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ECONOMIC INTELLIGENCE REPORT

SURVEY OF ECONOMIC DEVELOPMENTS IN THE EUROPEAN SATELLITES UNDER THE FIRST LONG-TERM PLANS

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S-E-C-R-E-T

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(ORR Project 10.804)

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FOREWORD

This report consists of surveys of major economic developments during the first long-term plans of each of the European Satellites except Albania. The Five Year Plans of East Germany and Rumania and the Six Year Plan of Poland ended in 1955. The Five Year Plans of Czechoslovakia and Hungary ended in 1953 and 1954, respectively. The First Five Year Plan of Bulgaria for the period 1949-53 was concluded 1 year ahead of schedule, in 1952; the Second Five Year Plan runs from 1953 through 1957. The discussion and statistical series in these surveys generally have been extended through 1955 for Bulgaria, Czechoslovakia, and Hungary even though their first long-term plans ended earlier.

The report thus stops short of the dramatic events which followed de-Stalinization and the concept of "many roads to socialism," culminating in the armed revolt of Hungary. Economic difficulties contributed to the eruptions in Poland and Hungary, and these difficulties stem directly from the policies adopted by the Satellites in their first long-term plans. The purpose of this report is to present this historical background.

The survey for each Satellite contains a review of (1) economic policy and economic plans during the period; (2) the principal achievements and shortcomings in the performance of the economy; (3) the allocation of labor and investment expenditures by the state in order to promote the growth of output; and (4) developments within industry, agriculture, and other major sectors of the economy. In addition to the surveys for the six countries, the introductory section discusses the economic growth of the area as a whole since 1950. In order to limit the report to a reasonable length, it has of course been necessary to omit discussion of some relevant topics and to treat others very briefly.

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SURVEY OF ECONOMIC DEVELOPMENTS IN THE EUROPEAN SATELLITES UNDER THE FIRST LONG-TERM PLANS*

Summary

The European Satellites** under the first long-term plans of each country exhibited most of the characteristics which Western countries manifest under wartime conditions, although the primary objective was that of increasing the output of heavy industry rather than the production of armaments. The frantic concentration on one main production objective at the expense of others under a system of controlled prices and central allocations of supplies produced results, both good and bad, that were analogous in many respects to those in the US from 1941 to 1945. There was a rapid increase in output in the favored sector, heavy industry. Part of the increase resulted from a high level of investment, which was channeled to an excessive degree into heavy industry. The remaining part resulted, first, from restoration of war-damaged plants, and then from increasingly intensive use of capacity. Industrial labor forces in the various countries were expanded drastically by drawing labor out of agriculture and by employing hundreds of thousands of women who needed to supplement meager family incomes.

Controlled prices and central allocations led to familiar results -- shortages and distribution difficulties in the case of both consumer goods and industrial supplies. Quality of products declined, and the composition of output tended to be set with an eye to increasing gross value of production (at established prices) rather than to meeting demand. The worst results occurred in the sectors which served the consumer -- that is, agriculture, housing, personal services, and light industry. In these sectors the withdrawal of labor and withholding of investment contributed to declines, stagnation, or at best inadequate growth.

These economic difficulties were gravely aggravated by other policies and by the limited natural resource endowments of the Satellites. All of the Satellites lack sufficient domestic raw materials to develop and operate heavy industry and must therefore rely on imports for part of their needs. Headlong industrialization has created raw material shortages in all the countries. The reorientation of trade from West to East

* The estimates and conclusions contained in this report represent the best judgment of ORR as of 1 July 1957.

** Including Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Rumania but not including Albania.

made the Satellites dependent on the insulated Soviet Bloc economic system, in which their bargaining position was weak. Reparations, occupation costs, and more subtle exploitation through trade have transferred considerable resources to the USSR. At the same time, neglect of their former export industries, agriculture, and consumer goods greatly reduced the ability of the Satellites to trade with the West on favorable terms. Added to all this, socialization created waste and inefficiency in industry and was a major factor in the stagnation of agriculture.

Modifications of policy were introduced in 1953 in the "new course," which was intended to reduce the imbalances resulting from industrialization and the too rapid collectivization of agriculture. These modifications, however, were only partially successful. Although the Satellites made significant progress under the long-term plans, as represented by increased industrial capacity, the populations of the Satellite countries at the beginning of 1956 were frustrated and dissatisfied both as consumers and as workers and peasants.

The most fundamental objectives of the Satellite regimes under the first long-term plans, which covered from 4 to 6 years in the different countries during 1949-55, were maintenance of high rates of economic growth through preferential development of heavy industry, more complete socialization of agriculture, and greater interdependence and cooperation with other Bloc countries. Although these policies were generally adhered to, there were certain modifications in specific objectives during the period and significant shortcomings in the carrying out of the plans. The growth in the gross national products (GNP's) during the period was rapid, but with the end of the recovery from the effects of the war and the lessened opportunity to mobilize underutilized resources, the rates of increase declined in most Satellites. The original goals for the expansion of national income were not reached in most cases, judging by the production data available for a sample of products, and even official reports did not claim that the revised, higher goals adopted in 1950-51 for the terminal years of the plans were reached or even approached except in East Germany.

With the exception of agriculture the Satellite economies were largely socialized at the start of the plans. The principal exception -- East German industry -- remained an exception at the end of the plan, as private firms still accounted for 15 percent of the gross industrial output in 1955. The campaign to socialize agriculture was characterized by substantial gains in the early years of the plans, a leveling off or

reduction in the socialized area after the "new course" was announced in 1953, and a renewed campaign in 1955 and 1956 which made up some of the losses of 1953-54 and, in certain countries, raised the share of arable land under socialized ownership above earlier levels. Well over half of the land in the Satellites, however, is still in private hands. Bulgaria, which had socialized 65 percent of its land by the end of 1955 and nearly 80 percent by April 1956, has come closest to the long-range goal of complete socialization of agriculture. The proportion of the land in the socialist sector at the end of 1955 ranged from 30 to 36 percent in Czechoslovakia, East Germany, and Hungary and approximated about 25 percent of the total area in Poland and Rumania.

The role of the USSR in shaping Satellite economic policy and guiding broad developments in each country was direct and active during the period. Soviet pressure reinforced Communist doctrine in the effort to insure priority development for heavy industry in each Satellite. Several means were available and were used for the exercise of Soviet influence over the Satellite economies. Among these were reparations deliveries from East Germany, Hungary, and Rumania, which gave the USSR some control over the pattern of output in these countries; the joint Soviet-Satellite companies, which often had Soviet managers; the granting of credits and technical aid for projects which had Soviet approval; the providing of Soviet planners and technicians to act as advisers in the Satellites; the Soviet-dominated Council for Mutual Economic Assistance (CEMA); and, perhaps most important, the direct influence of the USSR in bilateral trade negotiations.

The economic interdependence of the Bloc countries increased considerably in the early years of the plans, as evidenced by the increased relative importance of intra-Bloc foreign trade. This swift redirection of Satellite trade was halted after the adoption of the "new course" policy calling for renewed trade with countries outside the Bloc, especially with underdeveloped areas which could provide needed raw materials.

Greatly increased attention has been given in the Satellites to coordination of their production and investment plans, greater specialization in production, organization of joint development projects, and sharing of technical "know-how." CEMA and its specialized committees have held numerous meetings since 1953, as a result of which certain major goals for production, investment, and foreign trade under the Five Year Plans for 1956-60 were coordinated.

These plans were badly upset by events in 1956, causing the Bloc countries to resort again to the system of bilateral trade negotiations which characterized the period of the first long-term plans. Communist domination up to 1956 produced no significant new economies from specialization among the Satellites. On the contrary, their adoption of the same general policy -- rapid growth of heavy industry -- may have led to greater similarity of the economies to each other and to the USSR. This similarity is evidenced by the common shortage of raw materials and fuels which has appeared in all Bloc countries. It would be possible for the Bloc countries to specialize even with similar economic goals, but the process of negotiation in the absence of equilibrium prices and exchange rates has not yet succeeded in this direction.

A prominent part of each long-term plan -- and the key to the attainment of the large planned increases in output -- was a program of intensified industrialization. Industry had the highest priority in the distribution of manpower and investment funds, and large gains in production were realized. Over-all production targets for industry were not reached in most of the countries, however, and the growth of output among the various industrial products was poorly balanced. The tendency of the production of capital equipment to outrun the supply of raw materials and to overwhelm the output of light industry not only held growth rates below what would have been possible with a more balanced expansion of industry but also severely limited improvements in living standards.

In addition to growing pressure on the raw materials base, there was a tightening up of supplies of manpower for industry and other nonagricultural employment. Transfers of labor to industry from agriculture became more difficult, and the more favorable policy adopted for agriculture after the "new course" required a halting or reversal of this movement in certain countries. By the end of the plans, the agricultural labor forces in Czechoslovakia, East Germany, and Hungary were comparatively small; only Poland, Rumania, and Bulgaria appeared to have much prospect of drawing sizable amounts of manpower from agriculture in the future.

The most distinctive feature in the distribution of the GNP'S of the Satellites during this period was the large allocation to investment. Except in East Germany, where there was a substantial drain on production through Soviet takings for reparations and occupation costs, gross investment evidently amounted to about 25 percent of the GNP's. This ratio was reduced somewhat after the "new course," when the

scheduled increases in investment were cut back, but it remains high by Western standards.

Improvements in living standards up to 1953 were held down by the high level of investment, Soviet takings (which were especially large in East Germany), the failure of agricultural output to increase materially, and the poor showing in housing construction. Some moderate gains in consumption have been achieved since 1953, but these gains were primarily in goods other than food or housing. In Rumania and in East Germany, some food rationing continues; in no Satellite has there been satisfactory improvement in urban housing conditions; and in all Satellites the cost of living compels many urban families to have at least two wage earners in order to maintain family living standards. The disturbances in Poland and the revolt in Hungary show that there is still an intense and widespread popular dissatisfaction with living conditions in the Satellites.

I. Introduction: Satellite Economic Growth Since 1950.

A. Problems of Data in Estimating Satellite Economic Performance.

Estimation of the size and growth of the Satellite economies has been rendered extremely uncertain by the scarcity and obscurity of statistical reporting from these countries in the past. Until recently, only fragmentary data have been available, and it has been nearly impossible to construct measures of GNP and its components in which much confidence could be placed. Nevertheless, some correction of the excessively favorable impression created by the published statistics of the Satellites is necessary.

These statistics have consisted principally of indexes of the gross value of production in industry, physical outputs for a selected list of products, and over-all measures of national income according to the Soviet concept.* These statistics allow great scope for misstatement and for misleading the unwary. The estimates which are presented in this report represent an attempt to express the economic growth of the Satellites in terms of the Western concept of GNP** with the minimal goal of including the sectors which are missing in the Soviet definition of national income. These sectors generally grow more slowly than those which are included. Other modifications are of a more dubious quality. Thus indexes of net industrial production have been constructed to replace the official gross value indexes in an attempt to avoid the distortion arising from the double counting in the latter. The constructed indexes, however, are necessarily based primarily on the officially selected samples of products for which output data are published.***

Some use has been made of the detailed statistics and other information recently released by certain Satellite countries. This information offers the possibility of constructing more thorough and accurate measures of economic growth and structure than have been possible to date, but it also reveals many more complexities and possibilities of distortion in Satellite statistics than were realized before. As a result, a great deal of time and effort will be required to construct reliable measures of economic performance in these countries.

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* Depreciation and "unproductive" services -- that is, services not connected directly with material production -- are excluded in the Soviet concept of national income.

** Except in the case of Hungary, for which official indexes of national income were used.

*** For further details concerning the calculation of indexes of GNP and production by major economic sector, see Appendix B.

Pending completion of this detailed research, the economic measures given in this report may be used cautiously as broad indicators of the magnitude, rates of growth, and structure of the Satellite economies if recognition is given to the possibility that future work may change these estimates considerably. In the light of recent revelations of dubious statistical procedures in Poland, which are likely to have been duplicated in some degree in the other countries, it seems probable that the present estimates of GNP overstate the economic growth of at least some of the Satellites.

B. Trends in Gross National Product.

Despite shortages of raw materials and labor, general underfulfillment of investment plans, and the confusion and waste resulting from the abrupt changes in the principal economic goals, the European Satellites succeeded in substantially increasing the total output of goods and services during 1951-55. The GNP of the Satellites (exeluding Albania) is estimated at $60 billion in 1955, or about 40 percent more than in 1950. This represents a relatively high average annual rate of growth of 7 percent. The gains in GNP for the individual countries ranged from about 32 to 50 percent during the 5-year period, according to calculations based on output data for a sample of products (see Table 1*). For the area as a whole and for each of the countries except East Germany, GNP in 1955 was also much higher than in 1938. East Germany apparently has had a more rapid expansion in output than most other Satellites since 1950, but the starting point for this growth was so low that the prewar level was not approximated until 1954.

The output of the Satellites is concentrated largely in Poland, East Germany, and Czechoslovakia, which together account for more than 80 percent of the total. Because of the considerable delay which occurred in the economic recovery of East Germany, Poland has assumed the former's prewar position as the most productive area among what are now the European Satellites. Rumania's GNP, which ranks fourth in the group, is rather small, considering the size and population of the country. The outputs of the other countries reflect their small populations and comparatively low levels of productivity. The marked difference in productivity between East Germany, Czechoslovakia, and Poland, on the one hand, and Hungary, Rumania, and Bulgaria, on the other, is clearly shown in the estimates of GNP per capita in the various countries given in Table 2.*

The growth in Satellite GNP generally paralleled the rapid expansion of Soviet output during 1951-55. In 1955 as in 1950, therefore,

* Tables 1 and 2 follow on p. 9.

Table 1

Gross National Products of the European Satellites a/
1938 and 1948-55

Year	Bulgaria		Czechoslovakia		East Germany		Hungary		Poland		Rumania		European Satellites	
	Value (Billion 1955 US $)	Index (1950=100)	Value (Billion 1955 US $)	Index (1950=100)	Value (Billion 1955 US $)	Index (1950=100)	Value (Billion 1955 US $)	Index (1950=100)	Value (Billion 1955 US $)	Index (1950=100)	Value (Billion 1955 US $)	Index (1950=100)	Value (Billion 1955 US $)	Index (1950=100)
1938	1.03	87	7.30	92	16.1	144	2.45	92	14.5	87	3.07	103	44.4	104
1948	1.11	93	6.71	85	7.81	70	2.01	75	11.9	71	2.60	87	32.1	75
1949	1.12	94	7.18	91	9.09	81	2.21	83	14.6	87	2.71	91	36.9	86
1950	1.19	100	7.93	100	11.2	100	2.67	100	16.7	100	2.98	100	42.7	100
1951	1.27	107	8.34	105	12.8	114	3.12	117	17.1	102	3.30	111	45.9	107
1952	1.33	112	9.10	115	13.6	121	3.06	115	17.9	107	3.32	111	48.3	113
1953	1.42	119	9.79	123	14.6	130	3.46	130	19.2	115	3.68	123	52.2	122
1954	1.56	131	10.3	130	15.9	142	3.32	124	20.7	124	3.98	134	55.8	131
1955	1.68	141	11.1	140	16.8	150	3.62	136	22.1	132	4.48	150	59.8	140

a. Excluding Albania.

Table 2

Gross National Product Per Capita in the European Satellites a/
1938 and 1948-55

1955 US $

Country or Area	1938	1948	1949	1950	1951	1952	1953	1954	1955
Bulgaria	150	160	160	160	180	180	190	210	220
Czechoslovakia	500	550	590	640	670	720	760	800	850
East Germany	970	420	490	610	700	740	800	880	940
Hungary	270	220	240	290	330	320	360	340	370
Poland	460	500	600	670	680	700	730	770	810
Rumania	200	160	170	180	200	200	220	230	260
European Satellites	470	370	420	480	510	530	570	610	640

a. Excluding Albania, whose product per capita probably is somewhat less than that of Bulgaria.

the GNP of the Satellites amounted to about 40 percent of the GNP of the USSR. The USSR, however, has greatly outdistanced the Satellites in economic growth since 1938, when the total output of the present-day Satellites is believed to have exceeded 50 percent of the output of the USSR. Although a substantial portion of the estimated Satellite GNP of $60 billion is needed to provide even a low standard of living for the area's population of more than 95 million, the Satellites nevertheless constitute a significant addition to the economic capability of the Bloc.

The Satellites, like the USSR, have achieved rates of economic growth since 1950 which are generally higher than those of the major countries of Western Europe, excluding West Germany. A comparison of increases in outputs between 1938 and 1955 is less favorable to the Satellites, however, and is decidedly unfavorable in the case of East Germany, as shown in Table 3.

Table 3

Percent of Increase
in the Gross National Products of the European Satellites, a/
the USSR, and Selected Countries of Western Europe b/
1938 to 1955 and 1950 to 1955

	Based on Constant Prices	
Area or Country	1950 to 1955	1938 to 1955
European Satellites	40	35
Bulgaria	41	63
Czechoslovakia	40	52
East Germany	50	4
Hungary	36	48
Poland	32	52
Rumania	50	46
USSR	40	78
France	23	46
Italy	31	38
UK	13	38
West Germany	57	49

a. Excluding Albania.
b. Percentage changes for Western European countries are calculated from index numbers [redacted] (France and West Germany in 1938, recalculated to a 1952 base) [redacted] (all other Western European countries). [redacted]

50X1
50X1
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C. Changing Pattern of Output.

The industrialization of the economies of the Satellites, which was well under way by 1950, was continued and even intensified during the succeeding 5 years. In each country, the resources at the disposal of the regime were focused on the development of industry. Large increases were correspondingly required in construction activity and in transportation services, although there was little provision for investment in transportation facilities. Estimated output in industry, construction, and transportation and communications grew substantially faster than output as a whole and by 1955 greatly surpassed the prewar accomplishment (see Table 4). After several years of neglect, agricultural output rose moderately in 1955, in part as a result of favorable weather. This probably was the first time since the war that the prewar level of output was approximated. A rough indication of how these divergent growth rates have affected the distribution of total Satellite output among the major economic sectors is presented in Table 5.*

Table 4

Indexes of Gross National Product and of Production by Economic Sector in the European Satellites a/
1938 and 1948-55

1950 = 100

	1938	1948	1949	1950	1951	1952	1953	1954	1955
Gross national product	104	75	86	100	107	113	122	131	140
Industry	95	72	84	100	112	125	138	149	163
Agriculture and forestry	111	77	88	100	99	97	99	103	110
Construction	105	55	70	100	122	143	161	164	169
Transportation and communications	77	76	88	100	117	129	143	146	156
Trade and services	113	79	89	100	105	107	113	126	133

a. Excluding Albania.

* Table 5 follows on p. 12.

Table 5

Gross National Product of the European Satellites a/
by Economic Sector
1938, 1950, and 1955

	Percent of Total		
Economic Sector	1938	1950	1955
Industry	33	36	42
Agriculture and forestry	32	29	23
Construction	5	5	6
Transportation and communications	4	6	6
Trade and services	26	24	23
Total	100	100	100

a. Excluding Albania.

II. Bulgaria.

A. General Policy and Achievements.

The Communist government of Bulgaria has followed economic policies designed to transform the largely agricultural economy into one which may be characterized as industrial-agricultural. Whereas agricultural production predominated in the GNP in prewar years, industry and agriculture have contributed about equal shares to the country's output in recent years. Beginning with 1955, the value of output in industry probably exceeded that in agriculture. Despite the change in the structure of the national output, almost 75 percent of the civilian labor force was still engaged in agriculture in 1955.

The program of industrialization and agricultural collectivization in Bulgaria has been promoted under two Five Year Plans, the first of which began in 1949 and the second in 1953. The First Five Year Plan (1949-53) was declared completed after 4 years, but of the major production goals, only that for industry was realized within that period. By the end of 1952, about 60 percent of Bulgaria's arable land was collectivized* -- a much larger proportion than in any other Satellite. The Second Five Year Plan of Bulgaria, begun in 1953, does not coincide with the current Five Year Plans of the other European Satellites, which began in 1956.

Bulgaria offers a typical example of the implementation of Communist economic ideology, with its emphasis on the output of producer goods as the basis for economic growth. Whereas producer goods output increased about 3-1/2 times during the 1949-55 period, consumer goods output rose only by about 50 percent, according to intelligence estimates based on sample production data. Machine building became a new branch of Bulgarian industry, and the output of chemicals, which was negligible until 1951, was considerably expanded. Although rapid strides were made in industry, the prewar level of agricultural production probably was not exceeded until 1954.

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* The terms collectives and collectivized are used in a general sense in this report to include all types of cooperative agricultural producers' organizations in the European Satellites. These organizations vary in nature from simple cooperatives in which only the members' land is pooled to organizations which closely resemble Soviet collective farms.

It is estimated that the GNP of Bulgaria increased by about 50 percent during the period 1949-55, or at an average annual rate of about 6 percent. This is a substantial rate of growth, but it is somewhat lower than the rates registered by the other European Satellites. Although indexes of estimated GNP give an impression of overall economic growth, they do not indicate the unevenness of the development that has taken place within the various sectors of the economy. Over the 1949-55 period, industry increased by about 116 percent, for example, whereas agriculture increased by only 11 percent, as shown in Table 6.* Activity in the industry-supporting sectors of construction and transportation and communications more than doubled. Trade and services output is believed to have risen by about 50 percent, reflecting the increasing urbanization of the country and the associated advances in health, education, and other social services.

Construction of urban housing was inadequate during the First Five Year Plan, and the housing situation therefore deteriorated rather than improved. The regime gave more attention to housing during 1953-55, as a result of which the volume of construction in urban areas increased significantly, but serious housing deficiencies remain, particularly in the larger cities.

* Table 6 follows on p. 15. The indexes of industrial production which are presented for the various Satellites in Tables 6; 12, p. 28, below; 17, p. 45, below; 27, p. 71, below; 30, p. 83, below; and 41, p. 106, below (and which are aggregated for all six countries in Table 5, p. 12, above), refer to estimates of net production. These indexes are based on production data for a sample of products; their accuracy varies with the representativeness of the sample and the accuracy of the production data and the weights used in aggregating the production data. The officially announced percentage increases in industrial production presented for purposes of information in Table 47, p. 118, below, refer to gross production. These statistics are useful in analyzing the degree of fulfillment of plan goals expressed in the same terms, but they are not in general comparable to the independently calculated indexes of net industrial production. Officially announced increases in gross production may differ from the actual increases in net production (which are only approximated in the calculated indexes) for several reasons, including (1) changes in the degree of double counting in the gross index, (2) changes in the statistical coverage of the gross index, and (3) bias introduced into the gross index through the use of inappropriate prices for new products.

Table 6

Indexes of Gross National Product and of Production
by Economic Sector in Bulgaria a/
1938 and 1948-55

1948 = 100

	1938	1948	1949	1950	1951	1952	1953	1954	1955
Gross national product	93	100	101	107	114	120	128	141	151
Industry	84	100	110	128	141	165	177	194	216
Agriculture and forestry	102	100	94	96	101	96	99	106	111
Construction	84	100	154	157	191	222	248	263	286
Transportation and communications	56	100	118	134	149	164	189	207	228
Trade and services	92	100	100	103	106	109	119	137	147

a. For rough comparisons with the other Satellites, see the 1955 indexes on a 1950 base in Table 48, p. 119, below.

B. Phases in Postwar Economic Development.

Since the assumption of power by the Communists in Bulgaria, there have been three distinct phases of economic development. The first phase (1947-48) was a period of reconstruction, socialization of the economy, and beginning steps in industrial development. In the second phase (1949-53) the structure of the economy was changed markedly, especially in the direction of increased emphasis on heavy industry. The third phase began in 1954 following the "new course" announcements. No drastic changes occurred in this period, but adjustments were made in the rates of growth of various sectors of the economy through changes in the allocation of resources among the sectors.

1. 1947-48.

The goal of the Two Year Plan for 1947-48 was to restore, and in most sectors exceed, prewar levels of production. Industrialization was stressed, particularly the production of fuels and electric power. Private as well as socialized agriculture was to be given incentives and encouragement. The Plan was completed successfully in

industry but was underfulfilled in agriculture. It was claimed that industrial production rose about 80 percent over 1939, whereas agricultural production remained 2 percent below that level. 3/ The government gained a substantial degree of control over the economy during this period. Mining, banking, wholesale trade, and most manufacturing enterprises were nationalized, and almost 70 percent of retail trade was brought into the state sector.

2. 1949-53.

