

**THE SOVIET UNION  
LOOKS AHEAD**

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*The Five-year Plan  
for Economic Construction*

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## PREFACE

THE publication of the five-year economic plan of the U.S.S.R. by the Presidium of the State Planning Commission was preceded by a thorough consideration of the plan by the Congress of planning bureaus of the Soviet Union and by the government, and its ratification by the latter as the program of economic development to be followed in the period 1928-29 to 1932-33.<sup>1</sup> By way of introduction, the Presidium of the State Planning Commission deems it necessary to point out a few very general conclusions that may be drawn from the discussions that accompanied the preparation of the plan.

In the first place, there should be mentioned the complete unanimity of all the planning agencies of the country in their appraisal of the plan as drafted. All the essential policies embodied in the plan, in regard to the tempo of economic development in the various fields, the amount and the distribution of capital investments, the character of the program of capital construction, the general social and economic problems, etc., met, on the whole, with unanimous approval. This unity of opinion has been due to the fact that the plan successfully embodies the general directives given by the cen-

<sup>1</sup> For explanation of fiscal year, weights and measures, etc., see Appendix III.

tral authorities in regard to the development of the productive forces of the country through industrialization and through socialist reorganization of peasant economy, with a consequent strengthening of the socialist elements in national economy.

Secondly, running like a red thread throughout the period of the examination of the plan, is the unquestionable triumph of the idea of power development as a basis of economic planning and construction. The power basis of the plan has met with deep response and unqualified recognition both from the workers on the economic front and from the public at large. In this manner the present plan is confirmed as the logical successor to the plan of electrification which Lenin called the second program of the Party.

The third feature of special importance brought out by the discussions, is the unanimity in regard to the regional division of labor in the Soviet Union in the period immediately ahead. This is the first five-year economic plan submitted for the consideration of the country with the regional aspects worked out on a complete scale, and with a thorough analysis of regional and inter-regional problems of economic development. The variegated nature of economic life in the different sections of the Soviet Union and the great complexity of the problems to be solved in raising the economic level of backward regions and of the various nationalities that were oppressed under the czarist régime, is a matter of more or less common knowledge. The com-



plete unanimity on this point, attained as a result of joint discussions with the representatives of all republics and economic regions, bears testimony to the fact that the socialist plan of economic development has been drawn up in conformity with the policy of the Soviet government in the matter of nationalities and on the basis of a rational combination of the interests of the Soviet Union as a whole and of the constituent republics and regions.

Special mention should be made of the tremendous interest with which the five-year economic plan has been greeted by scientific organizations and scientific workers generally. A socialist plan must and can be a scientific plan. The designing of a socialist plan of national economy is based upon the work of an extensive system of scientific organizations and investigators. At the same time, it opens to these institutions and scientific workers endless opportunities for the application of all the fruitful, advanced and revolutionary ideas at their command in all the important branches of science.

Finally, of utmost importance also is the unanimity on the planning front in the appraisal of the five-year plan in its relation to the present economic situation. The plan had to be considered and adopted in the face of economic difficulties of considerable magnitude, which have caused some persons even to question the expediency of adopting at the present time a plan for five years. The opponents of the plan have been

untiring in proclaiming the incongruity between the formidable scope of the tasks assigned, both in regard to general development and to production, and the current economic difficulties. They may be reminded, however, of the similar clamor raised in 1920 in regard to the contradiction between the electrification plan and the economic situation of the country at that time. In fact, the only way to overcome the difficulties of the present situation, which reflect the transitional nature of the present stage of economic development of the Soviet Union, is through the strict enforcement of the present plan of great works and a socialist advance on the entire front.

PRESIDIUM OF THE STATE PLAN-  
NING COMMISSION (GOSPLAN)  
OF THE U.S.S.R.

## APPENDIX I

### THE SYSTEM OF ECONOMIC PLANNING IN THE SOVIET UNION<sup>1</sup>

The state planning system in the Soviet Union embraces all fields of national economy, although not all fields have as yet been socialized to the same extent. By socialized field is understood one under the control and direction either of a state economic body, or of a co-operative organization. Thus, for instance, railway and water transportation, the large manufacturing industries, the electrification system and foreign trade, are almost entirely controlled and administered by state agencies. Other branches of economy, such as agriculture and domestic trade, are in part socialized under state and cooperative control, while the remaining part still remains under private ownership. The general tendency, however, running all through the economic policy of the Soviet Union, is toward a steady extension of socialization.

In planning for the socialized part of the national economy of the Soviet Union the guiding principle is the rational will applied with a view to securing the highest degree of economic and cultural development and the proper utilization of the returns from this part

<sup>1</sup> This section has been prepared by the editors of the English translation of the Five-Year Plan.

of the national economy, based upon a preliminary estimate both of the requirements and of the available resources.

As regards planning in the other part of national economy, still under private control, it is here reduced to estimating possible prospects on the basis of past experience of economic development and of possible future tendencies, including also the probable effects of the socialized sector upon private economy. In other words, the work of planning in the private sector deals with all those elements found in capitalist economy, together with the modifying influence of the socialized sector.

What are the results achieved by planning? An answer to this question may be supplied by any large corporation in a highly industrial country which controls, in a considerable measure, the production and distribution of a certain product, whether it be steel, or copper, or oil, etc. Such a corporation is in a position to estimate to a certain extent the needs of the market, to correlate its production with these needs and to secure the greatest advantages of large scale production. Centralization and general planning of production result in lower costs of management and permit the introduction of large plant equipment, which results in cheaper, faster and simplified processes of production. In distribution, concentration and centralization bring about a faster, more intensive, and less ex-

pensive circulation of goods, and reduce sales and advertising outlays.

However, in a capitalist economy, while an individual company may plan its own operations in an exemplary manner, all enterprises are at the mercy of the elemental forces of the market, as a result of the inherent antagonism between the great number of individual plans. This element of contradiction between plans is absent in the socialized sector of Soviet economy. The Soviet economic system is not designed to enrich certain groups of persons, but is a state economic system, whose aim is to steadily develop and enrich the country as a whole, while maintaining a proper proportion in the development of the various branches of economy. This opens up great possibilities to individual Soviet organizations, and affords them considerable advantages, as compared with individual private capitalist enterprises, in the way of enabling them to operate in accordance with a rational plan, drawn up in coordination with all other Soviet economic plans, instead of operating on a basis of competition, which, in view of the antagonism between individual enterprises, would mean the undermining of the very principle of general planning.

The socialization of Soviet economy, its centralization, the planning of both production and trade under a single system, and the centralized financing of economic activities—these are the instruments employed

in the Soviet Union for making production and distribution economical in the highest possible degree. This is attained through the creation of state trusts, combinations and syndicates, the construction of large enterprises, through centralized management guided by a general plan, and the systematic policy of gradually distributing the various industries by economic regions, in accordance with the raw materials and fuel available in each region.

Since the Soviet Union has a unified, coordinated and planned economy, and the government is in a position to divert resources from one branch of economy to another, the possibility of a breakdown in any particular sector is precluded. This accounts for the fact that in the course of their commercial relations with foreign countries, not a single instance of failure of Soviet organizations to meet their obligations has been noted.

Organized economic administration in the Soviet Union is effected by means of planning concentrated in a single government agency, the State Planning Commission (Gosplan). The plans now in force in the economic system of the Soviet Union embrace periods of varying length. General plans covering the national economy as a whole are drawn for periods of five years and one year.

The five-year plan outlines the course of the entire national economy, and of the various fields of economic activity—production, distribution, finances, etc. It takes into consideration all aspects of economic and

cultural development in the period covered and determines the volume and the character of production, distribution and financing, with a view to attaining the most rapid rate of development in the most economical manner. It also endeavors to secure the most harmonious balance between the various phases of economic activity by eliminating all factors which might tend to disturb this balance.

The annual plans relating to the entire national economy of the country are prepared much in the same manner and with the same objects in view, but are of a more concrete and specific nature. In addition, separate plans of still more detailed character are drawn up annually and quarterly for the several fields of economic activity, and monthly for individual enterprises.

The preparation of plans is carried out on the basis of the general instructions issued by the State Planning Commission of the Soviet Union. The specific data relating to the several economic fields and to individual enterprises are worked out on the spot, by the economic agencies of the several provinces, regions, autonomous and constituent republics, by the various government departments having economic functions, and, finally, by the individual enterprises themselves. All these specific data are then combined by the State Planning Commission and coordinated into a single general plan of economic administration. After ratification by the higher authorities the annual

or the five-year plan of national economy becomes legally effective as the guiding rule of all economic activities of the country.

The enforcement of the plan is effected under the direction and supervision of the government departments in the various fields of economic activity of the Soviet Union and of the several constituent republics (Supreme Council of National Economy, People's Commissariat for Trade, People's Commissariats for Agriculture, etc.), with the active participation of state trusts and syndicates, local economic and administrative agencies, and also of civic organizations embracing the masses of the people. It is due to the keen interest, the enthusiasm, and the tremendous efforts displayed by the working masses of the U.S.S.R. in the furthering of economic reconstruction since the revolution, that the country, once almost wrecked and ruined, has become a sound economic organism capable of further intensive growth. This indicates that in the future, also, the work of national construction can be successfully accomplished only through the support of the working masses and their participation in the work through such organizations as labor unions, factory conferences, clubs, etc., through the discussion of the formidable problems confronting the country, and through direct representation of the workers in the administrative and supervisory bodies.

The question may be asked, to what extent are Soviet plans confirmed by actual developments? It cannot be



expected, of course, that any economic plan will be 100 per cent completely carried out, with absolute precision and without deviations in any direction, especially when the plan is drawn for a considerable period ahead and embraces the entire economic life of such a big country as the Soviet Union, with all the complex interplay of the most varied economic factors. The object of the plans is not to predict, by means of detailed estimates, and with absolute precision, the course of economic developments in all particulars, but to determine the basic guiding lines and the general scope of the economic efforts to be exerted in the period under consideration.

