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ECONOMIC INTELLIGENCE REPORT

SOVIET ECONOMIC PROSPECTS
FOR THE SEVEN YEAR PLAN PERIOD
1959-65



CIA/RR 59-27

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SOVIET ECONOMIC PROSPECTS FOR THE SEVEN YEAR PLAN PERIOD*
1959-65

Summary and Conclusions

The post-Stalin regime in the USSR has guided the Soviet economy through a difficult 6-year period of experimentation and innovation with only a slight decline in rates of economic growth. Rewarded for its efforts by notable successes in some problem areas, the regime has tackled the forthcoming 7-year period with a confidence apparently undimmed by the embarrassment of the economic difficulties which led to the abandonment of the Sixth Five Year Plan (1956-60). Although the Seven Year Plan (1959-65) realistically calls for slightly lower growth rates than those of past plans, the leadership has repeatedly expressed optimism about overfulfillment of many of its goals. At least some of this confidence appears to have a sound basis in the new plan, which has corrected some of the grosser mistakes of earlier planning.

The prospects for the well-being of the Soviet economy have been enhanced by a threefold approach to the problem of removing the incompatibilities between resource availabilities and output targets which plagued the short-lived Sixth Five Year Plan: Goals have been lowered, investment in problem areas has been increased to alleviate resource deficiencies, and numerous steps have been taken to obtain a more efficient use of resources, both material and human. Although these actions probably have contributed to the general strength of the economy, they also are the source of the major uncertainties in assessing the likelihood of the success of the USSR in its bid for significant overfulfillment of the Seven Year Plan goals.

The degree of realism achieved in the goals of the Seven Year Plan for industrial output does not appear to have been equaled in agriculture. Resource allocations in the plan appear to support an average annual increase of 8 to 10 percent in industrial output and thus appear adequate to meet the plan goal of 8.6 percent. The agricultural program, however, seems less certain of supporting the required annual increase of 8 percent in gross agricultural output -- a rate equal to that reported during the past 7 years which included

* The estimates and conclusions in this report represent the best judgment of this Office as of 1 July 1959.

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considerable gains from the new lands and corn programs. The likelihood of substantial underfulfillment of the agricultural goal raises the question of how determined the regime might be to realize the announced objectives in this sector -- how tempted they might be to divert additional resources from other areas to agriculture.

The size of the investment program of the Seven Year Plan is sufficient to offset the gradually declining efficiency of capital which will continue to accompany the substitution of capital for labor in the economy. Furthermore, the investment plan provides a considerable increase in the portion of investment going to the recent problem areas, the raw materials industries. The major uncertainties of the program are whether or not it can be carried out on schedule, contrary to the experience of the last few years, and whether or not its composition will result in enough labor saving to permit the more slowly growing labor force to meet the requirements of the output goals of the Seven Year Plan.

Continuing expansion of the building materials industries should prevent a recurrence of the shortages which contributed to the lag in construction activities in 1956 and 1957. Further corrective measures in the construction industry, such as the recent organizational and wage changes, should also contribute to the task of supplying the necessary new plant capacity for the Seven Year Plan. The probability of meeting the Seven Year Plan requirements for labor-saving machinery and equipment is less certain. The civilian machine building industry, with a slightly smaller share of total investment, must meet an accelerating demand for labor-saving machinery. In spite of the emphasis placed upon automation and mechanization, management incentives in the machine building industries are still more favorable to mass production of standard machines than to job-lot production of advanced-design, specialized machines bearing greater possibilities for labor saving.

Other measures continue to be taken which will contribute to the fulfillment of the Seven Year Plan labor requirements. The indicated level of agricultural investment, now that the labor-absorbing new lands and corn programs are completed, appears adequate to permit the release of some labor to nonagricultural activities. This probable development, in conjunction with the additional young workers made available by the educational reform now in progress, should augment the natural increase in the number of workers and employees nearly enough to meet the planned labor requirement of 12 million additional persons. Furthermore, an all-out effort is being made to increase participation in the labor force of the adult population, particularly women. The continuing program for reducing the average workweek from the 47 hours prevailing

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in 1956 to 41 hours in 1960, 40 hours beginning in 1962, and further reductions beginning in 1964, will undoubtedly strain efforts to meet labor productivity goals. To avoid the necessity of above-plan additions to the labor force in the event of shortfalls in productivity goals, the leadership could slow down the move toward the shorter workweek. Such factors as the intensified program of replacement of obsolescent equipment and the rising proportion of technically trained workers in the labor force will help raise labor productivity.

The quest for greater efficiency in the utilization of resources has led to the creation of a substantially different institutional environment for the Seven Year Plan from that of previous planning periods. Organizational changes of the past 2 years in industry, construction, and agriculture have been aimed at obtaining the efficiency of a high degree of personal initiative while preserving a high degree of central control in carrying out centrally determined goals. Although the fear of diluting central control generally has tended to deprive the regime of any large gains from this source, it is likely that experiments along these lines will be continued. The concern for greater efficiency in resource utilization also has led to a new interest in linear programming and to measures to improve the criteria of investment choice, both of which have added a sense of urgency to recent controversial discussions about needed reforms in the price system.

Somewhat the wiser from experiencing the economic difficulties of the past few years, the leadership may be reconciled to some diminution in growth rates. But the Seven Year Plan gives every indication that beneath the aura of propaganda regarding consumer welfare, the regime will manage to forge ahead toward its goal of eventually overtaking the US economy. Although this is not likely to occur as rapidly as Khrushchev would make the world believe, the Seven Year Plan probably will result in an average annual increase in Gross National Product of 6.0 to 6.5 percent compared to an average growth rate of about 7.0 percent annually during the past 7 years -- a rate which is still nearly double the long-run growth trend of the US economy.

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I. Background

The Seven Year Plan (1959-65) is the first in the history of Soviet economic planning which was designed to fill a vacuum left by the abandonment of a previous plan. The withdrawal of the Sixth Five Year Plan (1956-60) after its first year of operation was the result of the emergence of forces tending to reduce the pace of economic expansion at a time when the leadership was broadening its economic commitments. The failure of the leadership to recognize earlier (a) that the rapid growth experienced during the Fifth Five Year Plan (1951-55) was based in part upon nonrecurring gains and (b) that the maintenance of such high rates in the future could involve more costly capital-output relationships led to a perpetuation in the Sixth Five Year Plan of certain planning mistakes already committed in the earlier period. The unrealistic expectations which lay behind these planning mistakes had led, in turn, to fairly explicit promises by the leadership for substantial continuing gains to the Soviet consumer. These new commitments, added to the continuing burden of heavy industrial expansion, magnified the political seriousness of the threatened reduction in rates of over-all economic expansion -- rates which, in spite of the problems appearing in 1956, still showed promise of remaining far above those of Western countries.

Following the death of Stalin, a dominant attitude among the leaders was that the Soviet economy could support some improvement in the welfare of workers and peasants. Differences in degree and method, and possibly motive as well, were overshadowed by the basic similarity of the views of Malenkov and Khrushchev, both of whom saw the importance of raising the levels of agricultural output and housing. Their major disagreement -- the degree to which consumer durables should be pushed -- did not diminish greatly the collective impact of their programs, which by 1956 represented a significant new claim on a resource base which suddenly was not growing in accordance with the prevailing theory of unlimited internal reserves.

The crisis of late 1956, compounded of short-run domestic shortages of steel, energy, and cement and of disruption of normal Soviet economic relationships with the European Satellites, focused attention on the fundamental inadequacy of existing planning policies. The leadership had failed to recognize that consistent failures in construction of planned new capacity in basic industries would force an early exhaustion of the internal reserves which had permitted the output goals of the Fifth Five Year Plan to be met in spite of the lagging development of new production capacity. The reality of insufficient physical resources to meet the requirements of the Sixth Five Year Plan goals now had to be faced at a time when the prospect of a more slowly growing labor supply was suggesting the need for more efficient use of

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available labor resources. The leadership had to (a) increase efficiency, (b) increase savings and investment at the expense of consumption (civilian or military or both), or (c) reduce output goals.

Previous limited attempts to increase efficiency must have suggested to the leadership that large gains from this source were by no means certain and, in any event, would require rather drastic measures and considerable time to implement. For a regime which had identified itself with increasing consumer welfare, the second choice -- an increase in investment at the expense of consumption -- was no longer the easy way out as it had been under Stalin. The third choice, running contrary to the overriding long-run goal of world economic supremacy, could be tolerated in the short run only as a temporary concession to reality, to be glossed over as soon as possible with renewed confidence in future growth prospects, as was to be demonstrated later by the Twenty-first Party Congress.