Bulgaria's First Five Year Plan emphasized industrialization, electrification, and the mechanization and collectivization of agriculture. Following the Soviet model of economic development, the Plan gave priority to industry over agriculture and to heavy industry over light industry. Gross industrial production was to increase 119 percent over 1948, and agricultural production 57 percent; producer goods output was to rise 220 percent and consumer goods output 75 percent. 4/ In accordance with these priorities, industry was scheduled to receive about 40 percent of total investment, and agriculture was to receive less than 18 percent. 5/ More than 80 percent of industry's share of investment funds was to be used for the development of heavy industry.

The First Five Year Plan was concluded after only 4 years, although only the goal for gross industrial production was stated to have been fulfilled. It was claimed that the value of gross industrial production (at 1939 prices) reached 55 billion leva* in 1952, whereas the Plan called for an output of 50 billion leva in 1953. 6/ The validity of this claim is uncertain because the statistical coverage of the two values may not be the same. In any case, the pattern of output in 1952 was different from that contemplated in the Plan. Official data indicate, for example, that the plan for metal-ore mining was overfulfilled by 100 percent and that the goals for coal and nonmetallic minerals were overfulfilled by 13 percent and 42 percent, respectively, although production of the metallurgical industry was 70 percent below the planned figure. 7/

* The official exchange rate for Bulgaria since May 1952 has been 1 lev to US $0.147 or, conversely, US $1 to 6.80 leva. It should be noted that the official exchange rate considerably overvalues the currency of Bulgaria.

While industrial production increased rapidly, agricultural output remained below the prewar level. Production of industrial crops, however, was an estimated 115 percent above 1938. The rapid progress in the socialization of agriculture was by far the most notable development in this sector during the Plan. This campaign raised the number of collective farms from 549 at the end of 1947 to 2,745 at the end of 1952. By December 1952, about 60 percent of Bulgaria's arable land was cultivated by collectives and an additional 4 percent by state farms. The area under collectivization increased only slightly, however, from 1952 to the end of 1955. Despite this lull, the extent of collectivization in 1955 was much greater in Bulgaria than in any other Satellite.

3. 1954-55.

Unlike some of the other Satellites, Bulgaria announced no drastic changes in economic policy for 1954-55 as a result of the introduction of the "new course" in 1953. Certain shortcomings in the economy were admitted, however, and minor reforms were ordered. There was to be a curtailment of diversification in industry, for example, and although heavy industry would still receive major emphasis, more consumer goods were to be produced. The main effort of the program was to be directed toward intensive development of raw materials and power. This new policy was reflected particularly in sizable investment allocations for coal mining and electrification. 8/ Subsequent to outlining these modifications of policy, Bulgaria published the text of the previously announced Second Five Year Plan for 1953-57.

C. Survey of Major Sectors of the Economy.

1. Industry.

a. Trends in Production.

Most of the output of Bulgaria originated in the agricultural sector in prewar years, but as a result of the Communist emphasis on industrial development, the value of industrial output probably now exceeds that of agriculture. It is estimated that industrial production in 1955 was about 116 percent above that of 1948. The greatest expansion took place in the manufacture of producers' equipment. The metalworking industry (including the new branch of machine building) now ranks after food processing and textiles in importance. 9/

Production of basic materials such as chemicals, brown coal, crude oil, lead, zinc, pyrites, and uranium ores also increased substantially under Communist Plans. The productive capacity for basic chemicals, which until 1951 consisted only of meager facilities for the production of calcium carbide, was extended to include sulfuric acid, synthetic ammonia, nitric acid, nitrogen fertilizers, soda ash, and caustic soda. Production of soda products meets domestic needs and permits some exports. Bulgaria began commercial production of crude oil in 1954. If the planned expansion in the production and refining of crude oil is realized, Bulgaria will be able to supply a substantial part of its petroleum requirements. Although production of electric power was almost four times as large in 1955 as in 1948, it continued to lag behind requirements.*

b. Allocation of Resources to Industry.

Industry has become one of the major sectors in the Bulgarian economy as the result of the priority which it has enjoyed in the allocation of resources under the Communist regime. Although the agricultural labor force increased only slightly during 1948-55, the labor force outside of agriculture increased by nearly 50 percent, as shown in Table 7.** Most of the expansion in the nonagricultural sector took place in industry.

The pattern of gross capital investment expenditure did not change much during 1949-54. In the First Five Year Plan, industry accounted for 38 percent of total investment; most of this went to heavy industry. In the first 2 years of the Second Five Year Plan the pattern of investment was similar to that of the First Five Year Plan, although heavy industry and agriculture received slightly higher shares than previously, as shown in Table 8.**

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* Selected production data for Bulgaria and the other Satellites are presented in Table 45, p. 115, below.

** Tables 7 and 8 follow on p. 19.

Table 7

Population and Labor Force in Bulgaria a/
1948 and 1952-55

Million

	1948	1952	1953	1954	1955
Population	7.10	7.28	7.37	7.47	7.57
Civilian labor force					
Agricultural	2.85	2.87	2.87	2.92	3.02
Nonagricultural	0.78	0.90	0.96	1.07	1.14
Total civilian labor force	3.63	3.77	3.83	3.99	4.16

a. Averages of estimates for the beginning and end of the year.

Table 8

Gross Capital Investment a/ in Bulgaria b/
1949-54

Million Post-Reform Leva at 1952 Prices

Economic Sector	1949	1950	1951	1952	1953	1954
Industry						
Heavy	931	1,162	1,616	1,603	1,943	2,014
Light	257	137	238	230	306	294
Subtotal	1,188	1,299	1,854	1,833	2,249	2,308
Agriculture	465	322	707	667	778	988
Housing	467	503	383	481	495	760
Schools and other cultural establishments	81	97	103	88	138	151
Health and social establishments	62	49	54	54	51	61
Other	1,228	1,251	1,238	1,899	1,894	1,702
Total	3,491	3,521	4,339	5,022	5,605	5,970

a. Including unplanned investment.
b. 10/

2. Agriculture.

a. Trends in Production.

Agricultural output, which remains an important part of the GNP despite the industrialization effort, continued at or below the 1948 level until 1954. This lag in agricultural development was the result primarily of inadequate investment allocations to this sector. Even the socialized sector received inadequate supplies of machinery, fertilizer, and breeding stock. Agricultural production increased moderately in both 1954 and 1955 as a result of favorable weather conditions and the changes in agricultural policy under the Second Five Year Plan. Although production of wheat, corn, rice, and potatoes was about the same as before the war, total production of food crops and livestock products in 1955 is estimated to have been still below the prewar level. Livestock numbers in 1955, except for hogs and goats, likewise remained below prewar levels. This lag in stockbreeding was largely the result of the inadequate fodder base 11/ and the depressing effect of the collectivization program on farmers' incentives. The output of industrial crops, on the other hand, was already above the 1938 level in 1948.

b. Food Availabilities.

Neglect of agriculture in the allocation of resources and poor weather conditions held the per capita consumption of foodstuffs below the prewar level during most of the First Five Year Plan. Significant gains were made during the following 3 years, however (see Table 46*). Estimates for the 1955/56 food consumption year indicate a per capita caloric intake about 5 percent higher than the 1933-37 average. Because of the lag in animal husbandry, supplies of meat and milk products have been inadequate from a nutritional standpoint; supplies of cereals, fats, and oils have been somewhat more adequate.

c. Socialization.

Socialization of agriculture began earlier and moved more rapidly in Bulgaria than in any other Satellite. The principal factors contributing to the peasants' acceptance of socialization were the long-established cooperative movement in Bulgaria and the

* P. 117, below.

promise of the Communist regime to assist poor peasants. Collectivization began as early as 1945, but it was not pursued vigorously until the period 1948-52. By the end of 1952, some 60 percent of the country's arable land was in the collectivized sector of agriculture. Collectivization proceeded very slowly thereafter until early 1956, when there was another spurt of activity. Collective farms held 75 percent of the arable land in April 1956 (see Table 9). State farms account for a relatively small part of Bulgaria's land.

Table 9

Socialization of Agriculture in Bulgaria
1949-56

Year (as of December)	Collective Farms		State Farms		Total Socialized Sector (Percent of Arable Land)
	Number	Percent of Arable Land	Number	Percent of Arable Land	
1949	1,608	11.3	91	1.9	13.2
1950	2,501	44.2	91	2.1	46.3
1951	2,740	46.0	103	2.3	48.3
1952	2,745	60.5	108	3.6	64.1
1953	2,747	61.0	108	3.6	64.6
1954	2,723	61.0	108	3.6	64.6
1955	2,735	63.0	108	3.6	66.6
1956 a/	3,074	75.0	108	3.6	78.6

a. April 1956.

3. Foreign Trade.

Significant changes have taken place since the war in the direction and composition of Bulgaria's foreign trade. Before World War II, Bulgaria's foreign trade was conducted principally with countries now outside the Soviet Bloc, and Germany was its most important trading partner. By 1946 the situation had changed greatly. Trade

with other countries of the Bloc accounted for about 90 percent of the total, and trade with the USSR alone made up 75 percent of Bulgaria's turnover. The USSR has continued as Bulgaria's chief supplier and customer, but its relative importance has declined as Bulgarian trade with other Bloc countries has expanded. In 1955, other Satellites accounted for about 38 percent of Bulgaria's total foreign trade turnover (see Table 10).

Table 10

Geographic Distribution of the Foreign Trade Turnover of Bulgaria a/
1948, 1952, 1954, and 1955

	Percent of Total			
Country or Area	1948	1952	1954	1955
Sino-Soviet Bloc				
USSR	55.3	57.1	44.8	46.3
European Satellites	22.4	30.5	39.3	38.2
Albania	0.1	0.5	0.5	0.7
Czechoslovakia	11.3	12.6	11.9	11.6
East Germany	3.3	6.8	13.4	13.0
Hungary	1.3	3.6	4.8	4.3
Poland	5.4	5.3	5.0	4.0
Rumania	1.0	1.6	3.6	4.6
Communist China	N.A.	0.7	1.8	2.1
Other Bloc countries	Negligible	0.4	1.1	0.9
Total	77.7	88.7	87.0	87.5
Other countries	22.3	11.3	13.0	12.5
Of which:				
Austria	4.8	4.3	3.3	2.5
UK	1.2	1.9	2.5	1.6
West Germany	N.A.	0.9	2.7	2.8
Total	100.0	100.0	100.0	100.0

a. 12/

The trade of Bulgaria outside the Bloc is principally with the industrialized countries of Western Europe. Since 1954, Bulgaria has made a special effort to increase trade with the West. Trade agreements were concluded in 1955 with many of Bulgaria's prewar trading partners and (in accordance with the recent trade policy of the Bloc) with a number of underdeveloped countries.

The commodity composition of Bulgaria's trade has likewise changed considerably in the postwar years. To promote economic recovery and development, Bulgaria considerably increased its imports of industrial and agricultural machinery. In 1949, machines, equipment, and other producer goods intended for the industrialization and electrification of the country and for the development of agriculture and transport amounted to 38 percent of total imports. By 1951 the proportion had increased to 45 percent. These goods were supplied by the USSR and the other European Satellites rather than by the industrialized Western European nations as in the prewar period. During the First Five Year Plan, the Bloc supplied more then 90 percent of Bulgaria's imports of metals, petroleum products, chemicals, and rubber and textile raw materials. The USSR was the primary supplier of machinery and equipment.

As a result of the industrialization program, the variety of goods exported by Bulgaria was broadened significantly. Agricultural products and industrial raw materials accounted for more than 90 percent of total exports before the war, but exports of machinery, equipment, and other manufactures have gained a more prominent position in the exports of recent years (see Table 11*).

4. Housing and Other Construction.

The construction goals of the First Five Year Plan were generally attained, especially those for industrial facilities. Insufficient allocations of investment funds to agriculture limited construction activity in this sector. During the Second Five Year Plan the volume of capital investment in the entire economy is to be about twice as large as under the previous Plan. During the first 3 years of the current Plan -- 1953-55 -- the investment goals were underfulfilled, mainly because of bad planning and poor organization at the construction sites. A decline in planned construction activity in 1956 to a level more in keeping with the industry's capability is

* Table 11 follows on p. 24.

Table 11

Imports and Exports of Bulgaria, by Product Group a/
1948, 1952, 1954, and 1955

Percent

Product Group	1948		1952		1954		1955	
	Import	Export	Import	Export	Import	Export	Import	Export
Food, drink, and tobacco	9.5	88.3	1.6	65.4	1.5	63.5	4.4	51.0
Raw materials and fuels	20.8	8.6	22.3	19.4	17.6	14.5	17.2	17.6
Semimanufactured and chemical products	31.0	2.1	26.7	8.2	30.3	9.2	27.4	11.0
Machinery and transport equipment	25.6	0.1	39.6	2.2	39.3	2.1	40.6	2.9
Other manufactures	13.1	0.9	9.8	4.8	11.3	10.7	10.4	17.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a. 13/

indicated by the investment plan for that year, which provided for a reduction of capital investments below the 1955 level.

Throughout the postwar period, there has been an acute housing shortage in urban areas which has adversely affected the morale and productivity of the labor force. This serious housing problem is the result of the heavy influx of workers from rural areas into the cities, the natural increase in the population, and the low priority assigned housing construction as the regime pursued a policy of directing the country's resources toward rapid industrial expansion.

The urban housing situation deteriorated rather than improved during the First Five Year Plan. Official reports of state and private housing construction in urban areas, together with estimates of the growth in the urban population, indicate that only about 90 new dwelling units per 1,000 new urban residents were built during 1949-52. By 1954, there were only 211 dwelling units per 1,000 urban residents, according to official announcements. The government gave increased attention to housing during the next 3 years, particularly in 1954 and 1955, when state construction of urban dwellings in each year approximated such construction during the entire period 1949-52. State and private construction of housing averaged only about 4,700 units annually in 1949-52. During the years 1953-55, in contrast, such construction averaged about 10,000 units annually, or about 200 dwellings per 1,000 additional urban residents. Although housing construction probably was adequate to meet the needs of new residents in 1953-55, it was not sufficient to overcome the deficiencies of earlier years. The shortage of housing in urban areas therefore remains acute, especially in the larger cities.

Construction of dwellings in rural areas numbered about 41,000 units during 1949-52 and 25,400 units during the following 3 years. The peasants generally take care of their own housing needs, using for the most part local construction materials such as clay and mud. Although housing in the rural areas of Bulgaria is primitive, it does not appear to be a major source of grievance among the people.

III. Czechoslovakia.

A. General Policy and Achievements.

The general aim of Communist economic policy in Czechoslovakia has been to reorganize the structure of the economy, in respect to both its output and its institutions. The planned changes in the level and composition of output were more extensive for industry than for agriculture. The industrial conversion entailed, in addition to nationalization, a very rapid expansion of heavy industry, particularly of the machine-building industry, and retardation of the growth of light industries which had been significant in the prewar period. Chief among these were the textile, leather, and glass industries, once important in the extensive prewar trade of Czechoslovakia with the West. Economic policy was slightly modified at the end of the Five Year Plan period in 1953. As a result, the output of consumer goods grew more rapidly than producer goods during the following 2 years, although producer goods continued to predominate in total industrial output. Greater attention was likewise paid to agriculture, but there has been no significant increase in output since 1953. The emphasis on livestock and fodder crop production, which was introduced in 1949, has been continued.

The expansion of industry is mainly responsible for the estimated growth in GNP of 65 percent from 1948 to 1955 (see Table 12*). Industrial output increased about 77 percent, whereas agricultural output grew only 28 percent during this period. The rate of growth of industry averaged 8.5 percent during the period and reached a peak of more than 12 percent in 1952. Increases in electric power generation and production in the engineering industries were especially large. The interim "new course" plans of 1954-55 provided for continued expansion of industry (although at a slower rate than previously), but the excessive disproportion in the growth of producer goods and consumer goods was to be eliminated. The output pattern of the machine-building industry was broadened to include durable consumer goods and capital equipment for such consumer goods industries as food processing and textile manufacturing. This planned shift in output was manifest in Czechoslovakia's trade negotiations during 1955.

During the 1949-53 period a large share of the national income was channeled into investment, primarily for expansion of the industrial

* Table 12 follows on p. 28.

Table 12

Indexes of Gross National Product and of Production by Economic Sector in Czechoslovakia a/
1938 and 1948-55

1948 = 100

	1938	1948	1949	1950	1951	1952	1953	1954	1955
Gross national product	109	100	107	118	124	136	146	153	165
Industry	99	100	106	118	124	139	154	162	177
Agriculture and forestry	147	100	110	120	118	127	125	117	128
Construction	105	100	112	148	170	198	228	242	250
Transportation and communications	65	100	109	121	137	147	160	172	193
Trade and services	109	100	104	110	116	121	128	143	153

a. For rough comparisons with the other Satellites, see the 1955 indexes on a 1950 base in Table 48, p. 119, below.

sector. At the start of the Plan, about 20 percent of the national income was allocated to investment, rising to about 25 percent in 1950 and 1951 and declining slightly thereafter. 14/ Investment is estimated to have doubled during the Plan, whereas it is admitted officially that consumption increased by only 25 percent. 15/ As planned, the major portion of the increase in consumption represented growing government expenditures for social welfare. Some gains appear to have been made in personal consumption since 1954, although real wages of industrial workers probably did not exceed prewar levels until 1956. When the poor living conditions of other groups of the population along with the acknowledged general deficiencies in housing and the quality of consumer goods are considered, it is doubtful whether prewar standards of living were attained by the Czechoslovak population in 1955.

B. Use of Resources to Promote Economic Development.

1. Manpower.

Chronic shortages of manpower hampered the attainment of Czechoslovakia's ambitious goals for industry and agriculture. Even before the war, the country had no significant reserves of manpower. The labor force was seriously reduced by the expulsion of about 2 million Germans just after the war, causing a severe strain on the economy after the First Five Year Plan was launched. In the competition for workers, industry always received the highest priority. Consequently, there was a continuous flow of labor from agriculture to industry during the Plan, with resultant adverse effects on agricultural production.

By the end of 1953 the agricultural labor force comprised about 25 percent of the total labor force, compared with about 33 percent in 1948. This change reflected a decline of about 18 percent in the number of agricultural workers over the 5-year period. Meanwhile, the nonagricultural labor force grew by about 20 percent (see Table 13*). Although the industrial labor force was augmented by recruiting agricultural workers, youths, women, and the aged, shortages of labor were nevertheless encountered in such key branches as mining and metallurgy and in construction. Since 1954, there has been a better balance in the allocation of labor. New workers have been directed to agriculture as well as to critical sectors in industry. In order to improve the tight labor supply, the government planned demobilization of 34,000 men in 1955 and an additional 10,000 in 1956. 16/

* Table 13 follows on p. 30.

Table 13

Population and Labor Force in Czechoslovakia a/
1948 and 1953-55

Million

	1948	1953	1954	1955
Population	12.12	12.81	12.95	13.09
Civilian labor force				
Agricultural	1.94	1.58	1.53	1.60
Nonagricultural	3.95	4.75	4.97	5.00
Total civilian labor force	5.89	6.33	6.50	6.60

a. Averages of estimates for the beginning and end of the year.

2. Investment.

During the Five Year Plan, Czechoslovakia maintained a high level of investment, representing more than 25 percent of national income in some years. The trend in investment during and since the Plan is shown in the following tabulation 17/:

Year	Gross Capital Investment as Percent of National Income	Index of Investment (1948 = 100)
1948	19	100
1949	20	115
1950	26	162
1951	26	180
1952	24	195
1953	23	195
1954	22	195

Under the original version of the First Five Year Plan, capital investments were to be concentrated on industry, transportation, and public works. Agriculture and trade, on the other hand, were to receive the smallest allocations, as indicated in the following breakdown of planned investment expenditures 18/:

Economic Sector	Planned Percentage Share of Capital Investment 1949-53
Industry	39.2
Transportation	15.7
Public works (roads, bridges, dams)	14.0
Housing	11.7
Social and cultural facilities	8.5
Agriculture	8.0
Trade and building trades	2.9
Total	100.0

Early in 1951, investment goals were increased by one-half, and a greater proportion of total investment than shown above was to be allocated to industry. Most of the increase was earmarked for heavy industry. 19/ Accordingly, the industrial sector accounted for almost one-half of realized investment during the Five Year Plan. 20/ Total investment fell an estimated 15 percent below the revised goal, however. 21/ The neglected sectors of agriculture, trade, and housing received greater shares of investment than formerly under the "new course" plans of 1954-55. Because over-all investment was held at the 1953 levels in each of these years, industry and transportation undoubtedly received correspondingly smaller shares than previously, but they continued to account for the major part of total investment.

C. Phases in Postwar Economic Development.

Postwar changes in economic policy in Czechoslovakia fall into three distinct periods: (1) the reconstruction period (1947-48), (2) intensive industrialization (1949-53), and (3) consolidation (1954-55). In all three periods the industrial sector was the main concern of economic policy, although greater attention has been given to other sectors since 1954.

1. Reconstruction, 1947-48.

The Czechoslovak plan of reconstruction covered only 1947 and 1948 because the country had emerged from the war with a strong industry which was only partly damaged and disorganized. Industrial production was claimed to have increased 10 percent 22/ (contrary to the indexes of estimated output given in Table 12*), but the GNP was probably smaller than in 1938 because of the low level of agricultural production. Substantial gains were registered in coal, steel, and electricity, although the planned rehabilitation of industries suffering from capital depletion, particularly coal and steel, was not achieved; nor were investment goals in housing construction attained. A serious decline occurred in agriculture as a result of the 1947 drought, which together with a reduction in livestock, adversely affected the food supply. With about 65 percent of industry nationalized and subject to central planning, the reconstruction period served as a proving ground for planning methods applied more comprehensively in subsequent plans.

2. Intensive Industrialization, 1949-53.

Soon after the Communists seized control of the Czechoslovak government in 1948, they drafted a Five Year Plan (1949-53) which stressed development of heavy industry over light industry and provided for the industrialization of Slovakia, where a significant segment of the country's armament industry is now situated. Besides supplying about 65 percent of the total Satellite output of armaments, the country has developed many new lines of capital goods necessary for the industrialization programs of other Satellites. Further sizable increases were also achieved in the output of electric power, coal, and steel. The goals for coal and iron ore were not entirely fulfilled, however, and production constantly lagged behind the demands of industrial consumers. It was these disproportionate rates of growth of various branches of industry which the interim plans of 1954 and 1955 sought to remedy.

3. Consolidation, 1954-55.

Along with other members of the Soviet Bloc, Czechoslovakia adopted a "new course" in late 1953 which was referred to as a policy of "proportionate growth." Under this policy the rate of industrial expansion was moderated in order to allow time for the correction of

* P. 28, above.

imbalances that had developed under the forced industrialization of the Five Year Plan. These imbalances arose from an overemphasis on industrial development at the expense of consumer goods production and a lag in the output of coal and basic metals within heavy industry. An effort was also made to improve the distribution system for consumer goods. In agriculture, increased investment funds were allocated to both the private and the collectivized sectors, and collectivization, although still a long-run goal, was put on a more voluntary basis. By means of these moves the government hoped to put the economy on a firm basis for the launching of the Second Five Year Plan in 1956.

D. Survey of Major Sectors of the Economy.

1. Industry.

a. Principal Developments.

Czechoslovakia made impressive strides in industrial production during the Five Year Plan, but the rates of growth were extremely uneven among the various branches of industry. For example, production of basic materials increased an estimated 42 percent from 1948 to 1953 compared with an estimated 70-percent increase in the output of the engineering industries. These industries manufacture a wide range of products such as transportation equipment, construction and agricultural machinery, heavy electrical equipment, and equipment for the chemical, oil, textile, and sugar-refining industries. Armaments production increased greatly during the Plan.

Shortcomings in the fulfillment of the goals for coal, iron, and steel were largely responsible for the comparatively slow rate of growth of output in the basic materials category during the First Five Year Plan. Production goals for coal, iron, and steel were not attained, because of inadequate investment and chronic shortages of experienced labor. Deficiencies in the output of basic materials adversely affected the engineering industry. Moreover, because the mines and foundries relied on capital equipment produced by the engineering industry, the lag in engineering production contributed to the inadequate output of basic materials. Output of basic materials has tended to correspond better to industrial requirements since 1954.

b. Analysis of Plan Fulfillment.