The five-year plan of national economy of the Soviet Union, which was prepared by the State Planning Commission for the period from 1926-27 to 1930-31 made the following estimates of the total gross volume of production in industry and agriculture (at pre-war prices) <sup>1</sup>:

1926-27.....	18.8 billion rubles
1927-28.....	20.2 " "
1928-29.....	21.6 " "
1929-30.....	22.9 " "
1930-31.....	24.3 " "

Due to the enormous efforts exerted for the furthering of economic development, these estimates were

<sup>1</sup> "Perspectives for the Development of National Economy of the U.S.S.R. for 1926-27 to 1930-31," published by the State Planning Commission of the U.S.S.R., 1927. Tables 2 and 3.

greatly surpassed in the first two years. In 1926-27 the gross output of industry and agriculture attained (at pre-war prices) a total of 21.1 billion rubles, or 2.3 billions in excess of the estimate, and in 1927-28 it reached 22.3 billion rubles, or 2.1 billions above the estimate. For the succeeding years the potentialities of economic development appear to exceed the estimates of the former plan to an even greater extent. The present five-year plan, for the period from 1928-29 to 1932-33, takes into account, with all possible completeness and precision, these increased possibilities of economic progress of the Soviet Union along the road of industrialization and socialist development.

As regards the sources of financing new construction work, production, and trade in the period under consideration, the present plan is based almost entirely upon the utilization of resources accumulated within the country. The part assigned (in the financing of development and production projects) to foreign capital invested in concessions is altogether insignificant, hardly amounting to one per cent of all new basic capital investments for the five years. In regard to foreign trade the financing of imports will likewise be covered almost entirely from the proceeds of Soviet exports, with foreign credits playing only a very small part. Under the plan, exports will greatly exceed imports in the five-year period as a whole (exports of 7 billion rubles as against imports of 6 billion rubles).

The national economy of the Soviet Union has been

reconstructed and developed at a rapid tempo in the last few years without the aid of foreign capital, and this process of intensive development can proceed in the same manner in the future at the rapid pace provided by the five-year plan. Should there be, however, a considerable flow of foreign capital into the Soviet Union, in the shape of loans or of investments in Soviet enterprises, the result would be a rate of economic development even more rapid than that provided under the plan, with a corresponding increase during the five-year period in the volume of foreign trade, and of imports, in particular, above the estimates given above.

The enormous natural resources of the Soviet Union, the rational economic policy in force, and the consistent effort toward industrialization, which involves many large-scale construction projects—all these combine to make the Soviet Union at the present time probably the greatest potential market in the world for industrial equipment and the most extensive field for the application of foreign capital. In 1927-28 imports of industrial and transportation equipment into the Soviet Union amounted to 256 million rubles, and it is estimated that they will aggregate over 1,800 million rubles in the five years covered by the plan. In addition, agricultural machinery and implement imports will amount to about 600 million rubles. These imports may reach a much higher figure if the expansion of Soviet imports is aided by large long-term foreign loans.

As the plan of reconstruction and of new development in industry and agriculture is carried out, the United States may well prove to be the most important of all countries as a source of Soviet imports, for the following reason. As industrial production in the Soviet Union is concentrated in large enterprises and is based on the principle of standardized mass production, American machines and machine tools are the most suitable, since their construction and design is likewise adapted, in type and in volume, for large plants and standardized production. Besides, American machines are technically superior to the European product in many ways. As the largest producer of improved agricultural machinery of various kinds, the United States will also play an important part in the mechanization of Soviet agriculture.

It is obvious that the economic development of the Soviet Union, insofar as it involves the technical reconstruction of industry and of agriculture, will insistently dictate imports of considerably increased quantities of instruments of production. Imports of raw materials (cotton, non-ferrous metals, rosin, etc.) will also be continued.

The influence of American technique will also penetrate into Soviet national economy in other ways besides the importation of American machinery, namely, by making American technical training and experience available for Soviet industries by means of technical assistance contracts with large American concerns,

through engaging American experts for work in the U.S.S.R. and delegating special Soviet commissions and individual specialists to the United States to study American production methods on the spot, through demonstrations of American machinery sent to the U.S.S.R. and, finally, through the establishment of American enterprises in the Soviet Union on a concession basis.

TABLE I  
 BASIC INDICATORS OF THE ECONOMIC DEVELOPMENT OF THE SOVIET UNION  
 UNDER THE FIVE-YEAR PLAN

	1927-28	1932-33	Total for 5 Years	Ratio of 1932-33 to 1927-28 Per cent
I. <i>Population</i> (millions):				
(1) Total (as on April 1).....	151.3	169.2	.....	111.8
Including:				
Urban.....	27.9	34.2	.....	122.6
Rural.....	123.4	135.0	.....	109.4
(2) Population of working age (16 to 59 years).....	82.4	91.5	.....	111.0
Including:				
Urban.....	17.7	21.9	.....	123.7
Rural.....	64.7	69.6	.....	107.6
(3) Number of persons working for hire (annual averages, including agriculture and forestry).....	11.35	15.76	.....	138.9
Of which:				
A. (a) In urban communities.....	7.0	9.7	.....	138.6
(b) In rural communities.....	4.3	6.0	.....	139.5
B. (a) In industry.....	3.5	4.6	.....	131.4
(b) In building trades.....	0.6	1.9	.....	316.7
(c) In transportation.....	1.3	1.5	.....	115.4
(d) In social welfare and cultural organizations.....	1.1	1.6	.....	145.5

<b>II. Capitalization at End of Year</b> (billions of rubles):				
(1) Basic capital:				
(a) At 1926-27 prices.....	69.8	126.9	.....	182.0
(2) Operating capital:				
(a) At 1926-27 prices.....	15.0	34.5	.....	230.0
(b) At prices of respective years.....	15.2	28.9	.....	190.0
<b>III. Capital Investments</b> (billions of rubles):				
Total:				
(a) At 1926-27 prices.....	8.2	27.7	92.7	338.0
(b) At prices of respective years.....	8.0	19.6	74.2	245.0
Including:				
(1) Basic capital:				
(a) At 1926-27 prices.....	7.3	23.4	77.7	321.0
(b) At prices of respective years.....	7.1	17.1	64.6	241.0
(2) Operating capital:				
(a) At 1926-27 prices.....	0.93	4.27	15.0	459.0
(b) At prices of respective years.....	0.94	3.58	13.8	380.0
<b>IV. National Income</b> (net production in billions of rubles):				
(a) At 1926-27 prices.....	24.4	49.7	186.6	203.0
(b) At prices of respective years.....	24.7	43.3	175.1	175.0
<b>V. Electrification:</b>				
(1) Basic capital at end of year (in billions of rubles at 1926-27 prices; exclusive of power stations in industrial plants).....				
	0.93	4.87	.....	524.0
Of which, in central regional stations.....	0.71	3.66	.....	516.0

	1927-28	1932-33	Total for 5 Years	Ratio of 1932-33 to 1927-28 Per cent
(2) Capital investments (in billions of rubles; exclusive of power stations in industrial plants):				
(a) At 1926-27 prices.....	0.31	1.44	4.47	465.0
(b) At prices of respective years.....	0.284	0.861	3.059	303.0
Of which, in central regional stations:				
(a) At 1926-27 prices.....	0.25	1.02	3.36	408.0
(b) At prices of respective years.....	0.230	0.605	2.302	263.0
(3) Total aggregate power capacity (thousands of kw.)	1,700.0	5,500.0	.....	324.0
Exclusive of power stations in industrial plants.....	880.0	3,750.0	.....	426.0
Central regional stations.....	520.0	3,100.0	.....	596.0
(4) Output of electric power (billions of kw.-hours)...	5.1	22.0	65.0	431.0
Exclusive of power stations in industrial plants.....	2.4	15.5	.....	646.0
Central regional stations.....	1.9	14.0	.....	737.0
<b>VI. Industry:</b>				
(1) Basic capital at end of year (in billions of rubles at 1926-27 prices), not including industrial housing.....	9.6	30.7	.....	320.0
Same, exclusive of regional and municipal electric plants.....	8.6	25.8	.....	300.0



Of which, in industries covered by the plan of the Supreme Council of National Economy.....	6.8	20.7	.....	304.0
(2) Capital investments (in billions of rubles), not including industrial housing:				
(a) At 1926-27 prices.....	1.9	7.4	24.9	390.0
Same, exclusive of regional and municipal electric plants.....	1.6	6.0	20.4	375.0
Of which, in industries covered by the plan.....	1.3	4.9	16.4	377.0
(b) At prices of respective years.....	1.8	4.6	18.0	256.0
Same, exclusive of regional and municipal electric plants.....	1.5	3.8	14.9	253.0
Of which, in industries covered by the plan.....	1.2	3.0	12.1	250.0
(3) Number of workers (not including salaried employees) in census industry* (thousands).....	2,750.0	3,631.0	.....	132.0
Of which, in industries covered by the plan.....	2,103.0	2,806.0	.....	133.0
(4) Gross production (in billions of rubles)				
A. All Industry:				
(a) At 1926-27 prices.....	18.3	43.2	154.6	236.0
(b) At prices of respective years.....	18.0	32.7	131.8	182.0
Including:				
Group A (Producers' goods)				
(a) At 1926-27 prices.....	6.0	18.1	60.1	302.0
(b) At prices of respective years.....	5.8	12.4	47.0	214.0
Group B (Consumers' goods)				
(a) At 1926-27 prices.....	12.3	25.1	94.5	204.0
(b) At prices of respective years.....	12.2	20.3	84.8	166.0

\* See Appendix III

	1927-28	1932-33	Total Years	Ratio of 1932-33 to 1927-28 Per cent
<b>B. Census Industry:</b>				
Total				
(a) At 1926-27 prices . . . . .	13.9	36.6	126.6	263.0
(b) At prices of respective years . . . . .	13.5	27.1	105.8	201.0
Group A				
(a) At 1926-27 prices . . . . .	5.6	17.4	57.3	311.0
(b) At prices of respective years . . . . .	5.4	11.8	44.6	219.0
Group B				
(a) At 1926-27 prices . . . . .	8.3	19.2	69.3	231.0
(b) At prices of respective years . . . . .	8.1	15.3	61.2	189.0
<b>C. Industry covered by the plan of the Supreme   Council of National Economy:</b>				
Total				
(a) At 1926-27 prices . . . . .	10.9	30.4	103.8	279.0
(b) At prices of respective years . . . . .	10.4	22.0	85.0	212.0
Group A				
(a) At 1926-27 prices . . . . .	4.4	14.5	47.2	330.0
(b) At prices of respective years . . . . .	4.2	9.8	36.4	233.0
Group B				
(a) At 1926-27 prices . . . . .	6.5	15.9	56.6	245.0
(b) At prices of respective years . . . . .	6.2	12.2	48.6	197.0

