

# SOVIET UNION

# 50 YEARS

## SUMMARY SECTION

●  
THE U.S.S.R.—A MIGHTY INDUSTRIAL  
POWER

●  
THE U.S.S.R.—A COUNTRY  
OF THE LARGE-SCALE SOCIALIST  
AGRICULTURAL PRODUCTION

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THE U.S.S.R.—A COUNTRY  
OF GIANT CONSTRUCTION

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THE FLOURISHING  
OF SOCIALIST CULTURE

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THE ECONOMIC DEVELOPMENT  
OF THE UNION REPUBLICS—  
BASIC INDICES

●

CENTRAL STATISTICAL BOARD  
UNDER THE COUNCIL OF MINISTERS  
OF THE U.S.S.R.

# SOVIET UNION 50 YEARS

STATISTICAL RETURNS



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Translated from the Russian

The statistical returns were compiled by the Central Statistical Board of the U.S.S.R. They were edited and prepared for publication by a board consisting of: *A. A. Alimov, A. A. Belyakov, A. S. Butov, M. R. Eidelman, S. Y. Genin, V. I. Manyakin, V. F. Monakhov* (Vice-Chairman), *P. T. Podyachikh, V. N. Starovsky* (Chairman), *L. M. Tsyrlin, A. F. Ulyanova, L. M. Volodarsky*.

The present book of statistical returns contains most important data on the achievements of the U.S.S.R. during 50 years of Soviet power in the development of the economy, culture and raising the people's welfare.

Data for Soviet years are given for the territory of the Soviet Union within the frontiers corresponding to the given period, while figures for the pre-revolutionary period relate to the territory of the U.S.S.R. within the present frontiers.

A number of indices showing the development of Soviet economy and culture are compared with the corresponding indices of the U.S.A. and other capitalist countries; also included in the book are figures showing the economic development of other socialist countries.

СТРАНА СОВЕТОВ ЗА 50 ЛЕТ  
СБОРНИК СТАТИСТИЧЕСКИХ МАТЕРИАЛОВ

*На английском языке*

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—BASIC INDICES**

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## INTRODUCTION

The complete, final victory of socialism is the main result of the revolutionising activity of the Soviet people under the leadership of the Communist Party.

The Great October Socialist Revolution opened up wide scope for the development of the country's productive forces and initiated sweeping socialist changes. High growth rates of the Soviet economy ensured the building up of mighty productive forces in a historically brief period. The economy of the Soviet Union is developing along the lines of steady technological progress.

The U.S.S.R. has now entered the period of the full-scale building of communism. The Soviet people are successfully coping with the task of laying the material and technical foundation of communism.

The victory of the October Revolution resulted in the **abolition of the exploiting classes**. The **class composition of the population of the U.S.S.R.** has basically changed as shown by the following data (percentages):

	1913 <sup>1</sup>	1928	1939	1959	1966
Entire population (including non-working members of families) . . . . .	100	100	100	100	100
of which:					
industrial, office and other workers . . . . .	17.0	17.6	50.2	68.3	76.39
collective farmers and co-opted artisans <sup>2</sup> . . . . .	—	2.9	47.2	31.4	23.58
individual peasants and artisans . . . . .	66.7	74.9	2.6	0.3	0.03
bourgeoisie, landowners, merchants and kulaks . . . . .	16.3	4.6	—	—	—

In pre-revolutionary Russia individual peasants and artisans made up a big part, more than two-thirds, of the population. Industrial,

<sup>1</sup> On territory within the frontiers of the U.S.S.R. prior to September 17, 1939.

<sup>2</sup> Co-opted artisans (with their families) accounted for 1.2 per cent of the population in 1928 and 2.3 per cent in 1939.

office and other workers comprised only 17 per cent. The exploiting classes—the bourgeoisie, landowners, merchants and kulaks—accounted for 16.3 per cent.

At present industrial, office and other workers make up more than three-fourths of the entire population and collective farmers, about one-fourth.

Soviet society consists of two friendly classes: the working class and the collective-farm peasantry. Soviet intellectuals make up a considerable part of the population.

As a result of sweeping socio-economic changes the **socialist system** and **socialist ownership** of the instruments and means of production **dominate undividedly in the country's economy.**

**Share of the Socialist Economy**  
(percentages)

	1924	1928	1937	1966
Fixed productive assets (including livestock) . .	35.0	35.1	99.0	100
National income . . . . .	35.0	44.0	99.1	100
Gross output of industry . . . . .	76.3	82.4	99.8	100
Gross output of agriculture (including individual subsidiary farming) . . . . .	1.5	3.3	98.5	100
Retail trade (including public catering) . . . . .	47.3	76.4	100	100

Fulfilment of the Leninist industrialisation plan, the building up of **large-scale socialist industry** equipped with the latest machinery and capable of coping with the most intricate scientific and technical problems and national economic tasks, is the greatest gain of the working class, of the entire Soviet people. Soviet industry is developing at stable, high rates.

In Soviet times the country's industrial output has risen tremendously.

In 1913, Russia contributed slightly more than 4 per cent of the world industrial output and in 1917, less than 3 per cent. At present the U.S.S.R. produces almost one-fifth of the world industrial output. The growth of the Soviet Union's industrial potential can be illustrated, for example, by steel production. While in 1913 Russia contributed 6.5 per cent of the world steel output, and in 1928 the U.S.S.R. accounted only for 3.9 per cent, in 1966 its share exceeded 20 per cent. Pre-revolutionary Russia greatly lagged behind each of the following countries: Britain, France and Germany. In 1966, Soviet steel output was much greater than the combined production of Britain, France, the Federal Republic of Germany and Italy. In 1967, the Soviet iron and steel industry reached an annual level exceeding 100 million tons of steel.

The U.S.S.R. holds first place in Europe and second place in the world for total industrial output.

The gap in industrial production levels between the Soviet Union and the United States, the most powerful capitalist country, is shrinking. While in 1913 total industrial production of the Russian Empire amounted only to 12.5 per cent of the American, now Soviet industrial output is above 65 per cent of the U.S. level. In the past 50 years, the gap in the production of all major industrial goods has been greatly narrowed.

To belittle the epochal significance of the achievements scored by the Soviet Union in the economic competition with the United States, bourgeois propaganda is making clumsy attempts to prove that Russia supposedly would have registered substantial economic progress even without the victory of the Great October Socialist Revolution. A few figures suffice to demonstrate the groundlessness of such assertions.

Here are figures characterising the growth rates of various industries in the U.S.S.R. as compared with the American rates since 1913.

	Growth of production from 1913 to 1966 (1913=1)		Growth of production in the U.S.S.R. as compared with the United States (U.S.A.=1)
	U.S.A.	U.S.S.R.	
Electric power . . . . .	52	267	5
Oil . . . . .	12	26	2
Coal and lignite (in terms of coal) . . . .	0.95	18	19
Steel . . . . .	4	22.5	6
Mineral fertilisers (conventional units) . . .	15	403	27
Metal-cutting lathes . . . . .	4	110	27.5
Turbines . . . . .	24	2,572	107
Cement . . . . .	4	45	11
Cotton fabrics (coarse) . . . . .	1.5	3.3	2
Woollen fabrics . . . . .	0.7	3.7	5
Leather footwear . . . . .	2.2	7.7	3.5

These figures show that Soviet industry is developing at a much faster pace than the American. Steel production is a case in point. Had Soviet iron and steel industry developed at the same rate as the American, in 1966 the U.S.S.R. would have produced 17 million tons. Actually the Soviet Union had an output of 96.9 million tons, or six times more.

In 1913, steel production in tsarist Russia was 15 per cent of the U.S. level, while in 1966 the respective figure was 78 per cent. Similarly the correlation in electric power production was 9 per cent in 1913 and 41 per cent in 1966; consumption of electric power in industry,

13 per cent and 63 per cent respectively. The production of cement in Russia in 1913 was 13 per cent of the U.S. level and in 1966 it was 120 per cent in favour of the U.S.S.R. The Soviet Union has advanced to first place in the world for the production of a number of important industrial goods.

The steady rise in the productivity of social labour has played the decisive part in the successful progress of the Soviet economy. "In the last analysis," Lenin wrote, "productivity of labour is the most important, the principal thing for the victory of the new social system" (*Collected Works*, Vol. 29, p. 427).

Materials in this volume show that annual labour productivity in industry in 1967 will be 15 times greater than in 1913 and hourly labour productivity (taking into account the shorter working day) about 22 times greater. In pre-revolutionary Russia labour productivity in industry was but a fraction of that in the developed capitalist countries. Labour productivity in tsarist Russia's industry was only 11 per cent of the American level. Now it is about 40-50 per cent of the U.S. level and is higher than industrial labour productivity in the other developed capitalist countries.

Total power and electric power available per worker has risen greatly in the Soviet Union, as a result of which labour productivity increased and, moreover, working conditions have been radically improved. In 1967, power available per industrial worker will be 22 times greater, and electric power 36 times greater than in 1913.