In the 2-year period from the 1956 crisis to the launching of the Seven Year Plan at the January 1959 Party Congress, the Soviet leadership implemented the decision to embark on all three approaches to the solution of their problem. The onerous task of reducing short-run goals was delegated to Pervukhin, who lowered the objectives of the 1957 plan and attempted to remedy the shortages of new capacity by reallocating investment in favor of selected critical areas without increasing total investment. Then, in the spring of 1957, Khrushchev began the display of personal power which was to reach its zenith 2 years later at the Twenty-first Party Congress. His proposal for reorganizing industry, felling opponents in its course, promptly was carried out in the summer of 1957. The quest for more efficient operation of the economy was broadened in 1958 to include an equally dramatic program for reorganizing agricultural activity. The Twenty-first Party Congress in February 1959 took up the task of reaffirming the long-run growth prospects of the Soviet economy with a fervor which was in marked contrast to the more modest expectations exhibited in the 1957-58 annual plans and in Khrushchev's long-range forecast which was presented in 1957 at the 40th anniversary meeting of the Supreme Soviet. In comparison with the abandoned Sixth Five Year Plan, however, output goals are reduced and investment is to increase partly at the expense of consumption.

II. Main Features of the Seven Year Plan

The Twenty-first Party Congress and the Seven Year Plan left no doubt about the main objective of Soviet economic activity. The obsession with overtaking the US economy in the shortest possible period of time was the dominant theme of the propaganda barrage which

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surrounded the presentation of the basic outline of a fairly reasonable plan which appears to have corrected the grosser deficiencies of the Sixth Five Year Plan. The more realistic provisions of the new plan promise to lessen the current constraints to rapid economic growth and to permit substantial progress toward lessening the gap between Soviet and US industrial production, although the obsession rather than the promise seems the more likely explanation of the ecstatic optimism which prompted the leadership's prediction of overtaking the US in per capita output by 1970.

The Soviet prediction of catching up with US industry by 1970 -- resting upon a fairly realistic assumption of an 8.6-percent average annual growth rate for Soviet industry but on an unrealistically high ratio of current Soviet output to US output (50 percent) and an unrealistically low growth rate for US industry (2 percent) -- becomes considerably less spectacular when deflated by the more realistic assumptions of a 40 percent current relationship and an annual rate of growth for US industry of 4.0 percent. The modified prediction thus obtained, nevertheless, presents the unpleasant prospect of Soviet industrial output rising from about 40 percent of US output at present to about 60 percent in little more than a decade. In this context of constant emphasis upon growth and economic competition with the US, the Seven Year Plan and the struggle to overfulfill its goals assume an importance even beyond the actual content of the plan.

The main goals of industry and agriculture in the Seven Year Plan call for generally slower rates of growth than were visualized 3 years earlier in the Sixth Five Year Plan. Plans for agricultural growth, still well above probable levels of achievement, nevertheless show the greatest reduction from the rates postulated in the earlier planning period. The annual grain harvest by 1965 is expected to be between 160 million and 180 million tons,* virtually identical to the earlier expectation of 180 million tons by 1960. The gross output of virtually all other principal agricultural products is planned to increase over the 7-year period (1959-65) by identical or smaller percentages than had been anticipated for the shorter 5-year period (1956-60).

Plans for over-all industrial growth -- at slower rates than those prescribed in the Sixth Five Year Plan but higher than the relatively low rates planned immediately after the crisis of 1956 -- preserve the traditional pattern of a more rapid growth of producer goods than of consumer goods (see Table 1**). Greater overfulfillment of plans in producer goods than in consumer goods, however, has

* Tonnages are given in metric tons throughout this report.

** Table 1 follows on p. 7.

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Table 1

Planned and Actual Annual Rates of Growth in Soviet Industry
Selected Years, 1951-65

	Percent					
	Fifth Five Year Plan (1951-55) Average	1956	1957	1958	Sixth Five Year Plan (1956-60) Average	Seven Year Plan (1959-65) Average
Gross industrial production						
Planned	12.0	10.5	7.0	7.6	10.5	8.6
Actual	13.1	10.7	10.0	10.0		
Producer goods						
Planned	13.0	N.A.	7.8	8.3	11.2	9.3
Actual	13.8	11.4	11.0	11.0		
Consumer goods						
Planned	11.0	N.A.	5.9	6.1	9.9	7.3
Actual	11.9	9.4	8.0	7.0		

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widened the actual differential rates of growth between the two during 1957 and 1958. This development has permitted growth rates in producer goods to keep pace with the average annual rate originally prescribed by the Sixth Five Year Plan, whereas the achieved growth rate in consumer goods has lagged considerably behind the rate originally contemplated.

Basic industrial materials industries -- most affected by past errors in the planning of new capacity -- are to grow more slowly than had been contemplated in the Sixth Five Year Plan (see Table 2*). These rates, nevertheless, involve tasks of considerable magnitude. The planned expansion of ferrous metallurgy by about two-thirds, at a time when the quality of ore is declining and when difficulty is being encountered in providing new capacity, will challenge the ingenuity of the planners. The growing size of the basic industrial materials base involves steadily larger additions to output in physical terms -- a circumstance which is not shown by percentage rates of growth. Thus, in spite of the slowing Soviet industrial growth rates of the Seven Year Plan, the physical gap between Soviet and US output of basic industrial materials, which generally in the past has been widening, will shrink by 1965 (see the chart**).

The chemical industry, which is to triple its output during the next 7 years, must expand rapidly in relatively new areas of production, such as petrochemicals, plastics, and synthetics, as well as triple its fertilizer output.

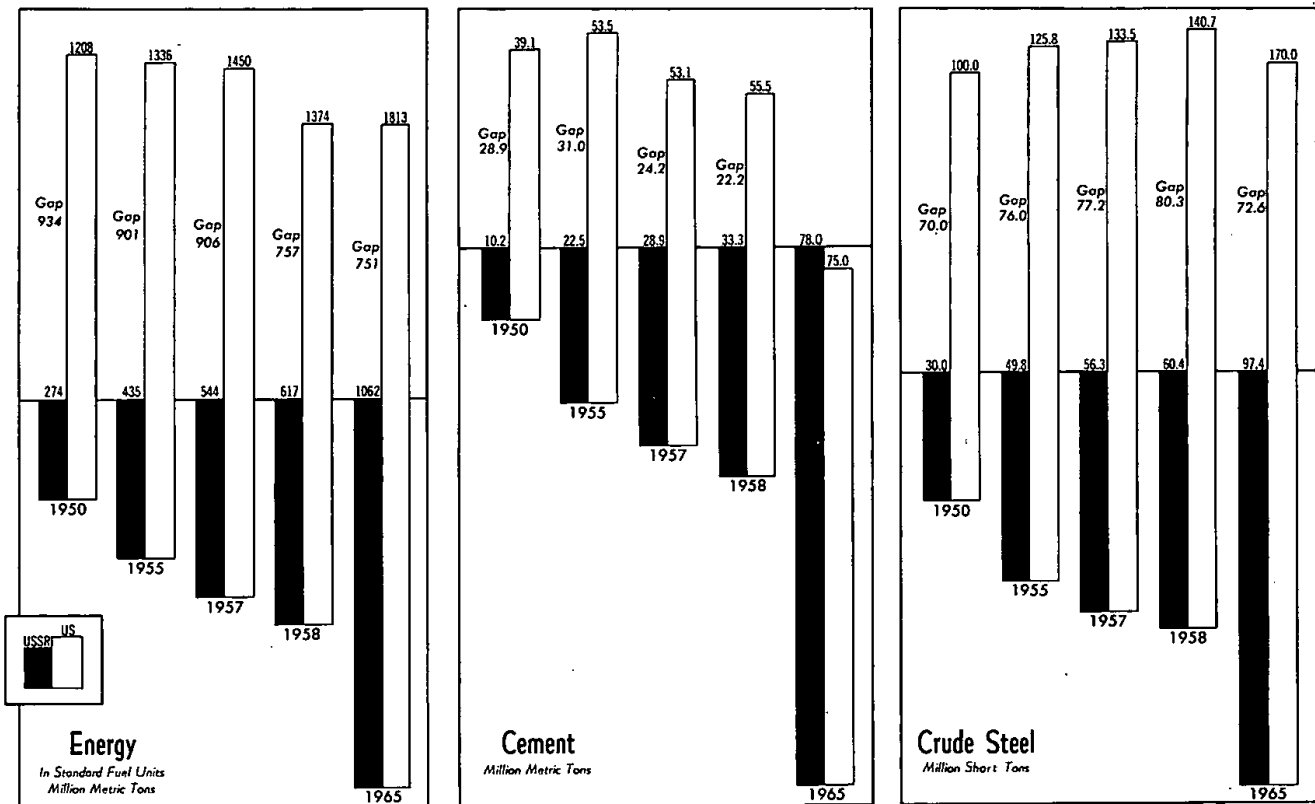
The plan for the machine building and metalworking industries shows an effort to correct the recent capacity bottlenecks in basic materials industries. Toward this end, plans for rolling mill equipment and equipment for the power-generating and chemical industries call for rates of increase substantially above past rates. On the other hand, the planned average annual growth rate for the entire machine building and metalworking industry is about 10.5 percent, compared with the average of 17 percent reported for the Fifth Five Year Plan period and the annual 14 percent experienced since 1955 -- a slowdown which probably reflects the anticipated lower rates of growth of its principal input, steel. Production of metalworking machinery will increase at approximately the same rate achieved during the last 3 years, but specialized machine tools will increase at nearly double the recent rates. Output plans for agricultural machinery, by contrast, call for substantially lower rates of increase than those achieved during the virgin lands program.