<b>D. Small industries (including flour-milling):</b>				
Total				
(a) At 1926-27 prices.....	4.4	6.6	28.0	150.0
(b) At prices of respective years.....	4.5	5.6	26.0	124.0
Group A				
(a) At 1926-27 prices.....	0.4	0.7	2.8	175.0
(b) At prices of respective years.....	0.4	0.6	2.4	150.0
Group B				
(a) At 1926-27 prices.....	4.0	5.9	25.2	148.0
(b) At prices of respective years.....	4.1	5.0	23.6	122.0
<b>(5) Net production (billions of rubles):</b>				
(a) At 1926-27 prices.....	6.6	16.3	57.7	248.0
(b) At prices of respective years.....	6.4	12.7	49.7	197.0
Same, including excise taxes.....	7.8	14.8	59.0	190.0
<b>(6) Gross production, marketable portion (billions of rubles):</b>				
Total				
(a) At 1926-27 prices.....	15.8	38.2	135.1	242.0
(b) At prices of respective years.....	15.5	29.0	115.3	187.0
Of which, industries covered by the plan.....	8.4	18.8	70.8	224.0
Group A				
(a) At 1926-27 prices.....	5.2	16.5	53.6	317.0
(b) At prices of respective years.....	5.0	11.3	41.9	226.0
Of which, industries covered by the plan.....	3.5	8.8	31.8	251.0
Group B				
(a) At 1926-27 prices.....	10.6	21.7	81.5	205.0
(b) At prices of respective years.....	10.5	17.7	73.4	169.0
Of which, industries covered by the plan.....	4.9	10.0	39.0	204.0

	1927-28	1932-33	Total for 5 Years	Ratio of 1932-33 to 1927-28 Per cent
<b>VII. Agriculture</b> (billions of rubles):				
(1) Basic capital at end of year (invested in agriculture proper, excluding fishing, hunting and forestry)				
At 1926-27 prices.....	28.7	38.9	.....	136.0
Of which, machines and implements.....	3.3	6.4	.....	194.0
(2) Capital investments (in agriculture proper)				
(a) At 1926-27 prices.....	3.1	4.9	20.6	158.0
Same, exclusive of buildings.....	1.7	3.3	12.9	194.0
(b) At prices of respective years.....	3.0	4.3	19.0	143.0
Same, exclusive of buildings.....	1.7	3.0	12.3	177.0
(3) Gross production (for agricultural years):				
(a) At 1926-27 prices.....	16.7	25.8	105.7	155.0
(b) At prices of respective years.....	17.4	26.1	111.1	150.0
Of which, in agriculture proper, including animals raised:				
(a) At 1926-27 prices.....	14.5	22.6	92.0	156.0
Same, not including animals raised.....	14.0	21.6	87.9	154.0
A. Crops, total.....	9.2	14.5	58.7	158.0
Of which: grain crops.....	3.7	5.6	23.3	151.0
Of which: industrial crops.....	0.9	1.85	6.9	203.0
B. Animal products.....	5.3	8.1	33.3	153.0
Same, not including animals raised.....	4.8	7.1	29.2	150.0

(b) At prices of respective years.....	15.4	23.2	99.1	151.0
Same, not including animals raised.....	14.9	22.2	95.0	149.0
A. Crops, total.....	10.0	15.3	65.6	153.0
Of which: grain crops.....	4.0	6.1	26.9	153.0
Of which: industrial crops.....	0.97	1.81	7.4	187.0
B. Animal products.....	5.4	7.9	33.5	146.0
Same, not including animals raised.....	4.9	6.9	29.4	141.0
(4) Net production (for agricultural years):				
(a) At 1926-27 prices.....	10.8	16.7	68.4	155.0
(b) At prices of respective years.....	11.3	16.7	71.8	148.0
Of which in agriculture proper:				
(a) At 1926-27 prices.....	8.9	13.8	56.1	156.0
(b) At prices of respective years.....	9.5	14.2	60.6	150.0
(5) Gross production, marketable portion (for agricultural years):				
A. Not including purchases by peasants:				
(a) At 1926-27 prices.....	3.8	7.9	28.5	208.0
(b) At prices of respective years.....	3.9	7.5	28.6	192.0
Of which, in agriculture proper:				
(a) At 1926-27 prices, total.....	2.9	6.4	22.0	221.0
(1) Crops, total.....	1.43	3.47	11.7	243.0
Of which: grain crops.....	0.45	1.14	3.7	253.0
Of which: industrial crops.....	0.60	1.56	5.3	260.0
(2) Animal products.....	1.47	2.89	10.3	197.0
(b) At prices of respective years.....	3.0	6.2	22.8	207.0
(1) Crops, total.....	1.55	3.54	12.7	228.0
Of which: grain crops.....	0.48	1.23	4.2	256.0
Of which: industrial crops.....	0.64	1.49	5.6	233.0

	1927-28	1932-33	Total for 5 Years	Ratio of 1932-33 to 1927-28 Per cent
(2) Animal products.....	1.47	2.69	10.1	183.0
B. In addition, purchases by peasants:				
(a) At 1926-27 prices.....	2.8	4.5	17.8	161.0
(b) At prices of respective years.....	2.9	4.4	18.5	152.0
C. Total marketable portion of agricultural production:				
(a) At 1926-27 prices.....	6.6	12.4	46.3	188.0
(b) At prices of respective years.....	6.8	11.9	47.1	175.0
VIII. <i>Transportation:</i>				
(1) Basic capital (billions of rubles at 1926-27 prices)...	12.3	23.3	.....	189.0
Of which, in railways.....	10.8	18.2	.....	169.0
(2) Capital investments (billions of rubles):				
(a) At 1926-27 prices.....	0.95	4.65	13.64	489.0
(b) At prices of respective years.....	0.90	3.11	10.00	346.0
(3) Of which, investments in railways:				
(a) At 1926-27 prices.....	0.76	3.08	9.52	405.0
(b) At prices of respective years.....	0.71	1.90	6.71	266.0
(4) Railway freight traffic (billions of ton-kilometers)...	88.1	162.7	.....	185.0
(5) Gross revenue of railways (billions of rubles).....	1.6	3.1	12.1	194.0

<b>IX. Construction:</b>				
(1) Buildings and structures, exclusive of farm construction (billions of rubles):				
(a) At 1926-27 prices.....	2.6	12.5	38.7	481.0
(b) At prices of respective years.....	2.5	7.4	26.5	296.0
(2) Same, including farm construction:				
(a) At 1926-27 prices.....	3.9	13.7	45.0	351.0
(b) At prices of respective years.....	3.8	8.6	32.7	226.0
<b>X. Budget and Currency Circulation (billions of rubles):</b>				
(1) Central budget, gross.....	6.8	14.1	53.9	207.0
(2) Central budget, net.....	4.2	9.6	35.9	229.0
(3) Local budgets.....	1.7	4.1	15.1	241.0
(4) Total, net.....	5.9	13.7	51.0	233.0
(5) Money in circulation (at end of year).....	1.97	3.22	.....	163.0
<b>XI. Financing of the National Economy and of Social Welfare and Cultural Organisations by Financial Institutions of the Soviet Union (billions of rubles):</b>				
Total.....	9.46	23.07	86.01	244.0
Including:				
(1) General administration and national defense.....	1.64	2.31	9.98	141.0
(2) Social welfare and cultural organizations.....	2.40	5.88	21.40	245.0
(3) National economy.....	5.42	14.88	54.63	275.0
Including { Industry.....	1.91	4.47	17.83	234.0
{ Agriculture proper.....	0.70	1.87	6.75	268.0
{ Transportation.....	0.86	2.79	9.47	324.0

	1927-28	1932-33	Total for 5 Years	Ratio of 1932-33 to 1927-28 Per cent
<b>XII. Price Indexes:</b>				
<b>(1) Producers' prices (1926-27 = 1,000):</b>				
<b>(a) General index of industrial prices (selling prices of state industries).....</b>				
	961.0	731.0	.....	76.1
<b>Group A (producers' goods).....</b>				
	966.0	677.0	.....	70.1
<b>Group B (consumers' goods).....</b>				
	957.0	782.0	.....	81.7
<b>(b) General index of agricultural prices (purchasing prices of state procuring agencies).....</b>				
	1,047.0	991.0	.....	94.6
<b>Grain.....</b>				
	1,071.0	1,122.0	.....	104.8
<b>Industrial crops.....</b>				
	1,070.0	967.0	.....	90.4
<b>Animal products.....</b>				
	1,014.0	937.0	.....	92.4
<b>(2) Wholesale price index of the Central Statistical Board (1913 = 1,000).....</b>				
	1,782.0	1,469.0	.....	82.4
<b>(a) Agricultural prices.....</b>				
	1,565.0	1,502.0	.....	96.0
<b>(b) Industrial prices.....</b>				
	1,877.0	1,445.0	.....	77.0
<b>(3) Retail price index of the Central Statistical Board, (1913 = 1,000).....</b>				
	2,070.0	1,610.0	.....	77.8
<b>(a) Agricultural prices.....</b>				
	2,090.0	1,660.0	.....	79.4
<b>(b) Industrial prices.....</b>				
	2,050.0	1,580.0	.....	77.1



(4) Index of cost of living of the Central Bureau of Labor Statistics (1913 = 1,000):				
All articles.....	2,050.0	1,760.0	.....	85.9
Articles purchased or rented.....	2,173.0	1,782.0	.....	82.0
(5) Index of construction costs, with allowance for rationalization (1926-27 = 1,000):				
All construction.....	961.0	564.0	.....	58.7
(a) Industrial construction.....	957.0	506.0	.....	52.9
(b) Railway construction.....	972.0	641.0	.....	65.9
(c) Housing construction.....	943.0	536.0	.....	56.8

TABLE II  
STRUCTURE OF NATIONAL ECONOMY OF THE SOVIET UNION  
UNDER THE FIVE-YEAR PLAN

	1927-28	1932-33	<i>Ratio of 1932-33 to 1928-29 Per cent</i>
<b>I. Power:</b>			
<b>A. Human labor:</b>			
(1) Number of persons of working age per 100 of population....	54.2	54.1	99.8
(2) Number of persons working for hire, per 100 of population of working age.....	13.8	17.2	124.6
(3) Same, in urban communities.....	38.7	42.3	109.3
(4) Number of persons not engaged in work, per 100 of popula- tion of working age in urban communities .....	6.4	2.4	37.5
(5) Number of persons occupied in the several fields, per 100 of total number of persons working for hire (exclusive of agri- cultural laborers):			
(a) Industry.....	37.7	35.7	94.7
Of which: large-scale industry.....	33.3	31.6	94.9
(b) Transportation.....	15.3	12.0	78.4
Of which: railway transportation.....	10.8	7.8	72.2
(c) Construction.....	6.8	14.6	214.7
(d) Social welfare and cultural activities.....	12.1	12.0	99.2

