda i zarabotnoy platy (na materialakh promyshlennosti SSSR)*, Moscow, 1963, p. 64.
1962: V. M. Moskovich, *Obshchestvennoye razdeleniye truda pri sotsializme*, Moscow, 1966, p. 71.
1965: Workers and employees: L. A. Kostin, *Planirovaniye truda v promyshlennosti*, Moscow, 1967, p. 238. Wageworkers: I. A. Mashinskiy, *Narodnokhozyaystvennaya trudoyemkost' produktsii*, Moscow, 1966, p. 122.
1966: Kostin, *Planirovaniye*, 1967, p. 214. Cited as the pattern existing "by the beginning of 1967."

TABLE 7.—*Annual average money wages of wageworkers, engineering-technical personnel, and salaried employees in industry, U.S.S.R., 1950–65*

[In rubles; indexes, 1950=100]

Year	Wageworkers		Engineering-technical personnel			Salaried employees		
	Wages	Index	Wages		Index	Wages		Index
			Percent	Amount		Percent	Amount	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950	832	100	175	1,456	100	92	765	100
1955	920	111	165	1,518	104	88	810	106
1956	938	113	161	1,510	104	86	807	105
1957	991	119	159	1,576	108	84	832	109
1958	1,024	123	175	1,608	110	82	840	110
1959	1,052	126	151	1,589	109	80	842	110
1960	1,078	130	148	1,595	110	82	884	116
1963	1,158	139	142	1,644	113	[1]	[1]	[1]
1965	1,216	146	142	1,727	119	80	973	127

[1] Not available.

SOURCE:
Column 1: Table 5, above.
Column 3:
1950–60: Karpukhin, *Sootnosheniye*, 1963, p. 62. A different figure is available for 1958 for the ratio of column 3 to column 1. N. S. Maslova, *Kollektivnyye formy material'nogo stimulirovaniya v promyshlennosti SSSR*, Moscow, 1966, p. 131, gives a figure of 165.1. The longer time series was retained.
1963: E. A. Lutokhina, *Oplata truda inzhenerno-tekhnicheskikh rabotnikov*, Moscow, 1966, p. 80. Maslova, *Kollektivnyye*, 1966, p. 131, gives 142.8.
1965: Kostin, *Planirovaniye*, 1967, p. 214. A different figure is available for the ratio of column 3 to column 1. *Sotsialisticheskiy trud*, No. 11, November 1966, p. 5, gives a figure of 145. The later source was used.
Column 4: Column (3) times column (1).
Column 6:
1950–60: Karpukhin, *Sootnosheniye*, 1963, p. 62.
1965: Kostin, *Planirovaniye*, 1967, p. 214.
Column 7: Column (6) times column (1).

TABLE 8.—*Employment of specialists with higher and specialized secondary education, by type of employing agency, U.S.S.R., 1950–66*

[In thousands. Figures exclude employment in households, Armed Forces, and private subsidiary economy]

Type of employing agency	July 1, 1950			Dec. 1, 1957			Dec. 1, 1960			Nov. 15, 1965			Nov. 15, 1966		
	Total	Higher education	Specialized secondary education	Total	Higher education	Specialized secondary education	Total	Higher education	Specialized secondary education	Total	Higher education	Specialized secondary education	Total	Higher education	Specialized secondary education
Total employed in the national economy	3,254	1,442.8	1,811	6,821.6	2,805.5	4,016.1	8,783.7	3,545.2	5,238.5	12,065.9	4,891.0	7,174.9	12,924	5,227	7,697
Of which:															
Industrial enterprises	(1)	172.6	(1)	1,102.7	354.4	748.3	1,667.5	494.4	1,173.1	2,524.9	713.3	1,811.6	2,747	784	1,963
Construction enterprises	(1)	25.0	(1)	191.0	71.9	119.1	304.1	93.1	211.0	490.8	158.4	332.4	552	177	375
Transport and communications organizations	(1)	32.0	(1)	214.5	55.7	158.8	317.9	73.1	244.8	481.1	104.1	377.0	519	112	407
Research, development and testing organizations	(1)	141.5	(1)	(1)	(1)	(1)	(1)	542.1	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Science and scientific services organizations	(1)	84.2	(1)	422.5	268.6	153.9	386.1	272.5	113.6	979.5	637.4	342.1	1,069	703	366
Project and project-survey organizations servicing construction	(1)	49.3	(1)	139.1	91.3	47.8	378.4	232.1	146.3	287.7	185.5	102.2	295	191	104
Geological-prospecting organizations	(1)	8.0	(1)	(1)	(1)	(1)	(1)	37.5	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Agricultural enterprises	(1)	22.0	(1)	431.3	130.9	300.4	485.9	98.0	289.9	626.1	181.9	444.2	(1)	(1)	(1)
Collective farms	(1)	(1)	(1)	278.1	70.6	207.5	(1)	(1)	(1)	231.9	46.0	185.9	265	54	211
State farms and subsidiary state agricultural enterprises	(1)	(1)	(1)	92.6	32.0	60.6	(1)	(1)	(1)	264.2	81.3	182.9	292	89	203
Organizations servicing agriculture and veterinary organizations	(1)	(1)	(1)	60.6	28.3	32.3	(1)	(1)	(1)	130.0	54.6	75.4	(1)	(1)	(1)
Trade, public dining, procurement, and material-technical supply organizations	(1)	11.5	(1)	205.7	43.8	161.9	315.7	62.0	253.7	501.1	82.5	418.6	557	90	467
Credit and insurance institutions	(1)	7.0	(1)	56.0	14.3	41.7	75.2	17.7	57.5	101.2	22.9	78.3	(1)	(1)	(1)
Government and administration institutions	(1)	157.3	(1)	492.8	249.3	243.5	558.0	300.3	257.7	773.9	413.2	360.7	941	465	476

Education and cultural institutions	(1)	572.2	(1)	2,147.7	1,153.4	994.3	2,445.6	1,349.4	1,096.2	3,167.2	1,816.2	1,351.0	3,293	1,903	1,390
Higher and specialized secondary educational institutions and cadre training organizations	(1)	163.5	(1)	(1)	(1)	71.3	373.3	278.3	95.0	(1)	(1)	(1)	(1)	(1)	(1)
General educational schools and cultural-enlightenment institutions	(1)	408.7	(1)	(1)	(1)	923.0	2,072.3	1,071.1	1,001.2	(1)	(1)	(1)	(1)	(1)	(1)
Health services institutions	(1)	202.1	(1)	1,266.8	309.1	957.7	1,518.4	361.7	1,156.7	1,840.5	461.9	1,378.6	1,937	480	1,457

[1] Not available.

NOTE: These figures pertain to all persons employed in the designated enterprises and organizations. In their routine reports on employment, enterprises and organizations classify their personnel by sector; thus the figures in this table are not comparable to those in table 2, which are reported by sector of the national economy.

SOURCE:

1950: *Nar. khoz. 65*, p. 573, and TsSU, *Vyssheye obrazovanive v SSSR, statisticheskiy sbornik*, Moscow, 1961, p. 54.
1957, 1965: *Nar. khoz. 65*, pp. 575–576, and TsSU, *Sredneye spetsial'noye obrazovaniye v SSSR, statisticheskiy sbornik*, Moscow, 1962, p. 33.
1960: TsSU, *Sredneye*, 1962, p. 33, and TsSU, *Vyssheye*, 1961, pp. 54–55.
1966: TsSU, *Strana*, 1967, p. 232.

TABLE 9.—*Employment of specialists with higher and specialized secondary education, by type of industrial enterprise, U.S.S.R., 1959–65*

[In thousands]

Type of industrial enterprise	Dec. 1, 1959				Dec. 1, 1962				Nov. 15, 1964				Nov. 15, 1965			
	Higher education		Specialized secondary education		Higher education		Specialized secondary education		Higher education		Specialized secondary education		Higher education		Specialized secondary education	
	Total	Engineers	Total	Technicians	Total	Engineers	Total	Technicians	Total	Engineers	Total	Technicians	Total	Engineers	Total	Technicians
Total employed in industrial enterprises	443.0	343.3	1,025.3	860.9	569.3	430.6	1,386.4	1,143.2	643.6	476.8	1,650.2	1,337.4	713.3	(1)	1,811.6	(1)
Industrial-production personnel	(1)	(1)	(1)	(1)	526.6	406.5	1,265.7	1,092.4	599.1	454.5	1,501.0	1,281.1	651.9	(1)	1,619.7	(1)
Of which, in enterprises of:																
Ferrous metallurgy (including ore extraction)	30.5	26.4	54.7	47.6	34.1	29.7	66.3	60.7	38.2	33.0	80.9	73.3	41.6	(1)	87.6	(1)
Nonferrous metallurgy (including ore extraction)	13.3	11.4	29.9	25.7	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Coal industry	22.4	20.4	59.4	51.3	21.3	19.4	63.8	57.5	21.7	19.5	71.1	63.2	23.5	(1)	73.7	(1)
Oil extraction industry	5.0	4.5	7.3	6.3	4.3	3.8	7.3	6.5	4.5	3.9	8.1	7.1	4.9	(1)	9.0	(1)
Oil refining industry	4.7	4.0	10.2	8.9	4.4	3.7	9.3	8.5	4.4	3.5	9.9	8.9	4.8	(1)	10.9	(1)
Gas, peat, shale, and other branches of the fuel industry	(1)	(1)	(1)	(1)	3.0	2.7	8.5	7.6	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Electric power industry	12.3	11.1	25.5	23.1	16.1	14.5	31.0	29.0	21.5	19.2	44.9	41.4	24.4	(1)	51.2	(1)
Machine-building and metalworking industry	197.9	158.9	432.7	390.3	248.3	194.8	562.9	507.4	288.8	223.6	670.6	597.7	318.2	(1)	732.0	(1)
Chemical industry	300.2	22.2	54.8	45.4	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Rubber-asbestos industry	4.1	3.1	7.3	6.2	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Timber, woodworking, and paper industry	20.3	15.4	59.0	44.4	25.5	21.1	69.2	56.4	26.6	21.1	74.4	59.0	27.7	(1)	77.3	(1)
Construction materials industry	18.5	14.7	49.5	41.4	19.9	15.8	59.5	51.2	22.1	16.9	68.8	58.1	23.6	(1)	73.3	(1)
Light industry	(1)	(1)	(1)	(1)	31.9	20.9	120.1	95.5	33.8	21.8	139.2	111.7	36.0	(1)	152.4	(1)
Textile industry	16.6	11.8	58.7	43.9	18.0	12.9	62.4	51.9	19.4	13.5	71.4	58.5	20.2	(1)	75.8	(1)
Sewn goods industry	3.9	1.8	19.2	13.9	6.1	3.2	34.4	25.2	6.4	3.6	41.1	32.0	7.3	(1)	47.7	(1)
Leather, fur, and shoe industry	5.3	3.4	15.4	12.1	7.4	4.5	22.0	17.7	7.6	4.5	25.6	20.5	8.0	(1)	27.6	(1)
Food industry	35.5	22.5	82.7	63.0	41.4	26.3	102.8	79.5	46.1	28.1	116.7	88.8	49.5	(1)	126.6	(1)

[1] Not available.

NOTE: These figures pertain to all persons employed in the designated enterprises. In their routine reports on employment, enterprises and organizations classify their personnel by sector; thus the figures in this table are not comparable to those in table 3, which are reported by branch of industry.

SOURCE:
1959: *Nar. khoz. 59*, pp. 606–607.
1962: TsSU, *Promyshlennost' SSSR, statisticheskiy sbornik*, Moscow, 1964, p. 91.
1964: *Nar. khoz. 64*, p. 563.
1965: *Nar. khoz. 65*, p. 577.

X. EDUCATION

Enrollment, Admissions, and Graduations

1. Total enrollment in Soviet schools increased from 36 million in 1958/59 to about 60 million (excluding factory training programs) in the current school year [1967/68]—an average annual growth of 5.7 percent. This striking rise in enrollment is clear evidence of the significant effort currently being made in the Soviet Union to improve educational opportunity and attainment.

2. The most rapid increase during this period was in secondary schools, very largely a result of the drive to achieve the planned goal of 10-year universal education by 1970. Enrollment of eighth-grade graduates in the ninth grade has risen markedly, from 58 percent in 1965 to 63 percent in 1966 and nearly 68 percent in 1967. According to the plan for 1968, this proportion will be about 69 percent.[1] Despite these increases as well as increases in admissions to specialized secondary schools and schools for working and rural youth, the 1970 goal of a universal 10-year education appears too optimistic, as plans for school construction and teacher training have not been fulfilled in recent years.

3. Enrollment at the specialized secondary and higher education levels increased significantly. Total enrollment in specialized secondary schools more than doubled in this 9-year period, from 1.9 million in 1958/59 to 4.2 million in 1967/68. Similar growth occurred in higher educational institutions, where enrollment increased from 2.2 million in 1958/59 to 4.3 million in 1967/68. To a great extent, these increases have been due to rising enrollment in part-time—evening and correspondence—divisions. The proportion of full-time students in the total enrollment of higher educational institutions declined from 54 percent in 1958/59 to 41 percent in 1965/66. The corresponding proportions in specialized secondary schools were 60 percent and 50 percent, respectively.

4. Enrollment in the part-time divisions of higher and specialized secondary schools will probably level off, however, as an announced program to increase full-time enrollment is effected. Results from this program are already to be seen, as the proportions of full-time students in total enrollment in higher and specialized secondary schools in 1966/67 were 42 and 53 percent, respectively. Plans call for an increase to 57 percent in specialized secondary schools by the end of this 5-year plan period.[2] The poorer quality of graduates produced by the evening and correspondence divisions was the principal reason for the decision to increase full-time enrollment.

[1] Ann S. Goodman and Murray Feshbach, *Estimates and Projections of Educational Attainment in the U.S.S.R.: 1950–1985*, U.S. Bureau of the Census, International Population Reports, Series P-91. No. 16, Washington, D.C., 1967, p. 5.

[2] "Five-Year Plan for Tekhnikums," *Sredneye spetsial'noye obrazovaniye*, no. 11, November 1966, p. 2. Priority for enrollment in part-time programs is being given to persons with work experience in the field in which they are enrolling.

5. The current stress on preparing middle-level technicians stems from the effort to reach the 1970 goal of a ratio of one specialist with higher education to three to four with specialized secondary education in the industrial, construction, transport, communications, and agricultural sectors of the economy, which was decreed by the Party and Government in 1963.[3] Since the end of 1958, the ratio of persons with higher education employed in all sectors of the national economy (excluding households, the military sector, and the private subsidiary economy) to those with specialized secondary education has been 1 to 1.45–1.48, despite efforts originating in the early 1950's to raise the proportion of technicians.

6. Although the ratio of full-time specialized secondary school admissions to full-time higher school admissions has not shown the expected rise since the 1963 decree, efforts are being made to increase substantially the number of students admitted to specialized secondary schools, as well as to vocational-technical schools. Admissions to specialized secondary schools have increased from 584 thousand in 1958/59 to 1.2 million in 1967/68 and are expected to rise to 1.5 million in 1970.[4] A similar increase has occurred in the vocational-technical schools, with admissions rising from 691 thousand in 1958/59 to 1.2 million in 1967/68, and a further rise to 1.7–1.8 million expected for 1970. It appears doubtful, however, that these increases in admissions will be sufficient to enable Soviet planners to achieve their goal of increasing the number of technicians relative to the number of higher school graduates.

7. The current 5-year plan provides for 7 million graduates with higher and specialized secondary education during the years 1966–70, of an increase of 63 percent over the number achieved during the preceding 5-year period. A recent article by V. P. Yelyutin, the Minister of Higher and Specialized Secondary Education of the U.S.S.R., reported that 2.7 million persons with higher education would be graduated during the current 5-year plan period, which is an increase of 56 percent over the preceding 5-year period.[5] The implied number of graduates of specialized secondary schools during 1966–70 (4.3 million) would be 67 percent more than the corresponding number for the previous 5 years. If the number of persons completing these schools in the years 1968–70 increases at the same rate experienced in 1966 and 1967,[6] the above goal established for 1970 is quite likely to be met.

8. The current plan also stipulates that the number of students to complete general secondary education between 1966 and 1970 will be four times as great as in the preceding 5 years (1961–65). However, since April 1966 when this problem was discussed at the XXIII Congress of the Communist Party, Soviet planners have reappraised

[3] Decreed by the Central Committee of the C.P.S.U. and the Council of Ministers U.S.S.R. in May 1963 "On Measures for the Further Development of Higher and Specialized Secondary Education, Improvement of Training, and Utilization of Specialists," *Byulleten' Ministerstva vysshego i srednego spetsial'nogo obrazovaniya SSSR*, no. 8, August 1963, pp. 4–13. There is much evidence of poor utilization of manpower with these levels of attainment. In some instances, persons with higher levels of education are employed in jobs requiring lower skills; in other instances, persons with technician-level skills are not employed in activities corresponding to their specific area of training. See A. Fefilov and L. Abalkin, "Economists of Tomorrow," *Izvestiya*, April 26, 1967, p. 5; "Shall We Throw Our Diplomas Into the Wastebasket?," *Komsomol'skaya pravda*, June 24, 1967, p. 2; and V. Kontorovich, in *Novyy mir*, cited in *The Washington Post*, February 21, 1968.

[4] "On the State Plan of Development of the National Economy of the U.S.S.R. in 1968 and Plans for the Development of the National Economy in 1969 and 1970," *Ekonomicheskaya gazeta*, no. 41, October 1967, p. 7.

[5] V. P. Yelyutin, "The Great October and Higher Schools," *Vestnik vysshey shkoly*, no. 11, November 1967, p. 12.

[6] Table 2, and *Trud*, January 25, 1968, p. 2.

their objectives. In February 1967 it was reported that the number of students planning to complete general secondary education in the current 5-year plan period will be only about three times as great as in the previous 5-year period.[7] This implies a postponement of the 1970 goal of universal 10-year education.

Level of Educational Attainment

9. The median years of school completed by the population 10 years old and over in 1950 was estimated at 5.0 years; it rose to 5.7 in 1960 and is projected to rise gradually to 6.7 in 1970 and 7.9 in 1985 (table 9). Starting from the same level (5.0) in 1950, the median for the population 16 years old and over increased to 5.9 in 1960 and 6.6 in 1965, and is projected to rise to 7.3 in 1970 and 8.4 in 1985 (table 10).

10. The level of educational attainment in the United States is considerably higher. In 1950, the median years of school completed by the population 16 years old and over was 10.1. It increased to 10.9 in 1960 and 11.9 in 1965, a level 80 percent higher than that estimated for the U.S.S.R.[8] The median for the United States (projected for the population 25 years old and over, which has a slightly lower median than the population 16 years old and over) is expected to stabilize between 12 and 13 years of school completed by 1975. Thus, the median for the U.S.S.R. will continue to approach that for the United States. However, these figures imply that even by 1985 the U.S. median level of attainment will exceed the Soviet median by 50 percent.

NEW DEVELOPMENTS IN THE EDUCATIONAL SYSTEM

11. A recent development in the Soviet educational system is the establishment of special secondary schools to train outstanding students in mathematics and physics. These schools are operating on an experimental basis, and each one is affiliated with a university whose faculty will teach in the school and help plan its curriculum. The program includes an intensified curriculum and time for independent research. Students are expected to complete their university programs in 2 years instead of the usual 4, and then go on to graduate study.[9]

12. A reform announced in September 1966 by the Council of Ministers U.S.S.R. and the Central Committee of the Communist Party gave educational institutions a voice in altering the traditional specialized curriculum. This reform was a consequence of the directive issued by the Party and Government in May 1963 calling for broader training of higher education students. For example, to improve serious shortcomings in their training, scientists and engineers are to prepare for management roles in enterprises and institutions, and technical specialists are to be taught business-school subjects.

13. Another development which reportedly is underway is the broadening of vocational-technical schools to accommodate both eighth- and 10th-grade graduates. In 1967, enough special technical schools were to be set up at large industrial enterprises, construction projects, and state farms to train over 96,000 graduates of secondary schools; short-

[7] Goodman and Feshbach, *Estimates*, 1967, p. 7.
[8] Goodman and Feshbach, *Estimates*, 1967, p. 4.
[9] *New York Times*, June 26, 1966.

term courses of 6 months and 1 year were to be offered to young workers on a full-time basis.[10] An increase in the number of schools for working and rural youth, boarding schools, and schools with "extended day" programs is also being planned. The latter schools provide care for children of working mothers, thereby enabling more women to enter the labor force.

TABLE 1.—*Enrollment in schools and training programs of the U.S.S.R., 1950/51–1967/68*

[In thousands as of the beginning of the school year]

Type of school and training program	1950/51	1958/59	1960/61	1965/66	1966/67	1967/68
Total enrollment	48,770	46,057	52,600	71,835	73,559	76,000
General education schools	34,752	31,483	36,187	48,255	48,170	49,000
Type of school:						
Primary, 7-year, 8-year, and general secondary schools	33,314	29,567	33,417	43,410	43,529	(1)
Schools for working and rural youth and schools for adults	1,438	1,916	2,770	4,845	4,641	(1)
Grades:						
1–4	20,023	17,779	18,659	20,243	20,740	(1)
5–8	13,705	10,571	14,798	19,770	20,128	(1)
9–11	907	3,022	2,594	7,979	7,302	(1)
Schools for handicapped children	117	111	136	263	(2)	(1)
Trade, vocational-technical, and factory schools	882	904	1,113	1,672	1,961	(1)
Specialized secondary schools	1,298	1,876	2,060	3,659	3,994	4,200
Higher educational institutions	1,247	2,179	2,396	3,861	4,123	4,300
Training programs for new trades and raising qualifications in factory and other courses (excluding political education)	10,591	9,615	10,844	14,388	15,311	(1)

[1] Not available.
[2] Included in grade distribution, above.

SOURCE:
1950/51–1965/66: Tsentral'noye statisticheskoye upravleniye pri Sovete Ministrov SSSR (TsSU), *Narodnoye khozyaystvo SSSR v 1965 godu, statisticheskiy yezhegodnik*, Moscow, 1966, p. 677. Cited hereafter as *Nar. khoz. 65.*
1966/67: TsSU, *Strana sovetov za 50 let, sbornik statisticheskikh materialov*, Moscow, 1967, pp. 273–274.
1967/68: *Sel'skaya zhizn'*, Jan. 25, 1968, p. 2.

[10] *Pravda*, February 7, 1966, p. 1.

TABLE 2.—*Admissions, enrollment, and graduations: Specialized secondary and higher educational institutions, by division, U.S.S.R., 1950–67*

[In thousands. Admissions and enrollment data as of the beginning of the school year; graduation data as of June]

Type of school and year	Admissions				Enrollment				Graduations			
	Total	Day	Evening	Correspondence	Total	Day	Evening	Correspondence	Total	Day	Evening	Correspondence
Specialized secondary schools:												
1950/51	426.3	349.5	15.6	61.2	1,298	1,065	52	181	313.7	279.0	4.7	30.0
1958/59	584.1	363.7	75.2	145.2	1,876	1,125	303	448	551.2	463.2	37.5	50.5
1960/61	769.3	415.0	130.0	224.3	2,060	1,091	370	599	483.5	348.1	57.9	77.5
1965/66	1,099.7	581.8	170.1	347.8	3,659	1,835	628	1,196	621.5	332.8	104.7	184.0
1966/67	1,211.0	705.8	505.2		3,994	2,111	677	1,206	685.0	(*)	(*)	(*)
1967/68	[1] 1,239.0	[2] 716.0	[3] 523.0		4,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Higher educational institutions:												
1950/51	349.1	228.4	9.1	111.6	1,247	818	27	402	176.9	145.9	2.0	29.0
1958/59	455.9	215.5	42.2	198.2	2,179	1,180	153	846	290.8	205.4	8.7	76.7
1960/61	593.3	257.9	77.2	258.2	2,396	1,156	245	995	343.3	228.7	15.4	99.2
1965/66	853.7	378.4	125.2	350.1	3,861	1,584	569	1,708	403.9	224.8	43.5	135.6
1966/67	897.0	412.4	484.6		4,123	1,740	618	1,765	432.0	(*)	(*)	(*)
1967/68	[4] 900.0	[2] 416.0	[3] 484.0		4,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)

*Not available.

SOURCE:
Admissions:
1950/51–1965/66: *Nar. khoz. 65*, p. 695.
1966/67: TsSU, *SSSR v tsifrakh v 1966 godu*, Moscow, 1967, pp. 155, 157.
1967/68:
[1] *Ekonomicheskaya gazeta*, No. 51, Dec. 1966, p. 11.
[2] *Pravda*, July 8 1967, p. 3.
[3] Residual.
[4] *Sel'skaya zhizn'*, Jan. 25, 1968, p. 2.

Enrollment:
1950/51–1965/66: *Nar. khoz. 65*, p. 688.
1966/67: TsSU, *Strana*, 1967, p. 276.
1967/68: *Sel'skaya zhizn'*, Jan. 25, 1968, p. 2.

Graduations:
Refer to 1950, 1958, 1960, 1965, and 1966.
1950–65: *Nar. khoz. 65*, p. 696.
1966: TsSU, *Strana*, 1967, p. 279.

TABLE 3.—*Admissions, enrollment, and graduations of graduate students* (aspiranty), *by type of institution and instruction, U.S.S.R., 1950/51–1966/67*

Item and year	Total	Higher educational institutions			Scientific institutions		
		Total	Full time	Part time	Total	Full time	Part time
Admissions:							
1950	7,717	4,783	4,253	530	2,934	2,124	810
1955	7,367	4,193	3,225	968	3,174	2,159	1,015
1960	14,399	8,271	5,374	2,897	6,128	3,641	2,487
Enrollment:							
1950/51	21,905	12,487	11,199	1,288	9,418	6,944	2,474
1958/59	23,084	12,328	9,004	3,324	10,756	6,528	4,228
1960/61	36,754	20,406	13,463	6,943	16,348	9,515	6,833
1965/66	90,294	53,412	33,344	20,068	36,882	17,765	19,117
1966/67	93,755	55,026	34,509	20,517	38,729	18,427	20,302
Graduations:							
1950	4,093	2,461	2,281	180	1,632	1,368	264
1958	6,802	3,826	3,119	707	2,976	2,053	923
1960	5,517	3,020	2,407	613	2,497	1,718	779
1965	19,240	11,845	8,764	3,081	7,395	4,701	2,694
1966	21,820	13,156	9,261	3,895	8,664	4,988	3,676

NOTE: The figure reported for total enrollment in 1967/68 is 100,000. *Pravda*, Dec. 12, 1967, p. 1.

SOURCE:
Admissions: TsSU, *Vyssheye obrazovaniye v SSSR, statisticheskiy sbornik*, Moscow, 1961, p. 220. This source reports data only for the 3 years given.
Enrollment:
1950/51–1965/66: *Nar. khoz. 65*, p. 715.
1966/67: TsSU, *Strana*, 1967, p. 286.
Graduations:
1950–65: *Nar. khoz. 65*, p. 715.
1966: TsSU, *Strana*, 1967, p. 286.

TABLE 4.—*Enrollment in higher educational institutions, by major field of study, U.S.S.R., 1950/51–1965/66*

[In thousands as of the beginning of the school year]

Major field of study	1950/51	1958/59	1960/61	1964/65	1965/66
Total	1,247.4	2,178.9	2,396.1	3,608.4	3,860.5
Geology and prospecting for mineral resources	16.2	23.2	21.3	28.2	31.1
Mining of mineral resources	20.9	33.9	30.2	38.3	39.5
Power engineering	23.8	67.3	74.7	83.5	85.9
Metallurgy	14.7	28.8	31.5	43.9	46.7
Machine-building and instrument-making	86.3	241.0	302.8	462.4	501.5
Electronic techniques, electrical instrument-making and automation	14.2	53.7	91.5	260.3	281.0
Radio engineering and communications	15.6	55.9	78.3	141.5	150.9
Chemical technology	23.9	40.9	56.3	94.3	107.0
Timber engineering and wood, pulp, and paper technology	8.7	23.7	22.9	28.8	30.4
Technology of food products	10.0	24.3	31.3	54.4	57.0
Technology of consumer goods	9.5	25.7	28.8	40.1	39.4
Construction	37.1	128.0	146.7	219.4	232.8
Geodesy and cartography	2.8	4.7	5.9	7.4	7.7
Hydrology and meteorology	2.8	4.4	5.2	7.1	6.6
Agriculture and forestry	107.7	242.2	236.3	318.4	332.5
Transportation (operations)	23.7	53.0	65.6	101.6	112.6
Economics	72.6	188.4	217.7	355.6	386.2
Law	45.4	36.2	40.3	56.3	59.9
Health and physical culture	113.3	183.1	189.2	226.6	242.5
University specialties	87.5	165.8	186.9	262.2	279.4
Specialties in pedagogical and library institutes	496.3	539.3	512.8	748.1	797.1
Art	14.4	15.4	19.9	30.0	32.8

SOURCE: *Nar. khoz. 65*, p. 689.

TABLE 5.—*Enrollment in specialized secondary educational institutions, by major field of study, U.S.S.R., 1950/51–1965/66*

[In thousands as of the beginning of the school year]

Major field of study	1950/51	1958/59	1960/61	1964/65	1965/66
Total	1,297.6	1,875.9	2,059.5	3,326.0	3,659.3
Geology and prospecting for mineral resources	14.7	11.1	11.8	18.3	19.9
Mining of mineral resources	43.3	54.3	42.6	38.6	42.7
Power engineering	48.1	77.5	98.4	163.2	180.4
Metallurgy	20.1	24.0	27.3	38.6	41.5
Machine-building and instrument-making	135.8	339.7	348.2	492.2	529.4
Electro-machine-building and electrical instrument-making	13.1	27.7	45.5	122.7	140.2
Radio engineering and communications	25.6	59.3	71.1	126.6	140.0
Chemical technology	22.2	31.6	43.5	76.4	90.9
Timber engineering and wood, pulp, and paper technology	15.9	29.7	28.7	37.6	39.7
Technology of food products	22.8	51.6	66.6	109.6	118.9
Technology of consumer goods	24.6	42.1	59.7	96.9	102.0
Construction	79.6	161.4	152.0	224.7	247.7
Geodesy and cartography	4.1	7.3	6.4	6.9	7.3
Hydrology and meteorology	3.5	6.2	6.3	7.3	7.6
Agriculture	150.0	293.5	292.4	442.6	497.6
Transportation	48.7	98.8	112.3	214.2	233.9
Economics	106.4	220.2	261.5	440.6	476.8
Health and physical culture	128.4	164.6	176.3	309.6	345.1
Education (*prosveshcheniye*)	345.3	136.5	154.3	265.2	299.0
Art	27.5	37.3	54.6	93.5	97.6
Other	17.9	1.5	0	.7	1.1

SOURCE: *Nar. khoz. 65*, p. 690.

TABLE 6.—*Graduations from higher educational institutions, by major field of study, U.S.S.R., 1950–65*

[In thousands]

Major field of study	1950	1958	1960	1964	1965
Total	176.9	290.8	343.3	354.0	403.9
Geology and prospecting for mineral resources	1.7	5.1	3.9	2.2	3.2
Mining of mineral resources	1.4	6.6	5.3	3.5	4.0
Power engineering	2.4	6.8	8.4	6.1	7.0
Metallurgy	1.4	3.8	3.9	3.6	4.8
Machine-building and instrument-making	9.1	23.6	30.6	37.2	46.0
Electronic techniques, electrical instrument-making and automation	1.4	5.0	8.1	18.4	24.6
Radio engineering and communications	1.4	5.4	6.3	10.8	14.0
Chemical technology	2.6	5.6	5.7	7.5	10.1
Timber engineering and wood, pulp, and paper technology	.7	3.4	3.7	2.4	2.9
Technology of food products	2.3	2.6	3.5	4.2	4.8
Technology of consumer goods	1.2	3.0	3.1	2.7	3.2
Construction	4.9	13.1	17.7	17.7	21.3
Geodesy and cartography	.3	.6	.6	.7	.9
Hydrology and meteorology	.4	.7	.7	.7	1.0
Agriculture and forestry	12.9	30.6	34.5	32.9	33.9
Transportation (operations)	3.1	5.7	6.6	7.0	9.6
Economics	10.1	28.5	30.7	34.9	40.8
Law	5.7	6.3	6.0	6.2	6.9
Health and physical culture	20.7	26.1	30.6	32.1	31.0
University specialties	12.3	24.0	29.9	26.7	30.7
Specialties in pedagogical and library institutes	78.5	81.9	101.0	93.1	99.3
Art	2.4	2.4	2.5	3.4	3.9

SOURCE: *Nar. khoz. 65*, p. 697.

TABLE 7.—*Graduations from specialized secondary educational institutions, by major field of study, U.S.S.R., 1950–65*

[In thousands]

Major field of study	1950	1958	1960	1964	1965
Total	313.7	551.2	483.5	558.3	621.5
Geology and prospecting for mineral resources	1.8	5.2	2.5	2.3	2.5
Mining of mineral resources	6.0	15.8	14.1	6.2	6.0
Power engineering	7.7	21.0	15.4	23.0	26.6
Metallurgy	4.9	6.8	5.6	6.3	6.8
Machine-building and instrument-making	26.6	70.8	74.9	72.7	86.3
Electro-machine-building and electrical instrument-making	2.4	7.8	6.8	14.6	18.7
Radio engineering and communications	5.2	13.9	12.5	17.3	21.8
Chemical technology	4.4	10.6	7.0	12.0	13.4
Timber engineering and wood, pulp, and paper technology	2.4	8.7	6.7	5.4	6.4
Technology of food products	4.9	10.3	12.0	15.6	18.8
Technology of consumer goods	5.0	8.9	9.0	16.6	17.2
Construction	14.6	53.3	34.2	31.4	36.2
Geodesy and cartography	.8	2.5	1.5	1.1	1.1
Hydrology and meteorology	.6	1.4	1.4	1.5	1.5
Agriculture	46.6	79.8	67.2	62.8	68.7
Transportation	11.1	23.7	21.3	27.2	33.6
Economics	26.3	64.0	71.6	94.8	104.1
Health and physical culture	54.2	80.6	64.4	76.0	76.0
Education (*prosveshcheniye*)	76.7	58.9	47.9	58.1	59.5
Art	5.0	6.3	7.5	13.4	16.3
Other	6.5	.9	0	0	0

SOURCE: *Nar. khoz. 65*, p. 698.

TABLE 8.—*Graduations from vocational-technical schools, general secondary schools, and schools for working and rural youth, U.S.S.R., 1950–70*

[In thousands]

Year	Vocational-technical schools	Secondary schools	Of which:	
			General secondary schools	Schools for working and rural youth and others
	(1)	(2)	(3)	(4)
1950	493	242	220	22
1958	653	1,573	(1)	(1)
1960	689	1,000	(1)	(1)
1965	1,042	1,350	900	450
1966	1,063	3,430	2,700	730
1967	1,230	2,400	1,700	700
1970 (plan)	1,500	(1)	2,700	(1)

[1] Not available.

SOURCE:

Column 1:

1950 and 1965: *Nar. khoz. 65*, p. 583.

1958: A. Ordukhanov, *Vestnik statistiki*, No. 9, September 1961, pp. 37–38.

1960: TsSU, *Zhenshchina i deti v SSSR*, Moscow, 1961, p. 182.

1961: TsSU, *Zhenshchina i deti v SSSR*, Moscow, 1963, p. 157.

1966: TsSU, *Strana*, 1967, p. 240.

1967: *Professional'no-tekhnicheskoye obrazovaniye*, No. 11, November 1967, p. 5.

1970: *Trud*, Feb. 8, 1967, p. 2.

Columns 2–4:

1950: Nicholas DeWitt, *Education and Professional Employment in the U.S.S.R.*, Washington, D.C., 1961, p. 592.

1958, 1960: Ann S. Goodman and Murray Feshbach, *Estimates and Projections of Educational Attainment in the U.S.S.R.: 1950–85*, U.S. Bureau of the Census, International Population Reports, Series P–91, No. 16, Washington, D.C., 1967, p. 20.

1965: *Pravda*, July 26, 1965, p. 2.

1966: *Ekonomicheskaya gazeta*, July 1966, p. 5.

1967: *Izvestiya*, July 16, 1967, p. 2.

1970: Computed from the report in *Trud*, Feb. 8, 1967, p. 2, that general secondary school graduates in 1970 will be 3 times greater than in 1965.

TABLE 9.—*Level of education attained by persons 10 years old and over, U.S.S.R., 1950–85*

[In thousands as of Jan. 1.]

Year	Population aged 10 years and over	Level of education attained							Median school years attained
		Higher	Incomplete higher	Specialized secondary	General secondary	Incomplete secondary (grades 7.0–9.9)	Primary and incomplete 7-year (grades 4.0–6.9)	Less than primary (grades 0–3.9)	
1950	146,475	1,915	881	5,006	6,300	22,390	54,569	55,414	5.0
1958	159,489	3,519	1,618	7,386	8,900	36,248	48,930	52,888	5.6
1960	165,249	4,087	1,547	8,306	10,800	35,927	50,970	53,612	5.7
1965	181,061	5,600	2,400	10,600	12,000	45,700	51,146	53,615	6.2
1966	184,303	6,000	2,600	11,200	12,300	48,200	50,557	53,446	6.3
1967	187,528	6,400	2,800	11,900	14,500	48,900	49,725	53,303	6.4
1970	197,683	7,506	3,430	13,526	15,755	53,259	51,051	53,156	6.7
1985	233,743	15,208	7,691	25,408	27,649	59,289	49,600	48,898	7.9
		Percent							
1950	100.0	1.3	0.6	3.4	4.3	15.3	37.3	37.8	(1)
1958	100.0	2.2	1.0	4.6	5.6	22.7	30.7	33.2	(1)
1960	100.0	2.5	0.9	5.0	6.5	21.7	30.8	32.4	(1)
1965	100.0	3.1	1.3	5.9	6.6	25.2	28.2	29.6	(1)
1966	100.0	3.3	1.4	6.1	6.7	26.1	27.4	29.0	(1)
1967	100.0	3.4	1.5	6.3	7.7	26.1	26.5	28.4	(1)
1970	100.0	3.8	1.7	6.8	8.0	26.9	25.8	26.9	(1)
1985	100.0	6.5	3.3	10.9	11.8	25.4	21.2	20.9	(1)

[1] Not applicable.

SOURCE: Goodman and Feshbach, *Estimates*, 1967, pp. 1, 16.

TABLE 10.—*Level of education attained by persons 16 years old and over, U.S.S.R., 1950–85*

[In thousands as of Jan. 1.]

Year	Population aged 16 years and over	Level of education attained							Median school years attained
		Higher	Incomplete higher	Specialized secondary	General secondary	Incomplete secondary (grades 7.0–9.9)	Primary and incomplete 7-year (grades 4.0–6.9)	Less than primary (grades 0–3.9)	
1950	121,384	1,915	881	5,006	6,300	19,164	41,678	46,440	5.0
1958	143,967	3,519	1,618	7,386	8,900	33,977	41,317	47,250	5.8
1960	145,748	4,087	1,547	8,306	10,800	33,810	40,348	46,850	5.9
1965	154,364	5,600	2,400	10,600	12,000	41,422	36,250	46,092	6.6
1966	157,107	6,000	2,600	11,200	12,300	43,754	35,431	45,822	6.8
1967	159,977	6,400	2,800	11,900	14,500	44,329	34,324	45,724	7.0
1970	168,702	7,506	3,430	13,526	15,755	48,369	34,792	45,324	7.3
1985	209,084	15,208	7,691	25,408	27,649	54,909	35,624	42,595	8.4
		Percent							
1950	100.0	1.6	0.7	4.1	5.2	15.8	34.3	38.3	(1)
1958	100.0	2.4	1.1	5.1	6.2	23.6	28.7	32.8	(1)
1960	100.0	2.8	1.1	5.7	7.4	23.2	27.7	32.1	(1)
1965	100.0	3.6	1.6	6.9	7.8	26.8	23.5	29.9	(1)
1966	100.0	3.8	1.7	7.1	7.8	27.8	22.6	29.2	(1)
1967	100.0	4.0	1.7	7.4	9.1	27.7	21.5	28.6	(1)
1970	100.0	4.4	2.0	8.0	9.3	28.1	20.6	26.9	(1)
1985	100.0	7.3	3.7	12.2	13.2	26.3	17.0	20.4	(1)

[1] Not applicable.

SOURCE: Goodman and Feshbach, *Estimates* ,1967, p. 17.

XI. CONSUMER WELFARE

1. The level of welfare of the Soviet population has improved conspicuously in recent years. Statistically, the rate at which consumer welfare improved during 1966–67 has been exceeded only by that of the early 1950's, which was a period when consumption was still recovering from effects of World War II. To review the record briefly, beginning in 1964 a series of welfare measures, aimed primarily at groups occupying the lower rungs of the economic ladder, has produced an increase in per capita money income of more than one-quarter. At the same time, per capita consumption, after a decade of declining rates of growth, also moved ahead at an accelerated rate after 1964, although at a slower rate than incomes. Notwithstanding the degree of real progress achieved, the level of living in the U.S.S.R. today remains far below the levels of Western Europe and the United States. Moreover, the Soviet Union has made no progress since the late 1950's in the pursuit of its longstanding goal to catch up with the United States in per capita consumption.

Trends in Consumption

A. THE PERIOD 1966–67

2. During 1966–67 per capita consumption of all goods and services increased by almost 5 percent annually, which is more than 1½ times the rate recorded for the previous 5-year period (see table below). With the exception of health and education services, all major components of personal consumption grew at a more rapid rate in the most recent period. Consumption of soft goods and durables scored the biggest gain, growing at nearly four times the rate achieved during the first half of the decade.

U.S.S.R.: Average annual rates of growth in per capita consumption by major component, 1951–67[1]

[Percent]

	1951–55	1956–60	1961–65	1966–67
Total consumption	6.0	4.1	3.1	4.8
Food products	4.9	2.5	2.0	3.5
Nonfood-products (soft goods and consumer durables)	10.9	5.4	2.1	7.7
Services, excluding health and education	5.3	5.9	5.5	7.2
Health and education services	3.3	3.4	5.1	3.6

[1] See footnote [1] of table 2. The base year for the calculations shown in each column is the year before the stated initial year of period, i.e., the average annual rate of increase for 1951–55 is computed by relating consumption in 1955 to base year 1950.

3. Especially important to Soviet consumers was the large boost in supplies of meat and milk in 1966–67, permitting a substantial improvement in the quality of the diet. Although the average caloric

intake of the population has fluctuated narrowly over the past decade—about 3100–3200 calories a day—there has been a decline in the share of calories provided by basic foods such as potatoes and grain products, along with an increase in the share of calories accounted for by quality foods such as milk and meat. Hence the share of calories derived from starchy foods, the so-called starchy-staple ratio, dropped from 63 percent in 1958 to 57 percent in 1965 and to 54 percent in 1967.

4. Increased supplies of agricultural raw materials for light industry, some improvement in quality, and better distribution of goods combined to effect a major boost during 1966–67 in the production and sales of clothing, footwear, and other soft goods. In addition to an improved supply from domestic sources, sales of soft goods in 1967 were enhanced by stepped-up imports ($100 million) of Western-made clothing, footwear, and fabrics. During the early 1960's a severe problem developed in the accumulation of inventories of soft goods in retail outlets. From 1958 to 1964 inventories of soft goods more than doubled, whereas retail sales grew by less than 30 percent (see table 6). A major part of this problem had its origin in the growing consumer resistance to the low quality and lack of variety of clothing, fabrics, and shoes in the market. Beginning in 1965, however, inventories began to decline, both in absolute amount and as a share of sales. By the end of 1966 the value of inventories had fallen to 40 percent of annual sales, compared with more than 50 percent at the end of 1964. The decline in the ratio of inventories to sales was brought about largely by: (a) price cuts on several commodities such as certain types of cloth and clothing; (b) a 7-percent reduction in the price of goods in rural stores (making rural and urban prices equivalent); (c) rapid increase in the earnings of lower income groups who were willing to purchase low quality merchandise; (d) official emphasis on better quality soft goods rather than quantity; and (e) improved distribution, particularly to rural areas.

5. Although there has been a notable increase in retail sales of consumer durables in the U.S.S.R. since 1955, available stocks of household appliances still remain very low, and a large pent-up demand exists for some types of durables, as shown by the long waiting lists at retail outlets.

6. The existing stock of housing increased by almost 3 percent annually in 1966–67. Although more housing was completed in 1967 than in any previous year, adequate housing space remains one of the most serious consumer problems. At the end of 1967, per capita living space was about 7 square meters (about 75 square feet)—far less than the officially designated minimum norm of 9 square meters and less than half the available space per capita in Austria or West Germany. Nevertheless, the current level represents a per capita increase of almost one-third since 1955 and has been accompanied by an appreciable improvement in individual privacy—fewer people per room and more apartments with private kitchens and baths.

B. U.S.-SOVIET COMPARISON

7. In 1966 Soviet consumption per capita was approximately 30 percent of the U.S. level (see table 1), the same as in 1958. Per capita consumption of food in the U.S.S.R. is about 50 percent of that in the

United States; health and education services, about 53 percent; other services, 24 percent; and nonfood consumer goods, about 13–14 percent (see table 2). Although supplies of consumer durables have increased markedly in the U.S.S.R. since 1955, stocks of home appliances are still far below those of U.S. households in most instances (see table 4). As shown in table 5, the Soviet Union has made rapid advances in health and education services. The supply of these services, in terms of available medical and teaching personnel, has exceeded levels in the United States since the mid-1950's.

Trends in Disposable Money Income

8. Per capita money incomes increased at an average annual rate of 7.5 percent since 1964 (see table 7). In part, the increases were due to normal wage creep, brought about by an improvement in skills, higher labor productivity, and greater welfare payments in the form of stipends for education, pensions, and the like. More important, however, were wage and welfare reforms begun by Khrushchev in 1964 and continued and embellished by the Brezhnev-Kosygin regime. Welfare measures implemented in 1965 brought 25 to 30 million collective farmers and their families under a state social insurance program, raised by 20 percent the average wage of 18 million workers in the services sector, and increased the minimum monthly wage by more than one-third. Further increases in 1967 added approximately 15 percent a month to the incomes of 4.5 million workers in lumbering, consumer goods industries, and certain occupations on state farms.

9. These programs have narrowed income differentials among occupational and social groups. Thus while average earnings in industry have increased by one-third since 1955, average earnings in health and education have risen by about one-half and money payments to collective farmers have tripled. Part of the rapid increase in money incomes of collective farmers is the result of higher prices paid by the Government for agricultural products, but a substantial part merely reflects policy to substitute cash wages for payments-in-kind. In-kind payments as a share of total income paid out by the collective farm to its members declined from about 60 percent in 1955 to approximately 20 percent in 1967.

10. The upward spiral of incomes is expected to continue as a result of new welfare measures being implemented in 1968 that will add 6 billion rubles annually to incomes. They include:

(a) Increase in the minimum wage to 60 rubles per month for both urban and rural wage and salary workers;

(b) Introduction of regional wage differentials for service workers and longevity payments for all workers in remote regions;

(c) Reduction of the eligibility age for retirement pensions of collective farmers by 5 years (from 65 to 60 years of age for men and from 60 to 55 years for women), thereby placing collective farmers on the same footing as wage and salary workers and adding 2½ million persons to the pension roles;

(d) Reduction of 25 percent in the income tax rates for persons in the lowest income bracket.

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Notes to Tables on Consumer Welfare

A. CONSUMPTION

The international comparisons shown in the following tables are subject to both statistical and conceptual limitations. Nevertheless, it is believed that the quantitative results are fairly reliable. With respect to nonquantitative factors, however, the comparisons undoubtedly are biased in favor of the U.S.S.R. Although every effort has been made to match goods of identical quality in the two countries, precise matching has not always been possible. In housing and health services, in particular, the allowances for differences in quality are probably inadequate. Furthermore, there are two characteristic deficiencies in the Soviet pattern of consumption that could not be measured despite the fact that they are undoubtedly significant: First, the observable lack of balance between supplies of particular kinds of goods and the demand for them that continues to be endemic; and second, the lack of variety and diversity and the resulting lack of choice on the part of consumers.

Differences between the figures presented in tables 1 and 2, below and those given in U.S. Congress, Joint Economic Committee, "Current Economic Indicators for the U.S.S.R., 1965," page 119, are due to the following:

(1) The U.S.S.R. indexes of consumption have been revised in two ways:
   a. The base year weights for 1955 have been changed somewhat.
   b. The volume indexes for the three major components (food, nonfood, and services) have been revised slightly.

(2) Some adjustments were made in the 1955 ruble/dollar price ratios. Based on a review of new evidence concerning prices and relative qualities of goods and services in the two economies, some upward adjustment was carried out in the ruble/dollar ratios for consumer durables and health and education services.

(3) In the 1965 publication, 1955 ruble/1963 dollar price ratios were used to convert each of the four subcomponents of consumption from rubles to dollars; in the tables below 1955 ruble/1966 dollar ratios were employed. Because of the divergency in price trends of the four major components the calculated shares will differ somewhat.

B. MONEY INCOMES

After a lapse of 30 years, the U.S.S.R. Central Statistical Administration began in 1965 to publish average monthly wages by sector of the economy. A Western economist, Alec Nove, has speculated that an "embarrassment concerning intersector and inter-occupational wage differentials" rather than a desire to conceal average wage levels may have been the reason for the long statistical silence on average earnings. Whatever the reason for the new policy, the official publication of wage levels has permitted estimates of disposable income to be made with greater confidence than was heretofore possible. Furthermore, the official data can be employed as benchmarks (as in table 8) to derive average wage levels for various branches of industry. In the past, the lack of such data has been the cause of considerable uncertainty in these estimates.

TABLE 1.—*U.S.S.R. and United States: Total consumption per capita, 1955, 1958, 1960–66*

	1955	1958	1960	1961	1962	1963	1964	1965	1966
U.S.S.R.[1] (1960=100)	82	93	100	103	107	108	111	116	120
United States[2] (1960=100)	93	94	100	100	104	107	110	116	121
U.S.S.R. consumption per capita as a percent of United States[3]	26	30	30	31	31	31	30	30	30

[1] Composite index of three major categories—food, nonfood, and total services.
[2] Based on data of the U.S. Department of Commerce. In addition, estimates of public current expenditures on health and education are included.
[3] The datum for 1955 is from CIA, *A Comparison of Consumption in the USSR and the United States*, January 1964, p. 15. Data for the remaining years are obtained by moving the datum for 1955 by the indexes presented in Table 2, below.

TABLE 2.—*U.S.S.R. and United States: Consumption per capita by major component, 1955, 1958, 1960–66* [1]

	1955	1958	1960	1961	1962	1963	1964	1965	1966
Food products:									
U.S.S.R. (1960=100)	88	97	100	102	105	104	105	111	113
United States (1960=100)	98	98	100	100	101	101	104	107	109
U.S.S.R. as a percent of United States [2]	43	47	48	48	50	49	49	50	50
Nonfood products:									
U.S.S.R. (1960=100)	77	90	100	103	107	107	108	111	118
United States (1960=100)	98	92	100	99	105	110	117	125	132
U.S.S.R. as a percent of United States [2]	11	14	14	15	14	14	13	12	13
Services, excluding health and education:									
U.S.S.R. (1960=100)	75	89	100	105	111	116	123	131	140
United States (1960=100)	91	95	100	101	103	106	109	114	116
U.S.S.R. as a percent of United States [2]	17	19	20	21	22	22	23	23	24
Health and education:									
U.S.S.R. (1960=100)	85	92	100	105	107	114	119	128	132
United States (1960=100)	82	93	100	102	106	109	114	120	130
U.S.S.R. as a percent of United States [2]	54	52	53	54	53	55	55	56	53

[1] Indexes for the U.S.S.R. were obtained using the basic procedures presented in U.S. Congress, Joint Economic Committee, *New Directions in the Soviet Economy*, Washington, 1966, pp. 520–522 (hereafter referred to as *New Directions*). Indexes for the United States are based on data from the U.S. Department of Commerce.

[2] See footnote 3, table 1, above.

TABLE 3.—*U.S.S.R. and United States: Availability of food products for human consumption, by major food group; selected years, 1953–67*

[Calories per capita per day]

	U.S.S.R. [1]					United States			U.S.S.R. 1966 as percent of United States 1909–13
	1953	1958	1962	1966	1967 preliminary	1909–13 [2]	1966 [3]	1967 preliminary [4]	
Grain products, potatoes, and pulses	2,169	2,031	1,931	1,769	1,717	1,560	850	827	113
Fats and oils, including butter	209	246	288	346	369	408	529	528	85
Sugar	168	229	292	334	354	408	517	518	82
Meat and fish	139	170	186	211	217	555	599	626	38
Milk and milk products, excluding butter	220	320	305	334	347	328	396	391	102
Vegetables, fruit, eggs, and other foods	195	204	198	206	196	231	279	290	89
Total	3,100	3,200	3,200	3,200	3,200	3,490	[4] 3,170	3,180	

[1] Consumption of food in the U.S.S.R. was estimated as described in *New Directions*, pp. 520–21, and was converted to calorie values with factors from U.N. Food and Agriculture Organization, *Food Composition Tables for International Use, 1954*. The average daily intake of 3,200 calories is based on *Kommunist* No. 4, 1964, p. 38, and other Soviet sources. It is, of course, an arbitrary parameter within which consumption of individual products is distributed according to production and utilization data. The difference between the total calories derived from foods for which reasonably reliable production and utilization data are available and about 95 percent of the estimated daily per capita intake is estimated to have been made up by grain products. The remaining 5 percent is estimated to have been derived from vegetables, fruit, eggs, and other foods.

[2] U.S. Department of Agriculture, Economic Research Service, Statistical Bulletin, No. 364, *U.S. Food Consumption 1909–63*, Washington, 1965, p. 65.

[3] U.S. Department of Agriculture, Economic Research Service, *National Food Situation*, November 1966, p. 45.

[4] U.S. Department of Agriculture, Economic Research Service, *National Food Situation*, November 196 p. 31–32.

TABLE 4.—*U.S.S.R. and United States: Household stocks of selected durables; selected years 1955–66*

[Units per thousand persons]

	U.S.S.R.[1]			United States[2]	U.S.S.R. as percent of United States
	1955	1960	1966	1966	in 1966
Sewing machines	31	92	151	[3] 136	112
Refrigerators	4	7	40	293	14
Washing machines	1	10	77	259	30
Radios	66	130	171	1,300	13
Television sets	4	22	82	376	22
Automobiles[4]	2	3	5	398	1

[1] Unless otherwise noted, data for the U.S.S.R. are from the following sources: U.S. Congress, Joint Economic Committee, *Current Economic Indicators for the U.S.S.R., 1965*, p. 121, Table 5; Panin, V. I., *Elektrifikatsiya komunal'nogo khozyaystva*, Moscow, 1961, p. 377; *Sovetskaya torgovlya*, No. 11, 1967, p. 21; Tsentral'noye statisticheskoye upravleniye, *Narodnoye khozyaystvo SSSR v 1960 godu*, Moscow, 1961, p. 576 (hereafter referred to as *N. kh. 1960*, or for other years in the series of official Soviet statistical yearbooks); and Tsentral'noye statisticheskoye upravleniye, *SSSR v tsifrakh v 1966 godu*, Moscow, 1967, p. 120.

[2] Based on data from U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States 1967*, Washington, 1967, p. 729. Numbers of refrigerators and washing machines may be understated because they are based on numbers of households with one (or more). Hence, if a household has more than one refrigerator, it is tabulated as "one unit."

[3] For 1963, electric sewing machines only.

[4] Based on data for production, imports, exports, and estimated retirements.

TABLE 5.—*U.S.S.R. and United States: Comparative indicators of health and education services; selected years, 1950–66*

	U.S.S.R.			United States
	[1] 1950	[1] 1958	[2] 1966	1966
Doctors (per 10,000 persons)	13.2	16.8	21.6	[3] 15.6
Hospital beds (per 10,000 persons)	56	74	100	[4] 85
School enrollments (thousands)[5]	34,752	31,483	48,170	[6] 48,987
Number of teachers (thousands)	1,475	1,900	2,530	[6] 1,788
Number of students per teacher	23.6	16.6	19.0	27.4

[1] *New Directions*, p. 503.

[2] Tsentral'noye statisticheskoye upravleniye, *Strana Sovetov za 50 let*, Moscow, 1967, pp. 255, 273–74.

[3] U.S. Department of Health, Education, and Welfare, Public Health Service, Health Resources Statistics, compiled from data supplied by the American Medical Association.

[4] *Hospitals Guide Issue*, 1 Aug. 1967, part II, p. 446.

[5] Elementary and secondary. In the U.S.S.R., elementary and secondary includes grades 1–10 for the years given; in the United States, it includes grades 1–12.

[6] U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States, 1967*, Washington, 1967, pp. 113, 121.

TABLE 6.—*U.S.S.R.: Retail sales and inventories of soft goods; selected years, 1950–66*

	1950	1958	1960	1963	1964	1965	1966
	Billion rubles						
Sales[1]	9.5	18.7	21.8	23.3	23.9	26.0	28.2
Inventories[2]	2.3	5.8	8.3	11.7	12.7	11.8	11.4
Inventories as percent of sales	24	31	38	50	53	45	40
	Index 1960=100						
Sales	44	86	100	107	110	119	129
Inventories	28	70	100	141	153	142	137

[1] *N. kh. 1964*, p. 630, and *N. kh. 1965*, p. 636. *Vestnik statistiki*, No. 12, 1967, p. 80.

[2] *N. kh. 1964*, p. 636–37 and *N. kh. 1965*, p. 642–43. *Vestnik statistiki*, No. 12, 1967, p. 84.

TABLE 7.—*U.S.S.R.: Personal disposable money income, 1960–67* [1]

[In billions of rubles]

	1960	1961	1962	1963	1964	1965	1966	1967
1. Total money income to the population [2]	85.14	93.99	101.36	105.50	111.57	124.76	134.77	143.87
2. Gross earnings of wage and salary workers [3]	59.59	65.95	70.65	74.11	79.25	88.24	94.89	101.72
3. Collective farm wage payments	4.94	6.00	6.63	6.79	7.68	8.90	10.60	11.40
4. Other earnings [4]	9.66	9.97	11.40	12.24	11.53	11.81	12.11	11.75
5. Transfer payments [5]	10.95	12.07	12.68	12.36	13.11	15.81	17.17	19.00
6. Total state deductions [6]	5.95	6.16	6.38	6.74	7.22	8.24	9.06	9.86
7. Total disposable money income [7]	79.19	87.83	94.98	98.76	104.35	116.52	125.71	134.01
PER CAPITA								
8. Disposable money income (rubles) [8]	369.7	403.1	429.0	439.5	458.1	505.5	539.1	569.0
9. Increase over preceding year (percent)	4.9	9.0	6.4	2.4	4.2	10.3	6.6	5.5

[1] The contents of this table are based on the procedures presented in *New Directions*, pt. II B, pp. 525–28. Figures for 1967 are preliminary estimates.
[2] Sum of lines 2 through 5.
[3] Product of average annual number of state workers and average monthly earnings adjusted to an annual basis.
[4] Other earnings include net household incomes from sale of farm products, profit distributed to cooperative members, and military pay and allowances.
[5] Transfer payments include pensions and grants, stipends to students, loan service, insurance payments less premiums, and net borrowing.
[6] Total state deductions include direct taxes on the population, local taxes, fees and fines, and state loans.
[7] Line 1 minus line 6.
[8] Line 7 divided by total population as estimated in *New Directions*, pt. III, p. 657.

TABLE 8.—*U.S.S.R.: Average annual money earnings of wageworkers by branch of industry; selected years 1950–65* [1]

[In rubles]

	1950	1956	1959	1965
All industry	832	938	1,052	1,216
Nonferrous metallurgy	(2)	1,351	(2)	1,789
Ferrous metallurgy	1,139	1,210	1,356	1,507
Coal	1,414	1,520	1,922	(2)
Oil extraction	1,001	1,041	1,093	1,396
Oil refining				1,341
Natural gas extraction	(2)	(2)	(2)	1,346
Peat	586	732	(2)	995
Basic chemicals	841	947	975	1,316
Synthetics and plastics				1,200
Electric power	846	929	(2)	1,296
Logging	(2)	938	(2)	1,201
Woodworking	678	788	902	(2)
Paper	869	1,004	1,080	1,256
Printing	797	811	(2)	(2)
Machine building-metalworking	899	976	1,050	(2)
Light	(2)	732	(2)	(2)
Wool	571	(2)	692	839
Textiles	711	783	829	(2)
Leather and shoes	652	791	872	914
Food processing	605	704	776	(2)
Fish	(2)	(2)	(2)	2,020
Meat processing	(2)	(2)	(2)	948
Construction materials	735	840	(2)	(2)

[1] The Soviet statistical category of wageworker (*rabochiy*) is similar to the U.S. category of production worker, although somewhat more limited in coverage. The Soviet category excludes some custodial personnel and technical personnel normally included in the U.S. concept of production worker.
[2] Not available.

SOURCE:
Wage data for all industry from: S. J. Cerniglia, *Wages in the U.S.S.R. 1950–1966: Construction*, U.S. Bureau of the Census, International Population Reports Series, P-95, No. 63, Washington, 1967, p. 15.
Wage data by branch of industry from:
1950: I. A. Orlovskiy and G. P. Sergeyeva, *Sootnosheniye rosta proizvoditel'nosti truda i zarabotnoy platy v promyshlennosti SSSR*, Moscow, 1961, p. 51. *Byulleten' navchnoy informatsii: trud i zarabotnaya plata*, No. 10, 1961, p. 24.
1956: *Byulleten'*, *op. cit.*, A. G. Aganbegyan and V. F. Mayer, *Zarabotnaya plata v SSSR*, Moscow, 1959, p. 187.
1959: Orlovskiy and Sergeyeva, *op. cit.*
1965: I. A. Machinskiy, *Narodnokhozyaystvennaya trudoyemkost' produktsii*, Moscow, 1966, p. 122.

TABLE 9.—*U.S.S.R.: Personal savings held in state banks, 1950 and 1960–67*

	1950	1960	1961	1962	1963	1964	1965	1966	1967
1. Total savings (billion rubles)[1]	1.9	10.9	11.7	12.7	14.0	15.7	18.7	22.9	27.0
Urban	1.6	8.7	9.2	9.8	10.6	11.8	14.0	17.0	[2]
Rural	.2	2.2	2.5	2.9	3.4	4.0	4.7	6.0	[2]
2. Average size account (rubles)	124	209	222	238	260	285	326	377	[2]
Urban	151	228	239	251	270	292	332	380	[2]
Rural	52	157	177	202	235	266	309	370	[2]
3. Share of additional disposable income saved (percent)[3]	[2]	17.2	9.3	14.0	34.4	30.4	24.7	45.7	49.4

[1] 1950, 1960–65: *Vestnik statistiki*, No. 1, 1967, p. 18.
1966: A. A. Poskonov, (Ed), *Kreditno-denezhnaya sistema, SSSR*, Moscow, 1967, p. 316.
1967: *Izvestiya*, 25 Jan 1968, p. 2.
[2] Not available.
[3] Line 1 increments divided by the additions to disposable income derived from table 7, line 7.

XII. FOREIGN TRADE

Recent Trends in the Foreign Trade of the U.S.S.R.

A. TRENDS IN TRADE TURNOVER

1. The foreign trade turnover of the Soviet Union increased by 8 percent in 1967, thus reversing the marked slowdown in the rate of growth that occurred in 1965–66. In 1967 this global foreign trade figure amounted to over $18 billion, compared with $16.8 billion in 1966. On the basis of its total trade turnover in 1966, the U.S.S.R. ranked sixth among the major trading nations of the world dropping behind Japan but remaining ahead of Canada.

U.S.S.R.: Foreign trade turnover, 1960–67

[In millions of U.S. dollars]

	1960	1961	1962	1963	1964	1965	1966	1967
Exports	5,564	5,998	7,030	7,272	7,683	8,175	8,841	(1)
Imports	5,628	5,828	6,455	7,059	7,736	8,058	7,913	(1)
Turnover	11,192	11,826	13,486	14,331	15,420	16,233	16,754	[2] 18,166
Percentage increase over preceding year		6	6	14	6	8	5	3	8

[1] Not available.
[2] Preliminary.

2. Part of the decline in the rate of growth of foreign trade turnover in 1965 and 1966 was the result of lower prices on some traded commodities. According to Soviet calculations, the rate of growth in trade turnover in constant 1960 prices was about the same in 1965–66 as it was in 1961–64. The apparent decline in the average unit value of Soviet exports is especially noteworthy. Whereas Soviet exports increased by 15 percent in current prices during 1965–66, they reportedly rose by as much as 25 percent in terms of 1960 prices.

U.S.S.R.: Index of foreign trade, 1961–66 [1]

[1960=100]

	1961	1962	1963	1964	1965	1966
Exports:						
Current prices	108	126	131	138	147	159
Constant (1960) prices	110	128	133	139	153	174
Imports:						
Current prices	104	115	125	137	143	140
Constant (1960) prices	103	115	126	131	138	137
Turnover:						
Current prices	106	120	128	138	145	150
Constant (1960) prices	106	122	129	135	146	155

[1] Indexes of value are based on trade in actual transaction prices; indexes of volume are based on Soviet estimates of the change in the real volume of trade, that is trade expressed in 1960 prices.

B. ADJUSTMENTS TO PROBLEMS CAUSED BY WHEAT IMPORTS

3. Since 1963 one of the outstanding problems for the U.S.S.R. in managing its foreign trade has been to accumulate the foreign exchange required to import wheat on a vast scale. The failure of the 1963 harvest brought Soviet grain reserves to a dangerously low level. The U.S.S.R. then decided to break with previous Soviet practice by turning to the West to import wheat in amounts averaging $377.5 million a year in 1963–66. As the U.S.S.R. already had a deficit of $260 million in 1962 in commodity trade carried out in hard currencies, some elements of the existing trade pattern had to be modified.

4. Faced with a difficult situation, the officials in charge of Soviet trade policy demonstrated considerable ability in carrying out the adjustments required to absorb the costs incurred by the wheat imports. By 1965 and 1966 the measures taken to increase exports, while restricting imports of a lower priority, succeeded in paring to manageable proportions the U.S.S.R.'s hard currency deficit, which had soared to $550 million in 1964. Preliminary estimates indicate that the hard currency deficit in Soviet commodity trade fell to about $25 million in 1967, the lowest level since 1959.[1] To finance the deficits that did arise, the U.S.S.R. used Western credits extensively, reduced its holdings of foreign exchange, and sold large amounts of gold.

U.S.S.R.: Hard currency trade, 1959–67 [1]

[In millions of U.S. dollars]

	Exports	Imports	Balance
1959	565	590	−25
1960	745	1,015	−270
1961	865	1,060	−195
1962	915	1,180	−265
1963	960	1,280	−320
1964	1,010	1,545	−535
1965	1,325	1,545	−220
1966	1,480	1,745	−265
1967 [2]	1,640	1,670	−30

[1] Official figures for Soviet trade with hard currency areas have been adjusted to take account of goods moving under credit arrangements.
[2] Preliminary.

5. The adjustments in Soviet commodity trade were not limited to a few particular sectors of trade. As a matter of record, the U.S.S.R. managed to increase exports on a broad front—machinery and equipment, petroleum products, wood and wood products, rolled ferrous metals, nonferrous metals, and cotton fiber. Important gains in hard currency earnings resulted, furthermore, from increased exports of petroleum products, ferrous and nonferrous metal products, lumber, cotton fiber, silver, platinum, diamonds, and even food products such as meat and vegetable oil. At the same time some hard currency imports were cut back—iron and steel products, copper, rubber, and machinery and equipment other than that for the chemical, transportation, and consumer sectors.

[1] The commodity trade deficit actually understates the value of the total deficit on current account in hard currency transactions. Net Soviet hard currency payments for freight, insurance, interest, and the like, if they were available, would have to be added to the commodity trade deficit to estimate the total deficit.

Geographic Pattern of Trade

6. In 1967, two-thirds of Soviet trade was conducted, as it has been in the recent past, with other Communist countries. Of the remainder, 22 percent was with the Western industrailized nations and 11 percent with the developing countries of the Free World.

U.S.S.R.: Geographic distribution of foreign trade, 1960, 1965–67

[In millions of U.S. dollars]

	1960	1965	1966	1967	1967 as percent of 1960
Total trade [1]	11,192	16,233	16,754	[2] 18,166	162
With Communist countries	8,190	11,166	11,137	12,171	149
Eastern Europe	5,937	9,225	9,154	([3])	.....
Other	2,253	1,941	1,984	([3])	.....
With non-Communist countries	3,002	5,067	5,617	5,995	200
Industrial nations	2,066	3,039	3,451	3,982	194
Developing countries	936	2,028	2,166	2,013	212

[1] Because of rounding, componets may not add to totals shown.
[2] Estimate.
[3] Not available.

7. Despite the heavy orientation of Soviet trade toward other Communist countries, the trading nations of the Free World have gradually gained a larger share of the trade turnover of the U.S.S.R. Between 1960 and 1967, as shown in the above table, trade with Communist countries increased by only 50 percent, whereas trade with the world market at large doubled. Within the Free World, trade with the industrial nations has gained in comparison with trade with the developing countries. Trade with the developing countries fell by 1 percent in 1966–67 (and by 5 percent in 1967), while trade with the industrialized countries rose by 31 percent. The absolute decline in trade with the developing countries in 1967 was the first of its kind since 1960.

The Commodity Structure of Trade

8. The commodity composition of Soviet exports in 1966 resembled the broad pattern of the recent past years. One notable exception was the greatly diminished importance of grain. Machinery and equipment, fuels, and metals remained the largest export items in 1960–66, increasing as a group by some $1.7 billion, or by 60 percent. Roughly three-quarters of the machinery and equipment was exported to Communist countries in 1966, with nearly all of the remainder going to newly developing countries. Sales of wood and wood products rose by over 100 percent in 1961–66, and although representing only 7 percent of total exports in 1966, were especially important as a source of hard currency earnings. The growing share of "other exports" in total exports (shown in the following table) can be traced to the sharp rise in the value of certain unspecified exports after 1960. These exports are believed to include sales of diamonds, platinum, silver, and rare metals.

U.S.S.R.: Commodity composition of imports and exports,[1] selected years

Commodity	1960	1962	1964	1966
	Exports (percent of total)			
Total exports	100	100	100	100
Machinery and equipment	21	17	21	21
Fuels and lubricants	16	16	18	16
Ores and concentrates	4	4	4	3
Ferrous metals	12	11	13	11
Nonferrous metals	4	3	4	4
Chemicals	3	3	3	3
Wood and wood products	5	6	7	7
Cotton fiber	5	4	4	4
Grain	8	8	3	3
Other food	4	5	4	6
Other consumer goods	4	3	3	3
Other exports	14	20	16	19
	Imports (percent of total)			
Total imports	100	100	100	100
Machinery and equipment	30	35	34	32
Fuels and lubricants	4	3	2	2
Ores and concentrates	6	5	4	4
Ferrous metals	7	7	4	3
Nonferrous metals	3	2	1	1
Chemicals	3	3	4	4
Rubber and rubber products	3	4	2	2
Wood and wood products	2	2	2	2
Cotton and wool fibers	5	3	3	3
Wheat and wheat flour	(2)	(2)	7	6
Other food	11	11	12	12
Other consumer goods	17	17	15	16
Other imports	9	8	10	13

[1] From tables 2 and 3.
[2] Less than 0.5 percent.

9. Although the composition of Soviet exports remained fairly stable in 1960–66, the pattern of imports changed considerably. Between 1960 and 1966, imports of several kinds of basic industrial materials declined or leveled off, while purchases of consumer and consumer-related goods rose sharply, reflecting in part the growth in wheat imports after 1962. For example, imports of fuels, ores, and metals fell by $304 million, or 28 percent, while imports of consumer goods rose by $1,048 million—an increase of 67 percent. Imports of machinery and equipment increased very rapidly in 1962–64, leveled off in 1965, and then declined by 5 percent in 1966. By 1966 machinery and equipment, foodstuffs, and other consumer goods represented 66 percent of total imports, compared to 63 percent in 1962 and 58 percent in 1960.

10. The value of imports of consumer goods in 1966 exceeded the value of imports of machinery and equipment, the first time this had occurred since 1961. Imports of foodstuffs, however, accounted for over half of all imports of consumer goods in 1966, and more than one-third of the imports of food consisted of imports of wheat and flour. The large imports of wheat that began in 1963 and reached a peak on $577 million in 1964 fell off sharply in 1967 after the bumper harvest of 1966. Although precise figures are not available, the Soviets probably imported around $150 million of consumer goods—mostly clothing—to meet the growing demand for better quality articles of apparel.

The Pattern of Soviet Trade by Region

A. EASTERN EUROPE

11. The countries of Eastern Europe as a group have dominated Soviet trade for many years. The six Eastern European members of CEMA accounted for 55 percent of the total trade of the Soviet Union in 1966, although the value of their trade actually fell slightly compared with 1965, in the wake of a revision in intra-CEMA foreign trade prices.

(i) Exports

12. In 1966, machinery and equipment, fuels, and metals made up 55 percent of total Soviet exports to Eastern Europe. Since 1960 the relative importance of machinery and equipment exports has been rising. At the same time, exports of foodstuffs declined from 16 percent to 8 percent of total exports to Eastern Europe. The U.S.S.R. is a net exporter of machinery and equipment to only two of the six East European countries—Bulgaria and Rumania. Its net imports of machinery from the other four Eastern European CEMA countries in 1966 totaled $966 million.

U.S.S.R.: Commodity composition of foreign trade with Eastern Europe,[1] selected years

Commodity	1960	1962	1964	1966
	Exports (percent of total)			
Total exports	100	100	100	100
Machinery and equipment	13	15	17	20
Fuels and lubricants	13	15	16	15
Ferrous and nonferrous metals	19	18	20	20
Foodstuffs	16	14	7	8
Iron ore	5	5	6	5
Other exports	34	33	34	32
	Imports (percent of total)			
Total imports	100	100	100	100
Machinery and equipment	43	45	46	43
Nonfood consumer goods	18	19	19	20
Foodstuffs	6	6	6	8
Fuels and lubricants	8	5	4	4
Other imports	25	25	25	25

[1] From tables 4 and 5.

(ii) Imports

13. In return for its deliveries of raw materials and heavy industrial goods, the U.S.S.R imports machinery and equipment and consumer goods from Eastern Europe. As shown in the table above, the pattern of imports has not changed appreciably since 1960; imports of machinery and equipment and consumer goods represented 67 percent of imports from Eastern Europe in 1960 and 71 percent in 1966. The U.S.S.R.'s dependence on Eastern Europe for its purchases of machinery may be seen in the fact that in 1966 these imports amounted to over $1.9 billion—more than the total value of all Soviet imports from the developed countries of the Free World.

(iii) CEMA

14. The Council for Economic Mutual Assistance (commonly known as CEMA or COMECON) was established in January 1949 as an organization to aid in the economic integration of the European

socialist countries. Thus far, it is generally recognized by most informed observers that CEMA has achieved only partial success. Some specialization of production among the member nations has gradually evolved in the machinery and equipment and chemical fields. However, coordination of the 5-year plans, which is a multistage process, is not progressing smoothly. The problem is complicated by the fact that the countries are not equally industrialized and the less advanced countries are not much interested in the kind of specialization that would freeze them in their present position of suppliers of raw materials and foodstuffs. Two other major goals of CEMA, the coordination of trade agreements and multilateral settlement of accounts, have also continued to elude the members of this grouping. There is as yet no multilateral scheme for the signing of trade agreements. The International Bank for Economic Cooperation, which began operations in 1964, has been unable to achieve its goal of routine multilateral balancing of trade because the currencies of the CEMA members are not convertible. The Bank's chief contribution has been to provide an improved centralized accounting service for foreign trade. The machinery provided by CEMA has achieved somewhat greater success in three recent endeavors involving cooperative undertakings of a technical nature. These include a freight car pool to permit fuller use of the chronically inadequate stock of freight cars in the CEMA countries, the "Friendship" oil pipeline carrying crude oil from the U.S.S.R. to refineries in most countries of Eastern Europe, and the integrated regional electric power system.

15. The Council for Economic Mutual Assistance is currently pursuing a policy that permits members to participate in cooperative projects, but exerts no pressure on them to join projects in which they are not interested. Growing economic nationalism and increasing opportunities for trade with the West, in fact, continue to impell the CEMA grouping in the direction of a more flexible association than had been originally intended. In spite of repeated statements by leading CEMA spokesmen that the original long-range goals for economic integration remain unchanged, formal arrangements for specialization and cooperation in the sphere of production cannot succeed unless the Executive Committee of CEMA has authority to enforce decisions, and there is almost no prospect that it can voluntarily obtain such authority from its members in the foreseeable future.

16. The system of pricing goods moving in trade among the CEMA countries has been administrative and artificial. Until 1964, the prices used had been based for the most part on world market prices of the late 1940's and early 1950's. In 1964 agreements were reached among the member countries to revise CEMA trade prices so that relative prices would be closer to current world market prices. The price revision was to be completed by the end of 1965, but disagreements over the relative changes to be introduced in prices for East European machinery and Soviet industrial materials delayed its completion until 1967.

17. Although information on the revisions is inconclusive it appears that price changes brought about the following adjustment in Soviet-East European trade in1966:

(a) The value of Soviet trade with CEMA declined although the physical volume of the goods exchanged reportedly increased; and

(b) Prices of Soviet exports to CEMA member countries declined on the average more than the prices of Soviet imports from the same countries—in short, the terms of trade became less favorable to the U.S.S.R.

B. COMMUNIST CHINA

18. Soviet trade with Communist China declined in 1966–67, as it has each year since 1960 when the open rift between the two Communist nations appeared. Between 1959 and 1966 exports to China fell by 82 percent from $955 million to $175 million, and Soviet imports during the same period decreased by 87 percent to $143 million. By the end of 1965 Communist China had repaid its debt to the Soviet Union, 2 years ahead of schedule.

U.S.S.R.: Trade with Communist China, 1959–67 [1]

[In millions of U.S. dollars]

	1959	1960	1961	1962	1963	1964	1965	1966	1967
Exports	955	817	367	233	187	135	192	175	(2)
Imports	1,100	843	551	516	413	314	223	143	(2)
Turnover [3]	2,055	1,665	919	750	600	449	417	318	[4] 250

[1] From tables 6 and 7.
[2] Not available.
[3] Because of rounding, components may not add to totals shown.
[4] Preliminary estimate.

19. Soviet exports of machinery and equipment to Communist China, which declined from $504 million in 1960 to $27 million in 1962, recovered somewhat in 1965–66. In 1966 they amounted to $86 million, almost half of total Soviet exports to Communist China. Exports of wood and wood products and ferrous and nonferrous metals contributed another $54 million to Soviet exports. Soviet deliveries of fuel and lubricants to Communist China declined steadily from $113 million in 1960 to $3 million in 1966.

20. By 1966 the only Soviet imports of consequence from Communist China were foodstuffs and other consumer goods. Together they amounted to $110 million and 77 percent of total purchases from Communist China. Imports of ores and concentrates, nonferrous metals, and cotton and wool fibers, still of substantial importance in 1960, had all but ceased by 1966.