* Table 2 follows on p. 9.

** Following p. 8.

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USSR and US
Comparisons of Output of Energy, Output of Cement, and Crude Steel Capacity
 Selected Years, 1950-65



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Table 2

Planned and Actual Production and Annual Rates of Growth in Soviet Industry, by Selected Commodity
Selected Years, 1951-65

Commodity	Actual				Planned		
	1951-55	1956	1957	1958	1959	Sixth Five Year Plan (1956-60)	Seven Year Plan (1959-65)
Usable iron ore							
Million metric tons		78.1	84.2	88.8	92.7	119.6	150 to 160
Percentage	12.7	8.8	7.8	5.5	4.4	7.0	7.8 to 8.8
Pig iron							
Million metric tons		35.8	37.0	39.6	42.0	53.0	65 to 70
Percentage	11.7	7.0	3.4	7.0	6.0	9.9	7.3 to 8.5
Crude steel							
Million metric tons		48.6	51.0	54.9	58.9	68.3	86 to 91
Percentage	10.7	7.0	4.9	7.6	7.3	8.6	6.6 to 7.5
Finished steel							
Million metric tons		38.0	40.2	42.9	45.9	52.7	65 to 70
Percentage	11.1	7.0	5.8	6.7	7.0	8.5	6.1 to 7.2

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Planned and Actual Production and Annual Rates of Growth in Soviet Industry, by Selected Commodity
 Selected Years, 1951-65
 (Continued)

Commodity	Actual				Planned		
	1951-55	1956	1957	1958	1959	Sixth Five Year Plan (1956-60)	Seven Year Plan (1959-65)
Coal							
Million metric tons		429.2	463.4	496.0		593.0	600 to 612
Percentage	8.4	10.0	8.0	7.0	N.A.	8.6	2.8 to 3.0
Petroleum							
Million metric tons		83.8	98.3	113.0	126.6	135.0	230 to 240
Percentage	13.3	18.0	17.3	15.0	12.0	13.3	10.7 to 11.4
Natural gas							
Billion cubic meters		12.1	20.0	29.8	41.1	60.0	150.0
Percentage	9.2	34.4	65.3	49.0	37.9	46.2	26.0
Electric power							
Billion kilowatt-hours		192.0	209.5	233.0	258.0	320.0	500 to 520
Percentage	13.3	13.0	9.1	11.2	10.7	13.5	11.5 to 12.2
Cement							
Million metric tons		24.9	28.9	33.3	39.0	55.0	75 to 81
Percentage	17.2	11.0	16.0	15.2	17.1	19.5	12.3 to 13.5

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The consumer goods program in the Seven Year Plan, calling for average annual increases of 6.0 and 8.0 percent, respectively, in the light and food industries, will provide noticeable increases in consumption levels (see Table 3). The housing program, however, which is to provide 650 million to 660 million square meters of new housing, or 2.3 times the amount provided in the preceding 7 years, continues to be the most conspicuous program aimed at the consumer.

Table 3

Production and Implied Average Annual Rates of Growth
in Soviet Light Industry, by Selected Product
1958 Actual and 1960 and 1965 Plan

<u>Product</u>	<u>1958</u>	<u>Original Sixth Five Year Plan (1960)</u>	<u>Seven Year Plan (1965)</u>
Wool textiles			
Million yards	331		547
Percentage	7.0	6.0	7.4
Silk textiles			
Million yards	924		1,624
Percentage	5.0	15.0	8.4
Knitwear			
Million pieces	495		940
Percentage	6.9	9.0	9.6
Cotton fabrics			
Million yards	6,300		8,400 to 8,800
Percentage	3.6	4.2	4.2 to 4.9
Leather footwear			
Million pairs	356		514
Percentage	13.0	9.0	5.5

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Production of consumer durables, such as household appliances, is scheduled to increase more rapidly than products of light industry, such as textiles, clothing, and footwear, which are dependent upon agricultural raw materials supplies. Sales of appliances during the next 7 years are to be several times greater than sales during the last 7 years; refrigerators, 5.8 times; washing machines, 9.1 times; sewing machines, 2.1 times; and television sets, 4.6 times. In spite of these large percentage increases, however, the output of such items at present is so low that 1965 production still will be far below that of the US on both an absolute and a per capita basis.

The Seven Year Plan provision for 1,940 billion to 1,970 billion rubles* of state capital investment compared with 1,072 billion rubles during the last 7 years seems sufficient reason for the emphasis placed by the Seven Year Plan upon the enormous size of the capital investment program. Although the annual rate of investment growth implied by this increase is lower than the average rate achieved during the last 7 years, the program still represents a very large investment effort. Total state investment in the Seven Year Plan will be about 80 percent greater than that of the preceding 7 years. The Sixth Five Year Plan was to require a 67-percent increase in total state investment above that in the preceding 5-year period.

An investment program of this magnitude, together with the reduced output goals of the Seven Year Plan, suggests that little difficulty should be encountered in reaching the planned general level of economic activity. A major uncertainty, however, is whether or not this tremendous investment effort will be in the right places to perform the necessary tasks of overcoming the recently experienced problems of growth and at the same time make adequate provision for other essential activities whose investment requirements are more difficult to gauge. How successfully the Seven Year Plan has dealt with the problem of gauging the strength of consumer expectations and the problem of satisfying these expectations is uncertain. A similar problem is inherent in the forces which determine military requirements. The uncertainties of technological developments, both domestic and foreign, both cost-saving and cost-increasing, influence the adequacy of a long-range military program. Finally, shifts within investment in favor of the industrial sector and heavily in favor of basic materials industries within this sector pose the difficult planning problem of determining for the less favored areas a minimum investment program compatible with output goals. The extreme concern expressed in the Seven Year Plan document about maximizing possible economies in investment suggests that the Soviet planners sense the tightness of their investment program.

* The appropriate dollar valuation varies greatly according to the composition of the goods and services comprising the investment ruble valuations given in this report. For capital investment in total, but not necessarily subcategories, a ratio of 6 to 1 is more accurate than the official rate of 4 to 1.

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The Soviet anxieties about investment economies, which marred the otherwise extremely optimistic tone of the Seven Year Plan, perhaps stemmed from a realization that the planned investment level, which already pressed hard on plans for consumption (both military and civilian), might not easily be raised further in the event of new difficulties. There is an implication that the military will receive less than might have been indicated by the trend suggested by the Sixth Five Year Plan. Manpower cuts have been made and procurement of conventional equipment (airplanes, submarines, and the like) has been cut drastically, at least in 1957-58. Civilian consumption, in spite of the verbal promises, has been cut; output goals for the light and food industry, in line with the more realistic appraisal of prospects for agricultural output, have been reduced more from the old Sixth Five Year Plan than those for heavy industry. Housing goals have been maintained, but other social-cultural investment will receive a declining share of total investment. Khrushchev's boast of catching up with the US in meat consumption has been quietly dropped. Reduced agricultural output goals, although still high enough to encompass an all-out effort to raise production, are now supported by investment plans which are largely the responsibility of the kolkhoz.

The adequacy of the Seven Year Plan investment program, particularly in terms of the possibility of overfulfillment of production goals, will rest in part upon the success of further efforts to increase economic efficiency. Definite opportunities exist for improving organizational relationships and technological practices beyond the scope of those measures specifically incorporated in the Seven Year Plan. Khrushchev's penchant for innovation and his obvious conviction of the need for greater efficiency almost certainly will impel him along new roads in the quest for growth. The organizational and management changes which have taken place during the last 2 years (notably the industrial reorganization and the abolition of the machine tractor stations -- MTS's) probably will be developed further, particularly in agriculture, where perhaps the greatest sources of efficiency gains lie dormant under present institutional bounds. Technological roads to greater efficiency, such as the continuing programs for dieselization and electrification of railroads and for shifting the fuel balance away from solid fuels toward gas and oil, are likely to lead to new opportunities for overfulfillment of the Seven Year Plan goals.