Implementation of Lenin's co-operative plan has brought about radical changes in **agriculture**. The victory of the collective-farm system has transformed the face of the countryside. Instead of an ocean of small peasant farms, an agriculture has been developed which is based on modern machinery and operated on the largest scale in the world. In his time Lenin dreamed of 100,000 tractors for agriculture. At the beginning of 1967 agriculture had 1,660,000 tractors (3,233,000 in terms of 15-hp units), 531,000 grain harvester combines, over 1,000,000 lorries and a lot of other up-to-date machinery. Power available per person engaged in agriculture in 1966 was 16 times greater than in the peasant farms of pre-revolutionary Russia.

Total agricultural production in 1966 was 180 per cent above that in 1913, with a considerable cut in the number of people engaged in this sector.

The economic measures elaborated by the Plenary Meeting of the Central Committee of the C.P.S.U. in March 1965 and approved by the 23rd Congress of the C.P.S.U. were of great importance for the further advance of agriculture.

The grain crop in 1966 amounted to 171.2 million tons, 13 per cent above the previous record harvest in 1964. Grain purchases by the state also reached an all-time high.

An immense programme of **capital construction** was carried out in the U.S.S.R. in 50 years. The fixed assets commissioned during these years are approximately 20 times greater than those tsarist Russia

had in 1913. Capital investments in the economy in the 50 Soviet years totalled about 650,000 million rubles (in present-day prices). During this period more than 40,000 large state industrial enterprises were built anew or restored.

A powerful **transport system** capable of satisfying the needs of the expanding economy, has been built up on a modern technical basis. Air, motor and pipeline transport facilities have been created and all other modes of transport have been reconstructed. Progressive types of traction have been introduced on most railway lines—in 1967 electric and diesel locomotives are handling 92 per cent of all rail freight carriage. In 1967, freight carriage by all modes of transport will be 24 times greater than in 1913 and passenger traffic, 13 times.

Under socialism, development of productive forces is not an aim in itself. It serves as a means for attaining the principal aim of socialism, namely, **utmost advance of the material and cultural standards of the people**. The material condition and cultural level of the Soviet people have radically changed in Soviet times.

The victory of socialism in the U.S.S.R. has for ever put an end to that scourge of the working people, unemployment. As early as the end of 1930, unemployment was completely abolished in the U.S.S.R. A prime programme principle of the Communist Party of the Soviet Union—"everything for the sake of man, for the benefit of man"—is steadily applied in the Soviet Union.

The basic social rights of man—to work, to rest and leisure, to education and to material security in old age, in case of sickness or disability—have been actually secured in the Soviet Union for the first time in history.

Real incomes of workers in industry and construction per employed person have increased 6.6 times as compared with the pre-revolutionary level and the incomes of working peasants, 8.5 times.

The rise in the real incomes of the working people is above all a result of an increase in money wages of workers and the money income of the collective farmers. Statistics show that they are steadily growing on the basis of higher labour productivity.

Real incomes of the Soviet people have also risen in large measure through the constant expansion of the public consumption funds. These funds go to provide free medical service, free education and vocational training, allowances and pensions, scholarships for students, passes to health and holiday homes free of charge or at reduced rates, the maintenance of children in nurseries and kindergartens and a number of other benefits and privileges.

The swifter growth of collective farmers' incomes in money and in kind than the rise in workers' wages brings the level of their labour remuneration closer together. The overwhelming majority of collective farms have introduced guaranteed payment for work corresponding to the level of wages paid to state-farm workers for similar jobs and output quotas. A single pension system for collective farmers has been introduced.

A huge programme of housing construction has been carried out in the Soviet Union. From 1950 to 1966, 155 million people received flats in new houses or their housing conditions were improved.

The victory of socialism in the U.S.S.R. has been marked by signal advances in culture. The Soviet system has created the requisites and possibilities for the genuine florescence of the Soviet peoples' culture.

The opportunity to obtain a free education in general and technical schools, universities and institutes, available to all the working people, is one of the notable gains of socialism. At present, 73.6 million, or every third person (not counting children of pre-school age), study in the U.S.S.R. While in tsarist Russia four out of five children were unable to attend school, in the U.S.S.R. universal compulsory elementary education was introduced as far back as 1930. Transition to universal secondary education is under way at present. Wide opportunities for obtaining a higher or specialised secondary education have been created.

About 8,000 newspapers and more than 4,000 magazines and journals are published in the Soviet Union. More than 1,250 million copies of books are issued annually. Altogether in Soviet times books were issued in a total printing of more than 31,000 million copies in 89 languages of the Soviet peoples and in 51 foreign languages. More than 40 nationalities in the U.S.S.R. acquired a written language of their own only after the Great October Socialist Revolution.

In the light of these figures it is worth recalling the staggering picture of illiteracy in tsarist Russia revealed by the 1897 population census. According to the census returns, 72 per cent of the population from the age of 9 to 49 were illiterate; among women the percentage was even 83. Many peoples in the borderlands of tsarist Russia, especially in the Far North and Central Asia, were totally illiterate. Here is what Lenin wrote about education in tsarist Russia: "There is no other country so barbarous and in which the masses of the people are *robbed* to such an extent of education, light and knowledge—no other such country has remained in Europe; Russia is the exception" (*Collected Works*, Vol. 19, p. 139).

The immense cultural advance of the Soviet people magnificently sums up the results scored by the Land of Soviets after the October Revolution. The U.S.S.R. has actually become a country of universal literacy. More than 56 per cent of the gainfully-employed population have a higher or secondary (complete and incomplete) education.

Over 4 million people study now in Soviet higher educational establishments, 3.5 times as many as in Britain, France, West Germany and Italy combined.

The achievements of the U.S.S.R. in science are generally known. Soviet science holds leading positions in a number of fields. The Soviet Union has now 712,400 research workers as compared with 11,600 in pre-revolutionary Russia. One-fourth of all the scientists in the world are concentrated in the U.S.S.R.

The public health system has been completely overhauled. Russia was one of the most backward countries in respect of sanitation, with the highest incidence of disease and the highest mortality rate. The Soviet Union has become a country with the lowest mortality rate.

The successes of the public health system are inseparably associated with the expansion of the network of medical institutions, increase in the number of doctors and other medical personnel and their improved training. The Soviet Union has greatly outstripped the capitalist countries as regards the number of doctors per 1,000 of population and firmly holds first place in the world.

The Soviet government takes great care to provide the people with facilities for rest and recreation. Most industrial workers have a 41-hour working week, 18 hours less than in 1913. The change-over to a shorter working day without reducing wages, effected in the Soviet Union, was a major factor in improving the living standard of the people.

The right of citizens of the U.S.S.R. to rest and leisure is also ensured by the institution of paid annual holidays for industrial, office and other workers and also the establishment of a wide network of holiday homes, sanatoria, tourist centres, etc.

A five-day working week with two free days has been introduced in the Soviet Union in keeping with the Directives of the 23rd Congress of the C.P.S.U. This important socio-economic measure eases the labour conditions of industrial and other workers and extends their opportunities to improve their qualifications and advance culturally.

The solution of the **national question** in the Soviet Union is one of the greatest gains of the October Revolution. Fifty years of constructive labour by the peoples of the Soviet Union under the leadership of the Communist Party have borne splendid fruits. In all Union republics a powerful socialist industry and large-scale mechanised agriculture have been built up and the multinational culture of the Soviet peoples has blossomed forth.

The Soviet people see in unbreakable fraternal friendship and unity, in co-operation and mutual assistance the well-spring of the strength and might of their multinational state.

\* \* \*

The emergence of socialism beyond the bounds of one country and the formation of the world socialist system constitute a major result of mankind's development in the last half a century. The peoples of another 13 countries of Europe, Asia and America, have taken their place under the banner of victorious socialist revolution raised aloft over Russia 50 years ago.

The following data characterise the changes in the political map of the world from 1919 to 1967:

**Political Map of the World in 1919  
and at the Beginning of 1967**

	1919				At the beginning of 1967			
	Territory		Population (estimated)		Territory		Population (estimated)	
	Mill. sq km	Per cent of total	Mill. people	Per cent of total	Mill. sq km	Per cent of total	Mill. people	Per cent of total
I. Entire world . .	135.8	100	1,777	100	135.8	100	3,380	100
of which:								
socialist world . .	21.7	16.0	138.0	7.8	35.2	25.9	1,190	35.2
rest of the world	114.1	84.0	1,639	92.2	100.6	74.1	2,190	64.8
II. Big imperialist powers <sup>1</sup> and their colonies . . . . .	60.3	44.4	855	48.1	12.6	9.3	532.6	15.8
III. All colonies and semi-colonies . .	97.8	72.0	1,235	69.4	5.3	3.9	37.8	1.1
IV. Former colonial and semi-colonial countries which became sovereign states after 1919 (except socialist states) . . . . .	—	—	—	—	78.9	58.2	1,529	45.2

In 1919, the socialist system, represented by one country, the U.S.S.R., occupied 16 per cent of the globe's territory and had 7.8 per cent of the world population. At present the socialist system takes up an area of about 26 per cent of the world territory and accounts for more than 35 per cent of the world population.

The Great October Socialist Revolution struck a powerful blow at the entire system of imperialist colonial rule and provided a mighty stimulus to the national liberation movement. The colonial empires have disintegrated and more than 70 sovereign states have arisen on their ruins. Over 1,500 million people have discarded the colonial yoke and gained national independence. All these developments have essentially altered the political map of the world.