C. INDUSTRIAL WEST

21. Approximately 21 percent of the foreign trade of the U.S.S.R. takes place with the industrialized countries of the Free World. In 1966 this trade was very nearly in balance. Preliminary estimates indicate that the deficit then increased in 1967 to $117 million. The following table shows the Soviet trade balance with the Industrial West in recent years.

U.S.S.R.: Trade with the Industrial West, 1962–67

[In millions of U.S. dollars]

	1962	1963	1964	1965	1966	1967[1]
Turnover	2,398	2,618	3,016	3,039	3,451	3,982
Exports	1,115	1,218	1,282	1,438	1,710	1,932
Imports	1,283	1,400	1,734	1,601	1,741	2,049
Balance	−168	−182	−452	−163	−31	−117

[1] Preliminary estimates.

(*i*) *Exports*

22. The commodity composition of Soviet exports to the Industrial West has remained relatively stable for a number of years. Since the late 1950's fuels as a group have headed the list of Soviet exports to these countries. Crude oil and petroleum products—delivered primarily to Italy, West Germany, Finland, France, Japan, and Sweden—accounted for over 21 percent of total exports in 1966. Other exports of significance were metal manufactures, forest products, and consumer goods.

U.S.S.R.: Commodity composition of foreign trade with the Industrial West,[1] selected years

Commodity	1960	1962	1964	1966
	Exports (percent of total)			
Total exports	100	100	100	100
Fuels and lubricants	26	29	31	27
Ferrous and nonferrous metals	11	11	15	14
Wood and wood products	16	18	21	17
Foodstuffs	12	12	6	7
Furs and pelts	5	4	4	4
Other exports	30	26	23	31
	Imports (percent of total)			
Total imports	100	100	100	100
Machinery and equipment	43	47	36	32
Ferrous and nonferrous metals	28	23	4	5
Wool and synthetic fibers	6	5	4	4
Wheat and wheat flour			31	24
Other imports	23	25	25	35

[1] From tables 8 and 9.

(*ii*) *Imports*

23. The U.S.S.R.'s massive grain purchases dominated the import picture in the past few years. Because of poor grain crops in 1963 and 1965, the Soviets had to buy huge quantities of cereals in the Free World, mainly from Canada. During 1963–66, the U.S.S.R. spent $1.5 billion on the purchase of wheat and flour which, in turn called for substantial sales of Soviet gold.

24. In order to make the wheat imports possible, however, the U.S.S.R. was forced to cut back other imports from the Industrial West. Machinery and metal imports fell by $277 million, or by 31 percent, between 1962 and 1965. As the need to buy wheat became less pressing, purchases of machinery and equipment began to turn upward in 1966. In recent years, chemical and transportation equipment have made up about two-thirds of total machinery imports.

25. The known record of recent Soviet orders for Western machinery clearly indicates that the value of Soviet imports of machinery and equipment from the Industrial West will continue to rise in the next few years. These orders reached something of an alltime high in 1966—over $900 million. Although the 1966 total was viewed as being to some extent atypical, inasmuch as it included the $400 million agreement with Italy's Fiat company, (the largest single Soviet order from the West) the U.S.S.R. proceeded to follow it up by placing new machinery orders of more than $600 million in the Industrial West in 1967.

D. DEVELOPING COUNTRIES

26. Soviet trade with the developing countries of the Free World rose in 1966, as it had for several years, but apparently declined slightly in 1967. In 1966 these countries accounted for about 11 percent of the total trade of the U.S.S.R. India and the U.A.R. were the U.S.S.R.'s leading trade partners among the developing countries in 1966, as they have been since 1962. These two countries, together with Malaysia and Argentina, conducted 54 percent of all Soviet trade with the third world in 1966. By area, Soviet foreign trade with the developing countries in 1966 was distributed as follows: Asia, $760 million; the Middle East, $640 million; Latin America, $200 million; Africa, $175 million; and Europe, $15 million.

27. Soviet exports of machinery to the developing countries—60 percent of total in 1964—slumped somewhat to 48 percent of all exports in 1966. Much of the machinery is sent under various financial and technical aid agreements, and a large part of the equipment consists of complete plants. The other main export item in 1966 was $120 million of petroleum of which slightly less than 20 percent went to India and an equal amount to Brazil.

28. The leading Soviet imports from the developing countries in 1966 were foodstuffs, rubber, and cotton fiber. Since 1963, the U.S.S.R. has more than doubled its purchases of food from the developing countries, while reducing slightly imports of rubber and cotton fiber. Part of the surge in imports of foodstuffs is explained by purchases of Argentine wheat, which represented one-fourth of the value of Soviet imports of food from the developing countries in 1966.

TABLE 1.—*U.S.S.R.: Geographic distribution of foreign trade, 1955–66*

[In millions of U.S. dollars]

Year	Exports or imports	Total foreign trade [1]	Communist countries					Free world			
			Total	Eastern Europe	Communist China	Other Asian	Other	Total	Industrial West	Less developed countries	Unspecified [6]
1955	Exports	3,426.6	2,726.2	1,792.1	748.3	169.4	[2] 16.4	700.3	554.1	95.6	50.6
	Imports	3,060.5	2,418.4	1,662.8	643.6	94.6	[2] 17.4	642.2	440.7	198.6	2.9
1956	Exports	3,615.0	2,732.9	1,767.8	733.0	163.0	[2] 69.1	882.1	607.1	164.2	110.8
	Imports	3,612.6	2,735.8	1,815.1	764.2	106.8	[2] 49.7	876.9	591.2	282.3	3.4
1957	Exports	4,381.4	3,304.4	2,549.9	544.1	137.3	[2] 73.1	1,077.0	701.9	271.3	103.8
	Imports	3,937.7	2,825.7	1,914.8	738.1	115.9	[2] 56.8	1,112.2	656.3	422.9	3.0
1958	Exports	4,299.2	3,136.2	2,320.1	634.0	131.0	[2] 51.1	1,163.0	682.0	378.9	102.1
	Imports	4,349.5	3,242.0	2,205.7	881.2	104.2	[2] 50.9	1,107.6	633.2	473.2	1.2
1959	Exports	5,450.4	4,131.7	2,950.6	954.6	180.3	[2] 46.2	1,318.7	867.4	332.0	119.3
	Imports	5,073.2	3,789.5	2,519.4	1,100.3	116.7	[2] 53.1	1,283.7	768.4	511.0	3.8
1960	Exports	5,563.7	4,211.4	3,117.7	817.1	[3] 63.9	[4] 208.8	1,352.3	983.4	338.3	30.6
	Imports	5,628.4	3,978.3	2,819.4	848.1	[3] 97.8	[4] 213.2	1,650.1	1,082.2	564.4	3.5
1961	Exports	5,998.4	4,321.1	3,399.4	367.3	[3] 118.3	[5] 435.7	1,677.3	1,069.3	496.6	111.4
	Imports	5,827.6	4,146.7	3,044.1	551.4	[3] 104.8	[5] 446.4	1,680.9	1,092.9	579.1	8.9
1962	Exports	7,030.5	4,905.2	3,971.1	233.4	[3] 135.3	[5] 565.3	2,125.3	1,115.2	560.0	450.1
	Imports	6,455.4	4,565.5	3,590.3	516.3	[3] 118.4	[5] 340.4	1,889.9	1,282.8	604.4	2.7
1963	Exports	7,272.4	5,099.4	4,163.3	187.2	[3] 138.8	[5] 610.1	2,173.0	1,259.6	751.9	203.0
	Imports	7,058.7	4,986.4	4,146.8	413.0	[3] 123.4	[5] 303.1	2,072.3	1,358.0	664.6	8.1
1964	Exports	7,683.3	5,406.9	4,499.2	135.3	[3] 130.6	[5] 641.8	2,276.4	1,282.1	774.5	219.8
	Imports	7,736.5	5,346.4	4,450.4	314.2	[3] 115.4	[5] 466.3	2,390.1	1,218.1	653.8	1.9
1965	Exports	8,174.6	5,556.3	4,552.6	191.7	[3] 164.7	[5] 647.3	2,618.3	1,399.6	910.7	269.6
	Imports	8,058.3	5,609.8	4,672.6	225.6	[3] 118.9	[5] 592.8	2,448.4	1,600.8	845.2	2.4
1966	Exports	8,841.0	5,872.8	4,692.0	175.3	[3] 153.8	[5] 851.8	2,968.2	1,710.2	886.2	371.8
	Imports	7,912.8	5,263.8	4,462.1	143.1	[3] 117.7	[5] 541.8	2,649.0	1,741.2	903.3	4.5

[1] Because of rounding, components may not add to totals shown.
[2] Yugoslavia.
[3] North Korea and North Vietnam.
[4] Cuba, Mongolia, and Yugoslavia.
[5] Cuba, Mongolia, Yugoslavia, and Albania.
[6] Believed to be composed primarily of trade with the Less Developed Countries.

NOTE: Figures in this and succeeding tables are based on data included in Ministry of Foreign Trade, U.S.S.R., *Foreign Trade for the Year 1966* (Moscow, 1967) and earlier volumes. Values converted from rubles to dollars at the rate of 1 ruble equals $1.11111.

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TABLE 2.—*U.S.S.R.: Commodity Composition of Exports, 1960–66*

[In millions of U.S. dollars and percent of total]

	1960		1961		1962		1963		1964		1965		1966	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Total exports [1]	5,563.7	100.0	5,998.4	100.0	7,030.5	100.0	7,272.4	100.0	7,683.3	100.0	8,174.6	100.0	8,841.0	100.0
Machinery and equipment	1,141.2	20.5	964.6	16.1	1,168.5	16.6	1,435.1	19.7	1,612.8	21.0	1,635.8	20.0	1,838.3	20.8
Complete plants	568.5	10.2	355.8	5.9	411.5	5.9	554.9	7.6	604.2	7.9	613.5	7.5	641.3	7.3
Fuels, lubricants, and related materials	901.8	16.2	1,044.8	17.4	1,152.5	16.4	1,289.3	17.7	1,364.0	17.8	1,386.3	17.0	1,429.4	16.2
Coal and coke	242.1	4.4	284.9	4.7	346.4	4.9	376.6	5.2	418.4	5.4	384.3	4.7	356.8	4.0
Petroleum and petroleum products	657.9	11.8	757.8	12.6	803.7	11.4	910.4	12.5	943.1	12.3	998.9	12.2	1,064.2	12.0
Ores and concentrates	242.9	4.4	252.6	4.2	273.6	3.9	291.4	4.0	313.8	4.1	308.6	3.8	302.2	3.4
Iron ore	175.0	3.1	187.8	3.1	215.7	3.1	235.9	3.2	255.5	3.3	249.2	3.0	241.7	2.7
Base metals and manufactures	837.7	15.1	923.2	15.4	1,010.3	14.4	1,012.8	13.9	1,254.9	16.3	1,329.4	16.3	1,344.9	15.2
Ferrous metals	642.7	11.6	712.1	11.9	792.8	11.3	794.1	10.9	962.6	12.5	997.6	12.2	964.8	10.9
Rolled ferrous metals	428.8	7.7	478.2	8.0	540.3	7.7	551.2	7.6	656.6	8.5	659.4	8.1	632.8	7.2
Nonferrous metals	194.9	3.5	211.1	3.5	217.5	3.1	218.7	3.0	292.3	3.8	331.8	4.1	380.1	4.3
Aluminum	44.7	0.8	58.2	1.0	77.6	1.1	79.5	1.1	113.4	1.5	141.3	1.7	118.6	1.3
Tin	24.6	0.4	12.2	0.2	1.1	(2)	1.7	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Chemicals	150.1	2.7	173.9	2.9	179.2	2.5	192.9	2.7	199.1	2.6	229.2	2.8	271.4	3.1
Wood and wood products	305.1	5.5	361.7	6.0	420.4	6.0	414.2	5.7	506.3	6.6	593.6	7.3	622.1	7.0
Lumber	182.8	3.3	206.5	3.4	221.3	3.1	234.9	3.2	281.8	3.7	305.6	3.7	307.6	3.5
Textile raw materials and semimanufactures	358.6	6.4	364.9	6.1	341.5	4.9	337.7	4.6	382.1	5.0	421.3	5.2	460.1	5.2
Cotton fiber	288.7	5.2	283.8	4.7	259.6	3.7	243.5	3.3	297.1	3.9	334.7	4.1	367.7	4.2
Consumer goods	898.9	16.2	1,010.5	16.9	1,132.1	16.1	1,156.3	15.9	806.1	10.5	893.2	10.9	1,031.3	11.7
Food	693.4	12.5	796.5	13.3	912.1	13.0	908.2	12.5	568.7	7.4	657.2	8.0	778.3	8.8
Grain	467.8	8.4	473.8	7.9	529.4	7.5	424.1	5.8	241.9	3.1	270.3	3.3	232.0	2.6
Other consumer goods	205.6	3.7	214.0	3.6	220.0	3.1	248.2	3.4	237.4	3.1	236.0	2.9	253.0	2.9
Other merchandise	209.7	3.8	229.6	3.8	227.3	3.2	225.9	3.1	216.6	2.8	247.5	3.0	246.9	2.8
Unspecified	515.6	9.3	672.4	11.2	1,125.1	16.0	916.8	12.6	1,027.6	13.4	1,128.3	13.8	1,294.4	14.6

[1] Because of rounding, components may not add to totals shown.

[2] Negligible.

TABLE 3.—*U.S.S.R.: Commodity composition of imports, 1960–66*

[In millions of U.S. dollars and percent of total]

	1960		1961		1962		1963		1964		1965		1966	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percen
Total imports [1]	5,628.4	100.0	5,827.6	100.0	6,455.4	100.0	7,058.7	100.0	7,736.5	100.0	8,053.3	100.0	7,912.8	100.0
Machinery and equipment	1,675.2	29.8	1,734.5	29.8	2,245.0	34.8	2,466.0	34.9	2,664.9	34.4	2,692.2	33.4	2,564.8	32.4
Transportation equipment	660.1	11.7	534.3	9.2	748.2	11.6	847.2	12.0	996.9	12.9	990.0	12.3	941.4	11.9
Fuels, lubricants, and related materials	237.3	4.2	217.0	3.7	198.7	3.1	201.9	2.9	183.2	2.4	198.5	2.5	184.5	2.3
Coal and coke	93.5	1.7	93.6	1.6	95.3	1.5	97.3	1.4	96.9	1.3	123.0	1.5	127.3	1.6
Petroleum and petroleum products	143.7	2.6	123.4	2.1	103.5	1.6	104.6	1.5	86.3	1.1	75.5	.9	57.1	.7
Ores and concentrates	314.0	5.6	291.4	5.0	297.8	4.6	292.1	4.1	302.0	3.9	315.5	3.9	300.5	3.8
Base metals and manufactures	545.9	9.7	494.2	8.5	563.4	8.7	464.9	6.6	356.9	4.6	389.4	4.8	307.8	3.9
Ferrous metals	373.9	6.6	348.4	6.0	427.0	6.6	339.9	4.8	276.7	3.6	314.2	3.9	249.4	3.1
Rolled ferrous metals	178.8	3.2	160.4	2.8	192.7	3.0	169.5	2.4	136.4	1.8	132.2	1.6	99.1	1.3
Nonferrous metals	172.0	3.1	145.9	2.5	136.4	2.1	125.0	1.8	80.1	1.0	75.2	.9	58.4	.7
Tin	34.8	.6	22.5	.4	20.5	.3	17.2	.2	17.9	.2	21.0	.3	16.0	.2
Copper	71.9	1.3	53.0	.9	68.7	1.1	61.7	.9	14.7	.2	6.5	.1	7.7	.1
Chemicals	149.3	2.7	153.5	2.6	212.0	3.3	285.3	4.0	347.6	4.5	373.2	4.6	396.3	5.0
Rubber and rubber products	196.2	3.5	273.5	4.7	251.4	3.9	212.5	3.0	145.0	1.9	198.9	2.5	189.0	2.4
Wood and wood products	104.8	1.9	124.3	2.1	118.5	1.8	118.9	1.7	131.3	1.7	150.3	1.9	152.2	1.9
Textile raw materials and semimanufactures	364.5	6.5	303.4	5.2	282.8	4.4	338.8	4.8	292.9	3.8	357.9	4.4	374.7	4.7
Cotton fiber	179.9	3.2	130.1	2.2	118.6	1.8	170.0	2.4	118.0	1.5	161.7	2.0	140.4	1.8
Wool fiber	118.0	2.1	103.8	1.8	93.4	1.4	88.8	1.3	97.8	1.3	100.0	1.2	117.9	1.5
Consumer goods	1,572.2	27.9	1,777.7	30.5	1,826.7	28.3	2,112.9	29.9	2,639.3	34.1	2,645.1	32.8	2,712.9	34.3
Food	611.8	10.9	783.5	13.4	712.8	11.0	872.6	12.4	1,486.3	19.2	1,501.0	18.6	1,433.9	18.1
Wheat and wheat flour	9.6	.2	46.3	.8	5.5	.1	237.1	3.4	576.9	7.5	424.7	5.3	515.1	6.5
Other consumer goods	960.4	17.1	994.2	17.1	1,113.9	17.3	1,240.3	17.6	1,153.0	14.9	1,146.3	14.2	1,278.9	16.2
Other merchandise	375.9	6.7	339.3	5.8	354.5	5.5	409.4	5.8	462.1	6.0	480.4	6.0	409.7	5.2
Unspecified	93.2	1.7	118.7	2.0	104.4	1.6	156.1	2.2	211.3	2.7	256.9	3.2	320.4	4.0

[1] Because of rounding, components may not add to totals shown.

TABLE 4.—*U.S.S.R.: Commodity composition of exports to Eastern European Communist countries, 1960–66*

[In millions of U.S. dollars and percent of total]

	1960		1961		1962		1963		1964		1965		1966	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Total exports [1]	3,117.7	100.0	3,399.4	100.0	3,971.1	100.0	4,163.3	100.0	4,499.2	100.0	4,552.6	100.0	4,692.0	100.0
Machinery and equipment	414.0	13.3	450.0	13.2	606.6	15.3	734.9	17.7	786.9	17.5	786.6	17.3	959.9	20.5
Complete plants	108.6	3.5	108.0	3.2	141.9	3.6	184.2	4.4	178.9	4.0	213.0	4.7	246.2	5.2
Fuels, lubricants, and related materials	413.7	13.3	485.8	14.3	583.4	14.7	655.2	15.7	727.1	16.2	738.1	16.2	715.1	15.2
Coal and coke	171.1	5.5	204.0	6.0	252.5	6.4	265.1	6.4	289.3	6.4	265.3	5.8	242.9	5.2
Petroleum and petroleum products	240.7	7.7	279.5	8.2	328.4	8.3	387.7	9.3	435.4	9.7	469.7	10.3	465.7	9.9
Ores and concentrates	206.6	6.6	218.4	6.4	245.8	6.2	264.4	6.4	284.6	6.3	269.8	5.9	253.9	5.4
Iron ore	170.8	5.5	184.1	5.4	211.0	5.3	230.4	5.5	250.0	5.6	241.3	5.3	231.2	4.9
Base metals and manufactures	584.1	18.7	652.2	19.2	727.1	18.3	754.6	18.1	907.7	20.2	928.0	20.4	916.6	19.5
Ferrous metals	451.7	14.5	506.8	14.9	574.2	14.5	598.5	14.4	720.6	16.0	717.7	15.8	699.5	14.9
Rolled ferrous metals	328.2	10.5	373.5	11.0	422.3	10.6	447.8	10.8	532.0	11.8	523.5	11.5	546.7	11.7
Nonferrous metals	132.4	4.2	146.0	4.3	152.8	3.8	156.0	3.7	187.0	4.2	210.4	4.6	217.1	4.6
Aluminum	30.6	1.0	42.5	1.3	49.7	1.3	51.3	1.2	70.7	1.6	78.5	1.7	84.2	1.8
Tin	6.3	.2	7.8	.2	.6	(2)								
Chemicals	65.4	2.1	75.0	2.2	83.3	2.1	92.1	2.2	111.4	2.5	123.2	2.7	180.1	3.8
Wood and wood products	98.7	3.2	118.0	3.5	148.3	3.7	139.4	3.3	162.7	3.6	186.0	4.1	198.9	4.2
Lumber	58.6	1.9	68.8	2.0	82.2	2.1	83.0	2.0	91.3	2.0	100.5	2.2	100.1	2.1
Textile raw materials and semimanufactures	283.2	9.1	293.0	8.6	273.3	6.9	273.6	6.6	318.0	7.1	321.7	7.1	332.3	7.1
Cotton fiber	234.0	7.5	231.0	6.8	215.2	5.4	200.6	4.8	249.9	5.6	255.0	5.6	265.6	5.7
Consumer goods	573.2	18.4	509.0	15.0	638.9	16.1	606.6	14.6	391.1	8.7	399.9	8.8	466.2	9.9
Food	497.7	16.0	426.9	12.6	547.4	13.8	520.2	12.5	321.5	7.1	328.6	7.2	392.4	8.4
Grain	352.6	11.3	275.0	8.1	347.5	8.8	297.0	7.1	193.2	4.3	200.3	4.4	188.1	4.0
Other consumer goods	75.6	2.4	82.0	2.4	91.5	2.3	86.4	2.1	69.6	1.5	71.4	1.6	73.9	1.6
Other merchandise	94.6	3.0	114.1	3.4	116.1	2.9	120.8	2.9	127.9	2.8	135.3	3.0	152.5	3.3
Unspecified	384.0	12.3	484.3	14.2	548.4	13.8	521.9	12.5	681.9	15.2	663.8	14.6	516.5	11.0

[1] Because of rounding, components may not add to totals shown.

[2] Negligible.

TABLE 5.—*U.S.S.R.: Commodity composition of imports from Eastern European Communist countries, 1960–66*

[In millions of U.S. dollars and percent of total]

	1960		1961		1962		1963		1964		1965		1966	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Total imports [1]	2,819.4	100.0	3,044.1	100.0	3,590.3	100.0	4,146.9	100.0	4,450.4	100.0	4,672.6	100.0	4,462.1	100.0
Machinery and equipment	1,208.6	42.9	1,245.2	40.9	1,623.9	45.2	1,858.5	44.8	2,024.9	45.5	2,113.7	45.2	1,926.2	43.2
Transportation equipment	532.2	18.9	451.0	14.8	579.5	16.1	669.5	16.1	725.8	16.3	728.7	15.6	678.3	15.2
Fuels, lubricants, and related materials	215.7	7.7	192.0	6.3	182.6	5.1	182.0	4.4	175.1	3.9	189.5	4.1	175.1	3.9
Coal and coke	90.9	3.2	91.2	3.0	91.9	2.6	93.6	2.3	93.2	2.1	119.5	2.6	126.6	2.8
Petroleum and petroleum products	124.8	4.4	100.8	3.3	90.7	2.5	88.5	2.1	81.8	1.8	70.0	1.5	48.4	1.1
Ores and concentrates	102.4	3.6	91.9	3.0	86.9	2.4	95.9	2.3	94.3	2.1	88.5	1.9	13.0	.3
Base metals and manufactures	94.8	3.4	127.9	4.2	144.8	4.0	153.0	3.7	171.9	3.9	185.4	4.0	96.5	2.2
Ferrous metals	80.3	2.8	110.9	3.6	133.1	3.7	139.1	3.4	149.5	3.4	163.2	3.5	89.1	2.0
Rolled ferrous metals	21.8	.8	35.2	1.2	43.3	1.2	50.0	1.2	62.6	1.4	69.6	1.5	26.6	.6
Nonferrous metals	14.6	.5	17.0	.6	11.7	.3	13.9	.3	22.4	.5	22.1	.5	7.3	.2
Chemicals	72.8	2.6	95.4	3.1	133.0	3.7	171.3	4.1	206.5	4.6	196.5	4.2	212.3	4.8
Rubber and rubber products	21.9	.8	24.2	.8	23.0	.6	25.4	.6	27.6	.6	26.5	.6	28.7	.6
Wood and wood products	45.2	1.6	48.8	1.6	48.4	1.3	44.5	1.1	41.5	.9	38.7	.8	37.4	.8
Textile raw materials and semimanufactures	8.3	.3	10.4	.3	11.5	.3	3.2	.1	3.8	.1	2.6	.1	.2	(2)
Consumer goods	667.3	23.7	799.7	26.3	902.1	25.1	1,103.3	26.6	1,089.9	24.5	1,169.3	25.0	1,242.7	27.8
Food	171.2	6.1	250.2	8.2	221.8	6.2	262.0	6.3	256.3	5.8	304.0	6.5	337.7	7.6
Other consumer goods	496.0	17.6	549.4	18.0	680.3	18.9	841.3	20.3	833.6	18.7	865.3	18.5	905.0	20.3
Other merchandise	126.6	4.5	132.4	4.3	133.4	3.7	162.8	3.9	185.9	4.2	168.0	3.6	184.1	4.1
Unspecified	255.8	9.1	276.1	9.1	300.7	8.4	347.1	8.4	429.0	9.6	493.9	10.6	545.9	12.2

[1] Because of rounding, components may not add to totals shown.

[2] Negligible.

TABLE 6.—*U.S.S.R.: Commodity composition of exports to Communist China, 1960–66*

[In millions of U.S. dollars and percent of total]

	1960		1961		1962		1963		1964		1965		1966	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Total exports[1]	817.1	100.0	367.3	100.0	233.4,	100.0	187.2	100.0	135.3	100.0	191.7	100.0	175.3	100.0
Machinery and equipment	503.9	61.6	108.1	29.4	27.3	11.7	42.2	22.5	57.7	42.6	77.0	40.2	86.2	49.2
Complete plants	373.8	45.7	78.9	21.5	8.8	3.8	14.6	7.8	12.4	9.2	3.9	2.0	.3	.2
Fuels, lubricants, and related materials	113.1	13.8	120.7	32.9	80.5	34.5	60.7	32.4	21.6	16.0	2.2	1.1	2.6	1.5
Petroleum and petroleum products	113.1	13.8	120.7	32.9	80.5	34.5	60.7	32.4	21.6	16.0	2.2	1.1	2.6	1.5
Ores and concentrates	1.2	.1												
Base metals and manufactures	69.8	8.5	41.2	11.2	33.8	14.5	32.3	17.3	23.9	17.7	38.4	20.0	24.5	14.0
Ferrous metals	59.3	7.2	34.7	9.4	28.2	12.1	27.4	14.6	20.8	15.4	34.7	18.1	14.6	8.3
Rolled ferrous metals	39.2	4.8	19.3	5.3	17.9	7.7	17.9	9.6	15.6	11.5	27.6	14.4	9.9	5.6
Nonferrous metals	10.5	1.3	6.5	1.8	5.6	2.4	4.9	2.6	3.1	2.3	3.8	2.0	3.6	2.1
Aluminum	2.6	.3	1.6	.4	1.2	.5	.9	.5	.1	.1	.1	.1	.8	.5
Chemicals	9.4	1.1	2.1	.6	4.7	2.0	4.4	2.4	5.5	4.1	15.4	8.0	5.7	3.3
Wood and wood products	.8	.1	2.9	.8	10.4	4.5	10.3	5.5	10.3	7.6	30.1	15.7	29.3	16.7
Consumer goods	4.4	.5	67.2	18.3	30.6	13.1	14.2	7.6	7.2	5.3	1.4	.7	1.8	1.0
Food	[2]	[2]	63.8	17.4	20.8	8.9	.7	.4	.1	.1	[2]	[2]	.1	.1
Other consumer goods	4.4	.5	3.4	.9	9.9	4.2	13.5	7.2	7.1	5.2	1.4	.7	1.7	1.0
Other merchandise	8.7	1.1	6.1	1.7	1.0	.4	2.0	1.1	1.0	.7	2.6	1.4	1.7	1.0
Unspecified	107.0	13.1	19.1	5.2	45.1	19.3	21.2	11.3	8.2	6.1	24.5	12.8	23.5	13.4

[1] Because of rounding, components may not add to totals shown.

[2] Negligible.

TABLE 7.—*U.S.S.R.: Commodity composition of imports from Communist China, 1960–66*

[In millions of U.S. dollars and percent of total]

	1960		1961		1962		1963		1964		1965		1966	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Total imports [1]	848.1	100.0	551.4	100.0	516.3	100.0	413.0	100.0	314.2	100.0	225.6	100.0	143.1	100.0
Machinery and equipment	.7	.1	.3	.1	8.7	1.7	6.9	1.7	5.8	1.8	----	----	(2)	(2)
Fuels, lubricants, and related materials	2.6	.3	2.4	.4	2.7	.5	2.8	.7	2.7	.9	2.7	1.2	----	----
Coal and coke	2.6	.3	2.4	.4	2.7	.5	2.8	.7	2.7	.9	2.7	1.2	----	----
Ores and concentrates	61.2	7.2	48.3	8.8	35.3	6.8	25.9	6.3	13.2	4.2	11.6	5.1	5.8	4.1
Base metals and manufactures	61.7	7.3	42.9	7.8	32.5	6.3	23.4	5.7	13.7	4.4	1.4	.6	2.3	1.6
Ferrous metals	12.8	1.5	8.7	1.6	6.6	1.3	10.9	2.6	10.6	3.4	----	----	----	----
Nonferrous metals	48.9	5.8	34.2	6.2	25.9	5.0	12.5	3.0	3.1	1.0	1.4	.6	1.3	.9
Tin	34.8	4.1	22.4	4.1	17.5	3.4	8.7	2.1	2.3	.7	1.0	.4	1.0	.7
Chemicals	14.3	1.7	7.9	1.4	5.5	1.1	7.6	1.8	12.3	3.9	5.6	2.5	4.0	2.8
Wood and wood products	1.0	.1	.3	.1	.3	.1	.3	.1	.4	.1	.4	.2	----	----
Rubber and rubber products	11.6	1.4	3.4	.6	4.9	.9	3.5	.8	2.1	.7	4.4	2.0	2.1	1.5
Textile raw materials and semimanufactures	65.3	7.7	22.9	4.2	13.9	2.7	8.6	2.1	6.7	2.1	3.6	1.6	.5	.4
Cotton fiber	33.9	4.0	8.0	1.5	5.9	1.1	----	----	----	----	----	----	----	----
Wool fiber	19.4	2.3	10.4	1.9	7.9	1.5	8.1	2.0	6.2	2.0	3.1	1.4	----	----
Consumer goods	518.4	61.1	360.6	65.4	382.3	74.0	309.6	75.0	230.0	73.2	172.9	76.6	110.5	77.2
Food	127.9	15.1	17.4	3.2	38.1	7.4	21.9	5.3	51.9	16.5	78.2	34.7	58.7	41.0
Other consumer goods	390.5	46.0	343.2	62.2	344.2	66.7	287.7	69.7	178.1	56.7	94.7	42.0	51.8	36.2
Other merchandise	96.6	11.4	31.0	5.6	26.6	5.2	19.0	4.6	15.5	4.9	13.4	5.9	10.9	7.6
Unspecified	14.7	1.7	31.4	5.7	3.6	0.7	5.5	1.3	11.8	3.8	9.6	4.3	7.0	4.9

[1] Because of rounding, components may not add to totals shown.

[2] Negligible.

TABLE 8.—*U.S.S.R.: Commodity composition of exports to the Industrial West, 1960–66*

[In millions of U.S. dollars and percent of total]

	1960		1961		1962		1963		1964		1965		1966	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Total exports [1]	983.4	100.0	1,069.3	100.0	1,115.2	100.0	1,218.1	100.0	1,282.1	100.0	1,438.0	100.0	1,710.2	100.0
Fuels, lubricants, and related materials	253.3	25.7	286.3	26.8	327.3	29.3	371.2	30.5	401.8	31.3	390.6	27.2	464.6	27.2
Coal and coke	57.1	5.8	65.1	6.1	77.7	7.0	98.3	8.1	109.3	8.5	100.0	7.0	100.0	5.8
Petroleum and products	196.1	19.9	221.1	20.7	249.7	22.4	272.9	22.4	292.5	22.8	290.6	20.2	364.6	21.3
Ores and concentrates	33.1	3.4	31.4	2.9	25.1	2.2	25.6	2.1	28.2	2.2	37.4	2.6	45.7	2.7
Manganese ore	14.9	1.5	13.3	1.2	9.1	.8	7.7	.6	6.9	.5	8.3	.6	9.3	.5
Base metals and manufactures	112.3	11.4	120.5	11.3	120.7	10.8	113.3	9.3	189.5	14.8	202.5	14.1	245.8	14.4
Ferrous metals	72.0	7.3	81.5	7.6	85.4	7.7	80.8	6.6	114.5	8.9	120.1	8.4	124.6	7.3
Pig iron	34.7	3.5	40.6	3.8	46.0	4.1	41.5	3.4	48.1	3.8	51.0	3.6	60.6	3.5
Rolled ferrous metals	21.3	2.2	24.5	2.3	26.4	2.4	28.3	2.3	37.1	2.9	28.4	2.0	25.1	1.5
Nonferrous metals	40.3	4.1	39.0	3.6	35.3	3.2	32.5	2.7	75.0	5.8	82.4	5.7	121.3	7.1
Tin	13.1	1.3	1.8	.2										
Aluminum	7.3	.7	7.2	.7	15.6	1.4	14.6	1.2	26.0	2.0	31.0	2.2	40.4	2.4
Wood and wood products	158.4	16.1	178.0	16.6	202.1	18.1	211.1	17.3	272.6	21.3	291.5	20.3	297.8	17.4
Lumber	100.2	10.2	107.4	10.0	110.5	9.9	125.3	10.3	158.8	12.4	159.6	11.1	175.8	10.3
Textile raw materials and semimanufactures	70.4	7.2	52.1	4.9	52.6	4.7	48.4	4.0	45.8	3.6	75.4	5.2	102.0	6.0
Cotton fiber	50.3	5.1	34.7	3.2	32.0	2.9	29.7	2.4	31.4	2.4	58.9	4.1	79.6	4.1
Consumer goods	168.6	17.1	206.9	19.3	188.9	16.9	216.5	17.8	146.6	11.4	168.1	11.7	200.1	11.7
Food	117.8	12.0	158.5	14.8	134.5	12.0	138.1	11.3	71.9	5.6	90.5	6.3	111.7	6.5
Grain	85.3	8.7	128.2	12.0	94.0	8.4	70.4	5.8	16.3	1.3	19.6	1.4	3.3	.2
Other consumer goods	50.8	5.2	48.4	4.5	54.3	4.9	78.4	6.4	74.7	5.8	77.6	5.4	88.4	5.2
Furs and pelts	44.3	4.5	41.4	3.9	46.2	4.1	66.6	5.5	56.1	4.4	54.4	3.8	63.1	3.7
Other	187.3	19.0	194.1	18.1	198.5	17.8	232.0	19.0	197.6	15.4	272.5	18.9	354.2	20.7

[1] Because of rounding, components may not add to totals shown.

TABLE 9.—*U.S.S.R.: Commodity composition of imports from the Industrial West, 1960–66*

[In millions of U.S. dollars and percent of total]

	1960		1961		1962		1963		1964		1965		1966	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Total imports [1]	1,082.2	100.0	1,092.9	100.0	1,282.8	100.0	1,399.6	100.0	1,734.4	100.0	1,600.8	100.0	1,741.2	100.0
Machinery and equipment	464.8	42.9	469.8	43.0	601.8	46.9	588.6	42.0	621.0	35.8	510.0	31.9	560.2	32.2
Chemical equipment	135.4	12.5	131.9	12.1	87.8	6.8	124.1	8.9	113.2	6.5	110.5	6.9	147.4	8.5
Transportation equipment	119.5	11.0	68.1	6.2	150.1	11.7	163.4	11.7	256.2	14.8	196.0	12.2	193.9	11.1
Base metals and manufactures	302.0	27.9	241.9	22.1	295.4	23.0	187.9	13.4	73.6	4.2	115.7	7.2	90.7	5.2
Ferrous metals	250.9	23.2	192.9	17.6	242.8	18.9	137.5	9.8	63.9	3.7	105.3	6.6	80.4	4.6
Rolled ferrous metals	134.4	12.4	96.5	8.8	109.9	8.6	76.3	5.4	30.3	1.7	26.0	1.6	21.0	1.2
Pipes	101.9	9.4	80.7	7.4	119.6	9.3	48.9	3.5	29.5	1.7	70.7	4.4	49.9	2.9
Nonferrous metals	51.1	4.7	49.0	4.5	52.5	4.1	50.4	3.6	9.7	.6	9.7	6.2	10.3	.6
Copper	38.2	3.5	32.0	2.9	44.9	3.5	38.1	2.7	4.3	.2	----------		.4	Neg.
Wood and wood products	52.2	4.8	70.1	6.4	64.8	5.0	66.7	4.8	78.8	4.5	100.4	6.2	103.5	5.9
Textile raw materials and semimanufactures	73.2	6.8	83.8	7.7	77.8	6.1	88.5	6.3	75.7	4.4	89.3	5.6	102.5	5.9
Wool fiber	48.1	4.4	37.1	3.4	29.5	2.3	41.9	3.0	40.3	2.3	38.4	2.4	46.5	2.7
Synthetic fiber	12.9	1.2	28.7	2.6	30.7	2.4	45.4	3.2	26.3	1.5	29.7	1.8	24.0	1.4
Consumer goods	45.1	4.2	78.7	7.2	72.7	5.7	249.5	17.8	641.1	37.0	487.7	30.5	567.1	32.6
Wheat and wheat flour	----------		30.8	2.8	----------		187.4	13.4	543.1	31.3	366.4	22.9	413.2	23.7
Other	144.9	13.4	148.6	13.6	170.3	13.3	218.4	15.6	244.2	14.1	297.7	18.6	330.0	19.0

[1] Because of rounding, components may not add to totals shown.

TABLE 10.—*U.S.S.R.: Commodity composition of exports to the developing countries, 1960–66*

[In millions of U.S. dollars and percent of total]

	1960		1961		1962		1963		1964		1965		1966	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Total exports [1]	338.3	100.0	496.6	100.0	560.0	100.0	751.9	100.0	774.5	100.0	910.7	100.0	886.2	100.0
Machinery and equipment	125.4	37.1	236.0	47.5	285.9	51.1	357.0	47.5	462.6	59.7	471.1	51.7	425.6	48.0
Complete plants	68.6	20.3	138.8	27.9	182.5	32.6	220.9	29.4	297.2	38.3	284.1	29.7	244.6	27.6
Petroleum and products	53.1	15.7	60.3	12.1	56.4	10.1	73.8	9.8	90.8	11.7	131.6	13.1	120.9	13.6
Rolled ferrous metals	23.9	7.1	23.0	4.6	31.7	5.7	23.4	3.1	39.8	5.1	39.7	4.4	39.9	4.5
Wood and wood products	35.2	10.4	37.4	7.5	33.6	6.0	33.9	4.5	30.7	4.0	52.7	6.0	62.7	7.1
Food	41.3	12.2	47.3	9.5	68.7	12.3	97.3	12.9	45.9	5.9	63.4	7.2	73.0	8.2
Other	59.4	17.6	92.6	18.6	83.9	14.9	166.5	22.1	104.7	13.5	152.2	16.7	164.1	18.5

[1] Because of rounding, components may not add to totals shown.

TABLE 11.—*U.S.S.R.: Commodity composition of imports from the developing countries, 1960–66*

[In millions of U.S. dollars and percent of total]

	1960		1961		1962		1963		1964		1965		1966	
	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent	Value	Percent
Total imports [1]	564.4	100.0	579.1	100.0	604.4	100.0	664.6	100.0	653.8	100.0	845.2	100.0	903.3	100.0
Cotton fiber	139.4	24.7	122.0	21.1	112.4	18.6	158.8	23.9	117.4	18.0	161.7	19.1	141.1	15.6
Natural rubber	151.8	26.9	224.8	38.8	205.9	34.1	163.3	24.6	92.8	14.2	137.1	16.2	151.7	16.8
Food	112.8	20.0	94.0	16.2	130.8	21.6	155.4	23.4	215.8	33.0	286.9	33.9	304.0	33.7
Nonferrous metals	33.3	5.9	19.9	3.4	22.9	3.8	20.0	3.0	13.5	2.1	11.7	1.4	14.6	1.6
Other	127.1	22.5	118.4	20.4	132.4	21.9	167.1	25.1	214.7	32.8	247.8	29.3	291.9	32.3

[1] Because of rounding, components may not add to totals shown.

TABLE 12.—*Trends in total foreign trade turnover between the U.S.S.R. and selected Free-World countries, 1955 and 1958–66*

[In millions of U.S. dollars]

	1955	1958	1959	1960	1961	1962	1963	1964	1965	1966
Free world, total [1]	1,342.6	2,270.6	2,602.3	3,002.4	3,358.2	4,015.2	4,245.3	4,666.5	5,066.7	5,617.2
Industrial West	994.8	1,351.2	1,636.3	2,065.6	2,162.2	2,398.0	2,617.6	3,016.5	3,038.8	3,451.4
Finland	234.0	254.3	286.7	293.4	278.9	395.4	427.2	388.4	453.7	474.1
United Kingdom	240.2	218.4	256.6	300.6	355.0	330.4	344.9	341.8	443.1	498.9
West Germany	53.0	137.8	209.3	318.0	298.1	344.1	284.2	328.9	282.4	333.1
France	95.8	167.7	188.2	203.7	199.9	239.9	174.4	175.1	224.9	290.4
Italy	33.8	73.8	130.8	193.0	226.2	229.9	272.8	232.8	249.7	250.5
Sweden	45.6	58.3	86.0	99.6	103.2	129.6	133.8	143.1	109.3	115.1
Belgium	39.3	39.2	37.0	51.4	67.6	79.2	77.8	75.9	82.2	106.9
Canada	4.6	27.6	19.1	15.2	50.3	5.2	178.2	329.4	266.7	360.9
Japan	4.0	37.7	56.8	137.7	179.6	258.8	289.3	357.9	362.3	462.9
United States	24.3	30.8	43.4	84.6	75.0	44.4	52.7	183.2	99.1	110.0
Other	220.2	269.6	322.4	368.4	328.4	341.1	382.2	460.0	465.4	448.6
Less-Developed Countries	294.2	852.1	843.0	902.7	1,075.7	1,163.4	1,416.5	1,428.4	1,755.9	1,789.5
United Arab Republic (Egypt)	26.3	194.8	180.7	191.1	204.9	176.3	258.8	278.3	372.1	348.7
India	11.8	180.9	128.6	115.6	162.3	196.4	316.7	390.7	403.2	384.4
Malaysia	21.8	118.0	127.6	111.6	171.6	163.2	138.1	70.9	112.7	125.6
Afghanistan	24.4	35.8	43.9	48.9	59.1	64.8	64.4	70.1	71.8	92.1
Argentina	52.1	33.2	44.7	35.7	30.4	17.8	19.3	24.3	92.3	114.8
Iran	41.6	53.9	36.8	37.0	36.4	32.6	41.6	42.8	33.4	50.4
Indonesia	3.8	38.8	26.8	47.7	65.2	97.2	79.7	72.9	86.4	35.6
Other	112.4	196.7	253.9	313.1	345.8	416.1	497.9	478.9	554.0	637.9
Unspecified	53.6	103.3	123.0	34.1	120.3	452.8	211.1	221.6	272.0	376.3

[1] Because of rounding, components may not add to totals shown.

XIII. THE ECONOMIES OF EASTERN EUROPE

Economic Growth

1. The economies of Eastern Europe [1] grew at an impressive average rate of 5 percent per year in both 1966 and 1967. The two most advanced countries—Czechoslovakia and East Germany—continued their recovery from the slump of the early 1960's, with average rates of growth of about 4 percent. Bulgaria and Rumania, the least advanced, also increased the pace of growth, with increases averaging 7–8 percent for the 2 years. Hungary and Poland maintained growth rates of about 4–5 percent, the average for 1961–65.

AGRICULTURE

2. Excellent harvests in 1966 and 1967 contributed substantially to the good economic performance, especially in Bulgaria and Rumania. The net agricultural output of the area rose by 9 percent in 1966, more than the total increase achieved over the entire period 1961–65. Output in 1967 was at or slightly above the 1966 level. The excellent harvests are the result of generally favorable weather, the introduction of improved varieties of grain, especially in Bulgaria and Rumania, further increases in the use of fertilizers and pesticides, and substantial increases in agricultural procurement prices. Gains in livestock output have been greater than those for crops, particularly in the more industrialized countries. As a result, Poland, Czechoslovakia, and East Germany must import substantial amounts of grain to support their livestock industries. Of the grains, wheat has shown the largest increase in output over the past few years, most notably in Bulgaria and Rumania, both of which were net exporters in 1966–67.

INDUSTRY

3. Increases in industrial output during 1966 and 1967 were quite rapid, ranging from about 5 percent in the more advanced countries to 11–12 percent in Bulgaria and Rumania, the least advanced countries. The fastest growing sectors were oil refining, chemicals, and the engineering industries. The growth reflects generally high rates of investment and, in Czechoslovakia and East Germany, a fuller use of existing capacity. In Bulgaria, Poland, and Rumania, it also reflects substantial increases in employment.

4. Despite high rates of growth, stiffening consumer resistance, both at home and abroad, is becoming a serious problem. Symptoms of this consumer resistance are the rapid accumulation of inventories, a lag in retail sales of soft goods, and a leveling-off in exports to the

[1] The text and accompanying tables refer to six countries: Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Rumania. Excluded are Albania and Yugoslavia, each of which has an economic and political orientation quite different from that of the six countries listed.

West. Poor quality and mix of products are the main reasons for consumer resistance at home. On foreign markets, slow deliveries and failure to provide credits and follow-up service are additional causes. The problem is most acute in Czechoslovakia, where inventories have risen sharply with industrial recovery—by about 6 percent in 1966 and 10 percent in 1967. Consumer resistance is also serious in Poland. In East Germany and Hungary, the problem is chronic but not critical, while in Bulgaria and Rumania, it is not yet serious, both because the people are less demanding and because the economies depend less heavily on exports of finished goods. The need to make producers more responsive to demand is a compelling reason for economic reform in all these countries, and varying programs of reform have been initiated in all of them. The pressure to increase output, however remains so strong that producers continue to turn out large quantities of unsaleable goods.

Foreign Trade

5. According to preliminary figures, Eastern Europe's trade with the Communist world, which makes up nearly two-thirds of its total trade, grew more rapidly in 1967 than did its trade with the West. This was counter to the trend of the past decade. Imports from the West in 1967 increased by about 4 percent. Rumanian imports increased at least 40 percent and Hungarian imports by nearly 8 percent, but decreases in imports by Czechoslovakia, East Germany, and Bulgaria largely offset these increases. There was little change for Poland. Exports to the West probably rose by about 5 percent.

6. The recent leveling off of Eastern Europe's imports from the West, which had grown very rapidly since the mid-1950's, is largely due to balance-of-payments considerations—most of the Eastern European countries are reluctant to raise further their indebtedness to Western Europe. The expansion of this trade has rested heavily on Eastern European exports of agricultural products, foodstuffs, and basic manufactures. All the Eastern European countries hope to switch to highly processed manufactures. But even Czechoslovakia and East Germany have had little success in developing a large-scale market for machinery and consumer goods. In the final analysis, the prospects for increased trade depend a great deal on the development of closer political and economic relations with the West.

7. Trade with the U.S.S.R., which represents about one-third of their total trade, remains a great stabilizing element in the economies of Eastern Europe. All the countries but Rumania depend largely on the U.S.S.R. for crude oil, and the U.S.S.R. supplies much of the area's necessary net imports of ferrous and nonferrous metals, coal, timber, textile fibers, and grain. The Soviet Government, even while pressing for changes in the composition and terms of trade, has continued to meet and increase its commitments to the area, except perhaps to Rumania.

Notes to Tables on the Economies of Eastern Europe

The dollar values of gross national product and the indexes of industrial and agricultural production presented in these tables are not official figures published by the Eastern European Communist countries. Rather they are estimates based on Western concepts and procedures, with the objectives of making them as nearly comparable as possible to the indexes published by Western countries. Each of these measures of economic performance is discussed briefly below.

A. Gross National Product

The dollar values of gross national product, which are given at market prices, are extensions and revisions of series presented in an earlier study (see Joint Economic Committee, *New Directions in the Soviet Economy*, 1966, vol. IV, p. 873–916). These dollar values were obtained via direct comparisons between the Eastern European Communist countries and West Germany. First, the estimates of GNP at domestic prices were converted to deutschmarks by means of estimated purchasing power ratios for individual components of GNP. Then, the estimates in deutschmarks were converted into dollars by using the geometric mean of the two sets of dollar values in purchasing power equivalents for 1955 as estimated for OEEC (Milton Gilbert and Associates, *Comparative National Products and Price Levels*, Paris, 1958). Finally, the dollar values were converted to 1967 prices by means of the U.S. official deflator for GNP.

B. Indexes of Industrial Production

These indexes, which include manufacturing, mining, and the generation of electric power, are intended to approximate a value-added index such as that of the Federal Reserve Board for the United States. Because information for constructing value-added weights is available only for major branches of industry, the indexes were constructed in two stages. First, data on the physical output of commodities produced within the branches of industry were weighted by their respective prices; and then, the resulting branch indexes were aggregated with value-added weights. The output data are reported in or derived from official statistics of the Eastern European Communist countries.

C. Indexes of Agricultural Production

The indexes, which are for net agricultural production, were calculated from physical output data on crops and livestock commodities using the 1952–56 average of FAO Western European regional prices as weights. For crops, the output data are gross production less feed, seed, and waste; for livestock commodities, the output data include changes in livestock numbers. These output data are reported in or derived from official statistics of the Eastern European Communist countries.

Table 1.—*Eastern Europe: Gross national product, 1960–67* [1]

[In billions of 1967 U.S. dollars]

	1960	1961	1962	1963	1964	1965	1966	1967 [2]
Eastern Europe	97.7	103.2	105.3	108.4	113.7	118.7	125.1	130.9
Bulgaria	5.3	5.6	6.1	6.5	6.9	7.2	7.8	8.4
Czechoslovakia	21.8	22.7	23.1	22.7	23.0	23.4	24.5	25.5
East Germany	24.0	24.8	25.5	26.0	27.1	28.1	29.1	30.5
Hungary	9.5	9.8	10.5	11.0	11.7	11.7	12.4	12.9
Poland	25.3	27.6	27.3	28.9	30.5	32.6	34.2	35.5
Rumania	11.8	12.7	12.8	13.3	14.5	15.7	17.1	18.1

[1] GNP is given at market prices and is converted to dollars at U.S. purchasing power equivalents.
[2] Preliminary.

Table 2.—*Eastern Europe: Population, 1960–67* [1]

[Million persons at midyear]

	1960	1961	1962	1963	1964	1965	1966	1967 [2]
Eastern Europe	96.5	97.2	97.8	98.6	99.4	100.1	100.6	101.2
Bulgaria	7.9	7.9	8.0	8.1	8.1	8.2	8.3	8.3
Czechoslovakia	13.7	13.8	13.9	14.0	14.1	14.2	14.2	14.3
East Germany	17.0	16.9	16.9	16.9	17.0	17.0	17.1	17.1
Hungary	10.0	10.0	10.1	10.1	10.1	10.1	10.2	10.2
Poland	29.6	30.0	30.3	30.7	31.2	31.5	31.7	32.0
Rumania	18.4	18.6	18.7	18.8	18.9	19.0	19.1	19.3

[1] *Source:* U.S. Bureau of the Census.
[2] Preliminary.

TABLE 3.—*Eastern Europe: Economically active population, 1960–67* [1]

[Million persons at midyear]

	1960	1961	1962	1963	1964	1965	1966	1967 [3]
Total: Eastern Europe [2]	49.13	49.29	49.60	50.04	50.56	51.05	51.58	52.12
Bulgaria	4.27	4.31	4.34	4.38	4.42	4.46	4.51	4.56
Czechoslovakia	6.38	6.44	6.51	6.58	6.64	6.71	6.77	6.80
East Germany	8.55	8.42	8.34	8.33	8.34	8.34	8.33	8.32
Hungary	4.89	4.90	4.93	4.96	4.98	5.02	5.05	5.09
Poland	14.22	14.34	14.51	14.73	15.01	15.23	15.53	15.86
Rumania	10.82	10.88	10.97	11.06	11.17	11.29	11.39	11.49
Agricultural: Eastern Europe	21.27	20.85	20.43	20.05	19.98	19.72	19.50	19.24
Bulgaria	2.31	2.29	2.28	2.22	2.20	2.13	2.10	2.08
Czechoslovakia	1.67	1.57	1.52	1.47	1.42	1.37	1.31	1.25
East Germany	1.43	1.41	1.42	1.42	1.42	1.42	1.40	1.39
Hungary	1.84	1.76	1.70	1.60	1.53	1.53	1.51	1.49
Poland	6.61	6.57	6.40	6.30	6.41	6.26	6.23	6.18
Rumania	7.41	7.25	7.11	7.04	7.00	7.01	6.95	6.85
Nonagricultural: Eastern Europe	27.87	28.44	29.19	30.02	30.60	31.33	32.07	32.83
Bulgaria	1.96	2.02	2.07	2.17	2.22	2.33	2.41	2.48
Czechoslovakia	4.72	4.87	4.99	5.11	5.22	5.34	5.45	5.50
East Germany	7.12	7.01	6.92	6.92	6.92	6.92	6.93	6.93
Hungary	3.05	3.14	3.23	3.35	3.46	3.49	3.54	3.60
Poland	7.61	7.77	8.12	8.44	8.59	8.97	9.30	9.68
Rumania	3.41	3.63	3.86	4.03	4.19	4.28	4.44	4.64

[1] *Source:* U.S. Bureau of the Census. Because of rounding, component may not add to the totals shown.
[2] Data include the armed forces and the unemployed.
[3] Preliminary.

TABLE 4.—*Eastern Europe: Indexes of industrial production, 1960–67* [1]

[1960=100]

	1960	1961	1962	1963	1964	1965	1966	1967 [2]
Eastern Europe	100	108	115	119	128	136	145	156
Bulgaria	100	109	122	133	145	162	179	200
Czechoslovakia	100	106	111	108	110	116	122	129
East Germany	100	104	109	113	117	122	126	134
Hungary	100	110	119	127	138	144	152	163
Poland	100	110	118	125	137	151	161	173
Rumania	100	113	125	136	156	171	190	214

[1] The indexes, which include manufacturing, mining and the generation of electric power, are calculated from officially reported data on the production of individual commodities using estimated value-added weights.
[2] Preliminary.

TABLE 5.—*Eastern Europe: Production of selected basic commodities, 1966* [1]

	Bulgaria	Czecho-slovakia	East Germany	Hungary	Poland	Rumania
Electric power (million kilowatt-hours)	11,757	36,528	56,866	11,861	47,385	20,806
Coal (million metric tons of standard fuel [2])	8	55	80	14	112	5
Crude oil (thousand metric tons)	404	190	[3] 60	1,706	400	12,825
Oil products (thousand metric tons)	[3] 2,214	2,499	[4] 4,332	4,256	5,622	11,955
Cement (thousand metric tons)	2,851	6,130	6,450	2,601	10,040	5,886
Pig iron (thousand metric tons)	[5] 903	6,269	2,448	1,633	5,855	2,198
Steel (thousand metric tons)	699	9,128	4,085	2,649	9,850	3,670

[1] *Source:* Official statistics of the Eastern European Communist countries.
[2] 7,000 kilocalories per kilogram.
[3] Data are for the year 1965.
[4] Gasoline and diesel fuel only.
[5] Includes ferro-alloys.

TABLE 6.—*Eastern Europe: Production of selected manufactured products, 1966* [1]

	Bulgaria	Czecho-slovakia	East Germany	Hungary	Poland	Rumania
Automotive vehicles (thousand units)	(2)	113	127	8	67	27
Tractors (thousand units)	[3] 3	28	12	3	26	18
Rolling stock (freight) (thousand units)	2	6	4	1	17	8
Metal-cutting machinery (thousand units)	8	24	16	10	33	9
Antifriction bearings (million units)	(2)	45	43	(2)	38	15
Chemical fertilizer (thousand tons)	[4] 273	512	598	1,829	826	419
Refrigerators (home) (thousand units)	47	279	360	114	335	140
Sewing machines (home) (thousand units)	(2)	77	195	[5]	135	66
Cotton and cotton-like fabrics (million linear meters)	299	494	[6] 352	[6] 324	845	[6] 339
Leather shoes (million pairs)	[7] 12	51	29	27	53	32

[1] *Source;* Official statistics of the Eastern European Communist countries.
[2] Not available.
[3] Data are for the year 1965.
[4] Nitrogen fertilizer only; data on phosphatic fertilizer are not available for 1966. In 1965 phosphatic fertilizer production was 94,000 metric tons.
[5] Negligible.
[6] Million square meters.
[7] Includes footwear made of rubber and synthetic material. In 1965, 51 percent were leather

TABLE 7.—*Eastern Europe: Indexes of agricultural production, 1960–67* [1]

[1960=100]

	1960	1961	1962	1963	1964	1965	1966	1967 [2]
Eastern Europe	100	102	97	99	104	106	116	116
Bulgaria	100	100	107	104	118	119	138	139
Czechoslovakia	100	100	96	96	99	98	108	111
East Germany	100	91	85	93	96	105	108	112
Hungary	100	103	94	107	105	97	110	110
Poland	100	106	100	99	105	107	114	113
Rumania	100	108	101	102	109	113	130	127

[1] The indexes are calaculated from data on the gross production of crops minus seed, waste, and feed (including imported grain) and data on the production of livestock products (including changes in livestock numbers) using FAO Western European regional prices (1952–56 average) as weights.
[2] Preliminary.

TABLE 8.—*Eastern Europe: Production of selected crops and livestock products, 1966* [1]

[In thousands of metric tons]

	Eastern Europe	Bulgaria	Czecho-slovakia	Hungary	Poland	Rumania	East Germany
Crops:							
Grain, total [2]	55,836	6,691	5,867	7,360	16,102	13,899	5,917
Of which:							
Wheat	17,864	3,193	2,247	2,192	3,646	5,065	1,521
Rye	10,607	56	790	242	7,777	100	1,642
Barley	7,014	1,064	1,608	916	1,418	483	1,525
Corn	14,627	2,207	476	3,907	13	8,022	2
Potatoes	71,626	421	5,846	2,433	46,751	3,352	12,823
Vegetables	10,406	1,300	947	950	4,110	2,176	923
Sugar beets	38,459	2,528	7,762	3,570	13,620	4,368	6,611
Oilseeds	2,048	423	84	102	476	742	221
Tobacco	248	125	8	20	48	40	7
Livestock products:							
Meat, live wt. [3]	7,845	618	1,123	888	2,625	1,021	1,570
Milk, cows	30,755	1,111	4,170	1,851	14,221	2,674	6,728
Wool	79	25	2	10	8	26	8
Eggs (million units)	19,899	1,490	3,080	2,436	6,185	2,814	3,894

[1] *Source:* Official statistics of the Eastern European Communist countries.
[2] Except for Czechoslovakia and Hungary, the Eastern European Communist countries do not make deductions for dockage and moisture in grain production data.
[3] Excludes poultry and game.

TABLE 9.—*Eastern Europe: Foreign Trade, 1960–67* [1]

[In millions of U.S. dollars]

	1960	1961	1962	1963	1964	1965	1966	1967 [2]
Exports:								
Bulgaria	571.5	662.6	772.6	834.0	979.7	1,175.8	1,305.0	1,480.0
Czechoslovakia	1,929.4	2,046.2	2,193.5	2,461.5	2,575.7	2,688.5	2,745.0	2,860.0
East Germany	2,207.3	2,281.4	2,378.0	2,713.0	2,931.5	3,069.7	3,204.9	3,460.0
Hungary	873.9	1,028.9	1,099.3	1,205.7	1,351.8	1,509.5	1,593.3	1,700.0
Poland	1,325.5	1,503.6	1,646.1	1,770.0	2,096.4	2,227.8	2,272.1	2,530.0
Rumania	717.0	792.5	818.0	915.0	1,000.1	1,101.5	1,186.2	1,400.0
Imports:								
Bulgaria	632.6	666.0	784.7	933.2	1,062.4	1,177.7	1,478.3	1,570.0
Czechoslovakia	1,815.6	2,023.6	2,070.0	2,160.3	2,429.0	2,672.5	2,736.0	2,680.0
East Germany	2,194.4	2,250.6	2,407.4	2,330.5	2,633.6	2,809.6	3,215.0	3,210.0
Hungary	975.8	1,025.5	1,148.7	1,305.5	1,494.5	1,520.3	1,565.5	1,780.0
Poland	1,495.0	1,686.7	1,885.4	1,979.0	2,072.2	2,340.3	2,494.0	2,640.0
Rumania	647.8	814.7	941.1	1,022.0	1,168.1	1,077.1	1,213.2	1,550.0

[1] *Source:* Official Statistics of the Eastern European Communist Countries.
[2] Preliminary.

TABLE 10.—*Eastern Europe: Geographical distribution of foreign trade, 1966* [1]

[In millions of U.S. dollars]

	Bulgaria	Czechoslovakia	East Germany	Hungary	Poland	Rumania
Total exports	1,305.0	2,745.0	3,204.9	1,593.3	2,272.1	1,186.2
Communist countries	997.0	1,928.2	2,385.9	1,088.9	[2] 1,400.2	735.4
U.S.S.R.	663.6	920.4	1,276.5	526.8	741.2	409.8
Communist China	1.8	22.2	36.2	15.6	29.6	34.1
Other	331.7	985.5	1,073.3	546.5	628.1	291.4
Free world	308.0	816.8	819.0	504.4	872.0	450.8
Developed countries	[3] 218.1	493.5	569.5	378.5	663.2	337.2
Less developed countries	[3] 89.9	323.3	249.5	125.9	208.8	113.6
Total imports	1,478.3	2,736.0	3,215.0	1,565.5	2,494.0	1,213.2
Communist countries	1,027.9	1,923.2	2,306.7	1,015.7	[2] 1,603.8	694.2
U.S.S.R.	706.5	914.6	1,384.5	517.3	791.7	394.1
Communist China	1.8	23.8	31.8	16.2	22.7	31.7
Other	319.6	984.8	890.4	482.2	789.2	268.5
Free world	450.3	812.8	908.3	549.8	890.2	519.0
Developed countries	[3] 382.8	560.9	696.0	399.1	678.9	446.3
Less developed countries	[3] 67.5	251.9	212.3	150.7	211.3	72.7

[1] *Sources;* Official statistics of the Eastern Communist countries. Because of rounding components may not add to the totals shown.
[2] The data for the individual Communist countries add to less than the total given. The data are presented here as they appear in the sources.
[3] Preliminary.

TABLE 11.—*Eastern Europe: Commodity composition of foreign trade, 1966* [1]

[In millions of U.S. dollars]

	Bulgaria [2]	Czechoslovakia	East Germany [3]	Hungary	Poland	Rumania
Total exports	1,305.0	2,745.0	3,069.7	1,593.3	2,272.1	1,186.2
Machinery and equipment	328.9	1,364.3	1,458.1	497.9	802.2	205.8
Fuels, raw materials, and other materials	296.2	809.0	890.2	391.9	778.6	564.5
Foodstuffs [4]	490.7	106.1	92.1	344.8	376.6	280.7
Consumer goods [5]	189.2	465.6	629.3	358.6	314.7	135.2
Total imports	1,478.3	2,736.0	2,809.6	1,565.5	2,494.0	1,213.2
Machinery and equipment	697.8	886.1	421.5	445.4	874.7	497.1
Fuels, raw materials, and other materials	625.3	1,243.6	1,727.9	901.4	1,177.8	589.4
Foodstuffs [4]	87.2	446.9	576.0	128.4	287.8	37.8
Consumer goods [5]	68.0	159.3	84.3	90.2	153.7	88.8

[1] *Source:* Official statistics of the Eastern European Communist countries. Because of rounding components may not add to the totals shown.
[2] Estimated.
[3] Data are for 1965.
[4] Including raw and semimanufactured foodstuffs.
[5] Excluding foodstuffs.

XIV. ECONOMIC AID TO THE LESS DEVELOPED COUNTRIES

Rationale of Soviet Aid

1. The program of economic assistance maintained by the U.S.S.R. for the benefit of the less developed countries outside the Communist camp is designed, most immediately, to strengthen its influence in the recipient countries and, in the long run, to replace the Western presence in the newly developing region. The content of this assistance program is planned specifically to weaken the historic economic and commercial links of emerging nations with the West by providing an alternative source of capital and technology and by establishing more active commodity exchange with these countries.

Soviet economic assistance, which by 1967 had become an integral part of the foreign policy of the state, has gradually evolved into a sophisticated program of economic penetration with economic and political objectives that are generally recognized to be longrun in character. In pursuing these objectives the U.S.S.R. has become perceptibly more cautious and selective in the determination of its financial and technical assistance and has given greater weight to economic criteria. During the past few years, in particular, the aid program has been geared increasingly to a realistic appraisal of the return on the Soviet investment and, therefore, to the more effective allocation of aid resources. Since 1965 the U.S.S.R. has chosen to conduct extensive cost and feasibility studies before making definite aid commitments. It has also extended a larger percentage of trade-oriented "commercial credits" that are primarily for machinery and equipment rather than for complete plants; this approach tends to reduce Soviet responsibility for project implementation and to minimize the subsidy element of the aid undertaking in question.

Magnitude and Character of Soviet Economic Aid in 1966 and 1967

2. By the end of 1967 the U.S.S.R. had extended a total of almost $6 billion of economic aid to 36 less developed countries (see table 1)[1] Approximately three-fourths of this aid, or about $4.5 billion, was extended to the countries of the Near East and South Asia, of which more than $3 billion was committed to three countries—India, the United Arab Republic (UAR), and Afghanistan. Annual extensions of Soviet economic assistance have fluctuated widely, usually reflecting the availability of opportunities to extend aid and particularly opportunities to participate in the periodic development plans of less devel-

[1] In addition, $4 to $4.5 billion of military aid has been extended.

oped countries. Aid extensions rose from less than $10 million in 1954 to $850 million in 1959 and to a record level in 1966 of $1.2 billion. In 1967, however, new aid undertakings fell to about $70 million, the lowest level since 1962.

3. The sharp decline in 1967 probably does not portend a reversal of Soviet aid policy. More likely, it reflects the Soviet desire to reduce the backlog of $3.9 billion in unexpended credits that existed at the end of 1966 as well as the reduced opportunities following three years of record high extensions in 1964–66. Soviet credits of $55 million to Chile constitute the only major Soviet aid undertaking during 1967 and account for 80 percent of the total aid extended. This commitment is part of Moscow's recently intensified effort to expand trade and aid activities in Latin America. In 1966 the U.S.S.R. had extended $85 million of aid to Brazil, its first large credit to that country, and was reported to have offered almost $200 million of aid to Latin American countries in 1967 that was not accepted. Recent Soviet overtures to Latin America apparently have coincided with the increased interest of some Latin American countries in extending their markets beyond traditional trading patterns.

4. More than one-half of the $1.2 billion of Soviet aid extended in 1966 was committed to the development programs of India and Pakistan; an additional 35 percent was extended to Syria and Iran; and the remainder was distributed among eight countries. Moscow's most significant aid undertaking during 1966 probably was its $289 million commitment to Iran, a CENTO country that previously had had only limited state-to-state relations with the U.S.S.R.

5. A larger share of new aid commitments in 1966 and 1967 was in the form of "commercial credits" (trade credits), which usually are for the purchase of individual pieces of machinery and equipment, rather than for complete plants or other project-related facilities. Trade credits allow 5 to 10 years for repayment, carry 2.5 to 4 percent interest and often require downpayments of as much as 20 percent. Prior to 1966 the overwhelming proportion of all Soviet aid—possibly as much as 90 percent—was extended as "State credits" that call for repayment over a 12- to 15-year period and carry 2.5 to 3 percent interest. Some $375 million of "commercial credits" were extended in 1966, or 30 percent of total Soviet aid commitments in that year (see table 2). In 1967, "commercial credits" comprised an even larger share of the total. While trade credits reduce Soviet involvement in project activity and require fewer Soviet technicians, the U.S.S.R. is willing to extend these credits to expand its markets and strengthen its economic ties with less developed countries. Because the credits limit the Soviet presence, some countries that might otherwise be reluctant to accept Soviet aid may be willing to accept trade credits.

The Implementation Record

6. Recent shifts toward a more judicious allocation of aid resources and the attempt to reduce Soviet responsibility for project implementation reflect, in part, Moscow's concern over the poor record of aid deliveries in the past. By the end of 1967, approximately $2.4 billion, or 40 percent of the total aid extended since 1954, had been drawn (see table 3). Afghanistan, India and the United Arab Republic, the three largest aid recipients, continued to account for about 70

percent of the deliveries. Annual drawings on Soviet aid had risen over the years to a peak of about $370 million in 1964 and then declined in 1965 to about $340 million. Drawings fell again in 1966, when only about $300 million of aid was delivered. Although deliveries to the United Arab Republic in 1967 for the Aswan Dam and the Soviet land reclamation program are believed to have increased Egyptian drawings, these increases were probably canceled out by the vastly reduced deliveries to India. Thus, the level of drawings in 1967 is estimated as approximately equal to 1966.

7. The slow drawdown of Soviet aid also is typical of most other aid programs in less developed countries. It is a concomitant of unstable political environments, the dearth of local resources—capital and technical skills—and, in some cases, large military budgets that divert resources from economic development. Most of the less developed countries are unable to provide the local currency needed to finance their share of Soviet-aided projects. Although the U.S.S.R. has been reluctant to assume the full burden of local costs, it has extended about 5 percent of its total aid in the form of commodities so as to raise local currency for this purpose. It has made a greater effort, however, to fill the gap of trained personnel.

8. Recognizing that shortages of technical skills and trained administrative and managerial personnel would obstruct the effective implementation of its aid commitments, the Soviet Union has provided less developed countries with technical services since the beginning of its aid program. Most of the personnel have been concentrated in countries where Soviet aid projects are underway. In African countries, however, a large number of nonproject personnel have served as doctors, teachers, advisers, and planners. During 1966 almost 12,000 Soviet technicians were present in the developing countries. About one-third of these were in Afghanistan, India, and the United Arab Republic, which together account for almost 55 percent of total Soviet aid extensions and approximately 70 percent of total aid drawn. The number of Soviet technicians present in the less developed countries during 1967 was probably somewhat smaller than in 1966 because of the reduced requirements for them on projects that were nearing completion, such as the Aswan Dam. Some 120,000 persons from the developing countries also have received on-the-job training and an additional 20,000 have gone to the U.S.S.R. for technical and engineering training.

Repayments of Economic Aid

9. With the exception of outright grants, estimated to total $130 to $150 million, all of the drawings on Soviet aid have contractually fixed, debt-servicing obligations. As the cumulative deliveries of goods and services under long term credits have expanded, the magnitude of interest and amortization payments required of the less developed countries also has increased. During the first 14 years of the Soviet aid program (1954–67) the less developed countries had incurred debts of about $2.2 billion, which obligated them to make repayments to the U.S.S.R. of almost $700 million by the end of 1967 (see table 4). Of this total, about 75 percent was for amortization and the remainder for interest. Scheduled repayments of interest and principal are

estimated to have risen from $10 million in 1959 to $145 million in 1966 and $175 million in 1967.

10. Total scheduled repayments for Soviet aid deliveries to the less developed countries have equaled almost 30 percent of total cumulated deliveries to these countries since the inception of the program in 1954. Because of the growing level of annual repayments and the leveling off of aid deliveries in recent years, the net outflow [2] of resources under the Soviet economic assistance program has actually declined. From about $70 million in 1957 the net outflow from the U.S.S.R. rose to approximately $290 million in 1964 and then declined to about $155 million in 1966 and $125 million in 1967. The reduction in the net aid flow has had repercussions on a number of aid recipients, whose repayment obligations have begun to preempt an increasing share of exports that are potential foreign exchange earners before the productivity of new projects has expanded sufficiently to meet even the interest payments.

11. For the U.S.S.R., on the other hand, assuming that most of the scheduled repayments are being made, the reverse is true. In spite of a 70 percent increase in annual deliveries between 1961 and 1967, the net outflow was reduced by almost 15 percent in 1967. In relation to Soviet GNP, the net drain of the economic aid program on Soviet resources was negligible, less than 1 percent in 1966 and 1967.

TABLE 1.—*U.S.S.R.: Economic credits and grants extended to less developed countries, 1954–67* [1]

[In millions of current U.S. dollars]

	1954–67 [2]	1967	1966
Total	5,989	69	1,244
Africa	858	9	77
Algeria	232	.....	1
Cameroon	8	.....	.....
Congo (Brazzaville)	9	.....	.....
Ethiopia	102	.....	.....
Ghana	89	.....	.....
Guinea	73	.....	3
Kenya	44	.....	.....
Mali	55	.....	.....
Mauritania	3	3	.....
Morocco	44	.....	44
Senegal	7	.....	.....
Sierra Leone	28	.....	.....
Somalia	66	.....	9
Sudan	22	.....	.....
Tanzania	20	.....	20
Tunisia	34	.....	.....
Uganda	16	.....	.....
Zambia	6	6	.....
Far East	411	0	4
Burma	14	.....	.....
Far East—Continued			
Cambodia	25	.....	4
Indonesia	372	.....	.....
Latin America	185	55	85
Argentina	45	.....	.....
Brazil	85	.....	85
Chile	55	55	.....
Near East and South Asia	4,535	5	1,078
Afghanistan	570	5	1
Ceylon	30	.....	.....
Greece	84	.....	.....
India	1,593	.....	571
Iran	330	.....	289
Iraq	184	.....	.....
Nepal	20	.....	.....
Pakistan	178	.....	84
Syria	233	.....	133
Turkey	210	.....	.....
United Arab Republic	1,011	.....	.....
Yemen	92	.....	.....

[1] Data for 1967 are preliminary. Data for all years from U.S. Department of State, Bureau of Intelligence and Research annual publication on Communist Aid and Trade (to be published in June 1968).
[2] Cumulative.

[2] Net outflow measures the difference in the value of aid delivered and repayments, including principal and interest.

TABLE 2.—*U.S.S.R.; Trade credits, extensions and terms, 1966–67* [1]

[Dollar amounts in millions of current U.S. dollars]

	1966			1967		
	Amount extended	Repayment terms		Amount extended	Repayment terms	
		Number of years	Interest rate		Number of years	Interest rate
Afghanistan	0			5	5	3
Brazil	[2] 85	8	4	0		
Chile	0			[2] 13	8	3-3.5
				[3] 42	8-12	3-3.5
India	222	[4]	[4]	0		
Morocco	[2] 8	8	3	0		
Pakistan	[2] 63	10	2.5	0		

[1] The U.S.S.R. calls these commercial credits, because they allow a shorter repayment period and often require a higher rate of interest than traditional Soviet "State credits."
[2] Net of downpayment.
[3] At least part of these credits—those for which the repayment period is less than 12 years and the interest rate exceeds 3 percent—are classified as trade credits.
[4] Not available.

TABLE 3.—*U.S.S.R.: Economic credits and grants to less-developed countries, extended and drawn, cumulative, 1954–67*

[Dollar amounts in millions of current U.S. dollars]

End of year	Extended	Drawn	Percentage drawn [1]
1958	$1,011	$210	
1959	1,866	297	29
1960	2,460	383	20
1961	3,007	557	23
1962	3,060	785	26
1963	3,296	1,061	35
1964	4,036	1,433	43
1965	4,676	1,772	44
1966	5,920	2,072	44
1967	5,989	2,372	40

[1] The ratio of cumulative drawings at year's end to cumulative extensions at the beginning of the year. This is thought to be the most appropriate method of computing the percentage since large outlays on project undertakings could not be expected in the year that aid is extended.

TABLE 4.—*U.S.S.R.: Outflows of economic aid to the less developed countries, 1954–67*

[In millions of current U.S. dollars]

	Deliveries of economic aid [1]	Estimated scheduled repayments, principal and interest [2]	Net outflow [3]
Total	2,372	680	1,692
1954–57 (cumulative)	70		70
1958	140		140
1959	87	10	77
1960	86	25	61
1961	174	30	144
1962	228	40	188
1963	276	60	216
1964	372	85	287
1965	339	110	229
1966	300	145	155
1967 [4]	300	175	125

[1] Derived from annual issues of Ministry of Foreign Trade USSR, *Vneshnyaya Torgovlya SSSR* (International Relations Publishing House, Moscow). Export of equipment and material for complete plants (listed under Category 16 in *Vneshnyaya Torgovlya SSSR*) is estimated to comprise 80 percent of total drawings. The remaining 20 percent includes: technical services that are not included under Category 16; machinery and equipment other than complete plants; grant aid not included in Soviet export figures; and commodities exported to the less developed countries to generate local currency for Soviet-aided projects
[2] Excludes grant aid estimated at a minimum of $130 million.
[3] Includes grant aid.
[4] Estimated.

XV. SUPPLEMENTARY PAPERS

A

AN APPRAISAL OF THE SOVIET ECONOMIC REFORM

At the September 1965 plenum of the CPSU Central Committee, Premier Kosygin outlined a new system of planning, management, and incentives to be adopted throughout most of the Soviet economy—by industry, construction, transportation, communications, and, in a modified variant, by the state farms. The first group of industrial enterprises went over to the new system in January 1966 and the bulk of industry is scheduled to be transferred by the end of 1968. By 1970, the entire economy, apart from the collective farm and private sectors, should have been converted.

The background to these reforms, their limited scope, and their initial implementation, have been fully described and analyzed elsewhere;[1] the purpose of this paper is to survey the degree of their implementation as at the beginning of 1968 and to assess their effect upon the operation of the enterprises concerned. Soviet reporting of the reforms ranges from the "one-sided reporting of general well-being" [2] to catalogs of minor woes retailed by enterprise directors and their executives to the popular press. Nevertheless, at the same time a frank debate has been carried by the low-circulation specialist journals and the latter have provided the bulk of sources for this appraisal. At the time of writing, detailed results are to hand only for the first year of the reforms' implementation and even these contain significant lacunae.

PROGRESS AND PERFORMANCE

By the end of 1966, 704 enterprises employing 10 percent of the industrial work force and accounting for 12 percent of industrial production had been transferred to the new system.[3] At the end of the second year, 1967, the figure had grown to some 7,000 enterprises: these turned out approximately 40 percent of total industrial production and generated about half of all industrial profits;[4] by the end of March 1968, some 10,000 enterprises had been converted, accounting for half of the gross industrial product.[4a] Since there are about 45,000 industrial enterprises,[5] it may be seen that the first enterprises to be converted were generally above the average in size and output.

[1] See Abram Bergson, "The Current Soviet Planning Reforms," in A. Balinky *et. al.*, *Planning and the market in the U.S.S.R.*, Rutgers Press, 1967; Keith Bush, "The Reforms: A Balance Sheet" in *Problems of Communism*, July–August 1967; Theodore Frankel, "Economic Reform: A Tentative Appraisal" in *Problems of Communism*, May–June 1967; Marshall Goldman, "Economic Revolution in the Soviet Union" in *Foreign Affairs*, January 1967; Gregory Grossman, "Economic Reforms: A Balance Sheet" in *Problems of Communism*, November–December 1966.

[2] To use Prof. Yevsei Liberman's expression in *Planovoye khozyaistvo*, No. 1, 1968, p. 24.

[3] *Pravda*, Jan. 29, 1967.

[4] *Ibid.*, Jan. 25, 1968.