This rising concern for efficiency in resource utilization is also leading to the development of more effective techniques of measuring the effects and of anticipating the requirements of economic plans through a newly awakened interest in linear programming. At the same time, both academic and government economists are actively engaged in improving investment-choice criteria. Essential to the

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successful application of both of these reforms is a more meaningful price system, the realization of which has been a subject of major controversy among Soviet economists.

It is evident from the Seven Year Plan that the attempt to obtain a fuller utilization of labor resources will be broadened. The automation program, although still impressive, has been divested of some of the magic ascribed to it by the Sixth Five Year Plan. This technological innovation as a means of improving the utilization of labor resources, particularly in industry, has been joined by organizational innovations in the Seven Year Plan which may bring about a more efficient distribution of labor between agricultural and nonagricultural pursuits. Institutional changes promised for agriculture, such as expansion of interkolkhoz production relations, guaranteed agricultural wages, and abolition of private husbandry activities of the kolkhozniki, may supply a badly needed boost in agricultural labor productivity and release manpower to nonagricultural employment.

Forearmed with a fairly reasonable plan, an open mind toward experiment and innovation, and discernible opportunities for improving efficiency, the attention of the Soviet leadership during the next 7 years probably will be fixed on maximizing overfulfillment rather than mere fulfillment of goals. Similarly, the problems of economic expansion discussed in III, below, except for agriculture, are in some degree more likely to place a ceiling on Soviet ambitions of overfulfillment than to threaten the success of the Seven Year Plan.

III. Problems of Economic Expansion

A. Trends in Labor Supply

During the period of the Seven Year Plan the population of the USSR is expected to increase by approximately 3.6 million annually, a slightly larger increment than in the recent past. The proportion of the population in the working ages (15 to 69) will decline during the period, however, and a larger share of this group will be under 20 and over 60. Consequently, the annual additions to the labor force will be smaller than in the past. The total addition during 1959-65 will be 7 million to 8 million* if present labor force participation

* This estimate was made before the release of preliminary data from the 1959 census. These data will require extensive revision of the labor force estimates, which probably cannot be carried out satisfactorily until more complete census figures are released. A preliminary calculation indicates that the main effects would be to increase the number of women in the labor force and decrease the number of men. The total would also be changed somewhat. The trend as indicated in the discussion above, however, probably would not be altered significantly.

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rates prevail and if the past trend toward greater school participation of youth continues. The reorganization of education now in process is expected to halt this trend, however, and to have the effect of adding about 1.5 million persons to the labor force, bringing the total expected addition to 8.5 million to 9.5 million.

The Seven Year Plan calls for the addition of nearly 12 million persons to the state sector, raising the total number of workers and employees from 54.6 million to 66.5 million. Achievement of this increase -- 2.5 million to 3.5 million above the expected increase in the total labor force during the period -- will require some transfer of people from the armed forces or the collective farm sector, or a significant increase in labor force participation rates, or both. Some reduction in the size of the armed forces may occur, but the USSR probably is not counting on supplying much of its civilian labor requirement in this way.

Recent developments and prospective plans indicate that an all-out effort is being made to increase the adult population's participation in the labor force, particularly that of women. The need to recruit women workers is emphasized by the recent census figures, which reveal that women comprise 55 percent of the population -- considerably more than had been thought. In his speech to the Twenty-first Party Congress, Khrushchev called for "the inclusion of new millions of women in the ranks of active builders of a communist society" and for the creation of "conditions ... which will allow all women to make use of their rights, knowledge, and their gifts in productive work." As an integral part of the Seven Year Plan, a number of measures are to be taken to induce housewives to go to work. Among these are greatly expanded programs for establishing nurseries, kindergartens, and boarding schools; an expansion of public catering and personal service enterprises; and a considerable increase in the production of household appliances. All of these measures are to be taken in fields of employment where women already predominate. Plans also call for the building of factories in small towns and for the expansion of homework opportunities, especially to provide employment for women. The adoption of a 5-day workweek -- already in process in some plants in light industry -- also will make it easier for housewives to work, and the scheduled substantial increase in the minimum wage will make jobholding more worthwhile.

Recent developments and plans for agriculture also imply greater work participation by members of farm households. Soviet planners, like the Chinese Communists, have taken note of the seasonality of agricultural employment and show every intention of trying to provide useful work for farmers during slack periods. Plans to use this labor include the construction of communal facilities, the production

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of building materials, and the construction and operation of light industrial enterprises such as food-processing plants, garment shops, and furniture factories. The planned expansion of such kolkhoz industry will provide the opportunity for employing otherwise idle labor resources to increase the supply of consumer goods without increasing the heavy pressures upon urban housing and other urban facilities already exerted by other aspects of the Seven Year Plan.

In addition to the labor resources that may be made available through higher participation rates and a more intensive use of farm labor, fulfillment of the planned addition to the state sector probably still will require a net reduction in the agricultural labor force to meet requirements in urban areas. The investment program for agriculture, now that the labor-absorbing new lands and corn programs have been concluded, is large enough to permit a considerable increase in labor-saving forms of mechanization. Barring the introduction of some new labor-intensive program, agriculture should be able to release some labor to industry without significantly affecting output.

The planned increase of about 12 million in the worker and employee force by 1965 should be adequate to meet the labor requirements of plans for industrial production during this period, if planned rates of increase in industrial labor productivity are attained. The planned average annual increase of 5.5 to 6.0 percent in industrial labor productivity on a man-year basis during the Seven Year Plan period is slightly lower than recent annual increases but, if planned reductions in working hours are carried out as scheduled, it represents a higher rate of increase on a man-hour basis than has been achieved during the past 7 years.

In the past, industrial labor productivity goals frequently have not been met fully, necessitating above-plan additions to the industrial labor force, but several features of the Seven Year Plan will tend to increase the possibility of fulfilling the present productivity goals. In addition to the intensified program of replacement of obsolescent equipment, the regime is striving to maintain the rate of growth of labor productivity through continual improvement in the welfare of the population and a steady rise in the proportion of technically educated workers entering the labor force. In the event of serious shortfalls in labor force or labor productivity goals, Soviet planners could slow down the program for introducing a shorter workweek in industry, but determination to carry out the program on schedule has been exhibited up to the present time. Since the program was begun in 1956, the average workweek in industry has been reduced from slightly more than 47 hours to about 44 hours, with about 8 million workers and employees on a 40- or 41-hour workweek

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by the end of 1958. Changes scheduled for 1959 in the petroleum, machinery, and metalworking industries and others will bring the average workweek still closer to the goal of a 41-hour week by the end of 1960. The Seven Year Plan reaffirmed the original 1960 goal and set a further goal of 40 hours to be introduced in 1962 and a general workweek of 35 hours to be introduced starting in 1964. Soviet statements suggest that the leadership believes the reform in working hours is proving to be beneficial, indicating that they would be reluctant to abandon the program.

B. Investment Considerations

The investment cost of achieving the goals of the Seven Year Plan appears to be anticipated adequately. The new plan has allocated sufficient over-all investment funds. It also appears that an adequate share of investment has been allocated for the development of new capacity in the basic materials industries. Failure to recognize the need for new capacity in these industries was one of the conspicuous weaknesses of the Sixth Five Year Plan.

In the Seven Year Plan directive, the investment program is emphasized, alternatively with plaudits for its enormous size and exhortations for maximum economies in its execution. The program calls for total investment of approximately 3 trillion rubles (including kolkhoz investment, decentralized investment of enterprises, and private housing investment). State investment alone is to total nearly 2 trillion rubles. This large state investment effort, claimed to be almost equal to total state investment in all the preceding years of Soviet rule, is symptomatic of the continuing need to substitute capital for labor if the economy is to be kept growing at rapid rates.

The substitution of capital for labor is being accompanied by a declining efficiency of capital which even extensive use of technological innovation has not been able to offset fully. This trend, evidenced by an increase in fixed capital relative to gross national product (GNP) (see Table 4*), seems to have been more than adequately allowed for in the Seven Year Plan and hence poses no obstacle to fulfillment of the plan. It does, however, lend additional importance to the two greatest uncertainties of the Seven Year Plan investment program -- whether or not its composition will result in enough labor saving to permit the more slowly growing labor force to meet the requirements of the Seven Year Plan output goals and whether or not the investment program can be carried out on schedule, contrary to the experience of the last few years.