Most of the revised production goals for basic materials in 1953 were not fulfilled (see Table 14*), and in some instances these goals still had not been reached by 1955. Production of hard coal in 1955 was still 12 percent, of iron ore 48 percent, and of crude steel 5 percent below the goals set for 1953. It is interesting to note, however, that the 1955 outputs of these products were announced as fulfillment or overfulfillment of their goals, indicating the adoption of more realistic plans for basic materials under the "new course." The degree of plan fulfillment for machinery and equipment in 1953 is not known, but the engineering industry appears to have lagged chronically in fulfillment of its plans, as it did also in 1954 and 1955 despite the fact that the planned annual rates of growth were lower than during the Five Year Plan.

c. Allocation of Resources to Industry.

The change in emphasis from light industry to heavy industry under the First Five Year Plan required a corresponding shift in the distribution of the industrial labor force. During this period the proportion of industrial labor in the mining, engineering, and metalworking industries increased from 29 percent to 38 percent of the total, according to official sources, whereas the proportion in the textile, clothing, leather and footwear, and glassware industries declined from 28 percent to 21 percent. 23/

In recent years the percentage of the population in the most productive age group, 15-64 years, has been declining. Because of the limited prospects for increasing the labor force, Czechoslovakia has relied more on increases in labor productivity than on added manpower to meet industrial goals. According to official reports, 75 to 80 percent of industrial growth during 1951-55 resulted from increases in labor productivity. 24/

As already stated, industry was the main recipient of investment funds during the First Five Year Plan, and heavy industry received the bulk of the allocation.

* Table 14 follows on p. 35.

Table 14

Planned and Actual Output of Selected Products in Czechoslovakia
1953 and 1955

Product	Planned Output, 1953 (Million Metric Tons a/) Original	Revised	Estimated Actual Output (Million Metric Tons a/) 1953	1955	Actual Output in 1953 as Percent of Revised Plan
Hard coal	20.8	25.0	20.3	22.1	81
Brown coal and lignite	32.2	35.8	34.3	40.8	96
Coke	8.0	8.0	7.96 b/	9.18 b/	100
Iron ore	1.4	3.8	1.73	1.99	46
Pig iron	2.7	3.0	2.73	2.98	93
Crude steel	3.5	4.7	4.37	4.47	93
Crude oil	0.24	0.31	0.12	0.13	39
Electric power (billion kilowatt-hours)	11.2	12.3	12.4	15.0	101

a. With the exception indicated for electric power.
b. Intelligence estimates for all types of coke. Lower figures in official sources are believed to include only metallurgical coke.

2. Agriculture.

a. Trends in Production.

Agricultural production in Czechoslovakia, as in the other Satellites, fell far behind the planned goals of the Five Year Plan. Gross agricultural production increased only 14 percent over the Plan period, compared with a planned goal of 53 percent. A drought in 1954 held production at the 1953 level. In 1955, however, it was claimed that gross output increased to about the prewar level.

Output of foodstuffs and fodder crops has increased much more rapidly than industrial crops; the greatest gains were in meat, animal fats, milk, barley, and oats. Production of potatoes, a basic food for the population, was still far below prewar levels in 1955, however. The expansion which has taken place in agricultural production reflects mainly governmental efforts to promote livestock production.

b. Food Availabilities.

The per capita caloric intake of food in Czechoslovakia has ranged from about 90 to 107 percent of the prewar level since 1948. It therefore has been generally adequate, although it is rather low for an industrially advanced country. This level of food consumption probably would not have been possible, however, without the population losses and a slight shift to lower quality foods during the postwar years. The stagnation in agricultural output therefore was not fully reflected in the per capita caloric intake of food. Shortages of potatoes, meat, and grain exerted some downward effect on food availabilities in the 1954/55 food consumption year, but consumption in 1955/56 was somewhat higher again and is estimated to have slightly exceeded the prewar average. This improvement was a result of the exceptionally good harvest of 1955 and the continued large imports of high-quality foods, particularly meat and butter, from the West.

c. Socialization.

The socialized sector of agriculture has been relatively larger in Czechoslovakia than in most other Satellites, although it has not yet embraced more than 45 percent of total agricultural land. The number of collective farms, which comprise the greater part of the socialized sector, has fluctuated sharply in Czechoslovakia, as the rapid

gains of forced collectivization during 1951 and 1952 were considerably reduced as a result of the more lenient policy adopted after the death of Stalin. Many collectives disbanded between June 1953 and June 1955, reducing the amount of agricultural land held by them from about one-third to one-fourth of the total (see Table 15*). 25/ The decline in the socialized sector as a whole would have been even greater if some of the land of disbanded collectives had not been turned over to state farms and other public bodies such as ministries, schools, factories, and the army. The area held by state farms has increased gradually since mid-1953 and in early 1956 amounted to about 12 percent of the country's arable land. 26/ Since June 1955 the regime has renewed the collectivization drive in a determined effort to make socialized agriculture predominate by the end of 1960. Many new collectives have been formed since mid-1955.

d. Investment and Manpower.

In accordance with the "new course" policy, there was some attempt to give the agricultural sector a greater proportion of investment funds. Whereas total investment outlays for most sectors of the economy were held at approximately the 1953 level in 1954 and 1955, investment in agriculture reportedly doubled. 27/ This investment pattern continued during 1955.

A separate 3-year plan for agriculture, which called for the recruiting of 320,000 new permanent workers by 1956, was adopted in 1954. 28/ These recruits were to be primarily youths and women who would work for the collectives and machine tractor stations. In 1955 the Czechoslovak government claimed that 100,000 more workers had been recruited for agriculture and that 14,000 students had enrolled in agricultural schools. 29/ Although there is some doubt concerning the permanency of some of these new workers, the increases registered in 1955 do manifest some success for the government's effort to augment the agricultural labor force. Nevertheless, the shortage of agricultural labor remains a persistent economic problem in the country.

3. Foreign Trade.

Changes in the structure of industrial output under the Communist regime have resulted in substantial changes in the composition and direction of Czechoslovak foreign trade. Before World War II,

* Table 15 follows on p. 38.

Table 15

Socialization of Agriculture in Czechoslovakia a/
1950-55

Year	Collective Farms (Types II-IV) Number	Collective Farms (Types II-IV) Area (Percent of Land)	State Farms (Percent of Land)	Total Socialized Sector (Percent of Land)
December 1950	3,743	15.1	N.A.	N.A.
December 1951	4,480	17.4	N.A.	N.A.
December 1952	7,819	34.8	8.2	43.0
June 1953	8,248	36.7	8.2	44.9
December 1953	7,350	N.A.	9.0	N.A.
June 1955	6,663	26.7	9.8	36.5

a. All percentages in the table refer to agricultural land, which consists of arable land plus permanent meadows and pastures.

Czechoslovakia's trade was conducted principally with countries now outside the Bloc. Germany (including East Germany and the German areas now under Polish administration) was the country's most important trading partner, but the USSR has assumed that role in postwar years, when trade was increasingly reoriented from Western Europe toward the Sino-Soviet Bloc. Although industrial raw materials and foodstuffs still constitute the main categories of Czechoslovakia's imports, foodstuffs bulk much larger in imports than they did in the prewar period. Manufactures remain the country's chief exports, but producer goods (especially producers' equipment) now occupy the position once held by consumer goods as the chief export category.

As can be seen in Table 16,* Czechoslovak trade with the Sino-Soviet Bloc rose from 32 percent of total trade turnover in 1948 to 78 percent in 1953 but declined somewhat in relative importance with the introduction of the "new course." The Soviet share of Czechoslovak trade continued at the same high level as in 1953, however. Beginning with 1953, Soviet trade has accounted for about one-half of Czechoslovakia's trade with the Sino-Soviet Bloc and more then one-third of total trade turnover.

Even though reduced to only 22 percent of Czechoslovakia's total trade by the end of the First Five Year Plan, 30/ trade with non-Bloc countries was nevertheless of great importance to the economy. Most of this trade was conducted with countries of Western Europe. Since 1953, there has been a minor resurgence of non-Bloc trade, particularly with underdeveloped countries in Latin America, the Far East, and the Middle East. Czechoslovakia has been one of the most active Satellites, along with East Germany and Poland, in the Soviet Bloc's economic penetration of these areas. Its expenditures at trade fairs in these areas have been the largest of any Bloc country, accounting for one-third of total Bloc spending for such purposes in 1955. As a leading exporter of land armaments to non-Bloc nations, Czechoslovakia concluded arms agreements in 1955 with Egypt valued at least at $18 million; with Syria, $7 million; and with Afghanistan, $5 million. The volume of arms shipments increased still further in 1956. In addition to supplying armaments and railroad equipment, the country has extended credits and signed contracts to furnish complete industrial units such as cement, ceramic, shoe, textile, sugar, refrigeration, and power plants, to countries of the Middle East, Asia, and Latin America.

* Table 16 follows on p. 40.

Table 16

Geographic Distribution of the Foreign Trade Turnover of Czechoslovakia
1936-38 Average, 1948, 1950, and 1953-55

	Average 1936-38		1948		1950		1953		1954		1955	
Area or Country	Million Current US $	Percent	Million Current US $	Percent	Million Current US $	Percent	Million Current US $	Percent	Million Current US $	Percent	Million Current US $	Percent
Sino-Soviet Bloc	120	17	459	32	744	55	1,460	78	1,454	75	1,559	70
Of which: USSR	11	2	229	16	365	27	655	35	698	36	779	35
Other	572	83	975	68	609	45	412	22	484	25	668	30
Total	692	100	1,434	100	1,353	100	1,872	100	1,938	100	2,227	100

Exports of machinery and equipment, primarily to members of the Soviet Bloc, have more than compensated for the decline in consumer goods exports since the beginning of the First Five Year Plan. Machine tools, textile machinery, powerplant equipment, motor vehicles, other engineering products, and semifinished metal products are well represented in Czechoslovak agreements for exports of capital goods. Textiles, footwear, leather, and paper products constitute about 10 percent of total exports and account for a significant part of the country's hard-currency earnings. Czechoslovakia also exports large quantities of sulfuric acid and coal-tar derivatives.

Czechoslovakia's raw material requirements are largely satisfied through imports. It was claimed at the end of 1955 that the USSR was supplying 80 percent of the iron ore, 70 percent of the copper, 80 percent of the synthetic rubber, and 60 percent of the phosphate which Czechoslovakia imported. 31/ Petroleum products are imported from the USSR and Austria, and hard coal from Poland. Because of Czechoslovakia's intensive industrialization drive, the country has become a net importer instead of a net exporter of coal. Raw cotton, wool, flax, hides, and crude rubber are also imported in substantial quantities. Apart from materials for the ceramics industry, timber, woodpulp, and uranium ores, Czechoslovakia exports few raw materials. It does, however, make sizable deliveries of coke and semifinished steel to other countries of the Bloc. In 1955, exports of finished steel products to Western countries were increased on account of a reduction of Soviet requirements for these products.

4. Housing.

Housing conditions were better in Czechoslovakia than in most of the other Satellites at the beginning of the first long-term plans, although both new construction and rehabilitation of old dwellings were needed to keep up with the growth in population and to satisfy the people's desire for improved living standards. Little or no improvement, however, took place in housing conditions. Construction of new dwellings averaged only about 37,500 units annually during 1949-55, whereas there was an estimated net increase of 40,000 to 60,000 married couples each year.

Neither the Five Year Plan goal nor the 1954 and 1955 goals for new housing construction were fulfilled. Construction of dwellings in 1955, however, was well above the level of preceding years, New

housing has been concentrated in rapidly expanding urban and industrial areas; construction and maintenance of rural dwellings have therefore been neglected. The government has been attempting to ease the housing shortage by manufacturing prefabricated units and by stimulating private construction, but in general it appears to be less concerned about the problem than are the regimes in the Satellites where housing deficiencies are more pronounced.

5. Other Sectors.

Goals for the expansion of the transportation and communications systems during the First Five Year Plan were generally attained. This was achieved in the case of the railroads, which accounted for 89 percent of the total freight traffic performance in 1955, by intensive utilization of rolling stock and by expanding the railroad network in the less developed, eastern part of the country. A second track of the "Friendship Line" from Prague to the Soviet border at Cierna, for example, was completed in November 1955, further increasing the importance of this line in trade with the USSR. The railroads, which are the greatest single consumer of coal, have been hampered by coal shortages from time to time in the past. The government plans to curtail the coal requirements of the railroads by extending electrification, as powerplants are much more efficient than steam locomotives in converting coal into energy. Highway transport in 1955 accounted only for about 3 percent of freight traffic performance.

Construction activity is claimed to have increased 130 percent during the First Five Year Plan and 10 percent beyond that during the following 2 years. 32/ Despite these increases, construction goals were not fulfilled for any sectors of the economy. The consistently poor showing of the building industry was due to shortages of qualified workers, worker absenteeism, failure to introduce modern construction methods, and the undertaking of too many projects at one time.

IV. East Germany.

A. General Policy and Achievements.

1. Introduction.

East Germany's two principal economic aims during the period of its First Five Year Plan (1951-55) were to extend greatly the socialized sector in both agriculture and industry and to raise industrial production to a level well above that of 1950. After a rapid start in 1952 and the first half of 1953, agricultural collectivization efforts were relaxed somewhat with the advent of the "new course." The proportion of total agricultural land in the socialist sector continued at about 30 percent during the last 2 years of the Plan, although some additional collectives were formed from abandoned farm land administered by local governmental units. The share of the socialist sector in gross industrial production increased only from 76 percent in 1950 to 85 percent in 1955, 33/ leaving a much larger private sector in industry than is found in the other Satellites.

The 5-year goal for gross industrial production was officially claimed to have been fulfilled with an increase of about 90 percent from 1950 to 1955. Independent estimates based on production data for a sample of products suggest that the growth in net industrial production (which excludes the double counting in measures of gross production) was somewhat smaller than that. Official East German statistics show that net output in agriculture and forestry rose only 12 percent from 1950 to 1955. 34/ The combined effect of the growth of output in industry, agriculture, and other parts of the economy was claimed to be a 62-percent increase in national income. 35/

East Germany's economic goals during the period probably were more stable than those of most of the other Satellites. The first revision of the East German Plan, in 1951, was minor compared with the changes in several of the other countries and in part merely took into account the difference between anticipated and actual output of certain products in 1950, the base year of the Plan. The "new course" program was marked by changes of varying degree in several aspects of the operational plans for 1953 and 1954, but there was little or no change in the over-all objectives for 1955. A series of measures was decreed which slowed up the effort to extend the socialization of agriculture and industry, provided for improvements in living

standards, and changed the allocation of resources to some extent to bolster output of agricultural commodities, raw materials for industry, and consumer goods. Some of these measures were regarded merely as correctives for growing imbalances among the different parts of the economy. Other announced changes, particularly those aimed at improving living standards, were partly political in motivation and never were carried out to the full extent promised. Supplies of food and dwelling space thus were still well below the accustomed standard at the end of the Plan period.

2. Growth of the Economy.

Even though a significant portion of East German industry, agriculture, and trade remained in private hands during the Plan, the adoption of Soviet techniques of economic planning and administration gave the regime extensive power to guide the area's economic development. This power was used to promote high rates of economic growth while holding down personal consumption and (during the first years of the Plan) making the required reparations deliveries to the USSR. The economy was still operating at a comparatively depressed level in 1950, and there thus was considerable scope for more complete and efficient utilization of productive facilities and the labor supply. Effective advantage was taken of these opportunities to raise the total output of goods and services, or GNP.

East Germany's GNP increased by an estimated 50 percent from the low level of 1950 (see Table 17*), or at an average rate of about 8.5 percent per year. East Germany thus had one of the more rapidly growing economies in the Soviet Bloc and in Europe generally during this period. The GNP was only slightly higher in 1955 than in 1938, however, leaving East Germany well behind the other Satellites and most Western European countries in this respect.

3. Changes in Origin and Distribution of Output.

Significant changes took place both in the origin and in the distribution of the GNP during the First Five Year Plan. The preferential development accorded industry resulted in its originating about one-half of total output in 1955 -- a larger share than ever before. The share of agriculture in total output, on the other hand, is estimated to have declined from 16 percent in 1950 to only 12 percent in 1955.

* Table 17 follows on p. 45.

Table 17

Indexes of Gross National Product and of Production
by Economic Sector in East Germany a/
1938 and 1950-55

1950 = 100

	1938	1950	1951	1952	1953	1954	1955
Gross national product	144	100	114	121	130	142	150
Industry	137	100	119	134	147	160	175
Agriculture and forestry	130	100	101	98	98	111	112
Construction	204	100	138	152	165	173	185
Transportation and communications	124	100	118	132	154	149	152
Trade and services	153	100	107	106	112	123	126

a. For rough comparisons with the other Satellites, see the 1955 indexes on a 1950 base in Table 48, p. 119, below.

The principal factor affecting the distribution of the national product probably was East Germany's reparations obligations and other drains on its output for the benefit of the USSR. Soviet takings of all kinds took perhaps one-sixth of total output in 1950. 36/ The scaling down of reparations levies in the early years of the Plan and the termination of such obligations at the end of 1953, together with a reduction in payments for the support of the Soviet occupation forces after 1953, are estimated to have reduced this ratio by about one-half by 1955. Increases in personal consumption during the first 3 years of the Plan probably were quite small, considering the continuing high level of Soviet takings and the substantial increases in investment expenditures. In 1954 and 1955, however, the East Germans benefited from more substantial gains in consumption as investment leveled off and the economic burden of the Soviet occupation was reduced.

Consumption of food during the First Five Year Plan was consistently below prewar consumption, averaging less than 90 percent of the average caloric intake during 1935-38 (see Table 46*). Although

* P. 117, below.

the volume of food imports has been comparatively large, imports have not been able to offset the low level of domestic production. Before the war, this area ranked first in food consumption among the present-day Satellites, but its per capita caloric intake is now one of the lowest in the group. Consumption of grains of all kinds has been maintained at or above the prewar level, however, indicating a reduction in the quality as well as the quantity of food consumed by the population. Meat, fats, and sugar were rationed throughout the period, but the balance between starchy foods and animal products has improved somewhat in recent years.

B. Survey of Major Sectors of the Economy.

1. Industry.

a. Trends in Production.

Industry grew much more than any other sector of the economy except construction during the First Five Year Plan (see Table 17*). The increase in net industrial production is estimated at 75 percent, compared with a planned increase in gross industrial production of 90 percent (later revised to 92 percent) and the officially announced fulfillment of the goal with an increase of 90 percent.** According to the regime, this accomplishment raised industrial production to more than twice the 1936 level, 38/ but estimates derived from sample commodity data indicate an increase of less than 30 percent over 1938, or roughly 50 percent over 1936. East Germany now claims to be the ranking industrial producer among the European Satellites and the fifth largest in Europe, following the USSR, the UK, France, and West Germany. 39/

In spite of the mediocre resource base, large gains were made from 1950 to 1955 in the output of some important raw materials. Brown coal production increased by about 45 percent (to

* P. 45, above.

** Official East German statistics 37/ indicate that the goal for industrial production for the entire 5 years of the Plan period was fulfilled by 104.4 percent. The more usual comparison, between output in the year preceding the Plan and output in the final year of the Plan, indicates an increase of 89.6 percent and, consequently, slight underfulfillment of both the original goal and the revised goal for 1955.

over 200 million metric tons), and electric power generation (based primarily on brown coal supplies) grew to a similar extent. Production of crude steel was raised to more than 2-1/2 times the 1950 level, but not without increasing the area's dependence on imported iron ore, which provided over one-half of requirements in 1955. Among the nonferrous metals, the outputs of refined copper and lead increased by about one-fifth and two-thirds, respectively, and production of aluminum grew from only 800 metric tons in 1950 to 27,000 metric tons in 1955. In the case of chemicals -- an East German specialty which provides about one-sixth of exports 40/ -- output rose by more than three-fourths. Production of bricks and cement also increased substantially.

Large gains were also made in the output of certain types of machinery and equipment, particularly trucks, passenger automobiles, and tractors. Production of mainline locomotives was negligible throughout the period, on the other hand, and freight car output declined. Large gains in the output of some consumer goods other than foodstuffs were achieved.

Unlike most of the long-term plans of the Satellites, East Germany's Plan did not contain widely divergent goals for heavy industry and light industry. The increases planned and officially reported to have been achieved for these two categories of production from 1950 to 1955 were within about 10 percent of the projected increase for industry as a whole. This relationship is perhaps explained by the fact that East Germany's engineering industries were reasonably well developed at the start of the Plan and the investment program was somewhat less ambitious than in most other Satellites. Furthermore, the official index for light industry probably has an upward bias because of the increasing statistical coverage of food processing and handicraft output in the course of the Plan.

Official reports of annual increases in gross industrial production and calculations of annual increases in net industrial production from available commodity statistics suggest that the growth of industrial production in East Germany was more regular than that of most of the other Satellites. In particular, East Germany apparently avoided the conspicuous slackening in the rate of industrial growth which occurred in Czechoslovakia and Hungary in 1954.

b. Manpower, Investment, and Productivity.

A vital factor in East Germany's industrial performance during the Plan was the enlargement of the industrial labor force by about 600,000 workers, or more than one-fourth. This was accomplished in the face of a decline in population of nearly 500,000 persons and a nonagricultural labor force which increased very little (see Table 18). Through a combination of incentives and pressures, employment of women was increased by about 650,000 during the period. 41/ Numerous persons were induced to leave agriculture for industrial employment, but not without adverse effects on agricultural production. Transfers of labor to industry from agriculture and the less essential nonagricultural employments became progressively more difficult, however, and in 1955 there were transfers of industrial workers to agriculture and construction. The industrial labor force grew by only 5,000 workers from 1954 to 1955.

The problem of expanding the industrial labor force was aggravated greatly by emigration. East Germany suffered a net loss of more than 1 million persons during the period from 31 August 1950 to the end of 1955, judging by official data on the excess of births over deaths and the admitted drop in population of 556,000 persons during the period. 42/

Table 18

Population and Labor Force in East Germany a/
1950-55

Million

	1950	1951	1952	1953	1954	1955
Population	18.40	18.35	18.33	18.18	18.06	17.94
Civilian labor force						
Agricultural	1.98	1.86	1.74	1.63	1.62	1.67
Nonagricultural	6.52	6.44	6.36	6.27	6.48	6.57
Of which: Industrial b/	2.15	2.40	2.57	2.64	2.76	2.77
Total civilian labor force	8.50	8.30	8.10	7.90	8.10	8.24

a. Averages of estimates for the beginning and end of the year except for industrial labor force data, which are annual averages.
b. 43/

The trend in investment in industry during the Plan generally paralleled that in the economy as a whole. The largest increases evidently were realized in 1951-53, followed by a dip in 1954 and a return to the 1953 volume in 1955. 44/ As the plans for both total investment and industrial investment were fulfilled by little more than two-thirds, industry accounted for about one-half of total investment as planned (see Table 19). Investment in light industry was increased considerably after the "new course" but in 1954 still amounted to less than one-fourth of investment in heavy industry. 45/

Table 19

Planned and Actual Gross Capital Investment in East Germany During the First Five Year Plan (1951-55) a/

Billion Deutsche Mark b/ at 1950 Prices

Economic Sector	Planned for Period: Initial Plan	Planned for Period: 1951 Revision	Actual Gross Investment During Period
Industry	14.1	15.4	10.7
Agriculture	1.4	1.8	1.9
Transportation and communications	2.0	2.7	1.8 c/
Housing	5.1	4.3	3.5
Educational, health, and cultural facilities	1.6	2.4	0.9
Other	2.7	2.0	1.6
Total	26.9	28.6	20.4

a. 46/

b. The official exchange rate for East Germany since November 1953 has been 1 Deutsche Mark /East/ (DME) to US $0.45 or, conversely, US $1 to 2.22 DME. The official exchange rate for West Germany -- 1 Deutsche Mark /West/ (DMW) to US $0.2381, US $1 to 4.20 DMW -- is considered a usable conversion rate for the DME. The rate for the DME on the Berlin free market, which usually falls within the range of 18 to 20 DME to US $1, is influenced by special factors such as the illegal character of the traffic (from the East German point of view) and the flow of East German refugees to West Berlin and the Federal Republic of Germany and understates the general purchasing power of the DME.

c. Excluding telecommunications.

Despite the leveling off in the volume of investment after 1953, it probably expanded more than the total output of goods and services during the Plan. The general level of investment, however, apparently was lower in relation to total output than in the other Satellites because of the reparations deliveries and other takings by the USSR. 47/ Moreover, as some lines of industry had already been developed in East Germany, it was necessary in some instances only to repair, enlarge, or modernize existing facilities to obtain prompt and substantial increments in output.