[4a] *Ekonomicheskaya Gazeta*, No. 12, 1968, p. 1.

[5] *Voprosy ekonomiki*, No. 9, 1967, p. 45.

The performance of the first 704 enterprises in 1966 was markedly superior to the results for the whole of industry: their gross output grew by 10.3 percent, profits by 23 percent, and labor productivity by 8 percent against all-industry averages of 8.6, 10.6, and 5.2 percent, respectively.[6] This comparison has been widely cited by Soviet spokesmen as vindication of the new system. Yet this is hardly valid because the first groups of enterprises were selected for their above-average profitability and performance; for instance, more than a half of the 243 enterprises transferred during the first 6 months of 1966 had previously registered a profitability rate of over 40 percent.[7] In order to assess how the new system affected the performance of these plants, a comparison with their growth rates *before* conversion, in 1965 and 1964, would be more informative but as yet the Central Statistical Administration (TsSU) has chosen not to publish such data despite complaints by Soviet economists.[8] However, an article in the TsSU's house journal did reveal two indicators of the 704 enterprises' previous performance: their profitability level (profits related to the value of fixed and working capital) increased from 22.5 percent in 1965 to 26.1 percent in 1966; i.e., by 16 percent, while their capital-output ratio improved by 1.8 percent (the capital-output ratio for industry as a whole remained at the 1965 level) [9] much of the rise in profitability can be attributed to nonrecurring benefits which accrue on conversion such as the sale of surplus equipment and reduction in inventories.[10] It would be interesting to compare the same indexes for the 704 enterprises during 1967, but this may have been rendered extremely difficult, if not impossible, by the July 1967 price reform.

By September 1967, the performance gap between the 5,700 enterprises converted by that date and the rest of industry had narrowed appreciably: as against the first 9 months of 1966, their profits had risen by 25 percent and labor productivity by 8 percent, compared with all-industry averages of 20 and 7 percent, respectively.[11] By November 1967 the sales and productivity growth rates of the converted enterprises were 12.0 and 8.0 percent against 10.2 and 7.3 percent for the whole of industry.[12] This narrowing was to be expected as a larger proportion of industry, including an increasing number of average and lagging enterprises, operated under the new system. It was complemented by the unusually good performance of all Soviet industry in the jubilee year, after the bumper harvest and mild winter of 1966 and the widespread introduction of the 5-day week.

By the end of 1968, the whole of industry is scheduled "in the main" to be transferred, [13] with the conversion of the few remaining low-profit enterprises now set for 1969.[14] The 1968 plan was drafted using the new indexes of products sold, total profits, and total wage funds; [15] thus the previous inherent conflicts between ministries working to the old, and enterprises operating on the new plan indicators should, hopefully, be resolved.

[6] *Vestnik statistiki*, No. 7, 1967, pp. 19–21.
[7] *Pervye Shagi Reformy*, Moscow, Ekonomika, 1966, p. 127.
[8] For instance, Fedorenko in *Planovoye khozyaistvo*, No. 4, 1967, p. 6.
[9] *Vestnik statistiki*, No. 7, 1967, p. 20, and *Voposy ekonomiki* No. 3, 1968, p. 26.
[10] In 1966. The 704 enterprises reduced their inventories by 3 percent (*Pravda*, Jan. 5, 1968). This explains why their sales growth at 11 percent was higher than the increase in their gross output of 10.3 percent.
[11] *Ekonomicheskaya gazeta*, No. 44, 1967, p. 30.
[12] *Planovoye khozyaistvo*, No. 1, 1968, p. 3.
[13] *Trud*, Feb. 22, 1968.
[14] *Planovoye khozyaistvo*, No. 1, 1968, p. 3.
[15] *Ekonomicheskaya gazeta*, No. 40, 1967, p. 11.

INITIAL PROBLEMS

Upon their conversion, the first groups of enterprises had, understandably, to contend with many problems which should be eased or eliminated as the reforms progress. For instance, the 1966 plans for gross output, profits, and allocations to the state budget had all been set and confirmed by the central planners before the first enterprises began to operate under the new system. In order to retain a meaningful amount of profits for their incentives funds, the enterprises had to take on additional profit plans. They also had to find customers for their centrally planned assortment of products.[16] Several of the pioneer enterprises were reportedly denuded of working capital by superior organizations at the time of transfer.[17]

Owing to the piecemeal nature of the reforms' implementation, the first enterprises had to operate within a rigid framework of supply and construction organizations still wholly tied to the plan. Thus they might take additional orders only to find that the corresponding inputs were not available. Or they were unable fully to spend their production development and housing funds because local building organizations were committed to their annual plans and had no spare capacity.[18]

The most formidable impediment to the implementation of the reforms has been, and continues to be, the resistance to change displayed throughout the bureaucratic hierarchy. The basic procedures used in Soviet industrial planning and management have altered little during two generations of bureaucrats. It was these functionaries who were most vocal in their opposition to the reform proposals prior to the September 1965 plenum, yet it is they who are charged with implementing the reforms adopted at that plenum.[19] Thus we read that the centrally planned indicators for each enterprise were admittedly reduced in number in most instances, but those remaining were often changed in the course of the plan year.[20] The pervasive influence of the *val* was frequently noted.[21] Some enterprises were set not only the total wage fund indicator but also indexes for the training and placing of cadres.[22] Not only were the higher bodies accused of "excessively regulating the products list of industrial output,"[23] but they also persisted in planning those items which enterprises manufactured for their own needs.[24] From officially inspired articles by Birman and Liberman which appeared early in 1968,[25] it would appear that this bureaucratic inertia continues to plague the implementation of the reforms in their third year.

With the value of products sold replacing gross output as a prime success indicator, the prevailing laxity in payments and contract discipline has had an especially deleterious effect upon the formation of incentive funds at the converted enterprises. A draft "Statute on Deliveries of Products," which provided for increased scales of fines for suppliers who delivered goods late or in inferior condition and

[16] *Ibid.*, No. 8, 1966, p. 28.
[17] *Dengi i kredit*, No. 9, 1966, p. 3 and *Sovetskaya Litva*, 28.9.67.
[18] See, for instance, *Planovoye khozyaistvo*, No. 9, 1966, pp. 93–95 and *Pravda*, Oct. 18, 1966.
[19] See Birman's warning in *Novy mir*, No. 12, 1965, p. 12.
[20] *Vestnik statistiki*, No. 6, 1967, pp. 30–31 and *Komsomolskaya Pravda*, Oct. 6, 1967.
[21] *Pravda*, June 28, 1967; *Ekonomicheskava gazeta*, No. 34, 1967, p. 11 and *Komosomolskaya Pravda*, Oct. 6, 1967.
[22] *Ekonomicheskaya gazeta*, No. 40, 1967, p. 11.
[23] *Voposy ekomomiki*, No. 4, 1967, p. 31.
[24] *Ekonomicheskaya gazeta*, No. 22, 1967, p. 10 and *Komosmolskaya Pravda*, Oct. 6, 1967.
[25] *Pravda*, Jan. 12, 1968 and *Planovoye khozyaistvo*, No. 1, 1968, pp. 19–28.

for consumers who delayed payment, was published in 1966.[26] The final decree was not promulgated until late in 1967 and only came into effect from January 1968.[27] Although some of the decree's provisions are less severe than those of the draft statute, they should at least remove the anomaly whereby the fine for late payment was less than the interest charged on the sum in question. It has also been suggested that higher organs be subject to financial penalties when they issue unbalanced or unrealistic orders to enterprises.[28]

Finally, a laughable oversight on the part of the Ministry of Ferrous Metallurgy serves to illustrate how little effect the new system has on an enterprise's operation at least in certain instances. Only after some 10 weeks had elapsed did the Ministry remember to inform 11 of its plants in Uralsk that they were meant to be working under the new conditions.[29]

NORMATIVES AND PLAN TARGETS

A serious shortcoming of the new criteria or norms measuring an enterprise's performance and according to which deductions from profits are made into the plant's incentive funds has proved to be their instability. When outlining the reform program, Kosygin stressed the desirability of establishing long-term norms, and this has generally been interpreted to mean norms covering at least a 5-year period.[30] However, about a quarter of the norms set in 1966 had to be revised during the following year;[31] this has been ascribed in part to the fact that the 5-year plans for these enterprises were not confirmed at the time of their conversion.[32] The least satisfactory normative has been the growth of the volume of sales as an indicator for forming incentive funds. It is obviously very difficult to improve on the growth rate of sales in successive years; for example, if a plant achieved an 11 percent growth rate in sales in 1966 (the average for the 704 enterprises) and a 10-percent growth rate in 1967, then no deductions from profits into the incentive funds would be made in the second year.[33]

Central branch normatives for deductions into the incentive funds were set for separate branches of industry; one republican observer found that the later the branch normative was set, the less favorable to the enterprise were the rates.[34] Many complaints have been registered to the effect that, since normatives for the formation of incentive funds are also linked with the enterprise wage fund, directors are thereby led to increase the planned wage fund even at the expense of a certain drop in profits.[35]

The norms for the formation of enterprise incentive funds have come under criticism on other scores: the scales of deductions from profits are too low, the penalties for overfulfilling a plan are almost as severe as for underfulfilling it and, in general, the norm-setting procedure is just too complicated to be fully understood by directors and their

[26] *Ekonomicheskaya, gazeta* No. 37, 1966, p. 13.
[27] *Izvestia*, Nov. 15, 1967.
[28] *Pravda*, Jan. 12, 1968.
[29] *Ekonomicheskaya gazeta*, No. 45, 1967, p. 10.
[30] See, for instance, *Voprosy ekonomiki*, No. 4, 1967, p. 34.
[31] *Planovoye khozyaistvo*, No. 9, 1967, p. 38.
[32] *Ibid.*, No. 1, 1968, p. 5.
[33] See *Voprosy ekonomiki*, No. 10, 1967; pp. 50 and 53.
[34] *Sovetskaya Litva*, Sept. 28, 1967.
[35] *Planovoye khozyaistvo*, No. 9, 1967, p. 39.

staffs [36]—indeed, by early 1968 more than 30 different supplementary regulations on bonus awards were in effect.[37] However, these defects should be rectified without too much difficulty; already in 1967 several enterprises were authorized, on an experimental basis, to transfer a fixed percentage of profits into their incentive funds.[38]

A more fundamental and enduring weakness of the new system is that the increased autonomy for the enterprise director, promised at the September 1965 plenum, remains primarily theoretical. The physical number of plan targets or "success indicators" handed down to each enterprise has been reduced from 20 or more to eight, but these eight almost wholly circumscribe the director's freedom of action in respect of both inputs and outputs. The material-technical supply inputs, which make up some 70 percent of the value of the average enterprise's output,[39] remain rigidly controlled from above. The other major value component of a factory's output is wages: these are theoretically freed from central control except, as a temporary measure only, for a top limit on the enterprise's wage fund. But when the top limit is fixed, when grades (*tarifny razryad*) and work norms are centrally controlled, while financial organs continued to order enterprises to prune their administrative staffs and hand over the resultant savings,[40] when directors are often obliged to find alternative employment for their own redundant workers and when they are reportedly compelled to take on new hands by the newly formed State Committees for the Utilization of Labor Resources,[41] then it is largely illusory to speak of the enterprise directors's new powers to control labor inputs and to hire and fire staff.[42]

Previously the gross output index listed virtually every item that an enterprise was to produce during the plan year. This has been partially replaced by the "main assortment of products" or *nomenklatura*, and it is now claimed that "only the most important, basic, and consolidated products are centrally determined." [43] Yet in practice the *nomenklatura* list is just as all embracing as its predecessor; thus a director of a chemical combine complained that "the entire production range is planned from above for our enterprise by the Gosplan and by the all-union ministry," while others maintain that the *nomenklatura* lists specify output requirements "down to the last kilogram" or "down to the last screw." [44] But how could it be otherwise? If a director were given free rein to determine his enterprise's output, he would naturally concentrate upon the most profitable products at the branch average prices and the rigidly inflexible price system would not signal overproduction. Thus given a little freedom of maneuver, a leather association increased its output of lined shoes which gave a profitability rate of 67 percent at the expense of other footwear yielding only 13-percent profitability, while a meat-packing combine cut back on sausages which brought only 8.3 percent profitability.[45] Therefore, until or unless the principles of price forma-

[36] See *Ekonomika i matematicheskiye metody*, No. 4, 1967, pp. 483–8; *Ekonomicheskaya gazeta, No. 31, 1967* p. 8; *Planovoye khozyaistvo*, No. 1, 1968, p. 24 and *Trud*, Feb. 22, 1968.
[37] *Pravda*, Feb. 1, 1968.
[38] *Pravda*, June 8, 1967 and *Ekonomicheskaya gazeta*, No. 44, 1967, p. 30 and No. 8, 1968, p. 9.
[39] *Pravda*, Jan. 5, 1968.
[40] *Planovoye khozyaistvo*, No. 1, 1968, p. 23.
[41] *Sovetskaya yustitsiya*, No. 23, 1967, p. 15.
[42] On this point see Liberman's strictures in *Planovoye khozyaistvo*, No. 1, 1968, pp. 19–28.
[43] *Trud*, Jan. 9, 1968.
[44] *Ekonomicheskaya gazeta*, No. 37, 1967, p. 14.
[45] *Vestnik statistiki*, No. 7, 1967, p. 27.

tion are radically altered, the enterprise will continue to be compelled—through the *nomenklatura* list—to manufacture low-profit and unprofitable items which are needed in the economy.

Another indicator which has replaced the gross output or *val* is that of the products sold.[46] Yet the vital distinction between these two indicators remains largely theoretical in the face of intense demand pressure. As a noted economist explained: "when there is a relative insufficiency of material resources compared with monetary and financial resources, the problem of improving the quality of output becomes insoluble. Output of any quality is taken by the consumer, since otherwise he risks not obtaining any output at all,"[47]

DISTRIBUTION OF PROFITS

At the 704 enterprises which were transferred during 1966, the proportion of profits paid into the state budget increased by 4 percent in 1966 when compared with 1965, while the share of profits left at the enterprises' disposal decreased by 4 percent.[48] Yet the total profits retained by the enterprises increased absolutely, and they formed the principal source of income for the incentive funds, as may be seen from the following table: [49]

Origin and distribution of incentive funds, 1966

[In millions of rubles]

Origin	Total	Distribution		
		Material incentives fund	Social-cultural fund	Production development fund
From all sources	399.2	195.7	67.0	136.5
Of which—				
Deductions from profits	311.4	195.7	67.0	48.7
Amortization deductions	79.2	.....	.....	79.2
Sales of surplus equipment	8.6	.....	.....	8.6

A justified complaint registered by enterprise managers and by observers of the reforms is that an excessive proportion of the profits earned by the converted enterprises is paid into the State budget in the form of "free or unused remainder." For the first enterprises, this free remainder amounted to 60–70 percent of their profits.[50] One manager pointed out that his plant had little incentive to reduce the capital charge since nearly all of the resultant saving would go to the budget in the form of unused remainder—44,000 out of 45,000 rubles in fact.[51]

Of course the first groups of enterprises enjoyed profitability rates of well above the average and this problem will become less acute as the new wholesale prices take effect and when the rest of industry is converted. Nevertheless, it has been proposed that enterprises should

[46] The concept "realized production" covers sales to other users, plus transfers to the enterprise's own capital construction work and nonindustrial economic activities. *Ekonomicheskaya gazeta*, No. 6, 1966, p. 32.
[47] Cited in *Vestnik statistiki*, No. 7, 1967, p. 25.
[48] *Ibid.*, p. 21.
[49] *Ibid.*, No. 5, 1967, pp. 94–95.
[50] *Plan, khozraschet, stimuly*, Moscow, 1967, p. 127; *Voprosy ekonomiki*, No. 10, 1967, p. 47.
[51] *Ekonomicheskaya gazeta*, No. 25, 1967, p. 14.

retain a greater share of their profits to build reserves against possible contingencies "in accordance with the most important principle of *khozraschet* which is *samookupaemost*".[52] Another proposal called for the retention by the enterprise of all its net profits subject to a progressive tax.[53] However, it seems likely that enterprises will be allowed to retain only about one-fifth of the profits they generate. An official of the Gosplan's State Price Committee has forecast that even if the standard capital charge is left at its present relatively low level of 6 percent, this will account for some 10 billion rubles or about 40 percent of total profits. He suggested the following approximate distribution of profits: [54]

Percent to the enterprise material stimulation fund	12.3
Percent to the enterprise social-cultural and housing fund	4.1
Percent to the enterprise production development fund	5.3
Percent to the budget as capital charge	40.8
Percent to the budget for financing centralized investment, including credit repayment and expansion of working capital	15.9
Percent to the budget as free remainder	21.6

PREMIA AND EARNINGS

For the overwhelming majority of workers and employees, the decisive criterion by which to judge the new system will be the size of their pay-packets: Will the increased norms and productivity be rewarded with higher earnings? Unfortunately, the reforms have been implemented during a period of growing inflationary pressure, and the authorities have had to restrain all industrial wage increases, including those at the converted enterprises.

The first year of the reforms was also the first year of the substantial pay increases for the lower paid service workers originally announced by Khrushchev in July 1964, while the average earnings of kolkhozniks from the public sector increased in 1966–67 by about 20 percent, consequent upon the decisions of the March 1965 plenum and the resolution on guaranteed pay at sovkhoz rates.[55] At the Supreme Soviet session in October 1967, Mr. Baibakov disclosed that the money incomes of the population had increased during 1966 and 1967 by 11.5 billion rubles more than had originally been envisaged in the 5-year plan directives while retail trade turnover had exceeded the directive levels by 2.3 percentage points, that is, less than 3 billion rubles' worth.[56] The reaction of the authorities has been to keep overall average wage increases in 1966–67 to below the 5-year plan directive levels even though the gross industrial product and industrial labor productivity have grown faster than was planned.[57]

As far as the workers and employees at the converted enterprises are concerned, reports on the growth of their earnings have been conflicting. The first information was that the average monthly earnings of industrial-production personnel in 699 out of the 704 enterprises converted in 1966 rose during that year by only 2.8 percent.[58] A later report gave the increase for all workers and employees at the

[52] *Voprosy ekonomiki*, No. 10, 1967, p. 47.
[53] *Ibid.*, p. 49.
[54] *Ekonomicheskaya gazeta*, No. 39, 1967, p. 15.
[55] *Planovoye khozyaistvo*, No. 12, 1967, p. 4.
[56] *Pravda*, Oct. 11, 1967.
[57] *Planovoye khozyaistvo*, No. 12, 1967, p. 4.
[58] *Voprosy ekonomiki*, No. 4, 1967, p. 31.

704 enterprises as 5.1 percent: this included all premia and non-recurrent bonuses.[59] Since the all-union average increase for industrial-production personnel in 1966 was 3.4 percent,[60] the differential at the converted enterprises was hardly commensurate with the marked increase in productivity. Even more disturbing for the workers at these plants was the fact that their average earnings rose by only 4 percent against a 10 percent increase in the salaries of employees.[61] This seeming discrimination against the workers in the workers' state stemmed from a variety of causes. As we have mentioned, the norms for deductions into the material incentives funds were faulty, they were too low and they were remarkably complicated. However, the prime reason would appear to be that engineering and technical employees had fared poorly in respect of pay increases when compared with workers prior to the reform. During the 7-year plan period (1959–65), for instance, workers' earnings had increased by 18.4 percent while the engineering and technical workers' and employees' earnings had grown by only 7.8 percent.[62] A certain correction was thus both overdue and understandable.

No definitive data are to hand for 1967, but it has been reported that workers' earnings in the majority of branches grew more rapidly than those of employees.[63] Yet further problems in this area are to be expected in 1968, since the average profitability and profits: Wage fund ratios of the plants scheduled for conversion this year are lower than those converted in 1966 and 1967. Thus while it was necessary for the first 704 enterprises to take on a 3.6 percent additional profits target in order to form material incentives funds equal to 8–9 percent of their wage funds, those transferred in 1967 were obliged to aim at an additional 6.2 percent profits target and those scheduled for conversion in 1968 will have to aim at a substantial 9–10 percent additional profits target in order to qualify for incentives funds on the same scale [64] which will not be easy.

THE PRODUCTION DEVELOPMENT FUND

Prior to the reforms, the annual sum available to enterprises for initiating new technology and for replacement and modernization of equipment through the so-called enterprise funds was equivalent to an insignificant 0.2 percent of the value of their production capital. It is now expected that, ultimately, one-fifth of all industrial investment will be channeled through the enterprise development funds.[65] Kosygin even forecast that by 1967 decentralized investment under the new system would total some 4 billion rubles, including 2.7 billion rubles' worth of depreciation allowances,[66] although this figure does not appear to have been met. However, during the initial stages of the reforms, the absolute scale of these funds has been insignificant and the degree of their utilization low, Gatovsky observed that:

> Up till now . . . enterprises transferred to the new system are incapable of conducting expanded reproduction at the expense of their own assets or on the basis of bank credits. The development fund created under the new conditions, as is well known, is used little.[67]

[59] *Vestnik statistiki*, No. 7, 1967, p. 20 also *Voprosy ekonomiki*, No. 11, 1967, p. 77.
[60] *Narkhoz 1965*, p. 567 and *Strana Sovetov za 50 let*, p. 227.
[61] *Vestnik statistiki*, No. 5, 1967, p. 94.
[62] *Voprosy ekonomiki*, No. 11, 1967, p. 79.
[63] *Ibid.*, No. 10, 1967, p. 54.
[64] *Planovoye khozyaistvo*, No. 1, 1968, p. 6.
[65] *Ekonomicheskaya gazeta*, No. 47, 1965, p. 10 and *Dengi i kredit*, No. 4, 1967, p. 70.
[66] *Pravda*, Sept. 28, 1965
[67] *Ekonomicheskaya gazeta*, No. 33, 1967, p. 9.

Thus although the production development funds at the 704 enterprises grew by 3.1 times in 1966 [68] and their total value amounted to 136.5 million rubles, this in fact was equivalent to just over 1 percent of these enterprises' fixed production capital of 12.5 billion rubles.[69] Liberman considered the minimum annual scale to be between 2 and 3 percent of fixed capital [70] and the norms in two republics vary from 1.6 to 3.7 percent.[71] However, one machine-tool plant director reckoned that he needed to invest about 9 to 10 percent of the value of fixed assets each year,[72] while another director referred to the fund's resources as "a drop in the bucket." [73]

At the enterprises transferred during 1966, of the increments to the production development funds, 61 percent came from amortization deductions and the rest from profits and from the sale of obsolete and surplus equipment.[74] It has been suggested that plants retain all amortization deductions instead of the 30 to 50 percent presently authorized plus a bigger share of the profits.[75] It also appears that only 8 percent of the surplus and obsolescent materials and equipment offloaded by the 704 enterprises was sold for payment while the rest was transferred gratis.[76]

With the rest of industry and supply organizations operating on the old system, the 704 enterprises were able to utilize only one-half of their production development funds.[77] This inability fully to exploit their decentralized investment resources has led to renewed demands that enterprises be encouraged, by a reasonable rate of interest, to leave their unused funds in special deposit accounts at Gosbank.[78]

Enterprise managers are by no means wholly independent in forming and disposing of their production development funds. There were initial complaints that local Gosbank officials showed a formal approach and tried to dictate to enterprises how they should spend their production development funds.[79] A Gosplan official later admitted that no provision had been made for meeting unplanned decentralized demand for material resources. He went on to declare that Gosplan now possessed some reserves to cover these needs, but warned that systematization of such demand required the inclusion of the work financed out of these funds in the state plan. Also, since newly built factories would not require much in the way of immediate replacements yet enjoyed large amortization deductions, ministries had been given the right to vary the amounts which enterprises could transfer to their production development funds.[80]

CAPITAL CHARGES

For the bulk of branches and enterprises, the capital charge has been set at 6 percent per annum; where profitability at the new wholesale price levels is low, the charge is reduced to 3 percent, and for

[68] *Dengi i kredit*, No. 4, 1967, p. 69.
[69] *Vestnik statistiki*, No. 7, 1967, p. 20.
[70] *International Labor Review*, January 1968.
[71] *Promyshlennost Belorussii*, No. 8, 1967, p. 6 and *Sovetskaya Litva*, Sept. 28, 1967.
[72] *Pravda*, Aug. 9, 1967.
[73] *Sovetskaya Rossiya*, Sept. 30, 1967.
[74] *Dengi i kredit*, No. 4, 1967, p. 68.
[75] *Sovetskaya Rossiya*, Sept. 30, 1967.
[76] *Vestnik statistiki*, No. 7, 1967, p. 20.
[77] *Voprosy ekonomiki*, No. 4, 1967, p. 36 and *Planovoye khozyaistvo*, No. 6, 1967, p. 50.
[78] *Voprosy ekonomiki*, No. 7, 1967, p. 41.
[79] *Ekonomicheskaya gazeta*, No. 37, 1967, p. 14.
[80] *Ibid.*, No. 39, 1967, p. 11.

planned-loss enterprises no capital charge is made.[81] The level of 6 percent appears to have been reached by relating the deductions from profits of state enterprises and economic organizations prior to the reforms to the value of their fixed and working capital: in 1963 these figures were 20 billion and 300 billion rubles, respectively.[82]

The level of 6 percent is regarded as a minimum;[83] some observers have criticized the practice of varying the capital charge,[84] but many have called for higher and/or differentiated capital charges on the grounds that the present rates comprise an insignificant share of total profits deductions.[85] For 43 Moscow enterprises, for instance, the ratio of capital charges to total profits ranged from 0.03 to 8.9 percent,[86] while the capital charges for the 704 enterprises during the first year of the reforms amounted to approximately 14 percent of their profits.[87] However, these proposals tend to overlook the fact that the level of profits at the first group of enterprises was atypically high and that a capital charge of 6 percent will assume greater significance in the future. Nevertheless, the head of the Price Formation Methodology Section in the U.S.S.R. Gosplan's State Price Committee has gone on record advocating a capital charge of 7 to 7.5 percent which would rise with the increasing effectiveness of social production by perhaps 0.3 to 0.5 percent per annum.[88]

The fixed productive capital of the first 704 enterprises rose by 8 percent in 1966, while the return on capital, as we have noted, rose by only 1.8 percent.[89]

CREDITS

In the past, the bulk of fixed capital investment was financed through the medium of nonreturnable budgetary grants and the use of credits was minimal: during the period 1963–67, for instance, credits used for expanding fixed assets amounted to about 3 percent of the total volume of capital investment.[90] Under the new system, bank credits are supposed to finance the major part of all new fixed capital investment, yet, during the first year at least, there occurred a paradoxical diminution in the use of credit by many of the 704 enterprises. This came about primarily because these enterprises built up considerable unused incentive funds due to the timelag between formation and disbursement, and to discrepancies between the production development funds and the building capacity available. Thus many enterprises assign a part of these resources to satisfying their needs for means which were formerly covered by bank credits. During 1966, one combine repeatedly waived "traditional" credits for accounts amounting to 3 million rubles.[91] A second explanation given was that, prior to the tightening of payments discipline in November 1967, the amount a client pays for a loan is greater than the sanctions exacted from him for failure to fulfill economic contracts. As a result, it is more advantageous to delay paying a bill than to acquire bank

[81] *Voprosy ekonomiki*, No. 7 1967, p. 60.
[82] *Plan, khozraschet, stimuly*, p. 156.
[83] *Voprosy ekonomiki*, No. 7, 1967, p. 60.
[84] *Ekonomicheskaya gazeta*, No. 39, 1967, p. 15.
[85] For instance, *ibid.*, No. 27, 1967, p. 20.
[86] *Voprosy ekonomiki*, No. 7, 1967, p. 57.
[87] *Ekonomicheskaya gazeta*, No. 39, 1967, p. 14.
[88] *Ibid.*, p. 15.
[89] *Vestnik statistiki*, No. 7, 1967, p. 20.
[90] *Pravda*, Dec. 28, 1967.
[91] *Voprosy ekonomiki*, No. 7, 1967, p. 56.

credits.[92] A third reason is that local Gosbank officials are, by nature and by training, no great risk takers and any initiative they might display is sharply circumscribed by the host of regulations emanating from their head offices. This reluctance to grant credits has given rise to the famous remarks by one disgruntled bookkeeper: "It is easier to obtain bird milk in its natural form than a bank loan".[93] However, a deputy chairman of Gosbank has promised that greater autonomy in decisionmaking on credits will be granted to local branches of the bank.[94]

When loans are forthcoming, the paperwork involved often takes an unconscionable time. Thus the RSFSR head office of Gosbank is theoretically empowered to issue up to a half million rubles in credits upon its own authority, but enterprise directors have tended to splitup draft projects into several subprojects within the 300,000 or 100,000 ruble limits prescribed for provincial or local Gosbank offices, simply because the request for large loans are considered at many levels in the bank and this takes months.[95]

The interest rates for credits vary considerably—from 0.5 percent on funds for centralized investment projects to 8 percent on defaulted loans,[96] and this wide range has been the subject of controversy.[97] Moreover, assets created through the production development fund are freed of interest for 2 years while those formed with the help of credits are subject to interest once the credits have been repaid. One Soviet economist has called for analogous rates of interest to be paid on all funds, regardless of the source of financing. He has also criticized the sequence of deductions from profits, suggesting that the credit charge be withdrawn from total profits before deductions are made into the material incentives funds on the grounds that this would enhance the significance of credit charges.[98]

REDUNDANCY

Although in theory the enterprise director has now been granted a large measure of autonomy in the area of staffing, we have seen that in practice his powers remain strictly limited. Since the first groups of enterprises to be converted had previously registered above average profitability, it may well be that they had relatively few surplus hands. In any case there has been no evidence to date of any large-scale redundancy, although a noted Soviet economist has warned that the incidence of labor surpluses will increase as the reforms progress.[99] If the converted enterprises did not dismiss personnel on any great scale, they at least took on fewer new hands than the rest of industry. During the first year, the number of industrial-production personnel at the 704 enterprises grew by 2.1 percent compared with 3.4 percent for all industry, [100] and by the end of the third quarter of 1967 the number of workers and employees at the 5,500 converted enterprises had also grown at a slower rate—2.6 percent—than in industry as a whole.[101]

[92] *Pravda*, Sept. 7, 1967.
[93] *Trud*, Aug. 27, 1966.
[94] *Ekonomicheskaya gazeta*, No. 40, 1967, p. 27.
[95] *Pravda*, Dec. 28, 1967.
[96] *Promyshlennost Armenii*, No. 5, 1967, p. 62 and *Voprosy ekonomiki*, No. 10, 1967, p. 56.
[97] See *Ekonomicheskaya gazeta*, No. 40, 1967, p. 27 and *Voprosy ekonomiki*, No. 10, 1967, p. 56.
[98] *Ibid.*
[99] *Ekonomika i matematicheskiye metody*, No. 6, 1966, p. 805.
[100] *Vestnik Statistiki*, No. 7, 1967, p. 20.
[101] *Trud*, Jan. 9, 1968.

MATERIAL-TECHNICAL SUPPLIES

There has been some confusion and not a little doubletalk concerning the actual liberalization of the material-technical supply system. With the aim of preventing unnecessary stockpiling and crosshauls, responsibility for the supply of producer goods is being transferred from the respective ministries and departments to a separate State Committee for Material-Technical Supplies. The transfer should have been completed early in the reforms' implementation, but certain ministries have proved reluctant to relinquish their powers in this vital area.[102] We read that: "The rights of territorial supply organs have already been extended considerably and their responsibilities have been increased. They are given the right to distribute certain types of products which have hitherto been distributed in a centralized manner." [103] Furthermore, "during 1967 Gossnab handed over to local supply organs more than 6,000 groups of supplies for distribution and direct sales to enterprises. In 1968 about 10,000 more groups will follow * * *. By the end of 1967, 246 wholesale trade stores were distributing producer goods." [104] These stores also distributed funded materials.[105]

Thus it would appear that the *distribution* of supplies has been tidied up and decentralized to a considerable degree. But, to all appearances, the *allocation* of virtually all the basic producer goods remains strictly and rigidly controlled by the center. In 1962, for example, there were some 19,000 funded commodities.[106] Yet as late as 1967 we are told by a foreign observer of the reforms that "some 20,000 items, machines, and raw materials are distributed from the center by means of the so-called cards and supply system," [107] while Lagutkin himself admitted that "under the new system * * * the rigidly centralized funding and allocation of more than 20,000 categories of products does not correspond with the needs of the economy." [108]

Indeed, at the time of writing, only two prime categories have reportedly been freed from centralized allocation and in both instances on a limited and experimental basis—motor fuel was decontrolled in Voronezh and certain types of building material were sold freely in Chelyabinsk.[109] Presumably the number of funded commodities will gradually diminish as the reforms progress, yet the continuing stress on maximum economic growth implies a continuing chronic shortage of supplies. And as long as administered prices reflect neither supply nor demand to any extent, it is difficult to see how the rigidly controlled allocation of producer goods can ever wither away.

PRICE FORMATION

After an interval of 12 years, the long-awaited and often deferred revision of several million wholesale prices was duly completed by the target date of July 1, 1967, amid fairly general agreement that it would be the last universal price revision of its type. A total of 691

[102] *Ekonomicheskaya gazeta*, No. 18, 1967, pp. 7–8 and *Materialno-tekhnicheskoye snabzheniye*, No. 7, 1967, p. 33.
[103] *Ekonomika i matematicheskiye metody*, No. 5, 1967, p. 667.
[104] *Pravda*, Jan. 5, 1968.
[105] *Ekonomicheskaya gazeta*, No. 40, 1967, p. 29.
[106] *Ibid.*, Nov. 10, 1962, p. 8.
[107] *Borba*, Mar. 6, 1967.
[108] *Khozyaistvennaya reforma v deistvii*, Moscow, 1967, p. 60.
[109] *Literaturnaya gazeta*, No. 34, 1967, p. 20 and *Stroitelnaya gazeta*, Feb. 11, 1968.

price lists were introduced, of which 173 were approved by the U.S.S.R. Gosplan's State Price Committee, 388 by the republican Gosplans' price committees, and 130 by ministries and departments.[110] The 1968 plan and budget were drafted in the prereform prices but were later converted to the new prices.[111] The new prices are calculated to provide average branch profitability rates of about 15 percent throughout most of industry, ranging from 7 to 8 percent for the coal industry, to 10 percent for the tractor and agricultural machine-building industry, to 40 to 44 percent for light industry. In general the prices of natural raw materials have been raised more than those of manmade products. There will no longer be entire industries operating on an unprofitable basis, but even after price increases averaging 78 percent, some 40 percent of coal enterprises will continue on a planned-loss basis.[112]

The new prices may reflect "the socially necessary costs of production" more closely than their predecessors, but they still leave much to be desired. It is reported, for instance, that they do not fully compensate enterprises for the introduction of new technology, nor do they provide adequate disincentives for the production of obsolescent goods.[113] It takes so long before a price for a new product is confirmed that a dress manufacturer complained that his creations may be out of fashion before approval is finally obtained.[114] Yet their crucial shortcoming in the context of the reforms is that they are still formed on an average cost-plus basis and reflect supply and demand to a wholly inadequate extent. The administered inflexible prices do not tell the enterprise manager what he should produce, of what quality, and at what cost; therefore, his output mix must be specified by the *nomenklatura* list.

Incidentally, Government spokesmen repeatedly stressed that the wholesale price revision would not be allowed adversely to affect the terms of trade for the farms. It was promised that "the increase in (the prices) of fuel, lubricants, metals, building materials, and other producer goods purchased by kolkhozes would be compensated for by certain increases in procurement prices." [115] However, at the time of writing no increases in procurement prices appear to have been promulgated.

CONCLUSION

It may be thought that this review has laid undue stress upon the problems and shortcomings encountered in putting through the reforms and has given too little credit to the positive aspects of the reform program. There can be little doubt that the measures promulgated at the September 1965 plenum will *eventually* improve planning, management, and productivity in Soviet industry. The salient features of the reform program which cannot but have a beneficial effect are the reduction of the excessive and sometimes contradictory centrally determined plan directives, the improvement of norms or "success indicators" for the enterprise director, the financing of most capital investment through bank credits instead of by free budgetary grants, the charging of interest on capital, the

[110] *Ekonymicheskaya gazeta*, No. 25, 1967, p. 9.
[111] *Finansy SSSR*, No. 9, 1967, p. 12.
[112] *Vestnik statistiki*, No. 3, 1967, pp. 13–20 and *Ekonomicheskaya gazeta*, No. 25, 1967, p. 12.
[113] *Voprosy ekonomiki*, No. 10, 1967, p. 53.
[114] *Izvestia*, Aug. 11, 1967.
[115] *Sovetskaya Rossiya*, Aug. 11, 1967.

strengthening of material incentives and their closer correlation with results attained, the rational concentration of production units, and the price reform of July 1967. Yet it is still too early to attempt to forecast the eventual effects of these measures, for many of them will take several years to manifest their full effect, while other features of the reforms are clearly provisional and are subject to modification as the new system is implemented. However, the limited aim of this paper was to survey the degree of the reforms' implementation after 2 years and to measure their effect upon the operation of the converted enterprises. The conclusion to be drawn from the available data is that the modest reforms have been only partially implemented and that they have had little effect so far upon the operation of the enterprises concerned.

Due to a variety of subjective and objective factors, the projected marginal increase in managerial autonomy was not fully realized, there was no significant increase in decentralized investment, an inadequate proportion of the enterprise's profits was withdrawn through the newly introduced capital charge, the use of credits declined in many cases. Capital productivity improved only slightly. Little real change was discernible in the allocation of material-technical supplies, acute demand pressure negated the significance of the new indicator of profits sold, and the earnings of the workers—who make up over 80 percent of the enterprises' workforce—increased only marginally faster than in the rest of industry.

In seeking the causes of the lack of progress, we should endeavor to distinguish between the initial and temporary difficulties which would be encountered in the reform of any major economic system and those weaknesses which stem from the limitations of the reform model or which are inherent in the Soviet command economy.

In view of the size, complexity and virtual autarky of the Soviet economy and in the light of its recent very impressive growth performance—albeit through a disproportionately rapid increase in the capital stock—the authorities understandably decided upon a gradual implementation of the new system of planning, management, and incentives. The conversion of the economy, less the kolkhoz and private sectors, is to be spread over 5 years. The piecemeal nature of the reforms' implementation has meant that the converted enterprises have been obstructed by supply and construction organizations, as well as other enterprises, working under the old system. This should cease once all ministries, departments and enterprises are transferred. Payments and contract discipline will presumably also be tightened as a result of the recent legislation.

The resistance to change displayed at all levels of the industrial bureaucracy will prove to be a far more formidable impediment. Opposition to reform is inherent in all bureaucracies, and in this respect there is little to choose between the Tsarist and the Soviet systems. The struggle against this inertia may well claim some high-placed victims. The reforms' proponents can be expected to gain the upper hand, although bureaucratic inertia will long act as a brake upon progress.

The improvement of the norms which measure an enterprise's performance and determine the scale of rewards for its personnel is a technical matter which should be accomplished without undue difficulty or delay. The acute inflationary pressures, which have led to restraint upon wage increases, should ease somewhat. It is true that the raising of the monthly minimum wage to 60 rubles, the increased scale of increments for those in the more inclement regions, the improvement of pensions and the other benefits which were announced prior to the 50th anniversary celebrations last year will swell consumer purchasing power by several billion rubles, but this should be more than absorbed by the projected increase in consumer goods production and by a marked increase in agricultural output despite the cutting back of inputs promised at the March 1965 plenum. And by 1969–70, the first of the Russian Fiats—with all the concomitant expenditures of a dawning automobile era—will help to mop up the sizable pent-up purchasing power of the Soviet population. We can expect to see more flexibility and a more positive response to requests for bank credits by enterprise managers, although this may take several years and possibly a new generation of bank managers!

All the above problems are of a more temporary nature and should be resolved or greatly eased as the reforms progress. There are, however, more fundamental contradictions or weaknesses which will negate or limit the effects of the reform proposals. The prime contradiction is that of price formation: In the context of the reform program even the new prices are conceptually incorrect. The index of profitability can assume a leading role in influencing the operation of an enterprise only if prices reflect underlying scarcities, yet these cost-plus prices do not. Since the prices do not tell the enterprise manager what to produce, he must be ordered from above through the medium of plan directives reinforced by sanctions for noncompliance. Physical planning should give way to financial planning, but the value of input-output tables is limited by the weaknesses of the price system. However, to judge from Sitnin's latest published policy statement,[116] the price-setting authorities have learned little from the increasingly liberal debate on price formation which has been featured in Soviet journals over the past few years.

All of the major ingredients of an enterprise's input mix, headed by material-technical supplies and labor, remain firmly under centralized control and even the director's autonomy in utilizing these inputs is strictly circumscribed. In a like manner, the *nomenklatura* list continues largely to determine an enterprise's output mix. One of the primary aims of the reforms was to decentralize some decision-making to the enterprise manager whilst guiding him with market-type controls, yet the persistence of purely administrative levers threaten this decentralization. Moreover, for any substantial decentralization of investment or for any real loosening of the rigid supply system, the planners must reduce tension, introduce slack into the economy. Yet there is no sign of this in the published plans covering the rest of this decade.

[116] *Ekonomicheskaia gazeta*, No. 6, 1968, pp. 10–11.

Many Soviet economists are well aware of the disappointing progress of the reforms to date and this is evidenced by the frank critiques which appear in the specialized press. However, not much of this debate reaches the general public and it is difficult to judge how much impact it has on the authorities. Regrettably, little meaningful reporting or discussion of the East European economic reforms is carried in the Soviet press; although the backgrounds to these reforms differ widely from the Soviet experience, much could be learned by Soviet economists from the achievements and the errors of their East European neighbors.

The new methods have now been tested for over 2 years and enough experience has been acquired to merit a reappraisal of the reform program by the Soviet authorities. For the time being we can probably expect only technical refinements of the existing reform model but no basic structural alterations.

K. B.

B

NEW SOVIET INTERINDUSTRY DATA*

Expanding Soviet work in the area of construction and implementation of regional and national input-output tables of both the ex post and planning type continues to serve as a useful source of reliable and detailed Soviet economic statistics. The policy of the statistical authorities of not publishing complete tables somewhat reduces the usability of the data, but the released segments of tables and related information are nevertheless valuable as they offer us economic statistics not otherwise available to a Western student of the Soviet economy. Soviet economic analysts, who have long complained about the paucity of published economic statistics in the U.S.S.R., are also making increasingly wider use of the new source of data.

Input-output statistics continue to coexist alongside the standard census-type statistics published regularly by the Central Statistical Administration of the U.S.S.R. in annual yearbooks and other sources, but in areas where the two types of data overlap the former are invariably better, at least in terms of offering substantially more detailed coverage. There are also areas where no economic statistics are available outside of input-output sources.

The purpose of this paper is to summarize briefly, interpret, and present several sets of recently published Soviet input-output data.

One of the most important achievements of Soviet input-output specialists to date has been the construction of an ex post input-output table in value terms for 1959 which was completed in 1961. While a new ex post table for 1966 is nearing completion in the U.S.S.R., the 1959 table has by no means lost its value as Soviet economists and statisticians are still using it extensively as a benchmark table and as a source of basic statistics not available elsewhere. The data presented in this paper, which were completed in the U.S.S.R. in the last 2 or 3 years, also take the 1959 table as the point of departure.

The 1959 table was never published in its complete form but sufficiently large fragments were released to enable the author to estimate the missing links and to reconstruct the entire table.[1] The original, and still unavailable, Soviet table showed production and distribution of 83 different products; however, lack of sufficient data and considerations of accuracy led to reconstruction of a smaller table with 38 products,[2] with some of the producing sectors grouped together. The data presented in this paper are given in the same 38-sector breakdown to facilitate the use of newly available statistics in conjunction with the previously published table.

*For earlier reports on Soviet use of input-output techniques as well as actual data, *see* by the same author: Vladimir G. Treml, "Economic Interrelations in the U.S.S.R." Joint Economic Committee, *Annual Economic Indicators for the U.S.S.R.*, Washington, D.C. 1964, pp. 185–213, and Vladimir G. Treml, "The 1959 Soviet input-output table—As Reconstructed," in Joint Economic Committee, *New Directions in the Soviet Economy*, Vol. II–A, Washington, D.C., 1966, pp. 257–270.

[1] The table was published in the two sources listed in footnote on first page of this paper.
[2] For detailed sector classification see app. A.

CAPITAL DATA

The usual coverage of fixed capital statistics in Soviet statistical sources is sketchy to say the least. Fixed capital data have been published since 1960 (with some years omitted), but the published figures refer to larger aggregates for branches such as machinebuilding or ferrous metallurgy and the coverage has varied from year to year. The detailed breakdown of capital stock into types of capital is generally not given. Thus the recent release of a very detailed set of capital data supplementary to the input-output table for 1959 closed an important gap in this area of Soviet statistics. The data shown are as of January 1, 1960, but the fact that they are somewhat dated does not significantly reduce their value to an analyst. The input-output capital data summarized below in table 1 make up the only available set of capital stock statistics, both in respect to detailed breakdown into different types of capital and in respect to sector-by-sector breakdown.

The fixed capital stock data (Soviet basic productive funds) are shown as of January 1, 1960, as measured in the 1959 economy wide inventory and revaluation of capital. No allowance for wear and tear has been made, and the figures represent initial cost adjusted for price changes.

The types of capital shown in tables 1 and 2 are as follows:

1. Buildings and structures, including all auxiliary structures, and all fixed heating and sanitation equipment.
2. Stationary prime movers, including turbines, boiler equipment, electrical generators, and all electrical systems.
3. Metalworking machinery and equipment, including machine tools and forging-pressing equipment.
4. Specialized machine tools, machinery, and equipment.
5. Pumps and compressors.
6. Measuring and control instruments.
7. Hoisting, lifting, and conveyor machinery and equipment.
8. Transportation and draft machinery and equipment including tractors, railroad rolling stock, road construction equipment, and trucks.
9. Cattle (productive herd).
10. Other.

Table 2 shows the same fixed capital data in the same type-sector format but not in terms of stock of capital but in terms of capital-output ratios or capital-output coefficients. The output statistics used for this purpose by the Soviet source are the gross values of output for 1959 measured in current purchasers' prices.

TABLE 1.—*Capital stock in the U.S.S.R. by sectors, 1959*

[In millions of rubles]

	Types of capital										Total [1]
	1	2	3	4	5	6	7	8	9	10	
1. Ferrous ores	828.423	38.240	10.241	173.801	3.434	3.339	16.076	132.554	2.198	113.825	1,322.133
2. Ferrous metals	2,765.278	255.390	209.304	1,616.853	20.122	29.115	276.916	157.072	2.465	36.426	5,368.942
3. Nonferrous ores	1,481.523	150.770	63.304	241.961	13.240	9.020	47.002	117.182	5.304	64.462	2,193.769
4. Nonferrous metals	1,267.921	89.737	11.528	521.148	2.765	14.745	12.256	50.759	.345	19.464	1,990.669
5. Coking coal	417.270	16.935	4.646	251.687	6.677	3.122	9.083	13.084	.022	2.955	725.482
6. Metal products	395.019	19.099	53.294	235.348	1.278	5.677	10.345	18.101	.338	8.187	746.687
7. Coal	5,959.854	157.113	5.571	1,211.688	2.176	24.503	4.862	50.595	13.719	118.317	7,548.397
8. Oil	3,845.398	90.679	7.129	853.648	22.236	19.440	6.404	62.656	.153	18.500	4,926.243
9. Gas	446.188	22.118	.758	107.810	3.006	3.298	.665	3.124	.045	1.761	588.773
10. Other fuels	352.877	16.044	18.469	141.467	7.093	1.541	21.452	63.716	.295	70.195	693.149
11. Electrical power	7,844.671	2,361.876	11.075	35.545	79.387	74.381	105.850	66.649	.386	31.483	10,611.304
12. Electrical and power M. & E	670.356	45.936	296.120	92.633	5.884	18.311	46.899	18.853	.330	21.599	1,216.922
13. Tools and instruments	483.659	29.036	235.462	123.115	2.127	36.796	4.912	15.231	.441	26.030	956.809
14. General machinery	1,427.020	81.345	741.601	168.480	6.427	25.996	128.571	43.608	.409	52.136	2,675.592
15. Transportation M. & E	932.017	39.878	228.336	67.214	2.111	11.336	52.059	58.632	.161	31.054	1,422.799
16. Automobiles	584.634	52.089	335.539	115.958	3.146	12.768	24.240	19.090	.339	13.579	1,161.382
17. Agricultural M. & E	508.283	46.097	315.657	123.444	1.579	8.675	18.930	18.249	.219	12.252	1,053.385
18. Machinery, n.e.c	1,120.678	59.659	429.605	264.229	8.843	95.275	18.605	49.017	20.077	35.871	2,101.858
19. Metalworking	372.692	24.344	140.144	58.931	4.337	6.138	29.231	13.677	.475	14.514	664.483
20. Repair of machinery	1,467.600	111.337	352.500	123.375	7.012	14.700	93.750	215.512	2.010	49.200	2,436.997
21. Abrasives	56.551	3.096	13.332	12.585	1.632	.845	1.483	2.995	.004	1.321	93.843
22. Mineral and basic chemistry	613.123	36.379	24.383	250.169	26.343	11.445	20.128	70.435	.734	9.087	1,062.226
23. Synthetics, paints	1,508.507	62.361	27.469	657.838	33.307	39.439	8.764	31.787	.597	23.372	2,393.441
24. Rubber products	185.260	8.572	11.634	71.180	1.208	4.500	.900	3.150	.044	5.412	291.860
25. Lumber and woodworking	2,378.608	186.300	85.367	442.177	7.997	4.388	65.782	578.094	48.179	60.671	3,857.562
26. Paper	499.705	56.305	24.884	242.884	15.077	5.220	10.060	17.654	.960	5.676	878.426
27. Construction materials	2,894.575	135.204	38.704	1,071.497	7.888	18.479	71.214	212.130	3.594	83.996	4,537.281
28. Glass	214.358	14.889	6.414	136.418	2.290	3.790	3.124	12.266	.162	5.290	399.001
29. Textiles	1,407.846	76.817	38.319	1,260.071	7.607	14.341	6.733	33.718	1.516	32.716	2,879.685
30. Apparel and footwear	734.954	18.136	31.953	261.842	6.505	4.200	5.393	20.339	2.298	43.127	1,128.748
31. Food	4,464.337	260.312	99.182	2,569.180	67.828	53.615	149.720	259.630	19.812	72.348	8,015.964
32. Industry, n.e.c	2,725.436	87.082	447.409	873.250	317.998	91.252	70.789	170.204	3.335	113.146	4,899.901
33. Construction	2,019.764	222.971	182.500	283.240	38.836	33.580	782.560	1,662.064	4.000	225.979	5,455.494
34. Agriculture	19,419.376	346.626	30.441	1,881.488	9.362	113.955	4.440	3,536.189	13,696.000	3,886.775	42,924.654
35. Forestry	6.089	.108	.007	.878	.002	5.020	.001	.956	1.127	.320	14.509
36. Transportation and communications	19,554.596	159.402	110.189	6,839.445	12.098	271.742	205.184	1,603.002	3.492	182.723	28,941.873
37. Trade and distribution	5,757.955	74.160	84.512	685.573	14.578	69.300	122.996	300.853	66.514	335.377	7,511.818
38. Products, n.e.c	295.956	15.870	2.331	25.770	21.000	2.859	1.239	34.341	.075	12.030	411.471
Total	97,908.350	5,472.316	4,729.314	24,093.818	794.438	1,166.146	2,458.618	9,737.171	13,902.175	5,841.177	166,103.520

[1] Totals may not add up to sum of components because of rounding.

NOTE.—For sources and notes see app. B, p. 157.

TABLE 2.—*Capital-output coefficients (rubles of capital per ruble of gross output)*

	Types of capital										Total [1]
	1	2	3	4	5	6	7	8	9	10	
1. Ferrous ores	1.473800	0.068031	0.018220	0.309200	0.006110	0.005940	0.028600	0.235820	0.003910	0.202500	2.352131
2. Ferrous metals	.427400	.039473	.032350	.249900	.003110	.004500	.042800	.024277	.000381	.005630	.829821
3. Nonferrous ores	1.790360	.182200	.076500	.292400	.016000	.010900	.056800	.141610	.006410	.077900	2.651080
4. Nonferrous metals	.331050	.023430	.003010	.136070	.000722	.003850	.003200	.013253	.000090	.005082	.519757
5. Coking coal	.308700	.012529	.003437	.186200	.004940	.002310	.006720	.009680	.000016	.002186	.536718
6. Metal products	.404650	.019564	.054594	.241086	.001309	.005816	.010597	.018542	.000347	.008387	.764892
7. Coal	.934000	.024622	.000873	.189890	.000341	.003840	.000762	.007929	.002150	.018542	1.182949
8. Oil	.573683	.013528	.001064	.127353	.003317	.002900	.000955	.009347	.000023	.002760	.734931
9. Gas	1.677400	.083151	.002849	.405300	.011300	.012400	.002500	.011744	.000169	.006619	2.213432
10. Other fuels	.641595	.029172	.033579	.257214	.012896	.002802	.039003	.115846	.000536	.127627	1.260271
11. Electrical power	2.193700	.660480	.003097	.009940	.022200	.020800	.029600	.018638	.000108	.008804	2.967367
12. Electrical and power M. & E	.267917	.018359	.118348	.037022	.002352	.007318	.018744	.007535	.000132	.008633	.486360
13. Tools and instruments	.119333	.007164	.058096	.030376	.000525	.009079	.001212	.003758	.000109	.006422	.236074
14. General machinery	.326953	.018637	.169913	.038601	.001473	.005956	.029458	.009991	.000094	.011945	.613021
15. Transportation M. & E	.463690	.019840	.113600	.033440	.001050	.005640	.025900	.029170	.000080	.015450	.707860
16. Automobiles	.189570	.016890	.108800	.037600	.001020	.004140	.007860	.006190	.000110	.004403	.376583
17. Agricultural M. & E	.209170	.018970	.129900	.050800	.000650	.003570	.007790	.007510	.000090	.005042	.433492
18. Machinery, n.e.c	.219212	.011670	.084034	.051685	.001730	.018636	.003639	.009588	.003927	.007017	.411138
19. Metalworking	.128737	.008409	.048409	.020356	.001498	.002120	.010097	.004724	.000164	.005013	.229528
20. Repair of machinery	.391360	.029690	.094000	.032900	.001870	.003920	.025000	.057470	.000536	.013120	.649866
21. Abrasives	.453860	.024850	.107000	.101000	.013100	.006780	.011900	.024034	.000032	.010600	.753156
22. Mineral and basic chemistry	.451822	.026809	.017968	.184354	.019413	.008434	.014833	.051905	.000541	.006697	.782775
23. Synthetics, paints	.320074	.013232	.005828	.139579	.007067	.008368	.001860	.006745	.000127	.004959	.507838
24. Rubber products	.092630	.004286	.005817	.035590	.000604	.002250	.000450	.001575	.000022	.002706	.145930
25. Lumber and woodworking	.215590	.016886	.007737	.040078	.000725	.000398	.005962	.052397	.004367	.005499	.349639
26. Paper	.394400	.044440	019640	.191700	.011900	.004120	.007940	.013934	.000758	.004480	.693312
27. Construction materials	.396300	.018511	.005299	.146700	.001080	.002530	.009750	.029043	.000492	.011500	.621205
28. Glass	.244310	.016970	.007310	.155480	.002610	.004320	.003560	.013980	.000185	.006029	.454754
29. Textiles	.054780	.002989	.001491	.049030	.000296	.000558	.000262	.001312	.000059	.001273	.112050
30. Apparel and footwear	.041997	.001036	.001826	.014962	.000372	.000240	.000308	.001162	.000131	.002464	.064500
31. Food	.077238	.004504	.001716	.044449	.001173	.000928	.002590	.004492	.000343	.001252	.138684
32. Industry, n.e.c	.492810	.015746	.080900	.157900	.057500	.016500	.012800	.030776	.000603	.020459	.885994
33. Construction	.069170	.007636	.006250	.009700	.001330	.001150	.026800	.056920	.000137	.007739	.186832
34. Agriculture	.362979	.006479	.000569	.035168	.000175	.002130	.000083	.066097	.256000	.072650	.802330
35. Forestry	.019769	.000350	.000022	.002851	.000006	.016300	.000003	.003105	.003660	.001040	.047106
36. Transportation and communications	1.737260	.014162	.009789	.607627	.001075	.024142	.018229	.142413	.000310	.016233	2.571240
37. Trade and distribution	.506688	.006526	.007437	.050329	.001283	.006098	.010823	.026474	.005853	.029513	.661025
38. Products, n.e.c	.098652	.005290	.000777	.008590	.007000	.000953	.000413	.011447	.000025	.004010	.137157
Total	19.102607	1.536509	1.442049	4.722421	.221120	.242636	.479804	1.280435	.293026	.752185	

[1] Totals may not add up to sum of components because of rounding.

NOTE.—For sources and notes see app. B, p. 157

Consumption Data

The data shown in table 3 comprise the first set of comprehensive and detailed consumption statistics published in the U.S.S.R. in recent years. Heretofore, Western analysts of consumption were restricted to the published consumers' retail and wholesale trade data, which exclude such consumption items as foodstuffs produced and consumed within the same household, drugs and medicines, as well as public utilities, such as fuel, electrical power and the like. The consumer trade statistics as published in the U.S.S.R. also somewhat overstate private consumption by including some purchases made by state organizations and agencies. The data presented below account for all private consumption as recorded for the purposes of national income accounts, and thus cover all material purchases of the population with the exception of services.[1]

Public consumption shown in table 3 is interpreted the same way; it shows the total bill of material purchases for current use incurred by all state organizations, agencies, and institutions.[2]

In accordance with Soviet national income accounting methodology, public consumption also includes material purchases incurred by two nonproductive service activities—passenger transportation and communications serving the nonproductive sphere of the economy; i.e., the population and the State. For the purposes of this presentation it was deemed desirable to show public consumption separately, and therefore the material purchases of transportation and communications were identified and grouped in a separate column.

All entries in table 3 are in terms of purchasers' prices of the given year. It should be noted that the values shown include not only freight and trade margins but also the turnover tax which, with some exceptions, is levied on private consumer goods only. While lack of the necessary data precludes removal of the turnover tax from the data, it is nevertheless quite apparent that the ratio of private to public consumption, which as measured in purchasers' prices is about 7 or 8 to 1, would be substantially lower were all the magnitudes expressed net of turnover tax.

[1] Soviet national income accounts, both on the production and on the distribution side, exclude all services with the exception of freight transportation, communications serving production, and trade and distribution activities. The sum of all material consumption plus depreciation of residential housing is equal to total private consumption as recorded in Soviet national income by use.

[2] Public consumption shows only final use of material products. Thus, this category covers such state activities as administration, science, education, medical, cultural, and defense, but excluding the intermediate use of materials incurred by productive activities in industry, construction, agriculture, and productive services such as freight transportation.

TABLE 3. *Consumption in the U.S.S.R., 1959–63*

[In millions of rubles]

CONSUMPTION FOR 1959

Sector No.	Type of commodity	Total consumption	Private consumption	Public consumption	Non-productive [1] services
1.	Ferrous ores	0	0	0	0
2.	Ferrous metals	22.1	2.1	4.1	15.9
3.	Nonferrous ores	0	0	0	0
4.	Nonferrous metals	294.4	2.1	286.5	5.8
5.	Coking coal	0	0	0	0
6.	Metal products	53.2	12.8	30.9	9.5
7.	Coal	688.5	146.3	341.4	200.8
8.	Oil	463.9	103.2	120.3	240.4
9.	Gas	85.8	49.8	36.0	0
10.	Other fuels	60.2	0	60.2	0
11.	Electrical power	1,032.8	635.5	359.8	37.5
12.	Electrical and power machinery and equipment	386.3	329.3	55.9	1.1
13.	Tools and instruments	662.0	605.1	49.6	7.3
14.	General machinery	234.2	234.0	0.2	0
15.	Transportation machinery and equipment	35.8	0	0	35.8
16.	Automobiles	630.6	555.7	23.2	51.7
17.	Agricultural machinery and equipment	0	0	0	0
18.	Machinery, not elsewhere classified	744.8	578.3	149.2	17.3
19.	Metalworking	1,047.5	859.1	188.4	0
20.	Repair of machinery	19.8	0	0	19.8
21.	Abrasives	0	0	0	0
22.	Mineral and basic chemistry	85.8	42.4	41.1	2.3
23.	Synthetics, paints	759.2	357.1	389.2	12.9
24.	Rubber products	166.5	34.5	42.0	90.0
25.	Lumber and woodworking	1,696.5	1,271.6	382.1	42.8
26.	Paper	81.2	0	80.4	0.8
27.	Construction materials	397.5	122.9	259.5	15.1
28.	Glass	351.3	333.7	16.1	1.5
29.	Textiles	9,624.2	9,287.0	318.7	18.5
30.	Apparel and footwear	10,644.9	10,205.9	421.3	17.7
31.	Food	36,789.4	35,575.0	1,214.4	0
32.	Industry, not elsewhere classified	5,415.8	4,805.1	610.7	0
33.	Construction	0	0	0	0
34.	Agriculture	17,612.6	17,096.9	510.9	4.8
35.	Forestry	0	0	0	0
36.	Transportation and communications	0	0	0	0
37.	Trade and distribution	0	0	0	0
38.	Products, not elsewhere classified	2,087.5	1,929.6	157.9	0
	Total	92,174.3	85,175.0	6,150.0	849.3

CONSUMPTION FOR 1960

1.	Ferrous ores	0	0	0	0
2.	Ferrous metals	26.6	2.1	7.2	17.3
3.	Nonferrous ores	0	0	0	0
4.	Nonferrous metals	360.4	2.2	351.9	6.3
5.	Coking coal	0	0	0	0
6.	Metal products	57.6	13.1	34.2	10.3
7.	Coal	732.5	147.9	366.6	218.0
8.	Oil	544.5	111.1	172.3	261.1
9.	Gas	101.4	62.3	39.1	0
10.	Other fuels	65.2	0	65.2	0
11.	Electrical power	1,168.2	706.2	421.2	40.8
12.	Electrical and power machinery and equipment	404.4	335.3	67.9	1.2
13.	Tools and instruments	674.2	606.5	59.8	7.9
14.	General machinery	256.3	256.0	0.3	0
15.	Transportation machinery and equipment	37.6	0	0	37.6
16.	Automobiles	702.6	612.6	33.9	56.1
17.	Agricultural machinery and equipment	0	0	0	0
18.	Machinery, not elsewhere classified	891.6	682.8	190.1	18.7
19.	Metalworking	1,064.8	861.2	203.6	0
20.	Repair of machinery	22.0	0	0	22.0
21.	Abrasives	0	0	0	0
22.	Mineral and basic chemistry	91.4	44.3	44.6	2.5
23.	Synthetics, paints	803.8	370.8	419.0	14.0
24.	Rubber products	185.9	36.2	52.0	97.7
25.	Lumber and woodworking	1,901.8	1,437.8	417.5	46.5
26.	Paper	87.2	0	86.4	0.8
27.	Construction materials	420.8	130.9	273.5	16.4
28.	Glass	356.9	336.0	19.3	1.6

See footnote at end of table, p. 152.

TABLE 3. *Consumption in the U.S.S.R., 1959–63*—Continued

[In millions of rubles]

Sector No.	Type of commodity	Total consumption	Private consumption	Public consumption	Non-productive [1] services
	CONSUMPTION FOR 1960				
29.	Textiles	10,179.4	9,785.1	374.2	20.1
30.	Apparel and footwear	12,040.8	11,581.1	440.5	19.2
31.	Food	40,440.9	39,047.8	1,393.1	0
32.	Industry, not elsewhere classified	5,585.2	4,966.9	618.3	0
33.	Construction				
34.	Agriculture	17,446.4	16,867.8	573.4	5.2
35.	Forestry	0	0	0	0
36.	Transportation and communications	0	0	0	0
37.	Trade and distribution	0	0	0	0
38.	Products, not elsewhere classified	2,133.1	1,960.5	172.6	0
	Total	98,783.5	90,964.5	6,897.7	921.3
	CONSUMPTION FOR 1961				
1.	Ferrous ores	0	0	0	0
2.	Ferrous metals	31.6	2.1	10.9	18.6
3.	Nonferrous ores	0	0	0	0
4.	Nonferrous metals	433.7	2.2	424.8	6.7
5.	Coking coal	0	0	0	0
6.	Metal products	62.9	13.2	38.6	11.1
7.	Coal	754.1	148.2	371.8	234.1
8.	Oil	547.7	117.1	150.3	280.3
9.	Gas	108.8	64.3	44.5	0
10.	Other fuels	68.7	0	68.7	0
11.	Electrical power	1,269.9	774.1	452.0	43.8
12.	Electrical and power machinery and equipment	498.7	417.9	79.5	1.3
13.	Tools and instruments	633.5	551.9	73.1	8.5
14.	General machinery	248.8	248.5	0.3	0
15.	Transportation machinery and equipment	39.2	0	0	39.2
16.	Automobiles	719.8	619.3	40.2	60.3
17.	Agricultural machinery and equipment	0	0	0	0
18.	Machinery, not elsewhere classified	1,018.1	753.1	244.9	20.1
19.	Metalworking	1,080.7	859.4	221.3	0
20.	Repair of machinery	25.2	0	0	25.2
21.	Abrasives	0	0	0	0
22.	Mineral and basic chemistry	95.3	44.2	48.4	2.7
23.	Synthetics, paints	857.9	372.8	470.0	15.1
24.	Rubber products	208.8	36.6	67.3	104.9
25.	Lumber and woodworking	2,104.2	1,603.1	451.2	49.9
26.	Paper	85.3	0	84.4	0.9
27.	Construction materials	432.7	136.0	279.1	17.6
28.	Glass	366.6	343.2	21.7	1.7
29.	Textiles	9,762.9	9,330.0	411.3	21.6
30.	Apparel and footwear	12,518.5	12,020.4	477.4	20.7
31.	Food	42,189.0	40,697.6	1,491.4	0
32.	Industry, not elsewhere classified	5,864.6	5,191.7	672.9	0
33.	Construction	0	0	0	0
34.	Agriculture	18,101.3	17,477.5	618.3	5.5
35.	Forestry	0	0	0	0
36.	Transportation and communications	0	0	0	0
37.	Trade and distribution	0	0	0	0
38.	Products, not elsewhere classified	1,908.9	1,716.3	192.6	0
	Total	102,037.4	93,540.7	7,506.9	989.8
	CONSUMPTION FOR 1962				
1.	Ferrous ores	0	0	0	0
2.	Ferrous metals	36.2	2.2	13.4	20.6
3.	Nonferrous ores	0	0	0	0
4.	Nonferrous metals	499.1	2.2	489.4	7.5
5.	Coking coal	0	0	0	0
6.	Metal products	65.9	13.9	39.7	12.3
7.	Coal	750.0	149.2	340.6	260.2
8.	Oil	594.8	122.1	161.1	311.6
9.	Gas	125.1	76.7	48.4	0
10.	Other fuels	75.3	0	75.3	0
11.	Electrical power	1,377.5	849.6	479.2	48.7
12.	Electrical and power machinery and equipment	605.2	513.9	89.8	1.5
13.	Tools and instruments	688.7	597.8	81.5	9.4

See footnote at end of table, p, 152,

TABLE 3. *Consumption in the U.S.S.R., 1959-63*—Continued

[In millions of rubles]

Sector No.	Type of commodity	Total consumption	Private consumption	Public consumption	Nonproductive services
	CONSUMPTION FOR 1962				
14.	General machinery	221.3	221.0	0.3	0
15.	Transportation machinery and equipment	38.3	0	0	38.3
16.	Automobiles	777.2	668.0	42.2	67.0
17.	Agricultural machinery and equipment	0	0	0	0
18.	Machinery, not elsewhere classified	1,174.6	863.3	288.9	22.4
19.	Metalworking	1,099.5	866.4	233.1	0
20.	Repair of machinery	25.0	0	0	25.0
21.	Abrasives	0	0	0	0
22.	Mineral and basis chemistry	97.3	44.3	50.0	3.0
23.	Synthetics, paints	925.6	395.3	513.6	16.7
24.	Rubber products	231.8	38.2	77.0	116.6
25.	Lumber and woodworking	2,338.6	1,812.5	470.7	55.4
26.	Paper	86.4	0	85.4	1.0
27.	Construction materials	465.0	140.9	304.5	19.6
28.	Glass	369.7	344.2	23.6	1.9
29.	Textiles	9,830.3	9,374.1	432.2	24.0
30.	Apparel and footwear	13,731.3	13,193.8	514.5	23.0
31.	Food	46,550.6	44,877.2	1,673.4	0
32.	Industry, not elsewhere classified	6,159.1	5,443.0	716.1	0
33.	Construction	0	0	0	0
34.	Agriculture	19,905.5	19,242.2	657.1	6.2
35.	Forestry	0	0	0	0
36.	Transportation and communications	0	0	0	0
37.	Trade and distribution	0	0	0	0
38.	Products, not elsewhere classified	1,951.4	1,731.9	219.5	0
	Total	110,796.3	101,583.9	8,120.5	1,091.9
	CONSUMPTION FOR 1963				
1.	Ferrous ores	0	0	0	0
2.	Ferrous metals	41.2	2.2	16.9	22.1
3.	Nonferrous ores	0	0	0	0
4.	Nonferrous metals	572.7	2.2	562.5	8.0
5.	Coking coal	0	0	0	0
6.	Metal products	69.1	14.3	41.6	13.2
7.	Coal	769.2	150.6	340.1	278.5
8.	Oil	657.1	125.6	198.1	333.4
9.	Gas	158.0	100.2	57.8	0
10.	Other fuels	80.1	0	80.1	0
11.	Electrical power	1,506.2	939.2	514.9	52.1
12.	Electrical and power machinery and equipment	694.0	590.9	101.5	1.6
13.	Tools and instruments	648.3	548.2	90.0	10.1
14.	General machinery	185.5	185.2	0.3	0
15.	Transportation machinery and equipment	38.2	0	0	38.2
16.	Automobiles	964.2	845.1	47.4	71.7
17.	Agricultural machinery and equipment	0	0	0	0
18.	Machinery, not elsewhere classified	1,370.5	1,007.0	339.6	23.9
19.	Metalworking	1,115.6	867.9	247.7	0
20.	Repair of machinery	21.9	0	0	21.9
21.	Abrasives	0	0	0	0
22.	Mineral and basic chemistry	99.2	44.1	51.9	3.2
23.	Synthetics, paints	998.3	432.1	548.3	17.9
24.	Rubber products	273.3	57.0	91.5	124.8
25.	Lumber and woodowrking	2,576.3	2,011.2	505.8	59.3
26.	Paper	91.0	0	89.9	1.1
27.	Construction materials	487.7	145.7	321.0	21.0
28.	Glass	376.8	348.5	26.3	2.0
29.	Textiles	9,889.9	9,406.7	457.5	25.7
30.	Apparel and footwear	13,871.8	13,304.4	542.8	24.6
31.	Food	50,016.6	48,173.1	1,843.5	0
32.	Industry, not elsewhere classified	6,391.3	5,645.6	745.7	0
33.	Construction	0	0	0	0
34.	Agriculture	20,653.2	19,949.5	697.1	6.6
35.	Forestry	0	0	0	0
36.	Transportation and communications	0	0	0	0
37.	Trade and distribution	0	0	0	0
38.	Products, not elsewhere classified	1,917.7	1,683.4	234.3	0
	Total	116,534.9	106,579.9	8,794.1	1,160.9

[1] Material purchases of passenger transportation and communications serving the population, and other nonproductive activities.

SOURCES: See app. C, p. 157.

Employment by Skills

Employment as used in Soviet input-output statistics is defined as average annual employment expressed in man-years and covering all employed in the given industry, i.e., both productive workers and workers employed in various auxiliary jobs, as well as apprentices and clerical and managerial personnel. The total employment shown in table 4 is broken down into six categories of skills.

I. Administrative-managerial, supervisory, and engineering personnel with completed higher education.

II. Other engineering and technical supervisory personnel.

III. Workers employed in production or auxiliary services of the highest skill group.

IV. Same as III but medium skills.

V. Unskilled workers.

VI. Other employees including trainees, apprentices, clerical personnel, watchmen, etc.

TABLE 4.—*1959 employment by skill categories*

[In man-years]

	I	II	III	IV	V	VI	Total employment [1]
1. Ferrous ores	5,022.8	7,534.2	19,352.5	76,819.1	27,920.8	11,079.7	147,729
2. Ferrous metals	23,727.0	35,590.6	91,418.9	362,884.1	131,894.4	52,339.0	697,854
3. Nonferrous ores	4,444.7	6,667.0	17,125.1	67,977.5	24,707.2	9,804.4	130,726
4. Nonferrous metals	11,184.0	16,776.0	43,091.4	171,049.8	62,170.0	24,670.6	328,942
5. Coking coal	1,493.5	2,240.3	5,754.4	22,842.0	8,302.2	3,294.5	43,927
6. Metal products	3,416.7	5,125.0	13,164.2	52,254.8	18,992.6	7,536.8	100,490
7. Coal	22,564.8	94,020.0	48,890.4	807,318.4	224,394.4	56,412.0	1,253,600
8. Oil	9,531.0	11,296.0	23,651.0	80,131.0	39,359.5	12,531.5	176,500
9. Gas	765.7	907.5	1,900.1	6,437.7	3,162.1	1,006.8	14,180
10. Other fuels	2,207.4	19,376.3	36,300.0	77,750.6	90,749.9	18,885.8	245,270
11. Electrical power	15,810.6	40,540.0	51,080.4	142,295.4	123,647.0	32,026.6	405,400
12. Electrical and power M. & E	17,974.0	41,151.0	32,637.0	151,360.0	194,403.0	35,475.0	473,000
13. Tools and instruments	22,355.4	51,182.1	40,592.7	188,256.0	241,791.3	44,122.5	588,300
14. General machinery	32,683.8	74,828.7	59,346.9	275,232.0	353,501.1	64,507.5	860,100
15. Transportation M. & E	13,414.0	30,711.0	24,357.0	112,960.0	145,083.0	26,475.0	353,000
16. Automobiles	13,186.0	30,189.0	23,943.0	111,040.0	142,617.0	26,025.0	347,000
17. Agricultural M. & E	16,150.0	36,975.0	29,325.0	136,000.0	174,675.0	31,875.0	425,000
18. Machinery, n.e.c.[2]	47,158.0	107,967.0	85,629.0	397,120.0	510,051.0	93,075.0	1,241,000
19. Metalworking	25,737.4	58,925.1	46,733.7	216,736.0	278,370.3	50,797.5	677,300
20. Repair of machinery	46,968.0	107,532.0	85,284.0	395,520.0	507,996.0	92,700.0	1,236,000
21. Abrasives	1,468.1	1,578.9	2,825.4	13,046.7	6,592.6	2,188.3	27,700
22. Mineral and basic chemistry	7,001.3	7,529.7	13,474.2	62,219.1	31,439.8	10,435.9	132,100
23. Synthetics, paints	22,864.2	24,589.8	44,002.8	203,189.4	102,673.2	34,080.6	431,400
24. Rubber products	5,300.0	5,700.0	10,200.0	47,100.0	23,800.0	7,900.0	100,000
25. Lumber and woodworking	28,528.0	151,198.4	299,544.0	1,383,608.0	770,256.0	219,665.6	2,852,800
26. Paper	1,470.0	7,791.0	15,435.0	71,295.0	39,690.0	11,319.0	147,000
27. Construction materials	22,726.2	90,904.8	259,728.0	779,184.0	384,722.1	86,034.9	1,623,300
28. Glass	0	12,643.7	22,930.1	96,006.4	69,004.6	13,715.2	214,300
29. Textiles	20,020.0	56,420.0	329,420.0	908,180.0	360,360.0	145,600.0	1,820,000
30. Apparel and footwear	13,440.0	96,000.0	328,320.0	910,080.0	403,200.0	168,960.0	1,920,000
31. Food	53,130.0	177,100.0	202,400.0	1,049,950.0	799,480.0	245,410.0	2,530,000
32. Industry, n e.c.[2]	13,800.0	40,200.0	64,200.0	253,800.0	181,800.0	46,200.0	600,000
33. Construction	151,512.0	321,963.0	827,003.0	2,626,208.0	2,140,107.0	246,207.0	6,313,000
34. Agriculture	99,000.0	726,000.0	1,122,000.0	6,072,000.0	24,320,999.5	660,000.0	33,000,000
35. Forestry	1,056.0	7,744.0	11,968.0	64,768.0	259,424.0	7,040.0	352,000
36. Transportation and communications	63,600.0	487,600.0	402,800.0	1,653,600.0	2,051,100.0	641,300.0	5,300,000
37. Trade and distribution	77,565.0	227,524.0	413,680.0	1,628,865.0	2,590,671.0	232,695.0	5,171,000
38. Products, n.e.c.[2]	11,325.0	33,220.0	60,400.0	237,825.0	378,255.0	33,975.0	755,000

[1] Totals may not add up to sum of components because of rounding.
[2] Not elsewhere classified.

NOTE.—For sources and notes see app. D, p. 158.

APPENDIX A

Commodity Classification Employed in the Reconstructed 38-Sector Input-Output Table for 1959

Reconstructed sector designation	Description [1]	Published Soviet table [2]
1. Ferrous ores	Ferrous ores and nonmetallic raw materials for ferrous metallurgy.	Part of 1.
2. Ferrous metals	Cast iron, steel, ferroalloys, rolled steel plate and sheet, rails and pipe.	Do.
3. Nonferrous ores	Nonferrous ores	Do.
4. Nonferrous metals	Nonferrous metals and industrial diamonds.	Do.
5. Coking coal	Coke and products of coke-chemistry, including tar and coal-based oils.	2.
6. Metal products	Industrial metal products: Nails, wire, bolts, pins, springs, chains, welding electrodes, and other small metal items; refractory materials.	3, 4.
7. Coal	Anthracite and lignite; coal briquets	5.
8. Oil	Extraction of oil, gas byproducts; oil refineries and processing of oil products.	6, 7.
9. Gas	Extraction of natural gas	8.
10. Other fuels	Peat, peat briquets, oil shales, liquid fuels from coal.	9–11.
11. Electrical power	Generation of electrical power (thermal and hydro) and of steam as byproduct.	12.
12. Electrical and power machinery and equipment.[3]	Steam boilers and equipment, steam and gas turbines, nuclear reactors, steam engines, diesel engines, and other prime movers; electrical machinery; electrical lighting fixtures; electrical household appliances.	13, 14.
13. Tools and instruments.	Cable and wire products; woodcutting and metalworking tools, electrical tools, measuring tools; industrial instruments and gages, measuring and control apparatus; calculating and data processing equipment, including electronic computers; clocks, watches, optical, and photographic equipment, including household types; ball and roller bearings.	15, 19–21.
14. General machinery	Metal and woodworking tools, lathes, and drills; forging and pressing equipment; casting equipment; mining and metallurgical machinery and equipment; pumps and compressors; machinery and equipment for the woodworking, paper, textile, apparel, food, and printing industries; hoisting and transporting equipment; construction machinery.	16–18, 22–30.
15. Transportation machinery and equipment.	Transportation machinery and equipment; shipbuilding and aircraft production.	31.
16. Automobiles	Passenger automobiles, trucks, and other motor vehicles.	32.
17. Agricultural machinery and equipment.	Tractors and other agricultural machinery and equipment.	33.