* Table 4 follows on p. 18.

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Table 4

Indexes of the Productivity of Capital in the USSR
Selected Years, 1951-65

	<u>1951</u>	<u>1953</u>	<u>1955</u>	<u>1958</u>	<u>1965</u>
GNP ^{a/}	100	110	132	162	238
Fixed capital	100	118	142	194	310 to 330
Ratio: $\frac{\text{Change in GNP}}{\text{Change in fixed capital}}$	100	93	93	84	72 to 77

a. Estimated.

Continuing improvement of the raw materials supply situation will involve heavy investment in the construction of new facilities. On the other hand, the attempt to minimize labor requirements in industry will involve a heavy demand for investment in machinery and equipment both for new plants and for modernization and expansion of old plants. The emphasis in the Seven Year Plan upon automation and mechanization in industry is supported to some extent by the planned distribution of investment between equipment and construction. The share of total investment devoted to machinery and equipment during the Seven Year Plan is to be slightly greater than that of the last 7 years, 33 percent compared with 30 percent.

Failure to realize this indicated increase in investment in machinery and equipment in industry during the Seven Year Plan could result in a repetition of the 1958 experience in which investment shortfalls in metallurgy and chemicals seem to have been occasioned at least in part by equipment shortages. The 1959 investment pattern, in response to these shortages, reveals an attempt to obtain a better mix of machinery and equipment -- the initial 1959 goal of a 33-percent increase in capital investment in the engineering industry was revised upward to 40 percent. Increased availability of supplies of materials needed by the engineering industry apparently made it possible to increase the effort devoted to this problem in 1959.

The civilian machine building industries in the Seven Year Plan will barely hold their former share of total investment at a time when the slower growth of the labor force is accelerating the demand for labor-saving machinery. The Soviet machine building industry, on the basis of past experience, is capable of satisfactory performance in mass production of standard types of machinery and equipment, but labor saving is a question of the design of machinery as

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well as the quantity. Soviet indicators of production success, which emphasize quantity achievements best obtained from mass production of standard types of machines, are ill suited to the encouragement of job-lot production of new, advanced-design, specialized, or custom-built machines which have greater possibilities for labor saving. Pressures for immediate production, poor coordination between research and production, and a lack of economic criteria for determining the effectiveness of such conversion have contributed to this situation. To the extent that the automation and reequipment program falls short of expectations, the manpower and physical plant requirements of the Seven Year Plan will be greater.

The physical plant requirements of the Seven Year Plan, after the obvious miscalculations of the ill-fated Sixth Five Year Plan, almost certainly have been anticipated more realistically. The Seven Year Plan includes programs for a substantial expansion of plant capacity in such key industries as coal, steel, cement, and electric power, which in 1956 caused serious failures in meeting production targets. A major uncertainty of the new investment program, nevertheless, is whether or not the more realistic assessment of requirements for new production capacity are matched by a more realistic assessment of construction capabilities. The lagging performance in the completion of projects in many areas by the construction industry in 1956-57 was avoided in 1958. Construction successes in 1958 seemed to attest to the effectiveness of corrective measures such as higher wages in the construction industry and continuing expansion of the basic materials industries which improved the supply of building materials. Although construction shortfalls have occurred in some industries during the first quarter of 1959, continuing corrective measures suggest that the experience of 1956-57 will be avoided during the Seven Year Plan. Nevertheless, the ambitious character of the plans for new production capacity, compared with achievements of the last 7 years (see Table 5*), will necessitate a considerable effort to keep construction plans on schedule.

Nonfulfillment of the targets for new capacity will not necessarily lead to nonfulfillment of production targets for the industries concerned, but it may have an adverse effect upon the economy as a whole. For many industries, greater tonnage additions to capacity than production increases are scheduled by the Seven Year Plan, and in other industries or sectors of the economy the investment programs are directed at obtaining operating economies. Thus capacity additions in the coal industry are planned to exceed production increases by about 100 million tons, in the apparent expectation that some marginal workings can be abandoned. Investment in the railroads is scheduled to increase by approximately 90 percent above expenditures**

* Table 5 follows on p. 20.

** Text continued on p. 22.

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Table 5

Average Annual Increases in Output and Additions to Capacity in the USSR, by Selected Commodity
1952-58 Actual and 1959-65 Plan

<u>Commodity</u>	<u>Unit</u>	<u>Actual Average Annual (1952-58)</u>	<u>Planned Average Annual (1959-65)</u>
Pig iron	Million metric tons		
Additions to capacity		2.3	3.4 to 4.3
Increase in production		2.5	3.6 to 4.4
Ratio: new production to new capacity		1.09	1.02 to 1.06
Steel	Million metric tons		
Additions to capacity		1.8	4.0 to 5.1
Increase in production		3.4	4.4 to 5.1
Ratio: new production to new capacity		1.89	1.0 to 1.1
Coal	Million metric tons		
Additions to capacity		30.0 <u>a</u> /*	28.6 to 31.4
Increase in production		35.1 <u>a</u> /	14.9 to 16.6
Ratio: new production to new capacity		1.17	0.52 to 0.53

* Footnote for Table 5 follows on p. 21.

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Table 5

Average Annual Increases in Output and Additions to Capacity in the USSR, by Selected Commodity
1952-58 Actual and 1959-65 Plan
(Continued)

<u>Commodity</u>	<u>Unit</u>	<u>Average Annual (1952-58)</u>	<u>Average Annual (1959-65)</u>
Electric power			
Additions to capacity	Million kilowatts	4.8 <u>a/</u>	8.3 to 8.6
Increase in production	Billion kilowatt-hours	19.7 <u>a/</u>	38.1 to 41.0
Ratio: new production to new capacity		4,104	4,590 to 4,767
Rolled metal	Million metric tons		
Additions to capacity		1.0	3.3 to 4.1
Increase in production		2.7	3.2 to 3.9
Ratio: new production to new capacity		2.7	0.95 to 0.97

a. 1954-58.

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of the last 7 years, although freight turnover is to increase 40 percent; the capital expenditures largely reflect the conversion to diesel and electric traction in the expectation of reducing operating costs. Production targets thus may be achieved in some instances by not retiring facilities scheduled for retirement or by continuing an obsolete type of operation in the face of incomplete modernization, but the implication is that achievement of output targets in this way will be at a higher resource cost (including labor input) than originally planned.

In ferrous metallurgy the lag of capacity behind the growth of production was such that by the end of 1956 some blast furnaces were curtailing operations because of inadequate ore supplies. In an effort to restore a balance among the various stages of the industry, the regime has placed great emphasis upon new construction in iron ore mining and blast furnaces. Considerable progress has been made in the construction of new blast furnaces, but only modest improvement in construction activity in iron ore mining has been achieved in spite of the large increase in investment allocations.

The most striking changes are in the pattern of investment for the next 7 years as opposed to the last 7 (see Table 6*). Investment in industry, which is scheduled approximately to double during 1959-65 compared with 1952-58, is to increase more than the increase in total investment, raising slightly the share of industry in the total. By contrast, nonproductive investments of a social-cultural type will increase more slowly than total investment. The most pronounced changes within industrial investment are to occur in ferrous and nonferrous metallurgy, chemicals, petroleum, and gas, and in the timber, paper, and woodworking industries. These industries, which received collectively about 180 billion rubles of productive capital investment during 1952-58, or approximately one-third of industrial investment, are scheduled to receive up to 500 billion rubles during the Seven Year Plan, which represents as much as 46 percent of industrial investment. Other, less emphasized areas of industrial investment, such as the coal industry, will receive a smaller share than in the past.

Present priorities leave little further opportunity for shifting investment away from the sectors producing consumer goods to industries producing investment goods. Housing for the next 2 years at least will constitute a rising share of total investment. Present agricultural programs and the labor saving which is urgently needed will require a growth of agricultural investment approximately equal

* Table 6 follows on p. 23.