(6) Number per 100 industrial workers in industries covered by the plan of the Supreme Council of national Economy:			
(a) Skilled workers.....	41.3	62.0	150.1
(b) Technicians.....	0.6	1.6	266.7
(c) Engineers.....	0.6	1.3	216.7
(7) Index of working hours (per cent of pre-war).....	77.0	70.5	91.6
(8) District agronomists per 100,000 of rural population.....	4.5	9.3	206.7
<b>B. Mechanical and electrical power equipment (KW-hours, per 1 man-hour):</b>			
(9) In industry.....	1.24	2.61	210.5
(10) In transportation.....	2.05	3.11	151.7
<b>C. Power and fuel consumption:</b>			
(11) Distribution of power consumed by nature of power (per cent of total)			
(a) Mechanical including electric.....	42.0	61.9	147.4
Of which: electric.....	15.4	37.4	242.8
Animal.....	58.0	38.1	65.7
(12) Distribution of fuel consumed by nature of fuel (per cent of total, estimated in standard fuel units)			
(a) Solid mineral fuels.....	59.4	65.3	109.9
(b) Petroleum products.....	18.2	16.2	89.0
(c) Peat.....	4.8	7.1	147.9
(d) Wood.....	17.6	11.4	64.8
(13) Share of electric power production in total fuel consumption (per cent of total).....	9.5	21.0	221.1

	1927-28	1932-33	Ratio of 1932-33 to 1928-29 Per cent
<b>II. Welfare and Cultural Status of the Population:</b>			
<b>A. Real income (allowing for decrease in prices), rubles per person a year:</b>			
<b>(1) Non-agricultural population:</b>			
(a) Total.....	313.8	537.8	171.4
(b) Persons working for hire.....	366.4	647.7	176.8
<b>(2) Agricultural population:</b>			
(a) Total.....	116.8	195.5	167.4
(b) Persons on individual farms.....	116.6	188.7	161.8
(c) Persons on collective farms.....	132.7	243.2	183.2
(3) Index of real wages of workers in industry (1913=100)	122.5	208.9	170.5
<b>B. Cultural status and general living conditions:</b>			
<b>(1) Literacy:</b>			
<b>A. Number of literate persons, per 100 of population, 8 years of age and above:</b>			
(a) Urban.....	78.5	86.7	110.4
(b) Rural.....	48.3	74.6	154.5
(c) Total population.....	53.9	77.0	142.9
<b>B. Number of children attending school, per 100 of children of school age:</b>			
(a) In urban communities.....	100.0	100.0	100.0
(b) In rural communities.....	79.3	92.4	116.5

<b>(2) Public health. Number of hospital beds, per 10,000 of population:</b>			
(a) In urban communities.....	49.0	51.0	104.1
(b) In rural communities.....	5.0	6.0	120.0
<b>(3) Housing conditions of urban population: dwelling space per person, in square meters:</b>			
(a) For workers in industries covered by the plan of the S.C.N.E.....	5.60	7.30	130.4
(b) For all workers in socialized sector of national economy.....	5.90	7.00	118.6
(c) For workers in private sector of national economy.....	5.55	5.70	102.7
(d) For urban population as a whole.....	5.70	6.30	110.5
<b>(4) Food consumption:</b>			
<b>A. Annual consumption per person in urban communities:</b>			
(a) Bread (centners).....	1.79	1.79	100.0
(b) Meat (kilograms).....	49.1	62.7	127.7
(c) Eggs (pieces).....	90.7	155.0	170.9
(d) Dairy products (kilograms).....	218.0	339.3	155.6
<b>B. Annual consumption per person in rural communities:</b>			
(a) Bread (centners).....	2.21	2.34	105.9
(b) Meat (kilograms).....	22.6	26.4	116.8
(c) Eggs (pieces).....	49.6	72.0	145.2
(d) Dairy products (kilograms).....	183.0	228.0	124.6

	1927-28	1932-33	Ratio of 1932-33 to 1928-29 Per cent
(5) Budget of worker's family, distribution of expenses (per cent of total budget):			
(a) Industrial products.....	34.2	32.5	95.0
(b) Agricultural products.....	43.2	39.0	90.3
(c) Dwelling.....	8.7	9.5	109.2
(d) Social and cultural needs.....	5.3	8.2	154.7
(e) Other expenses.....	3.6	4.8	133.3
(f) Savings.....	5.0	6.0	120.0
<b>III. Socialization and Cooperation:</b>			
(1) Gross production of socialized sector in proportion to total industrial and agricultural production (at constant prices) per cent.	45.9	66.5	144.9
(2) Gross grain production in socialized sector in proportion to total grain production, per cent.....	2.1	15.8	752.4
Of which, share of collective farming, per cent.....	1.0	11.3	1,130.0
(3) Production of cooperative enterprises in small industry in proportion to total production of small industry, per cent.....	19.4	53.8	277.3
(4) Sales in cooperative retail trade, in proportion to total retail trade.	60.2	78.9	131.1
(5) Proportion of basic capital invested in socialized sector of national economy (at constant prices), per cent.....	52.7	68.9	130.7
(6) Proportion of capital investments going into socialized sector of national economy (at constant prices), per cent.....	57.7	83.7	145.1

(7) Households belonging to cooperative associations in proportion to total households in agriculture, per cent.....	37.5	85.0	226.7
(8) Membership of consumers' cooperatives in proportion to population, per cent:			
(a) In urban communities.....	45.3	70.0	154.5
(b) In rural communities.....	19.1	40.0	209.4
<b>IV. Industrialisation:</b>			
(1) National income distribution by sources (at prices of respective years), per cent of total income:			
(a) Industry.....	31.6	34.2	108.2
(b) Construction.....	6.4	9.5	148.4
(c) Agriculture.....	45.8	38.7	84.5
(d) Transportation and communication.....	5.1	6.1	119.6
(e) Trade.....	11.1	11.5	103.6
(2) Distribution of basic capital at end of year, per cent of total:			
(a) Industry (including industrial housing).....	14.0	22.9	163.6
(b) Agriculture.....	41.0	30.4	74.1
(c) Electrification.....	1.4	4.3	307.1
(d) Transportation.....	16.6	17.2	103.6
(e) Housing (not including industrial).....	17.2	11.9	69.2
(f) Other.....	9.8	13.3	135.7
(3) Distribution of capital investments, per cent of total			
(a) Industry (including industrial housing).....	23.7	26.2	110.5
(b) Agriculture.....	43.4	32.2	74.2
(c) Electrification.....	4.0	5.4	135.0
(d) Transportation.....	12.7	19.4	152.8
(e) Housing (urban, not including industrial housing).....	7.2	6.7	93.1
(f) Other.....	9.0	10.1	112.2

	1927-28	1932-33	Ratio of 1932-33 to 1927-28 Per cent
(4) Distribution of gross production of industry covered by the plan, of the S.C.N.E., per cent of total:			
A. Production of producers' goods.....	40.3	47.8	118.6
Of which:			
Fuel.....	8.5	6.9	81.2
Metals.....	17.1	19.0	111.1
Chemical products.....	2.3	4.3	187.0
B. Production of consumers' goods.....	59.7	52.2	87.4
Of which: textiles.....	32.3	25.7	79.6
(5) Distribution of marketable portion of national production, per cent:			
(a) Industry.....	69.5	70.8	101.9
(b) Agriculture.....	30.5	29.2	95.7
<b>V. Technical Reconstruction and Rationalisation:</b>			
(1) In industry			
A. Fuel consumption, tons:			
In coal industry, per 100 tons produced.....	7.8	6.6	84.6
In petroleum industry, per 100 tons produced.....	7.5	5.6	74.7
In metal industry, per 1,000 units of production, standard fuel units.....	6.2	4.4	71.0
In cotton industry, per 1,000 pieces of goods.....	10.69	7.96	74.5



<b>B. Efficiency of equipment:</b>			
Output of pig iron, per 1 blast furnace, thousands of tons...	85.0	123.0	144.7
Output of steel, per 1 open hearth furnace, thousands of tons.	25.7	31.4	122.2
Output of fabrics in textile industry:			
(a) Cotton:			
Kilograms of yarn, per 1,000 spindles in 8 working hours.	2,300.0	2,576.0	112.0
Meters of unbleached cloth, per 1 loom in 8 working hours	25.6	27.0	105.5
(b) Linen:			
Kilograms of yarn, per 1,000 spindles in 8 working hours.	5,740.0	7,450.0	129.8
Square meters of cotton, per 1 loom in 8 working hours..	35.9	38.0	105.8
<b>C. General indicators:</b>			
(1) Rate of consumption of:			
(a) Raw materials, industrial.....	100.0	72.0	72.0
(b) Raw materials, agricultural.....	100.0	82.0	82.0
(c) Fuel.....	100.0	70.0	70.0
(2) Index of productivity of labor.....	100.0	210.0	210.0
(3) Production costs.....	100.0	65.0	65.0
(2) In agriculture:			
A. Per cent of planted area:			
(a) On which land demarcation will be completed at end of five-year period.....	.....	80.6	.....
(b) Which will at end of five-year period be provided with chemical fertilizers.....	.....	10.3	.....
Of which:			
Area planted to grain.....	.....	6.5	.....
Area planted to principal industrial crops.....	.....	89.0	.....
(c) Provided with selected seeds.....	3.9	57.6	1,476.9

	1927-28	1932-33	Ratio of 1932-33 to 1928-29 Per cent
<b>B. Yield in centners, per hectare:</b>			
(a) Grain crops.....	7.6	9.5	125.0
(b) Cotton.....	9.3	12.5	134.4
(c) Flax-fiber.....	2.3	3.6	156.5
<b>(3) In railway transportation:</b>			
(a) Productivity of labor: thousands of ton-kilometers, per employee.....	115.2	201.1	174.6
(b) Locomotive-kilometers per 1,000,000 ton-kilometers of freight.....	4,200.0	3,292.0	78.4
(c) Cost of transportation, kopecks, per ton-kilometer.....	1.21	0.96	79.3
<b>VI. Distribution:</b>			
(1) Distribution of national income, per cent of total:			
(a) Non-agricultural population.....	42.7	42.7	100.0
Of which, proletariat.....	32.1	37.0	115.3
(b) Agricultural population.....	49.8	42.5	85.3
Of which, collective farming.....	0.5	5.3	1,060.0
(c) Socialized sector of national economy.....	7.5	14.8	197.3
(2) Total budget, central and local, net, distribution by general classes of revenues and expenditures, per cent, at prices of respective years):			
<b>A. Revenues (per cent of total):</b>			
(a) Taxes.....	59.0	53.4	90.5