See footnotes at end of table, p. 156.

APPENDIX A—Continued

Commodity Classification Employed in the Reconstructed 38-Sector Input-Output Table for 1959

Reconstructed sector designation	Description [1]	Published Soviet table [2]
18. Machinery not elsewhere classified.	Radioelectronics and communication equipment; machinery and equipment not elsewhere classified.	None.[4]
19. Metalworking	Sanitary engineering equipment; metalware and hardware; metal furniture; metal frames, structures, bridges.	35–37.
20. Repair of machinery.	Repair of all machinery and equipment	38.
21. Abrasives	Abrasives and graphite products	39.
22. Mineral and basic chemicals.	Mineral chemicals; sulfur, calcite, etc.; basic chemicals: ammonia, nitrate fertilizers, inorganic acids, and salts.	40, 41.
23. Synthetics and paints.	Aniline dyes, synthetic resins and plastics, synthetic fibers, organic synthetics, synthetic rubber, paint and lacquer; pharmaceuticals and photochemicals.	42–46, 48.
24. Rubber products	Tires, tubes, hoses, and other rubber products; asbestos.	47.
25. Lumber and woodworking.	Logging, lumber, and woodworking; furniture and other wood products.	49–52, 54.
26. Paper	Paper and paper products; wood pulp and cellulose.	53.
27. Construction materials	Cement, alabaster, and other construction materials; brick, ceramic blocks, tiles, insulating materials, and concrete.	55.
28. Glass	Glass and porcelain-faïence products	56.
29. Textiles	Textiles, hosiery, knitwear, and felt goods	57.
30. Apparel and footwear.	Clothing and apparel, leather goods, footwear, and fur products.	58, 59.
31. Food	Processed foods: fish, meat, milk and dairy products, sugar, flour, bread, processed and canned goods, table salt, alcoholic and nonalcoholic beverages; tobacco and products; candles, soap, perfumes and other cosmetics.	60–65.
32. Industry, n.e.c.	Industrial products, not elsewhere classified, printing and publishing, musical instruments and toys.	None.[4]
33. Construction	Construction—new and maintenance	66.
34. Agriculture	Agriculture—crops and animal husbandry	68–69.
35. Forestry	Forestry	70.
36. Transportation and communications.	Freight transportation, and communications serving production.	71.
37. Trade and distribution.	Retail and wholesale trade, including public dining, supply and distribution services, procurement of agricultural products.	72.
38. Products, n.e.c.	Metal scrap collection, publishing, noncommercial hunting and fishing, and other activities not elsewhere classified.	73.

[1] Based on Central Statistical Administration of the U.S.S.R., "Forms and Instructions for 1959 Input-Output," translated by U.S. Department of Commerce, Office of Technical Services, Washington, D.C., 1962.

[2] Sector numbers refer to those in the published truncated version of the 1959 Soviet input-output table. TsSU, *Narodnoe khoziaistvo SSSR v 1960 godu*. Moscow, 1961, pp. 103–143.

[3] M. & E.—machinery, equipment, and spare parts.

[4] These sectors were completely omitted from the published version of the table.

APPENDIX B

Capital Data

The original capital stock table was prepared in the U.S.S.R. in terms of 130 types of productive capital, but for publication the capital data were aggregated into 22 groups. Furthermore, the original stock data were not published as such but in the form of capital-output coefficients, i.e., as the ratio of a given type of capital stock used in a sector to the gross output of that sector. The table was published in *Vestnik statistiki*, No. 9, 1966, pages 87–95.

The coefficients as published were converted into stock data by multiplication by the author's estimates of gross value of output of the 38 sectors shown in the table. The same values of gross output were used as weights in deriving the capital-output coefficients in table 2. For estimates of the gross output magnitudes see Vladimir G. Treml, *The 1959 Soviet Intersectoral Table*, volume I, RAC–TP–137, Washington, D.C. 1964, pages 93–94, and by the same author "New Soviet Capital Data", *Soviet Studies*, volume XVIII. No. 3, January 1967, pages 290–295.

APPENDIX C

Consumption Data

Originally, the distribution of final product was prepared in the U.S.S.R. in terms of 17 end-uses (private consumption, public consumption, investment, etc.) and 80 types of products but only private and public consumption data were published in Ts. S.U., *Narodnoe Khoziaistvo SSSR V 1964 godu*, Moscow, 1965, pages 579–589.

The separate identification of material costs of transportation and communications was made in the following manner. According to Soviet statistical practice, 70 percent of the total value of transportation services is allocated to freight and 30 percent to passenger transportation. The interindustry transactions table for 1959 gave us a breakdown of the material costs of transportation, and this breakdown was used to estimate material costs in passenger transportation as three-sevenths of the freight transportation costs. Since material costs of communications were not identified separately in the Soviet input-output table, this procedure by necessity covered also communications. The error, however, is not expected to be too significant as material costs of communication services are minor when compared to transportation. The material costs thus estimated for 1959 were projected for later years by applying the rate of growth of passenger transportation: 1959 equals 100; 1960, 108.6; 1961, 116.6; 1962, 129.6; 1963, 138.7 (Ts. S.U., *Transport i sviaz SSSR*, Moscow, 1967, p. 28). The estimates were then subtracted from the published column of material public consumption.

APPENDIX D

Employment Data

Employment by input-output sectors is from Vladimir G. Treml, *The 1959 Soviet Intersectoral Flow Table*, volume I, RAC–TP–137, Washington, D.C., 1964, pages 95–96. The skill breakdowns prepared for the 1959 input-output table are from E. Iasin and M. Fidler, *Vestnik statistiki*, No. 12, 1965, pages 36–43. This source shows skill breakdowns in terms of 17 aggregated branches of the economy. When the 38-sector breakdown used in this paper did not coincide with the 17-branch breakdown the distribution within branches was made proportionally.

V. G. T.

C

THE EIGHTH 5-YEAR PLAN IN PROGRESS: 1966 AND 1967

I. Economic Immobilisme

The moderate success to date of the first 5-year plan under Khrushchev's successors should not be interpreted as a step toward a return to past high levels of economic growth or significantly improved performance in meeting the variety of economic ends sanctioned by the leaders. Instead, the shortrun economic gains may actually conceal further deterioration in the performance of the economy. This deterioration may be masked by attention to shortrun aims at the expense of longer term performance and favorable, but not continuing, factors not controlled by the planners, e.g., weather. The lack of introduction and implementation of new programs may have provided two types of stimulants to short term performance: some of the programs introduced during the years of Nikita Khrushchev's power may be beginning to show returns and the absence of Khrushchev's "campaign-type" planning may have returned stability to the planning process.

The absence of new programs or significant changes in economic planning does not mean that policy debates on resource allocation, planning techniques, and economic institutions have not been occurring. The agenda of resource allocation debates is along one: agricultural investment versus military equipment; space versus strategic weapons, etc. Similarly the recognition of the need for change in economic administration has encouraged discussion on the role of prices in planning, the effectiveness of alternative incentive programs, etc. However, significant changes in the resource allocation pattern or in the administration of the economy have not resulted to date.

The equivocation in economic policy may reflect the unsettled political leadership situation as much as the formidable nature of the economic problems. The collegial role of Leonid Brezhnev and his fellow members of the Politburo may leave little firm basis for decisive action in this unstable political climate. The institutional voices of the military and others may act as a negative constraint on changes influencing resource allocation.

Temporization and equivocation have led to clear preference for present benefits over future gains. Military and other consumers have held their own or better while investment programs have been pared.

2. Plan and Fulfillment

The record of the first 2 years of the eighth FYP period measured against the targets as given by the directives of the XXIII Party Congress reflects in quantitative terms the above noted qualitative picture.

According to official Soviet data (see accompanying tables, beginning p. 161), the rate of growth of national income dropped in 1967 as compared to 1966. For the 2 years taken together the growth rate is within the average annual range implicit in the plan directives. It may be significant that the index for gross social product was not reported in the early returns for 1967; for 1966 the rate was higher than the planned annual average.

Official statistics show a higher rate of increase in industrial production for 1967 than for 1966, with most of the acceleration apparently accounted for by consumer goods industries. This is also borne out by data on production of individual commodities, where most of the major producer goods show slower growth rates for 1967. Total industrial output is well ahead of the implied average annual rate for the eighth FYP. For most of the major individual commodities in the producer goods category (electric power, chemicals, machinery), however, volume of output is increasing at a rate well below that planned, while consumer goods are near the planned rates.

The bad weather of 1967 hit grain production particularly hard, with a serious drop in output of this commodity compared to the previous year. It will be difficult to make up the 1967 deficit in the remaining 3 years of the plan period to attain the average target. Furthermore, the 1967 decline may well affect 1968 output of animal products unless grain is again imported to replenish feed stocks.

The chronic Soviet difficulty with construction is reflected in data on productive fixed capital stock, where the rate of increase is below the planned pace and is still declining. New capacities put into operation are well below the implied annual average rates in the important sectors of electric power generation, coal mining, and railroad transport.

3. Parallel With Khrushchev's Time of Promise

The last several years of the decade of the fifties were years of promise concealing longer term problems. In this sense 1966 may bear a resemblance to 1958. In each case the natural forces facilitated economic performance, specifically good weather permitted good to excellent grain harvests. Moreover, new programs were accepted and promulgated in principle without being faced with the difficult choices inherent in implementation over time; in each case the new programs involved additional space ventures and increased agricultural investment.

In the early sixties Khrushchev's plans were not only burdened with the impact of poor weather, but also the necessity to make choices among alternative programs. The resulting choices among military and investment programs were largely responsible for the retardation in Soviet industrial growth. A similar pattern may be emerging for the late sixties.

Future Prospects—A Time of Economic Troubles?

The Soviet economy may grow in the next few years at a more rapid rate than in the last 2. The Eighth Five-Year Plan may be met and exceeded. This might occur if labor productivity and capital efficiency respond well to the incentive programs for management in the reforms to date and if weather is good to excellent. These fortuitous developments, however, cannot be assured. Moderate and mixed success in the first 2 years of the Eighth Five-Year Plan could also be followed by moderate, or possibly extreme, failures in some sectors with indifferent success for the economy as a whole. As in Khrushchev's time, weather will trace its inexorable cycle from excellent to very bad for agricultural and extractive industries. Moreover, sooner or later Khrushchev's

successors must make some clear resource allocation choices. Brezhnev must either move to support his plan for agriculture at the expense of military and other sectors or suffer the consequences of the results of its tacit abandonment. In time, many of the effects of deferment in investment allocations will come home to roost.

There may be a pattern of convergence of favorable and unfavorable factors influencing Soviet economic performance. Some historical evidence could be marshaled to support this proposition: peak years such as 1958; trough years such as 1963. Alternatively there might be a pattern of gradual change which will obtain in the future years. If the latter, then the Eighth Five-Year Plan seems destined to fall short of its planned targets and the leadership will be increasingly concerned by falling performance. But if the more extreme cyclical pattern obtains, the Soviet Union may be headed for a major economic crisis dwarfing those problems which purportedly influenced Khrushchev's removal.

TABLE 1.—*Principal economic indicators for the U.S.S.R., 1966–70 planned, 1966 and 1967 achieved*

[Official Soviet data]

Indicator	Planned increase, 1966–70		Annual rate achieved, percent	
	Total for period, percent	Implied average annual rate, percent	1966	1967
Gross social product	40	7.0	8.0	na
National income	38–41	6.7–7.1	7.5	6.7
Industrial output, total	47–50	8.0–8.5	8.6	10.0
Chemical industry	100	14.9	13.0	13.0
Machine building	60–70	9.9–11.2	12.0	12.0
Light industry	40	7.0	9.0	11.0
Food industry	40	7.0	4.0	7.0
Agricultural output	25	4.6	10.0	1.0
Labor productivity:				
In industry	33–35	5.9–6.2	5.0	7.0
In construction	35–40	6.2–7.0	5.0	6.5
In agriculture	40–45	7.0–7.7	12.0	na
In railroad transport	23–25	4.2–4.6	3.6	8.0
Capital investment, all sources	47	8.0	6.0	8.0
Freight turnover:				
Railroad	23	4.2	3.0	7.0
Motor vehicle	70	11.2	4.0	8.0
Pipeline	100	14.9	12.0	11.0
Productive fixed capital	50	8.4	8.0	7.0
New capacity in:				
Power generation (million kilowatts)	64–66	12.8–13.2	10.0	10.0
Coal mining (million tons)	165	33.0	20.0	20.0
Oil and gas pipelines (thousand kilometers)	37	7.4	6.5	8.1
Railroads (thousand kilometers)	7	1.4	1.2	0.8

SOURCES: Plan data from *Direktivy XXIII s'ezda KPSS po piatiletnemu planu razvitiia narodnogo khoziaistva SSSR na 1966–1970 gody*, Moscow, 1966 (see also *ASTE Bulletin*, Summer 1966, pp. 18–25). Reported data for 1966 and 1967 from *Pravda*, Jan. 29, 1967 and Jan. 25, 1968.

TABLE 2.—*Output of selected industrial products, 1966–70 planned, 1966 and 1967 achieved*

[Official Soviet data]

Commodity	Planned increase, 1966–70		Annual rate achieved, percent	
	Total for period, percent	Implied average annual rate, percent	1966	1967
Electrical power	64– 68	10.4–10.9	8.0	8.0
Petroleum	42– 46	7.3– 7.9	9.0	9.0
Gas	74– 86	11.7–13.2	12.0	10.0
Coal	15– 17	2.8– 3.2	1.0	2.0
Pig iron	42– 47	7.3– 8.0	6.0	6.0
Steel	36– 42	6.3– 7.3	6.0	6.0
Rolled metal	34– 40	6.0– 7.0	8.0	7.0
Steel pipe	56– 67	9.3–10.8	10.0	7.0
Mineral fertilizers	98–108	14.6–15.8	15.0	12.0
Plastics and synthetic resins	156–180	20.7–22.8	21.0	14.0
Chemical fibers	94–104	14.2–15.3	13.0	11.0
Synthetic detergents	500	38.0	28.0	32.0
Tires	44– 52	7.6– 8.7	5.0	7.0
Turbines	51– 64	8.6–10.4	4.0	−3.0
Diesel locomotives, main line	1– 8	.2– 1.6	3.0	−2.0
Chemical equipment	103–116	15.2–16.7	8.0	2.0
Metalcutting machine tools	19– 24	3.5– 4.4	3.0	2.0
Forging, pressing machinery	45– 51	7.7– 8.6	10.0	7.0
Motor vehicles, total	121–145	17.2–19.6	10.0	8.0
Trucks	158–171	20.9–22.1	7.0	7.0
Passenger autos	248–298	28.3–31.8	14.0	9.0
Tractors	69– 76	11.1–12.0	8.0	6.0
Agricultural equipment	73	11.6	4.0	5.0
Wood (drevesina)	4– 8	.8– 1.6	.2	4.0
Paper	55– 64	9.2–10.4	10.0	7.0
Cement	38– 45	6.7– 7.7	10.0	6.0
Slate	60	9.9	8.0	8.0
Window glass	40	7.0	5.0	2.0
Fabrics	27– 31	4.9– 5.5	4.8	4.8
Footwear and leather	26– 30	4.7– 5.4	7.0	7.0
Meat (from state resources)	23– 29	4.2– 5.2	9.0	12.0
Fish, whales, seafood products	47– 55	8.0– 9.2	5.0	7.0
Whole milk products	39– 48	6.8– 8.2	2.0	6.0
Vegetable oils	34– 41	6.0– 7.1	−2.0	10.0
Canned goods	86– 93	13.2–14.1	5.0	17.0
Sugar, granulated (beet)	10– 12	1.9– 2.3	−7.0	2.0
Radios and radiolas	103–108	15.2–15.8	13.0	10.0
Refrigerators, household	212–229	25.6–26.9	32.0	22.0
Motorcycles, motorbikes	39– 53	6.8– 8.9	4.0	4.0
Furniture	44– 56	7.6– 9.3	9.0	10.0

SOURCES: Plan data from *Direktivy XXIII s'ezda KPSS po piatiletnemu planu razvitiia narodnogo khoziaistva SSSR na 1966–1970 gody*, Moscow, 1966 (see also *ASTE Bulletin*, Summer 1966, pp. 18–25). Reported data for 1966 and 1967 from *Pravda*, Jan. 29, 1967 and Jan. 25, 1968.

TABLE 3.—*Output of selected agricultural products, 1966–70 planned, 1966 and 1967 achieved*

Commodity	Unit	Average annual output (in physical units)	
		Planned 1966–70	Achieved 1966–67
Grain	Million tons	167	159.4
Sugar beets	do	80	80.4
Cotton	do	5.6–6.0	6.0
Potatoes	do	100	91.5
Meat	do	11	11.1
Milk	do	78	77.7
Eggs	Billion units	34	32.7
Wool	Thousand tons	392	383.0

SOURCES: Plan data from *Direktivy XXIII s'ezda KPSS po piatiletnemu planu razvitiia narodnogo khoziaistva SSSR na 1966–1970 gody*, Moscow, 1966 (see also *ASTE Bulletin*, Summer 1966, pp. 18–25). Reported data for 1966 and 1967 from *Pravda*, Jan. 29 1967 and Jan. 25 1968.

TABLE 4.—*Deliveries of equipment and fertilizer to agriculture, average annual planned for 1966–70 and reported actual for 1966 and 1967*

Item	Unit	Planned average annual, 1966–70	Reported actual	
			1966	1967
Tractors	Thousands	358	277	286
Trucks	do	220	106	146
Grain combines	do	110	86	96
Fertilizer	Million tons	41	31	34

SOURCES: Plan data from *Direktivy XXIII s'ezda KPSS po piatiletnemu planu razvitiia narodnogo khoziaistva SSSR na 1966–1970 gody*, Moscow, 1966 (see also *ASTE Bulletin*, Summer 1966, pp. 18–25). Reported data for 1966 and 1967 from *Pravda*, Jan. 29, 1967 and Jan. 25, 1968.

TABLE 5.—*Selected consumer indicators for the U.S.S.R., 1966–70 planned, 1966 and 1967 achieved*

Indicator	Planned increase, 1966–70		Annual rate achieved, percent	
	Total for period, percent	Implied average annual rate, percent	1966	1967
Per capita real income	30	5.4	6.0	6.0
Average wages of workers and employees	20	3.7	3.6	4.0
Average income of kolkhozniki	35–40	6.2–7.0	16.0	6.0
Consumer services	150	20.1	17.0	18.0
New housing [1]	480	96	80	103
Retail trade:				
Total turnover	43.5	7.5	8.7	9.4
Sales of industrial consumer goods:				
Household refrigerators	294	31.5	35.0	24.0
Washing machines	74	11.7	12.0	9.0
Radios and radiolas	40	7.0	−1.0	3.0
TV receivers	125	17.6	16.0	3.0
Furniture	45	7.7	9.0	10.0
Sales of food products:				
Meat and products	21	3.9	12.0	11.0
Milk and products	37	6.5	9.0	12.0
Fish and products	71	11.3	3.0	3.0
Sugar	22	4.1	7.0	6.0
Vegetable oils	65	10.5	−2.0	3.0

[1] In million square meters.

SOURCES: Plan data from *Direktivy XXIII s'ezda KPSS po piatiletnemu planu razvitiia narodnogo khoziaistva SSSR na 1966–1970 gody*, Moscow, 1966 (see also *ASTE Bulletin*, Summer 1966, pp. 18–25). Reported data for 1966 and 1967 from *Pravda*, Jan. 29 1967 and Jan. 25, 1968.

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XVI. BIBLIOGRAPHY

1. This bibliography is limited primarily to monographs which have been received by the U.S.S.R. Branch, Foreign Demographic Analysis Division, U.S. Bureau of the Census, in the fields of Soviet economics, labor, and population. The selection is limited to those monographs received since April 1966, the closing date of the previous bibliography contained in *New Directions in the Soviet Economy*, Part IV, 1966, pages 977–1026.

2. This new selection, as in the earlier ones, contains relatively few purely technical books, and statistical handbooks are omitted entirely. It consists of 564 items, more than half the number in the cumulative listing published in *New Directions*, and represents about 20 percent of the total number of items received in the U.S.S.R. Branch during the period of selection. In part this reflects the expanded general publishing program connected with the anniversary year of 1967, the publishing program of specific organizations such as the Central Mathematical Economics Institute which alone is represented by 11 items issued under its imprimatur, and in part an increased acquisition effort by the Branch.

3. The bibliography is arranged according to subject and sector of the national economy. The arrangement within the subject listing and the sector listing is as follows:

SUBJECT LISTING

Background.
Capital investment, new technology.
Communist party.
Cost-of-production, khozraschet, profits.
Economy—general.
Geography, urbanization, location of industry, regional economy.
Input-output, linear programing, mathematical methods.
International comparisons, foreign trade.
Labor.
Law.
Level of living, consumption.
National income, state budget, taxes, finances.
Planning.
Population and vital statistics.
Prices.
Social insurance, social security.
Sociology.
Statistics, accounting, mechanized data processing.
Wages.

SECTOR LISTING

Industry—General.
Electric power.
Fuels.
Metallurgy.
Machine-building and metalworking.
Chemical.
Construction materials.
Timber, woodworking, and paper.
Light.
Food.
Construction.
Agriculture.
Forestry.
Transportation—General.
Railroad.
Sea.
River.
Air.
Communications.
Trade and material-technical supply.
Housing-communal economy.
Health services.
Education.
Science and scientific services.
Banking, credit and insurance.
Government.
Armed forces.
Other.

SUBJECT LISTING

Background

1. Levin, A.Ya. *Sotsial'no-ekonomicheskiye uklady v SSSR v period perekhoda ot kapitalizma k sotsializmu; gosudarstvennyy kapitalizm i chastnyy kapitalizm.* Moscow, Ekonomika, 1967. 168 pp.
2. Moshkov, Yu.A. *Zernovaya problema v gody sploshnoy kollektivizatsii sel'skogo khozyaystva SSSR; 1929–1931 gg.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1966. 232 pp.
3. Panfilova, A.M. *Formirovaniye rabochego klassa SSSR v gody pervoy pyatiletki; 1928–1932.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1964. 176 pp.
4. Polyakov, Yu.A. *Perekhod k NEPu i sovetskoye krest'yanstvo.* Issued by the Academy of Sciences U.S.S.R., Institute of History. Moscow, Nauka, 1967. 512 pp.
5. Ul'yanovskaya, V.A. *Formirovaniye nauchnoy intelligentsii v SSSR; 1917–1937 gg.* Issued by the Academy of Sciences U.S.S.R., Institute of History. Moscow, Nauka, 1966. 216 pp.
6. Virnyk, D.F. et al. (Eds.). *Promyshlennost' i rabochiy klass Ukrainskoy SSR v period postroyeniya fundamenta sotsialisticheskoy ekonomiki; 1926–1932. Sbornik dokumentov i materialov.* Issued by the Academy of Sciences Ukrainian S.S.R., Institute of Economics, and the Central State Archives of the October Revolution and Socialist Constructiou of the Ukrainian S.S.R. Kiev, Izdatel'stvo politicheskoy literatury Ukrainy, 1966. 594 pp.
7. Zelenin, I.Ye. *Zernovyye sovkhozy SSSR; 1933–1941 gg.* Issued by the Academy of Sciences U.S.S.R., Institute of History. Moscow, Nauka, 1966. 248 pp.

(See also: 54, 61, 62, 102, 544.)

Capital Investment, New Technology

8. Antoshkevich, V. S. *Ekonomicheskaya effektivnost' sel'skokhozyaystvennykh mashin.* Moscow, Ekonomika, 1967. 184 pp.
9. Budunova, N. I. et al. *Ekonomicheskaya effektivnost' rekonstruktsii promyshlennykh predpriyatiy.* Moscow, Stroyizdat, 1966. 160 pp.
10. Dronov, F. A. *Effektivnost' ispol'zovaniya osnovnykh fondov promyshlennosti.* Issued by the Academy of Sciences Belorussian S.S.R., Institute of Economics. Minsk, Nauka i tekhnika, 1966. 192 pp.
11. Golub, B. M. and V. G. Lebedev. *Effektivnost' kapital'nykh vlozheniy i osnovnykh fondov v promyshlennosti.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Economic Sciences. Moscow, Mysl', 1967. 240 pp.
12. Gosstroy SSSR. *Normativy udel'nykh kapital'nykh vlozheniy v stroitel'stvo predpriyatiy i ob"yektov stroitel'noy industrii.* Moscow, Stroyizdat, 1966. 80 pp.
13. Khachaturov, T. S. *Ekonomicheskaya effektivnost' kapital'nykh vlozheniy.* Moscow, Ekonomika, 1964. 279 pp.
14. ——— (Ed.). *Metody i praktika opredeleniya effektivnosti kapital'nykh vlozheniy i novoy tekhniki.* Sborniki nauchnoy informatsii. Issued by the Academy of Sciences U.S.S.R., Scientific Council for the Effectiveness of Fixed Assets, Capital Investment and New Techniques, Institute of Economics. Moscow, Nauka. Issue 10 (1966). 152 pp. Issue 11 (1967). 184 pp. Issue 12 (1967). 168 pp. Issue 13 (1967). 184 pp.
15. Kolesov, N. D. (Ed.). *Politicheskaya ekonomiya.* Vypusk VII.; *Voprosy povysheniya ekonomicheskoy effektivnosti sotsialisticheskogo proizvodstva.* Leningrad, Izdatel'stvo Leningradskogo universiteta, 1965. 240 pp.
16. Korovina, Z. P. *Analiz i planirovaniye osvoyeniya novykh moshchnostey.* Novosibirsk, Zapadno-sibirskoye knizhnoye izdatel'stvo, 1967. 136 pp.

16a. Krasovskiy, V. P. *Problemy ekonomiki kapital'nykh vlozheniy.* Moscow, Ekonomika, 1967. 175 pp.

17. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR. *Politicheskaya ekonomiya.* Vyp. VII; *Voprosy povysheniya ekonomicheskoy effektivnosti sotsialisticheskogo proizvodstva.* Uchenyye zapiski kafedr obshchestvennykh nauk vuzov goroda Leningrada. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1965. 240 pp.
18. Mitrofanov, A. I. and R. M. Merkin. *Metody rascheta kapital'nykh vlozheniy pri perspektivnom planirovanii; voprosy normativnogo obosnovaniya otraslevykh planov kapital'nykh vlozheniy.* Moscow, Ekonomika, 1966. 200 pp.

19. Nikolayeva, G. V. (Ed.). *Metodicheskiye rekomendatsii po raschetam effektivnosti kapital'nykh vlozheniy pri razrabotke otraslevogo plana kapital'nogo stroitel'stva.* Issued by Central Scientific-Research Institute of Economics attached to Gosplan R.S.F.S.R. Moscow, Ekonomika, 1967. 144 pp.
20. Pandakov, V. I. *Planirovaniye i osvoyeniye proizvodstva novoy produktsii.* Issued by the Academy of Sciences U.S.S.R., Siberian Division, Institute of Economics and Organization of Industrial Production. Novosibirsk, Nauka, Sibirskoye otdeleniye, 1967. 184 pp.
21. Rekitar, Ya. A. *Opredeleniye kapital'nykh vlozheniy na razvitiye promyshlennosti stroitel'nykh materialov i konstruktsiy; metody obosnovaniya i primery raschetov.* Issued by Gosstroy U.S.S.R., Scientific-Research Institute of Construction Economics. Moscow, Stroyizdat, 1966. 268 pp.
22. Sitnikov, O. S. et al. (Eds.). *Effektivnost' kapital'nykh vlozheniy i novoy tekhniki.* Issued by the Academy of Sciences Byelorussian S.S.R., Institute of Economics. Minsk, Nauka i tekhnika, 1966. 204 pp.
23. Tsimerman, Yu.S. *Pravovoy rezhim osnovnykh i oborotnykh sredstv gosudarstvennogo promyshlennogo predpriyatiya.* Moscow, Yuridicheskaya literatura, 1967. 152 pp.
24. Usyk, M. A. *Ob okupayemosti kapital'nykh vlozheniy v sotsialisticheskom khozyaystve; teoriya voprosa.* Khar'kov, Izdatel'stvo Khar'kovskogo gosudarstvennogo universiteta, 1966. 148 pp.
25. Velikanov, K. M. and V. A. Vorotilov (Compilers). *Ekonomicheskaya effektivnost' proizvodstva.* Leningrad, Lenizdat, 1966. 180 pp. (See also: 40, 55, 96, 130, 138, 205, 234, 237, 322, 343, 347, 356, 397, 419, 420, 437, 439, 470, 480, 529, 556.)

Communist Party

26. Chernenko, K. U. et al. (Eds.). *Spravochnik partiynogo rabotnika.* Issue 6. Moscow, Politizdat, 1966. 544 pp. Issue 7 (1967). 512 pp.
27. Chkhivadze, V. M. (Ed.). *Politicheskaya organizatsiya sovetskogo obschchestva.* Moscow, Nauka, 1967. 420 pp.
28. Institut istorii partii pri TsK KP Kirgizii, Filial Instituta Marksizma-Leninizma pri TsK KPSS. *Rost i regulirovaniye sostava Kommunisticheskoy partii Kirgizii; 1918–1966 gg.; sbornik dokumentov i materialov.* Frunze, Kirgizskoye gosudarstvennoye izdatel'stvo, 1963. 282 pp.
29. Khromova, A. A. and B. F. Shilov (Compilers). *Voprosy partiynogo stroitel'stva.* Issued by the Leningrad Higher Party School. Leningrad, Lenizdat, 1965. 656 pp.
30. Ostryakov, V. V. and A. I. Steponavichius. *Sotsial'no-politicheskiye faktory formirovaniya kommunisticheskoy soznatel'nosti trudyashchikhsya.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Scientific Communism. Moscow, Mysl', 1967. 160 pp.

Cost-of-Production, Khozraschet, Profits

31. Gatovskiy, L. M. et al. (Eds.). *Plan, khozraschet, stimuly.* Issued by the Academy of Sciences U.S.S.R., Scientific Council of the Academy of Sciences U.S.S.R. for Economic Accounting and Material Stimulation of Production. Moscow, Ekonomika, 1966. 358 pp.
32. Tarnovskiy, O. I. *Pribyl' i yeye ispol'zovaniye.* Moscow, Ekonomika, 1966. 104 pp.
33. Tumanova, M. D. *Khozraschet, rentabel'nost', kredit.* Moscow, Ekonomika, 1966. 88 pp.
34. Vorob'yeva, A. V. (Ed.). *Sovremennyye problemy vnutrizavodskogo khozrascheta.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Ekonomika, 1966. 224 pp. (See also: 46, 273, 324, 329, 337, 405, 413, 418, 437, 471, 490.)

Economy—General

35. Anchishkin, A. I. and Yu. V. Yaremenko. *Tempy i proportsii ekonomicheskogo razvitiya.* Moscow, Ekonomika, 1967. 208 pp.
36. Avdiyants, Yu. P. et al. (Eds.). *Effektivnost' obshchestvennogo proizvodstva.* Moscow, Ekonomika, 1967. 264 pp.
37. Belyayev, I. T. *Differentsial'naya renta v SSSR.* Moscow, Mysl', 1967. 200 pp.
38. Chernyavskiy, V. O. *Effektivnaya ekonomika.* Moscow, Ekonomika, 1967. 232 pp.

39. Fedorenko, N. P. et al. (Eds.). *Sovershenstovovaniye planirovaniya i upravleniya narodnym khozyaystvom; k 90-letiyu akademika Stanislava Gustavovicha Strumilina.* Moscow, Nauka, 1967. 436 pp.
39a. Gatovskiy, L. M. (Ed.). *Teoriya i praktika khozyaystvennoy reformy.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Ekonomika, 1967. 175 pp.
39b. ——— et al. (Eds.). *Ekonomicheskiye zakonomernosti pererastaniya sotsializma v kommunizm.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Nauka, 1967. 680 pp.
40. ——— et al. (Eds.). *Problemy ekonomicheskogo stimulirovaniya nauchno-tekhnicheskogo progressa.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics, Scientific Council for the Problem "Economic Accounting and Material Stimulation of Production." Moscow, Nauka, 1967. 336 pp.
41. Grigor'yan, G. S. (Ed.). *Problemy proizvoditel'nosti truda i narodnogo potrebleniya v period razvernutogo stroitel'stva kommunizma.* Issued by the Moscow Institute of National Economy named after G. V. Plekhanov, Faculty of Political Economy. Moscow, n.p., 1965. 128 pp.
42. Iskakov, B.I. et al. (Eds.). *Ekonomika; Trudy Moskovskoy konferentsii molodykh uchenykh.* Issued by the Academy of Sciences U.S.S.R. and Moscow Committee of the VLKSM. Moscow, Nauka, 1967. 336 pp.
43. Kolesov, N. D. et al. (Eds.). *Ekonomicheskiye problemy stroitel'stva kommunizma.* Issued by the Leningrad State University. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1967. 204 pp.
44. Konstantinov, F. V. et al. (Eds.). *Stroitel'stvo kommunizma i razvitiye obshchestvennykh otnosheniy.* Issued by the Academy of Sciences U.S.S.R., Institute of Philosophy. Moscow, Nauka, 1966. 412 pp.
45. Kryazhev, V.G. *Vnerabocheye vremya i sfera obsluzhivaniya.* Moscow, Ekonomika, 1966. 144 pp.
46. Kulikov, A.G. et al. (Eds.). *Khozyaystvennyy raschet i material'noye stimulirovaniye v promyshlennosti i stroitel'stve.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Economic Sciences. Moscow, Mysl', 1967. 325 pp.
47. Kuznetsov, B. G. *Fizika i ekonomika.* Issued by the Academy of Sciences U.S.S.R. Moscow, Nauka, 1967. 88 pp.
48. Notkin, A. I. (Ed.). *Struktura narodnogo hkozyaystva SSSR.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Nauka, 1967. 368 pp.
49. Pervushin, S. P. (Ed.). *Ekonomicheskaya nauka i khozyaystvennaya praktika; ekonomicheskiy yezhegodnik; god 1967.* Moscow, Ekonomika, 1967. 352 pp.
50. Petrakov, N. Ya. *Nekotoryye aspekty diskussii ob ekonomicheskikh metodakh khozyaystvovaniya.* Moscow, Ekonomika, 1966. 128 pp.
51. Petrov, A. S. *Ekonomicheskiye osnovy upravleniya proizvodstvom.* Moscow, Mysl' 1966. 160 pp.
52. Rumyantsev, A. F. et al. (Eds.). *Ekonomicheskiye zakony i rukovodstvo khozyaystvom; ekonomicheskaya propaganda v sovremennykh usloviyakh.* Moscow, Ekonomika, 1966. 332 pp.
53. Sapov, G. V. *Neproizvodstvennaya sfera ekonomiki.* Moscow, Znaniye, 1967. 48 pp.
54. Strumilin, S. G. (Ed.). *Ekonomicheskaya zhizn' SSSR; khronika sobytiy i faktov; 1917–1965.* Book I: *1917–1950*, pp. 1–432, and Book II: *1951–1965*, pp. 433–932. Second revised and enlarged edition. Moscow, Sovetskaya entsiklopediya, 1967.
55. Yevstigneyeva, L. P. *Fondoyemkost' i struktura obshchestvennogo produkta.* Moscow, Mysl', 1967. 135 pp. (See also: 296, 349, 564.)

Geography, Urbanization, Location of Industry, Regional Economy

56. Abdurakhmanov, B. E. *Transport i yego vliyanie na razvitiye i razmeshcheniye proizvodstva Azerbaydzhanskoy SSR.* Issued by the Academy of Sciences Azerbaydzhan S.S.R., Institute of Economics. Baku, Izdatel'stvo Akademii nauk Azerbaydzhanskoy SSR. 1966. 176 pp.
57. Akademiya nauk Latviyskoy SSR, Institut ekonomiki. *Lesopil'no-derevobrabatyvayushchaya promyshlennost' Pribaltiyskogo ekonomicheskogo rayona; sostoyaniye i perspektivy razvitiya.* Riga, Izdatel'stvo Akademii nauk Latviyskoy SSR, 1964. 96 pp.
58. Akademiya nauk SSSR, Institut geografii. *Sovetskaya Pribaltika; problemy ekonomicheskoy geografii.* Moscow, Nauka, 1966. 279 pp.

59. ———, Sibirskoye otdeleniye. *Regional'nyye osobennosti ekonomicheskogo razvitiya rayonov strany; na primere Sibiri.* Moscow, Mysl', 1966. 207 pp.
60. Andreyev, B. I. et al. *Geografiya proizvodstva prodovol'stvennykh tovarov SSSR.* Moscow, Izdatel'stvo torgovoy literatury, 1961. 172 pp.
61. Baishev, S. B. (Ed.). *Istoriya industrializatsii Kazakhskoy SSR; 1926–1941 gg.; v dvukh tomakh. Tom I, 1926–1932 gg.* Issued by the Archives Administration and the Central State Archives of Kazakh S.S.R., et al. Alma-Ata, Nauka, 1967. 480 pp.
62. ——— and G. Ch. Chulanov (Eds.). *Razvitiye narodnogo khozyaystva Kazakhstana za 50 let sovetskoy vlasti.* Issued by the Academy of Sciences Kazakh S.S.R., Institute of Economics. Alma-Ata, Nauka, 1967. 464 pp.
62a. Baishev, S. B. et al. (Eds.). *Razvitiye i razmeshcheniye proizvoditel'nykh sil Kazakhskoy SSR.* Issued by the Academy of Sciences U.S.S.R., Gosplan U.S.S.R., Council for the Study of Productive Forces, Gosplan Kazakh S.S.R., Scientific-Research Economics Institute and Academy of Sciences Kazakh S.S.R., Institute of Economics. Moscow, Nauka, 1967. 260 pp.
63. Baranov, N. et al. *Osnovy sovetskogo gradostroitel'stva.* Tom I. Moscow, St royizdat, 1966, 416 pp.
64. Bedrintsev, K. N. (Ed.). *Ekonomicheskoye rayonirovaniye Uzbekistana* Tashkent, Fan, 1966. 247 pp.
65. Binder, M. A. *Gosudarstvenno-pravovyye problemy vzaimopomoshchi sovetskikh narodov.* Alma-Ata, Nauka, 1967. 375 pp.
66. Bogorad, D. R. *Voprosy spetsializatsii i kompleksnogo razvitiya narodnogo khozyaystva Sibiri.* Issued by the Academy of Sciences U.S.S.R., Siberian Division, Institute of Geography of Siberia and the Far East. Moscow, Nauka, 1966. 196 pp.
67. Brin, I. D. et al. (Eds.). *Trudy Irkutskogo instituta narodnogo khozyaystva; vypusk 1, (VIII); Seriya obshchestvennykh nauk.* Issued by the Ministry of Higher and Specialized Secondary Education and the Irkutsk Institute of National Economy. Irkutsk, n.p., 1966. 316 pp.
68. Daniyalov, G. D., *Razvitiye ekonomiki i kul'tury Dagestana (1945–1965).* Issued by the Dagestan Branch of the Academy of Sciences U.S.S.R., Institute of History, Language, and Literature. Moscow, Nauka, Glavnaya redaktsiya vostochnoy literatury, 1966. 367 pp.
69. Dzhamalov, O. B. (Ed.). *Tempy i proportsii vosproizvodstva valovogo produkta v sel'skom khozyaystve Uzbekistana.* Issued by the Academy of Sciences Uzbek S.S.R., Institute of Economics. Tashkent, Fan Uzbekskoy SSR, 1967. 204 pp.
70. Gradov, G. L. *Spetsializatsiya i kompleksnoye razvitiye ekonomicheskogo rayona SSSR.* Issued by the Council for the Study of Productive Forces of Gosplan Ukrainian S.S.R. Kiev, Naukova dumka, 1965. 165 pp.
71. Gulvan, P. V. *Latviya v sisteme narodnogo khozyaystva SSSR.* Riga, Zinatne, 1967. 387 pp.
72. Isayeva, M. G. et al. *Pishchevaya promyshlennost' v khozyaystvennom komplekse Kazakhstana.* Issued by the Academy of Sciences Kazakh S.S.R., Institute of Economics. Alma-Ata, Nauka, 1966. 272 pp.
73. Khodzhayev, D. G. (Ed.). *Puti razvitiya malykh i srednikh gorodov tsentral'nykh ekonomicheskikh rayonov SSSR.* Issued by Gosplan U.S.S.R., Council for the Study of Productive Forces. Moscow, Nauka, 1967. 208 pp.
74. Khramov, A. A. (Ed.). *Perspektivy razvitiya mineral'no-syr'yevoy bazy promyshlennosti Ukrainskoy SSR.* Issued by the Academy of Sciences Ukrainian S.S.R., Institute of Economics. Kiev, Naukova dumka, 1966. 252 pp.
75. Kolobkov, M. N. (Ed.). *Problemy osvoyeniya Zapadno-Sibirskoy neftegazonosnoy provintsii.* Issued by the Academy of Sciences U.S.S.R., Siberian Division, and Geographical Society U.S.S.R., Siberian Division. Novosibirsk, Zapadno-Sibirskoye knizhnoye izdatel'stvo, 1966. 132 pp.
76. Kolotiyevskiy, A. M. *Voprosy teorii i metodiki ekonomicheskogo rayonirovaniya; svyazi s obshchey teoriyey ekonomicheskoy geografii.* Issued by the Latvian State University named after P. Stuchka. Riga, Zinatne, 1967. 252 pp.
77. Konstantinov, A. S. *Kishinev; ekonomicheskiy ocherk.* Kishinev, Kartya Moldovenyaske, 1966. 160 pp.
78. Konstantinov, O. A. (Ed.). *Geografiya naseleniya naselennykh punktov SSSR.* Issued by the Academy of Sciences U.S.S.R. and Geographical Society of the U.S.S.R., Leningrad Division. Leningrad, Nauka, 1967. 295 pp.

79. Koretskiy, L. M. and M. M. Palamarchuk. *Geografiya promyslovosti Ukrainskoy RSR.* Issued by the Academy of Sciences Ukrainian S.S.R. Sector of Geography. (In Ukrainian.) Kiev, Naukova dumka, 1967. 328 pp.
80. Krutalevich, V. A. *Administrativno-territorial'noye ustroystvo BSSR.* Issued by the Academy of Sciences Byelorussian S.S.R., Institute of Philosophy and Law. Minsk, Nauka i tekhnika, 1966. 136 pp.
81. Makeyenko, M. et al. *Mashinostroitel'nyy kompleks Moldavskoy SSR; sostoyaniye i perspektivy razvitiya.* Issued by the Academy of Sciences Moldavian S.S.R., Institute of Economics. Kishinev, Kartya Moldovenyaske, 1966. 147 pp.
82. Manza, A. P. *Sootnosheniye rosta proizvoditel'nosti truda i zarabotnoy platy v promyshlennosti Moldavskoy SSSR.* Issued by the Academy of Sciences Moldavian S.S.R., Institute of Economics, Kishinev, Kartya Moldovenyaske, 1965. 80 pp.
82a. Margolin, A. B. et al. (Eds.). *Razvitiye i razmeshcheniye proizvoditel'nykh sil SSSR; Zapadno-Sibirskiy ekonomicheskiy rayon.* Issued by the Academy of Sciences U.S.S.R., Gosplan U.S.S.R., Council for the Study of Productive Forces. Moscow, Nauka, 1967. 252 pp.
83. Maslov, Ye. P. *Proizvoditel'nyye sily Severnogo Kavkaza; problemy geografii khozyaystva i osvoyeniya resursov.* Issued by the Academy of Sciences U.S.S.R., Institute of Geography. Moscow, Nauka, 1966. 264 pp.
84. Mazover, Ya. A. *Toplivno-energeticheskiye bazy vostoka SSSR.; Sibir' i Srednyaya Aziya.* Issued by the Academy of Sciences U.S.S.R., Gosplan U.S.S.R., Council for the Development of Productive Forces. Moscow, Nauka, 1966. 208 pp.
85. Medvedkov, Yu. V. (Ed.). *Geografiya SSSR.* Vyp. 2. *Ekonomicheskoye rayonirovaniye SSSR.* Seriya "Itogi nauki". Issued by the Academy of Sciences U.S.S.R., Institute of Scientific Information. Moscow, VINITI, 1965. 147 pp.
86. Mints, A. A. (Ed.). *Geografiya khozyastva respublik Zakavkaz'ya.* Issued by the Academy of Sciences U.S.S.R., Institute of Geography. Moscow, Nauka, 1966. 284 pp.
87. Nadirov, A. A. *Voprosy ekonomicheskogo razvitiya gorodov Azerbaydzhana: k probleme vnutrirespublikanskogo razmeshcheniya promyshlennogo proizvodstva.* Issued by the Academy of Sciences Azerbaydzhan S.S.R., Institute of Economics. Baku, Izdatel'stvo Akademii nauk Azerbaydzhanskoy SSR, 1966. 168 pp.
87a. Narzikulov, I. K. et al. (Eds.). *Ocherki istorii narodnogo khozyaystva Tadzhikistana; 1917–1965 gg.* Issued by the Academy of Sciences Tadzhik S.S.R., Institute of Economics. Dushanbe, Donish, 1967. 496 pp.
88. Nekrasov, N. N. et al. (Eds.). *Razvitiye i razmeshcheniye proizvoditel'nykh sil ekonomicheskikh rayonov SSSR.* Issued by Gosplan U.S.S.R., Council for the Study of Productive Forces. Moscow, Nauka, 1967. 288 pp.
89. Novak, V. A. et al. (Eds.). *Voprosy ekonomicheskogo analiza i finansov v promyshlennosti Moldavskoy SSR.* Kishinev, Kartya Moldovenyaske, 1966. 296 pp.
90. Nusupbekov, A. N. *Formirovaniye i razvitiye sovetskogo rabochego klassa v Kazakhstane.* Issued by the Academy of Sciences Kazakh S.S.R., Institute of History, Archeology and Ethnography. Alma-Ata, Nauka, 1966. 244 pp.
91. Pchelintsev, O. S. *Ekonomicheskoye obosnovaniye razmeshcheniya proizvodstva; metody primenyayemyye v kapitalisticheskikh stranakh.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Nauka, 1966. 264 pp.
92. Prokayev, V. I. *Osnovy metodiki fiziko-geograficheskogo rayonirovaniya.* Issued by the Academy of Sciences U.S.S.R., and the Geographical Society of the U.S.S.R. Leningrad, Nauka, Leningradskoye otdeleniye, 1967. 163 pp.
93. Purits, V. N. *Proizvoditel'nost' truda v promyshlennosti Kazakhstana.* Issued by the Kazakh State University named after S. M. Kirov. Alma-Ata, Nauka, Kazakhskaya SSR, 1967. 188 pp.
94. Rozmanov, M. M. *Nekotoryye problemy sovetskoy torgovli Kazakhstana.* Alma-Ata, Nauka, Kazakhskoy SSR, 1966. 232 pp.
95. Samed-Zade, Z. A. *Proizvoditel'nost' truda v sovkhozakh; na materialakh Azerbaydzhanskoy SSR.* Issued by the Academy of Sciences Azerbaydzhan S.S.R., Institute of Economics. Baku, Izdatel'stvo Akademii nauk Azerbaydzhanskoy SSR, 1966. 124 pp.

96. Sazanovich, N. K. (Ed.). *Metodika opredeleniya ekonomicheskoy effektivnosti razmescheniya promyshlennosti pri planirovanii i proyektirovanii novogo stroitel'stva.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Ekonomika, 1966. 48 pp.
97. Shelest, V. A. *Ekonomika razmeshcheniya elektroenergetiki SSSR.* Issued by the Academy of Sciences U.S.S.R. and Gosplan U.S.S.R., Council for the Study of Productive Forces. Moscow, Nauka, 1965. 268 pp.
98. Sumbatzade, A. S. et al. (Eds.). *Rastsvet ekonomiki Azerbaydzhanskoy SSR.* Issued by the Academy of Sciences Azerbaydzhan S.S.R., Institute of Economics. Baku, Izdatel'stvo Akademii nauk Azerbaydzhanskoy SSR, 1967. 296 pp.
99. ——— et al. (Eds.). *Voprosy razvitiya ekonomiki Azerbaydzhanskoy SSR.* Issued by The Academy of Sciences Azerbaydzhan S.S.R., Institute of Economics. Baku, Izdatel'stvo Akademii nauk Azerbaydzhanskoy SSR, 1966. 308 pp.
99a. Ursul, D. T. *Razvitiye obshchestvennykh otnosheniy v Sovetskoy Moldavii.* Kishinev, Kartya Moldovenyaske, 1967. 376 pp.
100. Varankin, V. V. et al. *Metodika opredeleniya ekonomicheskoy effektivnosti razmeshcheniya promyshlennosti pri planirovanii i proyektirovanii novogo stroitel'stva.* Issued by The Academy of Sciences U.S.S.R., Institute of Economics, Sector of the Effectiveness of Distribution of Production. Moscow, Ekonomika, 1966. 48 pp.
101. Veymer, A. T. *Razvitiye promyshlennosti Estonskoy SSR za semiletiye (1959–1965 gg.).* Issued by the Academy of Sciences Estonian S.S.R., Institute of Economics. Moscow, Nauka, 1967. 248 pp.
102. Virnyk, D. F. et al. (Eds.). *Razvitiye narodnogo khozyaystva Ukrainskoy SSR; 1917–1967, Tom I. Stroitel'stvo i pobeda sotsializma.* (In Ukrainian.) Kiev, Naukova dumka, 1967. 460 pp.
103. Voznesenskiy, A. N. et al. (Eds.). *Atlas razvitiya khozyaystva i kul'tury SSSR.* Moscow, Glavnoye upravleniye geodezii i kartografii pri Sovete Ministrov SSSR, 1967. 172 pp.
104. Yakusha, G. B. *Tekhniko-ekonomicheskiye osnovy razvitiya elektroenergetiki ekonomicheskikh rayonov Ukrainskoy SSR.* Issued by the Council for the Study of Productive Forces of the Ukrainian S.S.R., Gosplan Ukrainian S.S.R. Kiev, Naukova dumka, 1965. 252 pp.
105. Yedinovich, I. G. *Rol' kredita v razvitii ekonomiki Kirgizskoy SSR.* Frunze, Kirgizskoye gosudarstvennoye izdatel'stvo, 1962. 102 pp.
106. Zudina, L. N. *Organizatsiya truda na ugol'nykh shakhtakh Kuzbassa.* Issued by the Academy of Sciences U.S.S.R., Siberian Division, Institute of Economics and Organization of Industrial Production. Novosibirsk, Redaktsionno-izdatel'skiy otdel Sibirskogo otdeleniya Akademii nauk SSSR, 1964. 76 pp. (See also: 6, 172, 248, 250, 255–257, 261, 301, 343, 351, 369, 372, 387, 401, 561.)

Input-Output, Linear Programing, Mathematical Methods

107. Abramov, L. M. (Ed.). *Primeneniye matematiki v ekonomike.* Issue 4. Issued by the Leningrad State University named after A. A. Zhdanov, Faculty and Laboratory of Mathematical Economic Methods. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1967. 136 pp.
108. Aganbegyan, A. G. and I. P. Shubkin (Eds.). *Modelirovaniye protsessov proizvodstva i upravleniya.* Issued by the Academy of Sciences U.S.S.R., Siberian Division. Moscow, Nauka, 1966. 208 pp.
109. Akilov, G. P. et al. (Eds.). *Optimal'noye planirovaniye; sbornik trudov; vypusk 5; Matematicheskiye modeli ekonomiki.* Issued by the Academy of Sciences U.S.S.R., Siberian Division, Institute of Mathematics. Novosibirsk, Nauka, Sibirskoye otdeleniye, 1966. 120 pp.
110. Chetyrkin, Ye. M. *Primeneniye sovremennoy vychislitel'noy tekhniki i matematicheskikh metodov v planirovanii i upravlenii narodnym khozyaystvom SSSR.* Moscow, Mysl', 1967. 56 pp.
111. Dadayan, V. S. *Ekonomicheskiye raschety po modeli rasshirennogo vosproizvodstva.* Moscow, Ekonomika, 1966. 198 pp.
112. Dudkin, L. M. *Optimal'nyy material'nyy balans narodnogo khozyaystva.; modeli dlya tekushchego i perspektivnogo planirovaniya.* Moscow, Ekonomika, 1966. 184 pp.
113. Dumler, S. A. (Ed.). *Matematicheskiye metody v organizatsii i ekonomike proizvodstva.* Moscow, Mashinostroyeniye, 1966. 312 pp.

114. Eydel'man, M. R. *Mezhotraslevyy balans obshchestvennogo produkcia; teoriya i praktika yego sostavleniya.* Moscow, Statistika, 1966. 376 pp.
115. Fedorenko, N. P. (Ed.). *Sistemy ekonomicheskoy informatsii.* Issued by the Academy of Sciences U.S.S.R., Scientific Council for the Complex Problem "Cybernetics" and the Central Mathematical Economics Institute. Moscow, Nauka, 1967. 151 pp.
116. Istomin, L. I. and D. T. Novikov. *Matematicheskiye metody v praktike upravleniya material'no-tekhnicheskim snabzheniyem i sbytom.* Moscow, Ekonomika, 1966. 128 pp.
117. Kotov, I. V. (Ed.). *Primeneniye matematiki v ekonomike.* Issued by the Leningrad State University, Faculty and Laboratory of Mathematical Economic Methods. Issue 3. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1965. 191 pp.
118. Lidums, L. M. *Matematicheskiye sposoby ischisleniya differentsial'nogo dokhoda v kolkhozakh.* Moscow, Ekonomika, 1965. 96 pp.
119. Markin, A. V. and M. V. Khrushchev. *Primeneniye matematicheskikh metodov i elektronnykh vychislitel'nykh mashin pri planirovanii mezhdugorodnykh perevozok.* Issued by Ministry of Automobile Transport and Highways R.S.F.S.R., and NIIAT. Moscow, Transport, 1967. 69 pp.
120. Mikheyeva, V. S. *Matematicheskiye metody v planirovanii razmeshcheniya sel'skokhozyaystvennogo proizvodstva.* Moscow, Ekonomika, 1966. 104 pp.
121. Mints, L. Ye. *Ekonomiko-matematicheskiye metody,* vyp. III; *ekonomiko-matematicheskiye modeli narodnogo khozyaystva.* Issued by the Academy of of Sciences U.S.S.R. Scientific Council for Application of Mathematical Methods and Computer Techniques in Economic Research and Planning, Central Mathematical Economics Institute. Moscow, Nauka, 1966. 212 pp.
122. ——— (Ed.). *Mezhotraslevyye issledovaniya v ekonomicheskikh rayonakh; opyt raboty po Pribaltiyskomu ekonomicheskomu rayonu.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Nauka, 1967. 382 pp.
123. ——— et al. (Eds.). *Mezhotraslevyy balans ekonomicheskogo rayona; metodika sostavleniya.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Nauka, 1967. 332 pp.
124. Moskovskiy inzhenerno-ekonomicheskiy institut imeni S. Ordzhonikidze, Nauchnyy sovet Akademii nauk SSSR po probleme "Ekonomika, planirovaniye i organizatsiya promyshlennykh predpriyatiy". *Primeneniye elektronno-vychislitel'nykh mashin v upravlenii proizvodstvom.* Nauchnyye trudy, vyp. XXIII; *sbornik materialov tret'yey nauchnoy konferentsii po primeneniyu elektronno-vychislitel'nykh mashin v upravlenii proizvodstvom.* Moscow, Ekonomika, 1966. 352 pp.
125. Nemchinov, V. S. *Ekonomika i matematicheskiye metody.* Issued by the Academy of Sciences U.S.S.R., Moscow, Nauka, 1967. 491 pp.
126. Novozhilov, V. V. *Problemy izmereniya zatrat i rezul'tatov pri optimal'nom planirovanii.* Moscow, Ekonomika, 1967. 376 pp.
127. Postnov, Yu. I. *Lineynoye programmirovaniye v sel'skom khozyaystve.* Alma-Ata, Kaynar, 1966. 260 pp.
128. Shatilov, N. F. *Modelirovaniye rasshirennogo vosproizvodstva.* Moscow, Ekonomika, 1967. 176 pp.
129. Shlyapentokh, V. E. *Ekonometrika i problemy ekonomicheskogo rosta; makromodelirovaniye v rabotakh burzhuaznykh ekonomistov.* Moscow, Mysl', 1966. 224 pp.
130. Sukhotin, Yu. V. *Effektivnost' kapital'nykh vlozheniy i mezhotraslevyye svyazi.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Ekonomika, 1966. 200 pp.
131. Vinitskiy, K. Ye. and E. I. Reyentovich. *Matematicheskoye modelirovaniye parametrov sistem otkrytoy razrabotki mestorozhdeniy.* Moscow, Nauka, 1965. 88 pp.
131*a*. Vishnev, S. M. *Ekonomicheskiye parametry; vvedeniye v teoriyu pokazateley ekonomicheskikh sistem i modeley.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Nauka, 1968. 190 pp.
132. Volkonskiy, V. A. *Model' optimal'nogo planirovaniya i vzaimosvyazi ekonomicheskikh pokazateley.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Nauka, 1967. 153 pp.
133. Yevenko, I. A. *Sovershenstvovaniye upravleniya khozyaystvom i vychislitel'naya tekhnika.* Moscow, Ekonomika, 1967. 152 pp.
134. Zavel'skiy, M. G. *Optimizatsiya otraslevogo planirovaniya.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Ekonomika, 1967. 360 pp. (See also: 169, 295, 467, 546.)

International Comparisons, Foreign Trade

134a. Alampiyev, P. M. and N. A. Cherkasov (Eds.). *Problemy mezhdunarodnogo sotsialisticheskogo razdeleniya truda; ekonomicheskiye ocherki.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics of the World Socialist System, Leningrad Branch. Leningrad, Nauka, Leningradskoye otdeleniye, 1967. 172 pp.

135. Bautina, N. V. *Ekonomicheskiye problemy razvitiya mirovoy sistemy sotsializma.* Moscow, Izadatel'stvo Moskovskogo universiteta, 1967. 168 pp.

136. Belyayev, Yu. N. *Sblizheniye urovney ekonomicheskogo razvitiya sotsialisticheskikh stran; ocherk teorii.* Moscow, Mysl', 1967. 270 pp.

137. ——— and L. S. Semenova. *Strany SEV v mirovoy ekonomike.* Moscow, Mezhdunarodnyye otnosheniya, 1967. 190 pp.

138. Butakov, D. D. and V. I. Bochkova. *Finansirovaniye tekhnicheskogo progressa v stranakh SEV.* Issued by the Scientific-Research Financial Institute. Moscow, Finansy, 1966. 136 pp.

139. Bystrov, F. P. et al. *Valyutnyy spravochnik.* Moscow, Finansy, 1967. 360 pp.

140. Dudinskiy, I. V. et al. (Eds.). *Faktory povysheniya effektivnosti proizvodstva v mirovoy sotsialisticheskoy sisteme na primere stran—chlenov SEV.* Issued by the Academy of Sciences U.S.S.R., Institute of the Economy of the World Socialist System. Moscow, Mysl' 1965. 247 pp.

141. Dvorzhak, L. *Mirovaya sistema sotsializma i razvivayushchiyesya strany.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Economic Sciences. Moscow, Mysl', 1965. 144 pp.

142. Khmel'nitskaya, Ye. L. (Ed.). *Izmeneniya v ekonomicheskoy strukture stran Zapadnoy Yevropy.* Issued by the Academy of Sciences U.S.S.R., Institute of World Economy and International Relations. Moscow, Nauka, 1965. 435 pp.

142a. Khramelashvili, V. N. (Ed.). *Sorevnovaniye dvukh sistem: Novyye yavleniya v ekonomike kapitalizma.* Issued by the Academy of Sciences U.S.S.R., Scientific Council for the Complex Problem "Economic Competition of the Two Systems". Moscow, Nauka, 1967. 420 pp.

142b. Kudrov, V. M. *Statistika natsional'nogo dokhoda SShA; Istoriya, istochniki, metody, sravneniya.* Moscow, Statistika, 1966. 196 pp.

143. ——— and G. Shpil'ko. *Tempy i proportsii obshchestvennogo proizvodstva v SShA.* Issued by the Scientific-Research Institute of Economics of the Gosplan U.S.S.R. Moscow, Mysl', 1965. 239 pp.

144. Kumykin, P. N. et al. (Eds.). *50 let Sovetskoy vneshney torgovli.* Moscow, Mezhdunarodnyye otnosheniya, 1967. 320 pp.

145. Martsinkevich, B. I. *Obrazovaniye v SShA; ekonomicheskoye znacheniye i effektivnost'.* Issued by the Academy of Sciences U.S.S.R., Institute of World Economy and International Relations. Moscow, Nauka, 1967. 200 pp.

146. Mashenkov, V. F. (Ed.). *Proizvoditel'nost' truda v sel'skom khozyaystve za rubezhom.* Moscow, Kolos, 1967. 344 pp.

147. Mikul'skiy, K. I. *Natsional'nyye resursy i mezhdunarodnoye sotrudnichestvo; aktual'nyye problemy mezhdunarodnogo sotsialisticheskogo razdeleniya truda.* Moscow, Mezhdunarodnyye otnosheniya, 1965. 224 pp.

148. Obolenskiy, N. *Kreditno-raschetnyye otnosheniya sotsialisticheskikh stran.* Moscow, Finansy, 1967. 32 pp.

149. Oznobin, N. M. (Ed.). *Ocherki po sovremennoy sovetskoy i zarubezhnoy ekonomike.* Issue V. Issued by the Scientific-Research Institute of Economics of Gosplan U.S.S.R. Moscow, Ekonomika, 1967. 352 pp.

149a. Pavlov, V. G. *Promyshlennyy eksport v strategii ekonomicheskogo razvitiya.* Moscow, Mezhdunarodnyye otnosheniya, 1967. 200 pp.

150. Pomazanov, S. I. *Kompleksnoye razvitiye narodnogo khozyaystva v stranakh sotsializma.* Issued by the Academy of Sciences U.S.S.R., Institute of the Economy of the World Socialist System. Moscow, Mysl', 1966. 232 pp.

151. Prokhorov, G. M. (Ed.). *Problemy sotrudnichestva sotsialisticheskikh i razvivayushchikhsya stran; ekonomicheskiye otnosheniya.* Issued by the Academy of Sciences U.S.S.R., Institute of the Economy of the World Socialist System. Moscow, Nauka, 1966. 256 pp.

152. Revenko, A. F. *Sopostavleniye pokazateley promyshlennogo proizvodstva SSSR i SShA.* Moscow, Statistika, 1966. 148 pp.

153. Rozenberg, M. G. *Pravovoye regulirovaniye otnosheniy mezhdu vsesoyuznymi vneshnetorgovymi ob"yedineniyami i sovetskimi organizatsiyami—zakazchikami importnykh tovarov.* Moscow, Mezhdunarodnoye otnosheniya, 1966. 116 pp.

154. Ryabushkin, T. V. *Tempy i proportsii narodnogo khozyaystva sotsialisticheskikh stran.* Moscow, Ekonomika, 1966. 1964 pp.
154a. ———et al. (Eds.). *Metodologicheskiye problemy mezhdunarodnykh soizmereniy stoimostnykh pokazateley.* Book 1. Issued by the Academy of Sciences U.S.S.R., Institute of Economics of the World Socialist System and Gosplan U.S.S.R., Scientific-Research Economics Institute. Moscow, Nauka, 1968. 280 pp.
155. ——— (Ed.). *Pokazateli ekonomicheskogo razvitiya sotsialisticheskikh stran; Metodologiya sopostavleniya i analiza.* Issued by the Academy of Sciences U.S.S.R., Institute of the Economy of the World Socialist System. Moscow, Mysl', 1966. 320 pp.
156. Shafirkin, B. I. *Koordinatsiya transporta i planirovaniye gruzovykh perevozok.* Moscow, Transport, 1966. 232 pp.
157. Shagalov, G. L. *Ekonomicheskaya effektivnost' tovarnogo obmena mezhdu sotsialisticheskimi stranami.* Moscow, Mysl', 1966. 208 pp.
158. Storozhev, V. I. (Ed.). *Razvitiye sel'skogo khozyaystva i sotrudnichestvo stran SEV-a.* Issued by the Academy of Sciences U.S.S.R., Institute of the Economy of the World Socialist System. Moscow, Mysl', 1965. 351 pp.
158a. Tarnovskiy, O. I. and N. M. Mitrofanova. *Stoimost' i tsena na mirovom sotsialisticheskom rynke.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics of the World Socialist System. Moscow, Nauka, 1968. 335 pp.
159. Trubacheyev, A. F. *Kak upravlyayutsya predpriyatiya v sotsialisticheskikh stranakh.* Moscow, Ekonomika, 1967. 160 pp.
160. Vaganov, B. S. *Vneshnyaya torgovlya sotsialisticheskikh stran; voprosy teorii.* Moscow, Mezhdunarodnyye otnosheniya, 1966. 254 pp.
161. Vikent'yev, A. I. and B. P. Miroshnichenko. *Ekonomicheskiye zakony sotsializma i planirovaniye v stranakh SEV.* Moscow, Mezhdunarodnyye otnosheniya, 1967. 304 pp.
162. Vladova, N. V. *Organizatsiya zarabotnoy platy v torgolve yevropeyskikh sotsialisticheskikh stran.* Issued by the State Committee of the U.S.S.R. Council of Ministers on Labor and Wage Problems, Scientific-Research Institute of Labor. Moscow, Ekonomika, 1967. 104 pp.
163. Zatsarinskiy, A. P. (Ed.). *Ekonomicheskiye otnosheniya SSSR s zarubezhnymi stranami 1917–1967; spravochnik,* Moscow, Mezhdunarodnyye otnosheniya, 1967. 303 pp. (See also; 91, 129.)

Labor

164. Akhminova, P.Kh. *Istoriya rabochego klassa Uzbekistana.* Tom I. Issued by the Academy of Sciences Uzbek S.S.R., Institute of History and Archeology. Tashkent, Nauka, 1964. 339 pp.
165. Bor, M. Z. and E. V. Linde (Eds.). *Upravleniye proizvodstvom i organizatsiya truda.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Economic Sciences. Moscow, Mysl', 1967. 216 pp.
166. Cherkasov, G. N. *Sotsial'no-ekonomicheskiye problemy intensivnosti truda v SSSR.* Moscow, Mysl', 1966. 231 pp.
167. Epshteyn, A. L. *Neshtatnyye rabotniki.* Moscow, Yuridicheskaya literatura, 1964. 76 pp.
168. Fomin, V. F. *Byudzhet vremeni nauchnogo rabotnika.* Issued by the Academy of Sciences U.S.S.R., Siberian Division. Novosibirsk, Nauka, Sibirskoye otdeleniye, 1967. 116 pp.
169. Frenkel', A. A. *Mnogofaktornyye korrelyatsionnye modeli proizvoditel'nosti truda.* Moscow, Ekonomika, 1966. 96 pp.
170. Golovanova, Ye. A. *Prekrashcheniye trudovogo dogovora.* Moscow, Yuridicheskaya literatura, 1966. 200 pp.
171. Gosudarstvennyy komitet Soveta Ministrov SSSR po voprosam truda i zarabotnoy platy i VTsSPS. *Spisok proizvodstv, tsekhov, professiy i dolzhnostey s vrednymi usloviyami truda, rabota v kotorykh dayet pravo na dopolnitel'nyy otpusk i sokraschchennyy rabochiy den'.* Moscow, Ekonomizdat, 1963. 662 pp.
172. Gul'yan, P. B. et al. (Eds.). *Trudovyye resursy Pribaltiyskikh sovetskikh respublik.* Issued by the Institutes of Economics of the Academies of Sciences of Lithuanian S.S.R., Latvian S.S.R. and Estonian S.S.R. Riga, Zinatne, 1967. 149 pp.
173. Gur'yanov, S. Kh. and L. A. Kostin. *Trud i zarabotnaya plata na predpriyatii; spravochnoye posobiye.* Moscow, Ekonomika, 1967. 399 pp.

174. Ignatovskiy, P. A. *Sotsial'no-ekonomicheskiye izmeneniya v sovetskoy derevne.* Issued by the Academy of Sciences U.S.S.R. Moscow, Nauka, 1966. 392 pp.
175. Ivanov. S. I. et al. (Eds.). *Problemy truda v period razvernutogo stroitel'stva kommunizma; sbornik statey. Uchenyye zapiski t. 286.* Issued by the Leningrad State Pedagogical Institute named after A. I. Gertsen. Leningrad, Lenizdat, 1966. 212 pp.
176. Kapustin, Ye. I. (Ed.). *Pyatidnevnaya rabochaya nedelya.* Moscow, Ekonomika, 1967. 176 pp.
177. Klepikov, V. F. *Sotsialisticheskaya kooperatsiya truda.* Moscow, Ekonomika, 1966. 112 pp.
178. Kotlyar, A. Ye. *Rabochaya sila v SSSR; voprosy teorii vosproizvodstva.* Moscow, Mysl', 1967. 176 pp.
179. Kudryavtsev, A. S. (Ed.). *Ekonomika truda.* Moscow, Ekonomika, 1967. 464 pp.
180. Kulagin, V. G. et al. *Statistika truda.* Moscow, Profizdat. 1967. 216 pp.
181. Lebin, B. D. *Podbor, podgotovka i attestatsiya nauchnykh kadrov SSSR; voprosy istorii i pravovogo regulirovaniya.* Issued by the Academy of Sciences U.S.S.R. Moscow, Nauka, 1966. 288 pp.
182. Lukashevich, S. I. *Effektivnost' upravlencheskogo truda i puti yeye povysheniya.* Minsk, Nauka i Tekhnika, 1966. 168 pp.
183. Manevich, Ye. L. *Problemy obshchestvennogo truda v SSSR.* Moscow, Ekonomika, 1966. 191 pp.
184. Markevich, F. K. *Osnovnyye printsipy nauchnoy organizatsii truda na proizvodstve.* Moscow, Ekonomika, 1966. 248 pp.
184a. Mashenkov, V. F. *Ispol'zovaniye trudovykh resursov sel'skoy mestnosti.* Moscow, Ekonomika, 1965. 167 pp.
185. Mashinskiy, I. A. *Narodnokhozyaystvennaya trudoyemkost' produktsii.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Nauka, 1966. 169 pp.
186. Maslova, N. S. *Vysvobozhdeniye rabochey sily v promyshlennosti SSSR i yeye ratsional'noye ispol'zovaniye.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1967. 95 pp.
187. Mints, L. Ye. *Problemy balansa truda i ispol'zovaniya trudovykh resursov v SSSR.* Moscow, Statistika, 1967. 254 pp.
188. Moskovich, V. M. *Obshchestvennoye razdeleniye truda pri sotsializme.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Nauka, 1966. 128 pp.
189. Orlovskiy, Yu. P. *Pravovyye voprosy ispol'zovaniya truda rabochikh i sluzhashchikh na promyshlennykh predpriyatiyakh.* Issued by the Academy of Sciences U.S.S.R., Institute of State and Law. Moscow, Nauka, 1966. 192 pp.
190. Patrushev, V. D. *Vremya kak ekonomicheskaya kategoriya.* Moscow, Mysl', 1966. 240 pp.
191. Petrochenko, P. F. (Ed.). *Voprosy nauchnoy organizatsii truda na promyshlennom predpriyatii.* Issued by the Academy of Sciences U.S.S.R., Siberian Division, Institute of Economics and Organization of Industrial Production. Moscow, Mysl', 1965. 239 pp.
192. Podkovyrov, N. A. *Sovershenstvovaniye organizatsii truda na vspomogatel'nykh rabotakh.* Moscow, Ekonomika, 1965. 142 pp.
192a. Popov-Cherkasov, I. N. (Ed.). *Kratkiy slovar'-spravochnik po voprosam truda i zarabotnoy platy.* Moscow, Ekonomika, 1967. 312 pp.
193. Prudenskiy, G. A. *Vremya i trud.* Moscow, Mysl', 1965. 244 pp.
194. Ruzavina, Ye. I. *Territorial'nyye balansy trudovykh resursov.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1967. 172 pp.
195. Rzheshevskiy, V. A. *Trud v novoy pyatiletke.* Moscow, Ekonomika, 1967. 72 pp.
196. Semenov, V. S. *Sfera obsluzhivaniya i yeye rabotniki.* Moscow, Politizdat, 1966. 168 pp.
197. Senyavskiy, S. L. *Rost rabochego klassa SSSR; 1951–1965.* Issued by the Academy of Sciences U.S.S.R., Institute of History. Moscow, Nauka, 1966. 280 pp.
198. Shunikov, A. M. *Organizatsiya truda sluzhashchikh.* Moscow, Ekonomika, 1965. 124 pp.
199. Strizhenova, N. and A. Yusupov. *Puti rosta proizvoditel'nosti truda v burenii.* Ufa, Bashkirskoye knizhnoye izdatel'stvo, 1962. 76 pp.
200. Urzhinskiy, K. P. *Trudoustroystvo grazhdan v SSSR.* Moscow, Yuridicheskaya literatura, 1967. 144 pp.

200a. Yagodkin, V. N. (Ed.). *Ekonomicheskiye problemy podgotovki kvalifitsirovannykh rabochikh kadrov v sovremennykh usloviyakh.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1967, 332 pp.

201. Zabelin, N. N. and S. M. Sundetov. *Ispol'zovaniye trudovykh resursov i voprosy balansa truda.* Alma-Ata, Kazakhstan, 1966. 180 pp. (See also: 3, 5, 6, 41, 45, 48, 82, 90, 93, 95, 106, 146. 202, 203, 206, 209–211, 213–215, 257–260, 264, 275–279, 281, 284, 285, 292, 319, 320, 322, 325, 327, 328, 331, 340, 351, 353, 377, 395, 398, 417, 423, 434, 435, 453, 465, 466, 497, 503, 510, 512, 518, 525, 542, 562, 563.)

Law

201a. Aleksandrov, N. G. et al. *Kommentariy k zakonodatel'stvo o trude.* Second edition. Issued by the All-Union Scientific-Research Institute of Soviet Legislation. Moscow, Yuridicheskaya literatura, 1967. 856 pp.

202. ———. (Ed.). *Trudovoye pravo.* Fifth edition. Issued by the Moscow State University named after M. V. Lomonosov. Moscow, Yuridicheskaya literatura, 1966. 1966, 544 pp.

203. Astrakhan, Ye. I. et al. *Trudovoye pravo; posobiye dlya sudey.* Issued by the All-Union Scientific-Research Institute of Soviet Legislation. Second revised and enlarged edition. Moscow, Yuridicheskaya literatura, 1967. 280 pp.

204. Bescherevnyy, V. V. (Ed.). *Finansovoye pravo.* Moscow, Yuridicheskaya literatura, 1967. 420 pp.

205. Boguslavskiy, M. M. (Ed.). *Pravovyye voprosy nauchno-tekhnicheskogo progressa v SSSR.* Issued by the Academy of Sciences U.S.S.R., Institute of State and Law. Moscow, Nauka, 1967. 512 pp.

205a. Chernenko, K. U. and M. S. Smirtyukov (Compilers). *Resheniya partii i pravitel'stva po khozyaystvennym voprosam, tom 2, 1929–1940 gody.* Moscow, Politizdat, 1967. 800 pp.

206. Gorshenin, K. P. *Kodifikatsiya zakonodatel'stva o trude; teoriticheskiye voprosy.* Issued by the All-Union Scientific-Research Institute of Soviet Legislation. Moscow, Yuridicheskaya literatura. 1967. 224 pp.

207. Kozhevnikov, F. I. (Ed.). *Sovetskoye gosudarstvo i mezhdunarodnoye pravo.* Issued by the Institute of International Relations. Moscow, Mezhdunarodnyye otnosheniya, 1967. 312 pp.

208. Lunev, A. Ye. (Ed.). *Administrativnoye pravo.* Issued by the All-Union Juridical Correspondence Institute. Moscow, Yuridicheskaya literatura, 1967. 604 pp.

209. Natashev, A. Ye. and N. A. Struchkov. *Osnovy teorii ispravitel'no-trudovogo prava.* Moscow, Yuridicheskaya literatura, 1967. 192 pp.

210. Pashkov, A. S. (Ed.). *Sovetskoye trudovoye pravo.* Issued by the Leningrad State University. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1966. 376 pp.

211. Pyatakov, A. V. et al. (Compilers.) *Sbornik zakonodatel'nykh aktov o trude.* Second edition. Moscow, Yuridicheskaya literatura, 1965. 853 pp.

212. Sorokin, V. D. (Ed.). *Sovetskoye administrativnoye pravo; osobennaya chast'.* Issued by the Leningrad State University named after A. A. Zhdanov. Leningrad, Izdatel'stvo Leningradskogo universitetata, 1966. 320 pp.

213. Stolyarchuk, V. I. *Zakonodatel'stvo o trudovykh sporakh.* Issued by the Academy of Sciences U.S.S.R., Institute of State and Law. Moscow, Yuridicheskaya literatura, 1966. 228 pp.

214. Strukova, L. G. (Ed.). *Prilozheniye k sborniku zakonodatel'nykh aktov o trude.* Moscow, Yuridicheskaya literatura, 1965. 128 pp.

215. Tikunov, V. S. (Ed.). *Ispravitel'no-trudovoye pravo.* Issued by the Higher School of the Ministry for the Maintenance of Public Order R.S.F.S.R. Moscow, Yuridicheskaya literatura, 1966. 328 pp.

216. Yuridicheskaya komissiya pri Sovete Ministrov SSSR. *Sistematicheskoye sobraniye zakonov RSFSR, ukazov Prezidiuma Verkhovnogo Soveta RSFSR i resheniy pravitel'stva RSFSR; razdel VIII; Sel'skoye khozyaystvo, tom VI* Moscow, Yuridicheskaya literatura, 1967. 452 pp. (See also: 23, 26, 49, 54, 181, 189, 200, 219, 275–277, 306, 312, 486, 498, 503, 518, 520, 549, 559.)

Level of Living, Consumption

217. Basov, V. I. *Obshchestvennyye fondy potrebleniya i byudzhet.* Moscow, Finansy, 1967. 160 pp.
218. Itkin, A. S. (Ed.). *Voprosy planirovaniya narodnogo potrebleniya.* Issued by Moscow Institute of National Economy named after G. V. Plekhanov, Faculty of the Planning of National Economy. Moscow, Redaktsionyy otdel MINKh, 1965. 120 pp.
219. Kleyn, N. I. *Zakonodatel'stvo o planirovanii proizvodstva tovarov narodnogo potrebleniya.* Issued by the All-Union Scientific-Research Institute of Soviet Legislation. Moscow, Yuridicheskaya literatura, 1967. 144 pp.
220. Korzhenevskiy, I. I. *Osnovnyye zakonomernosti razvitiya sprosa v SSSR.* Moscow, Ekonomika, 1965. 204 pp.
220a. Lagutin, N. S. *Problemy sblizheniya urovnya zhizni rabochikh i kolkhoznikov.* Moscow, Ekonomika, 1965. 112 pp.
221. Mints, L. Ye. and L. S. Kuchayev (Eds.). *Statisticheskoye izucheniye sprosa i potrebleniya.* "Uchenyye zapiski po statistike," tom XI. Issued by the Academy of Sciences U.S.S.R., Institute of Mathematics. Moscow, Nauka, 1966. 260 pp.
222. Rakitskiy, B. V. *Obshchestvennyye fondy potrebleniya kak ekonomicheskaya kategoriya.* Moscow, Mysl', 1966. 192 pp.
223. Raytsin, V. Ya. *Normativnyye metody planirovaniya urovnya zhizni.* Moscow, Ekonomika, 1967. 120 pp.
224. Sarkisyan, G. S. and N. P. Kuznetsova. *Potrebnosti i dokhod sem'i.* Moscow, Ekonomika, 1967. 176 pp. (See also: 41, 45, 230, 278, 291, 300, 304, 475, 485, 500.)