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Table 6

Structure of State Capital Investment in the USSR, by Economic Sector
1952-58 Actual and 1959-65 Plan

Economic Sector	1952-58 Actual		1959-65 Plan	
	Billion Rubles ^{a/}	Percent of Total (Nonagricultural)	Billion Rubles ^{a/}	Percent of Total (Nonagricultural) (Upper Limit)
Nonagricultural				
Metallurgy	61	6.4	150	8.2
Machine building (nonmilitary)	66	6.9	118	6.5
Oil and gas	73	7.6	170 to 175	9.6
Coal	61	6.4	75 to 80	4.4
Electric power and transmission	75	7.8	125 to 130	7.1
Construction and con- struction materials	62	6.4	110 to 112	6.2
Timber, paper, and woodworking	25	2.6	58 to 60	3.3
Chemicals	20	2.1	100 to 105	5.8
Transport	107	11.2	209 to 214	11.8
Light and food industry	40	4.2	80 to 85	4.7
Housing and social- cultural	260	27.2	455 to 460	25.3
Other ^{b/}	107	11.2	131 to 141	7.7
Total nonagricultural	<u>957</u>	<u>100</u>	<u>1,790 to 1,820 ^{c/}</u>	<u>100</u>
Agricultural ^{d/}	115		150	

* Footnotes for Table 6 follow on p. 24.

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Table 6

Structure of State Capital Investment in the USSR, by Economic Sector
1952-58 Actual and 1959-65 Plan

-
- a. In 1 July 1955 prices, amended by new uniform evaluations of 1956.
 - b. The modest growth indicated here for this sector results from the assumption that the upper limits of the planned ranges will be achieved in the specifically labeled sectors.
 - c. Derived by subtracting the figure for agriculture from the grand total. This total does not correspond with the sums of the range figures, high and low, because the subtotals given by the Plan are not additive -- that is, some priority shift is provided for. Thus not all branches are expected to spend maximum amounts simultaneously, for example.
 - d. Total investment in agriculture, including kolkhoz investment, will increase from approximately 250 billion rubles to 500 billion rubles.

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to the growth of total investment. The growth in agricultural production that is estimated on the basis of presently known Soviet plans will fall far short of Khrushchev's earlier publicized goal of catching up with the US in meat production. Adoption of new programs to increase output -- for example, an extensive use of lime and fertilizer in the northwestern part of the European USSR -- could entail a substantial increase in agriculturally oriented investment at the expense of other sectors of the economy.

Total agricultural capital investment -- state and kolkhoz -- will approximately double to about 500 billion rubles during the Seven Year Plan compared with about 250 billion rubles during 1952-58. The transfer of MTS activities to the kolkhozes shifts the dominance in agricultural investment out of the state sector and into the collective sector of the economy. This transfer affords the Soviet government the expectation of increased efficiency of utilization of agricultural equipment, but at the same time it creates a new problem for the achievement of the desired degree of control over investment activities.

The estimate in the Seven Year Plan that collective farms will be able to spend 95 billion rubles for technical equipment out of the 350-billion-ruble total investment by collective farms indicates that mechanization of agriculture will continue to place major demands on engineering industries. Although it is difficult at present to compare this estimated equipment expenditure with former expenditures during the existence of the MTS system, it appears to be roughly equivalent to recent levels of investment in agricultural equipment. A major push to retire old agricultural equipment in 1956, which led to a decline in the stock of some types of equipment in spite of high production in that year, rid the agricultural equipment park of the most obsolete models. Hence fewer replacements will be needed for the next few years, permitting greater increases in equipment stocks from a given amount of investment. This possibility, in addition to the probable continuation of the trend for an increase in the portion of total equipment devoted to labor-saving types, suggest that the agricultural investment program may be large enough and labor saving enough to permit a flow of labor from agriculture to the nonagricultural labor force.

Agricultural investment policies have been affected by the reduction of opportunities for expanding acreage under cultivation and by the heightened necessity to increase yields per acre. Republic plans indicate that substantial activity is planned in reclamation and irrigation projects, construction of grain storage facilities, and animal shelters.

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According to the Party Draft of the Seven Year Plan, total capital investments in housing and social-cultural activities will increase from 260 billion rubles during 1952-58 to a total of 455 billion rubles during 1959-65. This increase will result in a slight drop from 24 percent to 23 percent of total state capital investment. The major share of investments in this category go to housing, which will increase from 180 billion rubles during 1952-58 to approximately 323 billion rubles during 1959-65. State housing construction would thus total about 28 percent of the total state construction activity. In addition, extensive urban and rural construction is expected to be undertaken on individual initiative and with some assistance from state credits. The 1959 plan for 41 billion rubles of state housing investment approaches the annual average of 46 billion rubles planned for the 1959-65 period. There is some reason, therefore, to assume that toward the middle of the plan period the rate of increase for state housing investment will slacken, permitting a relatively larger share of the construction effort to go into productive investment, unless attempts to improve the quality of housing construction raise the cost of the program.

In 1957, Soviet authorities foresaw a gradual shift in the area of concentration of capital investment toward the Eastern regions (including Middle Asia, the Urals, and all of the USSR east of the Urals). The share of the Eastern areas in total investment was to rise from the 35 percent received during the Fifth Five Year Plan to 40 percent in the Sixth and ultimately to 55 percent in the Ninth (which would have occurred during 1971-75). Had this trend been carried out, the share of the East during 1960-65 would have been 45 percent. The Seven Year Plan (1959-65) calls for more than 40 percent of total investment to go into the area, whereas the area's share of industrial output is to increase from 26.7 percent in 1958 to 31.0 percent in 1965. Implied growth in industrial production in the Eastern regions thus is 110 percent compared with about 80 percent for the country as a whole.

The desirability and the practicality of the Eastern development program have been discussed and debated in the USSR for many years. The leadership perhaps has no other alternative action if the material, fuel, and energy base of the country is to be expanded. Higher initial development costs in the Eastern regions should be followed by more favorable cost trends in subsequent years. The Soviet government, nevertheless, will be under continual pressure to obtain immediate increases in output by making investments in the established areas of the country and by foregoing costly overhead expenditures in the East.

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C. Institutional Considerations

The Seven Year Plan will be implemented in a substantially different institutional environment than that of previous planning periods. The impact of the institutional changes of the last 2 years and of the further changes which are certain to occur during the next 7 years, both in industry and in agriculture, is difficult to quantify. Yet these changes, which clearly are intended by the Soviet leadership to improve the functioning of the economy, must be viewed as possible contributors to the success of the plan.

The success of the new organizational arrangements, in terms of meeting the centrally determined goals of the Seven Year Plan, will depend upon how well the authorities have preserved effective central control and upon the extent to which the new operational environment may have become more favorable to the development of personal initiative -- so important in the drive to improve efficiency and mobilize heretofore unutilized resources.

In industry, central control has been strengthened by the enhanced role of USSR Gosplan and by the increased participation of the Party in economic matters at all levels. The new territorial administrative arrangement -- the regional Councils of National Economy -- parallels the territorial structure of the Party organization. Local Party organs have been charged with monitoring local economic operations, and economic officials can no longer effectively counter their intervention by direct recourse through ministerial channels to Moscow. Financial and statistical controls have been revamped to conform to the new structure; statistical offices with their own channels to Moscow have been established in each economic administrative area to provide the center with independent statistical information as well as to provide statistical support to the sovnarkhozy. Adaptations in the Gosbank structure have been made to facilitate close control of financial flows. Campaigns in mass media have exhorted the populace to be vigilant against actions contrary to "general state interests."

On the other hand, in order to promote initiative, republic and regional economic organs have been assigned many responsibilities and functions formerly handled by Moscow ministries and main administrations. Republic gosplans have been expanded in scope. Authority for many routine matters has been delegated to sovnarkhoz officials, but with stress on their expanded responsibility. There has been a new emphasis on suggestions from workers and administrators of all levels. Local initiative is now encouraged in matters relating to "how" centrally determined tasks are to be met.

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Generally speaking, the transition to the new form of industrial administration has been accomplished with little disruption. Even before this was confirmed by the plan fulfillment report at the end of 1957, a measure of initial success was suggested by new steps in the reorganization process. Certain ministries which initially had been retained, including those closely connected with the military, were abolished, and their technical and developmental functions were transferred to newly established state committees of the USSR Council of Ministers. In 1958, administrative categories for supply were redefined, and main administrations for interrepublic supply were established to replace the supply-sales administrations which had been merged temporarily within USSR Gosplan. USSR Gosplan maintained tight control over the distribution of critically scarce commodities and closely monitored all supply operations, but many functions, which formerly had involved detailed routine intervention by USSR Gosplan in supply movements, were assigned to republic gosplans and local supply organs.

Some modification was also made in the system for establishing prices. The center, principally by USSR Gosplan action, continued to determine all important industrial prices as well as prices for state procurement of agricultural products, but in retail trade significant delegations of price-setting authority seem to have been made. About 45 percent of food and industrial commodities marketed at retail are to have their prices set by republic or local organs on the basis of pricing policy determined by the center.

Considerable initiative was encouraged from the localities in the matter of investments, although the center reserved to itself all important decisions. A definite pattern of delegation of authority in this aspect has not yet emerged, however, and discussion of the problem continues.