In 1919, colonies, semi-colonies and countries with the status of dominions took up 72 per cent of the globe's territory and were inhabited by 69 per cent of the world population. Today, countries still remaining in colonial bondage account for less than 4 per cent of the globe's territory and 1.1 per cent of the world population.

The people continue their struggle for emancipation from colonial bondage.

<sup>1</sup> The United States, Federal Republic of Germany (in 1919, Germany), France, Japan and Italy.

\* \* \*

The present collection of statistical materials contains the most important data on the achievements of the U.S.S.R. in the economy and culture and the advance of the people's welfare in the 50 Soviet years.

The Directives for the five-year economic development plan of the U.S.S.R. in 1966-70, approved by the 23rd Congress of the C.P.S.U., are successfully being fulfilled. The present five-year plan ensures a considerable advance of Soviet society in building communism.

Implementation of the decisions, taken by the Central Committee of the C.P.S.U. at its Plenary Meeting in September 1965, and by the 23rd Congress of the C.P.S.U., on further improving planning and economic stimulation of production opens up fresh prospects for better utilising the advantages of the socialist system and coping more successfully with the tasks of communist construction.

The further considerable growth of industry and agriculture is creating the requisites for another essential advance in the living standard of the people and the ever fuller satisfaction of their material and cultural requirements.

*"The victory of socialism created the economic, social, political and spiritual conditions for transition to the construction of communist society."*

From the Theses of the Central Committee of the C.P.S.U. "Fiftieth Anniversary of the Great October Socialist Revolution"

## **SUMMARY SECTION**

*The Union of Soviet Socialist Republics holds first place in the world for territory and third place for size of population.*

### POPULATION OF THE U.S.S.R.

	Population (mill.)	of which		Percentage of total population	
		urban	rural	urban	rural
1913, end of the year . . .	159.2	28.5	130.7	18	82
1917, January 1 . . . . .	163.0	29.1	133.9	18	82
1940, January 1 . . . . .	194.1	63.1	131.0	33	67
1950, January 1 . . . . .	178.5	69.4	109.1	39	61
1959, census of January 15	208.8	100.0	108.8	48	52
1967, January 1 . . . . .	234.4	128.0	106.4	55	45
1967, July 1 . . . . .	235.5	129.1	106.4	55	45

In Soviet years, that is, as compared with 1917, the population of the U.S.S.R. increased by 72.5 million and now amounts to 235.5 million. During this period the urban population rose by 100 million and its share of the total grew from 18 to 55 per cent.

Persons born after the Great October Socialist Revolution make up the overwhelming majority of the population—184 million, or nearly 80 per cent of the country's population.

### NUMBER OF MALES AND FEMALES

	Total pop- ulation (mill.)	of which		Percentage of total population	
		males	females	males	females
1913, end of the year . . .	159.2	79.1	80.1	49.7	50.3
1940, January 1 . . . . .	194.1	93.0	101.1	47.9	52.1
1959, census of January 15	208.8	94.0	114.8	45.0	55.0
1967, July 1 . . . . .	235.5	108.1	127.4	45.9	54.1

*"The Union of Soviet Socialist Republics is a federal state, formed on the basis of a voluntary union of equal Soviet Socialist Republics."*

Constitution of the U.S.S.R.

**TERRITORY AND POPULATION OF THE UNION REPUBLICS**

	Territory ( <sup>'000</sup> sq km)	Population (thousands)			
		1913, end of the year	1940, January 1	1959, January 15	1967, January 1
U.S.S.R. . . . .	22,402.2 <sup>1</sup>	159,153	194,077	208,827	234,396
R.S.F.S.R. . . . .	17,075.4	89,902	110,098	117,534	127,312
Ukrainian S.S.R. . . . .	603.7	35,210	41,340	41,869	45,966
Byelorussian S.S.R. . . . .	207.6	6,899	9,046	8,055	8,744
Uzbek S.S.R. . . . .	449.6	4,366	6,645	8,261	10,896
Kazakh S.S.R. . . . .	2,715.1	5,565	6,054	9,154	12,413
Georgian S.S.R. . . . .	69.7	2,601	3,612	4,044	4,611
Azerbaijan S.S.R. . . . .	86.6	2,339	3,274	3,698	4,802
Lithuanian S.S.R. . . . .	65.2	2,828	2,925	2,711	3,02 6
Moldavian S.S.R. . . . .	33.7	2,056	2,468	2,885	3,425
Latvian S.S.R. . . . .	63.7	2,493	1,886	2,093	2,285
Kirghiz S.S.R. . . . .	198.5	864	1,528	2,066	2,749
Tajik S.S.R. . . . .	143.1	1,034	1,525	1,981	2,654
Armenian S.S.R. . . . .	29.8	1,000	1,320	1,763	2,253
Turkmen S.S.R. . . . .	488.1	1,042	1,302	1,516	1,966
Estonian S.S.R. . . . .	45.1	954	1,054	1,197	1,294

<sup>1</sup> Including the areas of the White Sea (90,000 sq km) and the Azov Sea (37,300 sq km) which do not figure in the territory of separate republics.

**TERRITORY AND POPULATION OF AUTONOMOUS REPUBLICS,  
AUTONOMOUS REGIONS AND NATIONAL AREAS**

	Territory (*000 sq km)	Population (thousands)	
		1926, December 17	1967, January 1
<b>R.S.F.S.R.</b>			
Bashkirian A.S.S.R. . . . . .	143.6	2,547	3,757
Buryat A.S.S.R. . . . . .	351.3	389	780
Daghestan A.S.S.R. . . . . .	50.3	744	1,361
Kabardinian-Balkar A.S.S.R. . . . . .	12.5	224	530
Kalmyk A.S.S.R. . . . . .	75.9	135	248
Karelian A.S.S.R. . . . . .	172.4	261	707
Komi A.S.S.R. . . . . .	415.9	224	974
Mari A.S.S.R. . . . . .	23.2	489	653
Mordovian A.S.S.R. . . . . .	26.2	1,256	1,014
North-Ossetian A.S.S.R. . . . . .	8.0	287	518
Tatar A.S.S.R. . . . . .	68.0	2,588	3,127
Tuva A.S.S.R. . . . . .	170.5	...	217
Udmurt A.S.S.R. . . . . .	42.1	1,023	1,379
Checheno-Ingush A.S.S.R. . . . . .	19.3	539	1,033
Chuvash A.S.S.R. . . . . .	18.3	891	1,192
Yakut A.S.S.R. . . . . .	3,103.2	287	646
Adyghei Autonomous Region . . . . .	7.6	227	366
Gorny Altai Autonomous Region . . . . .	92.6	107	169
Jewish Autonomous Region . . . . .	36.0	36	174
Karachai-Cherkess Autonomous Region . . . . .	14.1	170	330
Khakass Autonomous Region . . . . .	61.9	121	462
Aginsk Buryat National Area . . . . .	19.0	36	62
Komi-Perm National Area . . . . .	32.9	163	216
Koryak National Area . . . . .	301.5	10	37
Nenets National Area . . . . .	176.7	14	37
Taimyr (Dolgano-Nenets) National Area . . . . .	862.1	7	36
Ust-Orda Buryat National Area . . . . .	22.1	107	154
Khanty-Mansi National Area . . . . .	523.1	39	250
Chukotsk National Area . . . . .	737.7	13	89
Evenki National Area . . . . .	767.6	5	12
Yamalo-Nenets National Area . . . . .	750.3	19	73
<b>Uzbek S.S.R.</b>			
Kara-Kalpak A.S.S.R. . . . . .	165.6	331	638
<b>Georgian S.S.R.</b>			
Abkhazian A.S.S.R. . . . . .	8.6	212	471
Ajarian A.S.S.R. . . . . .	3.0	132	301
South-Ossetian Autonomous Region . . . . .	3.9	87	102
<b>Azerbaijan S.S.R.</b>			
Nakhichevan A.S.S.R. . . . . .	5.5	105	189
Nagorny Karabakh Autonomous Region . . . . .	4.4	125	149
<b>Tajik S.S.R.</b>			
Gorny Badakhshan Autonomous Region . . . . .	63.7	56	93

The Great October Socialist Revolution, having abolished all national privileges and having granted all nations the right to self-determination, opened to them broad opportunities for all-round political, economic and cultural progress. Many peoples of the U.S.S.R. have their own statehood—Union and autonomous republics, autonomous regions and national areas.

The Russian Soviet Federative Socialist Republic (R.S.F.S.R.) was the first Soviet republic set up immediately after the victory of the October Revolution. Shortly afterwards two independent Soviet republics were formed—the Ukrainian Soviet Socialist Republic (Ukrainian S.S.R.) in December 1917 and Byelorussian S.S.R. in January 1919. Somewhat later, the Azerbaijan (April 1920), Armenian (November 1920) and Georgian (February 1921) Soviet Republics were established. In March 1922 the three of them united as equal members in the Transcaucasian Soviet Federative Socialist Republic.