Although labor productivity did not rise as rapidly as planned, causing East German authorities to step up the flow of labor into industry, a sizable gain in average output per worker was nevertheless achieved. More than one-half of the 5-year increase in industrial production is ascribable to improved labor productivity. In addition to rehabilitating and expanding productive facilities, the regime endeavored to raise average output per worker through the use of piece-rate pay systems, training programs, bonus plans, and social security benefits, together with frequent productivity campaigns and unceasing exhortation.

2. Agriculture.

a. Trends in Production.

Agriculture was the victim of serious neglect by the East German regime during the First Five Year Plan. In contrast to the large increase in industrial output during 1951-55, net agricultural output rose only about 12 percent. Most of that gain, moreover, was registered in 1954; output changed little during the first 3 years of the Plan. Despite better than average weather, the output of most major agricultural commodities in 1955 amounted to only 50 to 75 percent of the Plan goals. Total agricultural production in 1955 probably was at least 10 percent below the 1935-39 average.

Crop yields per hectare generally remained below the prewar level, but the output of some minor crops such as oilseeds, flax, and hemp was raised above the prewar level by expanding their cultivated area. A more important change in the pattern of agricultural output was the greater emphasis on livestock. Whereas the average output of grains, potatoes, and sugar beets during 1951-55 was substantially lower than before the war, average inventories of cattle and hogs were appreciably higher. The output of meat, milk,

and animal fats did not reach a correspondingly high level, but the output of such products has increased gradually and now more nearly approximates the prewar achievement than is the case with grain or root crops.

The stagnation of East German agriculture during the Plan was largely the result of the stress on industrial expansion and the efforts of the regime to collectivize the land rapidly. These policies led to shortages of agricultural machinery and fertilizer; serious loss of manpower to industry and to the West; and reduced incentives for farmers because of inadequate supplies of consumer goods in rural areas, onerous government regulations concerning farming operations, pressure for collectivization, and state procurement of a large part of their output at controlled low prices. The effect of these policies on agricultural output has been such that East Germany requires a sizable net import balance in foodstuffs to maintain the present depressed level of consumption, whereas the higher consumption level of the prewar period was accomplished with balanced trade in foodstuffs.

b. Socialization.

The drive to socialize agriculture began somewhat later in East Germany than in the other Satellites. Concerted efforts to form agricultural collectives were first made by the regime in 1952, and by mid-1952 about 5,000 collectives with a membership of nearly 150,000 persons had been organized. Several hundred of these were disbanded during the second half of 1953 (after the announcement of the "new course"), reducing the proportion of total agricultural land held by collectives from about 12.5 percent to 11 percent. Abandoned land administered by local units of government apparently accounted for about 14 percent of the total agricultural area at this time, or more than the area cultivated by collectives. More than 500 state farms accounted for an additional 4 percent, making a total of about 30 percent of the agricultural land in the socialist sector (see Table 20*).

The area within the socialist sector increased very little during the remaining 2 years of the Plan. Approximately 1,000 collectives were formed from part of the land held by the local governmental units, however, and the proportion of collectives of

* Table 20 follows on p. 52.

Table 20

Socialization of Agriculture a/ in East Germany b/
1951-55

Period Ending	Collective Farms			Local Agricultural Enterprises c/ (Percent of Land)	State Farms (Percent of Land)	Total Socialized Sector (Percent of Land)
	Number	Membership (Thousands)	Area (Percent of Land)			
31 December 1951	Negligible	Negligible	Negligible	Negligible	4 d/	4
31 December 1952	1,815	31.2	2.5	N.A.	4 e/	N.A.
30 June 1953	5,074	146.9	12.5	N.A.	4 e/	N.A.
31 December 1953	4,691	133.8	11.2	14	4	29
31 December 1954	5,120	158.4	14.6	N.A.	4 e/	N.A.
15 November 1955	6,047	196.9	20.0	6 f/	4 e/	30

a. All percentages in the table refer to agricultural land, which consists of arable land plus permanent meadows and pastures.
b. 48/
c. Abandoned farms and other community lands administered by local units of government.
d. Land held by educational and other institutions (amounting to about 1 percent of total agricultural land) is excluded to make the percentage comparable with those for 1953 and 1955.
e. Assumed to be the same percentage as reported previously.
f. 15 December 1955.

"Type III" (which most nearly resemble Soviet collectives) was increased from about one-third to three-fourths of the total. 49/

c. Investment and Manpower.

The preference which industrial development received under the First Five Year Plan considerably restricted the amount of investment funds and labor allocated to agriculture. The share of total capital investment planned for agriculture during the 5-year period was about 6 percent, or much less than the estimated share of agricultural output in the GNP. Actual agricultural investment was especially small until the introduction of the "new course" in 1953. The level of agricultural investment during the last 3 years of the Plan was approximately double that of the first 2 years, and the small goal of the Plan evidently was fulfilled. 50/ However, the new investment policy for agriculture, which apparently will be continued during the Second Five Year Plan, has not yet had an appreciable effect on agricultural output.

Mechanization of East German agriculture, though fairly advanced by Satellite standards, was not increased enough to compensate for the heavy losses of agricultural labor during the period of the Plan. In addition to the transfer of labor from agriculture to industry, which was fostered by all of the Satellites until 1953, East Germany's agricultural labor force was materially reduced by the loss of population to West Germany. It is estimated that, during the course of the Plan, the agricultural labor force declined by 300,000 persons, or about 15 percent. Moreover, this group included a larger than average proportion of males in the most productive age groups and disproportionately large numbers of specialists and the more highly skilled types of laborers. By 1955, only 20 percent of East Germany's labor force remained in agriculture, compared with a ratio of 25 percent in Czechoslovakia, the next most industrialized Satellite.

3. Other Sectors.

Transportation, communications, finance, and foreign trade were largely or entirely nationalized before the start of the Plan, but private enterprise was still important in some areas other than industry and agriculture at the end of the period. Many small private handicraft establishments were still in business, and about one-third of retail trade turnover and one-half of construction output (including handicrafts) remained in private hands in 1955. 51/

The volume of construction output increased somewhat more than industrial output from 1950 to 1955. Building of industrial plants and community facilities received a clear priority over housing construction, which apparently grew only by about one-third. Several important industrial plants were built during the Plan, including the Stalin Metallurgical Combine near Fuerstenburg/Oder, the Metallurgical Works/West at Calbe, and a large plant at Lauchhammer which produces metallurgical-grade coke from brown coal. The operations at Lauchhammer were not entirely successful at first, but the process has been improved sufficiently to permit the manufacture of a reasonably satisfactory substitute for coke made from hard coal. In addition to these examples of new construction, numerous other plants were enlarged during the period.

Despite the loss in population of about 500,000 persons during the First Five Year Plan, a shortage of housing continued to be a significant economic problem in East Germany. East German housing conditions at the beginning of the Plan were more adequate than those in any other Satellite except Czechoslovakia, but there was a marked deterioration from prewar standards. The number of dwelling units per 1,000 inhabitants, for example, was only about 75 percent as large in 1950 as in 1939.

The plan for construction of 10.1 million square meters of housing during 1951-55 was fulfilled by about 90 percent. It is estimated that this represents 212,000 dwelling units, but the net addition to the stock of housing no doubt was appreciably smaller because of the retirement of some seriously damaged or dilapidated units. Some slight improvement in the over-all housing situation probably took place during the Plan, but little more than a start was made toward the restoration of prewar housing standards. Overcrowding is most serious in the cities which suffered the most severe war damage or in which new industrial facilities and offices of the state economic administration have been concentrated.

Freight and passenger traffic increased substantially in volume from 1950 to 1955. Ton-kilometers of railroad freight traffic in 1955 exceeded the 1936 level by about 30 percent, and highway freight traffic was several times as great as before the war. Freight traffic on inland waterways, on the other hand, was much smaller than in 1938 because of the reduced volume of trade between the areas which now make up East Germany and West Germany. As in the other Satellites, facilities have been used more and more intensively in recent years,

but the deterioration of both track and equipment under the strain of heavy traffic probably is most serious in East Germany.

In retail trade, too, considerable progress during the Plan was claimed officially. The reported doubling of retail trade turnover (at comparable prices) 52/ undoubtedly gives an exaggerated impression of the improvement in East German living standards, however. Part of this increase is due to the further urbanization of the population, which increased the proportion of consumer goods marketed through regular retail channels. Furthermore, the official figures do not adequately reflect the deterioration in the quality of consumer goods during the Plan.

The foreign trade turnover of East Germany was still far below the prewar level in 1950. The Plan stressed the need for increased trade and provided for nearly a tripling of the 1950 volume. This goal was not quite reached, but trade nevertheless increased substantially (see Table 21). The share of basic raw materials and foodstuffs in total imports fell during the period, and that of agricultural products and textiles rose. Products of the metal-

Table 21

Indexes of the Foreign Trade Turnover of East Germany a/
1950-55

1950 = 100

	1950	1951	1952	1953	1954	1955
Total turnover	100	151	173	223	271	280
Imports	100	129	165	209	233	250
Exports	100	176	182	238	315	315

a. Calculated from official data 53/ expressed in rubles.

fabricating industries became particularly important in East German exports in the course of the Plan, increasing from 32 percent of total exports in 1950 to about 60 percent in 1955 (see Table 22*).

* Table 22 follows on p. 56.

Table 22

Imports and Exports of East Germany, by Product Group a/
1950 and 1953-55

Product Group	Percent of Total			
	1950	1953	1954	1955
	Imports			
Basic materials	44.6	36.9	37.8	38.6
Of which: Metallurgical products	16.9	13.6	13.7	14.5
Fabricated metal products	8.2	5.2	4.8	4.7
Products of light and food industries	34.0	36.3	36.9	34.8
Of which: Textiles	8.4	12.6	13.6	14.0
Food and stimulants	22.3	20.8	18.8	15.9
Agricultural and forest products	13.2	21.6	20.5	21.9
Total	100.0	100.0	100.0	100.0
	Exports			
Basic materials	42.6	26.2	25.7	28.6
Of which: Chemicals	21.9	14.5	15.7	17.0
Fabricated metal products	31.9	62.7	62.2	60.4
Products of light and food industries	21.7	10.1	11.2	10.1
Agricultural and forest products	3.8	1.0	0.9	0.9
Total	100.0	100.0	100.0	100.0

a. 54/

The share of other Bloc countries in East Germany's foreign trade grew from about 72 percent in 1950 to more than 77 percent in 1953, but a ratio approximating that of 1950 was reestablished in 1955 (see Table 23). This change was a consequence of the general Bloc campaign to expand trade with Western Europe and with underdeveloped countries in various parts of the world.

Table 23

Geographic Distribution of the Foreign Trade Turnover of East Germany a/
1950 and 1953-55

	Percent of Total			
Country or Area	1950	1953	1954	1955
Sino-Soviet Bloc				
USSR	39.7	45.7	44.0	38.3
European Satellites	32.6	25.6	24.7	25.8
Albania	Negligible	0.2	0.1	0.3
Bulgaria	0.9	1.9	2.0	2.1
Czechoslovakia	8.3	5.9	6.3	6.7
Hungary	3.8	3.9	4.0	4.4
Poland	18.9	11.3	10.3	9.7
Rumania	0.7	2.4	2.0	2.6
Communist China, Korea, and Vietnam	Negligible	6.2	7.4	7.9
Total	72.3	77.5	76.1	72.0
Other countries b/	27.7	22.5	23.9	28.0
Of which: European countries b/	27.2	20.6	21.5	24.0
Of which: West Germany	16.0	6.9	8.8	11.0
	100.0	100.0	100.0	100.0

a. 55/
b. Including Yugoslavia, which [redacted] is lumped with the Sino-Soviet Bloc countries to form the "democratic world market." 50X1

V. Hungary.

A. Major Economic Policies and Problems.

In accordance with Communist theory, the long-term economic policy of Hungary stresses rapid industrialization of the country and socialization of the means of production. For the First Five Year Plan (1950-54) the primary emphasis was placed on the development of heavy industry: that is, on the machine-building industry and the supporting industries supplying basic materials and electric power. This was in line with the Communist principle that investment should first be concentrated on industries producing capital goods, which ostensibly would then be used to produce more consumer goods.

Hungary's difficulties consist chiefly in attempting to build an economy with a broad line of heavy industrial products on a weak foundation of natural resources. It has attempted to finance substantial capital investment in heavy industry from domestic resources and in so doing has limited consumption severely. At the same time, there has been a large drain on its resources through payments to the USSR for (1) reparations, (2) relinquishment of the Soviet share in the so-called "former German assets" organized as joint companies, and (3) the support of Soviet occupation troops. Raw materials for Hungarian industries must largely be purchased abroad, and although the best Hungarian products have been exported in an effort to obtain essential imports, frequent shortages of raw materials have occurred. One of Hungary's best resources, fertile land, has been used under conditions which produced far less output than would have been possible with good management, better income incentives for farmers, and adequate supplies of agricultural implements and fertilizer. In spite of its endowment of arable land and a relatively large agricultural labor force, Hungary has been unable to produce sufficient food for domestic consumption. Housing construction has also been seriously neglected.

Hungary started its first long-term plan in 1950 and almost immediately raised the production goals for the final year of the Plan. In 1952, however, there were many signs of industrial difficulty, and the severe drought of that year caused acute shortages of food products in 1953. These agricultural and industrial problems were responsible for the modifications of economic policy in June 1953 known as the "new course." All of the Bloc countries were suffering in a greater or lesser degree from over-rapid industrialization and neglect of agriculture, but these

problems were most serious in Hungary. Hungary was probably the most radical of the Satellites in its statement of the new policy, and the measures taken in implementing it were more persistent and complete than those of the other countries. Some of these measures were later modified, however, and the more extreme statements of the political leaders of the early "new course" period were repudiated.

The weaknesses in Hungary's economic structure were by no means completely remedied in the 2-1/2 years during which the "new course" policies were followed, and it remains to be seen whether sufficient changes have been made to ameliorate Hungary's economic conditions substantially. Party and government officials have frequently disavowed a policy reestablishing the previous emphasis on development of heavy industry. The reduction in both total investment and the share allocation to heavy industry under the "new course" policy was considered a corrective for the admittedly overambitious investment program. Nevertheless, an increase in the percentage allocation of investment to that sector was perceptible in the 1956 Plan and even more so in the Second Five Year Plan. It is doubtful, therefore, whether the planners have profited from past mistakes in any fundamental sense.

During the period of the "new course" the regime attempted to raise the standard of living by producing more consumer goods, giving them a wider distribution, and reducing their prices. Particular attention was given to the expansion of agricultural output, and the drive toward collectivization of the peasants accordingly was halted, suffering a setback from which it has never completely recovered. Collectivization of the land is considered basic to the efficient growth of farm production in the long run, however, and has never been abandoned as an ultimate goal. Pressure for collectivization was renewed in 1955, and at least 50 percent of the arable land was planned to be socialized by 1960. Less advanced forms of collectives, in which the participants do not give up their ownership of animals and equipment, have been encouraged to promote cooperative farming among peasants with above-average amounts of working capital. Nevertheless, new members in 1955 were principally peasants who owned little land and frequently had sold most of their livestock before joining. The government is still seeking a policy that will induce the more substantial independent peasants to join the collectives and to do so with their farm capital intact.

With the change of attitude in the USSR toward "new course" objectives in early 1955, Hungary moved toward the previous emphasis on the development of heavy industry. Plans for continuing agricultural growth were maintained, however, and production in the food-processing industries was scheduled to increase.

The principal objective of Hungarian economic planning at the present time is the equalization of its requirements for imported raw materials and its ability to produce a surplus of salable goods for export. The planners are attacking this problem from several angles. One important goal is a widespread replacement of imports with domestic output. Where possible, domestic resources will be developed to replace imports of timber, pit props, cotton, nonferrous metals and ferroalloys, foundry coke, and rubber, among other materials. Another aim is to change the principal line of exports from consumer goods such as textiles to machinery and equipment. Improvement of product design and technology and a reduction of manufacturing costs to a competitive level are also major objectives in the effort to balance imports and exports. Finally, there is a desire to acquire markets in the underdeveloped countries of the world, where Hungarian products may be traded for raw materials under favorable circumstances.

The general emphasis on heavy industry in Hungary has now been modified in the direction of greater concentration of effort on production lines in which the country has had long experience or for which it has special resources. These industries include alumina and aluminum, railroad equipment, electrical and electronic equipment, farm machinery, food processing, and pharmaceuticals. Specialization of Hungarian output along these lines has been stressed at conferences held by CEMA.

B. Achievements During the First Five Year Plan (1950-54).

1. Introduction.

At the start of the First Five Year Plan in 1950, Hungary had just completed a Three Year Plan of reconstruction in 2 years and 5 months, thus permitting a change from fiscal year to calendar year accounting. During this period the remaining war damage to the industrial plant was repaired, the currency was stabilized, the financial and banking system was reorganized under state management, and first large industries and then smaller enterprises employing 10 or more persons were brought under state control. Production in most of the basic industries had exceeded prewar output by 1947, and by 1949 industry had made a complete recovery in its productive power. Manpower employed in industry in 1949 far exceeded that of 1938, and labor productivity had risen about 15 percent in both heavy and light industry and about 3.5 percent in the food industry. Agricultural output rose substantially in 1949 but still amounted to only an estimated 75 percent of the prewar level. In short, the country had made

excellent progress in economic reconstruction and had almost overcome the inflationary tendencies of the early postwar period.

The First Five Year Plan was prepared in an atmosphere of optimism by a government completely under the control of Hungary's Communist Party. The scheduled pace of economic growth was much more rapid than in the previous Plan, but the planners' assessment at that time of the possibilities of growth was generally realistic, as the major industrial production and investment goals set forth in the original version of the Plan were met or exceeded. Considering the economy as a whole, the chief planning error was the assumption that the overfulfillment of some goals in the first year of the Plan indicated that the long-term goals for 1954 were not sufficiently ambitious to utilize all the capabilities of the economy. Even in the first year, when about three-fourths of the major construction projects were started, requirements for raw materials exceeded the supply, and the outputs of the electric powerplants, the extractive industries, and the matallurgical industry could not be pushed fast enough to keep the advanced processing and fabricating industries fully supplied.

On the strength of the first year's accomplishments, however, there was an extreme upward revision of the 1954 goals for production and investment. The planned increase in gross industrial production was revised upward from 86 percent to 210 percent, and planned capital investment by the state was raised from 50.9 billion forints* to 85

* The official exchange rate for Hungary since August 1946 has been 1 forint to US $0.085 or, conversely, US $1 to 11.74 forints. This rate of exchange considerably overstates the value of the forint. Hungary recently announced a new official exchange rate for transactions other than regular commercial trade of US $1 to 23.48 forints. This rate applies to such items as tourist, embassy, and legation expenditures, and transportation and communications services provided by Hungarian enterprises. Although this special rate gives a more realistic value for the forint than does the basic commercial rate of 11.74 forints to the dollar, it should be regarded only as a rough indicator of the relative purchasing power of the two currencies.

billion forints. The central objective of the revised Plan was stated to be the conversion of Hungary "from a predominantly agricultural economy to a country of steel, pig iron, and machines."

This revision of the Plan in 1951 probably retarded the country's economic growth, as it demanded a grossly disproportionate development of heavy industry and investment priorities for industry which hampered agricultural growth. Shortages of foods and other consumer goods, accompanied by large shipments of goods to the USSR, alienated the workers and set up resistance to the pressures for increased output. Moreover, the adoption of unbalanced and unrealistic objectives led to much waste, confusion, and inefficiency. Some of the most ambitious construction projects, for example, were severely cut back or abandoned a few years later.

2. Fulfillment of Major Production Goals.

The national income of Hungary rose about 50 percent during the First Five Year Plan, according to the official index calculated from values expressed in constant Plan prices. This is an increase of respectable size, but it is somewhat less than the original target for 1954 and considerably less than the revised goal of the Plan. The following tabulation shows that much of the increase was achieved in the first 2 years of the period and, more remarkably, that declines in national income occurred in both 1952 and 1954:

Year	Official Index of National Income
1949	100.0
1950	120.6
1951	141.2
1952	138.5
1953	156.7
1954	150.3

Hungary probably is the only European Satellite which experienced such setbacks in economic growth during its first long-term plan.

Comparatively large increases were also claimed in the gross output of industry and its major components. Although nearly all of the announced gains for total industry and the various industry groupings fell

short of the extremely ambitious objectives formulated in 1951 for the end of the period, they substantially exceeded the original targets in every case except electric power (see Table 24*). The outstanding failure of the Plan was in agriculture, where an increase of 42 percent in gross production was originally scheduled but only a 13-percent gain was claimed to have been realized.

3. Personal Income and Consumption.

The average per capita real income of workers and employees was reported to have increased by 20 percent from 1949 to 1954, but, according to official claims, the per capita real income of peasants increased by only 10 percent. The total consumption of the population increased by 30 percent, compared with the planned rise of 50 percent. Most of the indicated increase occurred during the last 1-1/2 years of the Plan, after the announcement of the "new course" policy.

4. Enlargement of Industrial Capacity.

The industrial capacity of the country was enlarged during the Plan by the completion of 65 new factories, mostly for the production of machinery and chemicals. Nineteen new electric powerplants were put into operation, two new foundries were completed and another almost finished, and a new pipe factory and a rolling mill were completed. In addition, the capacities of a number of older plants were enlarged. New equipment was installed in the Ganz freight car and machine factory, the Red Star tractor plant, the Gheorghiu-Dej shipyard, the Csepel automobile factory, and others.

The new or enlarged plant capacity permitted the production of various new products, including mining machines; new types of machine tools, agricultural machines, construction machines, and locomotives; antifriction bearings; and synthetic material in a straw cellulose factory. Chemicals production was advanced by building factories for pharmaceuticals, dyestuffs, asphalt, fertilizer, and industrial gas. The largest venture of the Plan, the Stalinvaros iron and steel combine, was discontinued for the period of the "new course" to permit the reallocation of material and labor to more urgent uses. A large prestige project -- the Budapest subway -- was also discontinued.

The capacity of light industry was expanded little, except for an increase in the number of spindles in the spinning mills and the

* Table 24 follows on p. 65.

Table 24

Planned and Reported Actual Increases
in National Income and Gross Production in Major Economic Sectors
in Hungary During the First Five Year Plan (1949-54)

	Percent of Increase		
	Planned		
Economic Sector	Original Plan	Revision of 1951	Reported Actual
National income	63	130	50
State-owned industry a/	86	210	155
Heavy industry	104	280	188
Mining	55	142	96
Metallurgy	95	162	132
Machinery	125	390	264
Electric power	94	175	92
Building materials	115	306	162
Chemicals	138	273	195
Light and food industries	73	145	127
Textiles	52	92	67
Clothing	250	750	355
Woodworking	78	220	162
Paper and printing	56	116	N.A.
Food processing	70	157	170
Construction	131	338	170
Agriculture	42	54	13

a. Excluding cooperative and private industry, which accounted for about 7 percent of total industrial production in 1954.

construction of 1 linen mill and 1 hemp mill. In the food industry, some cold storage plants and bakeries were built in decentralized locations.

5. Labor Productivity.

Labor productivity was reported to have increased 46.6 percent in the manufacturing industry from 1949 to 1954 and 47.4 percent in the building trades. These increases are well below the planned increase of 92 percent for all of industry. Approximately 63 percent of the increase in industrial output was a result of increased manpower and 37 percent a result of greater productivity.

C. Use of Resources to Promote Economic Development.

1. Manpower.

The population of Hungary in 1955 averaged 9.8 million persons, of whom about 4.5 million, or 46 percent of the population, were in the civilian labor force. Although the population increased only 6 percent from 1949 to 1955, the civilian labor force rose by over 12 percent. This accretion to the labor force was accomplished despite an abnormally large proportion of women in the population and a decreasing proportion of persons in the economically active age group (15-64 years) -- both the result of war losses.

The nonagricultural labor force increased 35 percent between 1949 and 1955 through absorption of the unemployed (in the early years), transfers from agriculture, and an increase in the participation of women in the labor force. The proportion of the civilian labor force in industry grew from less than one-fifth of the total in 1949 to about one-fourth in 1955. Construction, transportation, trade, and the civil service also shared in the general expansion of the nonagricultural labor force during this period (see Table 25*).