National Income, State Budget, Taxes, Finances

225. Borisov, V. *Balans denezhnykh dokhodov i raskhodov naseleniya. Moscow,* Finansy, 1965. 119 pp.
225a. Borodin, S. V. et al. *Finansy i kredit.* Second revised and enlarged edition. Moscow, Finansy, 1967. 260 pp.
226. Konnik, I. I. *Den'gi v period stroitel'stva kommunisticheskogo obshchestva.* Moscow, Finansy, 1966. 256 pp.
227. Kosyachenko, G. P. et al. (Eds.). *50 let Sovetskikh finansov.* Issued by Scientific-Research Financial Institute, Moscow, Finansy, 1967. 350 pp.
228. Krivenko, A. A. et al. *Spravochnik po gosudarstvennym dokhodam.* Moscow, Finansy, 1967. 368 pp.
229. Kuts, V. K. et al. (Eds.). *Finansy i kredit. Mezhvedomstvennyy respublikanskiy nauchnyy sbornik.* Issue 3. Issued by the Ministry of Higher and Specialized Secondary Education Ukrainian S.S.R., Kiev, Tekhnika, 1966. 170 pp.
230. Lenskaya, S. A. *Krugooborot i oborot obshchestvennykh fondov v SSSR.* Moscow, Mysl', 1967. 285 pp.
231. Liberman, Ya. G. *Gosudarstvennyy byudzhet i problemy sotsialisticheskogo vosproizvodstva.* Moscow, Finansy, 1966. 258 pp.
232. Menchinskiy, V. V. *Organizatsiya byudzhetnoy raboty v mestnykh finansovykh organakh.* Moscow, Finansy, 1965. 152 pp.
233. Millionshchikov, A. D. *Nenalogovyye dokhody.* Moscow, Finansy, 1967. 108 pp.
234. Plotnikov, K. N. (Ed.). *Finansy i kredit SSSR; uchebnoye posobiye.* Issued by the Higher Party School attached to the CC CPSU, Faculty of Soviet Economics. Moscow, Mysl', 1967. 264 pp.
235. Sitaryan, S. A. (Ed.). *Effektivnost' obshchestvennogo proizvodstva i finansy.* Vyp. I. Issued by the Scientific-Research Financial Institute. Moscow, Finansy, 1967. 168 pp.
236. Vinokur, R. D. *Vzaimootnosheniya byudzheta s khozyaystvom.* Moscow, Finansy, 1967. 180 pp.
237. Zlobin, I. D. et al. *Finansy SSSR.* Moscow, Finansy, 1967. 372 pp. (See also: 13, 14, 36, 89, 138, 148, 204, 217, 296, 298, 400, 408, 433, 499, 501, 502, 557.)

Planning

238. Aganbegyan, A. G. et al. (Eds.). *Metodicheskiye polozheniya po optimal'nomu otraslevomu planirovaniyu v promyshlennosti.* Issued by the Academy of Sciences U.S.S.R., Siberian Division, and Ministry of Instrument-Building, Means of Automation and Systems of Management. Novosibirsk, Nauka, Sibirskoye otdeleniye, 1967. 175 pp.

239. Antonov, I. K. *Dlya vsekh i dlya sebya; o sovershenstvovanii pokazateley planirovaniya sotsialisticheskogo promyshlennogo proizvodstva.* Moscow, Ekonomika, 1965. 272 pp.
240. Ivanov, G. A. and A. Sh. Pribluda. *Planovyye organy v SSSR.* Moscow, Ekonomika, 1967. 206 pp.
241. Koval', N. S. et al. (Eds.). *Planirovaniye narodnogo khozyaystva SSSR.* Issued by the Ministry of Higher and Specialized Secondary Education U.S.S.R. and the All-Union Correspondence Finance and Economics Institute. Moscow, Ekonomika, 1965. 608 pp.
242. Mezhduvedomstvennaya kommissiya pri Gosplane SSSR. *Sbornik ukazaniy i instruktivnykh materialov po perevodu predpriyatiy, ob"yedineniy i otrasley promyshlennosti na novuyu sistemu planirovaniya i ekonomicheskogo stimulirovaniya.* Moscow, Ekonomika, 1967. 271 pp.
242a. Morozov, P. T. *Sistema pokazateley plana razvitiya narodnogo khozyaystva SSSR.* Moscow, Mysl', 1967. 80 pp.
243. ——— *Zadachi i organizatsiya planirovaniya narodnogo khozyaystva v SSSR.* Moscow, Mysl', 1967. 80 pp.
244. Omarov, A. M. *Nauchnyye osnovy planirovaniya narodnogo khozyaystva.* Moscow, Mysl', 1966. 78 pp.
245. Silinskiy, P. P. *Planirovaniye narodnogo khozyaystva v oblasti; metodologiya i organizatsiya.* Moscow, Ekonomika, 1967. 119 pp.
246. Terekhov, L. L. *Otsenki v optimal'nom plane.* Moscow, Ekonomika, 1967. 136 pp.
247. Tsapkin, N. V. and V. I. Pereslegin (Eds.). *Planirovaniye narodnogo khozyaystva SSSR; uchebnoye posobiye.* Second revised and enlarged edition. Issued by the Higher Party School attached to the CC CPSU, Faculty of Soviet Economics. Moscow, Mysl', 1967. 448 pp.
248. Utrobin, Ye. N. and Shniper, R. I. *Planirovaniye khozyaystva krupnogo ekonomicheskogo rayona.* Moscow, Ekonomika, 1966. 140 pp.
249. Yefimov, A. N. et al. (Eds.). *Ekonomicheskoye planirovaniye v SSSR.* Issued by the Gosplan U.S.S.R., Scientific-Research Institute of Economics. Moscow, Ekonomika, 1967. 320 pp. (See also: 18, 20, 31, 35, 39, 109, 110, 112, 126, 161, 194, 195, 201, 218, 223, 317, 319, 321, 328, 341, 350, 361, 375, 381, 383–385, 388–390, 396, 399, 413, 424, 428, 443, 449, 459, 461, 463, 476, 487, 492, 494, 500–502, 522, 532.)

Population and Vital Statistics

250. Allakhverdiyev, M. *Sotsialisticheskiy zakon narodonaseleniya; na materialakh Azerbaydzhanskoy SSR.* Issued by the Academy of Sciences Azerbaydzhan S.S.R., Institute of Economics, Baku, Izdatel'stvo Akademii nauk Azerbaydzhanskoy SSR, 1965. 108 pp.
251. Baranskiy, N. N. *Geografiya naseleniya mira.* Moscow, Mysl', 1966. 224 pp.
252. Boyarskiy, A. Ya. et al. *Kurs demografii.* Moscow, Statistika, 1967. 400 pp.
253. Bruk, S. I. (Ed.). *Naseleniye zemnogo shara; spravochnik po stranam.* Issued by the Academy of Sciences U.S.S.R., Institute of Ethnography named after N. N. Miklukho-Maklay. Moscow, Nauka, 1965. 375 pp.
254. Geograficheskoye obshchestvo SSSR, Komissiya geografii naseleniya i gorodov. *Doklady po geografii naseleniya. Vypusk 5.* Leningrad, n.p., 1966. 138 pp.
255. Konstantinov, O. A. (Ed.). *Voprosy geografii naseleniya.* Issued by the Leningrad State Pedagogical Institute named after A. I. Gertsen. Leningrad, n.p., 1966. 356 pp.
256. Mullyadzhanov, I. R. *Narodonaseleniye Uzbekskoy SSR; sotsial'no-ekonomicheskiy ocherk.* Tashkent, Uzbekistan, 1967. 232 pp.
257. Otorbayev, K. and Ye. P. Chernova (Eds.). *Naseleniye i trudovyye resursy Kirgizskoy SSR.* Issued by the Academy of Sciences Kirgiz S.S.R., Institute of Economics. Frunze, Ilim, 1965. 116 pp.
258. Perevedentsev, V. I. *Migratsiya naseleniya i trudovyye problemy Sibiri.* Issued by the Academy of Sciences U.S.S.R, Siberian Division, Institute of Economics and Organization of Industrial Production. Novosibirsk, Nauka, Sibirskoye otdeleniye, 1966. 192 pp.
259. ———. *Sovremennaya migratsiya naseleniya zapadnoy Sibiri.* Issued by the Academy of Sciences U.S.S.R., Siberian Division, and the Geographical Society of the U.S.S.R., Siberian Branch. Novosibirsk, Zapadno-sibirskoye knizhnoye izdatel'stvo, 1965. 96 pp.

260. Pod"yachikh, P. G. et al. (Eds.). *Voprosy narodonaseleniya i demograficheskoy statistiki; doklady sovetskikh uchenykh i spetsialistov na Vsemirnoy konferentsii po voprosam narodonaseleniya 1965 g.* Moscow, Statistika, 1966. 400 pp.
261. Pokshishevskiy, V. V. *Geografiya naseleniya v SSSR; Geografiya SSSR*, vypusk 3, Seriya "Itogi Nauki". Moscow, VINITI, 1966. 171 pp.
262. ——— et al. (Eds.). *Nauchnyye problemy geografii naseleniya; materialy ko vtoromu mezhduvedomstvennomu soveshchaniyu po geografii naseleniya.* Issued by the Ministry of Higher and Specialized Secondary Education U.S.S.R. and the Geographic Society of the U.S.S.R. Moscow, Izdatel'stvo Moskovskogo universiteta, 1967. 264 pp.
263. Ryabushkin, T. V. (Ed.). *Problemy demograficheskoy statistiki.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Nauka, 1966. 355 pp.
263a. Valentey, D. I. (Ed.). *Naseleniye i trudovyye resursy Severo-Vostoka SSSR.* Issued by the Academy of Sciences U.S.S.R., Northeast Complex Scientific-Research Institute. Moscow, Nauka, 1968. 144 pp.
263b. ——— et al. (Eds.). *Narodonaseleniye i ekonomika.* Moscow, Ekonomika, 1967. 188 pp.
264. ——— *Teoriya i politika narodonaseleniya.* Moscow, Vysshaya shkola, 1967. 184 pp. (See also: 48, 63, 73, 78, 278, 392.)

Prices

264a. D'yachenko, V. P. (Ed.). *Voprosy tsenoobrazovaniya v sotsialisticheskom khozyaystve.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Nauka, 1968. 180 pp.
264b. ——— et al. (Eds.). *Sovershenstvovaniye tsenoobrazovaniya v stroitel'stve; materialy tret'ey rasshirennoy sessii i soveshchaniy, provedennykh nauchnym sovetam po problemam tsenoobrazovaniya i institutom ekonomiki stroitel'stva Gosstroya SSSR v 1963–1966 gg.).* Issued by the Academy of Sciences U.S.S.R., Economics Division, Scientific Council for Problems of Price Formation and Gosstroy U.S.S.R., Scientific-Research Institute of Construction Economics. Moscow, Stroyizdat, 1967. 161 pp.
265. Lasevich, G.M. and Sh.Mindel' (Compilers). *Tseny na tovary narodnogo potrebleniya; sbornik materialov.* Moscow, Gostorgizdat, 1963. 336 pp.
266. Markevich, O.Ye. et al. *Tsenoobrazovaniye v predpriyatiyakh obshchestvennogo pitaniya,* Moscow, Gostorgizdat, 1962. 88 pp.
267. Moyseyev, M. I. et al. *Zagotovitel'nyye tseny i chistyy dokhod.* Moscow, Ekonomika, 1967. 192 pp.
268. Royzman, V.M. *Tseny v obshchestvennom pitanii.* Moscow, Ekonomika, 1965. 152 pp.
269. Sokolov, M. M. (Ed.). *Tseny i tsenoobrazovaniye na sel'skokhozyaystvennyye produkty.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1966. 164 pp.
270. Srapionov, O.S. *Tarify na uslugi svyazi.* Moscow, Svyaz', 1965. 36 pp.
271. Stolyarov, Ya. S. *Tsena i rentabel'nost' v obshchestvennom pitanii.* Moscow, Ekonomika, 1967. 215 pp.
272. Turetskiy, Sh.Ya. (Ed.). *Razvitiye uslug i printsipy tsenoobrazovaniya na bytovyye uslugi.* Issued by Moscow Institute of National Economy named after G.V. Plekhanov. Moscow, Izdatel'stvo Instituta narodnogo khozyaystva imeni G.V. Plekhanova, 1966. 198 pp.
273. Vasilenko, G.K. *Izderzhki proizvodstva i tsenoobrazovaniye v krupnoseriynom i massovom mashinostroyenii.* Issued by the Academy of Sciences Ukrainian S.S.R., Institute of Economics. Kiev, Naukova dumka, 1967.216 pp.
274. Zhulego, V.I. et al. (Eds.). *Tsenoobrazovaniye na predmety potrebleniya.* Issued by the Academy of Sciences of the Belorussian S.S.R., Institute of Economics. Minsk, Nauka i Tekhnika, 1965. 200 pp. (See also: 337, 454, 496.)

Social Insurance, Social Security

275. Glebova, R. G. (Ed.). *Sovetskoye pensionnoye obespecheniye.* Moscow, Yuridicheskaya literatura, 1966. 448 pp.
276. Zabozlayev, A. et al. *Spravochnik po pensionnym voprosam; v pomoshch' komissiyam FZMK.* Second revised edition. Moscow, Profizdat, 1966. 288 pp.
277. Zakharov, M. L. (Compiler). *Sotsial'noye strakhovaniye i pensionnoye obespecheniye v kolkhozakh; sbornik rukovodyashchikh materialov.* Moscow, Profizdat. 1966. 192 pp. (See also: 550.)

Sociology

278. Aganbegyan, A. G. et al. (Eds.). *Kolichestvennyye metody v sotsiologii.* Issued by the Academy of Sciences U.S.S.R., Institute of Philosophy. Moscow, Nauka, 1966. 356 pp.
279. Anan'yev, B. G. and D. A. Kerimov, *Chelovek i obshchestvo. Uchenyye zapiski,* Issue I. Issued by the Leningrad State University named after A. A. Zhdanov, Scientific-Research Institute of Complex Social Research. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1966. 184 pp. Issue 2 (1967). 251 pp.
279a. Kuz'min, Ye. S. *Osnovy sotsial'noy psikhologii.* Issued by the Leningrad State University named after A. A. Zhdanov. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1967. 174 pp.
280. Maslov, P. P. *Sotsiologiya i statistika.* Moscow, Statistika, 1967. 295 pp.
281. Omarov, A. M. *Tekhnika i chelovek; sotsial'no-ekonomicheskiye problemy tekhnicheskogo progressa.* Moscow, Politizdat, 1965. 272 pp.
282. Ustinov, V. A. and A. F. Deyev. *Opyt primeneniya EVM v sotsiologicheskikh issledovaniyakh.* Novosibirsk, Nauka, Sibirskoye otdeleniye, 1967. 245 pp.
283. Vasil'yev, V. G. et al. *Vashe mneniye? Prikladnyye sotsiologicheskiye issledovaniya po problemam molodezhi.* Moscow, Sovetskaya Rossiya, 1967. 184 pp.
284. Zdravomyslov, A. G. et al. (Eds.). *Chelovek i yego rabota.* Moscow, Mysl', 1967. 392 pp.

Statistics, Accounting, Mechanized Data Processing

285. Artemov, V. A. et al. *Statistika byudzhetov vremeni trudyashchikhsya.* Moscow, Statistika, 1967. 220 pp.
286. Boyarskiy, A. Ya. et al. *Vyborochnoye nablyudeniye v statistike SSSR; sbornik statey.* Moscow, Statistika, 1966. 352 pp.
287. Brazhnik, A. and B. Shcheglov. *Spravochnoye posobiye po bukhgalterskomu uchetu v promyshlennom predpriyatii.* Second revised edition. Minsk, Belarus', 1966. 452 pp.
288. Glebov-Kotel'nikov, E. A. and V. B. Liberman. *Mekhanizatsiya ekonomicheskikh raschetov na predpriyatii.* Moscow, Ekonomika, 1965. 151 pp.
289. Goloshchapov, V. A. (Compiler). *Spravochnik bukhgaltera po raschetam s rabochimi i sluzhashchimi.* Moscow, Finansy, 1967. 152 pp.
290. Koroyed, A. S. et al. (Eds). *Voprosy statisticheskoy metodologii i statistiko-ekonomicheskogo analiza. Materialy mezhvuzovskoy konferentsii po voprosam sovershenstvovaniya uchebnoy literatury po statistike.* Issued by the Kiev Institute of National Economy. Moscow, Statistika, 1967. 240 pp.
291. Matyukha, I. Ya. *Statistika byudzhetov naseleniya.* Moscow, Statistika, 1967. 248 pp.
292. Patrushev, V. D. et al. *Metodika izucheniya byudzhetov vremeni trudyashchikhsya; sbornik materialov.* Issued by the Academy of Sciences U.S.S.R., Siberian Division, Institute of Economics and Organization of Industrial Production. Novosibirsk, n.p. 1965. 300 pp.
293. Petrov, A. I. (Ed.). *Kurs ekonomicheskoy statistiki.* Fourth revised and enlarged edition. Moscow, Statistika, 1967. 584 pp.
294. Ryabushkin, T.V. et al. (Eds.). *Metodologicheskiye voprosy promyshlennoy statistiki.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Nauka, 1967. 224 pp.
294a. ——— et al. (Eds.). *Metodologicheskiye voprosy statistiki truda.* "Uchenyye zapiski po statistike," vol. 13. Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Nauka, 1967. 212 pp.
295. TsSU SSSR. *Instruktsiya po zapolneniyu blankov yedinovremennogo ucheta zatrat na proizvodstvo produktsii dlya promyshlennykh predpriyatiy za 1959 god po formam No. 1 i 2.* Moscow, Gosstatizdat, 1960. 48, 4, and 8 pp.
296. Vaynshteyn, A. L. (Ed.). *Statistika narodnogo bogatstva, narodnogo dokhoda i natsional'nyye scheta; ocherki po balansovoy statistike.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Nauka, 1967. 270 pp.
297. Yezhov, A. I. *Statistika promyshlennosti.* Fourth revised and enlarged edition. Moscow, Statistika, 1966. 407 pp.

298. Zhutova, Z. U. *Byudzhetnyy uchet v SSSR; v bankakh i byudzhetnykh uchrezhdeniyakh.* Issued by Ministry of Higher and Specialized Secondary Education R.S.F.S.R., Leningrad Economics-Finance Institute named after N. A. Voznesenskiy. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1967. 160 pp. (See also: 180, 221, 242, 282, 324, 349, 357, 376, 380, 482, 488, 506, 523, 528.)

Wages

299. Adaskin, I. N. and V. S. Skvortsov, *Oplata truda robotnikov prosveshcheniya.* Moscow, Profizdat, 1966. 166 pp.
300. Bor, M. Z. (Ed.). *Real'nyye dokhody i zhiznennyy uroven' trudyashchikhsya.* Issued by the Academy of Sciences Belorussian S.S.R., Institute of Economics. Minsk, Nauka i tekhnika, 1966. 292 pp.
301. Kalinovskiy, N. P. *Rayonnyye razlichiya real'noy zarabotnoy platy rabochikh i sluzhashchikh.* Moscow, Ekonomika, 1966. 112 pp.
302. Lutokhina, E. A. *Oplata truda inzhenerno-tekhnicheskikh rabotnikov.* Moscow, Ekonomika, 1966. 119 pp.
303. Maslova, N. S. *Kollektivnyye formy material'nogo stimulirovaniya v promyshlennosti SSSR.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Nauka, 1966. 240 pp.
304. Mil'ner, G. V. et al. *Territorial'nyye problemy dokhodov i potrebleniya trudyashchikhsya.* Moscow, Ekonomika, 1966. 136 pp.
305. Panov, N. N. and V. D. Kharin. *Stimulirovaniye truda rabotnikov sfery obsluzhivaniya.* Issued by the Academy of Social Sciences attached to the CC CPSU. Faculty of Economic Sciences. Moscow, Mysl', 1966. 128 pp.
306. Popov-Cherkasov, I. N. *Zarabotnyaa plata rabotnikov sfery obsluzhivaniya; pravovyye voprosy.* Moscow, Yuridicheskaya literatura, 1967. 112 pp.
307. Pravdin, D. I. et al. *Zarabotnaya plata rabotnikov neproizvodstvennoy sfery.* Moscow, Ekonomika, 1967. 144 pp.
308. Semeykin, N. S. *Zarabotnaya plata v period stroitel'stva kommunizma.* Khar'kov, Izdatel'stvo Khar'kovskogo universiteta, 1966. 188 pp.
309. Tripol'skiy, V. A. *Printsip lichnoy material'noy otvetstvennosti i voprosy kommunisticheskogo vospitaniya.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Philosophy. Moscow, Mysl', 1966. 72 pp.
310. Tronev, K. P. *Ekonomicheskiye osnovy dinamiki real'nykh dokhodov trudyashchikhsya pri sotsializme.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1966. 84 pp.
311. Zaslavskya, T. I. *Raspredeleniye po trudu v kolkhozakh.* Moscow, Ekonomika, 1966. 342 pp.
312. Zaykin, A. D. and S. I. Shkurko. *Pravovyye voprosy organizatsii oplaty truda rabochikh.* Moscow, Yuridicheskaya literatura, 1967. 208 pp. (See also: 46, 82, 162, 173, 224, 225, 278, 289, 319, 340, 348, 444, 497, 509, 562.)

SECTOR LISTING

Industry—General

313. Bor, M. Z. and V. P. Kamkin (Eds.). *Effektivnost' kompleksnogo razvitiya tekhniki v promyshlennosti.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Economic Sciences. Moscow, Mysl', 1966. 168 pp.
314. Gromov, V. I. and V. Ya. Kamenetskiy. *Proizvodstvennyye ob"yedineniya v SSSR.* Moscow, Ekonomika, 1967. 167 pp.
315. Itin, L. I. et al. *Voprosy metodiki obosnovaniya kontsentratsii i spetsializatsii proizvodstva.* Issued by the Moscow Institute of the National Economy named after G. V. Plekhanov, Central Scientific-Research Laboratory of Economics and Organization of Production (TsNIEL). Moscow, Redaktsionno-izdatel'skiy otdel Moskovskogo instituta narodnogo khozyaystva, 1967. 64 pp.
316. Kalmykov, N. N. and S. A. Vaysbeyn. *Ekonomika sotsialisticheskoy promyshlennosti.* Second revised and enlarged edition. Moscow, Khimiya, 1967. 356 pp.
317. Kamenitser, S. Ye. (Ed.). *Al'bom naglyadnykh posobiy po kursu "Organizatsiya i planirovaniye promyshlennykh predpriyatiy".* Issued by the Moscow Institute of National Economy named after G. V. Plekhanov Faculty of Organization and Planning of Industrial Enterprises. Moscow n.p., 1966. 175 pp.

318. Kamenitser, S. Ye. (Ed.). *Voprosy ekonomiki i organizatsii promyshlennogo proizvodstva.* Issued by the Moscow Institute of National Economy named after G. V. Plekhanov, Central Scientific-Research Laboratory of Economics and Organization of Production (TSNIEL). Moscow, Ekonomika, 1967. 223 pp.
319. Kostin, L. A. *Planirovaniye truda v promyshlennosti.* Moscow, Ekonomika, 1967. 240 pp.
320. Kotelkin, V. I. *Sovershenstvovaniye normirovaniya truda v promyshlennosti; ekonomicheskiye problemy.* Issued by the Leningrad State University named after A. A. Zhdanov. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1966. 143 pp.
321. Kurskiy, A. D. (Ed.). *Pokazateli planirovaniya i otsenki raboty promyshlennogo predpriyatiya.* Issued by the Academy of Sciences U.S.S.R., Institute of Economics. Moscow, Nauka, 1967. 272 pp.
322. Kvasha, Ya.V. *Statistika novoy tekhniki.Mekhanizatsiya truda i avtomatizatsiya proizvodstva. Kontsentratsiya i spetsializatsiya promyshlennogo proizvodstva.* Moscow, Statistika, 1966. 264 pp.
322a. Lagutkin, V. M. (Ed.) *Voprosy sozdaniya priozvodstvennykh ob"yedineniy.* Moscow, Mysl', 1967. 248 pp.
323. Meleshkin, M. T. et al. *Uskoreniye osvoyeniya moshchnostey v promyshlennosti.* Moscow, Ekonomika, 1967. 272 pp.
324. Pogosov, I.A. *Stoimostnyye pokazateli promyshlennoy produktsii.* Moscow, Statistika, 1967. 128 pp.
325. Pukhova, I.A. *Trudoyemkost' produktsii promyshlennosti.* Moscow, Ekonomika, 1965. 144 pp.
325a. Sachko, N. S. *Kontsentratsiya proizvodstva v promyshlennosti.* Moscow, Ekonomika, 1968. 208 pp.
326. Savashinskaya V.I. and R.Ya. Bril' (Eds.). *Voprosy povysheniya effektivnosti ispol'zovaniya toplivno-energeticheskikh resursov v promyshlennosti.* Issued by the Leningrad Engineering-Mathematical Institute named after Palmiro Togliatti. Trudy, vyp. 60. Moscow, Energiya, 1966. 128 pp.
327. Slezinger, G. E. *Trud v upravlenii promyshlennym proizvodstvom.* Moscow, Ekonomika, 1967. 256 pp.
328. Stepanov, B. V. *Planirovaniye rabochikh kadrov na promyshlennykh predpriyatiyakh.* Moscow, Ekonomika, 1967. 112 pp. (See also: 1, 6, 9–11, 16, 20, 23, 46, 48, 51, 59, 61, 66, 79, 82, 87–89, 91, 93, 96, 101, 152, 185, 189, 191, 238, 239, 242, 287, 294, 295, 297, 303, 420, 447, 462, 473, 477.)

Industry—Electric Power

329. Avrukh, A. Ya. *Problemy stoimosti elektricheskoy i teplovoyenergii.* Second enlarged and revised edition. Moscow, Energiya, 1966. 456 pp.
330. Neporozhniy, P.S. (Ed.). *Elektrifikatsiya SSSR; 1917–1967.* Moscow, Energiya, 1967. 544 pp.
331. Poleshchuk, N. G. *Energovooruzhennost' i proizvoditel'nost' truda.* Moscow, Energiya, 1966. 140 pp.
332. Van, V. L. *Ekonomika energetiki.* Khar'kov, Izdatel'stvo Khar'kovskogo universiteta, 1966. 272 pp.
333. Vilenskiy, M. A. *Ekonomicheskiye voprosy razvitiya energetiki.* Issued by the Academy of Social Sciences attached to the CC C.P.S.U., Faculty of Economic Sciences. Moscow, Mysl', 1967. 166 pp. (See also: 84, 97, 104, 326.)

Industry—Fuels

334. Andrianov, V. M. *Ekonomika neftekhimicheskoy promyshlennosti.* Moscow, Khimiya, 1967. 204 pp.
335. Bykhover, N. A. *Ekonomika mineral'nogo syr'ya; toplivno-energeticheskoye syr'ye, rudy chernykh i legiruyushchikh metallov.* Moscow, Nedra, 1967. 368 pp.
336. Ivanchenko, G. Ye. (Ed.). *Voprosy ekonomiki i organizatsii proizvodstva v gornoy promyshlennosti; Nauchnyye trudy. vyp. 18.* Issued by the Karaganda Scientific-Research Coal Institute. Moscow, Nedra, 1965. 196 pp.
337. Kashnitskiy, L. A. *Sebestoimost' i tsenoobrazovaniye v neftedobyvayushchey promyshlennosti SSSR.* Moscow, Nedra, 1966. 159 pp.
338. Krapchin, I. P. *Razvitiye uglebriketnoy promyshlennosti SSSR.* Issued by the Academy of Sciences U.S.S.R., Ministry of Coal Industry U.S.S.R. and the Institute of Mineral Fuels. Moscow, Nauka, 1966. 136 pp.
339. Malyshev, Yu. M. et al. *Ekonomika neftyanoy i gazovoy promyshlennosti.* Moscow, Nedra, 1966. 184 pp.

340. Nikol'skiy, V. S. and M. I. Chetyrkin, *Organizatsiya truda i zarabotnoy platy na shakhtakh; pravovoye posobiye.* Moscow, Nedra, 1965. 290 pp.
340a. Suvorov, B. P. (Ed.). *Matematicheskiye metody i modeli v planirovanii neftepererabatyvayushchey promyshlennosti.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute. Moscow, Nauka, 1967. 256 pp.
341. Tishchenko, V. Ye. *Organizatsiya i planirovaniye neftegazorazvedochnykh rabot.* Moscow, Nedra, 1967. 292 pp.
342. Yegurnov, G. P. *Ekonomika gornoy promyshlennosti.* Moscow, Nedra, 1966. 224 pp. (See also: 74, 75, 84, 106, 131, 326, 510.)

Industry—Metallurgy

343. Aleksandrova, V. P. et al. *Effektivnost' kapitalovlozheniy v chernuyu metallurgiyu; po Ukrainskoy SSR.* Kiev, Tekhnika, 1966. 180 pp.
344. Gratsershteyn, I. M. and L. S. Kul'nitskiy. *Tekhniko-ekonomicheskoye proyektirovaniye predpriyatiy tsvetnoy metallurgii.* Moscow, Metallurgiya, 1966.
345. Lelyukhina, N. D. *Perspektivy razvitiya chernoy metallurgii tsentral'nykh rayonov SSSR.* Moscow, Nedra, 1966. 196 pp.
346. Spivakovskiy, L. I. et al. *Ekonomika trubnoy promyshlennosti SSSR.* Moscow, Metallurgiya, 1967. 416 pp. (See also: 74.)

Industry—Machine-Building and Metalworking

347. Bitunov, V. V. and R. M. Buryndin (Eds.). *Povysheniye effektivnosti tekhnicheskogo progressa; na materialakh mashinostroyeniya.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Economic Sciences. Moscow, Mysl', 1967. 173 pp.
348. Boborykin, S. G. and M. Ya. Zelikson, *Voprosy organizatsii zarabotnoy platy na predriyatiyakh mashinostroitel'noy i metalloobrabatyvayushchey promyshlennosti SSSR.* Leningrad, Sudostroyeniye, 1966. 480 pp.
349. Dobronravova, L. A. and G. S. Salibekov. *Kompleksnyy balans oborudovaniya i yego normativnaya baza.* Moscow, Ekonomika, 1966. 182 pp.
350. Gordon, A. L. and L. S. Rossiyanskiy. *Ekonomika, organizatsiya i planirovaniye radiotekhnicheskogo proizvodstva.* Second revised and enlarged edition. Moscow, Energiya, 1966. 344 pp.
351. Kasperovich Ye. *Puti povysheniya proizvoditel'nosti truda v mashinostroyenii; Iz opyta predpriyatiy Byelorusskoy SSR.* Minsk, Nauka i Tekhnika, 1965. 216 pp.
352. Konson, A. S. *Ekonomika elektrotekhnicheskoy promyshlennosti.* Moscow, Vysshaya shkola, 1966. 336 pp.
353. Leningradskiy inzhenerno-ekonomicheskiy institut imeni P. Togliatti. *Voprosy sovershenstvovaniya organizatsii proizvodstva i normirovaniya truda (mashinostroyeniye). Trudy, vyp. 54.* Leningrad, Izdatel'stvo Leningradskogo universiteta, 1966. 176 pp.
354. L'vov, D. S. *Osnovy ekonomicheskogo proyektirovaniya mashin.* Moscow, Ekonomika, 1966, 296 pp.
355. Lych, N. M. et al. *Ekonomika ispol'zovaniya mashinostroitel'nogo oborudovaniya.* Kiev, Tekhnika, 1967. 204 pp.
356. Oboznyy, A. G. *Osnovnyye fondy mashinostroyeniya i puti uluchsheniya ikh ispol'zovaniya; na primere stankostroitel'noy promyshlennosti SSSR.* Issued by the Academy of Sciencies Ukrainian S.S.R., Institute of Economics. Kiev, Izdatel'stvo Akademii nauk Ukrainskoy SSR, 1962. 160 pp.
357. Oktyabr'skiy, P. Ya. *Statistika spetsializatsii i kooperirovaniya v mashinostroyenii.* Issued by the Leningrad State University named after A. A. Zhdanov. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1966. 92 pp.
358. Polotskiy, S. G. *Nekotoryye voprosy ekonomiki sudostroyeniya.* Leningrad, Sudpromgiz, 1961. 196 pp.
359. Razumov, I. M. et al. *Organizatisya i planirovaniye mashinostroitel'nogo proizvodstva.* Moscow, Mashinostroyeniye, 1967. 620 pp.
360. Zamakhovskaya, A. G. et al. *Ekonomika i organizatsiya sudoremonta.* Moscow, Transport, 1966. 368 pp.
361. Zotov, I. S. et al. *Ekonomicheskoye obosnovaniye proyektov mashinostroitel'nykh zavodov.* Second revised and enlarged edition. Moscow, Mashinostroyeniye, 1966. 456 pp.

362. Zusman, A. D. *Analiz ispol'zovaniya materialov na mashinostroitel'nom zavode*, Moscow, Mashinostroyeniye, 1967. 41 pp. (See also: 8, 81, 149, 273, 422, 436, 438, 462, 530).

Industry—Chemical

363. Bobrovskiy, P. A. *Narodnokhozyaystvennaya effektivnost' khimizatsii proizvodstva*. Moscow, Mysl', 1966. 288 pp.
364. Fedorenko, N. P. *Ekonomika promyshlennosti sinteticheskikh materialov*. Moscow, Ekonomika, 1967. 520 pp.
365. Kostandov, L. A. et al. (Eds.). *50 let. Sovetskaya khimicheskaya nauka i promyshlennost'*. Moscow, Khimiya, 1967. 468 pp.
366. Movsesyan, Yu. T. *Ekonomicheskaya effektivnost' avtomatizatsii khimicheskikh proizvodstv; metody i praktika opredeleniya*. Issued by the Academy of Sciences Armenian S.S.R., Institute of Economics. Yerevan, Izdatel'stvo Akademii nauk Armyanskoy SSR, 1965. 172 pp.
367. Natradze, A. G. *Ocherk razvitiya khimiko-farmatsevticheskoy promyshlennosti SSSR*. Moscow, Meditsina, 1967. 228 pp.
368. Nekrasov, N. N. *Ekonomika khimicheskoy promyshlennosti*. Moscow, Ekonomika, 1966. 511 pp.
369. Strokova, V. I. *Kombinirovaniye neftepererabatyvayushchey i khimicheskoy promyshlennosti*. Issued by the Academy of Sciences Belorussian S.S.R., Institute of Economics. Minsk, Nauka i Tekhnika, 1966. 118 pp. (See also: 149, 406.)

Industry—Construction Materials

369a. Boldyrev, A. S. (Ed.). *Promyshlennost' stroitel'nykh materialov SSSR, 1917–1967*. Issued by the Ministry of Construction Materials Industry of the U.S.S.R. Moscow, Stroyizdat, 1967. 332 pp.
370. Loginov, Z. I. *Ekonomicheskiye problemy tsementnoy promyshlennosti SSSR*. Moscow, Stroyizdat, 1967. 203 pp. (See also: 21, 397.)

Industry—Timber, Woodworking, and Paper

371. Glotov, V. V. et al. *Spravochnik po ekonomike lesnoy promyshlennosti*. Moscow Lesnaya promyshlennost', 1967. 288 pp.
372. Gorovoy, V. L. and G. A. Privalovskaya. *Geografiya lesnoy promyshlennosti SSSR*. Issued by the Academy of Sciences U.S.S.R., Institute of Geography. Moscow, Nauka, 1966. 152 pp.
373. Katsenelenbaum, A. Z. et al. *Spravochnik ekonomista-bumazhnika*. Moscow, Lesnaya promyshlennost', 1967. 248 pp.
374. Knopov, A. L. *Voprosy kombinirovaniya proizvodstva v tsellyulozno-bumazhnoy promyshlennosti*. Moscow, Goslesbumizdat, 1962. 180 pp.
375. Uchastkina, Z. V. and G. B. Kasparov. *Ekonomika, organizatsiya i planirovaniye tsellyulozno-bumazhnogo proizvodstva*. Second revised and enlarged edition. Moscow, Lesnaya promyshlennost', 1966. 326 pp.
376. Yakubyan, S. S. *Statistika lesozagotovitel'nykh i derevoobrabatyvayushchikh predpriyatiy*. Moscow, Lesnaya promyshlennost', 1964. 263 pp.
377. Yurkin, R. V. et al. *Rezervy rosta proizvoditel'nosti truda rabochikh na lesozagotovkakh*. Moscow, Lesnaya promyshlennost', 1966. 140 pp. (See also: 57, 493.)

Industry—Light

378. Kislyakov, B. I. *Legkaya industriya za 50 let*. Moscow, Legkaya industriya' 1967. 247 pp.
379. ———. *Nasushchnyye zadachi razvitiya legkoy promyshlennosti*. Moscow, Legkaya industriya, 1965. 167 pp.
380. Vidrevich, Ya. V. *Statistika na predpriyatiyakh tekstil'noy promyshlennosti*. Moscow, Gosstatizdat, 1962. 168 pp. (See also: 219, 265, 274.)

Industry—Food

381. Donskov, V. Ye. and A. N. Shamin, *Sovershenstvovaniye planirovaniya i rasshireniye khozyaystvennoy samostoyatel'nosti predpriyatiy pishchevoy promyshlennosti*. Moscow, Pishchevaya promyshlennost', 1966. 88 pp.
382. Futter, E. I. and V. S. Ivanov. *Ekonomika flota rybnoy promyshlennosti SSSR*. Moscow, Pishchevaya promyshlennost', 1966. 248 pp.

383. Gavrichenko, D. N. *Organizatsiya i planirovaniye proizvodstva na mukomol'nykh, krupyanykh, kombikormovykh i khlebopriyemnykh predpriyatiyakh* Moscow, Vysshaya shkola, 1965. 416 pp.
384. Mayorova, S. A. and N. P. Sysoyev. *Upravleniye i planirovaniye v rybnoy promyshlennosti SSSR.* Moscow, Pishchevaya promyshlennost', 1966. 76 pp.
385. Shnitser, S. S. *Ekonomika, organizatsiya i planirovaniye myasnoy promyshlennosti.* Moscow, Pishchevaya promyshlennost', 1965. 356 pp.
386. Shvarts, V. M. *Organizatsiya upravleniya v pishchevoy promyshlennosti SSSR.* Moscow, Pishchevaya promyshlennost', 1966. 60 pp.
387. Sysoyev, N. P. *Razmeshcheniye rybnoy promyshlennosti SSSR.* Moscow, Pishchevaya promyshlennost', 1967. 112 pp.
388. Yenin, P. M. *Novaya sistema planirovaniya i ekonomicheskogo stimulirovaniya na predpriyatiyakh khleboproduktov.* Moscow, Kolos, 1967. 64 pp.
389. Zhuravkov, V. O. and I. S. Zinger. *Novyye metody planirovaniya i upravleniya rybnoy promyshlennost'yu.* Moscow, Pishchevaya promyshlennost', 1967. 134 pp. (See also: 60, 72, 219, 269, 274.)

Construction

390. Balikhin, M. I. et al. *Planirovaniye stroitel'stva.* Moscow, Stroyizdat, 1967. 391 pp.
391. Gosstroy SSSR. *Planirovka i zastroyka gorodov; v pomoshch' proyektirovshchiku. Tema 5.* Issued by the State Committee for Civil Construction and Architecture attached to Gosstroy U.S.S.R. Kiev, Budivel'nik, 1966. 75 pp.
392. ———. *Problemy rasseleniya; v pomoshch' proyektirovshchiku. Tema 6.* Issued by the State Committee for Civil Construction and Architecture attached to Gosstroy U.S.S.R. Kiev, Budivel'nik, 1966. 91 pp.
393. ———, NIIOMTP. *Raschetnyye normativy dlya sostavleniya proyektov organizatsii stroitel'stva.* Moscow, Stroyizdat, 1966. 148 pp.
394. Karavayev, G. A. et. al. (Eds.). *Stroitel'stvo v SSSR; 1917–1967.* Moscow, Stroyizdat, 1967. 656 pp.
395. Koshelyuk, S. A. and L. G. Marin. *Proizvoditel'nost' truda v stroitel'stve.* Kiev, Budivel'nik, 1966, 148 pp.
396. Mitrofanov, A. I. (Ed.). *Planirovaniye zadelov v promyshlennom stroitel'stve.* Issued by Central Scientific-Research Institute of Economics (TSNII) attached to Gosplan R.S.F.S.R. Moscow, Ekonomika, 1967. 192 pp.
397. Nemchinskiy, A. B. *Effektivnost' kapital'nykh vlozheniy v predpriyatiya i khozyaystva stroitel'noy industrii.* Moscow, Ekonomika, 1967. 168 pp.
398. Nozdrachev, N. D. and M. Ya. Griva (Compilers). *Spravochnik rabotnika otdela kadrov na stroitel'stve.* Kiev, Budivel'nik, 1966. 240 pp.
399. Otdel ekonomiki stroitel'stva Gosstroya SSSR and NIIES. *Ukazaniya po sostavleniyu stroyfinplana i operativnomu planirovaniyu; metodicheskiye rekomendatsii.* Moscow, Stroyizdat, 1966. 128 pp.
400. Podshivalenko, G. P. *Nezavershennoye stroitel'stvo i finansovyye metody yego regulirovaniya.* Moscow, Stroyizdat, 1966. 100 pp.
401. Prudenskiy, G. A. and V. I. Malyugin. *Ekonomika stroitel'stva i osvoyeniya novykh predpriyatiy.* Issued by the Academy of Sciences U.S.S.R., Siberian Division, Institute of Economics and Organization of Industrial Production. Moscow, Stroyizdat, 1966. 144 pp.
402. Rumyantsev, A. F. et. al. (Eds.). *Ekonomika stroitel'stva. Uchebnik.* Fourth revised and enlarged edition. Issued by The Higher Party School attached to the CC CPSU. Moscow, Politizdat, 1965. 440 pp.
403. Semenov, B. N. and S. Ya. Leyn (Eds.). *Ekonomika stroitel'stva magistral'nykh truboprovodov; spravochnoye posobiye.* Moscow, Nedra, 1966. 344 pp.
404. Shraybman, M. G. and B. M. Zadorin. *Proizvodstvennyye fondy podryadnykh organizatsiy, ikh normirovaniye i effektivnost' ispol'zovaniya.* Moscow, Stroyizdat, 1967. 128 pp.
405. Uspenskiy, V. V. *Sebestoimost' v stroitel'stve i puti yeye snizheniya.* Second enlarged edition. Moscow, Stroyizdat, 188 pp.
406. Zubritskiy, M. P. *Ekonomicheskoye obosnovaniye stroitel'stva i rekonstruktsii khimicheskikh predpriyatiy.* Second revised and enlarged edition. Leningrad, Khimiya, 1967. 184 pp. (See also: 12, 19, 21, 46, 96.)

Agriculture

407. Aleksandrov, N. P. *Spetsializatsiya i kontsentratsiya proizvodstva v kolkhozakh i sovkhozakh.* Moscow, Kolos, 1966. 286 pp.
408. Arkhipov, A. I. *Kolkhoznyye dokhody i ikh ispol'zovaniye.* Moscow, Kolos, 1966. 232 pp.
409. ———, *Plan, sbyt i initsiativa sel'skokhozyaystvennykh predpriyatiy.* Moscow, Ekonomika, 1967. 47 pp.
410. Badiryan, G. G. (Ed.) *Ekonomika sotsialisticheskogo sel'skogo khozyaystva; kurs lektsiy.* Moscow, Kolos, 1967. 600 pp.
411. Belozertsev, A. G. *Ekonomicheskiye osnovy mekhanizatsii proizvodstva zerna.* Moscow, Kolos, 1966. 352 pp.
411a. Churakov, V. Ya. and L. I. Suvorova. *Ispol'zovaniye trudovykh resursov v kolkhozakh i sovkhozakh.* Moscow, Kolos, 1967. 200 pp.
412. Demidov, S. F. et al. (Eds.). *Nekotoryye voprosy upravleniya sel'skokhozyaystvennym proizvodstvom.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Economic Sciences. Moscow, Mysl', 1967. 336 pp.
413. Gaponenko, G. S. et al. *Osnovnyye printsipy planirovaniya sel'skogo khozyaystva.* Moscow, Ekonomika, 1965. 132 pp.
414. Gukov, M. M. *Intensifikatsiya zhivotnovodstva i yeye ekonomicheskaya effektivnost'.* Moscow, Mysl', 1966. 160 pp.
415. Gusev, N. S. et al. *Martovskiy Plenum TsK KPSS o pod"yeme sel'skogo khozyaystva.* Moscow, Ekonomika, 1965. 112 pp.
416. Karalyun, V. Yu. *Mezhkhozyaystvennyye ekonomicheskiye svyazi v sel'skom khozyaystve.* Issued by the Academy of Sciences Latvian S.S.R., Institute of Economics. Riga, Zinatne, 1966. 188 pp.
417. Karnaukhova, Ye. S. et al. *Uchet obshchestvennykh zatrat truda v sel'skom khozyaystve; voprosy metodologii i metodiki.* Moscow, Ekonomika, 1967. 272 pp.
418. Kassirov, L. N., *Planovyye pokazateli i khozraschetnyye stimuly proizvodstva v kolkhozakh i sovkhozakh.* Moscow, Ekonomika, 1965. 288 pp.
419. Klemyshev, P. A. *Fondeyemkost' sel'skokhozyaystvennoy produktsii i rezervy yeye snizheniya.* Moscow, Ekonomika, 1966. 166 pp.
420. Klimenko, K. I. and N. G. Feytel'man (Eds.). *Ekonomicheskaya effektivnost' kapital'nykh vlozheniy i novoy tekhniki v promyshlennosti SSSR.* Issued by the Academy of Sciencs, Institute of Economics. Moscow, Nauka, 1966. 228 pp.
421. Koryagin, A. G. *Vosproizvodslvo v solsialisticheskom sel'skom khozyaystve.* Moscow, Kolos, 1966. 384 pp.
422. Kosachev, G. G. *Ekonomicheskaya effektivnost' universalizatsii sel'skokhozyaystvenykh mashin.* Moscow, Ekonomika, 1966. 133 pp.
423. Kotov, G. G. *Rezervy povysheniya proizvoditel'nosti truda v sel'kom khozyaystve.* Moscow, Ekonomika, 1966. 270 pp.
424. Lastivkinyy, V. Ya et al. *Spravochnik ekonomista po planirovaniyn v kolkhozakh i sovkhozakh.* Kishinev, Kartya Moldovenyaske, 1967. 272 pp.
425. Levin, A. I. *Ekonomicheskoye regulirovaniye vnutrennego rynka.* Moscow, Ekonomika, 1967. 120 pp.
426. Lobanov, P. P. et al. *Ekonomicheskiye osnovy razvitiya sotsialisticheskogo sel'skogo khozyaystva.* Moscow, Ekonomika, 1967. 200 pp.
427. Logvinenko, V. K. *Kolkhoznaya sobstvennost' i voprosy yeye razvitiya pri perekhode k kommunizmu.* Kiev, Izdatel'stvo Kievskogo universiteta, 1966. 228 pp.
428. Milyavskiy, I. O. *Tekhnologicheskiye karty i planirovaniye v kolkhozakh i sovkhozakh.* Moscow, Ekonomika, 1967. 384 pp.
429. Ogurtsev, V. I. et al. (Eds.). *Effektivnost' intensifikatsii sel'skogo khozyaystva.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Economic Sciences. Moscow, Mysl', 1966. 224 pp.
430. Pervushin, A. G. *Material'naya otvetstvennost' kolkhoznikov i dolzhnostnykh lits kolkhoza.* Moscow, Yuridicheskaya literatura, 1967. 168 pp.
431. Peshekhonov, V. A. *Rol' tovarno-denezhnykh otnosheniy v planovom rukovodstve kolkhoznym proizvodstvom.* Issued by the Leningrad State University named after A. A. Zhdanov. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1967. 204 pp.
432. Raskin, G. F. *Ekonomika oroshayemogo zemledeliya.* Moscow, Kolos, 1967. 312 pp.

433. Semenov, V. N. et al. *Rol' finansov v ukreplenıı ekonomiki kolkhozov.* Issued by the Scientific-Research Financial Institute. Moscow, Finansy, 1967. 228 pp.
433a. Sergeyev, S. S. *Ekonomicheskiy analiz sel'skokhozyaystvennogo proizvodstva.* Moscow, Ekonomika, 1968. 296 pp.
434. Shcherbakov, N. P. (Compiler). *Spravochnik po uslovıyam truda rabotnikov sel'skogo khozyaystva RSFSR.* Moscow, Rossel'khozizdat, 1966. 431 pp.
435. Shenger, Yu. Ye. (Ed.). *Voprosy finansirovaniya vodnogo khozyaystva.* Issued by the Tashkent Institute of National Economy. Moscow, Finansy, 1966. 160 pp.
436. Shpodarenko, I. P. *Ekonomicheskaya effektivnost' ispol'zovaniya skorostnykh traktorov.* Moscow, Kolos, 1965. 104 pp.
437. Sineva, L. N. *Osnovnyye fondy i khozraschet v sovkhozakh.* Moscow, Ekonomika, 1967. 127 pp.
438. Sinyukov, M.I. *Ekonomika ispol'zovaniya mashino-traktornogo parka v kolkhozakh i sovkhozakh.* Moscow, Kolos, 1966. 288 pp.
439. Sukhonosenko, N. D. *Nakopleniye i potrebleniye v kolkhozakh.* Moscow, Ekonomika, 1967. 152 pp.
440. Suslov, I. F. *Ekonomicheskiye problemy razvitiya kolkhozov; tempy rosta i usloviya rasshirennogo vosproizvodstva.* Moscow, Ekonomika, 1967. 246 pp.
441. ———(Compiler). *Metodologicheskiye osnovy ekonomicheskoy otsenki zemli.* Moscow, Ekonomika, 1967. 198 pp.
442. Terent'yev, M. L. *Kolkhozy i tovarno-denezhnyye otnosheniya.* Moscow, Ekonomika 1966. 64 pp.
443. Tolkachev, N.I. *Praktikum po organizatsii i planirovanıyu proızvodstva v kolkhozakh i sovkhozakh.* Moscow, Kolos, 1966. 240 pp.
443a. Vasilenko, V. P. *Vnutrirayonnaya i vnutrikhozyaystvennaya spetsializatsiya v kolkhozakh i sovkhozakh.* Moscow, Kolos, 1967. 288 pp.
444. Yeropkin, V. G. *Material'noye stimulırovanıye v kolkhozakh.* Issued by the Rostov-on-Don State Pedagogical Institute. Rostov-on-Don, Izdatel'stvo Rostovskogo universiteta, 1966. 321 pp. (See also: 2, 4, 7, 8, 69, 95, 118, 120, 127, 158, 174, 216, 267, 269, 277, 311, 474, 483, 561.)

Forestry

444a. Tsymek, A. A. et al. (Eds.). *Lesnoye khozyaystvo SSSR za 50 let; 1917–1967 gg.* Issued by the State Committee on Forestry of the Council of Ministers U.S.S.R. Moscow, Lesnaya promyshelnnost', 1967. 312 pp.
445. Vasil'yev, P. V. et al. *Ekonomika lesnogo khozyaystva SSSR.* Second enlarged and revised edition. Moscow, Lesnaya promyshlennost', 1965. 380 pp.

Transportation—General

446. Allakhverdov, M. A. and G. P. Savichev. *Dogovory o perevozkakh gruzov.* Moscow, Yuridicheskaya literatura, 1967. 184 pp.
447. Dlugach, B. A. et al. (Eds.). *Promyshlennyy transport, 1964–1965.* Issued by the Academy of Sciences U.S.S.R., Institute of Scientific Information. Moscow, VINITI, 1966. 263 pp.
448. Dmitriyev, V. I. (Ed.). *Metodika raschetov i ekonomicheskiye pokazateli dlya raspredeleniya perevozok mezhdu vidami transporta.* Issued by Gosplan U.S.S.R., Institute of Complex Transport Problems. Moscow, Transport, 1966. 524 pp.
449. Faynberg, A. F. (Ed.). *Ekonomika, organizatsiya i planirovaniye gorodskogo elektrotransporta.* Moscow, Stroyizdat, 1966. 236 pp.
450. Golovanov, A. L. (Ed.). *Transport SSSR; Itogi za pyat'desyat let i perspektivy razvitiya.* Moscow, Transport, 1967. 324 pp.
451. Khachaturov, T. S. (Ed.). *Povysheniye effektivnosti transporta v SSSR.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Economic Sciences. Moscow, Mysl', 1966. 176 pp.
452. Kolesov, L. I. et al. *Perevozki khlebnykh gruzov v Zapadnoy Sibiri i puti ikh ratsionalizatsii.* Issued by the Academy of Sciences U.S.S.R., Siberian Division. Novosibirsk, Izdatel'skiy otdel Akademii nauk SSSR, 1965. 136 pp.
453. Komarnitskiy, Yu. A. *Tekhnicheskiy progress kak faktor rosta proizvoditel'nosti truda na transporte.* Moscow, Transport, 1966. 256 pp.
454. Kreynin, A. V. (Ed.). *Passazhirskiye tarify na transporte SSSR.* Moscow, Transport, 1966. 188 pp.

455. Kukushkin, I. I. *Kompleksnoye razvitiye i ispol'zovaniye magistral'nogo i promyshlennogo transporta.* Moscow, Transport, 1966. 248 pp.
456. Markova, A. N. and M. F. Smirnov. *Tekhniko-ekonomicheskiye obosnovaniya razvitiya seti nefteproduktoprovodov.* Moscow, Nedra, 1966. 72 pp.
457. Skalov, K. Yu. (Ed.). *Transportnyye uzly.* Issued by the Institute of Complex Transport Problems attached to Gosplan U.S.S.R. Moscow, Transport, 1966. 508 pp. (See also: 56, 156, 403.)

Transportation—Railroad

458. Abramov, A. P. *Voprosy ekonomiki passazhirskikh perevozok na zheleznodorozhnom transporte.* Issued by the All-Union Scientific-Research Institute of Railroad Transport. Trudy. Moscow, Transport, 1966. 112 pp.
459. Altshuler, G. A. et al. *Planirovaniye na zheleznodorozhnom transporte.* Second enlarged and revised edition. Moscow, Transport, 1966. 340 pp.
460. Gundobin, N. A. (Ed.). *Spravochnik ekspluatatsionnika.* Moscow, Transport, 1966. 656 pp.
461. Minsker, S. D. and M. P. Koltunova (Eds.). *Razvitiye zheleznodorozhnogo transporta v novoy pyatiletke; 1966–1970.* Moscow, Transport, 1967. 272 pp.
461a. Tolkacheva, M. M. (Ed.). *Vliyaniye osnovnykh faktorov na proizvoditel'nost' truda i professional'nyy sostav rabotnikov zheleznodorozhnogo transporta.* Transactions. Issue 348. Issued by the All-Union Scientific-Research. Institute of Railroad Transportation. Moscow, Transport, 1967. 127 pp.
462. Trubachev, T. Ye. *Spetsializatsiya i kooperirovaniye predpriyatiy zheleznodorozhnogo transporta.* Moscow, Transport, 1966. 129 pp.
463. Tverskoy, K. N. *Novaya sistema planirovaniya i stimulirovaniya na zheleznodorozhnom transporte.* Moscow, Transport, 1966. 88 pp. (See also: 560.)

Transportation—Sea

464. Briliant, L. A. *Geografiya morskikh putey.* Moscow, Transport, 1966. 324 pp.
465. Kutyanin, P. I. *Rezervy povysheniya proizvoditel'nosti truda na morskom flote.* Moscow, Transport, 1966. 71 pp.

Transportation—River

465a. Gurevich, Sh. M. *Ekonomika rechnykh passazhirskikh perevozok.* Moscow, Transport, 1967. 152 pp.
466. Kalinin, B. A. *Povysheniye proizvoditel'nosti truda na rechnom transporte.* Moscow, Transport, 1966. 49 pp.

Transportation—Air

467. Rumyantseva, Z. P. *Matematicheskiye metody v planirovanii grazhdanskoy aviatsii.* Moscow, Transport, 1967. 190 pp.

Communications

468. Podgorodetskiy, I. A. et al. *Ekonomika svyazi.* Moscow, Svyaz', 1967. 384 pp.
469. Psurtsev, N. D. (Ed.). *Razvitiye svyazi v SSSR; 1917–1967 gg.* Moscow, Svyaz', 1967. 480 pp.
470. Yesikov, S. R. *Ekonomicheskaya effektivnost' kapital'nykh vlozheniy v khozyaystvo svyazi i puti yego povysheniya.* Issued by the Ministry of Communications U.S.S.R., Technical Administration. Moscow, Svyaz', 1965. 64 pp. (See also: 270.)

Trade and Material-Technical Supply

471. Abaturov, A. I. *Izderzhki obrashcheniya v roznichnoy torgovle.* Moscow, Gostorgizdat, 1962. 196 pp.
472. Basovskaya, G. I. et al. *Ekonomika torgovli.* Moscow, Ekonomika, 1966. 576 pp.
473. Baykov, G. D. *Sovershenstvovaniye svyazey torgovli s promyshlennost'yu.* Moscow, Ekonomika, 1967. 79 pp.
474. Belen'kiy, I. M. *Raschety s kolkhozami i sovkhozami za prinyatoye zerno i semena.* Sixth revised and enlarged edition. Moscow, Kolos, 1966. 184 pp.
475. Druzhinin, N. K. (Ed.). *Sezonnost' v roznichnoy torgovle i potreblenii.* Moscow, Izdatel'stvo torgovoy literatury, 1963. 143 pp.
476. Emdin, A. Ya. *Metodologiya planirovaniya i organizatsiya material'no-tekhnicheskogo snabzheniya.* Moscow, Ekonomika, 1966. 136 pp.

477. Estrina, A. M. *Torgovyye svyazi kolkhozov s promyshlennost'yu.* Moscow, Ekonomika, 1965. 108 pp.
478. Fel'dman. I. et al. (Eds.). *Voprosy organizatsii optovoy i roznichnoy torgovli.* Issued by the Moscow Institute of National Economy named after G. V. Plekhanov. Trudy. Moscow, n.p., 1967. 192 pp.
479. Gogol', B. I. *Ekonomika sovetskoy torgovli.* Second revised and enlarged edition. Moscow, Ekonomika, 1967. 328 pp.
480. Ivanitskiy, V. I. *Kapital'nyye vlozheniya v torgovle i ikh effektivnost'.* Moscow, Ekonomika, 1967. 134 pp.
481. Karpov, P. P. et al. *Rezervy ekonomii v material'no-tekhnicheskom snabzhenii; materialy seminara.* Issued by the Moscow House of Scientific-Research Propaganda named after F. E. Dzerzhinskiy. Moscow, np., 1964. 102 pp.
482. Khanelis, Ya. N. *Torgovo-ekonomicheskaya informatsiya.* Moscow, Statistika, 1967. 232 pp.
483. Lisenkov, V. I. and L. Kh. Ronin (Compilers). *Spravochnik rabotnika kolkhoznogo rynka.* Moscow, Ekonomika, 1966. 232 pp.
484. Mazo, N. I. *Organizatsiya upravleniya material'no-tekhnicheskim snabzheniyem.* Moscow, Ekonomika, 1967. 48 pp.
485. Morozov, N. N. and N. I. Belik. *Izucheniye sprosa na tovary.* Moscow, Ekonomika, 1967. 120 pp.
486. Pankratov, A. S. (Ed.). *Zakonodatel'stvo o proizvodstve, zagotovakh i zakupkakh sel'khozproduktov; sbornik ofitsial'nykh materialov.* Moscow, Yuridicheskaya literatura, 1967. 396 pp.
487. Platonov, A. N. *Osnovy organizatsii i planirovaniya khlebopriyemnykh predpriyatiy.* Second revised and enlarged edition. Moscow, Kolos, 1966. 136 pp.
488. Pugacheva, A. A. *Statistika material'no-tekhnicheskogo snabzheniya i sbyta.* Moscow, Statistika, 1966. 224 pp.
489. Shulyak, P. N. *Tovarooborot i tovarnyye zapasy potrebitel'skoy kooperatsii.* Moscow, Ekonomika, 1967. 264 pp.
490. Stepanova, Z. I. *Izderzhki obrashcheniya snabzhenchesko-sbytovykh organizatsiy i puti ikh snizheniya.* Moscow, Finansy, 1967. 92 pp.
491. Tselykovskaya, Ye. A. *Vremya obrashcheniya v torgovle i puti yego sokrashcheniya.* Issued by the Leningrad State University named after A. A. Zhdanov. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1966. 128 pp.
492. Vayner, M. G. and V. P. Alfer'yev. *Planirovaniye material'no-tekhnicheskogo snabzheniya sel'skogo khozyaystva.* Moscow, Ekonomika, 1966. 184 pp.
493. Yarmola, I. S. *Voprosy lesosnabzheniya v SSSR.* Moscow, Lesnaya promyshlennost', 1966. 248 pp.
494. Zakruzhnyy, A. A. *Organizatsiya i planirovaniye material'no-tekhnicheskogo snabzheniya.* Minsk, Nauka i tekhnika, 1966. 171 pp., (See also: 94, 116, 144, 153, 160, 162, 196, 265, 266, 268, 271, 306, 307, 425.)

Housing-Communal Economy

495. Alekseyev, S. A. *Ekonomika zhilishchnogo khozyaystva.* Moscow, Stroyizdat, 1966. 156 pp.
496. Gol'tsman. L. N. *Ekonomika kommunal'nogo khozyaystva: uslugi, tarify.* Moscow, Ekonomika, 1966. 192 pp.
497. Gun'ko, Ye. I. et al. *Trud i zarabotnaya plata v zhilishchno-kommunal'nom khozyaystve; spravochnik.* Kiev, Budivel'nik, 1966. 360 pp.
498. Landkof, S. N. et al. *Zhilishchnoye i zhilishchno-stroitel'noye zakonodatel'stvo.* Kiev, Budivel'nik, 1967. 272 pp.
499. Robotov, V. Y. *Finansirovaniye i kreditovaniye zhilishchnogo stroitel'stva.* Moscow, Finansy, 1967. 148 pp.
500. Roze, M. G. and M. B. Rossinskiy. *Planirovaniye i ekonomika bytovogo obsluzhivaniya naseleniya.* Moscow, Ekonomika, 1964. 120 pp. (See also: 63, 196, 217, 272, 305–307, 391, 392.)

Health Services

501. Chaykovskaya, M.V. and R.V. Grikurova. *Planirovaniye raskhodov na zdravookhraneniye.* Moscow, Finansy, 1967. 152 pp.
502. Gorokhover, I. A. *Planirovaniye i finansirovaniye bol'nitsy i polikliniki.* Second revised and enlarged edition. Moscow, Meditsina, 1967. 252 pp.
503. Margulis, A. L. and V. I. Kant. *Nekotoryye voprosy trudovogo zakonodatel'stva v rabote uchrezhdeniy zdravookhraneniya.* Kishinev, Kartya Moldovenyaske, 1964. 96 pp.

504. Maystrakh, K. V. et al. *Posobiye k prakticheskim zanyatiyam po organizatsii zdravookhraneniya.* Third revised edition. Moscow, Meditsina, 1967. 264 pp.
505. Medvedkov, Yu. V. *Meditsinskaya geografiya 1964 g.* Moscow, VINITI, 1966. 285 pp.
506. Merkov, A. M. (Ed.). *Metodologicheskiye voprosy sanitarnoy i meditsinskoy statistiki.* Issued by the Academy of Sciences U.S.S.R., Central Mathematical Economics Institute,. Moscow, Nauka, 1965. 227 pp.
507. Petrovskiy, B. V. (Ed.). *50 let Sovetskogo zdravookhraneniya 1917–1967.* Moscow, Meditsina, 1967. 697 pp.
508. Podol'nyy, S. A. *Meditsinskoye obsluzhivaniye sel'skogo naseleniya.* Issued by Ministry of Public Health U.S.S.R., Central Institute of Postgraduate Training of Physicians, Faculty of the Organization of Public Health. Moscow, n.p., 1965. 391 pp.
509. Rott, A. V. and K. M. Pavlenko. *Novaya oplata truda rabotnikov zdravookhraneniya.* Kiev, Zdorov'ya, 1965. 208 pp. (See also: 217, 305–307.)
509a. Trofimov, V. V. *Zdravookhraneniye Rossiyskoy Federatsii za 50 let.* Moscow Meditsina, 1967. 332 pp.

Education

10. Abusheva, B. N. *Pod"yem kul'turno-tekhnicheskogo urovnya rabochikh ugol'noy promyshlennosti Kazakhstana; 1946–1963 gg.* Issued by the Academy of Sciences Kazakh S.S.R., Institute of History, Archeology and Ethnography named after Ch. Ch. Valikanov. Alma-Ata, Nauka, 1965. 164 pp.
511. Bardinov, A. A. (Compiler). *Podgotovka shkol'nikov k vyboru professii.* Moscow, Prosveshcheniye, 1966. 180 pp.
512. Belkin, V. B. *Professional'noye razdeleniye truda i podgotovka rabochikh kadrov v SSSR.* Moscow, Vysshaya shkola, 1966. 307 pp.
513. Dorokhova G. A. *Upravleniye narodnym obrazovaniyem v SSSR.* Moscow, Yuridicheskaya literatura, 1965. 180 pp.
514. Gal'tsev, S. S. (Compiler). *Spravochnik dlya postupayushchikh v vysshiye uchebnyye zavedeniya SSSR v 1966 godu.* Issued by the Ministry of Higher and Specialized Secondary Education U.S.S.R. Moscow, Vysshaya shkola, 1966. 352 pp.
514a. Kim, M. P. et al. (Eds.). *Kul'turnaya revolyutsiya v SSSR; 1917–1965 gg.* Issued by the Academy of Sciences U.S.S.R., Institute of History, Scientific Council for the History of Socialist and Communist Construction in the U.S.S.R. Moscow, Nauka, 1967. 472 pp.
515. Kumanev, V. A. *Sotsializm i vsenarodnaya gramotnost'; likvidatsiya massovoy negramotnosti v SSSR.* Moscow, Nauka, 1967. 328 pp.
516. Moskovskiy gorodskoy otdel narodnogo obrazovaniya, Moskovskiy gorodskoy institut usovershenstvovaniya uchiteley. *O planirovanii raboty shkoly.* Moscow, n.p., 1966. 64 pp.
517. ———, ———. *O vneurochnoy vospitatel'noy rabote v vechernikh (smennykh) shkolakh.* Moscow, n.p., 1966. 49 pp.
518. Pashkov, A. S. *Regulirovaniye podgotovki i raspredeleniya kadrov; nekotoryye voprosy teorii i praktiki.* Issued by the Leningrad State University named after A. A. Zhdanov. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1966. 188 pp.
519. Petrovskiy, I. G. et al. (Eds.). *Moskovskiy universitet za pyat'desyat let sovetskoy vlasti.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1967. 760 pp.
519a. Prokof'yev, M. A. et al. (Eds.). *Narodnoye obrazovaniye v SSSR 1917–1967.* Moscow, Prosveschcheniye, 1967. 544 p.
520. Vidavskiy, L. M. et al. *Spravochnik po pravovym voprosam vysshey shkoly.* Kiev, Izdatel'stvo Kievskogo universiteta, 1965. 216 pp.
521. Zhamin, V. A. (Ed.). *Aktual'nyye voprosy ekonomiki narodnogo obrazovaniya.* Issued by the Moscow State Pedagogical Institute named after V. I. Lenin, Problem Laboratory for Socio-Economic Research in the Field of Public Education. Moscow, Prosveshcheniye, 1965. 225 pp. (See also: 30, 68, 145, 217, 278, 299, 305–307, 546.)

Science and Scientific Services

521a. Artobolevskiy, I. I. (Ed.). *Puti razvitiya tekhniki v SSSR.* Issued by the Academy of Sciences U.S.S.R., Institute of History of Natural Sciences and Techniques. Moscow, Nauka, 1967. 276 pp.
522. Bashin, M. L. *Planirovaniye nauchno-issledovatel'skikh i opytno-konstruktorskikh rabot.* Moscow, Ekonomika, 1966. 216 pp.
522a. Chinakal, N. A. et al. (Eds.). *Organizatsiya i effektivnost' nauchnykh issledovaniy.* Second edition. Issued by the Academy of Sciences U.S.S.R., Siberian Division, Institute of Mining Affairs. Novosibirsk, Nauka, Sibirskoye otdeleniye, 1967. 180 pp.
523. Dityatkovskiy, Ye. M. *Bukhgalterskiy uchet v proyektnykh organizatsiyakh.* Second revised and enlarged edition. Moscow, Stroyizdat, 1967. 251 pp.
524. Dubrovskiy, K. I. and G. Kh. Popov. *Ekonomicheskiye voprosy upravleniya opytno-konstruktorskimi razrabotkami.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1967. 100 pp.
525. Kissel', Ye. I. *Organizatsiya truda issledovateley i proyektirovshchikov.* Moscow, Ekonomika, 1967. 184 pp.
526. Krug, G. K. (Ed.). *Planirovaniye eksperimenta.* Issued by the Academy of Sciences U.S.S.R., Scientific Council for Cybernetics, Ministry of Higher and Specialized Secondary Education R.S.F.S.R., and Moscow Institute of Energetics. Moscow, Nauka, 1966. 424 pp.
527. Mosin, V. N. *Ekonomika konstruktorskikh rabot i opytnykh proizvodstv.* Moscow, Ekonomika, 1967. 174 pp.
528. Pakholkov, V. D. *Statistika geologorazvedyvatel'nykh rabot.* Second revised edition. Moscow, Nedra, 1966. 292 pp.
529. Proskurin, N. V. *Ekonomicheskaya effektivnost' novoy geologorazvedochnoy tekhniki.* Moscow, Nedra, 1966. 100 pp.
530. Tyamshanskiy, N. D. *Ekonomika i organizatsiya nauchno-issledovatel'skikh rabot v machinostroyenii.* Leningrad, Mashinostroyeniye, Leningradskiy otdel, 1967. 196 pp.
531. Zvorykin, A. A. *Nauchno-tekhnicheskaya revolyutsiya i yeye sotsial'nyye posledstviya.* Moscow, Znaniye, 1967. 62 pp. (See also: 20, 40, 168, 181, 205.)

Banking, Credit and Insurance

532. Barkovskiy, N. D. and K. S. Kartashova. *Kreditnoye planirovaniye v SSSR.* Moscow, Finansy, 1966. 244 pp.
533. Poskonov, A. A. (Ed.). *Kreditno-denezhnaya sistema SSSR; k 50-letiyu Velikoy Oktyabr'skoy sotsialisticheskoy revolyutsii.* Moscow, Finansy, 1967. 320 pp.
533a. Usoskin, M. M. *Organizatsiya i planirovaniye kredita.* Fourth revised and enlarged edition. Moscow, Finansy, 1967. 350 pp.
534. Vorob'yev, V. A. et al. *Denezhnoye obrashcheniye i kredit SSSR.* Moscow, Finansy, 1965. 244 pp. (See also: 33, 139, 148, 226, 229, 234, 237, 298, 499, 557.)

Government

535. Chekharin, I. M. *Postoyannyye komissii mestnykh sovetov.* Moscow, Yuridicheskaya literatura, 1966. 89 pp.
536. Kosachev, V. M. *Sistema organov upravleniya narodnym khozyaystvom SSSR.* Moscow, Mysl', 1966. 56 pp.
537. Kozlov, Yu. M. *Sootnosheniye gosudarstvennogo i obshchestvennogo upravleniya v SSSR.* Moscow, Yuridicheskaya literatura, 1966. 216 pp.
538. ———. *Sovershenstvovaniye demokraticheskikh printsipov v sovetskom gosudarstvennom upravlenii.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1966. 348 pp.
539. Kravchuk, S. S. (Ed.). *Voprosy razvitiya sovetov na sovremennom etape.* Moscow, Izdatel'stvo Moskovskogo universiteta, 1966. 248 pp.
540. Lepeshkin, A. I. *Sovety—vlast' naroda; 1936–1967 gg.* Moscow, Yuridicheskaya literatura, 1967. 376 pp.
541. Lunev, A. Ye. (Ed.). *Pravovyye problemy nauki upravleniya.* Issued by the Institute of State and Law, Academy of Sciences U.S.S.R. Moscow, Yuridicheskaya literatura, 1966. 224 pp.
542. Manokhin, V. M. *Sovetskaya gosudarstvennaya sluzhba.* Moscow, Yuridicheskaya literatura, 1966. 196 pp.

543. Sheremet, K. F. *Sel'skiy sovet; problemy pravovogo polozheniya.* Moscow. Yuridicheskaya literatura, 1966. 144 pp.
544. Tsikulin, V. A. *Istoriya gosudarstvennykh uchrezhdeniy SSSR; 1936–1965 gg.; uchebnoye posobiye.* Issued by the Ministry of Higher and Specialized Secondary Education of the R.S.F.S.R. and the Moscow State Historical Archives Institute. Moscow, n.p., 1966. 358 pp.
545. Yeropkin, M. I. *Upravleniye v oblasti okhrany obshchestvennogo poryadka.* Moscow, Izdatel'stvo yuridicheskoy literatury, 1965. 216 pp. (See also: 29, 208, 212, 240, 307, 384, 386, 484, 513.)

Armed Forces

546. Anureyev, I. and A. Tamarchenko. *Primeniya matematicheskikh metodov v voyennom dele.* Moscow, Izdatel'stvo Ministerstva oborony SSSR, 1967. 244 pp.
547. Barabanshchikov, A. V. (Ed.). *Voyennaya pedagogika.* Moscow, Izdatel'stvo Ministerstva oborony SSSR, 1966. 375 pp.
548. Glagolev, I. S. (Ed.). *SSSR, SShA i razoruzheniye.* Issued by the Academy of Sciences U.S.S.R., Institute of World Economy and International Relations. Moscow, Nauka, 1967. 172 pp.
549. Gornyy, A. G. (Ed.). *Osnovy sovetskogo voyennogo zakonodatel'stva.* Moscow, Voyennoye izdatel'stvo Ministerstva oborony SSSR, 1966. 432 pp.
550. Krivtsov, G. F. and M. Ya. Parshin. *Spravochnik o l'gotakh voyennosluzhashchim srochnoy i sverkhsrochnoy sluzhby i ikh sem'yam.* Moscow, Izdatel'stvo Ministerstva oborony SSSR, 1967. 232 pp.
551. Malinin, S. A. *Pravovyye osnovy razoruzheniya.* Issued by Leningrad State University named after A. A. Zhdanov. Leningrad, Izdatel'stvo Leningradskogo universiteta, 1966. 184 pp.
552. Novikov, K. V. et al. (Eds.). *50 let bor'by SSSR za razooruzheniye; sbornik dokumentov.* Issued by the Academy of Sciences U.S.S.R., Institute fo History. Moscow, Nauka, 1967. 692 pp.
553. Pobezhimov, I. F. and B. A. Viktorov (Eds.). *Spravochnik ofitsera po sovetskomu zakonodatel'stvu.* Moscow, Voyenizdat, 1966. 680 pp.
554. Safronov, I. V. (Ed.). *Spravochnik voyskovogo khozyaystvennika.* Moscow, Izdatel'stvo Ministerstva oborony SSSR, 1966. 464 pp.

Other

554a. Adaskin, I. N. et al. *Spravochnaya kniga o profsoyuzakh.* Second revised and enlarged edition. Moscow, Profizdat, 1967. 520 pp.
555. Akademiya nauk SSSR, Fundamental'naya biblioteka obshchestvennykh nauk. *Narodnoye khozyaystvo SSSR v 1917–1920 gg.Bibliograficheskiy ukazatel knizhnoy i zhurnal'noy literatury na russkom yazyke; 1917–1963 gg.* Compiled by Ye.V. Bazhanova. Moscow, Nauka, 1967. 620 pp.
556. Andrushchenko, T.P. and Ye.B.Margolina (Compilers). *Kapitalovlozheniya v narodnoye khozyaystvo SSSR. Osnovnyye fondy promyshlennosti i ikh ispol'zovaniye. Ukazatel' sovetskoy literatury 1945–1964.* Issued by the Academy of Sciences U.S.S.R., Fundamental Library of Social Sciences. Moscow, Nauka, 1966. 163 pp.
556a. Klimov, A. P. et al. (Eds.). *50 let Sovetskoy potrebitel'skoy kooperatsii.* Moscow, Ekonomika, 1967. 192 pp.
557. Lavrov, V.V. (Ed.). *Finansy,den'gi i kredit SSSR; bibliograficheskiy ukazatel'; 1946–1966.* Issued by the Scientific Library of the Ministry of Finance U.S.S.R., Moscow, Finansy, 1967. 480 pp.
558. Lebedev, V.G. and V.K. Yelev (Eds.). *Prirodnyye resursy i effektivnost' ikh ispol'zovaniya.* Issued by the Academy of Social Sciences attached to the CC CPSU, Faculty of Economic Sciences. Moscow, Mysl', 1966. 248 pp.
559. Lyubimov, I.M. *Poleznyye iskopayemyye SSSR.* Moscow, Prosveshcheniye, 1966. 256 pp.
560. Ministerstvo putey soobshcheniya SSSR, Tsentral'naya nauchno-tekhnicheskaya biblioteka. *Ekonomika zheleznodorozhnogo transporta SSSR; bibliograficheskiy ukazatel' za 1958–1966 gody.* Moscow, Transport, 1967. 91 pp.

561. Morachevskaya, Ye.N. (Compiler). *Bibliografiya po rayonirovaniyu i razmeshcheniyu sel'skogo khozyaystva SSSR; 1818–1960.* Issued by the Academy of Sciences U.S.S.R. Council for the Study of Productive Forces, Sector of the Network of Special Libraries. Moscow, Izdatel'stvo Akademii nauk SSSR, 1961. 200 pp.
562. Nauchno-issledovatel'skiy institut truda Gosudarstvennogo komiteta Soveta Ministrov SSSR po voprosam truda i zarabotnoy platy; nauchnaya biblioteka. *Trud i zarabotnaya plata; bibliograficheskiy ukazatel' literatury, izdannoy v SSSR na russkom yazyke v 1962 godu.* Moscow, n.p., 1965. 383 pp.
563. ———, ———. *Trud i zarabotnaya plata; bibliograficheskiy ukazatel' literatury, izdannoy v SSSR na russkom yazyke v 1963 godu.* Moscow, n.p., 1966. 495 pp.
564. Sivolgin, V.Ye. (Compiler). *Ekonomika SSSR; annotirovannyy perechen' otechestvennykh bibliografiy opublikovannykh v 1917–1964 gg.* Issued by the State Library named after V.I.Lenin, Department of Information-Bibliographic Work and of Scientific-Informational Bibliography. Moscow, Kniga, 1965. 160 pp.