In December 1922, the Soviet Socialist Republics united in a federal state, the Union of Soviet Socialist Republics. Later on, the U.S.S.R. was joined by the Uzbek and Turkmen republics (October 27, 1924) which were formed after national delimitation in Central Asia; by the Tajik S.S.R. (December 5, 1929) which previously had been part of the Uzbek S.S.R.; by the Kazakh and Kirghiz republics (December 5, 1936) which previously had been autonomous republics of the Russian Federation. The Transcaucasian Republic was dissolved on December 5, 1936, and its three constituent republics (Azerbaijan, Armenia and Georgia) directly joined the U.S.S.R. as Union republics.

In Lithuania, Latvia and Estonia Soviet power was established shortly after the October Revolution. But the bourgeoisie, with the help of imperialist states, succeeded in crushing Soviet power and restoring the capitalist order there. Only in 1940 was Soviet power restored in these republics and the Lithuanian, Latvian and Estonian Soviet Republics were admitted to the U.S.S.R.

A big part of Moldavia, in which Soviet power was also established shortly after the October Revolution, was occupied by Rumania in 1918. After the expulsion of the Austro-German imperialists the Moldavian Autonomous Soviet Socialist Republic was set up in the rest of Moldavia and it became part of the Ukrainian S.S.R. In 1940, the formerly occupied territory was reunited with the Moldavian Autonomous Republic and the Moldavian S.S.R. was formed.

Today the Soviet Union is a voluntary federation of 15 equal Soviet Socialist Republics.

The first autonomous republics to be formed were Bashkiria (1919), Tataria (1920), Daghestan, Abkhazia and Ajaria (1921), Yakutia (1922) and Nakhichevan (1924). The Buryat, Kabardinian-Balkar, Kara-Kalpak, Kalmyk, Komi, Mari, Mordovian, North-Ossetian, Tuva, Udmurt, Chuvash and Checheno-Ingush autonomous republics have been reconstituted at different times from autonomous regions.

Since the formation of the U.S.S.R. the number of state entities has increased considerably. In 1923, there were four Union republics, 13 autonomous republics and 16 autonomous regions, while in 1967 there were 15 Union republics, 20 autonomous republics, eight autonomous regions and 10 national areas.

*Men and women of over 100 nations and nationalities live and work in a harmonious family in the U.S.S.R. The national question has been fully solved in the Soviet Union for the first time in the history of mankind.*

**NATIONAL COMPOSITION OF THE POPULATION**  
**(Data of the 1959 Population Census in the U.S.S.R.)**

	Population (thousands)	Percentage of persons who consider the language of their national- ity their native language
<b>Entire Population of the U.S.S.R.</b> . . . . .	<b>208,827</b>	<b>94.3</b>
Russians . . . . .	114,114	99.8
Ukrainians . . . . .	37,253	87.7
Byelorussians . . . . .	7,913	84.2
Uzbeks . . . . .	6,015	98.4
Kazakhs . . . . .	3,622	98.4
Azerbaijanians . . . . .	2,940	97.6
Armenians . . . . .	2,787	89.9
Georgians . . . . .	2,692	98.6
Lithuanians . . . . .	2,326	97.8
Moldavians . . . . .	2,214	95.2
Letts . . . . .	1,400	95.1
Tajiks . . . . .	1,397	98.1
Turkmens . . . . .	1,002	98.9
Estonians . . . . .	989	95.2
Kirghiz . . . . .	969	98.7
Tatars . . . . .	4,968	92.1
Chuvashi . . . . .	1,470	90.8
Mordvinians . . . . .	1,285	78.1
Bashkirs . . . . .	989	61.9
Daghestan nationalities . . . . .	944	96.2
of which:		
Avars . . . . .	270	97.2
Lesghins . . . . .	223	92.7
Dargins . . . . .	158	98.6
Kумыks . . . . .	135	98.0
Laks . . . . .	64	95.8
Nogaians . . . . .	38.6	90.0
Tabasarans . . . . .	34.7	99.2
Tsakhurs . . . . .	7.3	99.2
Rutuls . . . . .	6.7	99.9
Aguls . . . . .	6.7	99.4
Udmurts . . . . .	625	89.1
Mari . . . . .	504	95.1
Chechens . . . . .	419	98.8
Ossets . . . . .	413	89.1
Komi . . . . .	287	89.3
Buryats . . . . .	253	94.9
Yakuts . . . . .	237	97.5

Continued

	Population (thousands)	Percentage of persons who consider the language of their national- ity their native language
Kabardinians . . . . .	204	97.9
Kara-Kalpaks . . . . .	173	95.0
Karelians . . . . .	167	71.3
Kalmyks . . . . .	106	91.0
Ingushi . . . . .	106	97.9
Tuvinians . . . . .	100	99.1
Abkhazians . . . . .	65	95.0
Balkars . . . . .	42	97.0
Jews . . . . .	2,268	21.5
Karachais . . . . .	81	96.8
Adyghei . . . . .	80	96.8
Khakassi . . . . .	57	86.0
Altaians . . . . .	45	88.5
Circassians . . . . .	30	89.7
Komi-Permyaks . . . . .	144	87.6
Northern nationalities . . . . .	127	75.2
of which:		
Evenks . . . . .	24.7	55.9
Nentsi . . . . .	23.0	84.7
Khanty . . . . .	19.4	77.0
Chukchi . . . . .	11.7	93.9
Evens . . . . .	9.1	81.4
Nanaians . . . . .	8.0	86.3
Mansi . . . . .	6.4	59.2
Koryaks . . . . .	6.3	90.5
Germans . . . . .	1,620	75.0
Poles . . . . .	1,380	45.2
Bulgarians . . . . .	324	79.4
Koreans . . . . .	314	79.3
Greeks . . . . .	309	41.5
Hungarians . . . . .	155	97.2
Gypsies . . . . .	132	59.3
Gagauzes . . . . .	124	94.0
Rumanians . . . . .	106	83.3
Uighurs . . . . .	95	85.0
Finns . . . . .	93	59.5
Kurds . . . . .	59	89.9
Turks . . . . .	35	82.2
Chinese . . . . .	26	69.3
Czechs . . . . .	25	49.0
Dungans . . . . .	22	95.1
Aisors (Assyrians) . . . . .	22	64.3
Iranians . . . . .	21	44.7
Abazians . . . . .	20	94.8
Vepses . . . . .	16	46.1
Shorians . . . . .	15	83.7
Slovaks . . . . .	15	61.2
Tats . . . . .	11	70.9
Other nationalities . . . . .	64	62.3

**POPULATION OF THE CAPITALS OF THE UNION REPUBLICS  
AND CITIES WITH A POPULATION OF OVER 500,000**

(thousands)

	1917 or the nearest year	1926, Decem- ber 17	1939	1959, Janu- ary 15	1967, Janu- ary 1
Moscow <sup>1</sup>					
within the boundaries of the respective					
years . . . . .	1,854	2,029	4,137	5,086	6,507
in present boundaries . . . . .	...	2,080	4,542	6,040	6,507
Leningrad <sup>1</sup> . . . . .	2,500	1,731	3,385	3,321	3,706
Kiev . . . . .	468	514	847	1,104	1,413
Tashkent <sup>2</sup> . . . . .	257	314	556	927	1,239
Baku <sup>1</sup> . . . . .	248	453	775	971	1,196
Kharkov . . . . .	313	417	833	934	1,125
Gorky . . . . .	127	222	644	942	1,120
Novosibirsk . . . . .	70	120	404	886	1,064
Kuibyshev . . . . .	249	176	390	806	992
Sverdlovsk . . . . .	70	140	423	779	961
Tbilisi . . . . .	231	294	519	703	842
Donetsk . . . . .	38	174	466	699	840
Chelyabinsk . . . . .	47	59	273	689	836
Kazan . . . . .	193	179	398	647	821
Dniepropetrovsk . . . . .	217	237	527	660	816
Perm . . . . .	48	121	306	629	796
Odessa . . . . .	466	419	602	667	776
Omsk . . . . .	80	162	289	581	774
Minsk . . . . .	153	132	237	509	772
Rostov-on-Don . . . . .	177	308	510	600	757
Volgograd . . . . .	133	151	445	592	743
Saratov . . . . .	223	220	372	581	720
Ufa . . . . .	105	99	258	547	704
Riga . . . . .	225	...	348	580	680
Yerevan . . . . .	34	65	204	509	665
Alma-Ata . . . . .	35	44	222	456	652
Voronezh . . . . .	127	122	344	448	611
Zaporozhye . . . . .	59	54	282	435	595
Krasnoyarsk . . . . .	70	72	190	412	576
Lvov . . . . .	...	...	340	411	512
Krivoi Rog . . . . .	22	33	189	388	510
Frunze . . . . .	12	37	93	220	396
Tallinn . . . . .	159	...	160	282	340
Dushanbe . . . . .	...	6	83	224	333
Vilnius . . . . .	139	...	215	236	316
Kishinev . . . . .	133	...	112	216	302
Ashkhabad . . . . .	26	52	127	170	238

<sup>1</sup> Including urban-type settlements under the jurisdiction of the City Soviet.

<sup>2</sup> The urban-type settlements Kuilyuk, Orjonikidze and Sergheli and 32 rural communities were included within the city limits of Tashkent by Decrees of the Presidium of the Supreme Soviet of the Uzbek S.S.R. of November 14 and December 31, 1966.