Informal statements by various Soviet leaders and articles appearing in Soviet journals indicate that active consideration is being given the question of redefining economic areas. The integration of plans for more than 100 separate areas poses problems in administration; the problem is especially acute in the sprawling Russian Republic (RSFSR) with its 68 sovnarkhozy. Proposals have ranged from suggestions for four large self-sufficient regions to suggestions for establishing about 25 or 30 main economic areas. In the former case, the need for subordinate territorial subdivisions is clear; in the latter, perhaps, new larger areas might consolidate some existing regions. In any case, some intermediate administrative echelons may be interposed between the republic and the sovnarkhozy. It is also possible that agriculture may be integrated into the sovnarkhoz system, as was suggested recently by Academician Strumilin and others.

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The present system, in any event, clearly is in an interim stage, and further organizational developments will be forthcoming. These changes, on the one hand, could be a return to a clearly defined central control in which all semblance of "decentralization" is removed and the rules are made so precise that the center has effectively eliminated any legal or illegal choice open to lower levels (republic, Council of National Economy, or enterprise). On the other extreme, the leadership could decide to introduce more drastic measures to give greater content to its originally announced intention of devolving meaningful decision-making powers.

The reorganization of construction has been analogous to the industrial organization in many ways. Administration of most construction sites within an economic region generally has been assumed by a generalized construction trust of the local sovnarkhoz. These trusts, amalgamating many former small specialized construction units, were intended to permit savings in administrative personnel as well as to induce greater efficiency through local specialization and timely maneuvering of building materials and labor among local construction sites.

Perhaps of even greater importance, the reorganization of construction was intended to counter the tendency to expand the volume of construction underway without due regard for timely project completion. This diffusion of the construction effort tied up scarce resources and delayed the commissioning of important new capacity upon which industrial expansion depended. With the sovnarkhozy becoming responsible for both industrial production and construction, lagging completions may be reduced although reports of excessive diffusion continue to appear. Correction of this situation may not be possible without introduction of new criteria for judging plan fulfillment and for awarding bonuses to construction workers.

In agriculture, further significant changes are now being introduced which perhaps will have a greater impact on production than those changes already instituted. State control over agricultural activities apparently is not to be weakened. Although the MTS has been abolished, its political and economic functions generally are being shifted to other institutions. Many of the general production, planning, and procurement controls apparently are now in the hands of a rayon executive committee under a newly created "inspectorate." Such political control as the MTS formerly exercised probably will be added to the rayon committee's functions. The important functions of major repair and materials distribution (fuel, fertilizer, and machinery) will reside in the repair technical stations (RTS's), which are physically taking over the plant of the MTS's.

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Collective farm control over most of the machinery formerly under the MTS's may prove of some significance in increasing output. The former dual and sometimes conflicting decisions by the collective farm chairman and the MTS director concerning day-by-day operations of the collective farms will now be avoided. The collective farm chairman now is free to maneuver machinery in a more timely manner and has the undivided use of more skilled labor.

The new "single price" system introduced in 1958 seems to be designed to give enough added income to the kolkhoz to cover most, if not all, of the cost of operations previously performed by the MTS's. Its adoption, however, may have removed one of the incentive features of the previous multiprice system, under which higher prices were realized for above-normal yields either through premiums or purchase prices. Prices are now to be set for individual rayons after the size of the rayon harvest is known. Lower prices will be set when yields in a given year are high so that incomes will be held relatively constant. It is not known what adjustments will be made for secular increases in yields. On the positive side, there is the possibility of a more favorable attitude on the part of the collective farmer toward socialized agriculture because of the elimination of sharp fluctuations in income from the collective farm.

Some important changes which were initially suggested in the agricultural reorganization proposals have not been adopted. The freedom of choice suggested for the collective farm chairman in the purchase of MTS machinery and in the negotiation of contracts has not materialized. Machinery is being transferred with little regard for the farm chairman's desires, and the central organs continue to determine procurement goals. The much-publicized decentralization of planning of acreages, production, and the like, initiated in 1955, apparently is quite limited in practice. There are few indications that the changes made thus far have improved the position of the enterprise manager in Soviet agriculture with regard to his making significant choices in what and how he will produce. The farm chairman, furthermore, still has little or no incentive to lower the cost of production by reducing labor and capital expenditures, because his personal success is related almost exclusively to the fulfillment of output goals. The present move to place collective farms on a khozraschet (cost accountability) basis, along with the movement toward a guaranteed wage for collective farm labor, should substantially increase the motivation for the farm chairman to minimize costs. Pressures to minimize labor inputs might force additional workers away from the collective farm into urban occupations.

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D. Role of Foreign Trade

Soviet foreign trade policy is revealed in the Seven Year Plan only in terms of a 50-percent increase in trade with Socialist countries and a readiness to expand trade relations with the rest of the world. Beyond this, it is probably safe to assume that Soviet trade policy will continue to subordinate short-run economic gains to the furtherance of national political objectives -- strengthening Satellite ties with the USSR, promoting Soviet relationships with underdeveloped non-Bloc areas, and providing the bulk of the capital imports required for the Chinese Communist industrialization program. Only in trade with the industrialized countries of the non-Bloc world will economic considerations tend to dominate Soviet foreign trade policies.

Total Soviet foreign trade, reported to be valued at 34 billion rubles in 1958 compared with 33.3 billion rubles in 1957, will continue to increase during the Seven Year Plan period. The composition of Soviet foreign trade will continue to be influenced by the requirements for maintaining the Soviet empire in Eastern Europe and the Soviet alliance with Communist China as well as by the requirements of the domestic economy.

Soviet trade with the European Satellites, as indicated by existing trade agreements, will increase considerably through 1960. European Satellite exports to the USSR, particularly electric and chemical equipment to meet expanding Soviet requirements, will increase as the European Satellites begin to repay credits previously granted them by the USSR. On the other hand, Soviet exports to the European Satellites of raw materials, particularly iron ore, petroleum, and nonferrous metals, will increase during the next 7 years. Soviet exports of capital equipment to the Satellites, however, will not substantially increase during the period, with the probable exceptions of electrical and agricultural machinery.

Recent attempts to increase intra-Bloc economic integration and specialization probably will be pursued further, particularly in regard to long-run allocations to exports of basic materials and bilateral cooperation and subcontracting on an interindustry basis. The main effect will be reflected in intra-Satellite production and trade. The USSR itself probably will not become highly involved in Bloc integration, particularly in specialization schemes, principally because it already possesses a large and diversified economy which was developed for purposes of self-sufficiency.

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Soviet trade with Communist China, characterized in the past by an excess of Soviet exports, recently has shifted to an excess of Soviet imports as Chinese repayments under terms of previously granted credits have begun. Soviet exports of machinery and equipment to Communist China, accounting for as much as one-half of total Soviet exports to China in recent years, will continue to account for a major portion of this trade, which is dominated by Chinese requirements for capital equipment for the industrialization program.

Soviet trade with underdeveloped countries of the non-Bloc world can be expected to increase during the Seven Year Plan period. Total credits of more than US \$1 billion (excluding military) have been granted to underdeveloped countries by the USSR, although only about 20 percent of this amount had been drawn by the end of 1958. Future drawings upon these credits and new credits which surely will be granted in the future may entail substantial increases in Soviet exports of capital goods to these countries. These areas will, nevertheless, continue to account for a relatively small part of total Soviet trade. The slight burden of this trade will remain a small price to pay for the promise of continuing rich political rewards.

Soviet trade with the industrial countries of the West, although small in size, will continue to increase as in the past when it rose from an import volume of approximately US \$200 million in 1950 to US \$575 million in 1956. More than one-third of these imports consisted of machinery and equipment, and another one-third of metal and metal products. The small volume of this trade understates its contribution to the Soviet domestic economy because of the gains derived from importing machinery and equipment for use as prototypes and from supplementing domestic production of items such as electrical machinery, power generating equipment, and ships. Recent Soviet statements have emphasized a determination to buy more machinery, particularly chemical machinery.

Soviet exports to the West, primarily industrial raw materials and fuel, have been motivated by the necessity of paying for imports and can be expected to increase to the extent that imports increase. Soviet export sales have been disturbing to Western producers, particularly as regards aluminum and petroleum, items about which Western producers have been successful in avoiding undue competition among themselves.

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Soviet aluminum production capacity is sufficiently above domestic needs to permit export sales, but production costs are high and much of the industry is still located in the Urals, where fuel is in short supply. Soviet export of petroleum to the West can be expected to continue to expand because it offers a convenient opportunity for obtaining foreign exchange. The USSR also is selling increasing amounts of tin, flax, and lumber products to the industrialized countries of the West for the same reason.