XVII. APPENDIX MATERIALS

Section A. *From Soviet sources—*

1. REPORT OF U.S.S.R. CENTRAL STATISTICAL BOARD ON THE FULFILLMENT OF THE 1967 STATE PLAN FOR THE U.S.S.R.'S ECONOMIC DEVELOPMENT.

Implementing the resolutions of the 23d Party Congress the working people of the Soviet Union met with deserving accomplishments the 50th anniversary of the Great October Socialist Revolution and scored in 1967—the second year of the Five-Year Plan period—new successes in building up the material and technical foundation of communism.

The rate of economic growth is characterized by the following figures:

	1967, in percentage to 1966	
	To annual plan	Actually
National income used for consumption and accumulation	106.6	106.7
Industrial output	107.3	110.0
Including:		
Group A industries	107.5	110.2
Group B industries	106.6	109.0
Agricultural output	103.0	101.0
Commissioning of fixed assets, total		107.0
Including those financed by centralized capital investments	110.0	103.0
Capital investments, total		108.0
Including centralized State investments	107.0	105.0
Freight turnover for all modes of transportation	105.6	109.0
Total number of industrial and office workers	104.0	103.0
Labor productivity:		
In industry	105.0	107.0
In building construction	106.3	106.5
On railway transport	103.5	108.0
Profits in national economy in comparable prices	114.0	116.0
Wage bill of national economy	105.6	107.4
Public funds of consumption	107.0	107.7
Per capital real incomes	105.5	106.0
Retail goods turnover	107.4	109.4
Foreign trade turnover	108.0	109.0
Scope of public services to population	117.4	118.0
Number of students at secondary specialized education institutions	106.8	104.3
Number of students at institutions of higher learning	104.3	104.6

A high rate of the development of our country's economy, culture, and prosperity was attained in the jubilee year.

The fulfillment of the annual plan for the production of steel, staple kinds of fuel, instruments, chemical products and output of the light, food and other industries was completed ahead of time. The freight transportation plan was carried out ahead of schedule by all modes of transportation, as has the retail goods-turnover plan.

Gross agricultural output in 1967, despite adverse weather conditions in a number of the country's major grain-producing areas, topped the production level of the favorable crop year of 1966 and was 17 percent higher than the average harvests in 1961 through 1965.

The plan for the state purchases of staple agricultural produce was carried out successfully.

A most important feature of the last year was the stepping up of the growth of consumer goods (group "B") production, which permitted to considerably extend the sale of many important goods, to substantially expand the goods turnover, and extend public services to the population.

1967 saw the introduction of new wholesale prices on industrial goods, as well as new tariffs on electricity, heat energy, and freight shipments. This measure is of extremely great importance for the enterprises changing over to the new managerial system. The modification of wholesale prices and tariffs was carried out without raising retail prices on consumer goods. Prices on the tractors, farm machinery, and mineral fertilizers sold to collective and state farms were not changed either.

The profit plan for the national economy on the whole and for most ministries, administrations and Union republics was fulfilled.

Here are the figures showing the plan fulfillment by the individual economic sectors:

I. Industry

The 1967 plan for gross output and most of the major articles was overfulfilled.

An increase in industrial output made 10 percent against planned 7.3 percent. About 7,000 million rubles' worth of products were manufactured in excess of the plan last year.

The output of major industries rose, compared with the previous year (in percent):

Power industry	9	Timber, woodworking and pulp and paper industry	7
Fuel industry	7	Building materials industry	9
Ferrous and nonferrous metals industry	8	Light industry	11
Chemical and petro-chemical industry	13	Food industry	7
Machine-building and metal-working	12	Goods for everyday and cultural needs and household appliances (from the total volume of industrial output)	15

As many as 7,000 factories producing about 40 percent of all industrial output and making almost half of the profit in industry had been switched to a new system of planning and economic incentives towards the end of 1967. These enterprises employ a third of the industrial workers of the country. The new system was introduced in the instrument-making industry, the industry producing means of automation and control systems, the plants turning out turbines, diesels, boilers and combines, the mills and factories of a number of branches of the nonferrous metals industry, the sewing, cotton, wool, silk, knitted goods, leather and shoemaking, and sugar industries. The enterprises working in new conditions overfulfilled their increased yearly plans for the disposal of products and for profit.

Figures of the fulfillment of the plan for the total volume of output by ministries of the U.S.S.R. are given below:

	Percent of fulfillment of the yearly plan	1967 in percent of 1966
Power industry and electrification	100.4	109
Oil-extraction industry	101.0	109
Oil-refining and petrochemical industry	101.0	111
Gas industry	104.0	115
Coal industry	102.0	103
Ferrous metallurgy	102.0	107
Nonferrous metallurgy	102.0	111
Chemical industry	101.0	115
Heavy power and transport engineering	100.8	109
Electric engineering	101.0	109
Chemical and oil engineering	102.0	111
Machine-tool and instrument making	102.0	111
Apparatus, automation and control systems (realized products)	103.0	107
Motorcar industry	102.0	113
Tractor and agricultural machinery	100.4	109
Machine-building for construction, roadbuilding, and municipal services	101.0	111
Machine-building for light and food industries and household appliances	101.0	114
Timber, pulp, and paper, and woodworking industry	100.8	108
Building materials industry	101.0	109
Light industry	140.0	110
Food industry	102.0	106
Meat and diary industry	103.0	110
Fisheries industry	100.9	108
Main Board of Microbiological Industry of the U.S.S.R. Council of Ministers	100.2	107
Medical industry	104.0	113

The Union Republics carried out the plan for industrial output (including industry of the all-Union control) as follows:

	Percent of fulfillment of the yearly plan	1967 in percent of 1966
Russian Federation	103	110
Ukrainian S.S.R.	103	109
Byelorussian S.S.R.	103	113
Uzbek S.S.R.	102	109
Kazakh S.S.R.	104	113
Georgian S.S.R.	103	108
Azerbaijanian S.S.R.	102	108
Lithuanian S.S.R.	103	113
Moldavian S.S.R.	105	111
Latvian S.S.R.	103	111
Kirghiz S.S.R.	104	118
Tajik S.S.R.	103	111
Armenian S.S.R.	104	114
Turkmen S.S.R.	104	112
Estonian S.S.R.	103	109

All industrial ministries and all the Union Republics overfulfilled the year's plan both for the general volume of production and for the output of most key industrial items.

The national industrial output in physical units is characterized by the following data:

	Output in 1967	1967 in percent to 1966
Electric power (billion kilowatt-hours)	589	108
Oil (million tons)	288	109
Gas (thousand billion cubic meters)	159	110
Coal (million tons):		
Total	595	102
Including coking coal	148	104
Cast iron (million tons)	74.8	106
Steel (million tons)	102.2	106
Rolled stock (million tons):		
Total	81.6	107
Including ready rolled stock	70.5	107

	Output in 1967	1967 in percent to 1966
Steel pipes:		
Million meters	1,640	109
Thousand tons	10,578	107
Iron ore (million tons)	168	105
Mineral fertilizers (million tons):		
In terms of 100-percent content of nutrients	9.4	111
In conventional units	40.1	112
Chemical means of plant protection (thousand tons):		
In terms of 100-percent active agent content	123	107
In conventional units	221	107
Calcinated soda (thousand tons)	3,169	107
Caustic soda (thousand tons)	1,525	109
Sulfuric acid (thousand tons)	9,740	104
Plastics and synthetic resins (thousand tons)	1,112	114
Chemical fibers (thousand tons)	511	111
Automobile tires (million pieces)	29.6	107
Turbines (million kilowatts)	14.7	97
Turbine generators (million kilowatts)	14.6	108
Alternating current electric motors (million kilowatts)	32.9	106
Metal-cutting lathes (thousand pieces)	196	102
Forging and pressing machines (thousand pieces)	41	107
Instruments, means of automation and computers (million rubles)	2,739	114
Metallurgical equipment (thousand tons)	290	115
Oil equipment (thousand tons)	140	95
Chemical industry equipment and spares (million rubles)	426	102
Looms (thousand pieces)	21.3	89
Trunkline Diesel locomotives (sections)	1,497	98
Trunkline electric locomotives (thousand horsepower)	2,834	82
Trunkline freight carriages (thousand pieces)	43.8	109
Automobiles (thousand)	728.8	108
Including—		
Lorries and buses	477.4	107
Passenger cars	251.4	109
Tractors (thousand)	405	106
Agricultural machines and spares, total (million rubles)	1,772	105
Grain harvesters (thousand)	101	110
Excavators (thousand)	25.8	110
Bulldozers (thousand)	26.8	120
Procurement of timber (minus that by collective farms) (million cubic meters)	267	104
Paper (million tons)	3.8	107
Cement (million tons)	84.8	106
Prefab ferroconcrete (million cubic meters)	70	110
Building bricks (without those produced by collective farms) (billion)	36	103
Slate (billion conventional units)	4.9	108
Soft roofing (million square meters)	1,200	104
Window panes (million square meters)	205	102
Fabrics (million square meters):		
Cotton fabrics	5,915	104
Woolen fabrics	547	107
Linen fabrics	642	109
Silk fabrics	938	108
Sewn goods (billion rubles)	11.6	114
Knitted underwear (million pieces)	812	105
Garments (million pieces)	254	115
Leather footwear (million pairs)	561	107
Meat (million tons):		
Total	11.4	106
Including the output of meatpacking plants	6.4	112
Sausage (million tons)	2.0	112
Fish and seafood catch (million tons)	6.5	107
Butter, cheese, and other dairy products in terms of milk (million tons)	42	106
Granulated sugar (million tons):		
Total	9.9	102
Including sugar made of sugarbeet	8.5	102
Vegetable oil (million tons)	3.0	110
Confectionery (million tons)	2.4	106
Tinned food (billion tins)	8.8	117
Soap (million tons)	1.65	99
Synthetic detergents (thousand tons)	247	132
Watches (million pieces)	34.4	106
Radios and radio-phonograph systems	6.4	110
Television sets (million pieces)	5.0	112
Refrigerators (thousand pieces)	2,697	122
Washing machines (million pieces)	4.3	112
Motorcycles and motor scooters (thousand pieces)	784	104
Bicycles and motorbikes (million pieces)	4.2	104
Furniture (thousand million rubles)	2.2	110

Compared with the preceding year there was an increase in the production of: electric power by 44 billion killowatt-hours, oil by 23 million tons, gas by 14 billion cubic meters coal by 10 million tons, pig iron by 4,500,000 tons, steel by 5,300,000 tons, finished rolled metal by 4,500,000 tons, mineral fertilizer by 4,200,000 tons, calcinated soda by 206,000 tons, automobile tires by 2 million, automobiles by 53,600, tractors by 22,600, excavators by 2,400, forge and pressing machines by 2,600, cement by 4,800,000 tons. There was an increase in the output of aluminium, copper, zinc, nickel and other nonferrous metals, synthetic rubber and ammonia, oil-refinery and oil-chemistry products and many other kinds of produce.

There was an increase in the output of consumer goods: textiles of all kinds by 382 million sq.m., knitted underwear and knitted outer garments by 74 million pieces, garments by 1,400 million rubles, leather footwear by 39 million pairs, meat by 700,000 tons sausages by 209,000 tons, butter, cheese and other dairy products by 2 million tons in terms of milk, vegetable oil by 265,000 tons, canned goods by 1,300 million cans, radio sets and radio-phonograph systems by 573,000, TV sets by 540,000, refrigerators by 492,000, washing machines by 455,000 and furniture by 204 million rubles.

Better use was made of the industrial equipment. For example, in the iron and steel industry there was an improvement in the use of the volume of blast furnaces and the daily output of steel per 1 square meter of the open-hearth furnace sole went up by 2 percent; the average fuel expenditure per 1 kilowatt-hour of electricity dropped by almost 3 percent at powerplants; the yield of wells in the oil extracting industry has increased; the hourly output of the rotating furnaces in the cement industry has gone up by 4 percent and that of mills by 2 percent.

The annual plan for boosting labor productivity, reducing the costs, and for accumulations has been overfulfilled.

Profits derived by the industry in 1967 increased by 22 percent in comparable prices, as against the preceding year.

In fulfilling the plan for industry as a whole a number of enterprises have failed to fulfill their plans for output, for improving labor productivity, increasing accumulations and bringing down production costs. The annual plan for the output of engine fuel, lubricants, some plastics and synthetic resins, caustic soda, steam turbines, power transformers, some agricultural machines, bricks, refrigerators, synthetic detergents, some fish products and other goods has not been fulfilled. The production capacities of enterprises already in operation have not been made full use of in a number of cases. The process of utilizing new capacities has been slow at many projects, commissioned in the last few years, for putting out iron and steel and some products of chemical, paper and other industries.

Research, projecting, and design organizations and industrial enterprises have designed and made more than 3,000 samples of new machines, equipment and apparatus, and about 1,500 instruments. The serial production of many new kinds of produce, conforming to modern technical requirements, has been mastered, and the production of a number of antiquated models and makes has eased. An all-round mechanization and automation of production processes has been carried out, progressive technological methods have been introduced and improved, more efficient machines and mechanisms have been used.

Technical progress was promoted by the creative participation of millions of inventors and rationalizers of production. About 3 million inventions and rationalization proposals, resulting in an annual saving of about 2,300 million rubles, have been introduced into national economy.

However, enterprises and organizations of a number of ministries and departments have not carried out fully the plan for research work and the introduction of the achievements of science and engineering into national economy.

II. Agriculture

Realization of the measures slated at the 23d Party Congress and Plenary meetings of the CPSU Central Committee has had a salutary effect on agricultural advancement.

Better farming standards and efficiency, the increased use of fertilizers and a series of other measures served to largely offset the adverse effects of the inclement weather over 1967.

Output of the principal items of cultivated produce at all types of farms was (in millions of tons):

Item	1961–65 (yearly average)	1966	1967
Cereals	130.3	171.2	147.6
Raw cotton	5	6	6
Sugar beet (for refineries)	59.2	74	86.8
Sunflower	5.07	6.15	6.6
Potatoes	81.6	87.9	95.0
Other vegetables	16.9	17.9	19.8

Gross grain returns aggregated 147,600,000 metric tons (9,000 million poods) or 13 percent more than the yearly average over 1961–65. The collective farms and state farms of the Ukraine, Byelorussia, the Baltic Republics, the nonblack earth zones of the Russian Federation and several other districts scored good grain results. The country's rice growers achieved success, gross rice returns aggregating 894,000 tons or 25 percent more than in 1966.

State programs for the purchase of grain, raw cotton, sugar beet, sunflower, potatoes and other vegetables and other produce have been exceeded. Grain purchases in 1967 ran into 57,200,000 metric tons which though less than in 1966 were 11 percent more than the average purchases over 1961–65.

Livestock performance went up over the past year. In comparison with 1966, the average milk yield at the collective farms and state farms was 5 percent more, the wool clip per sheep, 3 percent more, and egg production, 7 percent more. The quality of the livestock slaughtered has also risen.

According to a census taken on January 1st, 1968, the head of productive livestock was:

Type of livestock	All farms		Including collective and state farms	
	In million head	1968 in percent to 1967	In million head	1968 in percent to 1967
Beef and dairy cattle	97.1	100	68.7	101
Including cows	41.6	101	24.5	102
Pigs	50.8	88	37.2	90
Sheep and goats	143.9	102	110.4	102

Because of better livestock performance and some increase in the herd of beef and dairy cattle and in flocks of sheep and goats, livestock production went up at all types of farms, which can be seen from the following table:

Item	Unit	1961–65 (yearly average)	1966	1967
Meat (slaughter weight)	Million tons	9.3	10.7	11.4
Milk	do	64.7	76.0	79.3
Eggs	Thousand million	28.7	31.7	33.7
Wool	Thousand tons	362.0	371.0	395.0

Thanks to increased livestock production state purchases of livestock produce increased.

Item	Unit	Purchases of livestock produce at all types of farms		
		1961–65 (yearly average)	1966	1967
Cattle and poultry:				
Live weight	Million tons	8.6	10.3	11.5
In terms of dressed weight	do	5.2	6.5	7.2
Milk	do	31.1	40.1	42.4
Eggs	Thousand million	8.7	11.6	12.9

State programs for the purchase of the main types of livestock produce were topped by 25, 17, and 19 percent respectively as concerned livestock, milk, and eggs.

The collective farms are now on a still better financial footing. Their gross incomes aggregated upwards of 21 billion rubles which is 5 percent more than in 1966.

Still, shortcomings are to be observed in the functioning of the collective farms and state farms. In several parts of the country crop yields and livestock performance are still low. On many collective farms and state farms the increase in labor productivity is tardy while not enough is done to cut production costs. Though the state farms on the whole wound up the year with a margin of profit, many fell short of the planned profit while some operated at a loss.

Outfitting of agriculture with equipment and machinery continued. In the past year state and collective farm capital investment in agriculture aggregated 13,100 million rubles, or 10 percent more than in 1966. The farms were supplied with the following machinery: 286,000 tractors or 622,000 in terms of 15-horsepower units, including 107,000 cultivator tractors; 146,000 lorries including also special purpose vehicles; 96,000 grain combine harvesters; 6,000 potato harvesters and 10,000 beet-lifting combines, 63,000 windrowers and upwards of 6,000 mechanical cottonpickers. Also supplied were large consignments of mounted and trailed-tractor implements including 192,000 plows, 187,000 seed drills, 204,000 cultivators, 44,000 surface plows, 136,000 mowers, 63,000 mineral fertilizer distributors, 15,000 herbicide ammonia machines, 66,000 all purpose loaders, and plenty of other machinery and equipment. A total of 33,700,000 metric tons of mineral fertilizer, or 3,200,000 tons more than in 1966, was supplied.

III. Transport

The freight turnover of all the types of transport amounted to 3,179 billion tons per kilometer, which is 9 percent more than in 1966.

The fulfillment of the plan by separate types of transport is seen from the following data:

	Fulfilled in 1967	Percentage of fulfillment in annual plan	In percentage to 1966
Freight turnover in thousands of millions of ton-kilometers:			
Railway transport	2,160	104	107
General purpose river transport	144	104	104
General purpose auto transport	56	104	108
Oil carrying transport	183	102	111
Deliveries of freight in millions of tons:			
Railway transport	2,590	102	105
General purpose river transport	302	105	108
General purpose auto transport	3,499	102	104
Pumped by oil-carrying transport	272	103	110

The country's sea transport has overfulfilled the annual plan of deliveries in foreign sailing as well as the freight turnover and deliveries of cargo in cabotage sailing. The freight turnover of all types of sailing increased by 18 percent and the deliveries of cargoes by 8 percent.

The air transport has overfulfilled the plan of the general volume of deliveries and handling of passengers. The volume of the turnover of passenger deliveries increased by 18 percent and the volume of freight deliveries turnover by 16 percent. The volume of chemical processing work done by aviation in agriculture and forestry increased by 12 percent; the plan of this work has been overfulfilled.

The plan for raising labor productivity at the railway, sea, and river transport has been overfulfilled.

The plan of profit, on the whole, for all types of transport has been overfulfilled. As compared to 1966, profits have increased by 16 percent, with the profits in the railway transport increasing by 10 percent, in the sea transport by 30 percent, and in the air transport by more than 50 percent.

Eighteen railway lines have been changed over to the new system of planning and incentive, and these railway lines account for 80 percent of the entire rail freight turnover; the same was the case with 1,700 automobile transport enterprises which have more than a half of all the the general purpose automobiles in the country. At these railways and automobile enterprises better use is made of rolling stock; there is less idling time and empty runs, and profits and deductions from the profits into the budget have increased.

The length of the railway lines which have been changed over to electric and diesel traction has increased during the year by 7,500 kilometers, bringing the total length of the country's electrified railways to 96,000 kilometers. The freight turnover of trains pulled by electric locomotives and diesel locomotives amounted to 92 percent of the total turnover of the railway transport.

The country's railways have fulfilled and overfulfilled the annual plan for the deliveries of coal, coke, oil freights, ore, iron and steel, timber, cement, mineral fertilizers, and grain.

The targets have been reached in the average daily carrying capacity of carriages, electric locomotives and diesel locomotives and the cost price of deliveries has been reduced.

At the same time the country's railways have failed to reach the target for the reduction of the average time of turnover of freight cars. A substantial part of industrial enterprises allowed loaded cars to stand idle above set norms. In water transport the idle time and the empty runs of ships remain great. In the automobile transport there are still large shortcomings in the utilization of lorries. Almost a half of all the automobiles make runs without freight.

IV. Capital Construction

A big program of capital construction was carried out in 1967.

The commissioning of fixed assets financed through state centralized capital investments amounted to 37 billion rubles, which is 3 percent more than was commissioned in 1966. All in all, including construction on account of noncentralized investments, and also the money of the collective farms and the population, basic assets to the value of more than 51 billion rubles, or by 7 percent more, was put into operation.

The commissioning of production capacities is characterized by the following statistics:

Capacities put into operation in 1967 (preliminary data)

Power stations (million kilowatts)	10
Coal (million tons)	20
Pig iron (million tons)	4.1
Steel (million tons)	1.4
Rolled ferrous metal (finished) (million tons)	2.7
Mineral fertilizers (million tons)	3.1
Plastics and synthetic resins (thousand tons)	76
Chemical fibers (thousand tons)	15
Paints and varnishes (thousand tons)	89
Motor tires (millions)	3.2
Motor vehicles (thousands)	47
Turbines (thousand kilowatts)	980
Power transformers (million kilovolt-amperes)	8.7
Excavators (thousands)	1.7
Cement (million tons)	2
Cellulose (thousand tons)	385
Looms (mounted) (thousands)	9
Leather footwear (million pairs)	24
Knitted outer garments and underwear (millions)	105
Granulated sugar (thousand centners of processing of sugar beet per day)	190
Meat (tons per shift)	480
Whole-milk products (thousand tons of milk per shift)	3
Gas pipelines, trunklines and branches (thousand kilometers)	5.4
Oil pipelines and trunkline product pipelines (thousand kilometers)	2.7
New general use railways (thousand kilometers)	0.8
Electrification of railways (thousand kilometers)	1.9

Besides, an increase has been achieved of production capacities at operating enterprises on account of mechanization and stepped up production, improvement of technological processes, modernization of equipment, and other organizational and technical measures.

In the past year, nearly 400 new big industrial establishments went into operation as well as a large number of new shops and production lines at operating enterprises. Among these establishments and projects were:

At power stations—two units of 500,000-kilowatt capacity each at the Krasnoyarsk hydropower station, and also the first units at the Saratov and Vilyui hydropower plants; 19 power units of 160,000- to 300,000-kilowatt capacity each at heat and power stations; an experimental turbogenerator with a capacity of 800,000 kilowatts started feeding electricity at the Slavyansk thermal power station;

At ferrous metallurgy enterprises, three blast furnaces were put into operation, including the biggest blast furnace at the Krivoy Rog steel mill with a capacity of 1.7 million tons of pig iron a year; a convertor was commissioned at the Nizhne-Tagil steel mill, and a unique "1700" sheet mill at the Karaganda plant;

In the chemical industry the Vakhsh nitrogen fertilizer mill has been commissioned as well as new capacities at the second Soligorsk potash combine, the Novo-Kemerovo, Navoi, and Cheboksary chemical combines, the Kalush chemical-metallurgical combine, the Nizhny Tagil plastics plant, the Kotovsk varnish and paint plant, and at the Svetlogorsk artificial fiber mill;

In the oil refining and petrochemical industry, new capacities have been commissioned at the Omsk, Ryazan, Novo-Yaroslavl, Novo-Baku, and Polotsk oil refineries, at the Sverdlovsk, Yerevan, Dniepropetrovsk, and Baku tire plants;

New technological lines have been commissioned at the Katav-Ivanov, Akhangaransk, Savinsk, and Novo-Amvrosiyev cement mills;

In light industry the Osh cotton mill, the Grodno cotton-spinning factory, the Chelyabinsk shoe factory, the Kursk knitted goods combine, the Abakan and the Utensky knitted goods factories and the Brest hosiery factory have been commissioned;

In the food and meat and dairy industry the Ulyanovsk, the Sergach, Ostrozhsk and Kolpnyansk sugar mills, the Bendery oil extraction mill, meatpacking plants in Penza, Novograd-Volynsk and Atbasar, city dairy plants in Leningrad, Cherepovets, Kemerovo, Yaroslavl, Dmitrov, Dnieprodzerzhinsk, Bobruisk, and Sabirabad, powder milk plants in Kurgan, Ryazan and Penza regions, in the Altai territory as well as many other enterprises have been commissioned;

The first section of the largest central Asia center gas pipeline and the 1,000-kilometer-long Ust-Balik-Omsk oil pipeline have been commissioned. In all, more than 8,000 kilometers of new trunk pipelines have been set in operation.

Production capacities have been commissioned in agriculture. Using funds allocated by the State plan alone, elevators with a total capacity of 1.6 million tons and grain storages for a total of 7.8 million tons, including mechanized storages for 4.6 million tons, have been commissioned; livestock premises have been built for 953,000 head of cattle, for 730,000 hogs, for 2.5 million sheep and for 2.9 million poultry. Additional 252,000 hectares of land have been irrigated and work conducted on the draining of 714,000 hectares of overmoist and bogged land.

Capital investments in the national economy, including the expenditure of collective farms as well as that of the population on housing construction, amounted to more than 56 billion rubles or 8 percent more than in 1966. At the same time centralized capital investments increased by 5 percent and noncentralized investments—by 20 percent.

The assignment on the increase in labor productivity in construction has been carried out.

The volume of contract work carried out by construction assembly organizations has increased, as compared with the preceding year, by 9 percent.

The fulfillment of the plan for contract work according to individual construction ministries is as follows:

	Fulfillment of annual plan in percentage	1967 in percentage to 1966
U.S.S.R. Ministry for Heavy Industry Enterprise Construction	99	106
U.S.S.R. Ministry of Industrial Construction	95	106
U.S.S.R. Ministry of Construction	97	110
U.S.S.R. Ministry of Rural Construction	97	113
Ministry of Transport Construction	103	103
U.S.S.R. Ministry of Assembly and Special Construction Work	107	109
U.S.S.R. Ministry of Power and Electrification	104	108

The profit of contact construction organizations increased by 18 percent as compared with the preceding year.

At the same time there are as yet substantial shortcomings in construction. The plans for the commissioning of production capacities have not been fulfilled. A number of contract construction organizations failed to fulfill the assignment on reducing the cost of construction and assembly work, and the profit plan.

V. Rise of People's Standards of Living and Cultural Level

The national income used for consumption and accumulation increased by 6.7 percent, as compared with 1966.

The mean annual number of industrial and office workers in the national economy added up to 82.3 million people and increased by 2.6 million people, i.e., by 3 percent, as compared with the foregoing year.

There was no unemployment in the country last year, just as in the foregoing years.

In 1967 industrial and office workers were changing over to the 5-day working week with 2 days off.

All the real incomes of working people per capita of the population increased by 6 percent.

The mean monthly wages and salaries of workers and employees in the national economy increased by 4 percent and averaged 103 rubles. Bearing in mind the payments and privileges offered by the public funds of consumption, mean monthly wages and salaries added up to 139.5 rubles, as against 134.2 rubles in 1966. The remuneration of labor of collective farmers for their work in the collective economy rose by 6 percent.

The population received last year a sum total of 49 billion rubles out of the public funds of consumption, which was 7.7 percent more than in 1966. These funds covered the payment of pensions and grants and the expenditures on social insurance, social security, free education and medical services, the issue of stipends, free and rebate accommodations at health and holiday resorts, granting of paid holidays, maintenance of kindergartens and creches, and other social and cultural services.

The population's deposits in savings banks steadily grew. Last year they increased by 17 percent and by the end of the year added up to almost 27 billion rubles, while the number of such deposits reached the 64 million mark.

The retail goods turnover in state and cooperative trade last year amounted to 122,200 million rubles and increased by 9.4 percent in comparable prices. Some 2,400 million rubles' worth more goods were sold than had been planned.

The sale of goods by state and cooperative trade underwent the following changes:

	Sold in 1967 in percentage to 1966
Meat and meat products	111
Fish, herring and other fish products	103
Butter	102
Vegetable oil	103
Whole-milk products	112
Cheese	107
Eggs	112
Baked goods	101
Sugar	106
Confectionery goods	107
Tea	104
Potatoes	110
Vegetables	112
Fruits	110
Citrus fruits	116
Cotton textiles	105
Woolens	100
Linen textiles	109
Silk fabrics	104
Clothing and underwear	113
Knitted goods	130
Hosiery	117
Leather footwear	112
Porcelain, faience and glassware	107
Soap	104
Synthetic detergents	133
Furniture	110
Sewing machines	85
Refrigerators	124
Washing machines	109
Vacuum cleaners	115
Watches and clocks	105
Motorcycles and motorscooters	105
Bicycles and motorbikes	104
Radio sets and radio-gramophones	103
TV sets	103
Photocameras	100
Cars	120

Despite the growth of the retail turnover and improvements in food and industrial goods supply, the demands of the population for footwear, some kinds of clothing and knitted goods, chemical household products, furniture, refrigerators, and building materials is not being met in full yet.

The scope of farm produce sales at collective-farm markets in towns and cities increased by 11 percent.

The successful development of the country's economy and the growth of the retail trade turnover and of services to the population guaranteed the stability of money circulation.

State and cooperative enterprises and organizations, as well as the population, have commissioned more than 1.9 million new modern flats, besides, 375,000 dwelling houses have been built on collective farms. The total living area of the flats and dwelling houses commissioned was 103 million square miles, i.e., 1 million square miles more than was commissioned in the country's towns and villages in the preceding year. More than 11 million people have moved to new houses or improved their living conditions in houses built earlier.

With the means of the state farms and collective farms, general education schools for a total of 1,647,000 pupils have been built, along with preschool establishments for 535,000 children, a large number of hospitals and polyclinics and many other cultural and social service projects.

However, in 1967 the plans for housing construction and the construction of cultural and social service establishments for the whole of the country and for many republics have not been completely fulfilled.

The annual plan of social services for the population has been fulfilled on the whole by 100.4 percent. As compared with 1966 the volume of social services has increased by 18 percent; in rural localities it has increased by 28 percent.

The network of social services enterprises for the population increased during the year by almost 10,000 units. Nevertheless, this number is still insufficient, especially in rural localities. At many enterprises the quality of work and the standards of social services have not reached yet a proper level.

Work was done for the further layout improvement of towns and villages. More than 2 million flats have been provided with gas supply in towns, urban-type settlements, and in rural inhabitant localities.

Further success was achieved in the development of public education, science, and culture.

There are about 76 million people engaged in various types of educational studies. Out of this number 49 million study at general education schools of all types, 4.3 million at institutions of higher learning 4.2 million at technical and other specialized secondary educational establishments.

Last year 8-year schools were graduated by 4.2 million people, and secondary general educational schools by 2.4 million people.

Permanent creches and kindergartens were attended by about 9 million children; i.e., almost 700,000 more than in 1966. Besides, seasonal preschool establishments catered for more than 4 million children.

About 16 million children and teenagers spent vacations in pioneer and school-affiliated summer camps, children's sanatoriums, excursion and tourist centers, or went for the summer season to suburban localities with summer cottages and children's establishments.

Sent to work in national economy were about 1.3 million specialists with college and specialized secondary education (500,000 specialists with college education and more than 800,000 specialists with specialized secondary education); as compared to the preceding year the number of people who graduated from institutions of higher learning and technical schools increased by almost 170,000; i.e., by 15 percent. The country's institutions of higher learning and specialized secondary educational establishments enrolled 2.1 million people (institutions of higher learning about 900,000 people and technical schools 1.2 million people).

Extensive work was done in the training and refresher training of industrial, professional, and office workers. The country's vocational training schools graduated during the past year more than 1 million young highly skilled workers. About 16 million people have been trained in new professions and trades and improved their skills with the help of the method of individual and team training and the attendance of courses of lectures at enterprises, establishments, and collective farms.

The number of research workers engaged in research establishments, institutions of higher learning, and other establishments and organizations was about 750,000 by the end of the past year.

The number of film projection units reached 153,000. The number of people attending showings of films was 4,400 million.

Extensive work was done for the further improvement of medical aid for the population. In a year the number of doctors of all specialities increased by 24,000 and the number of hospital beds by more than 80,000. There was also an increase in the number of beds in sanatoriums, rest homes, and resort-type boarding houses.

As of January 1, 1968, the Soviet Union's population was about 237 million.

In pursuance of the decisions of the September (1967) plenary meeting of the CPSU Central Committee and the third session of the U.S.S.R. Supreme Soviet (seventh convocation) adopted in keeping with the decisions of the 23d CPSU Congress, beginning with January 1, 1968, the implementation of measures began for the further improvement of the living standards of the Soviet people.

In response to the care shown by the party and the Government a Socialist emulation movement for the preschedule fulfillment of the 5-year plan by November 7, 1970, is growing in the country.

Central Statistical Board Under the Council of Ministers of the U.S.S.R.

2. REFORM AIMS AT OPTIMIZATION OF ECONOMIC ELEMENTS*

We live in an era characterized by unprecedented rates of scientific and technological development. In the number and importance of discoveries and inventions the present technical revolution surpasses by far the industrial revolution at the end of the 18th century. During those years science did not yet take a direct part in the fundamental changes in technology. Now, however, the revolution in technology is connected not only with the achievements in applied, but also, and primarily, in theoretical, fundamental research. The present rates of scientific development are such that two-thirds of the knowledge accumulated by mankind was created in the last 20 years.

Whereas the industrial revolution of the 19th century was of great importance for the development of capitalism, the present scientific and technological revolution will be of decisive importance for the final victory of the world Socialist system. Technological progress is aimed at replacing any labor—physical or mental—by machines and at relieving the worker from any routine functions. This trend in technological development presupposes such a fundamental reorganization of personnel, mass improvement in their skill, and intensively drawing physical and mental labor closer together that under the conditions of capitalism these processes pose insoluble problems. The all-around automation under capitalism threatens an unprecedented increase in unemployment. The problem of placing workers, whose skills have become obsolete and do not correspond to the new technological level, in jobs is incomparably more easily solvable under socialism than under capitalism. The task of a mass and systematic change in workers' skills in accordance with technological progress is beyond the power of capitalism. It is true that in the sphere of the management of capitalist enterprises and monopolies the scientific and technical revolution has brought about great changes connected with the use of electronic computers. On the other hand, the basic contradiction of capitalism has been aggravated. Specifically, the lack of a system, which could maintain correspondence between the capital investments for raising labor productivity and those for creating new places of work, the training and retraining of personnel, the dynamic need for them and the length of the working day, and the growth of labor productivity and wages, is felt acutely. Maintaining correspondence between these processes during the years of swift technological progress is possible only in a planned economy.

The Socialist direction in the latest technical progress is manifested most strikingly in the most important postwar inventions—machines which replace mental labor. They intensify many times the functions that were the weakest point and the most backward section in technical progress—the functions of accounting, computing, and managing. In this sphere, labor productivity was growing incomparably more slowly than in the sphere of physical labor. Of course, the low-scientific

*By V. V. Novozhilov (Leningrad), in the Russian-language periodical *Ekonomika i matematicheskiye metody* (Economics and Mathematical Methods), No. 5, Moscow, September and October 1967, pp. 660–671.

and technical level of managerial labor had a greater effect on the Socialist than on the capitalist economy. After all, national economic management is much more complicated than the management of individual firms. The scientific and technical revolution has created new, highly efficient methods and means of managing complex systems, which not only yield a tremendous increase in the productivity of managerial labor, but, what is much more important, make it possible to solve planned tasks which are not at all feasible without them—the tasks of optimum planning. At the same time, as Socialist economy grew, so did the need for new methods and technical means of management. After all, as the number of different goods, technical methods of production, and production and consumption centers increases, the information necessary for management increases multiplicatively; that is, like the product of the corresponding numbers. At the same time, the time necessary for receiving and processing economic information is shortened, owing to the acceleration of technical progress—shortening the time between the appearance of new means of production, new goods, and new production and consumption centers.

Thus, at the same time, both the possibilities of improving the management of Socialist economy and the complexity of this management have increased sharply. The problem of the broad democratization of economic management on the basis of the coordination of personal and social interests, autonomous financing, and the plan has become more acute. Only on condition that there is mass interest in the results of labor is it possible to attain the prompt introduction of scientific and technological achievements into production. In turn, the solution of this problem presupposes a rise in the scientific level of centralized economic management.

However, the system of Soviet economic management, which was formed in its basic features as early as the 1930's, did not adapt itself immediately to the technical revolution. At one time this system played a decisive part in the Socialist reconstruction of the national economy, its transition with wide front to the advanced technological level, and the concentration of forces and funds for victory during the great patriotic war. However, it proved to be inadequate under the conditions of the technical revolution. It did not insure the proper rates of the introduction of scientific and technological achievements. Specifically, the technical revolution required the introduction of new scientific methods and technological means into Soviet economic management and the established system of this management hampered the introduction of these achievements.

The economic reform of 1965 is breaking up this circle. It begins a new stage in the development of this system of national economic management established by V. I. Lenin, a system which connects the plan and autonomous financing. The new thing is that tasks of the greatest development of both principles of democratic centralism—the plan and autonomous financing—are set and efficient means for their coordination are indicated. Thereby, conditions are also created for the introduction of new methods of planning (mathematical) and new technical means of management.

The Plan and Cost Accounting

During the first years of its existence the Soviet Republic was essentially an armed camp. This was also proclaimed by the decree of the All-Russian Central Executive Committee of September 18, 1918. Of course, the forms of economic management that had arisen under the conditions of an armed camp did not correspond to peacetime conditions.

The possibility of establishing a system of economic management designed for peaceful conditions opened up for the first time in 1920. At that time, both the planning of the national economy and the democratic forms of its management were initiated almost simultaneously. The first long-term plan for the development of the national economy—the plan for the electrification of Soviet Russia—was drawn up in 1920, and in 1921 the State Planning Committee was organized and the implementation of a new economic policy began. The NEP (Novaya Ekonomicheskaya Politika (New Economic Policy)), even though it was a partial return to capitalist relationships, but its main content was the establishment of a system of Socialist economic management on the principles of democratic centralism.

At the same time, whereas Marx and Engels wrote about the planned functions of Socialist economic management, the principle of democratic centralism and cost accounting are Lenin's ideas. The idea of connecting the plan with cost accounting is simple and, at the same time, also astonishing both in its insight and boldness.

Marx and Engels assumed that under socialism the law of value would lose its validity and that its function as the controller of production would be replaced by planning. V. I. Lenin established a system of management which combines planning with money-exchange relationships, the plan with cost accounting. Thereby, one production controller—the plan—is connected with the other controller—the law of value.

The relationships between the plan and cost accounting and also the forms of planning and cost accounting were changing. However, with all these changes, the system of Soviet economic management after 1921 included both elements—the plan and cost accounting. Such a vitality of this system is a sign of both its correspondence to the nature of the socialist economy and of its capacity for development and perfection. However, despite the work experience gained by this system over nearly half a century, as yet it is insufficiently studied and worked out. The similarity of the forms of cost accounting to the practice of economic calculations of capitalist enterprises especially gives rise to many false rumors and errors. For a long time this similarity confused Soviet economists who could not discern in the "profit" and "profitability" indices under a capitalist cover the resultative indices also necessary for the socialist economy. Some bourgeois economists also make use of this similarity, interpreting the economic reform that is being implemented as a return to the capitalist methods of management. Such an assessment of this reform is based (openly or secretly) on the principle of the incompatability of money-exchange relationships, cost accounting with the plan. These interpretations are groundless if we prove that cost accounting is not only compatible with the plan, but also necessary for the optimum planning and management of the socialist economy.

Such a proof would have been impossible during the years when cost accounting arose. The scientific means for it (cybernetics and mathematical programing) were created much later. By means of them we can illuminate in a new way the secrets of the vitality of the Leninist system of socialist economic management, i.e., the functions of cost accounting and the methods of its coordination with the plan.

Now it is already widely known that cybernetics substantiates cost accounting as a chance compensator in a planned economy. The Socialist economy is a very complicated system subject to the effect of a great number of chance causes and undescribable in all details. The management of such systems is possible only provided there exists an automatic feedback controller, which could promptly compensate for the chance action and adjust the system in the direction of the specified state or the specified way of development. The automatic feedback controller follows the values of certain variables (for example, production profitability) and affects the system in such a way as to prevent the excessive deviations of these variables from their standard values. In the Socialist economy money-exchange relationships are such a controlling mechanism. Commodity production is capable of maintaining a certain correspondence among its elements only on the basis of feedback. However, this controller operates too slowly with respect to certain very important proportions. Furthermore, it indicates only the direction in which it is necessary to operate (for example, to increase the production of a commodity), but not the measure of the operation (for example, to what extent the production of a given commodity should be increased). Therefore, the basic proportions in development and the main controlling standards should be established by the national economic plan. However, the detailing, correcting, and fulfilling the plan should be controlled by cost accounting.

However, this description of the functions of cost accounting is incomplete. Cost accounting is necessary not only for compensating for the actions of chance causes. It is also necessary as a result of the vast scale of the tasks of national economic planning. Let us imagine that there are no chance (disturbing) factors in the economy and that all economic processes are determined and are known to us and, therefore, in principle, can be accurately planned and controlled from the center without an automatic feedback controller. Nevertheless, even under this hypothetical condition, it would be necessary to divide national economic management among a great number of production units having some economic independence.

The planning of the national economy should search for the best solutions among such a great number of possibilities compared to which astronomical numbers are infinitesimal magnitudes. This is due to the fact that, as a planned economy grows, the number of possible plans increases in a combinatory manner. For example, if an economy consists of two objects of capital investments, for each of them two ways (variants) of investment use being possible, the number of possible plans is four. Given five objects of capital investments and three variants of their use, 243 plans can be drawn up for each object. If the number of the objects of investments is 500 and the number of variants for each object is 10, the number of possible plans is 10^{500}. One can judge the dimensions of this number by com-

paring it with the number of atoms throughout the apparent universe; it is equal to approximately 10^{73}. Nevertheless, the planning problem is to find the best possible variant. This task, hopeless at first sight, nevertheless is solved in terms of an approximation to the optimum.

First, economic analysis makes it possible to reduce the great number of plans many times by rejecting all the obviously inefficient variants. Second, economic analysis makes it possible to reduce the dimensions of planned tasks many times through the consolidation (unifications in groups) of similar economic elements. Third, cost accounting makes it possible to divide the tremendous task of national economic management into a great number of tasks of a smaller dimension. The consolidation of elements and the division of a major task into parts makes it possible to bring planned tasks to dimensions in which they can be solved by the mathematical methods of optimum planning by means of electronic computers.

Thus, cost accounting is necessary not only for compensating for the chance effect, but also for overcoming the supercosmic multidimensional world of possible plans.

The System (Plan and Cost Accounting) and the Theory of Optimum Planning

The plan and cost accounting are the two necessary elements of democratic centralism in economic management. Of course, they must be coordinated one with another. Otherwise, either the plan or cost accounting assume a formal nature.

However, the coordination of cost accounting with the plan and their unification in practice, and not only in idea, is a very difficult problem. This is the central problem of the organization of socialist economic management on the road to communism. It is versatilely connected with the economy. It is so complicated that its solution can be only approximate. At the same time, it is so important that the level of its solution should be considered the criterion of the perfection of the system of socialist economic management.

Mathematical models for the coordination of profitability with the plan have been worked out in the theory of optimum planning. This coordination lies in the determination of such standards for the calculation of expenditures and results (prices of goods and standards of payment for the use of the means of production) in which:

(1) only those and all those varients (possibilities) of production at each section that correspond to the plan would be profitable;

(2) all the sections (units) of production would be under equal conditions of labor application.

Under such conditions the greatest democratization of economic management and the most perfect distribution according to labor are possible. Payments for resources (for productive capital, capital investments, and natural resources) are necessary both for the coordination of profitability with the plan and for bringing different enterprises to equal conditions of labor application. Both functions of these payments result from the law of value when there are considerable differences in the production expenditures of the same product. At the same time, the size of such payments should correspond to the labor efficiency connected with the given resources in the optimum

plan. With such a calculation, the payment for resources levels off the production cost of the same output in various enterprises and brings it closer to the maximum socially necessary labor expenditures.

Capital use charge, payment for credit, and differential rent in the socialist economy differ from similar capitalist forms not only in the sense that they serve different masters, but also in the sense that they should be organically connected (coordinated) with the plan.

The system of prices and profitability standards, which meets the requirements (1) and (2), is possible only with the optimum plant Moreover, even optimum planning under certain conditions cannot coordinate profitability with the plan. For example, such a situation occurs when the maximum costs (of the increase in output) are lower than the average ones.

Thus, the system (the plan and cost accounting) can be internally coordinated (with the limitations mentioned) only with optimum planning. However, there is not much of this. The optimum planning of production and prices coordinates profitability with the plan. However, for the complete development of this system (the plan and cost accounting) it is necessary, in addition to this, to coordinate personal and social interests, i.e., to work out an optimum system of distribution according to labor (including awarding of bonuses). As a result, the democratization of economic management presupposes the optimization of production planning, the optimization of price formation, and the optimization of the forms of cost accounting and distribution according to labor. All these directions in the perfection of the organization of the Socialist economy should be closely connected and coordinated one with another. The insufficient development of any of these directions hampers the coordination of personal and social interests. Hence it is obvious that the complete implementation of this system (the plan and cost accounting) is a task on a historical scale. The time of the fulfillment of historical tasks is not measured in years, but in historical eras. The methods and technical means for implementing this system in the internally united form in which V. I. Lenin visualized the principle of democratic centralism have appeared only comparatively recently.

When there is a deficiency in the coordination of cost accounting with the plan, either the plan, or cost accounting inevitably assume some formal nature.

If the decisions of production units are based on cost accounting, the plan is not of a directive nature, or loses it to a certain extent. If the economic decisions of production units are based on the plan, cost accounting loses its validity to a certain extent. These two types of relationships between the plan and cost accounting are not only theoretical possibilities. Depending on historical conditions they can become different phases in the development of the management system.

The scientific and technical revolution has set an immediate task of raising the scientific level of the system of economic management in which cost accounting would be sufficiently coordinated with the plan. For only to the extent of this coordination can the economic independence of individual production sections and units be expanded and workers' material interest in the result of labor be intensified. (After all, material interest can be intensified only for the indices for which private advantage reflects common advantage and for which cost

accounting is coordinated with the plan. Otherwise, intensification of the material and even moral interest of the plan's executors will strengthen their aspiration to make use of private advantage to the detriment of common advantage, to the detriment of the plan).

Having brought forth the task of intensifying the interest of all the managers of the Soviet economy in the continuous introduction of scientific and technological achievements into production, the scientific and technical revolution also created the means for the solution of this task. Their application marks the new phase in the development of this system (the plan and cost accounting)—a phase based on the gradual and systematic coordination of cost accounting with the plan. The reform that is being implemented is the first stage of this phase.

The basic principles of optimum planning and management were laid down in the decree of the September (1965) plenum of the CC CPSU "On improving industrial management, perfecting planning, and strengthening the economic stimulation of industrial production" and the materials of the 23d party congress. Among them are the following: demand for the optimity of national economic plans; rise in the role of the profitability as the index of production efficiency; establishment of the use charge for productive and circulating capital; bringing prices closer to the socially necessary labor expenditures (specifically, taking into account in prices the quality of output); introduction of cost accounting into all production units; increase in the share of bonuses in the earnings of workers and employees, et cetera. The establishment of the use charge for productive and circulating capital subsequently predetermines the inclusion of profit in planned prices not in proportion to production cost, but in some correspondence with capital investments and productive capital, which is in agreement with the rules of optimum planning. Thus, the reform embraces all the basic spheres of economic management, the optimization of which is necessary for the coordination of personal and social interests—planning, price formation, forms of cost accounting, and distribution according to labor.

THE OPTIMIZATION OF PLANNING AND PRICE FORMATION

The optimity of planning is the main condition for coordinating cost accounting with the plan. The plan can become an economic law only to the extent to which its content is in agreement with objective economic laws. Prices and profitability standards (payments for capital and for natural resources) in which the cost accounting advantage conforms with the plan and profitability serves as the universal qualitative index of the work of enterprises can exist only in the optimum plan. This means that the optimization of planning the national economy should be the fundamental principle in the process of the reorganization of economic management.

This principle was clearly expressed both in the decisions of the September (1965) plenum of the CC CPSU and in those of the 23d party congress. The reform is improving considerably the distribution of functions among the various units of the planned system, restoring the branch organization of industry, and strengthening the role of long-term planning. The importance of these measures is very great. The excessive centralization of national economic management hampered not only the selection of optimum solutions, but also the

balance coordination of economic elements. Hence the frequent revisions of assignments and lack of coordination among the plan units, which complicated the tasks of efficient management. They extended to production branches and units, disrupting the plans of allied branches and interconnected units. The electric power that has not been delivered on time, the part that has not been supplied on time, and the delayed delivery of raw materials unsually cause considerable losses, often much greater than the cost of the means of production that have not been delivered. In all likelihood, losses of this kind exceed the losses due to not hitting the optimum.

The 5-year plan becomes the basic form of planning not only the national economy, but also branches and enterprises. Thereby, the stability of the economic activity of all production units increases. A basis is created for the prompt establishment of ties with consumers and sales organs, which determine the volumes of output deliveries, and for the regulation of the material and technical supply. The centralized distribution of many materials did not have the opportunity of giving at the right time the necessary material to the consumer who could use it in the most efficient manner. In its dimensions, such a task is unfeasible even on electronic computers. The reform is reorganizing the material and technical supply. The rights of territorial supply organs have already been extended considerably and their responsibility has been increased. They are given the right to distribute certain types of products, which have been distributed in a centralized manner thus far. The Government has charged the State Committee for Material and Technical Supply of the Council of Ministers U.S.S.R. with the organization, as early as 1967, of wholesale trade in equipment, materials, and semifinished products, and with insuring its consistent expansion, with a view to carrying out a gradual transition to the planned distribution of material and technical resources through wholesale trade. The committee was also entrusted with the organization of commission trade in the materials and equipment that are not used in enterprises. Provision is made for the further expansion of direct economic ties among enterprises, specifically the attachment of enterprises producing mass and large series output to their suppliers for a long period.

The transition to a systematic trade in the means of production and to the expansion of long direct ties will accelerate the turnover of stocks of materials, because allocation stimulates an increase in stocks.

Finally, such an important function of the center as the coordination of personal and social interests through a policy of prices, financcs, and credit (specifically, payments for the use of resources) and wages also belongs to this direction of the reform—the optimization of planning. The task of national economic management can be fulfilled only by dividing it to a great number of tasks of a smaller dimension, the joint solution of which is regulated by such controlling standards as prices, fixed payments, wage standards, etc. Therefore, ultimately, the success of this reform will depend on the level of coordination of all its main directions.

The principle to the effect that production and prices are interrelated is one of the basic tenets of the mathematical theory of optimum planning (duality theorem). In fact, the same idea is contained in the theory of value. The socially necessary labor expenditures presuppose socially necessary proportions. This truth has not been sufficiently

taken into account by practice. The administrative methods of management predominated over economic methods, because too often prices deviated from the socially necessary labor expenditures. And because of this, frequently the structure and expenditures of production deviated from the socially necessary ones, i.e., the optimum.

Optimum prices can be determined not only as a whole, but also in parts, i.e., by summing up the elements of the expenditures calculated according to the socially necessary standards. The value principle of price formation, which reflects the law of value, lies precisely in this. It is precisely because of this principle that the optimization of the prices for goods and the standards of the efficiency of resources is an active and independent factor in the optimization of production plans.

Such is also this factor in the economic reform that is being implemented. The shortcomings in price formation before the reform were a source of many difficulties in economic practice. Therefore, their elimination, specifically, the introduction of the capital use charge, will be an important factor in perfecting production structure and management organization—the optimization of prices is one of the aspects of the gradual optimization of planning. At the same time, under present conditions, by the socially necessary expenditures we should understand not average expenditures, but those that insure a certain profit to each normally operating enterprise; i.e., the maximum socially necessary expenditures. In other words, the prices that coordinate cost accounting with the plan should not reflect value, but its modification. The same conclusion follows from the introduction of the capital use charge by the reform. And, finally, the theory of optimum planning leads to the same conclusion. Optimum prices are proportional to the maximum labor expenditures; i.e., to labor expenditures on small increases in output in the optimum plan. We stress the word "in the optimum plan," because often the theory of optimum price formation is understood as orientation toward the actual greatest expenses. This is a major error. The actual maximum expenditures reflect an inefficient production structure formed at the time when prices did not set a clear limit for production expenses. Therefore, the establishment of the permissible limit on production expenses for each commodity is the first condition for the optimization of price formation. This task can be best solved only in connection with the preparation of the plan for the development of the national economy. The limits for the production expenses of key products can be determined in this plan. This does not mean that unprofitable enterprises should be liquidated immediately. Price is a signal for future decisions—it sets the limit on the expenditures for the further increase in production. Subsidy can be established not only in an obvious, but also in a hidden form of the calculated price for the output of a given enterprise or a group of enterprises. However, it is important that the consumers of a given output pay for it not according to the average, but the maximum expenditures in the branch production plan. At the same time, all the interchangeable products should be considered as a homogeneous product and the maximum expenses should be calculated for an equivalent unit of use value. In this way prices would stimulate efficient relationships among the production of interchangeable products.

The main problem of the further perfection of price formation lies in expanding and strengthening the relationship between pro-

duction planning and planned price formation. Price formation should be coordinated with the planning of production at all its levels—national economic, branch, regional, and plant levels. Such a situation has not yet been attained. The planning of prices is centralized to an excess.

The task of the best coordination of price formation and production planning is of great importance not only for the optimization of prices, but also for the optimization of production and supply management (a gradual transition to wholesale trade in the means of production).

The Optimization of Cost Accounting

The introduction of genuine cost accounting into all production units is the central task of the reform that is being implemented. It follows directly from the principle of democratic centralism. Actually, if individual production units are to be given economic independence, at the same time, it is necessary to organize a system of the calculations of expenditures and results at every section, so that the manager of each section, guided by the maximum difference between results and expenditures (i.e., the maximum profit), could attain the best utilization of the resources granted it—the best utilization for society at large in accordance with the plan for the development of the national economy. The cost accounting of one unit (for example, an enterprise) cannot be complete, if the other units connected with it are not interested in the results of overall production and are not responsible for the losses caused to this unit. Both the optimization of planning and the reorganization of price formation, as well as a considerable change in the forms of autonomous financing help in the attainment of this goal.

Optimum prices are the basis for genuine cost accounting. They make it possible to reduce the number of cost accounting indexes to a minimum. The multiplicity of the planned indexes of the work of individual production units deprives cost accounting of the possibility of calculating the efficiency of economic decisions and work efficiency. Under such conditions both economic decisions and an evaluation of the efficiency of the work of an individual unit inevitably depend on the subjective judgment of the evaluating instances. Of special importance are the replacement of the index of gross output by the index of marketed output and the advancement of the role of profitability as the basic index of the efficiency of a unit's work. The exclusion of gross output from the number of planned indexes is valuable not so much because the confusion of the expenditures of an enterprise with its results is eliminated, as because only the output that meets the demand is recognized as a result. Thereby, cost accounting is entrusted with a very important task—checking the proportionality of production by needs.

The reform changes not only the role, but also the content of profitability. Profit pertains not to production cost, but to productive capital. Such a calculation of profitability is a big step on the road to the system of optimum cost accounting.

In optimum planning, the standards of payments for resources bring all the plan executors to equally favorable conditions of labor application. Then differences in profit depend only on the efficiency of the workers themselves—their efforts, their initiative, and their

abilities. Therefore, it is logical to relate such profit either to the quantity of the expended labor, or to the payment for it. This is labor profitability brought to equal conditions of its application. The main cost accounting index in the system of optimum planning is envisaged as such. On the basis of such profitability it is no longer difficult to construct an incentive system, in which the interests of each enterprise, each shop, and each worker would coincide with the interests of society.

In practice the calculation of profitability differs from this system. This is natural, because the payments for resources do not correspond sufficiently to their standard efficiency. However, the fundamental importance of the new role and the new meaning of profitability is very great. For a long time it was commonly believed that the Socialist economy was not directed to the extraction of profit and, therefore, profitability could not be the main cost accounting index. In this situation the truth was confused with an error. The Socialist economy as a whole indeed cannot seek the maximum profit. This would mean that the goal of socialism is maximum accumulation and minimum consumption. However, it is an error to assume that profitability cannot be the main autonomous financing index, i.e., that it cannot reflect the correspondence of local decisions to the national economic plan.

If cost accounting is coordinated with the plan, labor profitability becomes an index of the correspondence of the decisions of any production unit to the national economic plan.

Of the problems of the introduction of cost accounting we shall focus our attention on the cost accounting of management organs and intraplant cost accounting.

The autonomous financing of management organs deserves special attention both because the decisions of superior units determine the direction of the activity of a much greater number of workers than the decisions of lower units and because the cost accounting of the organs of economic management represents a problem that has not been worked out. Every day facts recall its urgency. Thus, economically unsubstantiated directives and frequent changes in the plans of enterprises hampered their activity to such an extent that the problem of the responsibility of superior production units to the lower ones became one of the burning topics of the day.

However, its isolated solution makes little sense. It can be properly solved only in connection with the organization of the cost accounting of management organs. Responsibility for losses cannot exist without participation in the profits. If management organs do not have the capital for the compensation for the losses they cause, they cannot bear true responsibility for their decisions. Of course, their responsibility will be the fullest if it is based on a measurement of the results of the activity of industrial management organs. Such a measurement of the results of the work of an individual production unit is the basis for cost accounting. The contribution of higher units lies in the increase in the efficiency of the work of lower units which is brought about by the planned and regulating decisions of higher units. It is not easy to separate this increase from the growth of profit, which is to the credit of lower units. Nevertheless, this problem is solvable. The time has come to proceed to its solution.

According to economic logic, this problem is followed by the assignment of individual funds (for technical development, incentive, etc.),

the reimbursement of expenditures for the fulfillment of operational-economic or management functions and, finally, giving incentives to the most productive workers. At the same time, the expenditures for the maintenance of the managerial staff can be incurred at the expense of the deductions of enterprises. Such a system of financing would correspond to the role of the managerial staff as an element of material production.

However, the problem of the stability and rhythmical pace of branch work will also remain after the transfer of all industry to the new working conditions. The feedback mechanism of money-exchange relationships cannot compensate for the effect of all chance factors by far. Some unforeseen changes in a situation should be taken into account in a centralized manner. Branch plans should have both the reserves and possibility of maneuvering. Therefore, it is not only important that the changes in the plans of enterprises be internally coordinated (for all planned indexes), but also that enterprises be interested in their best fulfillment. In this way, cost accounting relationships between the lower and higher units of the management system are closely connected with the problem of the flexibility and maneuverability of branch management.

Among the problems that arise in the enterprises transferred to the new working conditions, as a rule, the problem of improving intraplant cost accounting is the most acute.

In the absence of intraplant cost accounting, the new working conditions are not presented to shops, sections, brigades, and workplaces, i.e., to the masses of workers. Therefore, the elaboration of forms and methods of genuine intraplant cost accounting is one of the most correct ways for the transition to the new working conditions. This work can be started in any enterprise even before the transition to the new system. It is all the more necessary, because the forms and methods of intraplant autonomous financing depend on the characteristics of specific industries. At the same time, the prerequisites for the introduction of intraplant cost accounting in many respects coincide with the prerequisites for the transition of the enterprise as a whole to the new working conditions (rise in the scientific level of planning and economic analysis, regulation of standard economy, accounting, and control, reduction in the number of planned indices, etc.).

The economic reform that is being implemented is due to two historical factors, i.e., the scientific and technical revolution and the formation of the world Socialist system.

On the one hand, the scientific and technical revolution has extremely complicated the tasks of socialist economic management and on the other, has created scientific and technical means for a tremendous rise in the efficiency of national economic management (mathematical methods of planning, cybernetics, and electronic computers).

The victory during the Great Patriotic War and the formation of the world socialist system removed the limitations on the democratization of economic management due to the capitalist encirclement.

The complication in management tasks was brought about by the growth of both their dimensions and the elements of uncertainty in them. Owing to both these processes, an increasing inadequacy of the previously formed management system has emerged. The lack of

coordination of personal and local interests with social interests and of cost accounting with the plan was the most general, concentrated expression of this inadequacy. The lack of coordination of private and social interests and private and common optima often directed the activity of enterprises and their workers toward inefficient decisions and actions. Hence the overburdening of centralized management with superfluous functions to the detriment of the necessary ones and the development of administrative methods of management to the detriment of the economic ones.

The main characteristic of the currently implemented reform lies in the fact that it is directed toward the perfection (optimization) of all the basic elements of the socialist economy, i.e., the optimization of planning, cost accounting, and distribution according to labor, and, finally, the democratization of economic management. Partially, we can judge the efficiency of this reform by the fact that in 1966 the profit throughout the industry of the U.S.S.R. increased by 10 percent, whereas in the enterprises transferred to the new methods of management, by 25 percent. At the same time, it should be kept in mind that the new methods of management fully manifest their force only when they encompass the entire national economy. For the enterprises transferred to the new working conditions, among the masses of the enterprises operating according to the old methods, inevitably feel the shortcomings in the previous system of work.

The success of this reform depends to a great extent on the extent to which economic science will help in the solution of a number of the problems posed by the reform. The increased role of economic science places great responsibility on Soviet economists.

3. TRADE IN MEANS OF PRODUCTION*

The decision of the 23d Congress CPSU on preparation for gradual conversion to planned allocation of means of production by wholesale trade summed up the results of many years of fruitful discussion on organization of the sphere of circulation under socialism. In addition to its great general-theoretical significance, this decision of the congress directs attention to many tasks of an applied nature, the accomplishment of which must also proceed on the basis of Marxist-Leninist theory. Although the question as to gradual conversion to trade in the means of production has been decided, it seems to us that it would be incorrect to stop theoretical discussion of the problem. The idea of the necessity for conversion to ordinary methods of wholesale trade, if it is to become a material force, must be comprehended by the many tens of thousands of persons in the entire system and in all links of material-technical supply. And it will be a long time before this is accomplished. From a theoretical point of view the protagonists of the need for funded supply have still not been worsted. And this cannot help but hold back the rates of reorganization of this important sphere of the national economy.

The present article is not intended to deal with general questions of trade production and trade circulation in the USSR. Its purpose is quite different—to analyze the practical, everyday audible expressions of doubt and dissatisfaction from the point of view of theory. It seems to us that doing this will help trade personnel to overcome the "psychological barrier" which has grown up in the course of many years. You see, it is no easy matter to give up following procedures which have become so habitual that they appear natural.

There was much that appears strange in the discussion on whether to supply (i.e., to allocate) or to trade which took place several years ago. In fact, everyone agreed that machines, materials, instruments, and devices are goods. Consequently, the only possible form for their realization was trade. On the other hand, everyone understood that to different goods belonged different means of trade.

What then was the dispute about? About the forms of trade under socialism.

Some economists maintained that although means of production and trade were by reason of the part they played in economic life different in principle from consumption goods and that therefore their realization should in principle be carried out by a different method than by trade than for consumers goods. By this form of trade different in principle is meant the system of material-technical supply as it had developed historically in our country. While agreeing with criticisms of this or that particular defect in this system of funded allocation of means of production, these economists nevertheless considered this system the correct one in principle. According to them, the essence of the fundamental distinction between the enterprise-consumer and the citizen-consumer lies in the fact that the latter, for example, can buy both a fall and a winter overcoat but if it happens that neither is to his taste he can get along for a time with a warm

*By A. Birman, in the Russian-language periodical *Material'no-Tekhnicheskoye Snabzheniye* (Material-Technical Supply), Moscow, No. 11, November 1967, pp. 21–30.

jacket, while enterprises need specific materials in strictly determined combinations and on strict schedules.

Therefore, these economists asserted, it is necessary to get from each consumer an actual requisition with detailed listing of everything needed. But since there are hundreds of thousands of such consumers [enterprises] and considerable time is required to total up their requisitions and allocate the assets, these requisitions must be submitted 6 months before the start of the plan period; that is the way it has to be.

Another group of economists categorically rejects this position. They think that for the preponderant volume of material assets consumed the demand on the part of enterprises is immeasurably more stable than for the population and that, therefore, no real grounds exist for a cumbersome system of planning. They consider the procedure for material-technical supply which has grown up as a bothersome survival of the card system of allocation, a survival which is holding back the development of the socialist economy.

While not denying the role of computers and in general of technical means for supply administration, these economists propose not loading computers with tremendous batches of requisitions but instead to make a 180° turn and convert from funded supply to ordinary Soviet wholesale trade or, as was stated in 1963 in the article" 100,000,000 Screws," "simply sell them, for money" (*Economic Gazette*, No. 13, 1963). At the time such a proposal was inacceptable but today it has become understandable.

Let us try as objectively as possible to consider the arguments which have been put forward against the conversion to wholesale trade in means of production.

What motivates many trade personnel in supporting the need for preservation of the monopoly procedure which existed until recently for allocation of means of production? They have at least two arguments. First, shortages of many means of production. Any person in a department of supply of a plant or territorial administration can give you offhand a long list of items for which the demand is not fully met. If additional evidence is needed, mention could be made of the "expediters" found in many factories and plants all over the country.

At the risk of being scoffed at as out of touch with life, we put forward the assertion that in a planned economy there cannot be any shortages and that what we called shortages are actually something different which will be named later on.

"Please," say the practical people, "don't get us into terminological refinements. That is not our field * * *."

But, actually, it is not a matter of terminology but of the essence of the phenomenon in question. Correct diagnosis is half the treatment. Without uncovering the real essence of the phenomenon which goes by the name of shortage we will never escape from the vicious circle in which we find ourselves.

So now, is a shortage possible in a planned economy?

As we know, Socialist is the first phase of a Communist society, a phase in which there is not yet complete satisfaction of requirements. Let us assume that the total requirement on the part of the population of the U.S.S.R. for shoes amounts to 800 million pairs a year. In fact, we are making 650 million pairs; i.e., only 80 percent of the figure we have taken for the total demand. Can it be said that the shortage of shoes amounts to 150 million pairs a year?

Clearly, no one would make such a statement since, to repeat, socialism does not presuppose complete satisfaction of requirements. We have burdened our readers with this trite example since out of it follows a general question: What should we mean when we speak of a shortage? On the other hand, customers coming to a shoestore and finding they cannot buy the footwear they want are unlikely to agree with a statement that there is no shortage in shoes.

What is the difficulty? Clearly, resources should not be compared with some theoretically determined level of requirement, and not with demand in general, but with effective demand. In the shoe example, which was taken only for purposes of illustration, there remains an unsatisfied effective demand for shoes. Is this a shortage? No; it is a miscalculation on the part of planning and trade organs. If they were able accurately to determine the structure of demand on the part of the population and, knowing the balance of its money incomes and expenditures, they would know what the effective demand for shoes is and could take steps fully to satisfy it out of domestic production and imports.

Fifteen to twenty years ago a dominant position in political economy held that a constant excess of demand over supply was a good thing because it acted an an incentive to increased production. But the application of this "theory" led to difficulties in the matter of currency circulation and undermining of the stimulus to increased labor productivity. Actually the relationship is one in which the toiler attempts to maximize his labor productivity, to achieve economies, and as a result to increase his money income, while planning and other bodies are obliged to insure full satisfaction of effective demand and, therefore, promote the further rapid development of public production. Obviously, this applies to mass-production goods and not to new items, the demand for which it would be impossible for the country to satisfy quickly.

Now let us consider means of production. What is the situation with respect to them?

In answer to this question let us attempt to analyze the principle ways of utilization of means of production. This will help us to uncover the mechanism of this phenomenon which is called a shortage. Without disclosing this "mechanism," we cannot create the conditions which actually are the material prerequisite for the conversion to whole trade in means of production.

In our opinion, the starting point for analysis of utilization of resources at the present stage of development of the Socialist economy is to begin with modes of utilization least subject to control (in the sense of volume of requirement) and move gradually to requirements for which in case of need there can be variations in the degree of their satisfaction.

First of all, naturally, stand the requirements for defense of the country (including State reserves). These requirements should be satisfied fully—and, in fact, they are. Here, naturally, we proceed from the position that such requirements have been correctly determined.

Second should be requirements for simple reproduction. The stocks of all material resources (including wear and tear of fixed capital) on December 31 of each year should be at least no less than those at the disposal of the national economy at the beginning of the same year. The existence of society would simply be impossible otherwise.

Of course, in allocating resources to a particular enterprise they do not distinguish between rolled metal made in repetition of the last year's program and that made under an increased program; the records are based on gross output. But the planning organs in preparing balances have to abide by this elementary economic rule. It was set forth with the utmost clarity by K. Marx in "Critique of the Gotha Program." Unfortunately, it often happens in practice that sufficient raw materials are not provided to carry out a production program, either for increased production or even in relation to the level of the previous year. Supply officials of this plant will then cry about a shortage, but one could just as well consider ignorance of the multiplication tables a catastrophe for science. Obviously, we have in mind cases where reproduction of a particular is required by the national economy; if the requirement for it is reduced, then this should be provided for in the plan.

In the third place we put the requirements of the population. Here it is more difficult to distinguish where simple reproduction ends and expanded reproduction begins, but there is really no need to make a detailed distinction. Marx revealed to mankind the very important economic law that the labor of a worker not only reproduces everything needed for his (the worker's) existence but also an additional, supplementary product. To prove that man is the most important productive force is not a purpose of this article. However, we have to consider this aspect of the problem briefly at least since in the work of material-technical supply the requirements of the population for fuel, repair, and other materials, and also the requirements of enterprises serving the population for means of production are still not satisfied. In order to forestall idle criticism we emphasize that we are considering here not the Communist approach to requirements, such as was spoken of above, but about a particular minimum of requirements which does not give rise to dissatisfaction on the grounds of its magnitude.

Before the March 1965 Plenum CC CPSU there was in effect on the kolkhozes the so-called remainder method of distribution of incomes. Essentially this meant that out of its receipts a kolkhoz fulfilled its obligations to the state, paid off bank loans, set up indivisible and other funds, and then distributed what remained on the basis of labor-days worked. Hence the name "remainder method."

The party condemned and replaced this method of providing material incentives for collective farmers as incompatible with the tasks of all-around and rapid development of agriculture. The correctness of the plenum's decisions have been confirmed by life. But the problem is not an agricultural one only. From it should be drawn a conclusion of importance to both planning bodies and organizations for material-technical supply.

In our time it is well recognized that the campaign for raising labor productivity and for high product quality will be won at the working place. But the campaign, however, begins long before a worker, employee, technologist, or designer comes to his working place. The campaign for high efficiency in public production begins with the apartment in which the toiler lives; it is continued on the means of transport which he takes to get to his place of work; in the dining hall where he eats; in the store where he buys merchandise; in the movie house or stadium where he takes his rest and recreation; in the kindergarten, school, polyclinic, etc.

None of this is a discovery for anybody. Sociologists can show by figures just how much the percentage of breakage in working places varies in accordance with a factor such as the mood of the foreman * * * But we have limited ourselves to listing only narrowly material factors.

Unfortunately, some personnel of planning and supply bodies are deaf to the findings of the social sciences. They prefer to look for the causes for inadequate increase in labor productivity anywhere but in such trifles. However, it has been known for a very long time that many things have very simple explanations.

By assigning to enterprises in the service sphere plans which are reduced in assignment as against the effective demand, and also plans for which sufficient resources are not provided, we again evoke wails about shortages, of rubber belting, wrapping paper, buttons, window glass, or whatever. But are these actually shortages? It is the maintenance in the sphere of planning and allocation of the remainder method which was condemned by the party. We must call a spade a spade, since only then can they more easily be put in their proper places.

A historical approach is needed in this question as in any other. In the years of war communism, in the period of industrialization of the country there had to be sharp curtailments in current requirements in order to create the productive apparatus for the country and ensure the existence of the Soviet state. Not only did they save on the repair of housing, but there was also rationing of bread and matches. Why did the party do this and why was its policy approved and supported by the Soviet people? Because this policy was economically justified, was the only possible policy. It ensured maximum satisfaction under existing conditions of the class interests of the toilers. But the party never exalted the cult of leftist asceticism, never regarded restriction of consumption as its goal. On the contrary even during the years of greatest difficulty it asserted that the goal was the building of communism, full satisfaction of the material and spiritual needs of every person.

Under present conditions an all-around strengthening of the rear areas of production—material incentives, including the service sphere, seems to us economically justified. As a result in the course of a number of years society will receive greater returns than from direct additional investments in, let us say, machine tools. The data presented by L. I. Brezhnev at the March 1965 Plenum CC CPSU on the dynamics of agricultural production in different breakdowns for the current decade were most convincing. Obviously, they do not deny the primacy of production over consumption. But they warn us against blind dogmatism which transforms even the most correct theoretical positions into mortally dangerous norms.

In fourth place, clearly, should be placed goods stocks. Even simple reproduction, not to speak of expanded reproduction, requires for its normal accomplishment the allocation of a definite part of national resources to stocks. The lack of order in this sphere is one of the most decisive reasons for the claimed shortages.

Stocks have a dual nature. On the one hand, stocks are an elementary prerequisite for the normal operation of any enterprise or construction project. Losses due to delays resulting from interruptions in supplies are so well known that there is no need to consider them. Hence the desire to create larger stocks.

At the same time material assets lying in stocks, apart from those in routine economic turnover, are frozen. If, let us say, the necessary amount of constant stocks of cement at all stages from its production to its use amount to 8 million tons, then with an annual production of 80 million tons only 72 million tons would actually be used in construction. It is not for nothing that Marx referred to stocks as potential and not active production factors. Hence the desire so far as possible to reduce stocks. This striving is increased still further by the fact that, on paper at least, it improves the level of material balances: given the gigantic scale of goods turnover the reduction of stocks by a half-day's level would provide enormous amounts of goods for the country. Experience shows that temptation is too strong for the will power of many planners. * * * And not only planners. For example, in the setting of norms for revolving assets (i.e., moneys out of which enterprises form stocks) no provision is made for the direction of time during which these assets remain in money form, in the bank or in the account. However, everyone who has held volume II of Capital in his hand knows that the currency phase is an obligatory one: D–T . . . P . . . T^1–D^1. By excluding the currency phase in drawing up norms for revolving assets the financial workers artificially reduce the norms and then spread their hands in astonishment: why do buyers violate payment discipline?

But let us get back to stocks in means of production. The actual amount of them required is understated in several ways (time spent en route, unloading, preliminary processing, etc.) but most of all in determination of the so-called current warehouse stocks, that is, those materials which should be ready for use at any moment.

The actual amount of current warehouse stocks (in days) is determined by only one circumstance—frequency of deliveries, by the interval of time between two regular delivery dates. Bread is bought daily and therefore in the amount of a day's consumption. If a bakery shop were open only every other day, customers would double their purchases. (Note: We leave aside treatment of the fact that creation of territorial supply organs, use of computers and mathematical methods permit optimizing of times and amounts of deliveries, linking together suppliers and customers, etc., and thereby considerably reducing the total amount of stocks in the national economy.)

This simple rule, instinctively followed by every housewife, is not followed in the setting of levels (in days) of current warehouse stocks for enterprises. If deliveries are made once a month, then current warehouse stocks should, as a rule, be 15 days. Let us say, that the actual stock levels amounts to 22 days. A theoretician in supply matters would say that the enterprise had exceeded the norm by almost a half, while the practical supply man, knowing that in the course of the last week of the month the stock level is not sufficient for production to be turned out, wails about a shortage.

Whence came this notorious half system, that is, fixing of the level of current stocks usually in the amount of 50 percent of the interval between two successive regular deliveries? An enterprise requires hundreds and thousands of different items, the delivery periods and shipment sizes for which are very diverse. On a given day there is in the warehouse 30-days stock of material A, 12 days of material B, 1 day of material C, etc. The experience of many years has demonstrated that under such conditions the constant aggregate

value of warehouse stocks will not exceed half of the maximum levels, and there levels of revolving assets in the formation of current stocks in the amount of the interval between deliveries is sufficient. This amount is raised to as much as 100 percent if the enterprise has a small number of suppliers or needs only a few different materials.

But material-technical supply is concerned with actual consumption value: mazut cannot be replaced by cable or germanium. An insufficient stock of one material can lead to a shutdown in production even though the warehouse is filled to overflowing with other items. Therefore there cannot be any average figure in this matter. Naturally, in the course of the period of deliveries the size of the stock of a particular item will be reduced from the 30-day level (using our example) to zero when the next shipment arrives. But it is just because the current stock level must lack until the next shipment that it should equal (in days) half of the supply period.

Under the influence of circumstances and criticisms some other methods were worked out for fixing current stock levels. They compute the interval between the end of a year and the date of the first delivery in the following year, determine the goods in process at the end of the year, etc. All of these methods have the same serious defect: stocks are not needed as of a certain date but constantly. They are also in turnover, in movement. Isn't that why Marx called them current stocks? Fixing stock levels as of a certain date is a bookkeeping or statistical device; in economic life they are continually in demand.

Obviously, bringing stock levels up to the objectively necessary level is a national economic task of great complexity; we have not the least desire artificially to underestimate the importance of its accomplishment. Our concern is with a different matter—we are dealing with defects in planning and not with shortages.

In fifth place goes requirements connected with the modernization of capital stocks and for other purposes connected with use of the development fund set up in enterprises which have been convereted to the new management conditions. There is no need to demonstrate the economic effectiveness of modernization. The more striking fact is that in very many enterprises the development funds set up cannot be utilized for this; the moneys are not allocated for it. Instead they are spent in new construction the results of which are often less and spread out over a longer period of time.

And now we come to new construction. The reader need not be disturbed that it is in last place in our list. And he should not see in this any undervaluation of expanded reproduction or make any comparisons between this and bottlenecks, etc. The concrete truth is that at the end of the 7-year plan there were more than 200,000 projects in the course of construction. Before adding even one more to this number it must be carefully considered: are resources actually available for it? Otherwise there will be excavations dug and foundations poured but there will not be production capital and, naturally, there will be no return on capital either. Incidentally, it is unnecessary to describe the harm which is done by the overdispersal of capital investments. It is useful only to remember Marx's words to the effect that society should consider carefully in every case what part of national income it can without harm allocate to new investments.

In order to end consideration of the reasons which bring about "shortages," we should point to the not infrequent instances of

inclusion in material balances of production which deliberately will not be turned out in the plan period. There was recently a lively discussion of this in the press so there is no need to deal with it again here.

Let us sum up what we have said: The disproportions between effective demand and supplies of many means of production offered are not objectively inherent to socialism and therefore cannot serve as justification for retention of the practice of funded realization of materials and equipment. These disproportions arise either as the result of voluntary actions in planning of production and goods stocks or as actions of the same type as related to new construction. Of course, there are failures in plan fulfillment by this enterprise or that one, but such facts are not of major significance.

Does what has been said above mean that the disproportions which we are all aware of between demand for many means of production and their availability can be eliminated only by the unmasking of cases of voluntarism or retraining or replacement of individual persons? In other words, are we dealing here only with a subjective factor or are there also objective circumstances which must be taken into account in the event of conversion to wholesale trade in means of production?

In our opinion, consideration should be given, and is being given by persons working in the field, to at least two objective circumstances.