In 1917, there were only two cities with a population of more than half a million, while now there are 31; of them Moscow, Leningrad, Kiev, Tashkent, Baku, Kharkov, Gorky and Novosibirsk have a population of more than one million.

### DISTRIBUTION OF TOWNS BY SIZE OF POPULATION

	Number of urban-type communities			Their population (mill.)		
	December 1926	January 1959	January 1967	December 1926	January 1959	January 1967
All urban-type communities . . . . .	1,925	4,619 <sup>1</sup>	5,319	26.3	100.0	128.0
of which towns . . . . .	709	1,679	1,874	21.7	83.0	106.6
of them towns with a population						
under 3,000 . . . . .	51	90	79	0.1	0.2	0.2
from 3,000 to 5,000 . . . . .	90	115	91	0.4	0.5	0.4
from 5,000 to 10,000 . . . . .	168	283	255	1.2	2.1	1.9
from 10,000 to 20,000 . . . . .	182	443	539	2.6	6.5	7.7
from 20,000 to 50,000 . . . . .	127	444	531	3.8	14.1	16.5
from 50,000 to 100,000 . . . . .	60	156	180	4.1	11.0	12.6
from 100,000 to 500,000 . . . . .	28	123	168	5.4	24.4	33.9
above 500,000 . . . . .	3	25	31	4.1	24.2	33.4

There were about 800 towns in pre-revolutionary Russia (within the present frontiers), in which 18 per cent of the country's entire population lived.

The development of industry has brought about a swift growth of towns and other urban-type communities and the urban population sharply increased. At present the Soviet Union has 1,874 towns and 3,445 other urban-type communities. The urban population has grown 4.5 times in the Soviet years and now accounts for 55 per cent of the total.

From 1926 to the beginning of 1967, 884 new towns were formed and the number of urban-type communities increased by 2,092.

<sup>1</sup> Data for 1959 on the composition of urban-type communities relate to the middle of the year.

*"The political foundation of the U.S.S.R. is the Soviets of Working People's Deputies, which grew and became strong as a result of the overthrow of the power of the landowners and capitalists and the attainment of the dictatorship of the proletariat."*

Constitution of the U.S.S.R.

**NUMBER OF DEPUTIES OF THE SUPREME SOVIET OF THE U.S.S.R.,  
SUPREME SOVIETS OF THE UNION AND AUTONOMOUS REPUBLICS  
AND LOCAL SOVIETS OF WORKING PEOPLE'S DEPUTIES**

Supreme Soviet of the U.S.S.R. (1966 elections) . . . . .	1,517
Soviet of the Union . . . . .	767
Soviet of Nationalities . . . . .	750
Supreme Soviets of the Union Republics (1967 elections) . . . .	5,830
Supreme Soviets of the Autonomous Republics (1967 elections) . .	2,925
Territorial, regional, area, district, city, settlement and rural Soviets of Working People's Deputies . . . . .	2,045,419

Soviet power is the power of the working people themselves, of the millions of workers and peasants.

Lenin wrote: "Comrades, working people! Remember that now *you yourselves* are at the helm of state.... *Your Soviets* are from now on the organs of state authority, legislative bodies with full powers" (*Collected Works*, Vol. 26, p. 297).

All state power on the entire territory of the Union of Soviet Socialist Republics is exercised by the Soviets of Working People's Deputies—from the local Soviets in rural communities and cities to the Supreme Soviet of the U.S.S.R.

All deputies of the Supreme Soviet of the U.S.S.R., the highest organ of state power, represent the workers, peasants and intelligentsia. Prior to the revolution, the Fourth Duma of tsarist Russia (1912 elections) had 439 deputies, of whom 354, or 80.6 per cent, represented the landowners, urban bourgeoisie, merchants and kulaks (rich peasants).

Present-day bourgeois parliaments consist chiefly of industrialists, bankers, landowners, top civil servants, and executives of monopoly corporations. The U.S. Congress, for example, does not have a single worker or small farmer. The Bundestag in the Federal Republic of Germany does not have among its deputies a single industrial worker.

In the Supreme Soviet of the U.S.S.R. elected in 1966, workers make up 26.6 per cent of all the deputies, collective farmers 19.4 per cent, scientists and workers in culture, literature and the arts 10.2 per cent, functionaries of Party, trade union and Komsomol bodies, government officials and executives of economic organisations 40.1 per cent and servicemen 3.7 per cent.

All the indigenous peoples and nationalities of the Union and autonomous republics, autonomous regions and national areas are represented in the Supreme Soviet of the U.S.S.R. The composition of the deputies attests to the genuinely representative nature of the highest organ of power in the Soviet state.

*"Our task is to make politics accessible to every working woman."*

V. I. Lenin

**WOMEN DEPUTIES OF THE SUPREME SOVIET OF THE U.S.S.R., SUPREME SOVIETS OF THE UNION AND AUTONOMOUS REPUBLICS AND LOCAL SOVIETS OF WORKING PEOPLE'S DEPUTIES**

	Total number of deputies	of them women	Per-centage of women
Supreme Soviet of the U.S.S.R. (1966 elections)	1,517	425	28.0
Soviet of the Union . . . . .	767	222	28.9
Soviet of Nationalities . . . . .	750	203	27.1
Supreme Soviets of the Union Republics (1967 elections) . . . . .	5,830	1,962	33.7
Supreme Soviets of the Autonomous Republics (1967 elections) . . . . .	2,925	1,021	34.9
Territorial, regional, area, district, city, settlement and rural Soviets of Working People's Deputies (1967 elections) . . . . .	2,045,419	875,303	42.8

In pre-revolutionary Russia women were disfranchised.

The Great October Socialist Revolution put an end to the unequal position of women.

The Leninist principles of widely enrolling women in the administration of the state has been steadfastly applied in the Soviet Union: 425 women are deputies of the Supreme Soviet of the U.S.S.R. There are very few women in parliaments of the capitalist countries. In the United States, for example, there are only 12 women in the 90th Congress.

*All peoples of the Soviet Union are taking an active part in the country's political and social life, in administering the state.*

**NUMBER OF DEPUTIES ELECTED IN 1967 TO THE SUPREME SOVIETS OF THE UNION REPUBLICS AND TO LOCAL SOVIETS OF WORKING PEOPLE'S DEPUTIES**

	To Supreme Soviets of the Union Republics			To local Soviets of Working People's Deputies		
	Total number of deputies	of which women	percentage of all deputies	Total number of deputies	of which women	percentage of all deputies
U.S.S.R. . . . .	5,830	1,962	33.7	2,045,419	875,303	42.8
R.S.F.S.R. . . . .	884	299	33.8	1,080,029	471,283	43.6
Ukrainian S.S.R. . . . .	469	160	34.1	422,576	173,654	41.1
Byelorussian S.S.R. . . . .	421	153	36.3	81,866	35,087	42.9
Uzbek S.S.R. . . . .	458	141	30.8	78,586	34,640	44.1
Kazakh S.S.R. . . . .	476	160	33.6	105,756	40,626	38.4
Georgian S.S.R. . . . .	400	125	31.3	48,218	20,960	43.5
Azerbaijan S.S.R. . . . .	380	123	32.4	42,407	17,290	40.8
Lithuanian S.S.R. . . . .	290	94	32.4	32,888	14,240	43.3
Moldavian S.S.R. . . . .	315	119	37.8	32,285	15,502	48.0
Latvian S.S.R. . . . .	310	101	32.6	23,978	11,003	45.9
Kirghiz S.S.R. . . . .	339	120	35.4	22,666	9,289	41.0
Tajik S.S.R. . . . .	315	104	33.0	19,658	8,567	43.6
Armenian S.S.R. . . . .	310	101	32.6	25,650	10,619	41.4
Turkmen S.S.R. . . . .	285	100	35.1	17,565	7,228	41.2
Estonian S.S.R. . . . .	178	62	34.8	11,291	5,315	47.1

The people exercise state power through the Soviets. Workers, collective farmers and intellectuals of the many nations and nationalities inhabiting the U.S.S.R. are elected deputies of the Soviets.

Young people hold a considerable place in the Soviets: 334,000 deputies are under 30.