The agricultural labor force was reduced by about 200,000 persons from 1949 to 1953, but this trend subsequently was halted and even reversed. In recent years the labor force in agriculture has amounted to an estimated 44 percent of the total. This is still an excessive proportion by Western standards, but the small farms, backward methods of cultivation, and limited mechanization keep the productivity of farm labor low. Practically all of the agricultural machinery has

* Table 25 follows on p. 67.

Table 25

Population and Labor Force in Hungary
1949-55

	1949	1950	1951	1952	1953	1954	1955
	Million [a]						
Population	9.24	9.33	9.42	9.50	9.59	9.69	9.80
Civilian labor force							
Agricultural	2.12	2.09	2.07	1.99	1.92	1.93	1.97
Nonagricultural	1.87	2.06	2.20	2.33	2.45	2.50	2.52
Total civilian labor force	3.99	4.15	4.27	4.32	4.37	4.43	4.49
	Percent of Civilian Labor Force						
Agricultural labor force	53.1	50.4	48.5	46.1	43.9	43.6	43.9
Nonagricultural labor force	46.9	49.6	51.5	53.9	56.1	56.4	56.1
Industry	19.3	19.3	20.0	21.2	23.0	24.6	24.9
Construction	2.5	3.9	5.2	6.3	6.4	5.4	4.7
Transportation	4.1	4.2	4.5	4.8	5.1	5.2	5.4
Trade	5.3	5.5	5.5	5.4	5.4	5.7	6.1
Other [b]	15.7	16.7	16.3	16.2	16.2	15.5	15.0

a. Averages of estimates for the beginning and end of the year.
b. Including the civil service, which increased from 4.8 percent of the civilian labor force in 1949 to 6.3 percent in 1955.

so far been allotted to machine tractor stations, state farms, and collectives. Relatively few private farmers have been able to obtain and pay for the costly services of the machine tractor stations.

2. Investment.

Most of the capital investment in Hungary consists of state investment financed through the budget. Some investment is made by cooperatives, but this is important in amount only in agriculture. The

amount of private capital investment in agriculture is not known but is probably small. Medium- and long-term loans have been made by the state to agricultural collectives or other cooperative enterprises but not to private persons except for housing. Gross capital investment has been as follows since 1949:

Million Forints

Year	Total Actual Investment in Plan Prices	Investment Through the Budget by the State (Current Prices)	
		Scheduled	Actual
1949	N.A.	3,320	N.A.
1950	9,700	7,250	N.A.
1951	13,100	11,700	N.A.
1952	16,000	15,300	N.A.
1953	16,800	19,019	15,837
1954	11,800	12,656	9,300
1955	11,200	9,000	9,800

Actual investment through the budget probably equalled or even exceeded the scheduled amounts until 1953, when investment was much smaller than scheduled. Hungary was forced to reduce its goal for budgetary investment in 1954 in the middle of the year, and the target for 1955 was even more conservative.

The share of heavy industry in gross capital investment was maintained at a high level (averaging about 40 percent of the total) throughout the First Five Year Plan. The reduction of more than 40 percent in budgetary investment in 1954, however, reflected a substantial decline in the absolute amount invested in heavy industry; at the same time the sums devoted to agriculture and the light and food industries were increased. The share going to heavy industry was reduced in 1955, permitting a further increase in the sums allocated to agriculture and light industry. Planned and actual allocations of gross capital investment during the First Five Year Plan are shown in Table 26.*

* Table 26 follows on p. 69.

Table 26

Planned and Actual Gross Capital Investment
in Hungary During the First Five Year Plan (1950-54)

Economic Sector	Billion Forints a/			Percent of Total		
	Original Plan	Revised Plan	Actual	Original Plan	Revised Plan	Actual
Industry	20.45	41.00	29.75	40.2	48.2	44.1
Heavy industry	17.45	37.50	27.45	34.3	44.1	40.7
Light and food industry	3.00	3.50	2.30	5.9	4.1	3.4
Construction industry	0.85	3.00	1.75	1.7	3.5	2.6
Agriculture	8.00	11.00	9.30	15.7	12.9	13.8
Transportation and communications	7.50	10.00	8.60	14.7	11.8	12.8
Trade	0.90	1.00	1.70	1.8	1.2	2.5
Housing and public works	7.40	14.00	10.00	14.5	16.5	14.8
Other	5.80	5.00	6.30	11.4	5.9	9.4
Total	50.90	85.00	67.40	100.0	100.0	100.0

a. At Plan prices.

Industrial investments fell short of the augmented goals of the First Five Year Plan in every major category, but the amounts originally planned were exceeded except in the machine-building industry and light and food industry. Investment in machine-building facilities was cut severely after mid-1953 in order to free resources for the expansion of the basic materials and power industries. Even the existing plants in the machine-building industry could not be fully utilized at this time, because of the shortages or poor quality of forgings, castings, and other iron and steel products.

State investment in agriculture has been devoted mainly to the strengthening of the socialist sector (the machine tractor stations, state farms, and collectives). Mechanization, livestock breeding, reforestation, and irrigation projects have been the major investment categories. The growth of agricultural investment since 1950 is shown in the following tabulation:

Investment in Agriculture

Year	Billion Forints in Plan prices	Percent of Total Investment*
1950	0.9	9.8
1951	1.4	10.6
1952	2.1	12.8
1953	2.2	13.2
1954	2.7	22.7
1950-54	9.3	13.8
1955	2.7	23.8

D. Survey of Major Sectors of the Economy.

1. General Economic Growth.

The GNP of Hungary is estimated to have increased by about 50 percent from 1949 to 1954. After a further sizable increase in 1955, the GNP probably was nearly 50 percent higher than in 1938. Output in the industry and transportation sectors experienced rapid growth, nearly doubling in each case from 1949 to 1955 (see Table 27**). There was also a large increase in the volume of construction over the low level prevailing in 1949. Construction activity apparently reached a peak in 1953 and then declined somewhat with the abandonment of certain projects under the "new course."

Agricultural production moved erratically because of varying weather conditions and shifts in agricultural policies. Output in 1951 was well above the 1949 level, for example, but production dropped about 25 percent the following year. A postwar high was reached in 1955, but output apparently was still somewhat smaller than before the war.

* Calculated before final rounding of values.
** Table 27 follows on p. 71.

Table 27

Indexes of Gross National Product and of Production
by Economic Sector in Hungary a/ b/
1938 and 1949-55

1949 = 100

	1938	1949	1950	1951	1952	1953	1954	1955
Gross national product	111	100	121	141	138	157	150	164
Industry	86	100	128	144	172	188	186	196
Agriculture and forestry	133	100	106	123	93	110	113	126
Construction	105	100	148	198	256	279	245	262
Transportation and communications	78	100	117	141	169	189	191	204
Trade and services	118	100	109	113	113	121	131	134

a. The indexes of estimated GNP shown for the period 1949-55 are official indexes of Hungary's national income as published [redacted] Because the Communist concept of national income excludes provision for depreciation and the value of services not connected directly with production of material goods, it is not comparable with the usual Western concept of GNP. The official indexes for national income nevertheless are regarded as the best indicator of the trend in the GNP which is presently available. The indicated rate of growth in GNP during the period probably would be somewhat lower if depreciation allowances and excluded services were taken into account inasmuch as these elements of the GNP are believed to have increased less rapidly than the elements included in national income by the Hungarian statisticians. The GNP index linking 1938 with 1949 is a weighted average of indexes calculated for the various sectors of the economy.

50X1

Table 27

Indexes of Gross National Product and of Production
by Economic Sector in Hungary a/ b/
1938 and 1949-55
(Continued)

Official indexes of net production in the various sectors of the economy (which would be consistent with the published index for national income) are not available. The indexes shown for production in the different economic sectors during 1949-55 thus are not directly related to the indexes of GNP and are not entirely comparable with them. The indexes for agriculture and construction for the period 1949-55 are official indexes of gross production [redacted] 50X1
[redacted] The other sector indexes were calculated independently from production data for a 50X1
sample of products or were derived from other rough indicators of economic activity in the sector. A satisfactory GNP index cannot be calculated from these sector indexes, because suitable sector weights are not available.

Despite their limitations, these indexes show a pattern of growth among the various sectors of the economy that is believed to be generally correct. More confidence can be placed in the growth rates shown for the entire postwar period than in the indicated annual changes in output. This qualification is particularly applicable to some of the sector indexes for 1952, which appear to be too high to be consistent with the index of GNP.

b. For rough comparisons with the other Satellites, see the 1955 indexes on a 1950 base in Table 48, p. 119, below.

2. Industry.

a. Trends in Production.

Table 28* presents a comparison of the outputs of a number of important industrial products in 1954 and 1955 with the goals set in the Five Year Plan for 1954. Although the growth attained in the production of coal, electric power, iron and steel, and construction materials was substantial, it was insufficient to keep the economy running at the desired pace.

Total production of coal increased from 11.8 million metric tons in 1949 to 22.3 million metric tons in 1955. The heat value of the coal mined has gradually declined, however, so that greater quantities are needed to produce the same amount of energy. The quality of Hungarian coal is for the most part poor and, except for limited deposits near Pecs, is unfit for making the metallurgical-grade coke required for production of iron and steel. Hungary is trying to free itself from dependency on imports of coke and has constructed a modern byproduct coking plant at Sztalinvaros which was intended to use coal from Pecs and Komlo. According to reports, however, the new plant is dependent for its supply on a mixture of various kinds of coal, chiefly imported. Gas and coke plants and other plants in heavy industry have priority in the allocation of bituminous coal, and other consumers such as the railroads use a mixture of different coals. Some of the lowest quality coals in Hungary cannot be used without the addition of better grade coals.

Increased production of electric power has been the object of great effort. During 1949-55, Hungary was reported to have built 19 power stations, increasing output from 2.52 billion kilowatt-hours (kwh) in 1949 to 5.43 billion kwh in 1955. Electric energy is required in large quantities for industrial use, particularly for refining aluminum. The aluminum industry reportedly uses 17 percent of the total output of electric power, even though most of the bauxite and alumina produced in Hungary are shipped to Czechoslovakia, East Germany, and the USSR for refining.

Although production of pig iron and crude steel increased by 106 percent and 73 percent, respectively, between 1949 and 1954, output of both products fell far short of the Plan. Moreover, the quality of iron and steel produced in Hungary has been very poor and has held down

* Table 28 follows on p. 74.

Table 28

Planned and Actual Output of Selected Products in Hungary
1949, 1954, and 1955

Product	Unit	1949 Actual	1954 Original Plan	1954 Revised Plan (1951)	1954 Actual	1955 Actual	Percent of Increase 1949 to 1955
Electric power	Billion kilowatt-hours	2.52	4.27	6.05	4.82	5.43	115
Coal (all types)	Million metric tons	11.8	18.5	27.5	21.5	22.3	89
Pig iron	Thousand metric tons	398	960	1,280	820	855	115
Crude steel	Thousand metric tons	860	1,600	2,200	1,491	1,629	89
Bauxite	Thousand metric tons	561	N.A.	N.A.	1,260	1,241	121
Primary aluminum	Thousand metric tons	14	N.A.	N.A.	33	37	164
Bricks	Millions	389	N.A.	1,420	1,138	1,198	208
Cement	Thousand metric tons	552	1,050	2,100	947	1,175	113
Trucks	Units	996	9,000	9,000	4,217	3,664	268
Combines	Units	a/	N.A.	1,500	925	1,535	a/
Radios	Thousands	68	146	N.A.	258	377	454
Cotton cloth	Million square meters	166	258	264	224	234	41
Wool cloth	Million square meters	23	23.9	27.0	21	26	13
Knitwear	Metric tons	1,280	N.A.	4,750	4,124	5,057	295
Leather shoes	Million pairs	3.85	N.A.	12.3	10.7	12.4	222

a. Output in 1949 was negligible or zero.

the quality of machine products made from it. Because of the large proportion of rejects, usable production has been much smaller than that reported.

In the chemical industry, Hungary has been struggling to attain a larger degree of self-sufficiency. Production during the First Five Year Plan was confined chiefly to the manufacture of basic chemicals for domestic use, but production of pharmaceuticals was also important. The country has not been able to meet its own requirements for calcium carbide, caustic soda, or coal chemicals, and no soda ash is produced.

b. Principal Problems.

The most acute problem of industry is the shortage of raw materials, which necessitates the export of products badly needed at home in order to obtain supplies of the most essential materials. Although it has been admitted officially that shortages of raw materials are the chief industrial weakness, it is claimed that new trade agreements will assure the import of necessary basic materials and power in the future. These raw materials include not only coal, coke, and iron ore but also nickel, zinc, pyrites, cotton, lumber, and other commodities. The machine-building industries are expected to furnish the bulk of future Hungarian exports to countries outside the Bloc.

A second and related problem is the backward technology of Hungarian industry, which keeps production costs high and makes it difficult to sell Hungarian products in the highly competitive markets of Western Europe. Numerous official statements have emphasized the obsolescent character of the existing industrial equipment, even in such Hungarian specialties as the electrical equipment industry.

3. Agriculture.

a. Trends in Production.

During the First Five Year Plan, gross agricultural production rose by a meager 13 percent, according to official reports, in comparison with the 54-percent increase specified in the revised Plan. The planted acreage in fiber crops, oilseeds, vegetables, and rice rose substantially during the period, while that in grain crops and livestock fodder crops declined.

Agricultural output in 1955 was well above the average annual output during the First Five Year Plan, and crop production probably was the highest since 1951. Impressive gains were also made in livestock and poultry numbers and in the output of animal products. Outputs of bread-grains, potatoes, and animal products during the past several years have generally remained well below prewar levels, however.

b. Collectivization.

Agricultural collectivization efforts were renewed in 1955 after the dismissal of Premier Imre Nagy and the repudiation of the "new course" policy. After the Nagy government granted permission to dissatisfied members to leave the collectives, many members withdrew and hundreds of collectives were dissolved. The number of collectives dropped by about one-sixth during the 18 months following the "new course" announcement, and the number of households was reduced by nearly 50 percent. This setback to the collectivization effort was so severe that the losses had not yet been made up by the end of 1955 (see Table 29*). Recent additions to the membership of collectives have consisted primarily of families with small land holdings. In March 1956, collective farms embraced 21 percent and state farms about 13 percent of the total arable land, making a total of 34 percent of the arable land in the socialized sector.

c. Mechanization.

Mechanization of agriculture progressed at a faster rate in 1955 than in previous years, but its level is still low by Western European standards. Although the production of farm machinery has increased considerably since 1949, the country's export requirements have absorbed a major part of such manufactures. Consequently, the planned deliveries of machinery to the agricultural sector during the First Five Year Plan were not fully carried out, as is shown by the following figures:

Deliveries of Agricultural Machines to State Farms and Machine Tractor Stations During the First Five Year Plan (1950-54)*

	Planned	Actual	Actual Deliveries as Percent of Plan
Tractors	26,100	12,403	46
Tractor plows	17,320	11,488	66
Harrows	11,300	8,053	71
Grain binders	9,060	3,448	38
Cultivators	6,800	4,277	63
Grain drills	5,300	4,729	89
Combines	2,600	2,052	79

* Table 29 follows on p. 77.

** A small number of these machines, amounting to less than 5 percent of the total, were delivered to collective farms or private farmers.

Table 29

Socialization of Agriculture in Hungary
1949-56

Year	Collective Farms				State Farms		Total Socialized Sector
			Area				
	Number of Farms	Number of Households (Thousand)	Arable Land (Thousand Hectares)	Percent of Total Arable Land	Arable Land (Thousand Hectares)	Percent of Total Arable Land	Percent of Total Arable Land
December 1949	1,760	40	173	3.0	230	4.0	7.0
September 1950	2,229	89	403	7.0	345	6.0	13.0
November 1951	4,653	236	898	15.6	518	9.0	24.6
December 1952	5,300	318	1,416	24.6	731	12.7	37.3
April 1953	5,315	340	1,445	26.0	734	13.2	39.2
December 1953	4,677	238	1,117	20.1	693	12.5	32.6
December 1954	4,381	185	940	16.9	689	12.4	29.3
December 1955	4,996	245	1,107	19.9	706	12.7	32.6
March 1956	5,186	280	1,174	21.1	706	12.7	33.8

In 1955, there were 312 machine tractor stations with about 13,000 tractors, or an average of 42 tractors per station. Indications are that the machinery of the stations has not been fully used, because of a lack of trained personnel, poor maintenance, shortage of parts, and poor planning. Because of high and discriminatory fees, it is doubtful whether the private farms obtain much benefit from the machinery of the machine tractor stations. Most of the work on private farms is done with horse-drawn machinery. Small machine and implements have usually been scarce, but the situation has improved since 1953.

4. Transportation.

Since World War II the major east-west railroad lines of Hungary have been strengthened, and railroad bridges destroyed in the war have been rebuilt. Improved signal and communications facilities have been installed on the major lines, and key railroad yards and stations have been improved. Investment in railroad rolling stock has not kept pace with the increase in freight traffic. Despite improvements in operational efficiency, the railroads have been hard pressed to meet growing traffic requirements. There were sizable increases in the volume of freight traffic from 1949 to 1955, however, as shown in the following tabulation:

Million Ton-Kilometers of Freight Traffic

Year	Railroad	Inland Waterways	Highways
1949	4,545	443	246
1954	8,148	906	826
1955	8,780	847	868

5. Housing.

Only 103,000 dwelling units, or less than 50 percent of the planned goal of 220,000 units, were built in Hungary during the First Five Year Plan. New housing construction did not even keep up with the increase in population during the period; 225 dwelling units were constructed per 1,000 persons added to the population compared with the stock of about 265 dwelling units per 1,000 persons at the beginning of the Plan.

Moreover, the number of units built during the Plan was only one-third as large as the net increase in the number of married couples. The rapid expansion of the urban population made overcrowding especially acute in urban areas. Construction by the state fell so far short of needs that a program of incentives for private construction of dwellings was started in late 1953 and was in large part responsible for the increases in 1954 and 1955 as shown in the following tabulation for new housing construction during 1950-55:

Construction of Dwelling Units

Year	Total	Built by State
1950	24,669	5,781
1951	17,742	6,333
1952	16,683	7,379
1953	16,793	9,187
1954	27,211	11,329
1955	31,526	13,604

6. Retail Trade.

After remaining unchanged or actually decreasing in the early years of the Plan, the volume of retail sales in Hungary rose almost 20 percent in 1954 and 5 percent in 1955. This rapid rise was the result of the increased volume of consumer goods placed on the market during the implementation of the "new course" policy. Sales of nonfood items reportedly increased by 31 percent from 1953 to 1954 and constituted about 43 percent of total retail trade turnover in the latter year. Sales of foods and stimulants also increased but only about half as much (in percentage terms) as nonfood products. The average intake of food in Hungary during the food year 1954/55 reached approximately the prewar level (see Table 46*), but the typical diet in Hungary remains inadequate in milk products, meat, and fish. In spite of improvements since 1949, consumer goods generally remain scarce and high priced.

7. Foreign Trade.

One of the objectives stressed in Hungary's "new course" announcement in 1953 was an increase in its trade with non-Bloc countries. An associated aim was a lessening of emphasis on economic autarky, including the attempt of Hungary to supply its own coal, iron, and other raw materials despite its resource deficiencies. Trade with countries outside

* P. 117, below.

the Bloc almost doubled during the next 2 years, rising from 23 percent of its foreign trade turnover in 1953 to 29 percent in 1954 and 39 percent in 1955. The value of foreign trade with other countries of the Bloc declined in 1954 and 1955. Trade with the USSR reportedly declined in both years.

The increase in Hungary's trade with Western countries was to some extent made possible by credits granted by the latter. By 1955, Hungary had amassed debts to the West totaling about $229 million and was striving for a favorable trade balance with which to pay them off. The total balance of Hungarian trade in 1955 was reported to be favorable, but the balance with countries outside the Soviet Bloc was still unfavorable.

Certain changes in the commodity composition of Hungarian trade have also taken place. Hungary was a net importer of textiles before the war but is now a net exporter. About 50 percent of total production of cotton goods was exported in 1955. The country has, on the other hand, become a net importer of breadgrains in recent years. As Hungary has had difficulty in selling such consumer goods as bicycles, toys, and radio sets in Western Europe, the planners have concluded that the sale of certain types of consumer goods abroad does not pay. They are therefore attempting to increase exports of heavy industrial products instead. Among the new commodities which Hungary is exporting to the West are residual oil, steel pipe, and rolled steel products.

In spite of Hungary's elaborate plans to balance its foreign trade, its balance of payments position is precarious. A recent agreement with Yugoslavia calls for reparations payments totaling $85 million over the next 5 years, and another agreement with the UK provides for payment of $12.6 million in full settlement of prewar and wartime claims against Hungary. In addition, a sizable foreign debt must be serviced, and payments must be made to the USSR and other countries of the Soviet Bloc, for credits extended in recent years, to enable Hungary to obtain needed raw materials. As a consequence, Hungary will make substantial exports without any return in the form of needed raw materials.

VI. Poland.

A. General Policy and Achievements.

The economic policies of Poland during the postwar period followed a pattern common to all Soviet Bloc countries. After a short period of reconstruction (1947-49), during which the Communist Party consolidated and broadened its control over the economy, Poland entered into a Six Year Plan (1950-55) of economic development. This Plan was designed primarily to hasten the industrialization of the country by all possible means. Although other branches of the economy were also planned to expand rapidly, it was clearly intended that heavy industry and economic activities directly connected with it receive the highest priorities in allocations of the factors of production.

The 6-year targets were in general not achieved. The agricultural goals proved to be completely unrealistic, and official claims of overfulfillment of goals for industry are open to question. Nevertheless, Polish industrial growth was extremely rapid during 1950-55 (about 11 percent a year, judging by production data available for a sample of products). With the aid of newly acquired productive capacity in the western territories detached from Germany, Poland not only expanded production of industrial materials such as steel, coal, electric power, and basic chemicals but also undertook large-scale production of a wide range of technically complex items in the machine-building and chemical industries. Expansion of heavy industry was the primary factor causing an estimated growth of about 50 percent in Poland's GNP during the period of the Six Year Plan. Agriculture, related light industries, and housing, on the other hand, fared badly. Agricultural production in 1955 was about 18 percent above 1949 but only 4 percent above the good crop year of 1950. The stagnation of agricultural production is attributable not only to low priorities for skilled labor and capital goods in this area but also to the deleterious effects on farmers' incentives of the system of forced deliveries of farm products at low prices and the continuing threat of collectivization. The process of collectivization was very slow, however, and by the end of 1955 state-owned and cooperative farms controlled only 24 percent of the agricultural land, the lowest percentage in the European Satellites.

The great disparity between the growth of heavy industry and that of light industry and agriculture is reflected in the relative increases in investment and the consumption of goods, the principal end uses of these products (see Table 30*). Investment increased about three times faster than the consumption of goods from 1949 to 1955. A small rise in per capita consumption appears to have taken place, but because of severe shortages of certain commodities, the poor system of distribution, and a decline in housing space per capita in urban areas, Polish consumers apparently have not attained a higher standard of living. Even official statistics show that money wages in many occupations increased more slowly than the cost of living. Since 1953 there has been widespread criticism of the so-called imbalance in the growth of the economy, and steps have been taken to correct it to some degree by devoting a larger part of the gains in production to raising consumption.

1. Use of Resources to Promote Economic Development.

a. Manpower.

The Polish population emerged from World War II severely reduced in size as a result of heavy war losses, territorial changes, and forced emigration. The population in 1948 was about 24 million compared with 31 million before the war within the same boundaries. Although the lands acquired from Germany were highly industrialized, a large portion of their German inhabitants had been forced to leave the country. Consequently, only 35 percent of the labor force in 1948 was employed outside agriculture. Through about 1950, labor was recruited for industry and construction from low-productivity occupations such as agriculture, private trade, and domestic service. There was also a heavy demand for labor on the part of the military, the internal security forces, and the civil service.

After 1950, nationalization of nonagricultural occupations was almost complete, but the movement away from the farms continued. The "new course" efforts to stimulate agricultural production led to a small increase in the agricultural force in 1954, but the downward trend appeared again in 1955. In addition to transfers from agriculture, the nonagricultural labor force has been augmented to an important extent by increased employment of women. The number of women employed in the socialist sector outside of agriculture increased from 1.06 million in 1949 to 1.96 million in 1955. Low real wages for most men have been an important stimulus in

* Table 30 follows on p. 83.

inducing wives to work. The announced demobilization of 47,000 men and amnestying of about 70,000 political prisoners have augmented the civilian labor force to the extent that they have been carried out. Table 31* shows the growth of the Polish population and labor force since 1948.