Of which direct taxes.....	30.0	31.5	105.0
Of which, indirect taxes.....	29.0	21.9	75.5
(b) Non-tax revenue.....	15.7	17.4	110.8
(c) Loans.....	11.8	12.4	105.1
(d) All other.....	13.5	16.8	124.4
B. Expenditures, per cent of total:			
(a) Social welfare and cultural service.....	21.1	21.9	103.8
(b) Financing of national economy.....	41.1	51.1	124.3
(c) All other.....	37.8	27.0	71.4
(3) General financial plan; distribution of revenues and expenditures by general classes (per cent of total):			
A. Revenues from:			
(a) Government budget.....	55.9	50.6	90.5
Of which, central budget.....	37.1	32.7	88.1
(b) Credit system.....	9.1	7.9	86.8
(c) Social insurance.....	11.0	10.9	99.1
(d) Resources of economic organizations.....	17.8	22.5	126.4
(e) Outside sources.....	6.2	8.1	130.6
B. Expenditures for:			
(a) Economic activities.....	57.3	64.5	112.6
Of which:			
Agriculture.....	7.4	8.1	109.5
Industry.....	20.2	19.4	96.0
Electrification.....	2.9	3.6	124.1
Transportation.....	9.1	12.1	133.0
Housing construction.....	4.2	5.2	123.8
Other.....	13.5	16.1	119.3
(b) Social welfare and cultural activities.....	25.4	25.5	100.4
(c) General administration and defense.....	17.3	10.0	57.8

**TABLE III**  
**BASIC INDICATORS OF THE FIVE-YEAR PLAN OF NATIONAL ECONOMY AS COMPARED**  
**WITH 1913 AND WITH THE PRECEDING FIVE-YEAR PERIOD**

	1913	1922- 1923	1927- 1928	1932- 1933	Total for 5 Years		Ratio to 1913		
					1923-24 to 1927-28	1928-29 to 1932-33	1922- 23	1927- 28	1932- 33
							Per cent	Per cent	Per cent
<b>I. Population:</b>									
(a) Total number (millions):.....	139.7	133.3	151.3	169.2	143.8	162.0	95.4	108.3	121.1
Including:									
Urban.....	25.7	21.9	27.9	34.2	25.3	31.5	85.2	108.6	133.1
Rural.....	114.0	111.4	123.4	135.0	118.5	130.5	97.7	108.2	118.4
(b) Number of persons working for hire, total (thousands).....	11,200.0	6,803.0	11,350.0	13,764.0	9,740.0	13,794.0	60.7	101.3	140.8
Of which, in census industry.....	2,900.0	1,706.0	3,072.0	4,080.0	2,550.0	3,626.0	58.8	105.9	140.7
<b>II. Electrification:</b>									
1. Capacity of primary motors in industrial plants (thousands of KW.)...	960.0	.....	2,550.0	6,200.0	.....	.....	.....	265.6	645.8
2. Capacity of primary motors in public utility stations (thousands of KW.)...	96.0	.....	880.0	3,750.0	.....	.....	.....	916.7	3,906.3
3. Output of electric energy (millions of KW.).....	1,945.0	1,095.0	5,050.0	22,000.0	16,000.0	65,000.0	56.3	259.6	1,131.1
<b>III. Agriculture:</b>									
1. Planted area (millions of hectares)...	116.7	80.0	115.6	147.0	105.0	129.0	70.4	101.7	124.9
Of which, planted to grain.....	102.7	70.0	97.2	112.0	84.0	104.0	68.2	94.8	109.2
Of which, planted to industrial crops...	5.5	4.0	7.3	12.0	6.0	10.0	72.7	132.7	218.1
2. Live stock: bovine cattle or its equivalent (millions of heads):.....	85.0	65.0	85.0	114.0	77.0	.....	76.8	100.0	134.1
Of which:									
(a) draft animals (millions of heads)	36.0	22.0	31.0	48.0	27.0	.....	61.8	86.1	133.3
(b) breeding stock (millions of heads)	49.0	43.0	54.0	66.0	50.0	.....	87.8	110.2	134.7

3. Production (physical volume):										
(a) Grain (millions of tons).....	81.2	61.0	73.7	106.0	335.0	445.0	75.1	89.5	130.5	
(b) Cotton (thousands of tons).....	744.0	28.0	719.0	1,907.0	2,369.0	6,857.0	3.7	96.6	256.4	
(c) Flax fiber (thousands of tons)....	454.0	306.0	292.0	621.0	1,501.0	2,210.0	67.4	63.8	136.8	
(d) Sugar beet (millions of tons).....	10.9	2.0	10.1	20.0	31.0	74.0	18.3	92.7	183.5	
(e) Oil seeds (thousands of tons)....	2,554.0	2,098.0	3,401.0	6,721.0	14,257.0	25,275.0	82.1	133.2	263.2	
4. Production at pre-war prices (billions of rubles).....	10.5	7.8	11.0	17.0	49.6	.....	74.3	104.8	161.9	
5. Marketable portion of grain production (millions of tons).....	20.4	.....	8.0	19.6	44.0	65.0	.....	39.2	96.1	
IV. Industry:										
I. Production, physical volume:										
A. Producers' goods										
(a) Coal (millions of tons).....	28.9	11.0	35.4	75.0	125.0	379.0	38.1	122.5	259.5	
(b) Petroleum (millions of tons)...	9.3	5.0	11.6	22.0	44.0	86.0	53.8	124.7	236.6	
(c) Peat (millions of tons).....	1.6	3.0	6.9	16.0	24.0	57.0	187.5	431.3	1,000.0	
(d) Iron ore (millions of tons)....	9.2	.....	5.7	19.0	17.0	64.0	4.3	62.0	206.5	
(e) Pig iron (millions of tons)....	4.2	.....	3.3	10.0	10.0	33.0	7.1	78.6	238.1	
(f) Steel ingots, open hearth (millions of tons).....	4.2	.....	4.0	10.4	13.0	35.0	11.9	95.2	247.6	
(g) Rolled steel (millions of tons)...	3.5	.5	3.3	8.0	10.0	27.0	14.3	91.4	228.6	
(h) Agricultural machinery (millions of rubles at pre-war prices)	67.0	14.0	125.0	498.0	286.0	.....	20.9	186.6	743.3	
(i) Cement (millions of barrels)...	12.3	1.0	11.0	41.0	37.0	135.0	8.1	96.7	333.3	
(j) Bricks (millions of pieces)....	2,144.0	213.0	1,785.0	9,300.0	5,178.0	29,750.0	9.9	83.3	433.8	
(k) Superphosphates (thousands of tons).....	55.0	5.0	150.0	3,400.0	379.0	7,291.0	9.1	272.7	6,181.8	
(l) Sulphuric acid (thousands of tons).....	150.0	35.0	208.0	1,450.0	674.0	3,801.0	23.3	138.7	966.7	
B. Consumers' goods:										
(a) Cotton yarn (thousands of tons).....	271.0	75.0	328.0	620.0	1,148.0	2,367.0	27.7	121.0	228.8	
(b) Wool cloth (millions of meters)	95.0	22.0	97.0	270.0	328.0	849.0	23.2	102.1	284.2	
(c) Linen cloth (millions of square meters).....	.....	93.0	165.0	500.0	728.0	1,537.0	.....	.....	.....	

NOTE: Figures in columns 6 and 7 referring to population, planted areas, number of live stock, and transportation are five-year averages.

	1913	1922- 1923	1927- 1928	1932- 1933	Total for 5 Years		Ratio to 1913		
					1923-24 to	1928-29 to	1922- 23	1927- 28	1932- 33
					1927-28	1932-33	Per cent	Per cent	Per cent
(d) Sugar, granulated (thousands of tons).....	1,390.0*	211.0	1,340.0	2,600.0	4,124.0	9,640.0	16.4	103.9	201.6
(e) Salt (thousands of tons).....	1,978.0	950.0	2,300.0	3,250.0	8,269.0	14,473.0	48.0	116.3	164.3
(f) Rubber shoes (millions of pairs)	28.0	10.0	37.0	75.0	113.0	274.0	35.7	132.1	267.9
2. Production of census industry, at pre-war prices (billions of rubles).....	6.4	8.0	8.1	21.0	.....	.....	31.3	126.6	328.1
2. Real wages of industrial workers, including rent and other municipal services (per cent of 1913).....	100.0	54.2	122.5	208.9	.....	.....	54.2	122.5	208.9
<b>V. Transportation:</b>									
1. Mileage in operation (thousands of km.).....	59.0	71.0	77.0	90.0	75.0	82.0	120.3	130.5	152.5
2. Freight traffic (in millions of tons)...	132.0	58.0	151.0	281.0	111.0	217.0	44.3	114.4	212.9
Of which:									
Grain.....	18.0	9.0	14.0	25.0	13.0	19.0	50.0	77.8	138.9
Coal.....	26.0	8.0	30.0	58.0	21.0	45.0	30.8	115.4	223.1
<b>VI. National income (billions of rubles):</b>									
At pre-war prices.....	14.0	7.0	15.0	30.0	63.0	115.0	50.0	107.1	214.3
At prices of respective years.....	.....	7.0	25.0	43.0	.....	175.0	.....	.....	.....

\* 1914 production.