**NUMBER OF DEPUTIES ELECTED IN 1967  
TO THE SUPREME SOVIETS OF THE AUTONOMOUS REPUBLICS**

	Total number of deputies	of which women	percentage of all deputies
<b>R.S.F.S.R.</b>			
Bashkirian A.S.S.R. . . . . .	247	82	33.2
Buryat A.S.S.R. . . . . .	127	42	33.1
Daghestan A.S.S.R. . . . . .	178	75	42.1
Kabardinian-Balkar A.S.S.R. . . . . .	138	56	40.6
Kalmyk A.S.S.R. . . . . .	115	44	38.3
Karelian A.S.S.R. . . . . .	133	42	31.6
Komi A.S.S.R. . . . . .	150	49	32.7
Mari A.S.S.R. . . . . .	113	36	31.9
Mordovian A.S.S.R. . . . . .	138	49	35.5
North-Ossetian A.S.S.R. . . . . .	128	43	33.6
Tatar A.S.S.R. . . . . .	207	73	35.3
Tuva A.S.S.R. . . . . .	110	30	27.3
Udmurt A.S.S.R. . . . . .	178	58	32.6
Checheno-Ingush A.S.S.R. . . . . .	149	64	43.0
Chuvash A.S.S.R. . . . . .	149	54	36.2
Yakut A.S.S.R. . . . . .	201	64	31.8
<b>Uzbek S.S.R.</b>			
Kara-Kalpak A.S.S.R. . . . . .	164	56	34.1
<b>Georgian S.S.R.</b>			
Abkhazian A.S.S.R. . . . . .	130	44	33.8
Ajarian A.S.S.R. . . . . .	90	26	28.9
<b>Azerbaijan S.S.R.</b>			
Nakhichevan A.S.S.R. . . . . .	80	34	42.5

*Labour is a matter of honour, valour and glory in the Soviet Union. The working people are awarded government decorations for their outstanding labour achievements.*

**NUMBER OF CIVILIANS DECORATED WITH ORDERS  
AND MEDALS OF THE U.S.S.R.**

	From 1918 to June 22, 1941	From June 23, 1941 to end of 1945	From 1946 to January 1, 1967	Altogeth- er from 1918 to January 1, 1967	of which women
<b>Total number of awards</b>	<b>42,893</b>	<b>202,953</b>	<b>3,123,912</b>	<b>3,369,758</b>	<b>1,080,105</b>
of which:					
award of the title of Hero of Socialist La- bour . . . . .	12	197	13,013	13,222	3,828
of them:					
Heroes of Socialist Labour awarded a second or third Ham- mer and Sickle Gold Medal . . . . .	—	—	65	65	24
Number of persons awarded orders . . . . .	24,739	115,163	1,125,935	1,265,837	309,317
of them:					
Order of Lenin . . .	4,764	5,207	241,195	251,166	59,944
Order of the Red Banner of Labour	7,927	21,029	449,870	478,826	109,182
Order of Badge of Honour . . . . .	10,858	53,933	428,262	493,053	138,907
Number of persons awarded medals . . . .	18,142	87,593	1,984,899	2,090,634	766,936
of them:					
For Valorous Labour Medal . . . . .	7,328	44,589	899,485	951,402	310,676
For Meritorious La- bour Medal . . . . .	10,791	39,667	1,083,892	1,134,350	455,841

*"Observing the 50th anniversary of the October Revolution, the Soviet people are reviewing the half-century road of struggle and victories. That was the road from the landowner-capitalist system to radical socialist changes, to a society that knows no exploitation; from the political disfranchisement of the working people to socialist democracy; from national oppression of the peoples to their freedom and equality, friendship and brotherhood; from technical and economic backwardness to a modern industry and mechanised collective agriculture; from illiteracy to the unprecedented progress of education, science and culture."*

From the Resolution of the Central Committee of the C.P.S.U. on Preparations for the 50th Anniversary of the Great October Socialist Revolution

**BASIC INDICES OF ECONOMIC DEVELOPMENT OF THE U.S.S.R.  
FROM 1913 TO 1967  
(Percentages of 1913)**

	1913	1917	1928	1940	1945	1960	1966	1967 (plan)
Production of national income . . . .	100	75	119	535	445	2,327	3,431	3,658
Fixed productive assets (including livestock) of all branches of the economy . .	100	94	115	264	226	838	1,432	1,554 <sup>1</sup>
of which: industry	100	89	105	689	657	2,925	5,355	5,837
Gross output of industry . . . . .	100	71	132	769	705	4,032	6,613	7,096
Output of means of production (Group A) . . .	100	81	155	1,340	1,504	8,936	15,458	16,617
Output of consumer goods (Group B) . . .	100	67	120	460	273	1,498	2,183	2,327
Gross output of agriculture . . . . .	100	88	124	141	86	224	276	288
Freight carriage by all types of transport . . . . .	100	75	104	387	297	1,496	2,315	2,431
Rail freight carriage	100	96	142	543	411	1,968	2,637	2,682
Capital investments	100	...	106	555	523	3,665	5,324	5,694
Number of industrial, office and other workers . . . . .	100	...	100	263	221	481	618	643
Productivity of labour in industry . . . . .	100	...	120	376	427	1,113	1,468	1,540 <sup>2</sup>
in agriculture . . . . .	100	86	115	193	131	347	439 <sup>2</sup>	

<sup>1</sup> Estimate.

<sup>2</sup> The figures give the growth rates of annual labour productivity. Taking into account the reduction of the working day, hourly labour productivity in industry rose approximately 22 times as compared with 1913 and in agriculture, more than 5 times.

*"The mass heroism that was displayed by the working people during the period of economic rehabilitation and the first five-year plans constitutes an unforgettable page in the history of our society. Soviet people did not stint their strength, consciously accepted hardships and set examples of courage and self-sacrifice in their work for the sake of surmounting the country's economic backwardness and turning it into a great socialist power."*

From the Resolution of the Central Committee of the C.P.S.U. on Preparations for the 50th Anniversary of the Great October Socialist Revolution

**BASIC INDICES OF ECONOMIC DEVELOPMENT OF THE U.S.S.R.  
FROM 1928 TO 1967  
(Percentages of 1928)**

	1928	1940	1945	1960	1966	1967 (plan)
Production of national income . . .	100	513	427	2,234	3,294	3,512
Fixed productive assets (including livestock) of all branches of the economy . . . . .	100	243	208	770	1,317	1,429
of which: industry . . . . .	100	697	663	2,957	5,412	5,899
Gross output of industry . . . . .	100	646	593	3,387	5,555	5,961
Output of means of production (Group A) . . . . .	100	1,000	1,122	6,664	11,528	12,393
Output of consumer goods (Group B) . . . . .	100	415	246	1,351	1,969	2,099
Gross output of agriculture . . . . .	100	132	80	210	259	270
Freight carriage by all types of transport . . . . .	100	408	314	1,579	2,444	2,566
Rail freight carriage . . . . .	100	444	336	1,611	2,159	2,195
Fixed assets commissioned by state and co-operative enterprises and organisations, collective farms and the population . . . . .	100	704	617	4,636	6,732	7,456
exclusive of assets commissioned by collective farms and the population . . . . .	100	1,060	856	6,831	10,427	11,285
Capital investments by state and co-operative enterprises and organisations, collective farms and the population . . . . .	100	642	606	4,240	6,160	6,588
exclusive of capital investments by collective farms and the population . . . . .	100	862	771	5,587	8,489	8,920
State and co-operative retail trade . . . . .	100	233	104	758	1,099	1,180
Number of industrial, office and other workers . . . . .	100	296	250	542	697	725
Productivity of labour:						
in industry . . . . .	100	313	356	927	1,224	1,283
in construction . . . . .	100	247	223	705	953	1,013
in agriculture . . . . .	100	171	116	308	390	
on the railways . . . . .	100	269	183	610	828	849

**BASIC INDICES OF ECONOMIC DEVELOPMENT OF THE U.S.S.R.  
FROM 1940 TO 1967  
(Percentages of 1940)**

	1940	1945	1950	1960	1966	1967 (plan)
Production of national income . . . . .	100	83	164	435	642	684
Fixed productive assets (including livestock) of all branches of the economy . . . . .	100	86	124	317	543	589
of which: industry . . . . .	100	95	141	424	777	847
Gross output of industry . . . . .	100	92	173	524	860	922
Output of means of production (Group A) . . . . .	100	112	205	666	1,153	1,239
Output of consumer goods (Group B) . . . . .	100	59	123	326	475	506
Gross output of agriculture . . . . .	100	60	99	160	198	206
Freight carriage by all types of transport . . . . .	100	77	146	387	598	628
Rail freight carriage . . . . .	100	76	145	362	486	494
Fixed assets commissioned by state and co-operative enterprises and organisations, collective farms and the population . . . . .	100	88	196	658	956	1,059
exclusive of assets commissioned by collective farms and the population . . . . .	100	81	199	645	984	1,065
Capital investments of state and co-operative enterprises and organisations, collective farms and the population . . . . .	100	94	200	660	959	1,026
exclusive of capital investments of collective farms and the population . . . . .	100	89	204	648	985	1,035
State and co-operative retail trade . . . . .	100	45	110	326	473	508
Number of industrial, office and other workers . . . . .	100	84	119	183	235	245
Productivity of labour:						
in industry . . . . .	100	114	145	296	391	410
in construction . . . . .	100	90	125	285	385	410
in collective farms, state farms and subsidiary agricultural enterprises . . . . .	100	60	100	203	269	
on the railways . . . . .	100	68	110	226	307	315

*"The power of the socialist system has been strikingly displayed in the post-war years too. Towns and rural communities were raised from the ruins and ashes in the shortest time. The war-wrecked economy was fully restored, new achievements were scored in the development of the economy, science and culture, and the Soviet Union entered the period of full-scale building of communism."*

From the Resolution of the Central Committee of the C.P.S.U. on Preparations for the 50th Anniversary of the Great October Socialist Revolution