Table 30

Indexes of Gross National Product,
of Production by Major Economic Sector,
and of End Uses of Gross National Product in Poland a/
1948-55

1949 = 100

	1948	1949	1950	1951	1952	1953	1954	1955
Gross national product	82	100	114	117	123	132	142	151
Industry	86	100	115	125	135	152	168	185
Heavy industry	89	100	114	126	143	164	185	207
Light industry	82	100	117	122	124	134	141	151
Agriculture and forestry	78	100	113	108	108	109	114	118
Investment	81	100	142	157	185	211	215	215
Consumption of goods b/	N.A.	100	114	121	119	122	130	139
Consumption of goods per capita	N.A.	100	112	116	112	113	118	124

a. For rough comparisons with the other Satellites, see the 1955 indexes on a 1950 base in Table 48, p. 119, below.
b. Per capita consumption of selected consumer goods (from official reports) was weighted by estimated average prices in state stores in 1955. The index excludes services and consumer durables, and no adjustment was made for changes in the quality of goods. The index number for 1955 was derived from an official index of real wages.

* Table 31 follows on p. 84.

Table 31

Population and Labor Force in Poland
1948-55

Million a/

	1948	1949	1950	1951	1952	1953	1954	1955
Population	23.85	24.30	24.77	25.27	26.75	26.25	26.76	27.28
Civilian labor force b/								
Agricultural	8.03	7.81	7.52	7.34	7.30	7.29	7.32	7.22
Nonagricultural c/	4.40	4.79	5.24	5.54	5.73	6.08	6.33	6.57
Of which: industrial d/	2.10	2.13	2.33	2.48	2.55	2.69	2.84	3.01
Total civilian labor force	12.43	12.60	12.76	12.88	13.03	13.37	13.65	13.79

a. Averages of estimates for the beginning and end of the year.
b. Including unemployed workers, who decreased from an estimated 160,000 in 1948 to 90,000 in 1952 and thereafter increased to 190,000 by the end of the period.
c. Workers and employees in the socialist sector of forestry, who are included in the nonagricultural category but not in the industrial labor force, numbered about 100,000 in 1948; 110,000 in 1949-52; 140,000 in 1953; and 150,000 in 1954-55.
d. Including private industry and handicrafts.

b. Investment.

The bulk of capital investment during the postwar period has been allocated to industry in order to support the planned growth in industrial output (see Table 32*). Agriculture received an extremely small share (about 8.5 percent), considering its importance in the GNP. Housing also suffered in the allocation of investment funds, resulting in a decline in housing space per capita. The concentration of investment in industry, on the other hand, was greater than planned. This policy undoubtedly was a strong stimulus to economic growth in the short run, but it was also largely responsible for the lag in consumer goods production and has left a legacy of problems which will affect investment allocations in the new Five Year Plan.

c. Economic Planning and Control.

The operation of economic planning and control has tended increasingly to conform to the Soviet pattern. On the whole it has been inefficient and wasteful. Plans were in general unrealistically high, and when quantity plans were met, the quality or assortment of goods often suffered. Accounting and financial control over the expenditures of enterprises was severely damaged by a great inflation of wage rates during a period when prices of producer goods were nearly constant. This resulted in large and increasing subsidy payments from the state budget to nearly all heavy industries. There has been some recent improvement in both planning and control methods, however. Planned increases in output for the next 5 years appear to be much more realistic than in the past. Measures intended to reduce waste include the major price-cost reform of January 1956, which is designed to make most industrial enterprises profitable and therefore more amenable to accounting control.

2. Phases in Postwar Economic Development.

Since World War II there have been three clearly delineated phases in Polish economic development: 1947-49, a reconstruction period; 1950-53, a period of headlong industrialization; and 1954-55, a period of readjustment. The effect of these changes in policy on the growth and allocation of output can be seen in Tables 30, 31, and 32,** and in the following tabulation, which shows the varying share of accumulation in the Polish national income:

* Table 32 follows on p. 86.
** Pp. 83 and 84, above, and p. 86, below, respectively.

Table 32

Planned and Actual Gross Capital Investment in Poland a/
1947 and 1949-55

Percent of Total

Economic Sector	Actual							Total for 1950-55	
	1947	1949	1950	1951	1952	1953	1954	Planned	Actual
Industry	35.4	43.1	42.1	46.4	56.8	52.4	50.8	45.4	50.7
Agriculture and forestry	15.9	11.0	10.1	10.3	8.2	8.3	10.7	11.9	8.5
Transportation and communications	27.5	18.4	15.7	15.6	12.6	11.6	10.8	14.9	12.6
Internal trade	2.2	5.1	5.1	5.3	3.4	3.6	3.1	4.2	3.7
Housing and communal building	9.6	12.7	12.0	13.8	13.6	13.5	15.1	11.5	13.6
Cultural and social	6.4	7.6	8.3	7.7	4.3	4.7	5.8	8.8	10.9
Miscellaneous	3.0	2.1	6.7	0.9	1.1	5.9	3.7	3.3	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a. Data refer to investments comprised within the state investment plan. The planned and actual distributions of investment during 1950-55 are based on 1950 prices and 1956 prices, respectively, and data for 1953 and 1954 are based on 1953 prices. Changes in relative prices, however, probably do not greatly affect the percentage distribution of investment by sector, as the percentages given in the Six Year Plan fulfillment report are close to a weighted average of the percentages available for individual years through 1954. Data are from [redacted] 1947 and 1949-52, 58/; 1953-54, 59/; 1950-55 total, planned 60/ and actual 61/.

50X1
50X1

Year	Accumulation as Percent of National Income*
1949	23.2
1950	27.2
1951	28.1
1952	26.9
1953	25.1
1954	24.2
1955	23.1

a. 1947-49.

The period of the Three Year Plan of reconstruction was one of extremely rapid recovery of all parts of the economy from the low levels of output of the first postwar years. Industrial recovery was greatly aided by the reconstruction of plants in the Silesian territories during 1947-49 and, to some extent, during the first few years of the Six Year Plan. In 1946-47, agricultural production was so low that the urban population could not be fed without extensive imports. By 1949, agricultural production had recovered sufficiently to satisfy domestic requirements and in addition permit net exports of some foods. 62/ The improvement in food supplies was achieved without extensive use of compulsory deliveries of farm products and without collectivization. During the Three Year Plan, however, the state, which already owned most large-scale industry, wholesale trade, and transport, rapidly extended its control over retail trade. By the end of 1949, only a part of handicrafts and 44 percent of retail trade remained in private hands.

Rapid growth was achieved simultaneously in investment and consumption, whose shares in the national income did not vary significantly during the period. Domestic investment was supplemented considerably from foreign sources, particularly during the period of UNRRA aid. In terms of either dollars or 1937 zlotys,** imports greatly exceeded exports in 1947-48. In terms of current domestic prices, the trade deficit probably was even greater. By 1949, however, foreign trade was about balanced in terms of dollars.

* Accumulation consists essentially of capital investment plus increases in working capital and stockpiles. National income, in the Marxist definition, excludes most direct services and depreciation allowances but includes indirect taxes. The percentages are based on data in current prices.

** The official exchange rate for Poland since 1950 has been 1 zloty to US $0.25 or, conversely, US $1 to 4 zlotys. This rate of exchange

b. 1950-53.

The first 4 years of the Six Year Plan saw a tremendous concentration of resources on the construction of new industrial projects plus the added strain, after the start of the Korean War, of a substantial program for the production of modern military equipment such as jet aircraft and tanks. Production of heavy industry increased at a rate of about 14 percent per year. After a good year in 1950, production of light industry grew only an estimated 5 percent per year during 1951-53, and agricultural production fell. A rapid expansion of nonagricultural employment continued to make inroads on the agricultural labor force, but forced deliveries of agricultural products insured food supplies for the cities.

Investment more than doubled during the period, while the consumption of goods rose little if at all. The share of accumulation in the national income (at current prices) rose from 23 percent in 1949 to 28 percent in 1951 in spite of the fact that prices of consumer goods were increasing faster than those of capital goods. The share of industry in centralized investment rose from 43 percent in 1949 to 57 percent in 1952, whereas the share of agriculture fell from 11 percent to 8 percent. The investment plan for heavy industry was overfulfilled by 19 percent during 1950-53, but the investment plans for most other sectors were underfulfilled -- for example, in light industry by 23 percent, in agriculture by 25 percent, and in social-cultural construction by 45 percent. 63/ The low priority of consumption and consumer welfare in this period is also shown by the decline in both absolute and relative terms of budgetary expenditures for social and cultural purposes. At the same time, military expenditures grew rapidly.

Although foreign trade statistics for 1950-53 are very incomplete, it is probable that Poland financed its development with little or no net foreign aid. Polish exports increased by 850 million rubles from 1949 to 1953, although imports increased by only 570 million rubles.

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considerably overstates the value of the zloty. Poland recently announced a new official exchange rate for transactions other than regular commercial trade of US $1 to 24 zlotys. This rate applies to such items as tourist, embassy, and legation expenditures, and transportation and communications services provided by Polish enterprises. Although this special rate gives a more realistic value for the zloty than does the basic commercial rate of 4 zlotys to the dollar, it should be regarded only as a rough indicator of the relative purchasing power of the two currencies.

The cost of headlong industrialization was increased by waste and inefficiency, about which there have been severe and numerous complaints in the Polish literature. Large new projects were undertaken although output could have been raised at lower cost by modernizing existing facilities. Waste resulting from too great a pressure to increase output was protected and even fostered by the irrational price-cost structure.

c. 1954-55.

Economic developments in 1954-55 were in sharp contrast to those of the preceding period (1950-53) with respect to the growth of production and especially to the allocation of resources, although the "new course" changes were not as great as in certain other Satellites. The average rate of growth of heavy industry declined to about 12 percent a year, and that of light industry and agriculture increased to 6 percent and 4 percent, respectively. The ratio of accumulation to national income declined from about 25 percent in 1953 to 23 percent in 1955. This trend is all the more notable in that consumer goods prices were falling while prices of capital goods were stable or showed a slight rise. A decided rise in consumption took place in 1954-55, as is shown by the consumption index in Table 30.* Although the extent of the rise is indicated only roughly by the indexes, the level of consumption probably was higher in 1955 than in any other postwar year. The share of investment in industry fell from 57 percent to 51 percent from 1952 to 1954, and the share of agriculture and forestry rose from 8 percent to nearly 11 percent. In addition, private farmers received larger credits than before, and the flow of workers from the farms to the cities was reversed. Military expenditures rose much more slowly than in the preceding period. The share of social-cultural expenditures in the budget increased, and the share of investment declined.

By the end of 1955 it was apparent that the production of consumer goods would continue to receive higher priorities than during 1950-53. "New course" policies have in general been continued. On the other hand, recent demobilizations of military personnel, political amnesties, and reductions of administrative personnel and costs represent an attempt to minimize the depressive effect of the "new course" on the country's industrial growth. The relaxation of the international situation also led to a cut in the military budget for 1956.

* P. 83, above.

B. Survey of Major Sectors of the Economy.

1. Industry.

a. Principal Developments.

Polish industry grew at a rapid rate during the Six Year Plan. Production of industrial materials (fuels, metals, chemicals, and building materials) increased by an estimated 72 percent, and the output of the machine-building and defense industries almost tripled. A significant share of industrial production now represents items not produced or produced only in negligible quantities before 1949. Included in this category are most pharmaceuticals and synthetic materials, boilers and turbines, automobiles and trucks, antifriction bearings, various types of agricultural machinery, and a wide range of consumer durables. The smallest percentage increases in output during the Plan were in coal, cotton fabrics, and food processing.

The coal industry presents a special problem because it not only provides the domestic economy with about 90 percent of its primary energy but also supplies coal to other Satellites and the USSR and is the most important means of earning Western currencies. Production of coal increased by only 28 percent during the period, to a level only slightly in excess of 1943 production within the same boundaries. 64/ The internal demand for coal has grown faster than production as a result of the rapid development of metallurgy, coke chemicals, electric power, and railroad transport. Increases in coal allocations to domestic users have aggravated the situation, and exports have dropped considerably.

b. Analysis of Plan Fulfillment.

The Six Year Plan was not fulfilled for any important industrial raw material (see Table 33*). Output of the three key products of electric power, hard coal, and crude steel, for example, fell short of the 1955 targets by 4 to 8 percent. Increases in production for electric power and crude steel were quite large, however. Goals for various other basic materials were underfulfilled by substantially larger percentages. The degree of plan fulfillment in machinery output cannot be clearly ascertained from the limited data available for individual products. Nevertheless, official claims of overfulfillment of the plans for industrial output in the socialist sector and for the output of heavy industry are difficult to believe. Official indexes of the volume of industrial production appear to have a substantial upward bias.

* Table 33 follows on p. 91.

Table 33

Planned and Actual Output of Selected Products in Poland
1955

Product	Unit	Output		Actual Output as Percent of Plan	Percent of Increase in Output, 1949 to 1955
		Planned	Estimated Actual		
Electric power	Billion kilowatt-hours	19.3	17.8	92	114
Hard coal	Million metric tons	100	94.5	94	28
Brown coal	Million metric tons	8.4	6.0	71	31
Crude oil	Thousand metric tons	394	180	46	20
Pig iron	Million metric tons	3.50	3.11	89	124
Crude steel	Million metric tons	4.60	4.43	96	92
Refined zinc	Thousand metric tons	198	156	79	44
Sulfuric acid (as 100 percent acid)	Thousand metric tons	540	450	83	63
Caustic soda	Thousand metric tons	162	99.6	61	80
Nitrogen and phosphorous fertilizers (as pure nutrient)	Thousand metric tons	481	286	59	93
Cement	Million metric tons	5.0	3.8	76	63
Bricks	Billion	3.8	2.6	68	125
Freight cars	Thousand a/	18.8	16.1	86	-4
Tractors	Thousand	11.0	8.1	74	220
Trucks	Thousand	25.0	12.5	50	4,990
Cotton fabrics	Million linear meters	608	565	93	39
Wool fabrics	Million linear meters	74.9	75.7	101	51
Silk fabrics	Million linear meters	104	81.3	78	70
Leather footwear	Million pairs	22.2	24.6	111	186
Sugar (raw)	Million metric tons	1.10	1.07	97	26

a. Standard-gauge freight cars in 2-axle equivalent units.

c. Allocation of Resources to Industry.

Table 34* shows the distribution of the industrial labor force in 1949 and 1954 and the growth of employment in individual industries during the period. The metallurgical, construction materials, and metal-fabricating industries had the largest percentage increases in employment, whereas textiles, leather, and shoes had the lowest. A comparison of the growth of production with the growth of employment suggests that output per worker increased slowly in industries producing primarily basic materials but increased rapidly in chemicals and the metal-fabricating industries, where goods of increasing complexity were being produced. The highest wages and wage increases were permitted in the key producer goods industries as a means of attracting labor or raising labor productivity. Workers in light industries such as textiles, however, probably suffered a decline in their living standards.

Labor productivity in coal mines in 1955 was at about the 1949 level and thus considerably below prewar levels 65/ in spite of substantial investments and labor incentives in the form of above-average and rapidly growing wages and high overtime rates.

Apart from the fact that heavy industry received the great bulk of industrial investment, there is no information on the allocation of investments to individual industries during the Six Year Plan.

2. Agriculture.

a. Trends in Production.

Polish agricultural production increased by 18 percent from 1949 to 1955, whereas the Six Year Plan had called for an increase of 50 percent. Production in 1955 was only 4 percent above the exceptionally good crop year of 1950. After a period of stagnation (1951-53), favorable weather during 1954 and 1955, combined with more liberal government policies toward private farmers, raised production to approximately the prewar level.

Crop production rose by less than 10 percent from 1949 to 1955; the output of grains grew more slowly than this and that of industrial crops faster. Livestock numbers increased significantly. In the

* Table 34 follows on p. 93.

Table 34

Employment in Principal Industries a/ in Poland b/
1949 and 1954

Industry	1949 c/ (Thousand)	1954 d/ (Thousand)	Percentage Increase 1949 to 1954
Coal mining	215	279	30
Other mining	32	37	16
Ferrous metallurgy	96	133	85
Nonferrous metallurgy		45	
Electric power	51	59	16
Chemicals	100	130	30
Construction materials	106	145	93
Glass and porcelain		60	
Metals manufactures	305	651	86
Electrotechnical	45		
Wood and wood products	123	162	32
Paper and printing	67	76	13
Textiles, leather, and shoes	519	560	8
Food processing	225	320	42
Other industries	109	47	-57
Total	1,993	2,704	36

a. Including private industry and handicrafts (including self-employed).
b. Data are from the US Bureau of the Census [redacted] 50X1
c. Industrial employment in March 1949 plus handicrafts employment in June 1948.
d. Annual averages.

case of hogs, which are the principal source of meat and fats in Poland, numbers rose 78 percent, or more than planned. An inadequate fodder base, however, led to a decline in productivity per animal and a growth in the output of animal products of only 32 percent. The inability of grain production to meet rising bread and fodder requirements has led to a net import position on grain, reversing the 1949-51 net export position.

b. Food Availabilities.

Poland has been more successful than the other Satellites in restoring and surpassing prewar levels of food consumption. Per capita caloric intake of food during the Six Year Plan was generally 5 to 10 percent above the prewar level. This is partly the result of wartime population losses and the change in Poland's boundaries, which resulted in a larger amount of arable land per capita. Owing to the increased availability of meat, animal fats, and vegetable oils, there was also some improvement in the quality of the diet during the Plan period, especially in rural areas.

c. Socialization.

The socialization of agriculture in Poland has progressed very slowly in spite of continuous official pressure. Collective farms, which were insignificant in 1949, held 7 percent of agricultural land in 1953 and 11 percent in 1955. State farms are more important, representing 9 percent of agricultural land in 1949 and 13 percent in 1955 (see Table 35). Very few of the state and collective farms are in the old Polish lands, however; Polish peasants have strongly resisted collectivization.

Table 35

Socialization of Agriculture in Poland
1949-55

Year (as of December)	Percent of Agricultural Land a/		
	Collective Farms	State Farms	Total Socialized Sector
1949	0.2	9.0	9.2
1950	2.1	10.9	13.0
1951	3.2	11.8	15.0
1952	4.8	12.0	16.8
1953	7.2	12.8	20.0
1954	8.6	12.5	21.1
1955	10.6	13.0	23.6

a. Agricultural land consists of arable land plus permanent meadows and pastures.

d. Investment and Manpower.

Agricultural investment comprised within the state investment plan doubled during 1949-53. This represented only 75 percent fulfillment of the plan, however, and it was partly counteracted by a fall in private agricultural investments. 67/ Since 1953 an increase of 84 percent in agricultural investment is officially claimed, together with a substantial growth of credits to private farmers.

The number of tractors available to agriculture at the end of 1955 was announced to be 56,000 -- which is only 69 percent of the Six Year Plan goal -- and deliveries of other types of agricultural machinery appear to have lagged even more. The following tabulation shows the growth of the tractor park during 1949-55:

Year	Tractor Park* (15 Horsepower Units)
1949	18,019
1950	22,800
1951	31,800
1952	39,200
1953	45,691
1954	51,303
1955	56,000

The recent emphasis on agriculture has led to a reversal of the downward trend in the agricultural labor force. Agricultural labor continues to be scarce, however, especially in the western territories, which are incompletely settled.

3. Foreign Trade.

Rapid industrialization created substantial changes in the pattern of Polish foreign trade. In general, it led to a rapid growth of imports of machinery and of heavy industrial materials with which Poland is poorly endowed -- for example, petroleum, iron ore, and phosphorous fertilizer. At the same time, the pressure of domestic demand led to a considerable reduction in the ratio of exports to domestic production for such goods as coal, coke, cement, caustic soda, soda ash, and rolled steel products. In the case of coal, there was an absolute decline in exports. Poland's most important and most salable exports increased slowly or not at all, while the portion of its imports which were tied to the industrialization program was growing rapidly. Consequently, other imports, representing mostly fibers and foods, had to be ruduced. Exports of machinery

* 68/

and equipment increased very rapidly but only recently have become an important source of foreign currency.

The effect of "new course" policies is clearly reflected in trade statistics for 1954-55. Exports of textile fabrics declined, but imports of light industrial materials recovered to the 1949 level and imports of foods tripled. In this manner, domestic availabilities of consumer goods were increased. These changes, however, did not fundamentally alter the trade pattern established as a result of the industrial development program. Table 36 shows the percentage distribution of the value of imports and exports by major product group in 1949 and 1953-55. In 1955, Poland still depended on coal and coke for nearly one-half of its export earnings. Machinery and equipment represented 13 percent of exports, compared with 2.4 percent in 1949. The share of machinery and raw materials for heavy industry in total imports rose from 42 percent in 1949 to 51 percent in 1955, whereas the share of raw materials for light industry fell from 36 percent to 24 percent.

Table 36

Imports and Exports of Poland, by Product Group a/
1949 and 1953-55

Product Group	Percent of Total			
	1949	1953	1954	1955
Imports				
Machines, installations, and transport equipment	24.4	40.6	32.5	30.9
Of which: Machines and installations for complete industrial projects	N.A.	10.7	10.4	9.8
Electrical and power machines and installations	5.0	6.2	4.7	3.5
Transport equipment	6.5	6.3	5.0	2.3

a. 69/

Table 36

Imports and Exports of Poland, by Product Group a/
1949 and 1953-55
(Continued)

Product Group	Percent of Total 1949	1953	1954	1955
Imports				
Raw materials				
Fuels	3.4	3.5	4.2	4.7
Raw materials for heavy industry	17.5	19.8	19.8	20.4
Raw materials for light industry	35.8	22.3	23.0	23.7
Supplies for agriculture	4.7	4.3	3.6	2.9
Subtotal	61.4	50.0	50.6	51.7
Agricultural consumer goods	11.4	6.7	13.5	13.1
Industrial consumer goods	2.8	2.7	3.4	4.3
Total	100.0	100.0	100.0	100.0
Exports				
Machines, installations, and transport equipment	2.4	12.3	11.1	13.1
Of which: Land transport equipment	0.7	7.3	6.3	5.4
Marine transport equipment	0.4	3.1	2.9	4.0
Raw materials	68.7	57.8	61.6	64.4
Of which: Coal and coke	47.8	38.0	44.6	46.6
Iron and zinc	9.7	9.9	7.8	8.0
Chemicals	3.6	2.0	2.6	3.1
Wood and paper	3.5	3.9	3.8	3.7
Agricultural consumer goods	19.8	20.3	18.0	15.3
Industrial consumer goods	9.1	9.6	9.3	7.2
Total	100.0	100.0	100.0	100.0

The growth of imports and exports in certain categories during the Six Year Plan is indicated in Table 37. Although the basis of calculation of these official indexes is not known, the magnitudes are reasonable and consistent with the data on imports and exports of individual commodities shown in Table 38.* Polish trade with the USSR has declined recently in relative importance, but the USSR is still Poland's leading trading partner by a wide margin. The neighboring Satellites of East Germany and Czechoslovakia rank next in importance. Trade with Communist China formed a larger part of Poland's turnover in 1955 than trade with several of the other Satellites or any country of Western Europe other than the UK (see Table 39**).

Table 37

Indexes of the Imports and Exports of Poland
by Selected Product Group a/
1949 and 1953-55

1949 = 100

Product Group	1949	1953	1954	1955
Imports				
Machinery and equipment	100	204	190	186
Materials for heavy industry	100	138	162	165
Materials for light industry	100	77	92	100
Agricultural products (including foodstuffs)	100	98	282	293
Exports				
Machinery and equipment	100	706	658	816
Materials for heavy industry	100	110	126	135
Agricultural products (including foodstuffs)	100	131	136	128

a. 70/

* Table 38 follows on p. 99.
** Table 39 follows on p. 100.