IV. Probable Results of the Seven Year PlanA. Estimated Growth of Gross National Product, 1958-65

Soviet GNP grew about 40 percent during the years of the Fifth Five Year Plan (1951-55), or at an average annual rate of approximately 7 percent compared with an annual GNP growth rate for the US of 4.3 percent during the same period. The US growth during these years was substantially higher than the long-run trend of 3 percent annually. Soviet GNP increased about 5.5 percent in 1957 and about 7.0 percent in 1958, compared with a 9-percent rate of increase in 1956 which was explained largely by the extremely good harvest in that year. It is estimated that Soviet GNP will grow at an average annual rate of 6.0 to 6.5 percent for the period 1958-65, for a total increase of 50 to 55 percent over this period.

The estimated proportions of Soviet GNP by end use in 1958, with a comparison of those of US end-use components, are shown in Table 7.* Investment, although growing more slowly than during the past several years, will continue to increase more rapidly than total product and will comprise, therefore, a larger share of Soviet GNP by 1965. Defense is expected to remain about the same proportion of the total. Consumption probably will grow more slowly than in the 1950-58 period and at a lesser rate than GNP. Although various consumer services are expected to expand at increasing rates, this expansion will not be enough to counteract the effect of the relatively slow-growing agricultural production upon consumption.

B. Comparison of Gross National Product in the USSR and the US

The anticipated high rates of growth of Soviet GNP during the period of the Seven Year Plan will increase the size of the Soviet economy relative to that of the US (see Table 8**). Soviet GNP, which in 1950 was a third of US GNP, increased to 41 percent in 1957. If***

* Table 7 follows on p. 34.

** Table 8 follows on p. 34.

*** Text continued on p. 35.

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Table 7

Distribution of Gross National Product
in the USSR and the US, by End Use a/
1958

End Use	Percent	
	USSR <u>b/</u>	US <u>c/</u>
Consumption	61	69
Investment	28	17
Defense	10	11 <u>d/</u>
Administration	1	3
Total	<u>100</u>	<u>100</u>

a. Adjusted value added.

b. Gross national product of 1,367 billion 1957 rubles.

c. Gross national product of 397.7 billion 1958 dollars.

d. Including military foreign aid amounting to approximately 5 percent of defense expenditures.

Table 8

Value of Gross National Product, at Market Prices,
in the USSR and the US
Selected Years, 1950-65

	Billion 1957 US \$					
	1950	1955	1956	1957	1963	1965
USSR <u>a/</u>	112	156	170	180	260 to 270	290 to 300
US <u>b/</u>	344	425	435	440	550	590
USSR as a percent of US	33	37	39	41	47 to 49	49 to 51

a. Two projections were made for the USSR -- one involving an estimated annual increase in industrial production of 8 percent from 1958 to 1965, and the other a 10-percent increase per year for the same period.

b. The US projection is based on a growth rate of 3 percent per year between 1956 and 1960 and of 3.7 percent per year between 1960 and 1965, derived from recent estimates by the Joint Economic Committee.

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the annual growth rate of US GNP is projected at 3.5 percent, approximately midway between its postwar rate and its long-run trend, Soviet GNP will have increased to about half that of the US by 1965.

The comparison of the principal end-use components varies greatly from the comparison of total GNP of the two countries. Soviet GNP in 1957 was only 41 percent of US GNP, but defense expenditures measured in dollars in the two countries were approximately the same in absolute size. Total investment in the USSR was about two-thirds of that in the US, but investment in industry, mining, and public utilities was 80 to 85 percent as high. On the other hand, consumption in the USSR amounted to less than a third of that in the US, although the USSR has a population approximately 20 percent greater.

C. Projections of Industrial Growth

Aggregate industrial production is expected to grow at approximately 8 to 10 percent per year during the period 1959-65. Growth of most of the major industrial products will be somewhat slower than in the past. Production of crude steel will increase by 6 to 6.5 percent per year compared with 9.5 percent between 1950 and 1957. Production of machinery will expand at rates below those achieved in the recent past, perhaps 8 to 10 percent per year compared with an estimated average annual rate of 10 to 13 percent between 1950 and 1957. Prospects for energy output are more promising as a result of the planned shift in the fuel balance away from solid fuels. Production of petroleum and natural gas is expected to rise by 10.5 percent per year between 1958 and 1965, permitting the coal share of the fuel balance to fall from about 60 percent at present to less than 45 percent by 1965. Production of coal, in spite of the radical planned reduction of the coal share of the fuel balance, is planned to grow nearly 3 percent annually during the next 7 years, or at about one-half the rate planned for 1958. The increase foreseen for output of electric power is below the 13.3 annual average for 1950-55 but will be adequate to support the anticipated industrial growth rate.

D. Projections of Agricultural Production

The average annual rate of increase in agricultural output during the 1958-65 period is projected at about 4 percent compared with the average annual rate of 7.5 percent achieved over the 1953-57 period. This slowing trend in future agricultural growth compared with the remarkable performance over the past 4 years is caused by several factors.

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Perhaps half of the increase in production during the 1953-57 period came from a 23-percent increase in sown acreage. During the 1958-65 period the total acreage will increase about 11 percent, or at an average annual rate of only about one-fourth that of the earlier period. The corn program, which explained part of the sharp rise since 1953 in the availability of livestock feed, will not contribute to future agricultural output on the same scale as in the past. Much of the expansion of corn acreage came about from substituting corn for sown grasses and other feed crops that produced less feed units per acre. Most of the opportunities for gainful substitution will have been exhausted.

In this context, the Seven Year Plan goal of a 70-percent increase in gross agricultural production -- about 8 percent annually -- appears to be impossible of achievement. Some beneficial effects may be expected from the plan to triple the supply of mineral fertilizer, to improve the quality of grain, to extend and improve crop rotation practices, to extend irrigated land in cotton areas, to ameliorate the soils in the northwestern and western areas of the country, and to proceed with further institutional reforms. Output gains from these sources, however, do not show clear promise of duplicating gains of the last 4 years.

The projected output for 1965 is premised on the continuation of presently known agricultural programs. The rate of growth, about 4 percent a year, does not appear to be consistent with Khrushchev's formerly publicized meat production goals, which called for nearly a 10.5-percent average annual increase, nor with his general inclusion of consumption in the arena of economic competition with the West. If such a modest rate of increase emerges over the next several years and it becomes apparent that present programs and resource allocations are not adequate to sustain the rapid growth of the 1953-57 period, new campaigns may be initiated with the aim of matching the food production growth of the earlier period.

E. Prospects for Consumption

The Seven Year Plan continues to exploit the propaganda value of improvements in consumption levels and continues to treat per capita consumption as a new area of competition with capitalist countries. It is clear, however, that the Soviet regime continues to regard consumption primarily as a "cost of production" required to obtain economic growth and military power. This minimum regard for consumption, which has fostered the development of an economy which can engage in defense expenditures equal in dollar value to those of the US and investment outlays two-thirds as large as those of the US but whose consumption is less than one-third the dollar value of

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consumption in the US, will continue to limit severely the prospects for a rapid rise in the welfare of the Soviet consumer. The consumer goods program in the Seven Year Plan is sufficient to narrow or close the gap between US and Soviet consumption levels in a few limited areas; and these gains are sure to be proclaimed loudly for their propaganda value, but over-all per capita consumption in the USSR, nevertheless, still will be far below that in the US.

Over-all per capita consumption, furthermore, will increase more slowly during the Seven Year Plan -- perhaps 3.0 or 3.5 percent annually -- than it did during 1950-57, when notable gains in agricultural output contributed to an average annual increase in consumption of 5 percent. Slower rates of growth in agriculture will limit the increase in food consumption to about 2.5 percent annually compared with the average annual rate of 4.0 percent from 1950 to 1957. Slower growth in agricultural industrial crops will limit the increase in consumption of manufactured soft goods, such as textiles, to about 4.0 percent annually, compared with the annual rate of about 8.0 percent during 1950-57, in spite of planned increases in artificial and synthetic fiber production by the chemical industry. Per capita consumption of durable goods, starting from a very low level in 1950, has been increasing at the rapid average annual rate of 23 percent but will increase at a much slower rate of perhaps 10 percent annually during the Seven Year Plan period. The only component of consumption which will increase more rapidly than in the past is services, of which urban housing, household fuel and power, and personal transportation will gain the most rapidly. Even in these areas, however, planned 1965 consumption levels are still quite low. Achievement of urban housing goals, for example, will result in an average living space of only 7 to 7.5 square meters per person, still well below the Soviet minimum standard of 9 square meters.

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