First, due to the proliferation of nomenclature of many forms of means of production the actual gap between demand and available stocks is considerably higher than it appears in summarized form. Assume that the total shortage of rolled metal amounts in a year to 1 million tons. This is only 1.5 percent of annual production, but for individual grades, shapes, etc., the gap may amount to 10 or 15 percent or more.

We said above that in planning current stock levels theoreticians in the field of material-technical supply forget about actual consumption values, proceed on the basis of average requirements and consequently improperly reduce the stock levels. But this problem can't be solved that way in life. In practice a certain period of time and no little capital investments are needed in order to eliminate bottlenecks.

The second circumstance consists in the fact that, if only the gap between requirements and resources was equal for all simultaneously required means of production, it would be easier to convert to trade in them. Let us say, that of all building materials, rods and bars, machine tools, instruments, etc., stocks are sufficient to meet 80 percent of the expressed demand. Then the gap can be eliminated easily and simply: reduce proportionately the plan for construction or for production increase. Actually, 90 percent of the bricks needed are available and 60 percent of the pipe. Having prepared everything needed to put an irrigation system into operation, a kolkhoz or sovkhoz is held up by a shortage only of pipe. It makes tremendous efforts and often is able to obtain the pipe, thereby introducing additional complications into the balancing of production and consumption. Nor can this circumstance be left out of the reckoning. It is one of the reasons for gradualism in the conversion to wholesale trade in means of production, a gradualism to which the party and government decisions refer.

Does what has just been said signify recognition of the possibility of a shortage, something which was categorically denied at the start of this article?

Not at all. Proponents of funded supply identify incomplete satisfaction of requirements, something which is inherent in socialism, with a shortage. They consider it inevitable for the foreseeable future and therefore oppose conversion to wholesale trade in means of production. We deny the correctness of such identification but, obviously, we acknowledge the presence in production of particular disproportions which have developed in the course of decades.

From the first position there follows the impossibility of conversion to nonfunded allocation of means of production; from the second—the impossibility of gradualness in such conversion.

* * * * * * *

The second theoretical argument of proponents of funded supply is that it allegedly arises entirely out of centralized planning which is the basis for development of a socialist economy. Gathering together on top of requisitions from below and dispatch of stocks and assets from the top down creates a linear pattern of movement of public product, one which can be controlled at all levels. The replacement of such funding procedures by the market would be a conversion to spontaneity and a retreat from planning.

I think we are dealing here with a serious theoretical misunderstanding. You see, under this view of the essence of planning the ideal would be a ration card system; it would show every product in natural units and the consumer would be assigned to a particular store.

V. I. Lenin defined the planning approach as consciously maintained proportionality. Any social formation in the last analysis achieves the necessary proportionality in reproduction, otherwise it could not exist. But only under socialism, which has placed the means of production under public control, can society have the opportunity consciously and in advance to provide for and maintain the necessary proportion.

By what means or mechanism is this done? To this, I think, there can be only one answer—that mechanism is the best which most effectively answers to the purpose at hand. Neither in the classics of Marxism-Leninism nor in the decision of the CPSU is there any attempt to put forward any particular forms or methods as the only ones possible and suitable for all time. The GOELRO plan was in the highest degree a scientifically grounded plan although it did not contain any assignments broken down by factories or plants. The later development of planning led to greater particularity and detail; the domestic and international situations also operated along this line. But today it is indisputable that the new stage in the development of centralized state planning unquestionably calls for not an expansion but a reduction in the range of centrally approved indicators.

Will this result in a weakening of national economic planning or in a strengthening of it? The answer is clear. Freed from a multiplicity of details, the state plan will be able to concentrate attention on the basic problems of reproduction and this will enormously increase the efficiency of operations of every enterprise.

These considerations apply in equal measure also to material-technical supply. F. Engels said that the means of distribution depends on the amount to be distributed although, of course, it is

defined by the manner of production. Isn't it clear that 100 million tons of steel can't be distributed in the same way as 15 million tons? The availability in warehouses and bases of any and all needed materials—and we are still far from this today—and the possibility of ordering materials by telephone on the day before they are to be used will signify not a weakening but a true flourishing of centralized planning, just as the development of the trade network, stores, full of fine and needed merchandise, and not the disbursing of goods on ration cards, characterizes the accomplishments of planning and of the socialist economy. Trade therefore is necessary under socialism also since without continual and flexible control by the ruble on the part of the buyer it will be impossible to reach a level of development which will permit distribution of material goods. This applies equally to means of production and consumer goods.

A further strengthening of centralized planning, a subject dealt with in the decisions of the September 1965 plenum CC CPSU, clearly will involve, in the area of interest to us, the use of detailed balances of supply and demand in natural units to reveal the actual requirements for all kinds of means of production, and not for main users alone. This will permit elimination of particular disproportions in the supply to the national economy of particular materials, instruments, and machines. The study of demand will be improved. Experience of non-funded distribution of fuels and lubricants in Voronezhskaya Oblast shows that the possibility of unlimited acquisition of these products by users did a good deal to promote study of demand and control over storage conditions for material assets. Increased also was the role of forecasting which made it possible sooner to anticipate the requirements of the national economy and to make plans long in advance to satisfy them.

It would be naive to attempt within the limits of a single article to solve or even to post all the problems of the conversion to wholesale trade in means of production. The methodology of study of demand, forms for satisfaction of it, handling of resources, financing, credits, and accounts—all these and many others will be developed as experience is gained and solutions undoubtedly will vary with different goods, consumers, and regions of the country.

But it is necessary to raise a few general questions. The conversion to wholesale trade in means of production should be considered not as a forced necessity caused by this or that defect in funding operations, but as the bringing of management practice into conformity with the requirements of the economic laws of socialism. This will do much to change the approach to this task.

In recent years Soviet economic science has penetrated far into the sphere of understanding of the economic laws of socialism. There is a new understanding of the role of economic laws and particularly of the law of value. The result has been a fundamental change in the relationship between economic and administrative methods of management, planning, and incentives.

To a certain extent administrative methods predominate in the system of funded allocation. However, the flexible, mobile, rapidly introduced technical innovations in the national economy of the U.S.S.R. cannot wait on the sluggish—with requisitions for 6 months ahead—system of funding. There must be a highly developed wholesale trade in means of production. This is an objective requirement and,

consequently, it will be satisfied. But certain prerequisites are necessary.

The first and decisive prerequisite is the complete rooting out of all displays of voluntarism in planning. So long as the plan is not balanced in any of its sections, gaps will appear. Today—for better or worse—these are controlled by the methods of funded allocation. When such methods are no longer available, additional difficulties may arise.

A second prerequisite is the inclusion of all forms of resources in the plans of enterprises. Trade by its nature is mobile. It should respond quickly to the demand caused by the discovery of a new mineral deposit, a new invention, etc. For this reason wholesale organs must be able to place additional, above plan, orders in the course of a year, and producers must have resources available to fill orders. Losses due to slow introduction of scientific and technical innovations even today exceeds the advantage to be gained from 100 percent loading of production capacities (not to mention various kinds of illegal payments ("namazki")) in the period of plan preparation. Not the maximum but the optimum—such is the ABC of economic planning.

The third prerequisite is putting of stocks in order, both with respect to volume and to location.

In the course of a number of years in many works on economics (including some by the present writer) it has been cited as a merit of our national economy that the preponderant part of revolving assets, more than two-thirds, were in the sphere of production and only one-third in the sphere of circulation. We considered this an indication of more effective utilization of resources.

It should be recognized that this is a very erroneous position. Along with an actually more rapid circulation than under capitalism of resources the structure of circulating resources just mentioned reflects the fact that the lion's share of materials have been concentrated in the warehouses and bases of enterprises. Hence the immobilizing of many resources, reduced maneuverability of them, increased transporting and storage costs, etc.

The setting up of territorial supply organs and in the future the expansion of the system of wholesale trade will free enterprises from playing the role of the stingy knight. Resources will be concentrated to a considerable extent in the sphere of ciruclation. This will not be viewed as a "worsening" of the structure of revolving assets; rather it will indicate conversion to a higher degree of management sophistication.

In the management reform being carried out by the party the gradual conversion from funded allocation of means of production to planned distribution of them by means of wholesale trade is one of the most important and most difficult links. Here is required not only organizational discipline, practical businesslike approach, and broad horizons, but also, and primarily—full theoretical clarity and conviction. Freedom, said Engels, is the recognition of necessity. When every one of the many tens of thousands of persons working in the system of material-technical supply recognizes the significance of the new stage in the development of the sphere of circulation, the practical difficulties will be overcome more rapidly and more easily.

4. THE EQUALIZATION OF THE LEVELS OF THE ECONOMIC DEVELOPMENT OF THE SOCIALIST COUNTRIES*

The Communist and workers' parties of the Socialist countries have elaborated measures aimed at the maximum increasing of the effectiveness of the national economy, the expansion and consolidation of the reciprocal economic collaboration. The deepening of that collaboration is possible only on the basis of the cognition and utilization of the objective laws governing the development of the worldwide Socialist economy. These laws include the gradual overcoming of the differences which developed historically in the levels of the economic and cultural development of the socialist countries, the leveling out of the general line of that development in the course of the socialist and Communist construction.

At that time of the formation of the worldwide Socialist system of economy the level of the economic development of the countries making up that system differed substantially; this was the inevitable result of the unevenness in the development of the individual countries under capitalism. The only countries industrially developed were the U.S.S.R., Czechoslovakia, and East Germany, although even those countries had serious economic problems involved with the necessity of eliminating the consequences of the Second World War. The national economy of such countries as Bulgaria, Rumania, and China at the time of their taking the path of Socialist construction was at a low level of development. Before the Second World War their economy had a sharply expressed specialization on agrarian and raw-material items, and they were completely dependent upon the highly developed imperialist countries. The dominance of the socialist production relations in each country of the commonwealth, the expansion and deepening of the collaboration among the socialist countries fundamentally changed the course of their historical development. The rapid growth of the economy, the rise in the material standard of living, and the cultural level of the population in all the socialist countries, the gradual leveling out of the general line of their economic development became an absolutely necessary condition for the successful socialist and Communist construction. "The socialist system," the CPSU program states, "creates the conditions for the elimination of the gap, inherited from capitalism, in the level of the economic and cultural development among the countries, for the more rapid development of the countries which had been economically backward under capitalism, and the steady rise of their economy and culture, and for the equalizing of the general level of development of the countries of the Socialist commonwealth."

The overcoming of the differences in the levels of economic and cultural development of the Socialist countries and the gradual equalizing of those levels constitute an objective natural law. It evolves from the very nature of socialism. The action of that law is influenced by the necessity of the creation of a material-technical base for the new society. The construction of a socialist society in any country is linked with the rapid growth of all branches of the national economy and, in the final analysis, with the achievement of a high level of economic development.

*By O. Rybakov in *Voprosy Ekonomiki* (Problems of Economics), Moscow, No. 1, 1967, pp. 106–116.

The equalizing of the levels of the economy of the countries has as its objective aim the elimination of the consequences of their uneven development in the past. It is necessary to keep in mind the fact that in the future it is inevitable to have a transition to the Socialist path by newer and newer countries. Therefore the scope of the influence of the law of equalization will expand, and it itself will acquire new features.

The process of the gradual equalizing of the levels of the economic development of the Socialist countries is in close dialectical connection with the economic laws of socialism, and primarily with the law of the planned, proportional development, as well as with the international Socialist division of labor. When considering the process of the equalization outside of that connection, it is difficult to understand its socioeconomic essence.

The law of planned, proportional development operates primarily within the framework of the national economy of each Socialist country. In proportion to the increase in the economic collaboration of the Socialist countries and the establishment of the worldwide Socialist economy, the effect of that law begins to go beyond the national framework. Its requirements lie in the fact that the national-economic proportions of each Socialist countries are, to a definite degree, coordinated with the proportions of expanded reproduction on the scale of the Socialist system as a whole. And that means that the countries, by developing a national-economic complex that is optimal for themselves individually, must, as it were, supplement one another in the system of the international Socialist division of labor. The interconnection among the economies of the individual countries, which evolves from the division of labor, must be solid and stable, since the violation of that interconnection by even one country will inevitably lead to the violation of the economic rhythm in the other Socialist countries. The effect of the law of the planned, proportional development contributes objectively to the equalization of the levels of the economic development of the Socialist countries as individual component parts of the economic organism—the worldwide Socialist system of economy.

The overcoming of the differences in the levels of economic development, as indicated in the document "Basic Principles of the International Socialist Division of Labor" which was coordinated among and approved by the CEMA member countries, creates the objective basis for the more complete utilization of the advantages of the international Socialist division of labor, while being simultaneously one of the factors for accelerating the rates of the economic development of the Socialist system as a whole.

The process of the equalization of the levels of economic development is linked with the action of other objective economic laws of socialism, for example, the law of value. The foreign-trade exchange among the countries is carried out on the basis of worldwide prices, which to one degree or another take into consideration the average worldwide socially necessary expenditures of labor, that is, the international value of the commodities. The levels of the national value of commodities, as a rule, do not coincide with the level of their international value. In countries which are economically more backward, the level of the national expenditures is higher than the international expenditures, and therefore in the process of the reciprocal exchange of commodities they can incur certain losses. Other more highly developed countries obtain, during this exchange, certain advantages.

This circumstance exerts a definite stimulating influence upon the countries with the less-developed economy. They strive to pull themselves up economically to the level of the advanced socialist countries. The latter, in their turn, help them in this process in every way. The gradual equalizing of the levels of the economic development of the socialist countries contributes, thus, to the elimination of the substantial differences in the levels of the national value of the commodities in those countries, and this has a desirable influence upon the development of their foreign-trade ties.

The equalization of the levels of the economic development of the Socialist countries is a complex historical process. It does not mean the elimination of all the differences evolving from the peculiarities of the development of the individual countries (natural resources, climatic conditions, national peculiarities in the structure of consumption and the way of life of the population, etc.). According to its socioeconomic nature the process of equalization represents the elimination of the substantial differences in the levels of the development of the productive forces and the production relations, in the material and cultural living conditions of the workers. And this contributes to the development of the economic collaboration among the countries of the Socialist commonwealth, and primarily the development of the international Socialist division of labor, and accelerates the social and economic development of the Socialist countries. This creates the material and spiritual prerequisites for the more or less simultaneous transition, within the confines of a single historical era, of the Socialist countries to communism.

The process of the equalization of the levels of the economic development is based primarily on higher rates of increase in the productive forces in the economically less-developed countries. However, this by no means indicates that the rates of increase in production in the more highly developed countries should be restrained by any artificial means. The outstripping rates of increase in production in the countries which in the past were economically backward are achieved under conditions of the optimally high rates of development of the economy of all the Socialist countries. This is the basis of the rapid development of the productive forces of the entire worldwide Socialist system of economy and a most important condition for the acceleration of the victory of socialism in the peaceful economic competition with capitalism.

In the overcoming of the economic backwardness of the less highly developed countries, all the Socialist countries have a vital interest. But the equalization of the levels of development as an objective economic process cannot be accelerated by means of the artificial "pushing" or use of artificial force. The successful course of this process depends upon the scientifically substantiated economy policy of the Communist and workers' fraternal parties, aimed at the consistent and planned utilization of all the factors of the economic growth of the countries which previously were economically backward. Therefore the study of those factors, the cognition of the mechanism of their action and influence upon the course of equalization are a most important task of economic science.

The accelerated development of all the countries of the worldwide Socialist system is influenced not only by a number of domestic

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factors evolving from the very nature of the Socialist method of production, but also foreign factors determined by the economic collaboration of the countries of the Socialist commonwealth. These factors operate in a manner which dialectically is complicatedly intertwined, and therefore it is difficult to imagine the influence of each factor upon the processes of the economic growth in "pure" form, especially since the nature of their action depends, to a large extent, upon the national peculiarities of the development of the economy of the particular country. Nevertheless let us attempt to isolate a number of the principal factors and to establish their interdependence.

Each country of the Socialist commonwealth is a sovereign state completely regulating the processes of expanded reproduction in its national economy, as well as the processes occurring within the framework of that country's foreign-economic ties. Being complete and undivided owners of the national means of production, as well as the results of production, the Socialist countries themselves determine the basic tasks of their economic development. Therefore a most important source of the rapid economic growth of any country is primarily the most effective utilization of all its domestic resources the domestic factors of development. As mentioned in the "Basic Principles of the International Socialist Division of Labor," the material prerequisites for the construction of communism are created on the basis of the creative labor of the people in each country, the gradual increase of its contribution to the common cause of the strengthening of the Socialist system.

When speaking about the domestic factors of the economic development of the Socialist countries, it is necessary to keep in mind the fact that the countries which were formerly economically backward have larger reserves for the increase of the effectiveness of the economy and the increase in the productivity of social labor than in the highly developed countries. In the works of individual Soviet economists these possibilities are defined as the "starting-up effect," that is, the utilization primarily of extensive factors in the growth of the economy. Actually, any country with a high level of development, when undertaking the industrialization of its economy, can utilize the advanced technical experience of the highly developed countries to a considerably greater extent than the developed countries, carry out the transfer of manpower from agricultural into industrial production, create the more progressive structure of the economy. However, only in the socialist countries is it possible to utilize the "starting-up effect" to complete measure, since only under conditions of Socialist production relations are there a base for the domestic accumulations (extensive development requires large capital investments) and the opportunity to make complete utilization of the technical achievements of the advanced countries.

At the present time the countries of the Socialist system are at that level of development when the tasks which are moved into the foreground are those of the maximum increase in the effectiveness of production, the utilization primarily of intensive factors of economic growth. And in this area, as well, the countries which previously were backward in their development have large reserves.

A decisive factor in raising the economy of the less developed countries is Socialist industrialization, aimed primarily at the preferential

development of the most progressive branches of industry: machine building, chemistry, electric power engineering, et cetera. This creates the possibility of the more complete and more efficient utilization of the country's natural wealth and labor resources. It is completely natural that the newly created progressive branches of industry are based on the very latest achievements of science and technology, and they utilize the advanced experience accumulated in the industrially developed countries.

The less developed countries have inexhaustible opportunities in the area of increasing agricultural production and in increasing its effectiveness. The transition of the agriculture to the Socialist path of development, the expansion of mechanization and chemicalization, and, on that basis, the increase in the harvest yield of agricultural crops and the productivity of animal husbandry, make it possible to achieve a sharp increase in agricultural production.

The more effective utilization of work time is also a serious factor in accelerating the increase in the economic potential of the less-developed countries. They can guarantee complete employment, that is, can utilize the manpower reserves, carry out, to a considerable extent, the shifting of that manpower to more progressive branches of industry, and increase the level of proficiency of the workers and improve the organization of labor itself.

On the basis of Socialist industrialization, the creation of progressive branches of production, the utilization of the technical achievements, the economically less-developed countries are increasing the productivity of social labor at rapid rates. They can construct technically up-to-date enterprises with the optimal capacities, as well as utilize all the advantages of the mechanization and automation of production. They also have at their disposal large reserves in the area of the most effective utilization of production assets and capital investments. The rapid economic development of the countries which formerly were economically backward is contributed to by the increase in the proportion of accumulations in their national income, which means the mobilization of all the domestic sources of accumulation. The optimalization of the share of the accumulation fund when increasing the effectiveness of its utilization is a most important direction in increasing the effectiveness of production.

With the increase in the productive forces of the less-developed countries, with the creation of the basis of modern economy in those countries, extensive factors as additional reserves for their national-economic growth are, to a greater and greater extent, exhausting themselves. We are faced with a problem in economic development which is common for all the socialist countries—the maximum increase in the effectiveness of social production. In recent time certain shortcomings in this area were revealed in a more or less general form in all the CEMA member countries. That is why in most of the Socialist countries an extremely large amount of attention is being devoted to the carrying out of economic reforms in the sphere of the planning and administration of production.

The successful carrying out of the process of bringing the levels of the economic development of the Socialist countries closer together and of gradually leveling them out is linked with the solution of problems arising in connection with that process. Among these problems one might name the insufficient raw-material and fuel-and-power

base in many of the CEMA member countries; the necessity of investing large amounts of money in the development of the extractive branches of industry, which require large expenditures of funds; the backwardness of agricultural production; et cetera. In most of the Socialist states these problems can be successfully resolved on the basis of the development of the foreign-economy ties and reciprocal economic collaboration. This collaboration contributes also to the rapid increase in the productive forces of the Socialist countries which previously were backward, and to the more effective utilization of their domestic resources. It should be emphasized that only provided there is a combination of the domestic and foreign factors in the development of the economy of those countries is it possible to have the complete utilization of the advantages of the Socialist method of production.

A most important foreign factor in the economic development of the countries of the Socialist commonwealth is the international Socialist division of labor. Orienting each country of the Socialist system upon the national-economic complex which is optimal for that country itself, the international Socialist division of labor thus contributes to the rapid rise of the economy of the countries, and primarily that of the less developed ones.

The most progressive forms of the international Socialist division of labor are the intergovernmental specialization and cooperation of production. International specialization presupposes the creation, in the Socialist countries, of mass large-series production, which is optimal in its extent and which is based upon the latest achievements of science and technology. Of course, this type of specialization is advantageous to all countries—both to the developed countries and those which were economically backward in the past. However, this contributes to the accelerated growth of the economy of the less developed countries, to the process of pulling them up to level of the advanced countries, since only in this instance will they be able to become completely equal partners alongside the developed countries in the most progressive forms of the international Socialist division of labor. Consequently, the equalizing of the levels of the economy is not only the consequence of the development of the processes of the division of labor, but also, in and of itself, creates the conditions for its further improvement.

The international Socialist division of labor contributes to the solution of many problems pertaining to the economic development of the countries of the worldwide Socialist system. It plays an exceptionally important role in the solution of problems pertaining to raw material and to fuel and power. The joint exploitation of natural resources, the creation of the Mir (Peace) power system, and the Druzhba (Friendship) petroleum pipeline, the mutual assistance in the development of the most effective sources of power and raw material—those constitute a far from complete list of all the forms of collaboration in this area.

A serious factor for accelerating the growth of the economy of the less developed countries is scientific-technical collaboration. The mutual assistance of the Socialist countries is also carried out through the mutually advantageous foreign-trade exchange among them.

The most complete realization of the advantages of the economic collaboration is possible as a result of the joint planning activity of

the Socialist countries. Its form is the coordination of the national-economic plans. One of the most important tasks of coordination is the gradual overcoming of the historically formed differences in the levels of the economic development of the individual countries by means of the utilization of all the domestic possibilities of each country, as well as the advantages of the worldwide Socialist system.

It would be incorrect, however, to assume that the development of economic collaboration among the Socialist countries is proceeding smoothly. The development and reinforcement of the worldwide Socialist economy is a process which is multifaceted and complex; in the course of its development it is necessary to overcome certain difficulties and contradictions. Their study, a Marxist, dialectical approach to their elimination constitute the pledge of the successful development of the Socialist countries.

The indexes characterizing the processes of the equalization of the levels of the development of the Socialist countries must encompass both aspects of the Socialist method of production: productive forces and production relations. Socialist production relations are constantly improved in the course of the Socialist and Communist construction in those countries. In order to study them it is possible to utilize such indexes as the proportion of the Socialist sector in the creation of the national income, in the production of industrial and agricultural output, and in the total number of persons employed in the national economy.

At the same time it is necessary to keep in mind the fact that in the CEMA member countries the Socialist sector has won a complete and undivided victory in all spheres of the national economy. Therefore the basic problem in the equalization of levels is the overcoming of the existing differences in the area of the development of the productive forces of the individual countries.

When one speaks of the system of indexes for the development of the productive forces of the Socialist countries, one usually has in mind the traditional indexes characterizing the development of the economy of any country: the production of the most important types of output as a whole and per capita of population, progressive changes in the structure of the national economy, the rise in the population's standard of living, and so forth. However, when utilizing these indexes it is necessary to take into consideration, first of all, the national peculiarities in the structure of the national economy of the individual countries, in the conditions of development of their economy.

The specific difficulties arising during the international comparison of many economic indexes are influenced specifically by those peculiarities. First of all this pertains to the indexes of production of the most important commodities per capita of population. Inasmuch as each country of the Socialist commonwealth specializes in the production of a particular type of output, the indexes of production, in the various countries, of such commodities as coal, petroleum, steel and pig iron, definite types of machines and machine tools, and so forth, cannot reflect the differences in the levels of the economic development of those countries. For example, if one compares such a very important index as the production of steel, it turns out that in 1965 the amount produced per capita in the U.S.S.R. was 395 kilograms, in Poland 289 kilograms, in Czechoslovakia 607 kilograms, and in East Germany 256 kilograms. Still sharper differences are observed in the volume of

petroleum production in the Socialist countries, with the smallest volume of petroleum production being in such countries as East Germany and Czechoslovakia.

Of course, it would be untrue, on the basis of these comparisons, to make any conclusions concerning the levels of the economic development of the countries. In this instance we are concerned with the differences influenced by definite natural conditions (the existence of mineral resources, and so forth). Thus, keeping in mind that it is more efficient to ship not ore, but metals, it is obviously desirable in the future to concentrate steel production in the countries having the minerals resources for its production (iron ore, coal). And this will inevitably lead to a situation in which the index of steel production per capita of population in the Socialist countries will be still less suitable for comparing the achieved levels of economic development. An exception probably is the index of electric-power production, since the latter is the motivating force for all the machine tools, all the industrial assemblies.

Electric power production in 1965 (per capita of population)

[In kilowatt-hours]

Bulgaria	Hungary	East Germany	Poland	Rumania	U.S.S.R.	Czechoslovakia	Yugoslavia
1,249	1,101	3,149	1,391	905	2,198	2,415	794

Data which is more telling when comparing the levels of economic development is that dealing with the production consumption of the most important types of raw material products, as expressed in kind: metal, coal, electric power, etc. The volume of consumption of these products is not in direct dependence upon their production in the particular country, since they can be imported. It is more important, obviously, not to consider how much fuel or steel was produced in the particular country, but how much electric power or how many articles made of steel that country produced. But even these indexes are not completely free of the influence of the structural differences in the economy of the socialist countries. Suffice it to state that in the countries specializing in the branches of production requiring larger expenditures of materials, the consumption, for example, of metal will be considerably higher than in the countries orienting themselves on branches requiring large expenditures of labor (electronics industry, instrument building).

What was stated above allows us to conclude that a system of in-kind indexes characterizing the production or the production consumption of the most important commodities is not very suitable for the international comparison of the levels of the economic development of the socialist countries. In order to solve that task it is necessary, obviously, to compare and to analyze the value, synthetic indexes reflecting the more general economic processes and phenomena. At the same time it is necessary to consider the fact that under conditions of definite differences in the specific nature of the economic development of the socialist countries, even the value indexes have dissimilar meaningfulness from the point of view of characterizing the levels of development and primarily the determining of the

quantitative importance of the differences in them. In this connection let us examine the most important of the value indexes.

A decisive factor for raising the economy of the less developed countries is socialist industrialization. Therefore the rise of the overall volume of industrial production per capita of population, the increase iu the national economy of the percentage represented by machine building, and progressive changes in the structure of industry are viewed usually as the basic indexes of the economic development of any country.

The level of industrial production is highest in the U.S.S.R., Czechoslovakia, and East Germany. At the same time, the economically less developed countries are, as a rule, characterized by higher rates of growth of industrial production. Thus, in 1965 the industrial output of the socialist countries surpassed the prewar level by 9.7 times, including: in Bulgaria, 21.6 times; in Hungary, 6.1 times; East Germany, 4.2 times; Mongolian People's Republic, 11.8 times; Poland, 11.1 times; Rumania, 9.6 times; U.S.S.R., 7.9 times; and Czechoslovakia, 5.1 times.

Average yearly rates of increase in industrial output of the CEMA countries during 1961–65

[In percentages]

	Bulgaria	Hungary	East Germany	Outer Mongolia	Poland	Rumania	U.S.S.R.	Czechoslovakia
Total industrial production	11.3	7.7	5.9	10.2	8.8	13.8	8.5	5.2
Including:								
Production of electric power	15.0	8.8	6.2	18.4	10.7	20.6	12.0	7.1
Machine building and metal working	18.4	9.8	8.0	7.6	14.4	16.8	12.2	6.6

The figures given in the table indicate that the rates of growth of industrial production in Bulgaria, Mongolia, and Rumania are much higher than in Czechoslovakia and East Germany. In the countries which formerly were economically backward there is a considerably much higher rate of increase in the production of electric power, the output of machine building and metalworking, which to the decisive extent determine the industrial development of any country. Thus, whereas the rates of growth of the entire output of industry in Bulgaria are higher than in Czechoslovakia more than twice, the rates of growth of output of machine building and metalworking are three times higher.

The higher rates of growth of industrial production in the previously economically backward countries are a decisive factor determining the process of the equalizing of the levels of the economic development of the socialist countries. This is graphically attested to by the changes in the ratios of the levels of industrial production in a number of socialist countries which occurred between 1950 and 1965 (computed in terms of per capita population; U.S.S.R. level equals 1):

	Bulgaria	Hungary	East Germany	Outer Mongolia	Poland	Rumania	U.S.S.R.	Czechoslovakia
1950	0.4	0.8	----------	----------	0.7	0.3	1.0	1.5
1965	.7	.8	1.5	0.25	.8	.5	1.0	1.2

When comparing the indexes of industrial production it is necessary at the same time to take into consideration the differences in the structure of the national economy of the socialist countries. The natural and climatic conditions and the other conditions of production determine that optimal complex of branches of the national economy which makes it possible to achieve the greatest effectiveness of socialist production. It is completely natural that both the extent of the per capita production and the percentage of industry in the national economy, for example, of Czechoslovakia will be higher than in Bulgaria, where the conditions for the development of agriculture are more favorable. The achievement by Bulgaria of approximately equal per capita volumes of industrial production, as compared with Czechoslovakia, would contradict the entire process of equalization of the levels of their economic development, since Bulgaria would thus either have to reject the development of agriculture, or strive for a much higher level of national income per capita of population (at the expense of a high volume of agricultural production). In this instance it is more justified to speak about the definite bringing closer together of the extent of industrial production per capita of population in those countries, which would correspond to the course aimed at the complete industrialization of the national economy of Bulgaria. The indexes of the volume of industrial production per capita of population, and the percentage of industry in the national economy of the countries characterize, consequently, those conditions which determine the pulling up of the level of the economy of the less developed countries to the economic level of the advanced ones.

Indexes of extremely limited importance for comparing the levels of economic development of the socialist countries are, for similar reasons, those pertaining to the volume of production of other branches (agriculture, construction, transportation), inasmuch as they too are directly dependent upon the specific nature of the structure of the national economy of the particular country. These indexes characterize the place which the countries occupy in the system of the international socialist division of labor. Especially graphic in this regard is the information pertaining to the levels of development of agricultural production in the individual socialist countries.

Ratio of physical volumes of agricultural output in 1965 per capita of population

[U.S.S.R. = 100]

Bulgaria	Hungary	East Germany	Poland	Rumania	U.S.S.R.	Czechoslovakia
115	125	119	140	86	100	93

From the table it can be seen that the level of agricultural production in such economically developed countries as East Germany and Czechoslovakia are lower than in Bulgaria, Hungary, and Poland.

It is generally felt that countries with a high percentage of agricultural production are, as a rule, at a lower level of economic development. However, this is far from so. Suffice it to cite as an example countries with such a highly developed agriculture as Holland and Denmark. According to volume of export of machinery per capita of population they are ahead of even France and the United States.

Very important indexes of the development of the national economy of any country are capital investments, the volume and structure of fixed production assets. Therefore it is not by chance that they are used by many economists to characterize the levels of the economic development of the Socialist countries. When considering the importance of those indexes it is necessary to keep in mind that the absolute volumes of capital investments, in and of themselves, do not attest to future production capabilities, since they do not contain an evaluation of the effectiveness of those investments. And that effectiveness to a great extent is linked with the peculiarities of the national economy of the countries.

As is known, in the various branches of production there exists a varying effectiveness of capital investments. In branches of the processing industry the effectiveness of capital investments is much higher than in the extractive branches. According to certain computations, in order to obtain one foreign-currency ruble from the export of iron ore, raw material for the production of mineral fertilizers, coal, or electric power it is necessary to invest in the national economy of the U.S.S.R. 5–8 times more money than that required to obtain one foreign-currency ruble from the export of machinery. The different branch structure of capital investments in the Socialist countries also predetermines the differences in their economic effectiveness. That effectiveness is higher in the countries specializing basically in processing branches, and lower in countries with a higher percentage of the extractive branches of industry. In addition, the volume of capital investments at various periods of time depends upon the specific conditions of the development of the economy of the individual countries.

If one analyzes the changes which occurred in the ratios in the volumes of capital investments in the Socialist countries during the period from 1950 through 1965, it is possible to detect the most diverse tendencies. For example, in Bulgaria in 1950 the volume of capital investments per capita of population constituted 0.4 the volume of capital investments in the U.S.S.R., and in 1965, 0.7; the respective figures for East Germany were 0.5 and 0.8, and for Rumania, 0.3 and 0.5. In certain other countries the ratios in the volume of capital investments changed in the reverse direction. In 1950 the volume of investments per capita of population in Czechoslovakia was equal to 1.1 the volume of capital investments in the U.S.S.R., and in 1965, only 1.0. The same tendency is observed in the ratios of the indexes of the U.S.S.R. and Poland (1950, 0.7; 1965, 0.5) (see note). This situation can apparently be explained by the certain degree of specificity in the solution of the concrete tasks of the economic policy in those countries.

NOTE.—Computed on the basis of data published in the book *Sopostavleniye Urovney Ekonomicheskogo Razvitiya Sotsialisticheskikh Stran* (Comparison of the Levels of the Economic Development of the Socialist Countries), "Ekonomika" (Economics) Publishing House, 1965, page 268.

The differences in the structure of the national economy of the Socialist countries require a definite amount of specificity also when comparing the indexes of the fixed production assets. It is not always completely suitable, when comparing the levels of the economic development of the Socialist countries, to utilize the indexes of the

national-economic structure itself: the ratios of subdivisions I and II in the social production, groups A and B in industry, the ratios of industry and agriculture, etc. These structural indexes to a considerable degree depend upon those specific tasks which are being solved by the countries on the paths of Socialist and Communist construction.

What indexes, then, can be utilized with a sufficient degree of generality and reliability to reflect the differences in the levels of development of the economy of the Socialist countries, and consequently to characterize the process of their equalization? The answer can be found, obviously, in the question itself. When comparing the levels of the economic development of various countries it is necessary first of all to utilize indexes which would be least dependent (on other indexes) and which would be determined by the peculiarities of the economic development of those countries. Such indexes could be considered to be the volume of national income, the level of popular consumption, and the level of productivity of social labor.

The principal merit of the index of the volume of national income, from the point of view of its utilization for a comparison of the levels of economic development of the Socialist countries, is the fact that it characterizes those levels irrespective of the differences in the branch structure of the national economy. Actually, independently of the economic specialization of the country, independently of its production specialization the final result of the activity of society in the field of material production is determined by the sum of the value newly created during the year and embodied in consumer goods and producer goods, that is, the national income. This situation is graphically illustrated by ratios shown on the next page, indicating the volumes of national income, industrial output, and capital investments in several of the Socialist countries in 1965 (converted to per capita of population).

The data indicates that the differences in the levels of the national income by countries are less considerable than those in the levels of industrial production and of capital investments. The latter two indexes are more subject to the influence of differences in the economic structure of those countries.

[U.S.S.R. = 100]

	Bulgaria	Hungary	East Germany	Poland	Rumania	U.S.S.R.	Czechoslovakia
National income	0.8	0.8	1.3	0.8	0.7	1.0	1.1
Industrial output	70.0	75.0	150.0	75.0	50.0	100.0	120.0
Capital investments	65.0	.....	80.0	45.0	55.0	100.0	100.0

The level of national income in terms of per capita population characterizes the degree of development of production in the Socialist countries. However, from the point of view of the level of the economic development of each Socialist country it is important to know how the income produced by society is utilized. If, within the country, large amounts of money are invested in production accumulation, and the rates of increase of the national income are low, then, obviously, the effectiveness of production there is insufficiently high. The increasing of that effectiveness will make it possible, without lowering the rates

of increase in the national income, to direct more and more money to satisfying the material and cultural needs of the workers. Therefore indexes which are of very great importance for analyzing the levels of development of the Socialist countries are those characterizing the part of the national income which is utilized for consumption by the population.

An international comparison of the indexes of popular consumption in the Socialist countries is also free of any influence on the part of differences in the branch structure of production. Irrespective of the branches of production in which the particular country is specializing or is going to specialize, irrespective of the levels of production in the particular country (existence of natural resources, etc.), the determining task of the historic development of the Socialist countries is to assure the world's highest standard of living for the workers. Consequently, in the system of indexes characterizing the process of equalization of the levels of the economic development of countries, an important place is occupied by the indexes of the overall volume of popular consumption of material blessings, that is, the consumption fund.

The utilization of the indexes of the volume of national income and popular consumption characterizes the levels of the economic development of the individual Socialist countries having a "liabilities" side (passivnaya storona), if one might put it that way; in other words, it attests to what society has at its disposal for the satisfying of its needs. It is no less important also to analyze the method by which society produces its annual national income. It is known that the volume of the obtained national income depends basically upon two factors: the amount of labor expended in material production, and the productivity of that labor. Within the framework of society the latter acts as the productivity of social labor.

When determining the levels of development of countries it is far from immaterial to consider how the increase in social income is being achieved: through a simple increase in the mass of labor (the number of persons employed in the national economy) or through labor productivity. Both these factors, of course, are of great importance. However, the increase of the mass of labor plays a limited role and has natural limits. The most essential feature characterizing the level of the economic development of any country is the level of productivity of social labor which it has achieved. That level, as it were, synthesizes all the critical factors in the development of the countries. This index reflects, primarily, the direct increase in labor productivity in the individual branches of the economy of the Socialist countries. Therefore, by utilizing it, it is possible to ascertain the degree to which the national economy is equipped with advanced technology, to ascertain the level of mechanization and automation of production, the efficiency of the displacement of productive forces, the scope of production, workers' qualifications, the organization of the workers' labor, and many other factors. The increase in labor productivity also depends upon the effectiveness of the utilization of capital investments.

Increase in the productivity of social labor occurs not only as a result of the productivity of labor in the individual branches. A very important factor for its increase is represented by the progressive structural shifts in the national economy of the Socialist countries.

It is known that labor productivity in the processing branches of industry is higher than in the extractive branches. The utilization of the law of the economy of worktime presupposes the creation, in each country, of that national-economic structure which assures the achievement of the maximum degree of processing of raw-material products. And that means that, with an increase in the share of industry, including machine building, there will also be an increase in the overall productivity of social labor. Practically speaking, this results in the transferring of a certain number of workers' hands into branches with higher labor productivity.

When utilizing the index of productivity of social labor to analyze the process of equalization of the levels of the economic development of the Socialist countries it is necessary to remember that in countries with a considerable proportion of agriculture, that labor productivity will always be somewhat lower. However, this must by no means indicate that the orientation of the Socialist countries upon the achievement of approximately identical levels of productivity of social labor is not justified. For this point of view might give rise, in individual countries, to the attempt to refuse the expansion of agricultural production, thus resulting in the violation of the principle of the production direction which is most efficient for them. The Socialist countries must orient themselves upon the complete raising of labor productivity in agriculture by means of mechanizing it, by means of the gradual bringing of the organization of agricultural production closer to the level of industrial production. In addition, in countries with a high percentage of agriculture, as a rule, the conditions for its development are more favorable. This makes it possible for them to assure a higher level of labor productivity than in the countries with less favorable natural conditions. In addition, as is known, all the countries in the worldwide Socialist system must do everything to develop agricultural production so as to provide themselves with the largest possible amounts of foodstuffs and industrial raw material. Consequently, the countries where the percentage of industry in the national economy is lower and where, consequently, the productivity of social labor is also lower, can reduce the differences in the level of the productivity of social labor by achieving higher labor productivity in agriculture. By no means is it mandatory for a country with a large percentage of agriculture to have a level of productivity of social labor to be much lower than in countries where agriculture does not play such an important role. One example might be the United States of America. In addition, the very process of equalization of the levels of the economic development of the Socialist countries must be understood not as the achievement of absolutely identical indexes, but as the elimination of the substantial differences among them.

Thus, for the quantitative determination and comparison of the levels of the economic development of the socialist countries, and, consequently, for the analysis of the process of the equalization of those levels, it is desirable to proceed from three basic indexes: the level of the productivity of social labor, national income, and the popular consumption fund. The attempt, when solving these tasks, to draw in a broader system of indexes can only complicate the understanding of the essence of the process of the equalization of the levels of the economic development of the socialist countries.

It is self evident that, when analyzing this process, it is necessary to consider all the factors influencing it. The complete study of the economy of countries would be unthinkable without such indexes as the overall volume of industrial and agricultural production, capital investments, the volume and structure of fixed assets, labor resources, and many others. As for the indexes of the productivity of social labor, national income, and the popular consumption fund, it is justified to speak about their relative leveling off in the course of the historical development of the socialist countries; but the remaining indexes will either come relatively closer together or, conversely, as there is an increasing deepening of the international socialist division of labor, the gap between them will increase still further.

The long range plans for the development of the national economy in 1966–70 stipulate a considerable increase in the production of the CEMA member countries, and, on that basis, the further equalization of the levels of their development. The rates of increase in industrial production and national income which have been planned in the CEMA member countries for the forthcoming planning period make it possible to judge their possible ratios in 1970. If one assumes the average per capita level of industrial production in 1970 in the U.S.S.R. to be 100, then in Bulgaria it was 65 in 1960 but, on the basis of tentative data, will be 89 in 1970. The respective figures for Rumania are 37 and 56; Czechoslovakia, 140 and 112. The countries of socialism will also come considerably closer with regard to the average per capita volume of national income, which, in comparison with the average per capita volume of the national income in the U.S.S.R., taken as 1, will be the following in 1970: in Bulgaria, 0.8–0.9; Hungary, 0.7–0.8; in Poland, 0.7–0.8; in East Germany, 1.2–1.3; and in Czechoslovakia, approximately 1.

The gradual overcoming of the differences in the levels of the economic development of the socialist countries, the prospects for their more or less simultaneous transition to communism are consolidating still more the peoples of the socialist countries in their joint struggle for the construction of a new society, and raising to a new level their creative initiative in the cause of Communist construction. The historic experience of the development of the countries of the socialist commonwealth is exerting a tremendous amount of influence upon all the other countries, and strengthening the positions of socialism in the peaceful economic competition with capitalism.

5. TREND IN ECONOMIC DEVELOPMENT AND COLLABORATION OF THE EUROPEAN SOCIALIST COUNTRIES*

Materials published in this section are recommended as an aid to lectures on the subjects: "Economic regularities of development of the world socialist system" and "Economics of world capitalism in a period of general crisis."

Economic growth of socialist countries is characterized by a great variety of processes, inherent not only to the national economy of individual states but also their collaboration on the whole.

The development of the economy of member countries of the Council of Economic Mutual Assistance occurs under the conditions of intensification and improvement of the international socialist division of labor.

Because of the practical implementation of the principles of international socialist division of labor, the structure of production is being improved.

The rational organization of all processes of physical production and its structure in the countries of socialism are served also by other factors; to which now much attention is being directed. The purposes for increase of effectiveness of production are answered by measures conducted in European socialist countries for the acceleration of technical progress and the most rapid initiation into production of the latest achievements of science and technology. Such a way, leading to the increase of overall labor productivity, is inseparable from those measures conducted in the countries in improvement of the organization of production, administration and planning.

The necessity of these measures is dictated by the general conditions of development of the economies of the socialist countries in recent years. They, in particular, were characterized by a certain reduction in effectiveness of production and a known reduction in the rate of growth of industrial and agricultural production. Thus, the rate of growth of combined gross output of industry of the countries—members of the Council of Economic Mutual Assistance—was (in percent): for 1951–55, 186; 1956–60, 163; and 1961–65, 150.[1]

All subsequent data (if this is not especially stipulated) are taken from the indicated book. These data are calculated on the international comparable basis from officially published information of socialist countries.

The difference in the rate of growth of industrial production in individual countries is determined by many internal and external factors of development of each country. At the same time, it is to be noted that higher average rates of growth are inherent to countries possessing a relatively lower level of production. Thus, in Bulgaria they are for 1951–55, 13.7; in 1956–60, 15.9; in 1961–65, 11.4; in Rumania, respectively, 15.1; 10.9; 13.9; and in Czechoslovakia, 10.9; 10.5; 4.2.

The levels of gross output of industry of certain socialist countries in 1964 per capita of population are seen from the following data

*By Ya. Kotkovskiy and O. Rybakov, in *Ekonomicheskiye nauki* (Economic Sciences), Moscow, No. 2, 1966, pp. 92–96.

[1] *See*: "Comparison of the Levels of Economic Development of Socialist Countries" (Sopostavleniye urovney ekonomicheskogo razvitiya sotsialisticheskikh stran). Edited by Ya. Ya. Kotkovskiy, O. K. Rybakov and A. P. Strukov, *Ekonomika* (Economy), 1965.

(in percent, U.S.S.R. equals 100): Bulgaria, 68; Hungary, 79; German Democratic Republic, 153; Poland, 74; Rumania, 48; Czechoslovakia, 130; Yugoslavia, 60.

The higher rates of growth of industrial production in countries, earlier lagging in their economic development, are determined by a number of causes. In economically less well developed countries—members of the Council of Economic Mutual Assistance—the volume of industrial production is comparatively low, and the demand of the internal market, determined by the rapid industrialization of these countries, and their development of the modern branches of industry, is extraordinarily high. It is necessary to consider, that the most important significance is possessed by fraternal aid of other socialist countries.

The systematic development and intensification of the international socialist division of labor appears in the gradual equalization of industrial development, being the objective regularity of development of countries of socialism. Orienting itself primarily on those branches and forms of production, for which exist the most favorable economic possibilities, these countries develop for themselves the most progressive structure of the national economy and accelerate the rate of their development. If we examine how the levels of industrial development of socialist countries has changed over the last 15 years, then the action of the process of equalization of their industrial production is clearly visible (see table 1).

TABLE 1.—*Relationship of levels of industrial production of certain Socialist countries in the 1950–65 period, per capita of population*

[U.S.S.R.=1]

Country	1950	1955	1960	1965
Bulgaria	0.4	0.5	0.6	0.7
Hungary	.8	.8	.8	.8
German Democratic Republic		1.5	1.6	1.5
Mongolia		.1	.2	.2
Poland	.7	.8	.7	.8
Rumania	.3	.4	.4	.5
Soviet Union	1.0	1.0	1.0	1.0
Czechoslovakia	1.5	1.4	1.4	1.2

The basic form of manifestation of the international Socialist division of labor is specialization. It directly serves the purposes of increase of the economic effectiveness of national material wealth.

The production of any form of product can be economical only in a determined volume. The large nomenclature of modern industrial production and need for improvement of its quality, comparable to the world's best standards, present their specific requirements to modern production. The majority of Socialist countries are not in a position to insure the effective production of all necessary goods. It frequently happens that the tendency to expand the assortment of produced goods leads to unnecessary atomization of assets, which is reflected primarily in the level of labor productivity. The given circumstance primarily pertains to the highly developed, in the industrial sense, but countries small in size. Regarding, however, the industrially less well developed countries, then the need for specialization objectively arises to a lesser degree. This is explained by the

fact that under the conditions of a lower level of industrial production, the need for development of the internal market appears stronger. The most favorable conditions for specialization (especially detailed) exist in countries who are on approximately the same level of technical and industrial development.

Consequently, it is possible to assume that the differences in the levels of industrial development can arise to some degree as a factor, counteracting international specialization. It is possible also to assume that according to the increase in levels of industrial development of Socialist countries and on this basis, their approximate equal stature, the tendency to specialize will increase.

The interest of countries in development of the international Socialist division of labor is exhibited to a greater extent in respect to new production, since to develop industrial specialization of countries is much easier during the construction of new industrial projects. Therefore, the most important significance is possessed by the recent questions of coordinated actions of countries—members of the Council of Economic Mutual Assistance—in the areas of capital investments over a long-term period. This is all the more important under the modern conditions of development of Socialist countries; during immeasurable increasing volumes of capital investments, the imperative necessity is to increase their economic effectiveness and improve their structure.

If we do not touch upon intrinsic factors, determining the possibilities to increase effectiveness, then within the framework of collaboration of Socialist countries, it depends first, on orientation of capital investments in those branches of production, which to the greatest degree correspond to the profile of one or another country in the system of the international Socialist division of labor; and second, on the most economic development of the extractive branches of industry, being the most voluminous in capital investment.

These circumstances have special meaning in the U.S.S.R., the volume of capital investments of which is significant. The relationship of levels of capital investments of several Socialist countries (per capita of population; in percent to the U.S.S.R.) was the following in 1963:

Bulgaria	Hungary	GDR	Poland	Rumania	U.S.S.R.	Czechoslovakia
67	63	80	62	60	100	91

According to the development of economic collaboration of countries—members of the Council of Economic Mutual Assistance—the most rapid economic development of the past lagging countries occurs by the determined equalization in volumes of capital investments in these countries. This is explained not only by the increasing need in capital investments according to the industrial development of countries, but also by the necessity to develop in all countries the raw materials branches of industry, the production of which at present is known to be deficient. (See table No. 2.)

In recent years, a certain lag in the development of agriculture has appeared in a number of European Socialist countries. Therefore, as the first priority tasks of these countries, the tasks of the increase of intensity of agricultural production is advanced.

TABLE 2.—*The relationship of levels of capital investments of several Socialist countries in 1950–63, per capita of population*

[U.S.S.R.=1.0]

	1950	1955	1960	1963
Bulgaria	0.4	0.5	0.6	0.7
Hungary		.5	.6	.6
German Democratic Republic	.5	.7	.8	.8
Poland	.7	.7	.6	.6
Rumania	.3	.4	.4	.6
Soviet Union	1.0	1.0	1.0	1.0
Czechoslovakia	1.1	1.0	1.0	.9

European Socialist countries occupy different positions with respect to agricultural production. The levels of agricultural production per capita of population in 1962 can be judged by the following relationships (on the basis of appraisal in rubles; in percent of the U.S.S.R.):

Bulgaria	116
Hungary	116
German Democratic Republic	108
Mongolia	146
Poland	141
Rumania	81
USSR	100
Czechoslovakia	94
Yugoslavia	93

The tasks of the intensification and increase of the level of agricultural production have different practical ratifications in individual countries due to the different sizes of the land fund. This can be judged if the comparable volumes of agricultural production are considered not per capita of population but per hectare of ploughed land. In this case, the relationship of the volumes of agricultural production in 1962 will be expressed by the following figures per hectare of ploughed land, on the basis of appraisal in rubles; U.S.S.R. equals 1.0.

Bulgaria	2.2
Hungary	2.3
German Democratic Republic	3.9
Poland	2.7
Rumania	1.5
USSR	1.0
Czechoslovakia	2.6

The most indicative index of the economic development of any country is its national product. This index, independent of the specific character of the structure of the national economy and its development of industrial specialization, synthetically characterizes the results of the activity of society in the field of physical production. The volume of national income on the whole determines the amount of assets directed toward expansion of production and consumption. The differences in the levels of physical production in Socialist countries determine also the well-known differences in the level of national income and consumption of the population in these countries (see table No. 3).

TABLE 3.—*Levels of national income and consumption of the population in several Socialist countries in 1963, per capita of population*

[U.S.S.R.=1.0]

	National income	Consumption of the population
Bulgaria	[1] 0.9	1.0
Hungary	.9	1.1
German Democratic Republic	[1] 1.4	1.5
Poland	.9	1.0–1.1
Rumania	.6–.7	
U.S.S.R.	1.0	1.0
Czechoslovakia	1.1–1.2	1.4

[1] Approximate.

The achieved level of economic development in Socialist countries is the initial basis for the further intensification of their collaboration. Long-term plans of development of their national economy in the period to 1970 anticipate a further significant growth in production and consumption, increase in the effectiveness of national material wealth and improvement of the structure of the national economy.

Questions of the economic collaboration of the U.S.S.R. with Socialist countries occupy a conspicuous place in the new 5-year plan, the realization of which is begun by the Soviet peoples.

In the draft of the directives of the 23d Congress of the CPSU on the 5-year plan of the development of the national economy of the U.S.S.R. in 1966–70, it is stated that one of the most important tasks of the 5-year plan in the field of external economic connections is the further development of economic connections of the Soviet Union with Socialist countries and the use of the superiorities of the international Socialist division of labor, founded on Leninist principles of proletarian internationalism, on fraternal mutual assistance in the interests of intensification of the entire Socialist system.

For development of economic collaboration with socialist countries, there is anticipated in the 5-year plan a further increase of commodity circulation between the U.S.S.R. and other Socialist countries, further development of economically effective, stable specialization and cooperation of production, expansion of scientific and technical collaboration, improvement of its methods, development of new rational forms of economic collaboration of countries—members of the Council of Economic Mutual Assistance—in the areas of industry, transport, and trade; in the sphere of credit-financial connections and international exchange calculations etc.

The expansion of economic, commercial, scientific and cultural connections of the Soviet Union with other Socialist countries, as is indicated in the draft of the directives of the 23d Congress of the CPSU on the 5-year plan, is to strengthen fraternal friendship and collaboration between them, to serve for the successful realization of tasks, which exist in total Socialist collaboration.

6. TWENTY-THIRD PARTY CONGRESS EMPHASIZES IMPORTANCE OF FOREIGN TRADE*

The decisions of the 23d CPSU Congress, which determine the problems of the present stage of Communist construction, the basic trends of domestic policy and economic activity, and the foreign economic policy of our state, have been greeted by the Soviet people with a new upsurge of creative activity. The tasks set by the Congress are tremendous and sublime. Much more is to be done than in the last 5-year period. The realization of these tasks will allow our people to achieve new goals in creating the material-technical base of communism.

An important sector in this work is the foreign economic relations of the U.S.S.R.

The past 7-year period was characterized by the active development of economic relations of the Soviet Union with foreign countries. The volume of foreign trade turnover for that period rose from 7.8 billion rubles in 1958 to 14.6 billion rubles in 1965, i.e., almost twice the amount. The activity of our state in this sphere promoted not only the further development of Soviet economy, but also the rallying of the countries of the world Socialist system, the strengthening of the latter's power, and the consolidation of the position of the young national states of Asia and Africa, which have embarked upon the path of an independent development.

U.S.S.R.'s foreign economic relations have become a factor of great international importance that corresponds to the interests of the struggle for peace and social progress.

The directives for the first 5-year plan envisage further expansion of economic relations of the Soviet Union with the Socialist countries and utilization of the advantages of the international socialist division of labor on the basis of Lenin's principles of proletarian internationalism and fraternal mutual assistance in the interests of fortifying the world Socialist system; the expansion of economic cooperation with the developing countries by way of strengthening trade relations and rendering them economic and technical assistance toward consolidating an independent national economy; and the expansion of trade with other foreign countries.

The countries of socialism occupy a principal place in our foreign economic relations. The volume of commodity turnover with these countries amounted to 10 billion rubles in 1965, almost 75 percent more than the volume of trade with these countries in 1958. The share of these countries in the entire foreign trade turnover of the U.S.S.R. is about 70 percent.

The division of labor between the Socialist countries plays an ever greater role in providing the national economy with the necessary types of equipment and raw materials and in improving the supplying of the population with a variety of consumer goods. It helps to accelerate technical progress and to enhance the effectiveness of social production. Based on the principles of voluntariness and full equality, the international Socialist division of labor helps us and our friends—the fraternal Socialist countries—to move faster toward the common goal of building communism.

**Vneshniaia torgoulia*, No. 5, 1966, pp. 3–5.

The economic relations of the Soviet Union with the Socialist countries will become consolidated even more in the present 5-year period. Cooperation in the sphere of science and technology will expand, and the turnover of commodities will rise. It is for the first time that in the practice of international economic relations a whole group of countries has agreed 5 years in advance on mutual deliveries of commodities in such large volumes.

The directives of the 23d CPSU Congress for the new plan envisage an increase in the commodity turnover between the U.S.S.R. and other Socialist countries, implementation of agree-upon measures to further improve the structure of export and import, and an increase on this basis of economic effectiveness in foreign trade; a further expansion of an economically effective and stable specialization and cooperation in production between the interested fraternal countries, primarily in machine building, chemical industry, ferrous metallurgy, and in electronics; an expansion in scientific-technical cooperation, improvement of its methods, development of mutual technical information, and exchange of scientific-technological achievements and licenses; a development of new efficient forms of economic cooperation between the member countries of CEMA [Council of Mutual Economic Assistance] in the field of industry, transportation, trade; in the sphere of credit-financing relations and international currency clearings; a broader unification of products and applying advanced standards to production supplied by the Socialist countries on the basis of an agreed-upon specialization and cooperation in production; a further development of the fuel and power and raw material base through joint efforts toward providing the needs in power and raw material for the countries interested on mutually acceptable terms.

Cooperation with the states of the Socialist system will help to resolve the problems of the new 5-year plan. The Soviet Union will purchase more than 1,000 sets of equipment for the enterprises and workshops of the chemical, light, foodstuff and other branches of the industry. Deliveries from the fraternal countries will cover 48 percent of our needs in ocean-going transport vessels, 40 percent in mainline and industrial electric locomotives, 36 percent in railroad passenger cars, etc. Also to be purchased is a large quantity of such consumer goods as finished clothing, knitted goods, footwear, fabrics, and food products and items of chemical industry. This will permit satisfying better the needs of our population. In turn, the basic needs of the Socialist countries in many types of equipment and machinery, in solid and liquid fuel, in metallurgical raw material and metals, cotton, lumber, cellulose and paper and some other important commodities will be provided for by deliveries from the Soviet Union.

An overall development of the economic relations between the Socialist countries is a task of paramount importance, inasmuch as it corresponds to the vital interests of each country individually and to that of the world socialist system as a whole.

The Soviet Union attaches great importance to the expanding of economic relations of the U.S.S.R. with the independent states of Asia, Africa, and Latin America. Under current conditions, these countries, accounting for about one-half of the world's population, have become an arena of a fierce struggle against imperialism. By consolidating their economy, the economic cooperation of the Soviet Union with the young national states represents an important part

of the efforts aimed at securing peace and rights of the peoples to freedom and independent development.

The volume of foreign trade turnover with the developing countries grew from 805 million rubles in 1958 to 1,744 million rubles in 1965; i.e., by more than 2.1 times. The mean annual increase of the trade volume was 11.7 percent for this period.

By virtue of the economic plan, cooperation of the U.S.S.R. with the developing countries is directed toward resolving such vital problems as creating important branches of the national industry, training of technical and scientific personnel, and consolidating their positions on the world market. This cooperation also opens up for the Soviet Union additional possibilities of utilizing more widely the advantages of the international division of labor. The U.S.S.R will be able to purchase in these countries in ever-increasing volumes their traditional commodities—cotton, wool, hides, concentrates of nonferrous metal ores, vegetable oils, fruits, coffee, cocoa beans, tea, and other types of raw materials as well as finished articles.

During the years of the 5-year plan, the commodity turnover with the developing countries will rise considerably. Moreover, considered here are not only its increase but also structural changes that would correspond to the changes in the economy of the developing countries.

The directives of the Congress for the 5-year plan envisage intensification of foreign trade relations and economic cooperation with the developing countries of Asia, Africa, and Latin America; expansion of trade with the developing countries, first of all, by increasing the export of machinery and other types of industrial output for which they experience need in order to establish their national economy and also by raising correspondingly the import from these countries of agricultural and industrial commodities and raw materials; rendering technical assistance to the developing countries in creating a national industry, agriculture, scientific and planning organizations and a construction base, modern means of transportation and communication and in geological survey operations, and in training specialists and qualified workers.

From 1958 to 1965 the volume of trade of the Soviet Union with the industrially developed capitalist countries increased from 1.2 billion rubles to 2.8 billion rubles—by more than 2.2 times. The commodity turnover rose considerably, in the first place. with such countries as Finland, France, Italy, Japan, England, and Sweden. However, the trade relations of the West with the U.S.S.R. are not free of artificial restrictions. There are still increased duties on Soviet commodities in a number of countries. The United States of America endeavors to hinder the development of foreign trade of the U.S.S.R. However, these attemps are to no avail. By so acting, the United States can only earn itself the reputation of a country, which attempts to set up barriers over the wide paths of international trade.

Undoubtedly, the objective needs of the international division of labor will lead toward the point where the structure of the Soviet export will correspond more and more to the current structure of our economy and its potentialities. If our trade partners will take into account the changes, which have and are taking place in the national economy of the Soviet Union, then this will permit increasing substantially the volume of purchases in the capitalist countries. The directives for the 5-year plan envisage a further growth in the com-

modity turnover with the capitalist countries. One may assume that such growth will be promoted to an even greater degree than in the preceding years by long-term trade and credit agreements, which reflect the interestedness in the development of durable, mutually advantageous trade relations with the Soviet Union.

In the past 5-year period, foreign trade helped to resolve a number of important national economic problems. However, the possibilities that the development of foreign economic relations open before us are not as yet utilized to a satisfactory extent.

The time has arrived when the role of foreign trade must be evaluated differently. The workers in the foreign trade organizations frequently lock themselves up in their own sphere and do not take into account sufficiently that their entire activity should be subordinated to the tasks of increasing the effectiveness of the national economy as a whole. It goes without saying that the long-term plan of foreign trade cannot envisage all the possibilities and changes which arise on the international market; it is precisely for this reason that it is very important that the workers in foreign trade know well the needs of our economy and show initiative in formulating questions concerning the most advantageous purchases and sales. On the other hand, the workers in the industry frequently still look upon foreign trade as something secondary. This fundamentally incorrect view must be changed, and business contacts between the industry and foreign trade must be strengthened.

In order to utilize more fully the advantages of the international division of labor, to increase the economic effectiveness of foreign trade, and to satisfy better the needs of the Soviet people for commodities, the directives for the 5-year plan envisage—

> Improving the structure of Soviet export by increasing the export of machinery, equipment, instruments, means of transportation and communication, and other finished goods of the processing industry:
>
> Improve the structure of import by way of importing primarily those types of raw materials, supplies, and products, whose manufacturing inside the country is connected with rather large outlays and capital investments, and also by way of increasing the purchases of technically advanced equipment that helps to speed up the development of the advanced branches of the national economy;
>
> Creating, on the basis of a profound study of foreign markets, new specialized industries and expanding the existing ones in order to increase the production of export output that meets the requirements of the world market, and especially the output of machine building;
>
> Expanding the international ocean, air, and other freight transportation by means of Soviet transport means, expanding the export of other types of services and exchanging the same, and also expanding the development of foreign tourism.

The new 5-year plan should envisage measures toward a substantial improvement in efficiency, improvement in the quality of export output, perfecting the methods of trade, and a more correct utilization of import commodities. A considerable increase in the volume of our export and enhancement in its effectiveness is planned. With

this aim in mind, it is necessary to secure an outpacing development of exporting machinery, equipment, and other finished goods, and also to expand the export of such types of raw materials, semifinished products and materials, which guarantee large proceeds in hard currency. The solution of this important national economic problem can be achieved by way of a joint and purposeful activity of the planning, industrial, foreign trade, and transport organizations.

The development of our industry in the forthcoming 5-year period will open up additional possibilities in the sphere of foreign trade. Many machine building plants of the country even today are producing equipment of original designs improved in technical respect. All the more so, one should not be content with the fact that this first-class output—the result of the creative mind and skill of our remarkable engineers and workers—is not yet at the present moment entering the foreign market only because necessary attention is not devoted to its finishing, the drawing up of engineering documents, and the insuring of services and advertising.

Until recently, we have underestimated the importance the trade on patents and licenses. Meanwhile, this trade plays an ever appreciable role in the entire world and develops faster than the trade with industrial commodities. Our scientific and engineering personnel are capable of creating—and this has been proved in practice—perfect machines and equipment. Therefore, we should and ought to occupy a worthy place on the world market of licenses. In turn, it is advantageous for us, too, in a number of instances, to buy license rather than for us to be engaged in working out this or that problem. The purchase of patent rights abroad will allow us to save hundreds of millions of rubles on scientific research work during the 5-year plan.

One of the major tasks of the new 5-year period is to expand the production of the most effective output earmarked for export. The ministries and planning organs should occupy themselves in earnest with the solution of this problem. The workers of the industry should study the conditions of sale of their output both in our country and abroad, while the Ministry of Foreign Trade is obligated to furnish them with the necessary information.

Foreign economic relations are an important sector of our work. A successful development of foreign economic relations of the U.S.S.R., and the enhancement of their effectiveness will contribute to a further upsurge of the national economy of the U.S.S.R. and to a steadfast implementation of Lenin's principle of Soviet foreign policy.

7. IMPROVING THE STRUCTURE OF FOREIGN TRADE*

Socialist countries devote much attention to calculating the effectiveness of foreign trade and to developing programs for the restructuring of exports and imports. Coefficients of the comparative effectiveness of the export of individual goods are constructed by comparing national economic outlays for the production of goods within the country with the monetary receipts from their sale. Analysis of these indexes in combination with the efficiency coefficients of the corresponding import equivalents by groups of goods and by countries permits the construction of recommendations regarding optimization of the product structure of trade and the determination of the best geographical directions of trade relations. The obligatory consideration of the economic interests of all collaborating countries is the most important condition for restructuring the foreign trade of Socialist countries on the basis of these calculations.

It is obvious that the search for means of rationalizing the structure of commodity circulation must be accompanied by consideration of the peculiarities and patterns of the internal economic development of Socialist countries, the division of labor among them, and the objective tendencies in the development of world trade as a whole.

One of the most important contemporary features of structural changes in world trade is the systematic growth of the share of finished goods, alongside a steady and considerable decrease in the share of raw materials and food. The average yearly growth in the world export of these groups of commodities during the period 1928–60 was 3.1 percent and 1.4 percent, respectively. This process has become particularly accelerated in the postwar period. While the export of raw materials and food accounted for more than one-half of total exports in 1948, it accounted for little more than a third in 1962.

The rapid growth in world trade of finished goods stems from industrial specialization and such objective, universal changes in international production conditions as the conversion to mass production of substitutes for traditional raw materials; the lowered consumption of raw material, fuel, and energy per unit of product as a result of technological progress; and also the processing of raw material in the country where it is extracted.

A leading place in the trade of finished goods is occupied by machines, equipment, and means of transport. The share of these goods in the export of all finished goods by 12 industrially developed capitalist countries (England, United States of America, Canada, Common Market countries, Sweden, Switzerland, Japan) increased from 39.9 to 44.7 percent just for the period from 1954 to 1963.[1]

Specialization and technological progress also influence the foreign trade structure of Socialist countries. The main direction of structural changes is expansion of the exchange of output of the processing branches. To a large and ever-increasing extent, this is promoted by international intrabranch specialization and by the Socialist countries' cooperation in production.

Correspondingly, trade in raw materials and food products relatively declines with a simultaneous increase of their internal consumption.

*By N. Zotova, planovoe khoziaistvo, 1967, No. 1.

[1] *Board of Trade Journal*, Nov. 27, 1964.

In 1960–64, raw materials accounted for only one-third of the general export growth in Comecon [Council for Mutual Economic Assistance] countries while machinery and equipment accounted for almost one-half. The export of raw materials for this period rose 38 percent, and machines, 70 percent. The share of finished products such as machines and equipment is increasing especially rapidly in the export of such countries as Bulgaria, Romania, and Poland. Thus, the share of machines and equipment in Poland's exports to Comecon countries increased from 34.2 percent in 1955 to 69.3 percent in 1964; in Bulgaria's exports it increased from 44.9 to 76.1 percent.

A more rapid growth in the export of machines, equipment, other finished goods, and of those raw materials, semifinished goods, and supplies which guarantee a high monetary return, is also one of the main aims in improving Soviet foreign trade relations.

To a considerable degree, a successful solution of this problem depends upon finding correct and efficient ways to improve the structure of commodity circulation between the U.S.S.R. and the Comecon countries, which account for 60 percent of Soviet foreign trade. The growth in reciprocal trade of machines and equipment by Comecon countries is shown in table 1. The percentage of finished goods in our total exports to Comecon countries is lower than in total export deliveries. In 1965, finished goods accounted for 42.8 percent of total Soviet exports, while they constituted 40.4 percent of the deliveries to Comecon countries. The share of machines and equipment comprised 20 percent of total exports, and 18 percent of exports to Comecon countries; the export of raw materials was 57.2 percent and 59.6 percent, respectively.

TABLE 1

[In percent]

	U.S.S.R.	Bulgaria	Hungary	German Democratic Republic	Poland	Romania	Czechoslovakia
Share of machines in exports to Comecon countries:							
1960	14.1	15.2	46.2	56.3	37.4	16.1	47.3
1964	18.3	29.0	44.6	55.8	46.6	23.0	54.3
Increase of machine exports in the overall increase of exports to CMEA countries from 1960 to 1964	27.6	51.1	42.1	54.7	59.3	41.5	71.1

The relative decline in the share of raw materials in the reciprocal trade of Comecon countries is caused primarily by a decline in the share of raw materials in the exports of the people's democracies: Bulgaria—from 55.1 percent in 1955 to 23.9 percent in 1964; Hungary—26.9 to 17.6 percent for the same period; Poland—65.8 to 30.7 percent; etc.

This tendency testifies to a growing raw materials deficit in Comecon countries. A lack of natural fuel and raw material resources and the corresponding necessity of developing inefficient deposits in most countries, along with the high capital-output ratios in branches of the extractive industries, necessitate increased national economic expenditures for extracting raw material. The current contract

prices on the Socialist market, oriented toward average world conditions of production, do not, as a rule, compensate additional expenditures by countries to develop extractive branches. As a result, not only is the production of raw materials and supplies for export not stimulated, but it becomes economically advantageous for individual countries to substitute imports for domestic production.

The resultant discrepancy in the level of efficiency of exporting raw materials as compared to finished goods leads to an artificial growth of the export of the latter. Moreover, the comparatively high level of profitability of export is only one aspect of the high national economic efficiency of exporting finished goods. The export of finished goods, especially machines and equipment, permits a rapid growth in the overall value of exports by increasing the share of domestic labor in the value of the exported output, broader utilization of the advantages of international specialization and cooperation, etc. Thus, the most important tendency of trade, the development of exchange of finished goods, should be regarded as the most farsighted and efficient direction of trade for all countries.

At the present stage, one of the central problems of trade development in Comecon countries can be considered the increase in the export of fuel and raw materials as the result of their scarcity. Efforts are directed to solving this problem, particularly to finding mutually acceptable means, of compensation for additional outlays for the extraction and export of raw materials.

The main market in which European Socialist countries exchange finished goods for raw materials and food products is that of the Soviet Union. Thus, these nations pay for over 65 percent of total raw material imports from the Soviet Union with finished goods, and for only about 35 percent with reciprocal deliveries of raw materials.[2] About two-thirds of the exports of these countries to the Soviet Union fall into two product groups: first, machines and equipment and, second, industrial consumer goods,[3] with the share of the latter tending to rise. The share of machines and equipment in U.S.S.R. exports to Comecon countries is also increasing: from 14.1 percent in 1960 to 18.0 percent in 1965. But the negative balance of trade for this group of products is still great: 1,144 million rubles (about 27 percent of Soviet exports to these nations). For the Comecon nations, in reciprocal export of raw materials (excluding food), the share of the U.S.S.R. in 1964 was 55 percent, the GDR—10.9 percent, Czechoslovakia—10.3 percent, Poland—8.8 percent, Rumania—6.7 percent, Hungary—3.8 percent, Bulgaria—3.7 percent, Mongolia—0.8 percent.[4]

The large deliveries of raw materials from the U.S.S.R. to socialist countries are a clear demonstration of the qualitatively new economic relations among the countries of the world socialist system, of their fraternal mutual aid and collaboration.

Also significant are deliveries to the world socialist market from other Comecon countries; e.g., coal from Poland and Czechoslovakia, brown coal from the GDR, etc. The development of economic cooperation in these countries is based on the principles of proletarian internationalism, the necessity of combining national and common interests

[2] Calculated according to figures in the yearbook *Vneshniaia torgovlia SSSR*, 1965.
[3] *BIKI*, Supplement No. 22, 1965, p. 4. [BIKI: Russian initials of a publication of the Ministry of Foreign Trade called Bulletin of Foreign Commercial Information.]
[4] *Nova mysl*, 1965, No. 5, pp. 587-596.

in the development of the whole fraternal commonwealth. Their combined import needs are covered by reciprocal deliveries: 97 percent of coal, 96 percent of oil and petroleum products, almost 80 percent of iron ore, etc.[5]

In the early stages of the formation of the world socialist economic system, exports from the U.S.S.R. to European socialist countries were directed at changing the financial and material structure of the national income of the latter. With the help of the Soviet Union, the socialist countries significantly increased their production capacities for the most important kinds of output: coal, electric energy, copper, zinc, steel, aluminum, rolled metal, synthetic rubber, tractors, petroleum refining, etc. A certain movement toward bartering in international exchange which took place at that stage was dictated by the necessity of providing real accumulation for industrializing these countries and restructuring their economies.

At the present time, socialist countries are emphasizing questions of the efficiency of foreign trade, as determined by the level of prices and production costs of those goods which enter foreign commodity circulation. Primary attention is paid to measures for raising export efficiency, which in a number of cases has a decisive influence on the change of structure of export production. At the same time the European Comecon countries are forced to make greater use of the balance method in determining their import structure, while the basic determining factors remain, as before, the need to satisfy current needs of the national economy, the liquidation of temporary disproportions, and the provision of scarce commodities. Herein lies one of the contradictions in the trade development of Comecon countries at the present stage, resulting from a rather significant import dependence of these countries on a number of goods and from insufficient development of specialization and cooperation of production among them. This explains the difficulties which European socialist countries meet in their reciprocal trade in satisfying import needs and selling certain kinds of exports.

Undoubtedly the policy of the Communist and workers' parties of these countries for improving the methods of planned management of the national economy, raising the efficiency of all elements of social production, and increasing specialization will provide closer coordination of export-import plans in the immediate future. This will also be furthered by determining mutually acceptable means of compensating the additional outlays of those countries which exchange (on net balance) raw materials for the output of manufacturing industry.

The broad import needs of the U.S.S.R. now make it possible to overcome these difficulties that arise. Output produced efficiently (for the given country), but without due regard for the import needs of other European socialist countries, finds a partial sale in the Soviet Union, which is the chief purchaser of machines, equipment, and industrial consumer goods. The U.S.S.R. receives more than half the exported output of the machine building of Czechoslovakia and Hungary, about 50 percent of the GDR's export of machine building and metal processing, about 43 percent of Rumania's machine exports, etc.

[5] *Vneshniaia torgovlia*, 1965, No. 11, p. 7.

Consideration for the special features and patterns both of the internal development of the Comecon countries and of their foreign trade determines the broad approach to problems of increasing the efficiency of Soviet trade with their group of countries. It is evident that an integrated solution of these problems is needed on the basis of raising the profitability of reciprocal import operations, and of careful consideration for the effect that the imported goods will have on the country's national economy.

The tendency toward growth of finished goods being exchanged on the Comecon market creates important problems in the development of their import by the Soviet Union and interstate specialization of production. By carrying on massive purchases of finished goods, the Soviet Union influences the formation of a profile of specialization of various branches of production in these countries.

To change the proportions in the disadvantageous exchange of raw materials for finished goods by restraining purchases of the latter could influence both the growth rates of trade and the development of interstate specialization. Consequently, the problem consists in working out a broad, long-term import program, defining more clearly the basic orientation of import specialization with regard to the national economic needs of the Soviet Union and to the basic tendencies of technological progress and international Socialist division of labor. Such a program will further a better grounded choice of optimal decisions when comparing the economic efficiency of exports of different products of Comecon members, and will further the strengthening of stability of their trade relations with the U.S.S.R. both in regard to the import of raw materials and supplies and to deliveries of specialized output of the manufacturing industry.

Raising the national economic efficiency of the Soviet Union's trade with Comecon members also presupposes a basic structural change in Soviet exports by increasing the share of finished products. However, such a restructuring is particularly complicated by the fact that it is supposed to be carried out while keeping U.S.S.R. raw material exports on a high level. Proceeding from the necessity of the utilization of available and planned capacities of the manufacturing industry in European Socialist countries, the Soviet Union will increase deliveries of these basic raw materials before 1970: Oil, 1.8 times; coal, 1.4 times; gas, more than 6 times; and electric energy, 4.3 times.[6]

The efficiency of U.S.S.R. raw material exports will be increased by an integrated solution of the fuel and raw materials problem through the efforts of all Comecon members, the creation of economic incentives for countries to expand the production and export of raw materials and fuel to the world socialist market, including joint financing of units of the iron ore industry and enterprises processing raw materials, long-term special-purpose loans, limited-time introductions of incentive prices for certain kinds of raw materials, etc.

High national economic effect of exports is obtained by greater processing or improvement of raw materials (e.g., replacing pig iron by rolled metal, wood materials by paper, cellulose, cardboard, lumber, plywood, etc.). Such a direction has highly favorable perspectives when the export of output of corresponding branches is increased

[6] *Vneshniaia torgovlia* 1965, No. 12, p. 5.

above deliveries which ensure the utilization of already available productive capacities in socialist countries.

An acceleration of the rate of the export of finished goods and, consequently, a decrease in the share of raw materials should be considered the basic path of rationalizing commodity structure and raising the efficiency of the Soviet Union's export to Comecon countries. If a change in the exchange proportions of raw materials for finished products expresses the Soviet Union's participation in intrabranch specialization of production in socialist countries, then the increase in the volume and share of finished goods in its trade with these countries can be basically regarded as both a consequence and an important prerequisite of the Soviet Union's participation in international intrabranch specialization and cooperation. Thus, optimizing the commodity structure and raising the efficiency of Soviet foreign trade are closely connected with organizing and further strengthening the cooperation between socialist countries, and developing interstate specialization and cooperation in the manufacturing industry.

Special problems arise in the realm of expanding specialized deliveries of machine-building output.

By its volume of output, the U.S.S.R. machine-building industry occupies the first place in Europe and the second place in the world. The technical level and structure of Soviet machine building offer broad opportunities of growth in the export of machines to Comecon members, while taking account of the needs of their national economies. Meanwhile the export of machines to these countries can hardly be considered sufficient. The growth in exports of machines and equipment from the U.S.S.R. to Comecon members is presented in table 2: for the period from 1955 to 1965, it amounted to 8.1 billion rubles.[7]

TABLE 2

[In millions of rubles]

	1950	1955	1960	1965	1965 in percent of 1950
All exports	191.3	539.1	1,027.1	1,472.2	760
The share of that included in—					
Exports to socialist countries	185.6	521.7	899.9	1,017.6	540
Exports to Comecon members	138.5	298.8	407.4	760.0	550

The need to expand exports by increasing export specialization of the machine-building industry is also dictated by tasks of increasing the rates of growth of the Soviet Union's trade with countries comparatively better provided with fuel and raw material resources. Thus, while in general the share of all Comecon countries in the foreign commodity circulation of the U.S.S.R. increased, the share of Poland and Romania declined in 1965, as compared to 1955, from 11.1 percent and 7.4 percent in 1955 to 9.3 percent and 5.2 percent in 1965.

Expanding Soviet machine deliveries on the basis of participation in interstate specialization will accelerate the rates of growth of U.S.S.R. trade with all Comecon members and raise its efficiency.