Table 38

Foreign Trade in Selected Commodities of Poland a/
1949 and 1955

Commodity	Unit	Volume of Trade		Trade as Percent of Production	
		1949	1955	1949	1955
Imports					
Crude petroleum	Thousand metric tons	91.5	545	61	303
Petroleum products	Thousand metric tons	255	886	111	120
Iron ore	Million metric tons	1.69	4.41	444 b/	374 b/
Wheat and rye	Thousand metric tons	165	1,154	2	13
Cotton	Thousand metric tons	98.3	95.2	c/	c/
Wool	Thousand metric tons	15.4	16.3	497	166
Exports					
Hard coal	Million metric tons	26.3	24.3	35	26
Coke	Million metric tons	1.85	2.24	32	21
Caustic soda and soda ash	Thousand metric tons	54.7	51.8	32	17
Cement	Thousand metric tons	506	674	22	18
Rolled steel products	Thousand metric tons	162	247	11	8
Timber	Thousand metric tons	697	915	6	5
Cotton fabrics	Million linear meters	50.5	57.5	12	10
Wool fabrics	Million linear meters	5.9	5.8	12	8
Sugar	Thousand metric tons	184	372	22	35
Meat and meat products	Thousand metric tons	26	71	5	8

b. In terms of iron content. The average iron content of domestic ore is estimated at 35 percent and that of imported ore at 63 percent in 1949 and 55 percent in 1955.
c. Poland's production of cotton is negligible or zero.

50X1

Table 39

Geographic Distribution of the Foreign Trade Turnover of Poland a/
1954 and 1955

Country or Area	Percent of Total 1954	1955
Sino-Soviet Bloc b/		
USSR	37.6	32.1
European Satellites	28.6	27.0
Bulgaria	1.3	0.9
Czechoslovakia	8.9	8.4
East Germany	14.1	13.3
Hungary	3.0	3.1
Rumania	1.3	1.3
Communist China	3.8	3.8
Total	70.0	62.9
Other European countries	21.2	26.6
Of which: Austria	2.2	2.5
Finland	2.3	2.6
France	2.1	2.6
UK	5.2	6.5
West Germany	1.9	2.9
Asia excepting Communist China	2.2	3.2
Other areas	6.6	7.3
Total	100.0	100.0

a. 72/
b. Excluding Albania and Communist Korea and Vietnam.

Like most rapidly industrializing countries, Poland has experienced a chronic shortage of foreign exchange during the postwar period. UNRRA gifts greatly aided the Three Year Plan of reconstruction. After the cessation of UNRRA aid, the recovery of agricultural production continued to increase export availabilities and reduce import requirements until about 1950. The 1951-53 period was one of maximum balance-of-payments pressure because of the rapidly growing demands of domestic industry and the stagnation of agriculture. Imports of low priority such as consumer-oriented goods fell sharply. The foreign exchange shortage was relieved somewhat by the high prices paid for Polish coal in the West during the early part of the period and by Soviet credits for the purchase of equipment. These advantages were partly offset, however, by the low prices paid for Polish coal exports to the USSR. There was an export surplus of 227 million rubles in 1953, but exports increased too slowly during the "new course" to pay for the additional imports of consumer goods. Imports exceeded exports by 140 million rubles in 1954 and 73 million rubles in 1955, leaving trade barely balanced for the last 3 years of the Plan.

4. Housing.

Housing conditions throughout the urban areas of Poland deteriorated during the Six Year Plan. That they were not favorable initially is indicated by the fact that there was an average of 1.54 persons per urban habitable room (including kitchens) in 1950. Furthermore, about 15 percent of the entire population lived in 1-room dwellings, averaging 2.7 persons to each dwelling. Overcrowding was especially pronounced in the larger cities outside the underpopulated former German territories. About 26 percent and 40 percent of the populations of Warsaw and Lodz, respectively, for example, occupied 1-room dwellings in 1950, and there was an average of about 3 persons for each dwelling.

Even this situation was an improvement over the desperate housing conditions of the early postwar years, but the regime did not fully maintain the gains which had been made. The urban population grew by about 2.4 million persons from 1950 to 1955, whereas there was a net increase in the number of urban rooms of only 740,000, or roughly 1 room for every 3 new residents. As a result, the average number of residents per room rose to 1.72 in urban areas and reached 2 or more in almost every major city in the region which was part of prewar Poland.

Many Polish families must share their apartments with strangers, and instances of newlyweds forced to live apart for want of a room and of couples wanting to separate who are forced to live together for want of two rooms are not uncommon. Moreover, tens of thousands of families are compelled by the housing shortage to occupy quarters dangerous to their health and safety. The regime has admitted that thousands of persons occupy rooms in unreconstructed World War II ruins, in condemned and crumbling buildings, and in unheated attics and basements. Besides its impact on the morale and health of the population, the housing shortage adversely affects the mobility and productivity of workers.

The shortage of housing in rural areas has received even less attention from the regime than the urban housing problem, despite the average density of 2 persons per room. The state constructed only 110,000 rooms in rural areas during the Six Year Plan, and the peasants built an additional 260,000 rooms with whatever materials were at hand. Premier Gomulka stated in October 1956 that the combined total of this construction was inadequate to meet the high rate of deterioration of rural housing. Although housing conditions doubtless are worse in rural than in urban areas, the greater publicity given to the need to improve urban housing indicates that Polish officials consider this the more crucial problem.

5. Other Sectors.

Polish railroads attained a large increase in ton-kilometers of freight traffic (about 59 percent) from 1949 to 1955, primarily through more efficient use of existing facilities. Very little electrification and dieselization has taken place up to now, however, and the added strain of increased traffic has caused some deterioration of rolling stock. Although motor, air, and sea transport grew much more rapidly than railroad transport, they accounted for only about a quarter of total ton-kilometers of traffic in 1955. Communications services also increased rapidly.

The growth of retail trade (see Table 40*) reflects in large part the process of urbanization. Employment in education, health, and other state services has grown rapidly, as have the number of students in schools and the number of hospital beds, but the level of social services in Poland remains comparatively low. Private services have slowly declined in volume since 1950 and are now of small importance.

* Table 40 follows on p. 103.

Table 40

Retail Trade Turnover in Poland a/
1950-55

Year	Retail Trade Turnover b/ (Billion 1950 Zlotys) Private	Socialist	Total	Index of Total Retail Trade Turnover (1950 = 100)
1950	9.5	46.5	56.0	100
1951	5.4	53.8	59.2	105.7
1952	4.4	56.9	61.3	109.5
1953	2.1	57.3	59.4	106.1
1954	2.3	68.4	70.7	126.2
1955	2.1	75.9	78.0	139.3

a. 73/
b. Including sales of food-serving establishments but excluding sales by farmers directly to the population.

VII. Rumania.

A. General Policy and Achievements.

Rumania was still a comparatively underdeveloped country at the end of World War II, when the Communists gained control. About three-fourths of the population was dependent on agriculture, and the living standard was one of the lowest in Europe. The Communist regime has attempted to develop the economy through industrial development and agricultural reform. As a result, most of the large estates were broken up, but the largest ones were converted into state farms which were to serve as models of agricultural production. Industrial development was promoted within the framework of the Soviet-Rumanian joint stock companies (Sovroms), which were established in the spring of 1945. The Sovroms included a wide variety of nonagricultural enterprises. Consequently, there was a large degree of state ownership in the economy long before nationalization was undertaken officially in June 1948.

Nationalization of productive facilities was followed by the introduction of national economic plans, consisting first of annual plans for 1949 and 1950 and more recently of Five Year Plans for 1951-55 and 1956-60. Although these plans have had the usual aim of general development of a heavy industrial base, particular attention has been given to the exploitation of the country's principal mineral resource -- petroleum. Production of crude oil increased considerably during the First Five Year Plan and is somewhat larger than before the war. Production before the war was concentrated very largely in Ploesti, but this area has declined in importance as other areas have been developed.

During the First Five Year Plan, Rumania's GNP increased an estimated 50 percent, and substantial progress was made in the effort to industrialize the economy. Heavy investment in industry contributed to an increase in industrial production of about three-fourths during the Plan period. Producer goods output increased even more, according to intelligence estimates, and consumer goods output probably rose by about 50 percent. Agricultural production has generally lagged behind the prewar accomplishment. A substantial improvement was registered in 1955, however, as a result of favorable weather and expansion of the cultivated area (see Table 41*).

* Table 41 follows on p. 106.

Table 41

Indexes of Gross National Product and of Production in Industry and Agriculture in Rumania a/ 1938 and 1950-55

1950 = 100

	1938	1950	1951	1952	1953	1954	1955
Gross national product	103	100	111	111	123	134	150
Industry	79	100	116	132	146	156	178
Agriculture and forestry	122	100	112	97	106	121	148

a. For rough comparisons with the other Satellites, see the 1955 indexes on a 1950 base in Table 48, p. 119, below.

B. Economic Plans.

1. One Year Plans (1949 and 1950).

The first Rumanian economic plans were relatively simple and unambitious One Year Plans for 1949 and 1950. The major goal of a rapid recovery of industry apparently was achieved. According to official claims, gross industrial production in 1949 and 1950 increased by about 40 percent and 37 percent, respectively, over the preceding years. 74/ On the other hand, agricultural production remained well below the prewar level, primarily because of the low level of investment.

In 1949, heavy industry received 37 percent of total investment; light and food industries, 10 percent; transport and telecommunications, 21 percent; social and cultural activities, 11 percent; and agriculture and forestry, only 9 percent. 75/ The funds available for investment in the 1950 Plan were similarly allocated, except that agriculture received a larger share (15 percent) to expedite collectivization. 76/ Rumania's foreign trade was drastically reoriented under the 1949 and 1950 Plans. Trade turnover with the countries which now make up the Soviet Bloc increased from 23 percent of the total in 1938 to 83 percent in 1950.

2. First Five Year Plan (1951-55).

The main goals of the First Five Year Plan were greater industrialization, gradual collectivization and mechanization of agriculture, and expansion of the state and cooperative trade network. As in the earlier One Year Plans, about one-half of planned total investment was allocated to industry, most of it to heavy industry. Investment in agriculture, however, comprised a still smaller share of total outlays than previously.

The goals for gross industrial production in 1951 and 1952 were overfulfilled. Apparently impressed with this performance, Rumanian planners increased the goals for the remaining years and spoke of attaining the over-all industrial objective of the Five Year Plan in 4 years. Certain factors, however, interfered with the successful completion of the revised Plan. First of all, the industry was beginning to outstrip its limited base of raw materials. The coal industry, for example, failed to meet its goals for 1952 and 1953. Second, the government's indifference to consumer welfare had begun to have an unfavorable effect on labor productivity. These problems were aggravated by the subnormal harvests of food crops in 1952 and 1953. As a consequence, the 1953 plan for industrial output would not have been fulfilled if the target had not been lowered substantially. The gross output of industry grew only 14 percent in 1953, compared with a rise of 23 percent in the previous year. 77/ This decline probably was one of the principal considerations underlying the "new course" modification in economic policy in the latter part of 1953.

The "new course" also called for an increase in the share of national income distributed to consumers. The consumption fund, which includes some governmental outlays for defense as well as private comsumption expenditures, was to be increased from 62 percent to 72 percent of the national income. Capital investments in agriculture also were scheduled to increase sharply. The original 1953 plan allocated 7.2 percent of total capital investment to agriculture, but this share was increased to 16.4 percent in 1955. 78/ Capital investments in industry, particularly in heavy industry, were to be reduced. For example, planning work on such large-scale projects as the Danube - Black Sea Canal, the Bucharest subway, the Bistrita-Bicaz hydroelectric complex, and the Roman iron and steel complex in Moldavia was either halted or slowed down.

The plan revisions of the "new course" were ostensibly designed to redress the excessive disproportions which had arisen during the first part of the Five Year Plan. These revisions were partly disregarded, however, and the actual allocation of investment during the "new course" followed much the same pattern as in earlier years. The share of heavy industry in total investment exceeded the very high level of the original schedule for 1951-55, but the share of the consumer goods industries fell below the original Plan (see Table 42).

Table 42

Planned and Actual Gross Capital Investment in Rumania
During the First Five Year Plan (1951-55)

Percent of Total

Economic Sector	Planned			
	Original [a]	"New Course" Revision [b]	Actual [c]	
Industry	51.4	48.2	58.0	
Producer goods	42.1	34.1	50.6	
Consumer goods	9.3	14.1	7.4	
Agriculture and forestry	10.0	13.1	10.4	
Transportation and communications	16.2	16.2	11.2	
Construction industry	2.0	2.2	4.6	
Social and cultural projects	13.4	15.2	N.A.	
Of which: workers' dwellings	3.2	5.2	3.8	15.8
Other	7.0	5.1	N.A.	
Total	100.0	100.0	100.0	

a. 79/
b. 80/
c. 81/

With the exception of crude oil, production of major industrial materials in 1955 failed to meet the goals set down in the original Five Year Plan. Only in a few instances were the Five Year Plan targets in the basic materials, chemicals, building materials, and food industries fulfilled more than 70 percent. The 1955 outputs of coal, pig iron, steel, and cement, for example, were well below the original goals (see Table 43). A general overfulfillment of goals was claimed by the regime, however, on the basis of the reduced goals adopted during the "new course."

Table 43

Planned and Actual Output of Selected Products in Rumania
1950 and 1955

Product	Actual Output (Million Metric Tons a/) 1950	1955	Original Planned Output 1955 (Million Metric Tons a/)	Actual Output in 1955 as Percent of Plan
Coal (all types)	3.9	6.2	8.5	73
Crude oil	5.1	10.6	10.0	106
Pig iron	0.32	0.58	0.8	72
Crude steel	0.56	0.76	1.25	61
Finished steel	0.50	0.62	0.83	75
Cement	1.0	2.0	2.9	69
Electric power (billion kilowatt-hours)	2.2	4.3	4.7	91

a. With the exception indicated for electric power.

C. Survey of Major Sectors of the Economy.

1. Industry.

Rumanian industry had recovered from wartime damage and dislocation by the beginning of the First Five Year Plan in 1951.

Industrial production is estimated to have been about one-fourth above the 1938 level in 1950 and to have increased an additional three-fourths during the Plan. The petroleum industry was expanded greatly to meet reparations requirements until 1953, and increments to output since then have served as a means of earning foreign exchange, particularly hard currencies. Outputs of electric power, crude oil, pig iron, and cement in 1955 were roughly twice as high as in 1950. As in the other Satellites, these gains were accomplished by a sizable increase in the industrial labor force and by limitation of investment in other sectors of the economy. The gains in nonagricultural employment did not, however, appreciably affect the labor force in agriculture, which still has a surplus of workers (see Table 44).

Table 44

Population and Labor Force in Rumania
1948 and 1950-55

Million a/

	1948	1950	1951	1952	1953	1954	1955
Population	15.98	16.37	16.57	16.80	17.02	17.23	17.43
Civilian labor force							
Agricultural	7.12	7.17	7.07	7.01	7.00	7.00	7.04
Nonagricultural	2.20	2.70	2.95	3.12	3.20	3.27	3.34
Total civilian labor force	9.32	9.87	10.02	10.13	10.20	10.27	10.38

a. Averages of estimates for the beginning and end of the year.

2. Agriculture.

a. Trends in Production and Food Availabilities.

Agricultural policy during the First Five Year Plan was conditioned by the investment priority of heavy industry and by the Communist dogma calling for the socialization of agriculture. As a result of this policy, agriculture did not achieve very high levels of

output until the end of the Plan. The substantial gain in agricultural production in 1954 served only to restore the prewar level, but an additional large increase in 1955 pushed output well above the prewar accomplishment. Output in 1955 nevertheless was considerably smaller than scheduled in the Plan.

Food consumption per capita dropped to about 80 percent of the prewar average in the 1952/53 consumption year but has risen steadily since then (see Table 46*). The estimated level of about 2,500 calories per day in 1955/56 was still slightly under the prewar average, however.

b. Manpower.

The labor force in agriculture changed little during the First Five Year Plan. About 7 million people were employed in agriculture in 1955, representing about 70 percent of the civilian labor force and 40 percent of the population.

c. Collectivization.

Socialization of agriculture has been less rapid in Rumania than in most other Satellites. The holdings in the socialist sector advanced from about 9 percent of the total arable land at the end of 1950 to more than 26 percent at the end of 1955. 82/ The "new course" policies initiated in mid-1953 relaxed somewhat the earlier pressure on farmers to join collectives. By the beginning of 1955, however, the old doctrines were in operation again. Although the increase in 1955 in the amount of arable land under collectivization was relatively modest because of the small size of the new collectives, the program made notable gains on the organizational level. The number of collective farms and agricultural associations increased from 4,968 in January 1955 to 6,600 by the end of the year. 83/ There was also a gain of about 21 percent during the year in the number of farm families in collectives.

3. Foreign Trade.

Rumania's trade during the First Five Year Plan was characterized by a steady growth in volume and by a general shift in its direction toward other Bloc countries. The value of Rumanian foreign

* P. 117, below.

trade rose from less than $500 million in 1950 to about $870 million in 1955. 84/ About 80 percent of this trade was with Bloc countries, compared with a ratio of about 23 percent in 1938. Although Bloc countries offer a ready market for Rumanian exports, especially oil and timber products, they have been unable to supply all its needed imports.

In 1950, Rumania exported 70 percent of its production of petroleum products, of which 97 percent went to the Sino-Soviet Bloc and 3 percent to the West. By 1955, however, about 73 percent of the output of petroleum products was exported, of which only 70 percent went to Bloc countries. Petroleum exports accounted for at least 40 percent of Rumania's exports to non-Bloc countries in 1955 and were a valuable source of badly needed foreign exchange.

4. Housing.

The volume of housing construction in the urban areas of Rumania was much too small during the First Five Year Plan to meet the needs of the rapidly increasing urban population. Even the low Plan goal of 2.8 million square meters of new housing during the period was underfulfilled, inasmuch as state and state-aided construction amounted to only about 1.9 million square meters. As the urban population grew by about 1 million from 1950 to 1955 and as 50,000 to 60,000 dwelling units would be a generous estimate of the amount of new housing construction, only 60 units at most were provided for every thousand new urban residents. The shortage of housing, which was a serious problem at the beginning of the Plan, therefore got worse during the period. Referring to housing conditions in the cities in a speech in August 1955, the Rumanian premier admitted that "the quantity of housing is unsatisfactory" and that there is "a serious lag in the building of new houses."

APPENDIX A

STATISTICAL TABLES

Table 45

Output of Selected Products in the European Satellites, by Country
Selected Years, 1938-55

Category	Unit	Albania 1938	Albania 1950	Albania 1955	Bulgaria 1938	Bulgaria 1948	Bulgaria 1952	Bulgaria 1955
Energy products								
Electric power	Billion kilowatt-hours	0.003	0.021	0.13	0.23	0.55	1.35	2.1
Brown coal and lignite	Million metric tons	0.004	0.055	0.40	1.94	4.14	7.22	9.85
Hard coal	Million metric tons	0	0	0	0.14	0.13	0.19	0.30
Coke (all types) c/	Million metric tons	0	0	0	0.004	0.009	0.015	0.025
Crude oil	Million metric tons	0.13	0.13	0.21	0	0	0	0.15
Petroleum products (all types)	Million metric tons	0	0.02	0.06	0.03	0	0	0.03
Metals and minerals								
Pig iron	Thousand metric tons	0	0	0	0	0	0	0
Crude steel	Thousand metric tons	0	0	0	21	26	40	142
Manganese ore	Thousand metric tons	0	0	0	2 e/	8	20	45
Bauxite	Thousand metric tons	0	0	0	0	0	0	0
Primary aluminum	Thousand metric tons	0	0	0	0	0	0	0
Refined copper	Thousand metric tons	0	0.9	2.5	0	1.0	2.8	7.4
Refined lead	Thousand metric tons	0	0	0	0	12.5 f/	48 f/	55 f/
Refined zinc	Thousand metric tons	0	0	0	0	9.4 f/	27 f/	51 f/
Chemicals and rubber								
Sulfuric acid (as 100 percent acid)	Thousand metric tons	0	0	0	0	0	13	20.5
Nitric acid (as 100 percent acid)	Thousand metric tons	0	0	0	Negligible	Negligible	50	90
Synthetic ammonia (as nitrogen)	Thousand metric tons	0	0	0	0	0	17	32
Caustic soda	Thousand metric tons	0	0	0	0	Negligible	Negligible	2.6
Chlorine	Thousand metric tons	0	0	0	0	Negligible	Negligible	Negligible
Soda ash	Thousand metric tons	0	0	0	0	0	0	50
Calcium carbide	Thousand metric tons	0	0	0	0.3	1.5	4.2	8.7
Nitrogen and phosphorous fertilizers (as pure nutrient)	Thousand metric tons	0	0	0	0	0	16.5	29.7
Synthetic rubber	Thousand metric tons	0	0	0	0	0	0	0
Motor vehicle tires	Thousands	0	0	0	N.A.	12.5	60	87
Building materials								
Cement	Thousand metric tons	14 e/	15	47	180	378	674	817
Bricks	Millions	0.8	3.6	18	52 e/	130	540	655
Machinery and equipment								
Machine tools (metal-cutting) h/	Thousands	0	Negligible	Negligible	Negligible	0.2	N.A.	0.57
Trucks	Thousands	0	0	0	0	0	0	0
Tractors	Thousands	0	0	0	0	0	0	0
Mainline locomotives	Units	0	0	0	0	1	0	0
Freight cars	Thousands (physical units)	0	0	0	0	0	0.2	1.2
Passenger automobiles	Thousands	0	0	0	0	0	0	0
Footwear and textiles								
Leather footwear	Million pairs	N.A.	N.A.	N.A.	N.A.	0.5	1.2	1.5
Cotton fabrics i/	Million linear meters	0.4	1.1	18.6	34.1 e/	58.3	105	132
Wool fabrics j/	Million linear meters	N.A.	N.A.	0.5	5.3 e/	5.4	9.2	10.6
Processed foods n/		Prewar k/			Prewar k/			
Meat	Thousand metric tons	12.5	7.0	15.5	153	100	121	121
Animal fats o/	Thousand metric tons	2.0	N.A.	3.4	40	19.0	25.1	22.3
Milk	Thousand metric tons	N.A.	N.A.	13.6	454	750	446	371
Flour	Thousand metric tons	36.4	N.A.	125	1,040	1,250	1,200	1,370
Sugar (raw)	Thousand metric tons	0	0.6	13.0	25	74	50	62
Agricultural products								
Wheat	Thousand metric tons	45.0	62.0	83.7	1,560	2,040	1,760	1,930
Rye	Thousand metric tons	4.0	3.0	4.0	280	254	238	279
Barley	Thousand metric tons	6.0	5.6	8.5	348	435	342	390
Oats	Thousand metric tons	10.0	9.6	10	133	131	104	122
Corn r/	Thousand metric tons	127	127	197	1,010	159	440	1,260
Potatoes	Thousand metric tons	2.0	4.1	4.4	113	103	62	127
Sugar beets	Thousand metric tons	N.A.	6.3	106	152	495	325	556