TABLE IV  
PROGRESS OF SOCIALIZATION

	<i>Proportion of socialized sector and of private sector in national economy, per cent of total.</i>			
	<i>Socialized Sector</i>			<i>Private Sector</i>
	<i>State</i>	<i>Co-operative</i>	<i>Total</i>	
<b>1. Number of persons occupied:</b>				
1927-28.....	15.1	3.2	18.3	81.7
1932-33.....	16.3	14.4	30.7	69.3
<b>2. Number of persons working for hire:</b>				
1927-28.....	70.5	9.4	79.9	20.1
1932-33.....	70.7	13.2	83.9	16.1
Of which:				
(a) Industry:				
1927-28.....	85.7	5.7	91.4	8.6
1932-33.....	86.9	6.5	93.4	6.6
(b) Agriculture:				
1927-28.....	28.6	4.7	33.3	67.7
1932-33.....	34.5	6.9	41.4	58.6
<b>3. Capital investments:</b>				
1927-28.....	53.9	3.8	57.7	42.3
1932-33.....	74.4	9.3	83.7	16.3
Of which:				
(a) Industry:				
1927-28.....	94.4	1.8	96.2	3.8
1932-33.....	96.2	2.5	98.7	1.3
(b) Agriculture:				
1927-28.....	2.6	5.2	7.8	92.2
1932-33.....	7.0	24.4	31.4	68.6
<b>4. Capital at end of year:</b>				
A. Basic capital:				
1927-28.....	51.0	1.7	52.7	47.3
1932-33.....	63.6	5.3	68.9	31.1

	<i>Proportion of socialised sector and of private sector in national economy, per cent of total.</i>			
	<i>Socialised Sector</i>			<i>Private Sector</i>
	<i>State</i>	<i>Co-operative</i>	<i>Total</i>	
<i>Of which:</i>				
(a) Industry:				
1927-28.....	89.2	3.0	92.2	7.8
1932-33.....	94.5	2.3	96.8	3.2
(b) Agriculture:				
1927-28.....	2.7	2.2	4.9	95.1
1932-33.....	4.9	9.4	14.3	85.7
B. Operating capital:				
1927-28.....	41.5	14.9	56.4	43.6
1932-33.....	39.5	28.8	68.3	31.7
<i>Of which:</i>				
(a) Industry:				
1927-28.....	87.3	11.9	99.2	0.8
1932-33.....	74.3	25.4	99.7	0.3
(b) Agriculture:				
1927-28.....	2.7	1.5	4.2	95.8
1932-33.....	5.1	15.9	21.0	79.0
5. <i>Gross production:</i>				
1927-28.....	39.8	6.1	45.9	54.1
1932-33.....	52.7	13.8	66.5	33.5
<i>Of which:</i>				
(a) Census industry:				
1927-28.....	90.9	7.4	98.3	1.7
1932-33.....	91.1	7.9	99.0	1.0
(b) Small scale industry:				
1927-28.....	1.3	19.4	20.7	79.3
1932-33.....	1.8	53.8	55.6	44.4
(c) All industry:				
1927-28.....	69.2	10.3	79.5	20.5
1932-33.....	77.5	14.9	92.4	7.6
B. Agriculture:				
1927-28.....	1.2	0.6	1.8	98.2
1932-33.....	3.2	11.5	14.7	85.3



	<i>Proportion of socialized sector and of private sector in national economy, per cent of total.</i>			
	<i>Socialized Sector</i>			<i>Private Sector</i>
	<i>State</i>	<i>Co-operative</i>	<i>Total</i>	
<b>6. Marketable portion of production:</b>				
1927-28.....	56.4	9.7	66.1	33.9
1932-33.....	65.8	16.0	81.8	18.2
Of which:				
<b>A. Industry</b>				
(a) <b>Census industry:</b>				
1927-28.....	89.7	8.4	98.1	1.9
1932-33.....	90.3	8.6	98.9	1.1
(b) <b>Small scale industry:</b>				
1927-28.....	1.4	19.3	20.7	79.3
1932-33.....	1.8	53.8	55.6	44.4
(c) <b>All industry:</b>				
1927-28.....	66.1	11.3	77.4	22.6
1932-33.....	75.8	16.0	91.8	8.2
<b>B. Agriculture:</b>				
1927-28.....	3.6	0.8	4.4	95.6
1932-33.....	8.6	16.7	25.3	74.7
<b>7. Commercial turnover:</b>				
1927-28.....	37.6	48.5	86.1	13.9
1932-33.....	36.9	59.9	96.8	3.2
Of which, retail trade:				
1927-28.....	14.8	60.2	75.0	25.0
1932-33.....	12.2	78.9	91.1	8.9
<b>8. National income:</b>				
1927-28.....	42.8	9.9	52.7	47.3
1932-33.....	48.4	17.9	66.3	33.7
Of which:				
(a) <b>Industry:</b>				
1927-28.....	78.7	8.4	87.1	12.9
1932-33.....	83.5	11.4	94.9	5.1
(b) <b>Agriculture:</b>				
1927-28.....	1.2	0.7	1.9	98.1
1932-33.....	3.1	11.8	14.9	85.1

TABLE V  
PROGRESS OF COOPERATIVE ORGANIZATION

	1927-28	1932-33	Ratio of 1932-33 to 1927-28 Per cent
<b>1. Number of shareholders (thousands):</b>			
(a) Agricultural cooperation* . . . . .	9,500	23,580	248.
Of which, in collective farming*	400	3,580	895.
(b) Artisans' associations . . . . .	870	3,686	424.
(c) Consumers' societies:			
In urban communities . . . . .	8,705	16,450	189.
In rural communities . . . . .	13,876	31,800	229.
(d) Housing construction societies . . . . .	247	875	354.
(e) House renting associations . . . . .	963	.....	.....
<b>2. Relative extent of cooperative organization: †</b>			
(a) Agricultural cooperation . . . . .	37.5	85.0	227.0
(b) Artisans' associations . . . . .	21.0	56.0	267.0
(c) Consumers' societies, urban . . . . .	45.3	70.0	155.0
(d) Consumers' societies, rural . . . . .	19.1	40.0	209.0
<b>3. Total amount of share capital (millions of rubles):</b>			
Of which:	334.6	2,590.0	774.0
(a) Agricultural cooperation . . . . .	65.0	583.0	897.0
(b) Artisans' associations . . . . .	43.0	366.0	851.0
(c) Consumers' societies:			
Urban . . . . .	90.6	658.0	726.0
Rural . . . . .	103.0	795.0	772.0
(d) Housing construction societies . . . . .	30.0	188.0	627.0
(e) House renting associations . . . . .	3.0	31.0	1,033.0
<b>4. Average value of share (rubles):</b>			
(a) Agricultural cooperation . . . . .	6.85	24.70	361.0
(b) Artisans' associations . . . . .	49.40	99.10	201.0
(c) Consumers' societies:			
Urban . . . . .	10.40	40.00	385.0
Rural . . . . .	7.42	25.00	337.0
(d) Housing construction societies . . . . .	121.00	.....	.....
(e) House renting associations . . . . .	5.20	.....	.....

\* Numbers of households affiliated with cooperative organizations, in thousands.

† The relative extent of cooperative organizations is expressed, for agricultural cooperation, in percentages of the total number of households; for consumers' societies, in percentages of the adult population, urban and rural, respectively; for artisans' associations, in percentages of the total number of artisans.

**TABLE VI**  
**CAPITAL INVESTMENTS IN BASIC CAPITAL OF THE NATIONAL ECONOMY**  
**OF THE SOVIET UNION**  
 (At prices of respective years)

	<i>Amounts in Millions of Rubles</i>			<i>Ratio of 1932-33 to 1927-28 per cent</i>	<i>Per Cent of Total</i>		
	<i>1927-28</i>	<i>1932-33</i>	<i>Total for 5 years</i>		<i>1927-28</i>	<i>1932-33</i>	<i>Total for 5 years</i>
<b>I. Industry (Including industrial housing):</b>	1,672	4,170	16,353	249.4	23.7	26.2	27.1
Of which, in regulated industry.....	1,318	3,465	13,500	262.9	18.7	21.7	22.3
Group A (producers' goods).....	938	2,396	9,788	255.4	13.3	15.0	16.2
Group B (consumers' goods).....	365	734	2,860	201.1	5.2	4.6	4.7
<b>II. Agriculture (Land cultivation):</b>							
(a) Including land organization and other measures of public policy....	3,084	5,516	23,152	178.8	43.4*	32.2*	35.8*
(b) Not including land organization and other measures of public policy....	3,022	4,341	18,998	143.6	42.8	27.2	31.4
Of which, machinery and implements	550	1,196	4,507	217.5	7.8	7.5	7.5
<b>III. Forestry</b> .....	12	64	229	533.3	0.2	0.4	0.4

\* Percentages of total (a) i.e., including land organization and other measures of public policy.

	Amounts in Millions of Rubles			Ratio of 1932-33 to 1927-28 per cent	Per Cent of Total		
	1927-28	1932-33	Total for 5 years		1927-28	1932-33	Total for 5 years
<b>IV. Electrification:</b>							
(a) Not including power stations in industrial plants.....	284	861	3,059	303.2	4.0	5.4	5.1
(b) Including power stations in industrial plants.....	349	1,061	3,844	304.0	5.0	6.6	6.4
Of which, central regional plants...	230	605	2,302	263.0	3.3	3.8	3.8
<b>V. Transportation.....</b>	896	3,105	10,002	346.5	12.7	19.4	16.5
Of which, railway transportation...	714	1,898	6,713	265.8	10.1	11.9	11.1
<b>VI. Posts, Telegraph, Telephone and Radio...</b>	35	65	307	185.7	0.5	0.4	0.5
<b>VII. Trade and warehousing.....</b>	176	605	2,164	343.8	2.5	3.8	3.6
<b>VIII. Public education.....</b>	114	645	2,017	565.8	1.6	4.0	3.3
<b>IX. Health service.....</b>	89	227	778	255.1	1.3	1.4	1.3
<b>X. General administration.....</b>	67	91	413	135.8	1.0	0.6	0.7
<b>XI. Municipal enterprises.....</b>	174	725	2,233	416.7	2.5	4.5	3.7

<b>XII. Housing construction in urban communities:</b>							
(a) Including housing for requirements of industry, transportation, and electrification.....	711	1,647	5,885	231.6	10.1	10.3	9.7
(b) Not including housing for requirements of industry, transportation, and electrification.....	509	1,068	3,895	209.8	7.2	6.7	6.4
<i>Total:</i>							
(a) Including investments for land organization and other measures of public policy in agriculture.....	7,112	17,142	64,601	241.0	.....	.....	.....
(b) Not including measures of public policy in agriculture.....	7,050	15,967	60,447	226.5	100.0	100.0	100.0
Distribution by socialized and private fields:							
State.....	3,613	10,472	37,463	289.8	51.2	65.6	62.0
Cooperative.....	385	2,097	6,725	544.7	5.5	13.1	11.1
Private.....	3,052	3,398	16,259	111.3	43.3	21.3	26.9