**BASIC INDICES OF ECONOMIC DEVELOPMENT OF THE U.S.S.R.  
FROM 1945 TO 1967  
(Percentages of 1945)**

	1945	1950	1960	1966	1967 (plan)
Production of national income . . . . .	100	197	523	772	823
Fixed productive assets (including livestock) of all branches of the economy . . . . .	100	144	371	634	688
of which: industry . . . . .	100	148	446	816	889
Gross output of industry . . . . .	100	189	572	938	1,006
Output of means of production (Group A)	100	183	594	1,028	1,105
Output of consumer goods (Group B)	100	207	549	800	853
Gross output of agriculture . . . . .	100	163	264	326	340
Freight carriage by all types of transport	100	190	503	779	818
Rail freight carriage . . . . .	100	192	479	642	653
Fixed assets commissioned by state and co- operative enterprises and organisations, collective farms and the population . . . . .	100	224	751	1,090	1,208
exclusive of assets commissioned by col- lective farms and the population . . . . .	100	247	798	1,219	1,319
Capital investments of state and co-ope- rative enterprises and organisations, col- lective farms and the population . . . . .	100	213	700	1,017	1,088
exclusive of capital investments by collective farms and the population	100	228	725	1,101	1,157
State and co-operative retail trade . . . . .	100	246	727	1,055	1,133
Number of industrial, office and other work- ers . . . . .	100	141	217	279	291
Productivity of labour:					
in industry . . . . .	100	128	260	343	360
in construction . . . . .	100	139	316	427	454
in collective farms, state farms and subsidiary agricultural enterprises . . . . .	100	165	337	445	
on the railways . . . . .	100	161	332	451	463

In assessing the great achievements of the socialist economy one must bear in mind that about 20 of the 50 years of the Soviet state were taken up by the Civil War and foreign intervention and the Second World War and also by the subsequent restoration of the economy.

The Soviet Union sustained colossal damage during the Second World War. Here are figures showing the scale of the material damage caused by the nazi invaders to state enterprises and institutions, collective farms, mass organisations and citizens of the U.S.S.R.

	'000 mill. rubles (in 1941 prices)
Damage inflicted on the economy of the U.S.S.R. and citizens (losses from direct destruction and looting of property)—total	679*
of which:	
state enterprises and institutions . . . . .	287
collective farms . . . . .	181
rural and urban dwellers . . . . .	192
co-operative, trade union and other mass organisations . . . . .	19

The damage inflicted on some Union republics was as follows:

	'000 mill. rubles (in 1941 prices)
R.S.F.S.R. . . . .	255
Ukrainian S.S.R. . . . .	285
Byelorussian S.S.R. . . . .	75
Latvian S.S.R. . . . .	20
Lithuanian S.S.R. . . . .	17
Estonian S.S.R. . . . .	16
Moldavian S.S.R. . . . .	11

The German fascist invaders fully or partially destroyed and burned down 1,710 towns and urban-type communities and more than 70,000 rural communities; demolished over 6 million dwelling houses and deprived about 25 million people of shelter; destroyed 31,850 industrial enterprises, put out of commission iron and steel works which prior to the war produced about 60 per cent of country's steel, collieries which contributed over 60 per cent of the country's coal; destroyed 65,000 kilometres of railway track and 4,100 railway stations, 36,000 post and telegraph offices, telephone exchanges and other communication establishments; ruined and looted tens of thousands of collective and state farms, slaughtered, or drove off to Germany 7 million horses, 17 million head of cattle, 20 million pigs and 27 million sheep and goats. They also destroyed and looted 40,000 hospitals and other medical institutions, 84,000 schools, technical schools, higher educational establishments and research institutions and 43,000 public libraries.

These figures by far do not encompass all the damage inflicted by the nazi invaders. They cover only losses caused by the direct destruction of property of citizens, collective farms, mass organisations and state enterprises and institutions. The sum

\* In old rubles.

of damage does not include such losses as the decrease in the national income because of the discontinuation or curtailment of activity by state enterprises, collective farms and citizens, the value of the foodstuffs and other goods seized by the German occupation forces, the war expenditure of the Soviet Union and also the losses from the slowing down of the country's economic growth rates as a result of enemy hostilities from 1941 to 1945.

The expenditure of the Soviet state on the war against Germany and also against Japan, and the loss of income as a result of occupation sustained by state and cooperative enterprises and organisations, collective farms and the population of the Soviet Union reached during the war the huge sum of not less than 1,890,000 million rubles (in 1941 prices). This sum should be added to the direct damage estimated at 679,000 million rubles.

But the gravest loss suffered in the Patriotic War was the toll of more than 20 million Soviet people killed.

The mighty forces of the socialist system ensured the swift restoration of the war-wrecked economy and the subsequent steady expansion of production.

### GROWTH RATES OF FIXED ASSETS FROM 1917 TO 1966

(end-of-year figures; 1917=1)

	1917	1928	1940	1945	1960	1966
<b>All fixed assets</b>						
(including livestock) . . . . .	1	1.4	2.9	2.4	8.4	14
<b>Fixed productive assets</b> . . . . .	1	1.2	2.8	2.4	9.0	15
of which:						
industry . . . . .	1	1.2	7.7	7.3	33	60
construction . . . . .	1	1.7	43	53	320	625
agriculture . . . . .						
including livestock . . . . .	1	1.3	1.5	1.1	3.2	4.8
exclusive of livestock . . . . .	1	1.7	3.1	2.1	8.5	15
transport . . . . .	1	1.1	3.2	2.9	9.4	15
communications . . . . .	1	1.3	13	11	25	47
trade and public catering . . . . .	1	1.3	10	11	39	65
procurements, supply, forestry and other branches of material production . . . . .	1	1.9	25	17	67	117
<b>Fixed non-productive assets</b> . . . . .	1	1.5	3.0	2.4	7.7	11
of which:						
housing . . . . .	1	1.6	2.9	2.4	6.4	8.8
public utilities and service estab- lishments . . . . .	1	1.1	3.8	2.4	11	20
public health, education, science, culture, art and other non-pro- ductive branches . . . . .	1	1.2	3.8	3.2	22	39

**GROWTH RATES OF FIXED ASSETS FROM 1940 TO 1966**  
(end-of-year figures: percentages of 1940)

	1940	1945	1950	1955	1960	1966
<b>All fixed assets (including livestock)</b>	<b>100</b>	<b>84</b>	<b>117</b>	<b>182</b>	<b>290</b>	<b>466</b>
<b>Fixed productive assets . . . . .</b>	<b>100</b>	<b>86</b>	<b>124</b>	<b>201</b>	<b>317</b>	<b>543</b>
of which:						
industry . . . . .	100	95	141	250	424	777
construction . . . . .	100	125	241	492	748	1,464
agriculture:						
including livestock . . . . .	100	72	101	144	216	328
exclusive of livestock . . . . .	100	69	101	169	278	476
transport . . . . .	100	90	121	192	292	475
communications . . . . .	100	83	105	138	190	363
trade and public catering . . . . .	100	103	177	285	379	631
procurements, supply, forestry and other branches of material pro- duction . . . . .	100	70	106	183	268	465
<b>Fixed non-productive assets . . . . .</b>	<b>100</b>	<b>81</b>	<b>111</b>	<b>161</b>	<b>259</b>	<b>383</b>
of which:						
housing . . . . .	100	83	105	145	222	306
public utilities and service estab- lishments . . . . .	100	63	88	156	299	512
public health, education, science, culture, art and other non-productive branches . . . . .	100	83	182	323	594	1,038

**FIXED ASSETS OF THE ECONOMY BY BRANCHES**  
as of January 1, 1967  
(in 1955 prices)

	'000 mill. rubles	Percentage of total
<b>All fixed assets (including livestock)</b> . . . . .	<b>555</b>	<b>100</b>
<b>Fixed productive assets</b> . . . . .	<b>337</b>	<b>60.7</b>
of which:		
industry . . . . .	163	29.5
construction . . . . .	12	2.2
agriculture . . . . .	69	12.5
transport . . . . .	68	12.2
communications . . . . .	4	0.8
trade and public catering . . . . .	13	2.2
procurements and supply . . . . .	7	1.2
other branches of material production . . . . .	1	0.1
<b>Fixed non-productive assets</b> . . . . .	<b>218</b>	<b>39.3</b>
of which:		
housing . . . . .	147	26.6
public utilities and service establishments . . . . .	20	3.6
public health, education, science, culture, art and other non-productive branches . . . . .	51	9.1

Fixed assets make up the most important part of a country's national wealth. They reflect the value of all buildings, installations, transmission devices, machinery, equipment, apparatus, instruments and other objects which are used by society.

Restoration of the fixed assets, their expansion and improvement began in the first Soviet years: old enterprises destroyed in the First World War were restored and the building of new enterprises was started. From 1918 to 1928, more than 2,000 large state enterprises were restored or built anew. As a result, at the end of 1928 the country's fixed assets increased by 15 per cent as compared with 1913. Non-productive assets grew by 50 per cent.

The scale of reproducing the fixed assets rose with each passing year. In the course of the pre-war five-year plans (1929-40) the fixed productive assets increased 2.4 times and non-productive assets 2.1 times. At the end of 1940 fixed productive assets increased 2.6 times and non-productive assets 3 times as compared with 1913.