Category	Czechoslovakia 1938	Czechoslovakia 1948	Czechoslovakia 1953	Czechoslovakia 1955	East Germany 1938	East Germany 1950	East Germany 1955
Energy products							
Electric power	4.05	7.52	12.4	15.0	18.0	19.5	28.7
Brown coal and lignite	16.0	23.6	34.3	40.8	119.6	137.0	200.6
Hard coal	15.8	17.7	20.3	22.1	3.51	2.80	2.67
Coke (all types) c/	3.02	5.20	7.96	9.18	4.23	6.84	9.27
Crude oil	0.02	0.03	0.12	0.13	0	0	Negligible
Petroleum products (all types)	N.A.	0.42	0.88	0.81	N.A.	1.3	2.1
Metals and minerals							
Pig iron	1,323	1,644	2,781	2,982	232	337	1,517
Crude steel	1,873	2,621	4,366	4,474	1,695	999	2,507
Manganese ore	105	150	240	300	0	0	0
Bauxite	0	0	0	0	0	0	0
Primary aluminum	0	0	2.7	24.7	78.7	0.8	27
Refined copper	0	0.6	3	4.7	29.5	27.8	33.2
Refined lead	5	5.7	9.2	10	15	12.1	20.3
Refined zinc	8.9	2.2	4.7	5.7	44.4	0	3.2
Chemicals and rubber							
Sulfuric acid (as 100 percent acid)	180	215	311	383	447	280	593
Nitric acid (as 100 percent acid)	36.3	37.5	62.2	93.6	164	184	276
Synthetic ammonia (as nitrogen)	21	25.7	36.8	42	320	242	335
Caustic soda	27	37	60.6	71.5	195	149	257
Chlorine	14	19.5	37	45.5	226 e/	142	212
Soda ash	100	102	95.5	96.5	496	103	458
Calcium carbide	36	47.2	64.5	80	390 e/	628	814
Nitrogen and phosphorous fertilizers (as pure nutrient)	84 5	83.7	102	159	464	261	376
Synthetic rubber	0	0.3	0.6	0.6	4.9	39	70.7
Motor vehicle tires	500	953	1,750	2,000	313	394	1,225
Building materials							
Cement	1,273 d/	1,658	2,320	2,892	1,686 g/	1,412	2,971
Bricks	836 d/	924	1,212	1,475	3,668 g/	1,356	1,963
Machinery and equipment							
Machine tools (metal-cutting) h/	4.1 d/	8.8	N.A.	15.7	38 e/	16	20
Trucks	1.66	7.22	11.4	10.5	N.A.	1.00	14.2
Tractors	0.21 d/	9.10	6.52	12.6	N.A.	5.17	8.21
Mainline locomotives	74 d/	171	98	120	100	0	3
Freight cars	1.65	5.37	6.12	5.55	8.0	5.0	2.4
Passenger automobiles	11.4	18.0	7.3	12.5	N.A.	7.16	22.2
Footwear and textiles							
Leather footwear	N.A.	27.7	23.3	22.5	15.3 g/	7.96	17.6
Cotton fabrics i/	377 d/	280	346	356	264 g/	221	381
Wool fabrics j/	33.3 d/	42.1	39.8	39.5	233 g/	82	122
Processed foods n/	Prewar k/				Prewar		
Meat	388	263	434	381	756 l/	428	614
Animal fats o/	N.A	57.9	91.2	92.2	N.A.	112	226
Milk	4,500	2,500	3,150	3,420	4,950 k/	3,580	5,530
Flour	1,840	1,770	1,600	1,720	1,650 p/	2,050	1,950
Sugar (raw)	630	627	730	732	790 l/	780	720
Agricultural products							
Wheat	1,590	1,420	1,520	1,480	1,550 q/	1,210	1,070
Rye	1,630	1,110	1,190	948	2,130 q/	2,420	1,950
Barley	1,100	925	1,200	1,300	1,080 p/	587	777
Oats	1,200	907	1,020	974	1,690 q/	1,130	1,160
Corn r/	270	306	219	418	Negligible	Negligible	Negligible
Potatoes	9,700	6,580	5,070	7,920	13,600 q/	13,100	9,690
Sugar beets	4,050 p/	3,800	4,270	4,900	6,080 q/	5,730	5,400

Category	Hungary 1938	Hungary 1949	Hungary 1954	Hungary 1955	Poland 1938	Poland 1949	Poland 1955
Energy products							
Electric power	1.40	2.52	4.82	5.43	6.96	8.30	17.8
Brown coal and lignite	8.32	10.5	19.1	19.6	5.80	4.62	6.04
Hard coal	1.04	1.38	2.44	2.69	69.4	74.1	94.5
Coke (all types) c/	0.31	0.22	0.28	0.28	5.33	5.86	10.6
Crude oil	0.043	0.51	1.22	1.60	0.51	0.15	0.18
Petroleum products (all types)	0.24	0.50	1.40	1.70	N.A.	0.23	0.74
Metals and minerals							
Pig iron	335	398	820	855	720 d/	1,391	3,112
Crude steel	647	860	1,491	1,629	1,468 d/	2,304	4,426
Manganese ore	43	58	71	110	0	0	0
Bauxite	540	561	1,260	1,241	0	0	0
Primary aluminum	1.3	14	33	37	0	0	20.4
Refined copper	Negligible	Negligible	Negligible	Negligible	0	0	15.7
Refined lead	Negligible	Negligible	Negligible	Negligible	80	20.9	31.2
Refined zinc	0	0	0	0	108	108	156
Chemicals and rubber							
Sulfuric acid (as 100 percent acid)	40.0	40	120	124	195	276	450
Nitric acid (as 100 percent acid)	15	30	55	30	8.8	53	200
Synthetic ammonia (as nitrogen)	5.4	12	16.1	9	30.9	40.1	137
Caustic soda	2.9	6	10	11.7	29.8	55.3	99.6
Chlorine	2.5	4.6	8.6	10	4.0	5	8.1
Soda ash	0	0	0	0	85.7	118	207
Calcium carbide	5.8	7.3	10.5	11	67.1	154	211
Nitrogen and phosphorous fertilizers (as pure nutrient)	15.1	26.3	43.8	34.8	85.8	148	286
Synthetic rubber	0	0	0	0	0	0.6	0.7
Motor vehicle tires	N.A.	72	180	195	N.A.	172	425
Building materials							
Cement	323	552	947	1,175	1,719	2,344	3,810
Bricks	647	389	1,138	1,198	1,880	1,141	2,564
Machinery and equipment							
Machine tools (metal-cutting) h/	Negligible	2.4	5.0	5.4	4.3	5.36	14.5
Trucks	N.A.	1.00	4.22	3.66	0.82 d/	0.24	12.5
Tractors	0.70 d/	2.74	3.70	4.66	0.53	2.51	8.05
Mainline locomotives	60	195	161	154	28	228	308
Freight cars	1.5	4.9	3.5	3.5	0.57	16.1	11.9
Passenger automobiles	0.24	0	0	0	2.0	0	4.02
Footwear and textiles							
Leather footwear	3.5	3.85	10.7	12.4	2.8	8.6	24.6
Cotton fabrics i/	185	237	320	334	288	406	565
Wool fabrics j/	14	16	15	19	37.7	50.1	75.7
Processed foods n/	Prewar k/				Prewar l/		
Meat	280	116	215	266	965	540	894
Animal fats o/	147	47.1	76.4	101	N.A.	191	277
Milk	1,700	1,460	1,450	1,530	10,200	7,140	9,620
Flour	1,420 q/	1,130	1,430	1,380	4,200 k/	3,780	4,490
Sugar (raw)	124 l/	160	271	276	954	845	1,066
Agricultural products							
Wheat	2,200	1,830	1,670	1,980	1,960	1,780	2,130
Rye	727	776	478	543	6,850	6,760	7,000
Barley	631	687	534	715	1,630	1,310	1,240
Oats	279	243	149	176	2,830	2,250	2,290
Corn r/	2,140	1,680	2,420	2,780	N.A.	N.A.	N.A.
Potatoes	2,140	1,890	1,990	2,080	38,000 k/	30,900	27,000
Sugar beets	952	1,240	1,930	2,230	5,960	4,790	7,290

Category	Rumania 1938	Rumania 1950	Rumania 1955	European Satellites a/ Prewar b/	European Satellites a/ 1950	European Satellites a/ 1955
Energy products						
Electric power	1.15	2.17	4.3	31.8	44.1	73.4
Brown coal and lignite	2.50	3.52	5.58	154.2	190.2	282.9
Hard coal	0.33	0.37	0.62	90.3	101.2	122.9
Coke (all types) c/	0.086	0.12	0.35	13.0	20.1	29.7
Crude oil	6.6	5.1	10.6	7.3	6.0	12.9
Petroleum products (all types)	5.9	4.4	9.1	N.A.	7.1	14.5
Metals and minerals						
Pig iron	133	320	575	2,743	4,589	9,041
Crude steel	284	555	765	5,988	8,265	13,943
Manganese ore	60	93	390	210	341	845
Bauxite	11.8	9.8	62	552	588	1,303
Primary aluminum	0	0	0	80	18	109
Refined copper	0	2.5	8.6	29.5	34.1	72.1
Refined lead	5.5	8.6	11.1	46	71	128
Refined zinc	0	3	6	161	132	222
Chemicals and rubber						
Sulfuric acid (as 100 percent acid)	43	51.6	92	906	914	1,663
Nitric acid (as 100 percent acid)	0.4	3.5	29	224	316	718
Synthetic ammonia (as nitrogen)	0.6	1.7	8.1	378	331	563
Caustic soda	13.8	25.4	40	268	294	482
Chlorine	3	4.7	5	250	189	281
Soda ash	16.8	54.2	78.5	698	387	890
Calcium carbide	5.5	9.1	27.5	505	876	1,152
Nitrogen and phosphorous fertilizers (as pure nutrient)	0.3	0.3	13.6	650	555	899
Synthetic rubber	0	0	0	4.9	40	72.0
Motor vehicle tires	N.A.	78.5	217	N.A.	2,226	4,149
Building materials						
Cement	510	1,028	2,000	5,705	8,351	13,712
Bricks	372	340	664	7,456	5,081	8,537
Machinery and equipment						
Machine tools (metal-cutting) h/	0	N.A.	1.5	N.A.	N.A.	58
Trucks	0	0	3	N.A.	10.5	43.9
Tractors	2	3.32	5	N.A.	28.4	38.5
Mainline locomotives	85	90	110	347	644	695
Freight cars	0.5	1.6	4	12.2	31.5	28.6
Passenger automobiles	0	0	0	N.A.	29.2	38.8
Footwear and textiles						
Leather footwear	3.6	8.6	13.6	N.A.	64.0	92.2
Cotton fabrics i/	148	207	350	N.A.	1,556	2,136
Wool fabrics j/	8.8	14.7	22.1	N.A.	229	289
Processed foods n/	Prewar k/			Prewar m/		
Meat	295	239	402	2,850	2,370	2,690
Animal fats o/	55	47.9	80.6	N.A.	674	803
Milk	1,400	1,670	2,610	23,200	17,700	23,100
Flour	1,250	1,440	1,840	11,400	11,700	12,900
Sugar (raw)	75	95	159	2,600	2,860	3,030
Agricultural products						
Wheat	2,320	2,090	3,120	11,200	10,600	11,800
Rye	155	123	180	11,800	11,000	10,900
Barley	690	395	500	5,490	4,050	4,930
Oats	585	427	388	6,730	4,880	5,120
Corn r/	3,900	2,920	4,420	7,440	5,720	9,090
Potatoes	1,300	1,010	2,190	64,800	59,500	49,000
Sugar beets	682	727	1,445	17,900	19,800	21,900

a. Because of rounding, totals for the European Satellites may differ slightly from the sum of the figures for the individual countries.
b. Generally 1938. See figures for individual countries for exceptions.
c. Lower figures for Czechoslovakia in official sources are believed to include only metallurgical coke.
d. 1937.
e. 1939.
f. Estimated recoverable metal in concentrates.
g. 1936.
h. Including also metalforming machinery in Poland.
i. Official figures in square meters for East Germany and Rumania were converted to linear meters using a factor of 1.43 (includes cotton-type fabrics in East Germany).
Official figures in square meters for Hungary for the postwar years were converted to linear meters using a factor of 1.43.
j. Official figures in square meters for East Germany, Hungary, and Rumania were converted to linear meters using a factor of 0.714 (includes part-wool fabrics in East Germany).
k. 1933-37 average.
l. 1934-38 average.
m. Totals of prewar averages for periods which vary from country to country. In general, the period is 1933-37 for Albania, Bulgaria, Czechoslovakia, Hungary, and Rumania; 1935-39 or 1935-38 for East Germany; and 1934-38 for Poland. See figures for individual countries for exceptions.
n. Estimates include home processing.
o. Slaughter fats and butter.
p. 1935-38 average.
q. 1935-39 average.
r. Including miscellaneous grains in Czechoslovakia and East Germany.

Table 46

Indexes of Average Daily Per Capita Consumption of Food
in Calories in the European Satellites
Prewar Average, 1948/49, and 1951/52 - 1955/56 a/

Prewar Average = 100

Country	Prewar Average	1948/49	1951/52	1952/53	1953/54	1954/55	1955/56
Albania	100 b/	N.A.	92	84	85	101	111
Bulgaria	100 b/	110	98	88	96	103	105
Czechoslovakia	100 b/	107	101	90	101	98	105
East Germany	100 c/	83	86	85	89	89	89
Hungary	100 b/	91	101	99	98	100	101
Poland	100 d/	98	110	106	106	110	105
Rumania	100 b/	93	97	79	86	92	97

a. Food consumption years beginning on 1 July.
b. 1933-37.
c. 1935-38.
d. 1934-38.

Table 47

Officially Announced Increases in Gross Industrial Production
in the European Satellites
1949-55

Percent

Country	Announced Increase over Previous Year a/							Increase During First Long-Term Plan				
	1949	1950	1951	1952	1953	1954	1955	Cumulation of Annual Increases	Announced at End of Plan b/	Reported in Recent Official Statistical Publications c/	Increase During Period of 1951-55	Average Annual Increase over Previous Year During Period of Long-Term Plan d/
Albania	N.A.	N.A.	47.1	20	22	10.7	14.9	174	179	N.A.	179	22.8
Bulgaria	29.5	23.2	19	18.0	12	8.7	9.6	124	130	115	87	21.1
Czechoslovakia	7.8	15.3	14.9	18.3	10	4.4	10.6	86	102	93	73	14.1
East Germany	20	26	21.9	16	12.5	10	8.3	90	90	90	90	13.7
Hungary	N.A.	37.3	30.5	25.5	11.2	3.1	8.2	158	155	130	103	18.1
Poland e/	38	30.8	24	20	17.5	11	11	182	170	170	115	18.0
Rumania f/	40	37	28.7	23.0	14.4	6.6	14.0	120	120	N.A.	120	17.1

a. Increases during the first long-term plans are enclosed in boxes.
b. The increase announced at the end of the long-term plan probably differs in some instances from the cumulation of the announced annual increases because the latter are either preliminary or rounded figures or are applicable only to the socialist sector of industry. This explanation seems inadequate for Czechoslovakia, considering the extent and direction of the discrepancy, but no other explanation is presently available.
c. Corresponding annual percentage increases reported for Bulgaria, East Germany, and Hungary in these publications are as follows:

	1950	1951	1952	1953	1954	1955
Bulgaria	N.A.	N.A.	N.A.	14.2	10.2	8.8
East Germany	N.A.	22.7	15.8	11.3	11.7	7.7
Hungary	26.8	27.5	22.2	11.3	4.5	9.6

d. Calculated from increases reported in recent official statistical publications or, lacking such publications, from the over-all increases announced at the end of the Plan.
e. Announced annual increases probably refer only to the socialist sector of industry.
f. All increases shown probably refer only to the socialist sector of industry.

Table 48

Indexes of Gross National Product and of Production
by Economic Sector in the European Satellites
1955

1950 = 100

	Bulgaria	Czecho-slovakia	East Germany	Hungary	Poland	Rumania	European Satellites
Gross national product	141	140	150	136	132	150	140
Industry	169	150	175	154	161	178	163
Agriculture and forestry	116	107	112	119	104	148	110
Construction	182	169	185	177	151	205	169
Transportation and communications	170	160	152	174	166	172	156
Trade and services	143	139	126	123	138	125	133

a. Excluding Albania.

APPENDIX B

METHODOLOGY

[redacted] 50X1

2. Industrial Production Indexes.

The following major changes were made in the calculation of the industrial production indexes:

a. Subsector weights for Poland's industrial production index are now based on the wage bill and depreciation in 1954 rather than on estimated employment in 1952. These weights were calculated from data on employment and average wages by industry in Poland's Statistical Yearbook, 1955. Depreciation allowances were added to the wage bill in order to raise the relative weights of industries which use little labor and a great deal of capital (for example, electric power). The revised weights are as follows:

	Value-Added Weights Used in Construction of Industrial Production Index for Poland (Base Year: 1954)
Basic materials	40.5
Electric power	3.4
Solid fuels	15.2
Petroleum and petroleum products	0.8
Ferrous metals	6.8

	Value-Added Weights Used in Construction of Industrial Production Index for Poland (Base Year: 1954)
Nonferrous metals	2.3
Construction materials	6.3
Chemicals	5.7
Machinery and equipment*	24.7
Merchant shipbuilding	2.9
Motor vehicles and tractors	1.9
Mainline railroad equipment	4.6
Machine tools	1.6
Agricultural machinery	1.1
Electrotechnical equipment	8.3
Miscellaneous machinery	4.3
Military end items	1.4
Light industry (excluding food processing)	23.0
Food processing	10.4
Total	100.0

b. In calculating the industrial production index for East Germany, the index obtained in the customary way for the postwar period for the basic materials industries (electric power, fuels, metals, chemicals, and construction materials) was discarded in favor of other sources of information which show more reasonable rates of growth in output. Official East German data on gross production in these industries were used for 1948-50, and an independently calculated index of net production valued in 1950 West German prices rather than in East German Plan prices was used for 1950-55. The latter is from a preliminary report of an external research project undertaken by the Center for International Studies, Massachusetts Institute of Technology.

* Weighting within the machinery and equipment subsector is based on estimated employment in the various industries in 1955. The weights shown here for the various categories of machinery and equipment are the implicit weights for 1954.

c. Weights for the military end items subsector were revised. The new weights are substantially smaller than those shown in PR-111.

The indexes of total industrial production in the European Satellites which are calculated by CIA differ widely from the official indexes. The former show substantially lower rates of growth, although they are based for the most part on official production statistics for a sample of important products. Official indexes of the production of heavy industry are believed to have a substantial upward bias because of such factors as inflated valuation of new products, increases in the degree of double-counting in the indexes, and use in some instances of unrealistic price relationships (for example, prewar prices). The bias is probably concentrated in the indexes for the machinery and chemical industries. In calculating the CIA indexes, an attempt has been made to eliminate this bias by using production data expressed in physical units rather than in monetary values and by applying estimated value-added weights to industrial subsector indexes in order to eliminate or at least reduce double-counting.

The CIA indexes for industrial materials are constructed from a large sample of commodities and therefore are believed to be fairly reliable. The sample used for the indexes of machinery production is very small, however. Although these indexes show more reasonable trends in output than most official Satellite indexes for this component of industry, they cannot be considered reliable indicators of year-to-year changes. In some cases, the machinery indexes may be responsible for an incorrect movement in the indexes for heavy industry and the indexes for total industrial production.

In the case of the food-processing industry, the lower growth rates of the CIA indexes result from differences in coverage. The official indexes cover only commercial food-processing establishments considered to be a part of industry, whereas an attempt is made in the CIA indexes to cover all food processing, including home processing.

3. Agricultural Production Indexes.

Official indexes of agricultural production were used for East Germany for 1950-55, Hungary for 1949-55, and Poland for the entire period. The other agricultural production indexes were calculated as described in PR-111 except that production of timber is included in this sector in the present calculations.

4. Construction Indexes.

The CIA construction indexes have in the past been based on the output of construction materials. For Czechoslovakia, Rumania, and (before the Five Year Plan) East Germany, the present indexes represent estimates of the growth in constant prices of the construction component of capital investment. Official data on net output in the construction sector in the Statistisches Jahrbuch, 1955 were used for East Germany for 1950-55. For Hungary, an official index of total construction and installation work at current prices (which apparently changed only moderately) was used for 1949-55. This index is considered a more accurate indicator of the trend in net construction output than is the official index of the gross output of the "construction industry" at constant Plan prices. Indexes of total capital investment were employed for Bulgaria and Poland. Construction and installation work usually amount to 60 to 70 percent of capital investment.

5. Transportation and Communications Indexes.

Official data on net output in the transportation and communications sector were adopted for East Germany for 1950-55 in preference to indexes calculated from figures on freight traffic and selected communications services.

6. Trade and Services Indexes.

Except for East Germany and Poland during the period of their long-term plans, the indexes for trade and services are weighted averages of indexes of retail trade turnover in constant prices and indexes of the growth of the nonagricultural labor force (used to represent the growth of services). The East German index for 1950-55 is a weighted average of an index of net output in the trade sector and a services index based on the number of workers and employees outside of material production plus an allowance for increasing productivity. Data on net output in the trade sector and employment outside of material production were published in the official Statistisches Jahrbuch, 1955. In the case of Poland, the services index was calculated from indexes of employment in several types of services weighted by average wages in these occupations. As data on trade turnover and the nonagricultural labor force in 1938 which are comparable to the data used for the postwar period were not available for most countries, trade and services were assumed to constitute the same percentage of GNP in 1938 as in 1948.

Trade indexes based on retail trade turnover can be regarded only as rough indicators at best. In the first place, data on trade turnover probably exaggerate the growth of net output in retail establishments because value added per unit of turnover tends to decline as turnover increases. Second, there is some question whether proper adjustments for price changes have been made by the state statistical offices in every case. Third, wholesale trade and foreign trade have not been taken into account explicitly, it being assumed that the retail trade index is indicative of the trend of net output in the entire trade sector.

It is questionable whether the use of employment in trade establisnments, for the countries for which such data are available, would provide more accurate trade indexes, since changes in labor productivity would not be reflected in the indexes. Some increase in labor productivity would be expected in countries undergoing industrialization and urbanization.

The assumption that the volume of services increases proportionately with the nonagricultural labor force is a very rough rule of thumb, but it seems preferable to the assumption made in PR-111 that services grow at the same rate as population. Several important types of services are either primarily urban (municipal services) or tend to be connected with the process of industrialization (education, health, social welfare, and government administration).

A second major group of services consists of the personal services provided by domestic servants, laundries and dry cleaners, barber and beauty shops, and the like. The volume of services of this type has grown during the postwar period covered by the indexes but probably not to the same extent as the nonagricultural labor force. It seems reasonable to assume, however, that the growth in this part of the labor force is representative of the combined growth of these personal services and of the public services mentioned above, which may well have expanded somewhat more rapidly than the nonagricultural labor force.

In contrast to the trend in the volume of these types of services, there appears to have been only a very small increase in housing services, the third important element of this sector. The failure to take housing services into account therefore introduces an upward bias into the trade and services and GNP indexes. This deficiency has only a minor effect on the calculated rates of growth

of the GNP's of the Satellites, however. This may be illustrated by recalculating the trade and services and GNP indexes for 1950-55 for Czechoslovakia, East Germany, and Poland under the extreme assumptions that the net output of housing services did not increase at all and that housing services contributed one-half of total value added in the services sector at the beginning of the period. The effect of this adjustment for each country is to reduce the 1955 trade and services index by 4 or 5 points and to reduce the 1955 GNP index by only 1 point.

Most of the trade and services indexes are obviously very crude. They may indicate a reasonable long-run trend but cannot be expected to measure accurately changes from year to year.

7. Gross National Product Indexes and Dollar Values.

a. Use of Official Index for Hungary.

The indexes of estimated GNP presented for 1949-55 for Hungary are official indexes of national income published in the Hungarian Statistical Handbook, 1956. Because the Communist concept of national income excludes provision for depreciation and the value of services not connected directly with production of material goods, it is not comparable with the usual Western concept of GNP. The official indexes for national income nevertheless are regarded as the best available indicator of the trend in Hungary's GNP. For further comments concerning the GNP index for Hungary and its relationship to the indexes presented for production in the various sectors of the economy, see the footnote to Table 27.*

b. Changes in Sector Weights.

The sector weights used in the calculation of the indexes of GNP in Bulgaria, Czechoslovakia, and East Germany are those shown in PR-111. The following revised weights were adopted for Poland and Rumania:

* P. 71, above.

	Percent	
Economic Sector	Poland (1948)	Rumania (1938)
Industry	31.0	19.8
Agriculture	40.3	41.4
Construction	3.8	2.3
Transportation and communications	5.7	4.2
Trade and services	19.2	32.3
Total	100.0	100.0

The new sector weights for Poland, like those in PR-111, were calculated from official national income statistics for 1947. The adjustment for services, however, was recalculated on the basis of data on employment and average wages in services. An attempt was also made to adjust sector values to a factor cost basis by deducting indirect taxes and certain profits which are functionally similar to indirect taxes and by adding direct and indirect subsidies.

Because of the lack of postwar national income statistics for Rumania, which required that the weights in PR-111 be obtained by analogy with other Satellites, prewar weights have been used in the present calculations.

c. Change in Price Basis of Dollar Values.

Estimates of Satellite GNP's in dollars are now expressed in 1955 US prices rather than in 1951 US prices. This was done through an appropriate inflation of dollar estimates in prewar prices for 1938; all postwar values are obtained by moving the 1938 values with the calculated indexes of GNP. The price index used in inflating the 1938 values to a postwar price basis has also been changed. The implicit deflator calculated by the Department of Commerce for the US GNP is used in the present calculations, whereas the retail price index of the Department of Commerce was used previously. The change from 1951 prices to 1955 prices and the change from the retail price index to the GNP deflator coincidentally offset each other exactly. The 1938 values in 1955 prices are therefore the same as the previous 1938 values in 1951 prices.

d. General Effect of the Changes.

Most of the changes in methodology described above tended to increase the estimated rates of growth of the Satellite GNP's. This was particularly true of the revisions made in the indexes for trade and services and construction. The shifting of the sector weights for several countries to a more appropriate year (1948) also contributed to higher growth rates, but this was offset to some degree in the case of Poland by a concurrent increase in the weights for agriculture and a reduction in the weights for trade and services.

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