TABLE VII  
 BASIC CAPITAL AND CAPITAL INVESTMENTS IN THE  
 NATIONAL ECONOMY OF THE SOVIET UNION

	Amounts in Millions of Rubles (at 1925-26 prices)				Ratio of basic capital on Oct. 1, 1933 to that on Oct. 1, 1928. Per cent	Distribution of basic capital. Per cent of Total	
	Basic capital 'as on Oct. 1, 1928	Depreci- ation in 5 years	Invest- ments in 5 years	Basic capital on Oct. 1, 1933		Oct. 1, 1928	Oct. 1, 1933
<b>I. Industry:</b> Including industrial housing...	9,813	3,444	22,746	29,115	296.7	14.0	22.9
Of which, in regulated industry .....	7,940	2,762	18,808	23,986	302.1	11.3	18.8
Group A (producers' goods).....	4,550	1,745	13,589	16,394	360.3	6.5	12.8
Group B (consumers' goods).....	3,298	992	3,986	6,292	190.8	4.7	4.9
<b>II. Agriculture proper</b> .....	28,741	10,571	20,717	38,887	135.3	41.0	30.4
Of which, in agricultural implements and machinery.....	3,280	1,933	5,060	6,407	195.3	4.7	5.0
<b>III. Electrification:</b> Not including electric power stations at industrial plants.....	1,011	576	4,874	5,309	525.1	1.4	4.3
Of which, in central regional plants.....	769	446	3,667	3,990	518.9	1.1	3.1

IV. <i>Transportation</i> .....	11,653	2,546	12,905	22,012	188.9	16.6	17.2
Of which, in railway transportation.....	10,131	2,066	8,899	16,964	167.4	14.4	13.3
V. <i>Posts, Telegraph, Telephone and Radio</i> ....	286	101	416	601	210.1	0.4	0.5
VI. <i>Trade and warehousing</i> .....	701	379	3,195	3,517	501.7	1.0	2.7
VII. <i>Public education</i> .....	1,974	214	3,184	4,944	250.5	2.8	3.9
VIII. <i>Health service</i> .....	1,074	114	1,271	2,231	207.7	1.5	1.7
IX. <i>General administration</i> .....	656	116	657	1,197	182.5	0.9	0.9
X. <i>Municipal enterprises</i> .....	2,274	606	3,047	4,715	207.3	3.2	3.7
XI. <i>Housing construction in urban centers:</i>							
Including industrial housing.....	13,136	2,301	7,684	18,519	141.0	18.7	14.5
Not including industrial housing.....	11,971	2,062	5,342	15,251	127.4	17.2	11.9
TOTAL.....	70,154	20,729	78,354	127,779	182.2	100.0	100.0
Distribution by socialized and private sectors:							
State.....	35,786	8,922	54,347	81,211	226.9	51.0	63.6
Cooperative.....	1,198	869	6,449	6,778	565.8	1.7	5.3
Private.....	33,170	10,939	17,559	39,790	120.0	47.3	31.1
Distribution by economic functions:							
Production.....	27,567	11,734	41,068	56,901	206.4	39.3	44.5
Distribution.....	12,640	3,025	16,516	26,131	206.7	18.0	20.5
Consumption.....	29,947	5,969	20,769	44,747	149.4	42.7	35.0

NOTE: All figures in this table relating to basic capital have been calculated at 1925-26 prices, in order to make comparison possible with the figures for previous years; as compared with the latter, greater precision has been introduced into the figures for capital in agriculture and in transportation.

TABLE VIII  
NATIONAL INCOME OF THE SOVIET UNION  
(Net production)

	Amounts in Millions of Rubles			Ratio of 1932-33 to 1927-28 per cent	Per Cent of Total		
	1927-28	1932-33	For 5 years		1927-28	1932-33	For 5 years
<b>A. At prices of respective years:</b>							
1. Agriculture.....	11,285	16,742	71,836	148.4	45.8	38.7	41.0
Same, exclusive of fishing, hunting, and forestry.....	9,466	14,159	60,558	149.6	38.4	32.7	34.6
2. Industry, including excise taxes.....	7,809	14,815	58,990	189.7	31.6	34.2	33.7
Industry, not including excise taxes....	6,449	12,725	49,680	197.3	26.1	29.4	28.4
Of which, large scale industry (not in- cluding excise).....	5,214	11,072	42,120	212.3	21.1	25.6	24.1
3. Construction.....	1,588	4,096	15,007	257.9	6.4	9.5	8.6
4. Transportation and Communication....	1,261	2,620	9,630	207.8	5.1	6.1	5.5
Of which, railway transportation.....	1,061	2,294	8,302	216.2	4.3	5.3	4.7
5. Commerce.....	2,738	4,997	19,654	182.5	11.1	11.5	11.2
TOTAL.....	24,681	43,270	175,117	175.3	100.0	100.0	100.0



<b>B. At 1926-27 prices:</b>							
1. Agriculture.....	10,783	16,681	68,448	154.7	44.1	33.6	36.7
Same, exclusive of hunting, fishing, and forestry.....	8,868	13,827	56,091	155.9	36.3	27.8	30.1
2. Industry, including excise taxes.....	7,978	18,983	68,392	237.9	32.7	38.2	36.7
Industry, not including excise taxes....	6,582	16,314	57,694	247.9	26.9	32.8	30.9
Of which, large scale industry (not including excise).....	5,349	14,328	49,495	267.9	21.9	28.8	26.5
3. Construction.....	1,667	5,877	19,483	352.5	6.8	11.8	10.4
4. Transportation and Communication....	1,176	2,191	8,293	186.3	4.8	4.4	4.4
Of which, railway transportation.....	982	1,907	7,091	194.2	4.0	3.8	3.8
5. Commerce.....	2,825	5,958	21,960	210.9	11.6	12.0	11.8
<b>TOTAL.....</b>	<b>24,429</b>	<b>49,690</b>	<b>186,576</b>	<b>203.4</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**NOTE:** The total national income for 1927-28, as shown in this table, is 900 million rubles lower than is shown in the "Control Figures for National Economy for 1928-29"; the difference is accounted for chiefly by that in the respective figures for agriculture which is due to greater precision in the calculation of goods consumed in production.

TABLE IX

PLAN OF FINANCING OF THE NATIONAL ECONOMY OF THE SOVIET UNION  
(Net, exclusive of inter-departmental movement of funds)

	Amount in Millions of Rubles			Ratio of 1932-33 to 1927-28 per cent	Per Cent of Total		
	1927-28	1932-33	For 5 years		1927-28	1932-33	For 5 years
<b>A. Expenditures for:</b>							
1. Economic activities.....	5,422	14,881	54,629	274.5	57.3	64.5	63.5
Of which:							
(a) Industry.....	1,909	4,468	17,830	234.0	20.2	19.4	20.7
(b) Agriculture.....	698	1,873	6,746	268.3	7.4	8.1	7.8
(c) Electrical development.....	276	837	2,960	303.3	2.9	3.6	3.4
(d) Transportation.....	861	2,790	9,471	324.0	9.1	12.1	11.0
(e) Housing construction.....	400	1,190	4,028	297.5	4.2	5.2	4.7
2. Social welfare and cultural activities...	2,400	5,884	21,396	245.2	25.4	25.5	24.9
Of which:							
Public education.....	1,029	2,995	10,385	291.1	10.9	13.0	12.1
3. General administration and defense....	1,642	2,308	9,980	140.6	17.3	10.0	11.6
<b>TOTAL:</b> .....	<b>9,464</b>	<b>23,073</b>	<b>86,005</b>	<b>243.8</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>B. Revenues from:</b>							
1. Government budgets.....	5,293	11,674	44,709	220.6	55.9	50.6	52.0
Of which: central budget..	3,514	7,547	29,639	214.8	37.1	32.7	34.5
2. Credit system.....	861	1,822	6,628	211.6	9.1	7.9	7.7
3. Social insurance.....	1,039	2,524	9,180	242.9	11.0	10.9	10.7
4. Resources of economic organizations...	1,680	5,201	18,961	309.6	17.8	22.5	22.0
5. Outside sources.....	591	1,852	6,527	313.4	6.2	8.1	7.6
<b>TOTAL.....</b>	<b>9,464</b>	<b>23,073</b>	<b>86,005</b>	<b>243.8</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

TABLE X  
ANNUAL DEVELOPMENTS UNDER THE FIVE-YEAR PLAN

	Amounts in Millions of Rubles							Ratio of Each Year to Preceding Year, Per Cent					Ratio of 1932-33 to 1927-28
	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	For 5 Years	1928-29 to 1927-28	1929-30 to 1928-29	1930-31 to 1929-30	1931-32 to 1930-31	1932-33 to 1931-32	
I. Gross production of industry, at 1926-27 prices.....	18,312	21,164	25,009	29,643	35,584	43,196	154,596	115.6	118.2	118.5	120.0	121.4	236.0
Of which, industries covered by plan of the Supreme Council of National Economy.....	10,909	13,247	16,090	19,649	24,320	30,447	103,753	121.4	121.5	122.1	123.8	125.2	279.0
II. Gross production of agriculture, at 1926-27 prices.....	16,659	17,367	18,845	20,804	22,897	25,806	105,719	104.2	108.5	110.4	110.1	112.7	155.0
Of which, agriculture proper.....	14,526	15,038	16,304	18,054	19,935	22,630	91,961	103.5	108.4	110.7	110.4	113.5	155.8
III. National income (net production):													
(a) At 1926-27 prices.....	24,429	27,149	31,289	36,294	42,154	49,699	186,576	111.1	115.2	116.0	116.1	117.9	203.4
(b) At prices of respective years....	24,681	27,385	30,884	34,829	38,749	43,270	175,117	111.0	112.8	112.8	111.3	111.7	175.3
IV. Capital investments (at prices of respective years).....	8,052	10,193	13,080	16,061	18,354	20,717	78,404	126.6	128.3	122.8	114.3	112.9	257.3
Of which:													
(a) Basic capital.....	7,112	8,612	10,836	13,115	14,896	17,142	64,601	121.1	125.8	121.0	113.6	115.1	241.0