Significant reserves for the growth of efficiency of commodity circulation are also contained in the further development of foreign trade exchange of the products of the chemical industry. These

[7] Calculated from statistical collections in *Vneshniaia torgovlia SSSR* for the corresponding years.

products comprise little more than 1 percent of Soviet deliveries to Comecon countries, and about 2 percent of imports. At the present stage, Socialist countries have only begun to utilize the advantages of a division of labor in chemical production, especially in the new branches of chemistry. Thus, in 1962, the share of plastics and artificial resins comprised 3.3 percent of the reciprocal trade of these countries in chemical products, synthetic rubber comprised 6.5 percent synthetic fibers, 7.2 percent, and so forth. The growth of reciprocal trade of these products will be furthered by the development of the chemical industry on the basis of deliveries of Soviet oil and by rational utilization of natural resources of these countries.

Raising the export efficiency of individual goods may likewise be achieved by rationalizing transportation within the territory of the U.S.S.R., improving the distribution of export production, especially when the choice of optimal variants is not limited by natural and other factors. For example, it is extremely farsighted for a number of industrial enterprises located close to the importing countries to specialize in products which are exported to these countries.

The optimization of foreign trade plans, the organization and development of collaboration among Socialist countries in the sphere of specialization and cooperation of production both according to branch and within individual branches of manufacturing industry, will serve as a most important condition for the further acceleration of rates of growth of foreign commodity circulation in all Comecon countries.

Section B. *From Western sources—*

1. A COMPARISON OF RETAIL PRICES IN THE U.S.A., U.S.S.R., AND WESTERN EUROPE

The following survey lists the retail prices of 128 goods and services that were observed (for the most part personally) in New York, Moscow, London, Paris, and Munich during April and May 1967. In each of the Western cities, prices were, wherever possible, noted in three different suburban supermarkets and a mean price calculated. In Moscow, the prices given are those observed in a state retail store. (In Moscow, state retail store prices appear to be uniform. Prices on the urban kolkhoz market tend to be higher and the quality of meat, fruit and vegetables generally better.) Prices of items that were obviously "loss leaders" have not been included. Where trading stamps were issued, the discount has been subtracted from the price. Container charges are excluded.

The selection of goods and services for inclusion in the survey is wholly subjective. Since this compilation is intended primarily for those who may wish to compare Soviet with Western living standards, it is limited, in the main, to those items that were available in Moscow. Thus, it does not, for instance, include any of the frozen foods which appear to be the mainstay of many United States and British households. Furthermore, it includes only those items which are remotely comparable; this meant that clothing unfortunately had to be excluded.

The prices of certain items could not be found in the time available, and these are marked with a dash as being "not available." This should not, however, be taken to mean that the good or service was non-existent. For example, an article in a Soviet literary journal referred to the existence of a diaper (nappy) service in Moscow,[1] but no one could be found who knew of this service or could say what it cost.

Having lived in each of the cities listed, the author was able to make some sort of judgement on the foodstuffs on sale. However, with regard to some of the other items and services, it was necessary to ask permanent residents for information, and the answer varied considerably. For example, the author received so many varying estimates of the cost of an annual television and radio license in Paris and London that he was forced to conclude that some of his informants were not in the habit of paying such dues. Upon other items, such as the tablets marked "Contraceptin" in Moscow, it was not easy to arrive at a value judgement.

The greatest shortcoming of any survey of this kind is the lack of comparability of products. For a few Western products such as corn flakes, instant coffee and detergents, it was possible to find a common brand name, but for the most part the choice had to be based on the author's experience and judgement. Some basic foodstuffs such as bread, milk, butter, margarine and cheese are comparable, but there is a world of difference between, say, the beef, veal and lamb viewed in Paris and those seen in Munich or Moscow, which was not always reflected in the prices. Similarly, the fresh fruit and vegetables available in a Moscow state retail store would not be offered for sale in

[1] *Literaturnaya gazeta*, February 22, 1967, p. 12.

a New York supermarket. Few who have driven a "Zaporozhets" would put it in the same class as a Volkswagen 1200, and so on.[2]

Although they were collected within a few weeks, the food prices in the various cities were undoubtedly influenced by seasonal factors. Other external factors played a part; for instance, the prices of fresh fish in Paris were depressed in the aftermath of the "Torrey Canyon" disaster.

Retail prices of goods and services in local currencies

GRAIN PRODUCTS

[Except where otherwise noted, unit of measurment equals 1 kilogram]

	New York (dollars)	Moscow (rubles)	London (sterling)	Paris (francs)	Munich (DM)
Wheat flour	0.24	0.41	1s. 4d.	1.15	1.15
White bread (unwrapped)	.55	.50	1s. 10d.	.83	2.20
Rye bread (unwrapped)	.73	.24	1s. 10d.	2.30	1.25
Noodles	.70	.52	2s. 7d.	2.50	4.20
Polished rice	.55	.78	3s. 4d.	2.40	2.00
Corn Flakes	.94	.80	4s. 3d.	11.23	5.64
Oatmeal or buckwheat	.44	.18	1s. 10d.	3.14	2.20
MEAT AND POULTRY					
Beef (best available)	1.87	2.00	11s. 9d.	18.00	18.00
Veal	1.74	2.30	15s. 5d.	24.00	7.70
Roasting pork	1.52	2.10	23s. 2d.	16.80	7.50
Stewing mutton	1.31	1.90	6s. 7d.	(1)	12.00
Lamb	1.96	2.50	9s. 6d.	22.00	14.00
Chicken	.87	2.65	6s. 5d.	6.80	6.00
Goose	1.96	1.60	(1)	8.00	6.20
Duck	1.31	1.90	8s. 10d.	10.00	5.50
Turkey	1.10	2.75	8s. 7d.	9.00	6.80
Bacon (lean, sliced)	2.18	2.70	10s. 8d.	19.00	15.00
Ham (best available)	3.30	3.70	17s. 8d.	17.55	13.60
Minced beef or hamburger	1.52	2.00	5s. 8d.	10.70	7.00
Canned corned beef	1.52	1.50	11s. 9d.	9.12	8.10
Canned luncheon meat	1.10	2.85	8s.10d.	15.60	6.09
Sausages (commonest variety)	1.96	2.50	7s. 4d.	13.75	5.20
FISH					
Fresh salmon	1.96	7.60	20s.11d.	12.80	2.60
Fresh herring	1.65	1.55	4s. 5d.	3.50	1.50
Fresh cod	1.54	.77	14s. 4d.	8.50	3.50
Canned salmon	1.54	(1)	16s. 0d.	20.35	13.60
Canned herring	1.21	2.92	9s, 2d.	5.10	4.70
Canned tuna	1.80	3.20	12s. 6d.	15.30	7.90
Canned sardines	1.98	4.80	12s. 0d.	11.00	14.00
SUGAR AND CONFECTIONERY					
White sugar	0.27	1.04	1s. 6d.	1.30	1.25
Plain chocolate (100-gram bar)	.28	.80	1s. 0d.	.50	.65
Boiled sweets	1.65	3.50	8s.10d.	7.35	2.37
Vanilla ice cream	1.05	2.00	3s. 9d.	9.00	8.80
FATS					
Butter	1.85	3.30	6s. 3d.	11.60	8.00
Vegetable oil (1 liter)	.51	1.98	4s.11d.	2.60	2.65
Margarine	.90	1.65	3s. 8d.	3.92	2.88

See footnotes at end of table, p. 268.

[2] The medium and small cars chosen for this survey were respectively: in New York, the Rambler and Volkswagen 1300 (export model); in Moscow, the Moskvich M 408 and Zaporozhets; in London, the Morris 1100 and Mini-Minor; in Paris, the Renault R 10 and R 4; and in Munich, the Opel Kadett and Volkswagen 1200.

Retail prices of goods and services in local currencies—Continued

MILK AND MILK PRODUCTS

[Except where otherwise noted, unit of measurment equals 1 kilogram]

	New York (dollars)	Moscow (rubles)	London (sterling)	Paris (francs)	Munich (DM)
Fresh milk (1 liter)	0.26	0.28	1s. 8d.	0.85	0.80
Cream (1 liter)	1.20	1.10	5s. 8d.	8.50	5.00
Yoghurt	.88	.30	5s. 3d.	3.20	1.65
Gouda-type cheese	1.87	3.20	6s. 7d.	8.50	8.75
Cottage-type cheese	1.36	1.92	5s. 4d.	11.25	4.50
Camembert-type cheese	2.97	(1)	12s. 3d.	8.05	6.00
EGGS					
Eggs (largest, 1 dozen)	0.56	1.50	4s. 0d.	3.36	2.76
Eggs (cheapest, 1 dozen)	.39	1.30	3s. 0d.	2.16	1.92
VEGETABLES					
Potatoes (old)	0.15	0.10	11d.	0.45	0.30
Carrots	.33	.12	1s. 1d.	.70	1.30
Cabbage	.40	.08	1s. 8d.	1.60	.90
Onions	.22	.50	2s. 2d.	1.85	1.40
Beetroot	.66	.20	1s. 6d.	1.50	1.80
Tomatoes	.64	.80	6s. 3d.	3.15	2.90
FRESH FRUIT					
Eating apples	0.29	1.50	3s. 4d.	1.40	2.20
Oranges	.29	1.40	2s.11d.	2.20	1.40
Bananas	.33	1.10	2s.11d.	2.00	.99
Lemon (1 large)	.05	.25	5d.	.40	.15
Grapefruit (1 large)	.15	(1)	10d.	.80	.55
DRIED FRUIT					
Prunes	0.92	2.00	5s. 2d.	5.60	3.32
Raisins	.81	1.85	4s. 3d.	4.55	1.96
Figs	.77	1.78	2s. 9d.	4.80	3.60
PRESERVED FRUIT					
Canned peaches	0.44	1.26	2s.11d.	7.10	1.45
Canned plums	.59	1.17	3s. 1d.	5.40	1.48
Strawberry jam	1.30	1.44	4s. 3d.	3.66	3.11
CONDIMENTS					
Salt	0.24	0.10	1s. 1d.	0.50	0.54
Pepper (50 grams)	.35	.40	1s. 2d.	2.00	.75
Mustard (100 grams)	.08	.16	1s. 8d.	4.50	.25
Vinegar (1 liter)	.31	.96	1s. 7d.	.98	1.29
Mayonnaise (100 grams)	.17	.18	9d.	2.00	.65
TEA, COFFEE, COCOA					
Tea (100 grams)	0.40	0.60	1s. 5d.	3.00	1.70
Ground coffee	1.76	4.50	15s. 5d.	9.92	10.00
Instant coffee (50 grams)	.60	(1)	2s. 2d.	4.75	5.85
Cocoa	1.70	9.10	9s. 2d.	6.00	12.00
OTHER BEVERAGES					
Red wine (1 liter)	1.05	3.29	8s. 0d.	1.52	2.48
White wine (1 liter)	1.05	3.16	8s. 0d.	1.75	1.98
Beer (1 liter)	.47	.74	3s. 2d.	1.00	1.10
Cognac (1 liter)	10.77	12.24	62s. 9d.	38.67	23.95
Gin, vodka, etc. (1 liter)	5.24	6.14	44s. 6d.	20.00	15.10
Mineral water (1 liter)	(1)	.24	1s. 4d.	.70	.60
Apple juice (1 liter)	.23	.54	5s. 1d.	1.20	.90
Cola (1 liter)	.39	.26	1s. 7d.	1.28	1.00

See footnotes at end of table, p. 268.

Retail prices of goods and services in local currencies—Continued

TOBACCO

[Except where otherwise noted, unit of measurment equals 1 kilogram]

	New York (dollars)	Moscow (rubles)	London (sterling)	Paris (francs)	Munich (DM)
Cigarettes (20)	0.40	0.14	4s. 6d.	1.35	1.81
Pipe tobacco (100 grams)	.54	1.37	23s. 1d.	4.13	2.00
TOILET REQUISITES, ETC.					
Toilet soap (1 small bar)	0.10	0.14	11d.	0.90	0.80
Soap powder	.67	(1)	4s. 6d.	3.22	3.87
Toothpaste (100 grams)	.49	.25	3s. 5d.	2.25	2.04
Scouring powder	.21	(1)	1s. 4d.	1.50	1.00
Razor blades (10)	.89	.50	3s. 3d.	1.80	3.00
Cotton wool	.49	(1)	4s. 7d.	7.50	8.00
Lavatory paper (1 roll)	.13	.26	10d.	1.30	1.00
Oral contraceptives (1 month's supply)	2.00	.60	8s. 0d.	7.20	4.00
Lipstick	1.00	1.20	8s. 6d.	8.50	7.25
Aspirin (100 tablets)	.59	.64	1s. 0d.	3.45	6.00
Nail varnish (½ fluid ounce)	1.00	.40	9s. 0d.	9.00	4.25
TRANSPORT					
Medium car (no extras)	1,839.00	4,511.25	£625. 0s. 0d.	8,179.00	5,175.00
Small car (no extras)	1,650.00	2,220.00	£478. 0s. 0d.	6,611.00	4,485.00
Annual insurance of medium car	139.20	(1)	£35. 0s. 0d.	1,005.00	375.00
Annual insurance of small car	125.20	(1)	£28. 0s. 0d.	820.00	298.00
Annual road tax for medium car	25.00	(1)	£17.10s. 0d.	79.20	159.00
Annual road tax for small car	12.00	(1)	£17.10s. 0d.	52.80	173.00
High-octane gasoline (1 liter)	.09	.11	1s. 4d.	1.03	.63
Normal gasoline (1 liter)	.08	.07	1s. 3d.	.94	.57
Car wash	1.00	(1)	7s. 6d.	12.00	6.00
Puncture repair (no wheel change)	1.00	(1)	7s. 6d.	6.50	3.50
1 month's garaging	25.00	(1)	80s. 0d.	87.00	45.00
Taxi fare for 2 miles (3 kilometers)	1.00	.30	4s. 6d.	3.20	3.00
Bus fare for 2 miles (3 kilometers)	.20	.05	8d.	.28	.50
Subway fare for 2 miles (3 kilometers)	.20	.05	8d.	.37	(1)
1st-class train fare (100 kilometers)	3.75	5.90	32s. 8d.	11.50	13.20
Air fare, coach (300 kilometers)	16.12	4.97	100s. 0d.	127.00	142.00
MISCELLANEOUS					
Nylon stockings (1 pair)	0.59	3.30	2s.11d.	1.50	2.95
Electric light bulb (100 watts)	.35	.30	2s. 0d.	1.70	1.45
Morning paper	.10	.03	6d.	.30	.40
Suburban movies (best seat)	1.50	.50	7s. 6d.	4.00	3.50
HOUSING AND SERVICES					
Monthly rent of apartment (1 square meter)	1.50	0.18	13s. 0d.	10.50	5.00
Electricity (1 kilowatt-hour)	.03	.04	2d.	.39	.11
Gas (100 cubic meters)	(1)	2.00	11s. 6d.	35.00	28.00
Fuel oil (100 liters)	3.70	3.48	35s. 2d.	17.00	11.80
Monthly telephone rent [2]	6.00	1.38	23s. 0d.	28.50	18.00
Coin-operated local call	.10	.02	6d.	.50	.20
Annual television and radio license	none	(1)	100s. 0d.	130.00	84.00
Diaper service (1 month) [3]	15.00	(1)	60s. 0d.	95.00	48.00
Internal letter post	.05	.04	4d.	.30	.30
Laundering of shirt	.25	.22	2s. 1d.	1.40	1.20
Launderette (1 hour, machine full)	.30	(1)	2s. 0d.	12.00	8.00
Dry cleaning of man's overcoat	1.25	2.75	9s. 6d.	9.00	11.00
Baby sitter (1 hour, excluding fare)	1.00	.75	4s. 6d.	4.00	3.50
Cleaning woman (1 hour)	1.75	(1)	5s. 0d.	5.00	4.00
Men's haircut	2.00	.19	5s. 0d.	4.20	3.00
Women's hair shampoo and set	5.00	(1)	10s. 6d.	12.00	6.00
Women's manicure	2.00	.38	6s. 0d.	8.00	4.00

[1] No data available.
[2] New York charge includes 75 local calls.
[3] No nappies supplied in London.

In the following table, these prices have been converted to U.S. dollars at roughly the prevailing official rates of exchange; i.e., one U.S. dollar has been taken as the equivalent of 90 kopeks, 7s. 1½d., 5 French francs, and 4 marks.

Retail prices of goods and services converted to U.S. dollars

GRAIN PRODUCTS

[Except where otherwise noted, unit of measurement equals 1 kilogram]

	New York	Moscow	London	Paris	Munich
Wheat flour	0.24	0.46	0.19	0.23	0.29
White bread (unwrapped)	.55	.56	.26	.17	.55
Rye bread (unwrapped)	.73	.27	.26	.46	.31
Noodles	.70	.58	.36	.50	1.05
Polished rice	.55	.87	.47	.48	.50
Corn flakes	.94	.89	.60	2.25	1.41
Oatmeal or buckwheat	.44	.20	.26	.63	.55
MEAT AND POULTRY					
Beef (best available)	1.87	2.22	1.65	3.60	4.50
Veal	1.74	2.56	2.16	4.80	1.93
Roasting pork	1.52	2.33	3.24	3.36	1.88
Stewing mutton	1.31	2.11	.92	(1)	3.00
Lamb	1.96	2.78	1.33	4.40	3.50
Chicken	.87	2.94	.90	1.36	1.50
Goose	1.96	1.78	(1)	1.60	1.55
Duck	1.31	2.11	1.24	2.00	1.38
Turkey	1.10	3.06	1.20	1.80	1.70
Bacon (lean, sliced)	2.18	3.00	1.49	3.80	3.75
Ham (best available)	3.30	4.11	2.47	3.51	3.40
Minced beef or hamburger	1.52	2.22	.79	2.14	1.75
Canned corned beef	1.52	1.67	1.65	1.82	2.03
Canned luncheon meat	1.10	3.17	1.24	3.12	1.52
Sausages (commonest variety)	1.96	2.78	1.03	2.75	1.30
FISH					
Fresh salmon	1.96	8.44	2.93	2.56	0.65
Fresh herring	1.65	1.72	.62	.70	.38
Fresh cod	1.54	.86	2.01	1.70	.88
Canned salmon	1.54	(1)	2.24	4.07	3.40
Canned herring	1.21	3.24	1.28	1.02	1.18
Canned tuna	1.80	3.56	1.75	3.06	1.98
Canned sardines	1.98	5.33	1.68	2.20	3.50
SUGAR AND CONFECTIONERY					
White sugar	0.27	1.16	0.21	0.26	0.31
Plain chocolate (100-gram bar)	.28	.89	.14	.10	.16
Boiled sweets	1.65	3.89	1.24	1.47	.59
Vanilla ice cream	1.05	2.22	.53	1.80	2.20
FATS					
Butter	1.85	3.67	0.88	2.32	2.00
Vegetable oil (1 liter)	.51	2.20	.69	.52	.66
Margarine	.90	1.83	.51	.78	.72
MILK AND MILK PRODUCTS					
Fresh milk (1 liter)	0.26	0.31	0.23	0.17	0.20
Cream (1 liter)	1.20	1.22	.79	1.70	1.25
Yoghurt	.88	.33	.74	.64	.41
Gouda-type cheese	1.87	3.56	.92	1.70	2.19
Cottage-type cheese	1.36	2.13	.75	2.25	1.13
Camembert-type cheese	2.97	(1)	1.72	1.61	1.50

See footnotes at end of table, p. 271.

Retail prices of goods and services converted to U.S. dollars—Continued

EGGS

[Except where otherwise noted, unit of measurement equals 1 kilogram]

	New York	Moscow	London	Paris	Munich
Eggs (largest, 1 dozen)	0.56	1.67	0.56	0.67	0.65
Eggs (cheapest, 1 dozen)	.39	1.44	.42	.43	.48
VEGETABLES					
Potatoes (old)	0.15	0.11	0.13	0.09	0.08
Carrots	.33	.15	.14	.14	.33
Cabbage	.40	.09	.23	.32	.23
Onions	.22	.56	.30	.37	.35
Beetroot	.66	.22	.21	.30	.45
Tomatoes	.64	.89	.88	.63	.73
FRESH FRUIT					
Eating apples	0.29	1.67	0.47	0.28	0.55
Oranges	.29	1.56	.41	.44	.35
Bananas	.33	1.22	.41	.40	.25
Lemon (1 large)	.05	.28	.06	.08	.03
Grapefruit (1 large)	.15	(1)	.12	.16	.14
DRIED FRUIT					
Prunes	0.92	2.22	0.72	1.12	0.83
Raisins	.81	2.06	.60	.91	.49
Figs	.77	1.98	.39	.96	.90
PRESERVED FRUIT					
Canned peaches	0.44	1.40	0.41	1.42	0.36
Canned plums	.59	1.30	.43	.90	.37
Strawberry jam	1.30	1.60	.60	.73	.78
CONDIMENTS					
Salt	0.24	0.11	0.15	0.10	0.65
Pepper (50 grams)	.35	.44	.16	.40	.19
Mustard (100 grams)	.08	.18	.23	.90	.06
Vinegar (1 liter)	.31	1.07	.22	.20	.32
Mayonnaise (100 grams)	.17	.20	.11	.40	.16
TEA, COFFEE, COCOA					
Tea (100 grams)	0.40	0.67	0.20	0.60	0.43
Ground coffee	1.76	5.00	2.16	1.98	2.50
Instant coffee (50 grams)	.60	(1)	.30	.95	1.46
Cocoa	1.70	10.11	1.28	1.20	3.00
OTHER BEVERAGES					
Red wine (1 liter)	1.05	3.64	1.12	0.30	0.62
White wine (1 liter)	1.05	3.51	1.12	.35	.50
Beer (1 liter)	.47	.82	.44	.20	.28
Cognac (1 liter)	10.77	13.60	8.80	7.73	5.99
Gin, vodka, etc. (1 liter)	5.24	6.82	6.23	4.00	3.78
Mineral water (1 liter)	(1)	.27	.19	.14	.15
Apple juice (1 liter)	.23	.60	.71	.24	.23
Cola (1 liter)	.39	.29	.22	.26	.25
TOBACCO					
Cigarettes (20)	0.40	0.16	0.63	0.27	0.45
Pipe tobacco (100 grams)	.54	1.52	3.23	.83	.50

See footnotes at end of table, p. 271.

Retail prices of goods and services converted to U.S. dollars—Continued

TOILET REQUISITES, ETC.

[Except where otherwise noted, unit of measurment equals 1 kilogram]

	New York	Moscow	London	Paris	Munich
Toilet soap (1 small bar)	0.10	0.16	0.13	0.18	0.20
Soap powder	.67	(1)	.63	.64	.97
Toothpaste (100 grams)	.49	.28	.48	.45	.51
Scouring powder	.21	(1)	.19	.30	.25
Razor blades (10)	.89	.55	.46	.36	.75
Cotton wool	.49	(1)	.64	1.50	2.00
Lavatory paper (1 roll)	.13	.29	.12	.26	.25
Oral contraceptives (1 month's supply)	2.00	.67	1.12	1.44	1.00
Lipstick	1.00	1.33	1.19	1.70	1.81
Aspirin (100 tablets)	.59	.71	.14	.69	1.50
Nail varnish (½ fluid ounce)	1.00	.44	1.26	1.80	1.06
TRANSPORT					
Medium car (no extras)	1,839.00	5,012.50	1,750.00	1,635.80	1,293.75
Small car (no extras)	1,650.00	2,466.60	1,338.40	1,322.20	1,121.25
Annual insurance of medium car	139.20	(1)	98.00	201.00	93.75
Annual insurance of small car	125.20	(1)	78.40	164.00	74.50
Annual road tax for medium car	25.00	(1)	49.00	15.84	39.75
Annual road tax for small car	12.00	(1)	49.00	10.56	43.25
High-octane gasoline (1 liter)	.09	.12	.19	.21	.16
Normal gasoline (1 liter)	.08	.08	.18	.19	.14
Car wash	1.00	(1)	1.05	2.40	1.50
Puncture repair (no wheel change)	1.00	(1)	1.05	1.30	.88
One month's garaging	25.00	(1)	11.20	17.40	11.25
Taxi fare for 2 miles (3 kilometers)	1.00	.33	.63	.64	.75
Bus fare for 2 miles (3 kilometers)	.20	.06	.09	.06	.13
Subway fare for 2 miles (3 kilometers)	.20	.06	.09	.07	----------
1st-class train fare (100 kilometers)	3.75	6.56	4.57	2.30	3.30
Air fare, coach (300 kilometers)	16.12	5.52	14.00	25.40	35.50
MISCELLANEOUS					
Nylon stockings (1 pair)	0.59	3.67	0.41	0.30	0.74
Electric light bulb (100 watts)	.35	.33	.28	.34	.36
Morning paper	.10	.03	.07	.06	.10
Suburban movies (best seat)	1.50	.56	1.05	.80	.88
HOUSING AND SERVICES					
Monthly rent of apartment (1 square meter)	1.50	0.20	1.82	2.10	1.25
Electricity (1 kilowatt-hour)	.03	.04	.02	.08	.03
Gas (100 cubic meters)	(1)	2.22	1.61	7.00	7.00
Fuel oil (100 liters)	3.70	3.85	4.92	3.40	2.95
Monthly telephone rent [2]	6.00	1.53	3.22	5.70	4.50
Coin-operated local call	.10	.02	.07	.10	.05
Annual television and radio license	none	(1)	14.00	26.00	21.00
Diaper service (1 month) [3]	15.00	(1)	8.40	19.00	12.00
Internal letter post	.05	.04	.05	.06	.08
Laundering of shirt	.25	.24	.29	.28	.30
Launderette (1 hour, machine full)	.30	(1)	.28	2.40	2.00
Dry cleaning of man's overcoat	1.25	3.06	1.33	1.80	2.75
Baby sitter (1 hour, excluding fare)	1.00	(1)	.70	1.00	1.00
Cleaning woman (1 hour)	1.75	(1)	.70	1.00	1.00
Men's haircut	2.00	.21	.70	.84	.75
Women's hair shampoo and set	5.00	(1)	1.47	2.40	1.50
Women's manicure	2.00	.42	.84	1.60	1.00

[1] No data available.
[2] New York charge includes 75 local calls.
[3] No nappies supplied in London.

In the following table, these prices are expressed in terms of the working time which the average industrial worker of the respective country must put in to purchase the item. For this purpose, the average earnings net of income tax for male and female industrial workers as at mid-1966 have been used. The figures for the Western countries

were derived from the gross earnings listed in United Nations statistics and from income tax rates obtained from authoritative sources. For Soviet earnings, the figures given by the central statistical authority have been used and the tax rates drawn from an economic encyclopedia. In all cases, the rates of tax used were those applicable to a worker with a wife and two children under 16 years of age.

Retail prices of goods and services expressed in terms of minutes of working time

GRAIN PRODUCTS

[Except where otherwise noted, unit of measurement equals 1 kilogram]

	New York	Moscow	London	Paris	Munich
Wheat flour	6	46	10	22	16
White bread (unwrapped)	13	56	13	16	31
Rye bread (unwrapped)	17	27	13	43	17
Noodles	17	58	18	47	59
Polished rice	13	87	24	45	28
Corn flakes	22	89	30	210	79
Oatmeal or buckwheat	11	20	13	59	31
MEAT AND POULTRY					
Beef (best available)	45	222	83	337	252
Veal	42	256	108	449	108
Roasting pork	36	233	162	314	106
Stewing mutton	31	211	46	(1)	169
Lamb	47	278	67	411	197
Chicken	21	294	45	127	84
Goose	47	178	(1)	150	87
Duck	31	211	62	187	78
Turkey	26	306	60	168	96
Bacon (lean, sliced)	52	300	75	355	211
Ham (best available)	79	411	124	328	191
Minced beef or hamburger	36	222	40	200	98
Canned corned beef	36	167	83	170	114
Canned luncheon meat	26	317	62	292	85
Sausages (commonest variety)	47	278	52	257	73
FISH					
Fresh Salmon	47	844	147	239	37
Fresh herring	39	172	31	65	21
Fresh cod	37	86	101	159	49
Canned salmon	37	(1)	112	381	191
Canned herring	29	324	64	95	66
Canned tuna	43	356	88	236	111
Canned sardines	47	533	84	206	197
SUGAR AND CONFECTIONERY					
White sugar	6	116	11	24	17
Plain chocolate (100-gram bar)	7	89	7	9	9
Boiled sweets	39	389	62	137	33
Vanilla ice cream	25	222	27	168	124
FATS					
Butter	44	367	44	217	112
Vegetable oil (1 liter)	12	220	35	49	37
Margarine	22	183	26	73	40
MILK AND MILK PRODUCTS					
Fresh milk (1 liter)	6	31	12	16	11
Cream (1 liter)	29	122	40	159	70
Yoghurt	21	33	37	60	23
Gouda-type cheese	45	356	46	159	123
Cottage-type cheese	33	213	38	210	64
Camembert-type cheese	71	(1)	86	151	84

See footnotes at end of table, p. 274.

Retail prices of goods and services expressed in terms of minutes of working time—Con.

EGGS

[Except where otherwise noted, unit of measurement equals 1 kilogram]

	New York	Moscow	London	Paris	Munich
Eggs (largest, 1 dozen)	13	167	28	63	37
Eggs (cheapest, 1 dozen)	9	144	21	40	27
VEGETABLES					
Potatoes (old)	4	11	7	8	4
Carrots	8	15	7	13	19
Cabbage	10	9	12	30	13
Onions	5	56	15	35	20
Beetroot	16	22	11	28	25
Tomatoes	15	89	44	59	41
FRESH FRUIT					
Eating apples	7	167	24	26	31
Oranges	7	156	21	41	20
Bananas	8	122	21	37	14
Lemon (1 large)	1	28	3	7	2
Grapefruit (1 large)	4	(1)	6	15	8
DRIED FRUIT					
Prunes	22	222	36	105	47
Raisins	19	206	30	85	28
Figs	18	198	20	90	51
PRESERVED FRUIT					
Canned peaches	11	140	21	133	20
Canned plums	14	130	22	84	21
Strawberry Jam	31	160	30	68	44
CONDIMENTS					
Salt	6	11	8	9	37
Pepper (50 grams)	8	44	8	37	11
Mustard (100 grams)	2	18	12	84	3
Vinegar (1 liter)	7	107	11	19	18
Mayonnaise (100 grams)	4	20	6	37	9
TEA, COFFEE, COCOA					
Tea (100 grams)	10	67	10	56	24
Ground coffee	42	500	113	185	141
Instant coffee (50 grams)	14	(1)	15	89	82
Cocoa	41	1,011	64	112	169
OTHER BEVERAGES					
Red wine (1 liter)	25	364	56	28	35
White wine (1 liter)	25	351	56	33	28
Beer (1 liter)	11	82	22	19	16
Cognac (1 liter)	257	1,360	440	723	337
Gin, vodka, etc. (1 liter)	125	682	312	374	212
Mineral water (1 liter)	(1)	27	10	13	8
Apple juice (1 liter)	5	60	36	22	13
Cola (1 liter)	9	29	11	24	14
TOBACCO					
Cigarettes (20)	10	16	32	25	25
Pipe tobacco (100 grams)	13	152	162	78	28

See footnotes at end of table, p. 274.

Retail prices of goods and services expressed in terms of minutes of working time—Con.

TOILET REQUISITES, ETC.

[Except where otherwise noted, unit of measurement equals 1 kilogram]

	New York	Moscow	London	Paris	Munich
Toilet soap (1 small bar)	2	16	7	17	11
Soap powder	16	(1)	32	60	55
Toothpaste (100 g.)	12	28	24	42	29
Scouring powder	5	(1)	7	17	11
Razor blades (10)	21	55	23	34	42
Cotton wool	12	(1)	32	140	112
Lavatory paper (1 roll)	3	29	6	24	14
Oral contraceptives (1 month's supply)	48	67	56	135	56
Lipstick	24	133	60	159	102
Aspirin (100 tablets)	14	71	7	65	84
Nail varnish (½ fluid oz.)	24	44	63	168	60
TRANSPORT					
Medium car (no extras) (months)	4.1	47.3	7.3	12.9	6.4
Small car (no extras) (months)	3.6	23.3	5.6	10.4	5.5
Annual insurance of medium car	3,327	(1)	4,900	18,794	5,269
Annual insurance of small car	2,992	(1)	3,920	15,334	4,187
Annual road tax for medium car	598	(1)	2,450	1,481	2,234
Annual road tax for small car	287	(1)	2,450	987	2,431
High-octane gasoline (1 l.)	2	12	10	20	9
Normal gasoline (1 l.)	2	8	9	18	8
Carwash	24	(1)	53	224	84
Puncture repair (no wheel change)	24	(1)	53	122	49
1 month's garaging	597	(1)	560	1,627	632
Taxi fare for 2 miles (3 km.)	24	33	32	60	42
Bus fare for 2 miles (3 km.)	5	6	5	6	7
Subway fare for 2 miles (3 km.)	5	6	5	7	(1)
1st-class train fare (100 km.)	90	656	229	215	185
Air fare, coach (300 km.)	385	552	700	2,375	1,995
MISCELLANEOUS					
Nylon stockings (1 pair)	14	367	21	28	42
Electric light bulb (100 watts)	8	33	14	32	20
Morning paper	2	3	4	6	6
Suburban movies (best seat)	36	56	53	75	49
HOUSING AND SERVICES					
Monthly rent of apartment (1 square meter)	36	20	91	196	70
Electricity (1 kilowatt-hour)	1	4	1	7	2
Gas (100 cubic meters)	(1)	222	81	655	393
Fuel oil (100 liters)	88	385	246	318	166
Monthly telephone rent [2]	143	152	161	533	253
Coin-operated local call	2	2	4	9	3
Annual television and radio license	(3)	(1)	700	2,431	1,180
Diaper service (1 month) [4]	359	(1)	420	1,777	674
Internal letter post	1	4	3	6	4
Laundering of shirt	6	24	15	26	17
Launderette (1 hour, machine full)	7	(1)	14	224	112
Dry cleaning of man's overcoat	30	306	67	168	155
Baby sitter (1 hour, excluding fare)	24	(1)	35	94	56
Cleaning woman (1 hour)	42	(1)	35	94	56
Men's haircut	48	21	35	79	42
Women's hair shampoo and set	120	(1)	74	224	84
Women's manicure	48	42	42	150	56

[1] No data available.
[2] New York charge includes 75 local calls.
[3] None.
[4] No nappies supplied in London.

Average Earnings

The data on average earnings in these five countries used in the last table refer, as stated, to mid-1966, and are the latest definitive data to hand. The average gross earnings in industry for the four

Western countries are given in a United Nations source.[3] For the United States, France, and Germany, the figures refer to male and female workers, while the British earnings refer to male workers only; however, since we are applying these rates to retail prices observed in April–May 1967, this discrepancy is partially offset by the wage freeze applied in Britain in June 1966. The average monthly earnings of male and female industrial workers in the U.S.S.R. in 1966 were 104.3 rubles.[4] Using the U.N. figures for hourly earnings and weekly hours of work in the Western countries and accepting the central statistical authority's data for Soviet earnings, we arrive at the following picture of gross monthly earnings in mid-1966:

	Hours worked and rate	Earnings
U.S.A.	180.3 hours at $2.71 per hour	$488.61.
U.S.S.R.	177.7 hours at 59 kopeks per hour	104.30 rubles.
Great Britain	199.3 hours at 9s.1d. per hour	£90.10s.3d.
France	200.2 hours at 3.18 francs per hour	636.64 francs.
Germany	190.7 hours at DM 4.46 per hour	DM 850.52.

The income tax payable by a worker with three dependants on these gross monthly earnings in mid-1966 was: in the U.S.A., $35.20;[5] in the U.S.S.R., 8.76 rubles;[6] in Great Britain, £4.15s.4d.;[7] in France, none;[8] and in Germany, DM 37.80.[9] Applying these rates, we arrive at the following net earnings (with dollar equivalents at the official rates of exchange):

	Hourly	Monthly
U.S.A.	$2.51	$453.41.
U.S.S.R.	0.54 rubles ($0.60)	95.54 rubles ($106.16).
Great Britain	8s.7d. ($1.20)	£ 85.14s.11d. ($240.09).
France	3.18 francs ($0.64)	636.64 francs ($127.33).
Germany	DM 4.26 ($1.07)	DM 812.72 ($203.18).

These are, of course, imperfect measures. They do not take into account the compulsory deductions for social security schemes, national health contributions, etc., paid by Western but not by Soviet workers. What is more important, they ignore the receipt of transfer payments which make up a considerably larger portion of the total incomes of West European and even more of Soviet workers than of their U.S. counterparts. For example, the Central Statistical Authority estimates that the average Soviet worker (wage or salary earner) receives payments from the "social funds (*obshchestvennye fondy*)" to the value of 35 rubles a month; i.e., equivalent to 35 percent of his monetary earnings.[10] In addition to receiving an impressive non-contributory pension, free education, and medical care which is also free though it excludes the cost of drugs and medicines, the Soviet worker pays an apartment rent which is heavily subsidized by the state. Similarly, in France the average worker with three dependents

[3] *Monthly Bulletin of Statistics*, United Nations, New York, January 1967, pp. 132–133.
[4] *S.S.S.R. v tsifrakh v 1966 godu: Kratky statistichesky shornik* (The U.S.S.R. in Figures in 1966: A Concise Statistical Compilation), Moscow, 1967, p. 147.
[5] *1967 U.S. Master Tax Guide*, New York, 1966.
[6] *Ekonomicheskaya Entsiklopediya: Promyshlennost, stroitelstvo* (Economic Encyclopedia: Industry, Construction), vol. II, Moscow, 1964, p. 510.
[7] *Residence in Britain: Notes for the Guidance of Persons from Overseas*, London, 1965.
[8] *Guide fiscal 1967*, Paris, 1967.
[9] *Lohnsteuer-Tabelle für 1965*, Munich, 1965.
[10] *S.S.S.R. v tsifrakh v. 1966 godu*, p. 146.

would qualify for considerable family allowances. The value of these transfer payments was not included in the average earnings simply because the author was unable to quantify them for the Western wage earners. Another factor which should be borne in mind when assessing Soviet living standards in relation to those in the West is the higher proportion of women who work outside the home in the U.S.S.R.: there are 1.6 wage earners in the average urban Soviet family.[11]

The Weekly Family Food Basket

In order to give a rough idea of what the week's food supplies in the five cities of reference would cost in terms of dollars and hours of working time, we have compiled an "international median" food basket containing 1 week's supply of staple foodstuffs for a family of two adults and two teenage children. The contents, set out below, are qualitatively below the standard U.S. diet and above the average Soviet level.[12]

Wheat flour	2 kilograms	Margarine	1 kilogram
White bread	3 kilograms	Milk	10 liters
Macaroni	1 kilogram	Cheese (gouda)	500 grams
Beef	Do.	Eggs	2 dozen
Pork	Do.	Potatoes	5 kilograms
Chicken	Do.	Apples	1 kilogram
Cooked ham	500 grams	Oranges	Do.
Sugar	1 kilogram	Bananas	Do.
Cocoa	100 grams	Tea	100 grams
Butter	500 grams	Coffee (ground)	500 grams

The cost of these provisions, expressed in U.S. dollars and in hours of working time, in April–May 1967 was as follows:

	Cost (dollars)	Working time (hours)
New York	18.27	7.3
Moscow	34.60	59.2
London	16.66	13.9
Paris	20.54	32.1
Munich	22.48	21.0

In July 1964, the author made a similar comparison of prices, but differences in the type of store sampled and in the sources used do not allow us to attempt an assessment of changes that have taken place in prices and average net earnings since that time. It is hoped that this will be possible in forthcoming surveys.

Source: Keith Bush, in *Bulletin* of the Institute for the Study of the U.S.S.R., Munich. November 1967, pp. 27–40.

[11] *Narodnoye khozyaistvo SSSR v. 1965 godu: Statisticheskiy yezhegodnik* (the National Economy of the U.S.S.R. in 1965: A Statistical Yearbook), Moscow, 1966, p. 566.

[12] See, for example, the data on *per capita* consumption, *ibid.*, p. 597.

2. SIGNIFICANT SOVIET WAGE AND OTHER LABOR DATA FOR 1965

Earnings and Benefits

A figure on average monthly money earnings of all wage and salary earners in the Soviet Union was included for the first time in the annual economic report of the Central Statistical Office of the U.S.S.R. Council of Ministers. Monthly earnings for 1965 were reported to average 95 rubles (about US$106).[1]

The 1965 economic report was published in the Soviet press on February 3, 1966. The Soviet statistical yearbook for 1964,[2] which was first available in January 1966, reported a series of monthly average earnings figures, including the 1964 figure of 90.1 rubles (US$100). (See table 1.) The 1965 economic report repeated only the 1964 figure and stated that the increase in earnings between 1964 and 1965 had been 5.8 percent.

The last previous official earnings figure, quoted in Soviet publications for many years, was the 1940 average yearly earnings figure of 405.40 rubles (in present day rubles), or about 34 rubles (US$38) per month. (The 1964 yearbook gives the figure of 33.1 rubles.) Because the Government had fixed prices at a higher level in the postwar years, the purchasing power of the 1940 and 1965 earnings figures is not comparable. The last time extensive retail prices of consumer goods were published was in the price fixing decree of the Council of Ministers of December 14, 1947 (printed in the Communist Party daily *Pravda* on the same day).

Source: *Labor Developments Abroad*, Bureau of Labor Statistics, Dept. of Labor, April 1966.

The 1965 economic report stated that Government expenditures for free or subsidized consumer services and benefits (such as free medical services, tuition, and social security benefits) actually raised average monthly earnings from 95 to 128 rubles (US$142). These services and benefits would apparently amount to nearly 35 percent of average money earnings. In 1948, the ratio claimed was 38 percent.

Figures for overall average monthly earnings (monetary earnings plus Government benefits) are also presented in the 1964 yearbook for selected years during the period 1940–64 (table 1). The yearbook also states (p. 554) that there are, on the average, about 1.6 wage and salary earners per family in the Soviet Union, so that the average family had overall average monthly earnings of 194 rubles (US$216) in 1964.

[1] At the official rate of exchange, 1 ruble equals US$1.11, as fixed by the Soviet Government.
[2] *Narodnoe khoziaistvo SSSR v. 1964 g.* [*The National Economy of the U.S.S.R. in 1964*] (Moscow, 1965).

TABLE 1.—*Average monthly earnings of wage and salaried workers in the U.S.S.R. national economy, with and without additional Government payments and benefits, selected years, 1940–64* [1]

[In rubles]

Year	Monthly average	
	Money earnings	Money earnings with addition of payments and benefits
1940	33.1	40.7
1946	47.5	62.4
1950	63.9	82.4
1955	71.5	91.8
1958	77.8	104.4
1959	79.0	106.7
1960	80.1	107.7
1961	83.4	111.7
1962	86.2	115.7
1963	87.6	118.0
1964	90.1	121.0

[1] The 1964 yearbook states (p. 824) that the average monthly money earnings were calculated by dividing the allocated wages fund by the average number of persons employed, including persons on sick leave who were paid from social security funds.

SOURCE: *Narodnoe khoziaistvo SSSR v 1964 g.* [*The National Economy of the U.S.S.R. in 1964*] (Moscow, 1965), p. 555.

The 1964 yearbook, in presenting a table of average monthly monetary earnings by branches of the national economy (shown below as table 2), stated that (a) in recent years, measures had been taken to regulate and increase wages and salaries, (b) by the beginning of 1962, wages and salaries had been regulated in the production branches of industry, construction, transportation, agriculture, and certain other sectors, and (c) beginning with November 1, 1964, and during 1965, wages were increased in the service sector.

TABLE 2.—*Average monthly money earnings of wage and salaried workers, by branches of the U.S.S.R. national economy, 1958, 1960, 1963, and 1964*

[In rubles]

Branch of national economy	1958	1960	1963	1964
National economy as a whole	77.8	80.1	87.6	90.1
Industry (all personnel in production)	87.1	91.3	98.4	100.5
Wage earners	85.3	89.8	96.5	98.7
Construction (all personnel in production)	86.7	91.7	101.6	106.0
Wage earners	83.3	88.7	98.3	103.0
State farms and other state-owned agricultural enterprises	53.1	53.9	67.1	70.6
Transportation	82.3	86.7	99.3	102.2
Railway	80.7	82.4	94.6	96.3
Water	97.9	106.0	128.3	131.6
Automobile, city transit, trucking	79.7	78.8	99.6	103.0
Communications	58.0	62.3	72.5	73.3
Trade, restaurants, material, and technical supplies	58.1	58.6	64.5	65.7
Housing and public utilities	55.4	57.6	62.6	64.5
Health services	58.9	58.9	62.0	65.3
Educational services	69.4	69.9	75.3	78.5
Science and science services	105.9	104.2	109.7	112.0
Credit and insurance establishments	72.1	70.3	78.1	79.0
Administrative staffs of the state, cooperatives, and public organizations	84.2	85.6	93.6	95.8

SOURCE: *Narodnoe khoziaistvo S.S.S.R. v 1964 g.* [*The National Economy of the U.S.S.R. in 1964*] Moscow, 1965), p. 555.

The willingness of the Soviet Government to publish concrete average earnings figures may be accounted for by the nationwide comprehensive upward wage adjustments of the past several years.

For example, the report stated that wages were increased in 1964 and 1965 for 20 million workers in the service sector alone of the national economy. Earnings were increased 26 percent, on the average, for persons employed in education; 24 percent for persons in helath protection; and 19 percent for those employed in trade and restaurants. Also, the minimum wage had been rasied gradually, by geographic region, from 27 rubles (U.S. $30) to 40 rubles (U.S. $44), by January 1, 1965.

The Soviet Government still does not publish consumer prices But since prices of goods in the state stores have been observed and reported frequently in the foreign press by visitors to the Soveit Union, the study of the general relation of prices to earnings should now present less difficulty to foreign scholars. The 1965 economic report has taken prices into consideration by stating that real income per capita (including farmers) had increased by 7 percent in 1965. A major part of this increase was due largely to the claimed 16-percent increase in the income of collective farmers during 1965. The 1965 volume of retail sales was claimed to be 10 percent higher than the volume in 1964.

Other Labor Data

The population as of January 1, 1966, was reported as approximately 232 million, or an increase of about 3.0 million during 1965. The average number of wage and salary earners in 1965 was given as 76.9 million, or about 3.6 million more than in 1964. Part of the increase stems from intensive recruiting of housewives in recent years, for employment in the socialized economy.

The report claimed that in 1965 the "social product" (all the material goods produced) was 7 percent greater than in 1964; that the output of all industry had increased 8.6 percent over 1964 (as compared to an increase of 7 percent between 1964 and 1963), and that labor productivity in industry had increased by 5 percent (in 1964, a 4-percent increase). The report admitted that there were a number of shortcomings in industry, where many enterprises had failed to meet their obligations regarding production goals, greater productivity, and capital accumulation.

In the field of worker training, it was claimed that during 1965 about a million workers had been trained in trade and technical schools, and that about 14 million workers (including collective farmers) had increased their qualifications or acquired new skills while on the job.

3. OVERTIME AND LEAVE PROVISIONS IN THE U.S.S.R.*

Overtime Work

The Presidium of the Supreme Council decreed the 5-day workweek in March 1967.[1] While no mention was made about overtime, it may be assumed that such work, which still appears to be considerable, will continue to be forbidden under Soviet law without prior authorization by trade union and public authorities. Overtime work is permitted only in special or urgent circumstances stipulated in the Labor Code.[2] Each worker is limited to 120 hours of overtime work a year. A maximum of 4 hours within 2 consecutive days is allowed, except for seasonal work, where the limit is 4 hours a day and 50 hours a month.[3] Workers under 18 years of age, certain partial invalids, and expectant or nursing mothers are exempt from overtime labor. Overtime work is paid at premium rates, usually time and a half for the ninth and 10th hours and double time for all hours in excess of 10. Overtime pay provisions in forestry provide for time and a quarter for the first 2 hours and time and a half for subsequent hours.[4] Pieceworkers receive a premium of one-half of their base hourly rate for the first 2 overtime hours and the full base rate for each succeeding hour. Compensatory leave may not be given for overtime work except in the case of holiday work, and only at the worker's request.[5] Double time is paid for work on the eight legal holidays and, under certain circumstances, for work on the weekly day of rest (when compensatory time cannot be given).[6] Normally, work on a rest day must be compensated by another day off.

Refusal to work overtime when such work is considered critical is a punishable breach of labor discipline. If the worker believes that management's request for overtime is unreasonable, he may appeal to his trade union committee, to the enterprise's Labor Protection Commission, or to the public labor health inspector.[7]

The Soviet labor press continues to criticize, as of old,[8] managers of enterprises for "storming," or considerable compulsory overtime work in the last days of the month in order to meet production quotas. For example, the trade union daily *Trud* (*Labor*) reported on April 26, 1967, that in one foundry in Nizhne-Tagilsk, workers were compelled to work extra full shifts on the last Saturday and Sunday in March. Paradoxically, the management of this plant had been fined earlier for violating overtime laws, while receiving formal commendation for surpassing other plants in productive output.

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* By Edmund Nash, in *Labor Developments Abroad*, U.S. Dept. of Labor, August 1967.

[1] For discussion of this decree, see *Labor Developments Abroad*, June 1967, pp. 16–19.
[2] For a summary of such circumstances, see *Labor Law and Practice in the U.S.S.R.* (BLS Report 270, 1964), p. 44.
[3] *Sotsialisticheskii Trud* (*Socialist Labor*, a monthly), Moscow, May 1961, p. 138.
[4] E. Astrakhan and others, *Trudovoe Pravo* (*Labor Law*), Moscow, 1964, p. 99.
[5] *Spravochnik profsoyuznogo rabotnika* (*Handbook of the Trade Union Official*), Moscow, 1965, p. 59. Also, *Sotsialisticheskii Trud*, October 1966, p. 138.
[6] Astrakhan, op. cit., p. 100.
[7] Anatoli V. Yarko, *Sverkhurochnye raboty* (*Overtime Work*), Moscow, 1965, p. 12.
[8] See *Monthly Labor Review*, September 1957, p. 1070.

SOURCE: *Labor Developments Abroad* (U.S. Department of Labor), August 1967.

Holidays

The eight legal holidays observed in the U.S.S.R. are as follows:

January 1	New Years's Day.
March 8	International Woman's Day.
May 1 and 2	International Labor Days.
May 9	World War II Victory Day.
November 7 and 8	Anniversary of the 1917 Revolution.
December 5	Constitution Day.

If the worker's day of rest coincides with a holiday, he is not entitled to another day of rest.[9] The March 8 and the May 9 holidays were added in 1965.

Vacations

Before the enactment of the 5-day workweek, all wage and salary earners in the Soviet Union were guaranteed paid annual leave of at least 12 workdays or 2 weeks, provided they had been employed in their enterprise for a minimum of 11 consecutive months [10] and supplied valid excuses for all absences during that period.[11] The change from a 6- to a 5-day workweek includes a longer workday, and apparently will result in a corresponding reduction in the number of workdays of leave. Under the new work schedule, length of leave will be calculated in calendar days instead of the former practice of workdays.[12]

The worker's compensation during his leave corresponds to his average earnings during the 12 calendar months preceding his vacation. Workers under 18 years of age are entitled to 1 calendar month of leave, in the summer if they request it. In certain industries, like mining and metallurgy, blue-collar workers receive 3 extra days of annual leave after 2 consecutive years of employment in the enterprise.[13] Persons in arduous or hazardous jobs are given increased annual leave ranging from 6 to 36 additional days. For example, workers in the far north are granted an extra 18 workdays of annual leave.[14] They also are granted leave without pay to cover travel time to places of vacation. Teachers and scientific research workers are entitled to 48 workdays of leave during the summer.

In 1964, the distribution of leave to wage and salary earners was as follows: [15]

Workdays of leave:	*Percent of workers*
Total	100. 0
12	36. 6
15 to 18	25. 0
21 to 24	24. 9
27 to 39	8. 9
48	4. 4
Over 48	. 2

[9] *Sbornik zakonodatelnykh aktov o trude* (*Collection of Labor Legislation*), Moscow, 1965, p. 229.
[10] Expectant mothers, workers under 18 years of age, new teachers, transferred workers, men discharged from the armed services, and certain others may receive advance leave during the first year at their place of work. (*Trud*, Mar. 23, 1966, p. 3.)
[11] The basic decree on leave of Apr. 30, 1930, is printed in full in *Spravochnik profsoyuznogo rabotnika*, op. cit., pp. 212–219.
[12] *Sovetskie profsoyuzy* (*Soviet Trade Unions*, a semimonthly), No. 15, August 1966, p. 45.
[13] Ibid., pp. 45–46.
[14] V. G. Kamyshev, *Spravochnik molodogo rabochego* (*Handbook for the Young Worker*), Moscow, 1964, p. 55.
[15] *Vestnik statistiki* (*Statistical Herald*), No. 6, June 1965, p. 93.

Annual vacations are staggered in a manner to insure constant and uninterrupted production throughout the year. The management of each enterprise prepares a list by January 1, subject to trade union committee approval,[16] which schedules the vacation of each worker during the calendar year. Approximately 8 percent of the work force is scheduled each month. After 1 year of service, a worker may take leave in advance; should he quit after taking his unearned leave, deductions for the unearned portion of his leave will be made from his last pay check.[17] However, in cases of fire, flood, or other unexpected production stoppages, workers may be required to take their vacations during the shutdown.[18] Workers also may be required to take their vacations at times other than desired, thereby interfering with planned vacations of husbands and wives.[19]

A vacation may be postponed for a valid reason, such as sickness, compulsory state duties, or management's request. However, vacation accrual may not exceed 2 years, except for workers in the far north and contiguous territories.[20] Monetary compensation in lieu of unused annual leave is permitted only in exceptional cases.[21]

Sick Leave

A worker may take paid sick leave only with a doctor's authorization, in the form of a sickness certificate.

A worker usually is entitled to benefits from the first day of incapacity until he returns to his job or until he is declared an invalid [22] (invalids receive special pensions). A new worker who had been discharged from his previous job for violation of labor discipline or for committing a crime is entitled to sickness benefits only after 6 months on the job; however, a job-connected illness entitles him to sickness benefits regardless of his length of service.[23] A worker injured off the job is entitled to sickness benefits beginning on the sixth day of his incapacity.[24]

A work injury or an occupational disease entitles a disabled worker to benefits equal to his full normal average wage for the period of disability, regardless of his length of service or whether he is a trade union member. During illnesses unrelated to work, sickness benefits for nonunion members (about 5 percent of all the workers) are only one-half the amount to which union members are entitled; the latter receive sickness benefits ranging from 50 to 90 percent of average earnings, according to length of employment in the same enterprise. The sickness benefit for non-work-connected illness of workers under 18 years of age is equal to 60 percent of average earnings; and for partial war invalids, 90 percent. Trade union members are guaranteed a minimum monthly sickness benefit of 30 rubles (U.S.$33) in urban areas and 27 rubles (U.S.$30) in nonurban areas.[25]

[16] *Sovetskie profsoyuzy*, No. 12, June 1965. Also, *Trud*, Mar. 23, 1966, p. 3.
[17] A. Fastykovski, *Profsoyuznomu aktivistu o trudovym zakonodatelstve* (*The Trade Union Activist's Book on Labor Legislation*), Moscow, 1964, p. 136.
[18] Kamyshev, op. cit., p. 56.
[19] *Trud*, Mar. 23 1966, p. 3.
[20] *Sovetskie profsoyuzy*, No. 12, June 1964, p. 45.
[21] Ibid., No. 15, August 1966, p. 46.
[22] A. T. Stesin, *Ob otpuskakh rabochikh i sluzhashchikh* (*Concerning Leave of Wage and Salary Earners*), Moscow, 1966, pp. 115-116 and 119.
[23] Ibid., p. 118.
[24] Ibid., p. 119.
[25] Ibid., pp. 120-121.

Up to 3 days' leave with pay to take care of a sick family member is authorized only if the sick person's life is in danger and if neither hospital care or another family member is available to take care of the sick person; a woman worker, however, can take leave to look after a sick child under 2 years of age. The leave may be extended in exceptional cases.[26] Paid leave is granted in cases of quarantine upon presentation of a certificate from the health authorities.[27]

Maternity Leave

Women workers are entitled to 112 calendar days of paid maternity leave—56 days before and 56 days after the birth of the child. The postnatal leave is extended to 70 days after multiple or abnormal births.

During maternity leave, a woman worker receives regular payment, from the state social insurance fund ranging from 66.7 to 100 percent of her average earnings, depending on her length of service, efficiency record, and other considerations. For example, trade union members on maternity leave receive full pay (*a*) if they have 3 years of service including 2 years of continuous employment at their present enterprise or establishment; (*b*) if they are under 18 years of age and have been on their jobs at least 1 year; and (*c*) if they had distinguished themselves in the war or in production.[28] Nonunion members and workers with less than 1 year of service receive two-thirds of their normal average wages for the period of their maternity leave.

Women also have the right to leave without pay for a period of up to 3 months following postnatal leave; this right may be exercised at any time until the child is 1 year old.[29] If annual leave is interrupted by maternity leave, the unused annual leave may be used after the maternity leave.[30]

Leave for School Purposes

Leave for the purpose of taking final evening or correspondence school examinations, of preparing diploma projects or dissertations, and of preparing for Government examinations has played an important role in raising the level of qualifications of workers. In the 1965–66 school year there were 2,276,400 students enrolled in evening and correspondence courses in higher educational institutions (on the college level) throughout the U.S.S.R. and 1,824,000 in secondary specialized schools.[31] Workers pursuing these courses systematically are entitled to both leave with pay (based on the worker's monthly average earnings over the previous 12 months)[32] and leave without pay; no specified length of service at an enterprise is necessary to qualify for such leave.[33] The main requirement for qualification is that workers have made satisfactory progress in their evening or correspondence courses. Leave without pay is granted to cover time to and from the place of examination. Should the worker fail in his final examination, he is not required to return any money he received for leave with pay.[34]

[26] Ibid., p. 122.
[27] Ibid., pp. 116-117.
[28] Ibid., p. 113.
[29] Ibid., p. 123.
[30] Kamyshev, op. cit., p. 57.
[31] *Narodnoe Khoziaistvo SSSR v 1966 g.* (*The National Economy in 1966*), Moscow, 1966, p. 694.
[32] *Sotsialisticheski Trud*, July 1964, p. 129.
[33] Kamyshev, op. cit., p. 50.
[34] *Sotsialisticheski Trud*, May 1966, p. 127.

On the college level, workers taking evening or correspondence courses are entitled to 20 to 40 calendar days of paid leave to complete research projects and to prepare for examinations, depending on what year of study they are in. In addition, they are granted 4 months with pay for the preparation of dissertations and an extra 30 calendar days of leave with pay to take Government examinations. In musical, dramatic, and certain other institutes, longer periods of leave are granted (60 to 142 days, most of the days after 40 to 60 being at half pay).[35] The ceiling on the pay is 100 rubles (US$111) a month. Workers are granted 15 days without pay to prepare for entrance examinations to evening or correspondence schools on the college level.[36]

Workers are granted 10 days to prepare for and take entrance examinations for evening or correspondence secondary specialized schools. They are entitled to 10 to 20 calendar days of leave with pay each year to prepare for evening course examinations, depending on the year of study, and 30 to 40 days, for correspondence course examinations.[37] They are entitled to 2 months' leave with pay to complete diploma research projects, and to 30 days with pay to take Government examinations. The ceiling on the pay is 80 rubles (US$89) a month.

Workers progressing satisfactorily in higher or secondary specialized schools also are entitled to 1 day off with half pay each week for a period of 10 months before their final school examinations or the completion of their diploma research projects. Such workers may request, in addition, 1 or 2 days off without pay each week, and also 1 month without pay (but with a monthly stipend from the school) for the purpose of obtaining new factory experience and of gathering the necessary materials for a diploma project.[38]

Workers studying in the regular 10-grade (nonspecialized) secondary schools are entitled to 20 workdays of leave with pay for graduation examinations; only 8 working days of leave are granted to workers enrolled in the 8-grade elementary school for the purpose of taking graduation examinations.[39]

During the school year, workers enrolled in evening and correspondence courses in secondary schools (grades 9 to 10) are entitled to 1 day off with half pay a week (or an equivalent number of hours off during the week); in rural areas, workers are entitled to 2 days off with half pay a week, or an equivalent number of hours off during the week. These workers, if management can spare them, may ask for another 1 or 2 days off each week, without pay.[40]

On the trade school level, workers are entitled to 30 workdays off each year at half pay in order to prepare for and take examinations.[41]

Supervisory and technical employees who enroll in an evening or correspondence course of at least 10 months' duration for the purpose of increasing their qualifications are entitled to 10 calendar days (and any necessary traveltime) with full pay to prepare for and take the necessary examinations.[42] These employees, in exceptional cases,

[35] Stesin, op. cit., pp. 91-93.
[36] Ibid., pp. 123-124.
[37] Ibid., p. 87.
[38] *Sbornik zakonodatelnykh aktov o trude*, op. cit., p. 171; also, Stesin, op. cit., p. 124.
[39] G. M. Yamenfeld, *Osnovy sovetskogo grazhdanskogo i trudovogo prava* (*Fundamentals of Soviet Civic and Labor Law*), Moscow, 1965, p. 265.
[40] *Sbornik zakonodatelnykh aktov o trude*, op. cit., p. 169; also, Fastykovski, op. cit., p. 118.
[41] Fastykovski, op. cit., p. 119.
[42] Stesin, op. cit., p. 97.

may be granted up to 3 months' leave with pay to acquire skills involving new techniques.[43]

Professors and teachers are entitled to 3 months' additional "creative leave" to complete textbooks or other teaching materials designed to be used widely.[44]

Other Leave

Workers also are entitled to leave with pay for certain civic and other duties, such as (*a*) appearance in court as a witness, expert, or assessor; (*b*) attendance as a delegate to a trade union congress or conference; (*c*) service on the factory labor disputes board; and (*d*) appearance before a military draft board.[45] There are many kinds of special leave without pay in addition to those mentioned earlier. For example, leave without pay of the same duration as his paid leave may be granted to a worker to cover the time of transportation to and stay at a rest home, particularly when the worker has been certified as in need of recuperation, but already has used all his paid leave.[46] Doctors may receive 3 to 4 months' leave without pay from their regular jobs if they have been engaged to work during the summer in rest homes or sanatoriums.[47] A worker also is entitled to up to 3 days' leave without pay if he marries or if his parent, spouse, or child dies.

[43] Fastykovski, op. cit., p. 124.
[44] Ibid., p. 126.
[45] Kamyshev, op. cit., p. 138.
[46] Stesin, op. cit., p. 123.
[47] Ibid., p. 125.

4. MEASURES ADOPTED TO IMPROVE LIVING AND WORKING CONDITIONS IN THE U.S.S.R.*

Steps have been taken in the U.S.S.R. to improve and expand the operation of public service establishments and to insure that workers' complaints regarding working and living conditions are heeded and, if possible, corrected.

The Communist Party daily *Pravda* reported on September 13, 1967, the adoption of a joint party-Government decree "on measures for the further expansion of everyday services to the population." Although public services have been increased in recent years, the decree stated, they are still inadequate to satisfy the growing needs of the Soviet public. Increases were noted, for example, in the number of drycleaning plants, mechanized laundries, dressmaking and tailoring shops, and various other kinds of service (including repair) shops. Among the facilities mentioned in special need of expansion were laundries, repair shops, and public baths. According to *Pravda* (Sept. 16, 1967), the decree is an important step toward realization of the task set by the 23d congress of the party in March 1966 to transform public services into a large-scale, highly developed branch of the national economy. *Pravda* stated that the Soviet economy has grown to the point where possibilities for success are most favorable.

The decree calls upon all party, Government, trade union, and economic bodies in cities and rural areas to promote the improvements of the operation of public service facilities, and during the period 1967–70, to collaborate in the preparation of plans for the establishment of new and the modernization (including automation where possible) of old-fashioned service plants and shops. Enterprises making machinery and equipment for the service industry are directed to manufacture spare parts and list them in illustrated catalogs. Trade unions are asked to include in collective agreements with managements provisions for the improvement of various services to workers. In particular, the decree urges acceleration of the expansion of public services in localities where many women are employed outside the home.

Pravda reported that special orders had been sent to various industrial ministries to prepare equipment for public service establishments; however, it was admitted that many of the ministries were poorly executing the Government tasks. In addition to the call for greater efficiency, the decree also calls upon service workers to be more courteous in their dealings with the public.

Expansion of the network of service shops in the villages is considered especially urgent. The improvement of the economic position of collective and state farms in recent years, the decree asserts, enables them to spend more money on the provision of cultural and other consumer services.

The decree stated that the most serious problem in the public service industry has been the lack of properly trained personnel. The practice of placing unqualified people—those who had failed at other jobs and who had no special training, experience, or vocation for public service work—at the head of public service establishments is particularly harmful. To meet the need for trained personnel, the present

*SOURCE: *Labor Developments Abroad* (U.S. Department of Labor, November 1967.

network of special training schools, courses, and in-training facilities is to be extended. Government departments in charge of public services have been instructed to conduct a campaign to recruit young workers into public work, stressing the high social significance of such work. Komsomol, the national Communist youth organization, will assist in the campaign. The U.S.S.R. ministry of higher and secondary specialized education will designate the universities and secondary specialized schools which are to train the increased number of specialists for public service agencies and establishments that will be called for in the annual economic plans of the 15 constituent Republics of the U.S.S.R. Among those trained will be quality tailors, hairdressers, barbers, and shoemakers.

As a material inducement, the decree provides for increasing wage rates in the service industry. Old-age pensioners who will work in the service industry as order clerks, nurses, or cleaning women will receive their pensions in full, without deduction for earned income. The awarding of honorary diplomas to outstanding service establishments and honorary titles to efficient workers is under consideration.

On September 17, Pravda reported the adoption of a resolution by the Central Committee of the Party "On the Improvement of the Handling of Workers' Letters and Personal Protests." The resolution was clearly designed to spur the improvement of living and working conditions. According to Pravda, many Party, Government, trade union, and economic bodies have not heeded workers' letters of complaint and, as a result, efficient steps to remove the causes and conditions of such complaints have not been taken. Answers to letters of complaint were often long delayed, and promises to individuals complaining in person were frequently made with no intention of fulfilling them. The resolution obligates members of Party, Government, trade union, and other public bodies to carry on a permanent regular check on the prompt and careful treatment of workers' letters addressed to managements of enterprises and establishments. The resolution provides that workers' letters of complaint must be considered, as a rule, within a month from the day of receipt, and definite days and hours must be assigned for the receipt of complaints made in person. Newspapers are obliged to publish complaints and to report on action taken; false complaints are to be exposed and criticized.—Pravda.

5. NEW WAGE, PENSION, AND VACATION PROVISIONS IN THE U.S.S.R.*

Workers in the Soviet Union will receive increases in wages and liberalized pension and vacation benefits beginning on January 1, 1968. Disability pensions for farmers and former members of the armed services also are to be raised in 1968. The joint Government-Party decision granting these improvements was published in the Soviet press on September 17, 1967; implementing legislation appeared in the press 10 days later.[1] It was asserted that the increases in benefits will cost over 6 billion rubles (about U.S.$6.7 billion) in 1968 alone, or about 5 percent of the State budget expenditures in 1968.[2]

WAGES

Minimum monthly earnings of wage and salary earners in all sectors of the economy are to be raised from 40 rubles (U.S.$44.44; at the Soviet Government fixed rate of exchange, 1 ruble=U.S.$1.11) to 60 rubles (U.S.$66.67). The increase fulfills exactly, and rather early, the minimum wage goal set by the 5-year economic plan of 1966–70. Average monthly wages of all workers in 1966 were 99 rubles ($110); they are expected to rise to 108.6 rubles ($120.55) in 1968, an increase of 6 percent over 1967.[3]

The take-home pay of workers earning between 61 and 80 rubles a month is to be increased slightly at the beginning of 1968 by an average income-tax cut of 25 percent. The maximum tax cut will amount to about 1.45 rubles a month on earnings of 80 rubles. The Government has promised to abolish the income tax on earnings up to 70 rubles (60 rubles at present) by 1970.

During the first 6 months of 1968, the wage rates for over 1.3 million machine-tool operators in machine-building and metalworking shops are to be increased an average of 15 percent. Labor turnover has been heavy among these workers. Higher rates were advocated in view of the greater skill demands made upon them by the introduction of complex modern machinery.[4]

Wage supplements and other benefits were granted or liberalized for many workers in the far north and similar hardship areas. Wage supplements, hitherto available only to production and certain specialized personnel, are to be extended to all wage and salary earners in hardship areas. Payments will start on January 1, 1968, for about 750,000 workers. The length-of-service requirements for periodic wage increases of 10 percent will be shortened for all workers, about 1.5 million, in hardship areas. In the far north, the increases will be effective every 6 months (instead of every year) until the maximum earnings level (about 300 rubles a month) is reached; in other hardship areas, the period is to be 1 year instead of 2. To be eligible for wage supplements, workers must sign long-term labor contracts, but the term was reduced from 5 to 3 years for all areas except the Arctic Ocean islands, where the contract may be for 2 years. The bonus to

*By Edmund Nash of the Division of Foreign Labor Conditions.

[1] The laws were published in *Pravda*, the Communist Party daily, September 27, 1967, pp. 1-2.
[2] *Ekonomicheskaya Gazeta* [*Economic Gazette*, a weekly], Moscow, No. 41, October 1967, p. 9.
[3] *Pravda*, October 11, 1967, p. 3.
[4] *Trud* [*Labor*, the trade union daily], October 1, 1967, p. 2.

SOURCE: *Labor Developments Abroad*, U.S. Department of Labor, December 1967.

workers renewing their contracts is to be increased to 50 percent of their average monthly earnings. Lump-sum grants to graduates of specialized secondary and of higher schools who are assigned to the far north and contiguous areas are to be doubled.

Old-Age Pensions

The new old-age pension provisions, effective January 1, 1968, affect collective farmers, women textile workers, veterans, and workers in hardship areas. The retirement age of collective farmers is to be decreased by 5 years to that of industrial workers (men at 60 with at least 25 years of service, and women at 55 with at least 20 years of service). Collective farm women who have had and raised at least five children to the age of 8 will be entitled to an old-age pension at 50 after 15 years of work. Women in strenuous jobs in the textile industry will be able to retire at 50 rather than 55. The age at which military personnel partially disabled during wartime are to receive old-age pensions is to be lowered from 60 to 55 for men with a work record of 25 years, and from 55 to 50 for women with a work record of 20 years. In the far north, workers are authorized, as of January 1, 1968, to retire after 15 years' service at age 55 (men) or 50 (women). In areas adjacent to the far north, the same retirement ages apply, but a longer period of service (20 years) is required.

Old-age pensions in the Soviet Union range from a minimum of 30 rubles ($33.33) a month to a maximum of 120 rubles ($133.33). Able-bodied pensioners whose skills or services are in demand are encouraged to continue working by the right to receive 50 to 100 percent (depending on the character of their work) of the pension they would be getting had they retired.[5] The introduction of this provision in 1964 increased the percentage of working old-age pensioners from 9.4 to 14 percent by 1966.[6]

Disability Pensions

Disability pensions are to be increased for collective farmers on January 1, 1968, and for former military personnel on May 1, 1968.[7] The pensions for farmers will amount to 40 or 50 percent (depending on the extent of their disability) of average earnings up to 50 rubles a month plus 25 percent of earnings above 50 rubles. Minimum monthly pensions will be as follows: 30 rubles for a farmer totally disabled in connection with his work and requiring someone to look after him; 12 rubles for a partially disabled farmer with a work-connected disability. These minimums are much lower than the minimum pensions received by nonfarm workers having a work-connected disability—50 rubles for total disablement and 21 rubles for partial disablement.[8] Pensions for farmers who have been partially disabled while at work are something new.[9] Also new is the establishment of a disability pension of 16 rubles a month for individuals who have been totally incapacitated from childhood and have reached the age of 16.

[5] *Moscow News*, November 26, 1966, p. 2.
[6] *Sotsialisticheski Trud* [*Socialist Labor*, a monthly], Moscow, No. 2, 1967, p. 14.
[7] For detailed provisions, see the decree in *Pravda*, September 27, 1967, p. 2.
[8] *Sotsialisticheski Trud*, Moscow, May 1965, p. 146.
[9] *Trud*, October 1, 1967, p. 2.

The total disability pensions of soldiers and noncommissioned officers were increased by 15 rubles a month and those of officers by 25 rubles. The minimum pension for those partially disabled was raised to 30 rubles for the military rank and file and to 40 rubles for officers.

There were 34 million pensioners (over 14 percent of the population) in the Soviet Union at the beginning of October 1967.[10] The increase of about 14 million over the 20 million pensioners on July 1, 1959,[11] is due primarily to the extension of coverage to collective farmers in 1965. On January 1, 1966, the number of pensioners were as follows: [12]

Total pensioners [1]	32, 027, 000
Civilian pensioners	26, 998, 000
Collective farm pensioners	8, 000, 000
Military service pensioners	5, 029, 000

[1] Includes dependents.

Thus, 30 percent of the civilian pensioners lived or had lived on collective farms in January 1966.[13]

Sickness Benefits

The sickness benefits of wage and salary earners having more than 8 years' service are to be increased from 90 to 100 percent of their average earnings, and those with 5 to 8 years will have their benefits raised from 70 to 80 percent of average earnings. Sick workers having 3 to 5 years' service will continue to get 60 percent of earnings, and those with less than 3 years, 50 percent.

Vacations

After January 1, 1968, the minimum annual vacation will be 15 working days rather than 12. In effect, the minimum will be raised from 2 weeks to 3 weeks because of the introduction of the 5-day workweek throughout the Soviet Union by November 7, 1967.[14] Up to this time, most workers have worked 6 days a week and were entitled to at least 2 weeks' vacation. It appears that more than a third of the workers will receive an extra 3 days of annual leave in 1968, for in 1964, 36.6 percent of all the workers received 12 days of annual leave.[15]

[10] Moscow *TASS* broadcast, October 3, 1967, and *Moscow News*, November 5, 1967, p. 5.
[11] *Vestnik Statistiki* [*Statistical Herald*], Moscow, No. 4, 1960, p. 94.
[12] *Narodnoe Khoziaistvo SSSR v 1965 g.* [*The National Economy of the U.S.S.R. in 1965*], Moscow, 1966, p. 607.
[13] V. Acharkan, "Zabota gosudarstva o pensionnom obespechenii trudyashchikhsya" ["State Concern About the Pension Security of Workers"], *Sotsialisticheski Trud*, Moscow, February 1967, pp. 12 and 15.
[14] For discussion, see *Labor Developments Abroad*, June 1967, pp. 16–19.
[15] Ibid., August 1967, p. 6.

6. THE COST OF COMMUNISM*

After 20 years of unsensational life the United Nations Economic Commission for Europe looks like it is getting a new impetus as the industrial mammoths of east and west begin to think they might learn from the other's technology. At this year's annual conference delegates from both sides were ready to press for action to promote not only trade but the interchange of technical and scientific information. Nobody specified just how the small commission (staff of 200, annual budget of $4.2 million) was to help. But its views on the rate of return of investment in East and West Europe are now being challenged by a number of expert studies. What follows is necessarily a sketchy summary of some of these new findings.

By and large, over the past 20 years, Russia and the Eastern European countries have grown as fast as those in western Europe—much faster if industry only is considered. But since 1960 their rate of growth has fallen significantly behind. Eastern European living standards have visibly failed to improve as fast as those in the West. Appearances can be misleading; a more equal distribution of incomes in the East could disguise the rate of advance, particularly when Communist states spend more, proportionately, on things like education, medicine, and taking care of old people, which do not show up in the way the crowds in the street are dressed or in consumer goods in shop windows. But the way Eastern European countries are now tumbling over themselves in an effort to alter their system of economic management, root and branch, suggests there is more to it than this.

Fresh statistical evidence on this score has been provided by a series of lengthy and detailed studies commissioned for the Joint Economic Committee of the U.S. Congress.[1] In one of these Mr. Michael Boretsky comes to the sweeping conclusion that the Soviet Union, for all its impressive achievements, is lagging a quarter of a century behind the United States in the application of new technology to production. Perhaps surprisingly, this result is indirectly corroborated by a Russian study—the first of its kind—published recently in a Soviet journal.[2] This shows that expansion of the Russian economy has been due largely to growing inputs of labor and capital and to economies of scale, rather than to advancing technology. In another of the American studies, Mr. Maurice Ernst indicates that in the other Eastern European countries communism has also shown itself a very inefficient system of economic management.

There are very few scientific or industrial techniques that the Russians do not know about, or of which they do not have prototypes. But the rate at which their innovations get applied in industry is anything from 5 to 40 years behind what American factories achieve. The Russians seem to have made comparatively little use of opportunities for bringing their economy up-to-date when they were repairing war damage between 1945 and 1950. The newer technologies

*Reprinted from *The Economist*, May 13, 1967.

[1] *New Directions in the Soviet Economy:* studies prepared for the Subcommittee on Foreign Economic Policy, Joint Economic Committee, U.S. Congress. Washington, 1966.

[2] *Ekonomika i Matematicheskiye Metody, 1966.*

were hardly more widely applied in 1950, at the end of reconstruction, than they were in 1940.

In some sectors like manmade fibres, and in the substitution of coal for fuel wood, peat or shale, the Russian advance between 1940 and 1962 was faster than America's, but only because the Russians began so much further back. Moreover, in two important sectors that have enjoyed the highest priority in Moscow—electric power generation and metal cutting—the Russians did introduce innovations about as fast as the Americans. But generally it seems that the Russians have been falling further behind the Americans in the new techniques: Between 1950 and 1962 their rate of applications of new technology was only about 80 percent of America's.

Mr. Boretsky considers that brute investment (the simple increase in the supply of capital equipment, without technological progress) has been responsible for two-thirds of Soviet postwar economic growth, and actual technical innovation for only a fifth. Ten percent of growth is attributable to the pure economics of scale production. (More precisely, this is calculated as the gain from expansion of scale, net of the loss from the ever-lengthening period of gestation of investment.)

The rate of technical advance is thought to have speeded up since 1962. This view is endorsed by some of the technical teams from the West who have visited Russia's industrial research laboratories. But still the advance has had nothing like the same dramatic effects on productivity as have occurred in the past 5 American boom years. *So there is good reason to doubt whether all the blame can be placed on the lag in applying new technology. Communist management must take a big share of it.*

This is specially true in Eastern Europe where the planning and allocation of resources has been so inefficient that it has taken, according to Mr. Ernst's calculations, a third to a quarter more investment in real terms than it has done in the West to achieve a given increase in output

But *this American finding contradicts the belief held by the Economic Commission for Europe that returns on investment during the 1950's were roughly the same in the East and West.* Any maker of international comparisons indulges in some very heroic assumptions, but the East Europeans' leaders themselves constantly campaign against the inefficiency of investment. It is also possible that outside Russia the Eastern European countries suffered from inadequate access to new technology (especially East Germany and Czechoslovakia); from a neglect of infrastructure investment that hurt them increasingly as time went on; from the failure to achieve any sizeable international specialisation of production through Comecon; and, in agriculture, from collectivisation, which raised investment needs unnecessarily and took away much of the peasants' incentive to work harder.

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