Including:													
1. Industry (including industrial housing).....	1,672	2,091	2,845	3,451	3,796	4,170	16,353	125.1	136.1	121.3	110.0	109.9	249.4
Of which, industries regulated by the Supreme Council of National Economy.....	1,318	1,659	2,331	2,880	3,165	3,465	13,500	125.9	140.5	123.6	109.9	109.5	262.9
2. Electrification not including factory power plants.....	284	332	453	656	757	861	3,059	116.9	136.4	144.8	115.4	113.7	303.2
3. Agriculture.....	3,094	3,664	4,173	4,720	5,079	5,516	23,152	118.8	113.9	113.1	107.6	108.6	178.8
4. Transportation.....	896	1,128	1,497	1,878	2,394	3,105	10,002	125.9	132.7	125.5	127.5	129.7	346.5
(b) Operating capital.....	940	1,580	2,244	2,946	3,458	3,575	13,803	168.1	142.0	131.3	117.4	103.4	380.3
V. Government budget, central and local, net expenditures.....	5,879	7,123	8,633	10,120	11,810	13,669	51,355	121.3	121.2	117.2	116.7	115.7	232.5
Of which:													
(a) General administration and defense.....	1,751	1,878	1,991	2,195	2,406	2,716	11,186	107.1	106.0	110.2	109.6	112.9	155.1
(b) Social welfare and cultural activities.....	1,238	1,450	1,769	2,167	2,566	2,994	10,946	117.1	122.0	122.5	118.4	116.7	241.8
(c) Financing of national economy.....	2,424	3,284	4,204	5,058	6,081	6,981	25,608	136.0	128.0	120.3	120.2	114.8	288.0
(d) All other.....	464	511	669	700	757	978	3,615	110.1	130.9	104.6	108.1	129.2	209.9

## APPENDIX III

### EXPLANATORY NOTES

*Weights and Measures:*

Kilogram .....	2.2046 lbs.
Centner .....	220.46 lbs.
Metric Ton .....	2,204.6 lbs.
Meter .....	39.37 inches.
Kilometer .....	0.621 miles.
Square Meter .....	10.764 square feet.
Hectare .....	2.471 acres.

Ruble ..... equals  $51\frac{1}{2}$  cents.

**Supreme Council of National**

Economy (S.C.N.E.)..... Central government department  
in charge of state industry.

Census Industry ..... Industrial establishments employ-  
ing 15 workers or more and  
using mechanical power or es-  
tablishments where no mechan-  
ical power is used but at least  
30 workers are employed.

Soviet fiscal year..... October 1-September 30.

Soviet agricultural year..... July 1-June 30.

## APPENDIX IV

### SOVIET-AMERICAN TRADE

SOVIET-AMERICAN trade, which in 1929 entered its sixth year, amounted for the period ending July 31, 1929, to over half a billion dollars. This sum, constituting about 15 per cent of the total Soviet foreign trade since 1924, includes the export and import operations of the Amtorg Trading Corporation, representing the principal industrial and trading organizations of the Soviet Union, as well as of the All-Russian Textile Syndicate, which purchases cotton for the Soviet textile industry, Centrosoyus and Selskosojus, representing Soviet consumers' and agricultural cooperatives respectively, and the Amkino Corporation, which distributes the films of Sovkino and other Soviet moving picture producing organizations. All of these companies have been incorporated under the laws of the state of New York. Included in the total are also the shipments of Soviet manganese to the United States and the imports of furs by American firms having special agreements with Soviet organizations. The share of the Amtorg Trading Corporation alone in this turnover amounted to about \$215,000,000, the Amtorg handling the bulk of general imports and practically all the exports of machinery for industrial, agricultural and

transportation purposes, as well as exports of certain raw materials such as non-ferrous metals, rubber and chemicals and of hundreds of miscellaneous products.

Of the \$540,000,000 which represents the turnover of Soviet-American trade since 1924, purchases in the United States made up \$430,000,000 and sales of Soviet products in this country \$110,000,000. Large unfavorable trade balances were reported each year, and the adverse balance against the U.S.S.R. for the entire period aggregated about \$320,000,000. The Soviet Union has a favorable trade balance with most of the other countries with which it does business.

Soviet purchases in the United States have been growing at a steady rate, with exception being made for the year 1924-25, in which year exports from this country reached an unusually high figure, due primarily to the purchase of over \$20,000,000 worth of flour—an emergency purchase necessitated by the failure of crops in the Soviet Union. No such purchases have been made since that year. Omitting the fiscal year 1924-25, when Soviet purchases in this country totaled \$86,938,000, the following totals for Soviet purchases in the United States are obtained:

1923-24 .....	\$43,916,000
1925-26 .....	48,560,000
1926-27 .....	71,689,000
1927-28 .....	91,232,000
1928-29 (10 months).....	approximately 84,000,000

In the ten months beginning October 1, 1928, orders for the U.S.S.R. to a total value of \$51,000,000 were



placed in this country by the Amtorg Trading Corporation alone, as compared with \$33,000,000 for the entire preceding year. A new record for Soviet-American trade is expected this year.

The greater part of the purchases in this country for the past years was made up of cotton. Purchases by the Textile Syndicate since its inauguration in December, 1923, up to July, 1929, amounted to about \$245,000,000. Scores of ships have been chartered to bring American cotton to the Soviet port of Murmansk on the Arctic coast and to other Soviet ports in the north and on the Black Sea.

By far the most rapid growth, among the various groups of commodities purchased in the United States for the Soviet Union, has been shown by machinery and apparatus, including industrial machinery, agricultural implements, automotive equipment, transportation and electrical machinery. Purchases of industrial machinery by the Amtorg Trading Corporation alone, which amounted to \$2,500,000 in the fiscal year 1926-27, exceeded \$11,000,000 in 1927-28 and amounted to \$23,200,000 for the ten months ending July 31, 1929. There are dozens of Soviet industries which enter the American market every year to make purchases of machinery.

Imports of agricultural equipment, principally tractors, have shown a large increase, due to the expansion of large-scale farming in the U.S.S.R. Agricultural equipment purchases for the ten months ending July 31,

1929, amounted to \$21,000,000, one-third more than the purchases of the preceding year, and three times the purchases of two years previous.

An important factor in Soviet-American economic relations are the contracts for technical assistance, largely in the construction of new industrial enterprises in the Soviet Union, which have been concluded within the past two years with important American engineering and manufacturing companies. A list of such contracts is given below.

The bulk of the purchases now being made in this country for the Soviet Union involve credit terms. Large-scale credits, some up to a period of five years, are being granted by an increasing number of concerns, including the International General Electric Company, the Westinghouse Electric International Company, the International Combustion Engineering Corporation, International Harvester Company, John Deere Company, Allis-Chalmers Company, Worthington Pump Company, Ingersoll-Rand Company, Link Belt Company, Caterpillar Tractor Company, the Hercules Motor Company, and others.

Sales of Soviet products in this country have not shown a growth comparable with that of purchases. In the past three years (1926, 1927, 1928) sales in this country have amounted to 24, 21, and 22 million dollars respectively. The market for Soviet products in this country has been confined to about a score of items, including bristles, casings, furs, poultry, mushrooms,

seeds, candy, flax, crude drugs, manganese ore, precious metals, handicraft products, and small quantities of lumber and coal.

Mention should also be made of the contracts concluded by the Soviet Naphtha Syndicate with the Standard Oil Company of New York and the Vacuum Oil Company, calling for the delivery of Soviet oil products, to the value of \$10,000,000 annually, to the far and near eastern markets of these companies.

TECHNICAL ASSISTANCE CONTRACTS CONCLUDED BY  
SOVIET ORGANIZATIONS WITH AMERICAN  
FIRMS AND INDIVIDUALS

(List as of August 15, 1929)

*Hugh L. Cooper and Company*—Consulting engineers on the construction of the Dnieper hydro-electric power plant in the Ukraine.

*Stuart, James and Cooke*—Consulting engineers for the Donugol Coal Trust, the Southern Steel Trust (coal mines), the Moscow Coal Trust and the Kizel Coal Trust; making plans for the opening of new mines, rebuilding of old mines and installation of modern equipment.

*Freyr Engineering Company*—Consulting engineers on the designing of steel mills to be constructed in various parts of the country.

*Radio Corporation of America*—Exchange of patents

and technical information with the Soviet Weak Current Trust; technical assistance in the manufacture of radio apparatus in the U.S.S.R.

*International General Electric Company*—Technical assistance in the Soviet electrical industry and exchange of patent and other technical information with the Soviet State Electrotechnical Trust.

*Sperry Gyroscope Company*—Technical assistance in the manufacture of marine instruments.

*Nitrogen Engineering Company*—Technical assistance in constructing and operating a \$10,000,000 ammonia fertilizer factory.

*Du Pont de Nemours and Company*—Technical assistance in erecting fertilizer factories.

*Longacre Engineering and Construction Company*—Technical assistance and supervision of construction of apartment houses and public buildings in Moscow.

*Arthur P. Davis, Lyman Bishop*—Consulting engineers on the irrigation projects of the "Sredazvodkhoz" (Central Asiatic Water Economy) in Soviet Central Asia.

*The McCormick Company*—Designing of the largest Soviet baking plant in Moscow.

*Albert Kahn, Inc.*—Designing of buildings for the Stalingrad Tractor factory, to produce 40,000 tractors per year.

*Harry D. Gibbs*—Technical cooperation in Soviet aniline industry.

- Frank D. Chase, Inc.*—Technical assistance in the foundry industry.
- Ford Motor Company*—Technical assistance in the construction and operation of an automobile factory to produce 100,000 cars per year.
- Taft Pierce Co.*—Technical assistance in the foundry industry.
- Archer E. Wheeler*—Consulting engineer in Soviet copper industry.
- C. F. Seabrook Co.*—Technical advisors on road-building in the Moscow province.
- Foster-Wheeler Corp.*—Technical assistance in the Soviet oil refining industry.
- Lockwood Greene & Company*—Technical assistance in the reorganization and reconstruction of existing textile mills and in the design and construction of new plants.
- Roberts and Schaefer Company*—Technical assistance to the Donetz Coal Trust.
- Arthur J. Brandt*—Reconstruction of the Moscow Auto Automobile plant to a production, in one shift, of 25,000 cars per annum.
- Hercules Motor Company*—Assistance in the production of engines for heavy trucks in the Yaroslavl plant.
- Newport News Shipbuilding and Drydock Company*—Technical assistance in the construction of turbines.
- Seiberling Rubber Company*—Designing and assistance in construction of a rubber tire plant at Yaroslavl.

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