The Second World War inflicted great harm on the Soviet economy. About 30 per cent of the country's national wealth was destroyed. Large-scale restoration work was started while the war was still on. About 11,000 large state industrial enterprises were restored or built anew. At the end of 1945, the country's fixed productive assets were 86 per cent of those in 1940; non-productive assets were 81 per cent of the 1940 level.

Reproduction of the fixed productive assets began on a vast scale after the war. At the end of 1950, they were 24 per cent above the 1940 level. Non-productive assets increased by 11 per cent.

From 1951 to 1955 fixed productive assets increased by 60 per cent and non-productive assets by 50 per cent.

Reproduction of the fixed assets and their renewal assumed an even larger scale during the Seven-Year Plan (1959-65): the fixed productive assets increased by 90 per cent and amounted to 312,000 million rubles at the end of 1965, which was five

times greater than the value of these assets in 1940. In seven years the productive assets of industry increased by 110 per cent, the construction industry 120 per cent, state farms and other state agricultural enterprises 160 per cent, transport and communications 80 per cent and trade and catering establishments by 90 per cent. During the seven-year period, non-productive assets grew by 70 per cent and totalled 206,000 million rubles at the end of 1965, or 260 per cent above 1940.

In 1966, fixed productive assets increased by 8 per cent and amounted to 337,000 million rubles at the end of the year.

The value of the country's fixed assets will total approximately 597,000 million rubles at the end of 1967, of which productive assets, 364,000 million rubles. As compared with 1917, the fixed productive assets will rise almost 17 times, with the productive assets of industry increasing 65 times, of agriculture (including livestock) 5 times and (exclusive of livestock) 16 times, transport and communications 17 times and trade and public catering more than 70 times. The productive assets of the construction industry have been built up from scratch in Soviet times.

In the 50 Soviet years the fixed non-productive assets increased 12 times, with the assets of the public utilities rising 21 times, and the assets of public health, educational, cultural and art establishments, scientific institutions and credit and other organisations, over 42 times.

**FIXED PRODUCTIVE ASSETS AND CIRCULATING ASSETS**  
(end of 1966, '000 million rubles)

	Total	of which	
		fixed productive assets	circulating assets
Total . . . . .	516 <sup>1</sup>	337	179
of which:			
industry . . . . .	207	163	44
construction . . . . .	62	12	50
of which:			
uncompleted building work . . . .	38	—	38
agriculture:			
including livestock . . . . .	101	69	32
exclusive of livestock . . . . .	73	54	19
transport and communications . . . .	74	72	2

<sup>1</sup> Including livestock.

*"The growth of socialist production has created a sound basis for raising the material and cultural standards of the Soviet people."*

From the Theses of the Central Committee of the C.P.S.U. "Fiftieth Anniversary of the Great October Socialist Revolution"

### ADVANCE IN THE MATERIAL AND CULTURAL STANDARDS OF THE SOVIET PEOPLE

	Prior to the revolution (1913 or the nearest year for which data are available)	1940	1966
Population (end-of-year figures)—mill. . . . .	159.2	194.1 <sup>1</sup>	234.4
of which: urban population . . . . .	28.5	63.1	128.0
Average annual number of industrial, office and other workers—mill. . . . .	12.9	33.9	79.7
Rise in real incomes of industrial and building workers, taking into account the abolition of unemployment and reduction of the working day, per employed person (1913=1) . . . . .	1	2.7	6.6
Rise in real incomes of peasants, per person engaged in agriculture (1913=1) . . . . .	1	2.3	8.5
Increase in the output of consumer goods (Group B, 1913=1), total . . . . .	1	4.6	21.8
per capita of population . . . . .	1	3.9	14.9
Total living (useful) space in urban houses (end-of-year figures)—mill. sq m . . . . .	180	421	1,290
Total living (useful) space per urban dweller—sq m . . . . .	6.3	6.5	10
Total number of people who study—mill. of which:	10.6	47.5	73.6
in general schools of all types . . . . .	9.7	35.6	48.2
in specialised secondary schools . . . . .	0.05	1.0	4.0
in higher educational establishments . . . . .	0.13	0.8	4.1
Film projectors—'000 . . . . .	1.5	28.0	149.7
Number of children in permanent kindergartens, kindergarten-crèches and crèches—'000 . . . . .	4.55	1,953	8,192
Doctors of all specialities (end-of-year figures)—thousands . . . . .	28	155	578

<sup>1</sup> As of January 1.

Continued

	Prior to the revolution (1913 or the nearest year for which data are available)	1940	1966
Number of doctors per 10,000 of population	1.8	7.9	24.6
Hospital beds (end-of-year figures)—'000 . .	208	791	2,321
Hospital beds per 10,000 of population . .	13	40	99
Average life expectancy, years . . . . .	32	47 <sup>1</sup>	70
Number of deaths per 1,000 of population	29.1	18.0	7.3
Deaths of children under 1 per 1,000 of new-born infants . . . . .	269	182	26

<sup>1</sup> 1938-39.

**MONEY ACCUMULATIONS OF STATE, CO-OPERATIVE AND PUBLIC ENTERPRISES AND ORGANISATIONS (except collective farms)<sup>1</sup>**

	1928/29	1940	1946	1960	1966	1967 (plan)
<b>All accumulations — '000 mill. rubles . . . . .</b>	<b>5.6</b>	<b>14.3</b>	<b>19.5</b>	<b>65.2</b>	<b>89.6</b>	<b>94.0</b>
of which:						
profit . . . . .	1.3	3.3	—0.7 <sup>2</sup>	25.2	44.1	47.7
turnover tax . . . . .	3.1	10.6	19.1	31.3	39.3	40.7

Money accumulations of the socialist economy comprise the main part of the country's financial resources. The systematic growth of money accumulations reflects the constant and swift expansion of output in all branches, rise in labour productivity and cut in production costs and also the changes in the level of wholesale, retail and purchasing prices. In the last 20 years money accumulations increased approximately 4.6 times.

The structure of money accumulations has essentially changed. The share of profit, i.e., the part of the money accumulations which directly depends on the financial side of the operation of enterprises and organisations, is substantially rising. While in 1928/29 profit made up less than one-fourth of all money accumulations, in

<sup>1</sup> Accumulations include profit, the turnover tax and other revenue of enterprises and organisations which is part of their net income.

The tables on this page and other pages give the indicators up to 1940 in the money of those years and since 1940 in new money, i.e., at the rate of 10 old rubles equal one new ruble.

<sup>2</sup> The minus sign indicates losses.

1967 its share will rise to one-half. Most of the profit was received in industry. In 1967, profit in industry will amount to 28,900 million rubles, more than 60 per cent of all profit in the economy. The increase of profit in industry is accompanied by a rise in the profitability of production. In 1967, about 14 rubles profit will be received per 100 rubles of fixed productive assets and circulating assets.

In a socialist society profit is used in the interests of the working people. Part of the profit received by enterprises remains directly at their disposal and is spent for the further development of production, provision of material incentives to the personnel, social and cultural measures and housing construction. The other part of the profit is contributed by the enterprises to the state budget and is utilised for the needs of the entire people.

The economic reform, elaborated by the Plenary Meeting of the Central Committee of the C.P.S.U. in September 1965 and approved by the 23rd Party Congress, is aimed at further increasing profit and all money accumulations of the socialist economy and also at raising the profitability of production.

**STATE BUDGET**  
(\*000 million rubles)

	Revenue	Expenditure	Excess of revenue over expenditure
1913 <sup>1</sup>	3.4	3.4	
1940	18.0	17.4	0.6
1946	32.5	30.8	1.7
1960	77.1	73.1	4.0
1966	106.3	105.6	0.7
1967 (plan)	110.2	110.0	0.2

<sup>1</sup> On territory within the frontiers of the former Russian Empire.

## REVENUE AND EXPENDITURE OF THE STATE BUDGET

('000 million rubles)

	1940	1946	1960	1966	1967 (plan)
<b>Revenue—total</b> . . . . .	<b>18.0</b>	<b>32.5</b>	<b>77.1</b>	<b>106.3</b>	<b>110.2</b>
of which:					
turnover tax . . . . .	10.6	19.1	31.3	39.3	40.7
profit tax . . . . .	2.2	1.7	18.6	35.7	37.2
income tax paid by collective farms . . . . .	0.1	0.1	1.2	0.7	0.7
income tax paid by co-operatives and enterprises of mass organisations . . . . .	0.2	0.1	0.6	0.4	0.4
state loans . . . . .	1.1	2.5	0.9	0.2	0.3
of which:					
bonds sold to the population . . . . .	0.9	2.1	0.1	0.2	0.3
of which:					
by subscription . . . . .	0.9	2.1	—	—	—
bonds bought by state savings banks . . . . .	0.0	0.3	0.8	—	—
taxes paid by the population . . . . .	0.9	2.3	5.6	8.4	9.0
contributions to the state social insurance fund . . . . .	0.9	1.2	3.8	6.1	6.4
Total revenue received from state and co-operative enterprises and organisations . . . . .	16.0	27.5	70.1	97.0	100.4
<b>Expenditure—total</b> . . . . .	<b>17.4</b>	<b>30.8</b>	<b>73.1</b>	<b>105.6</b>	<b>110.0</b>
of which:					
on the economy . . . . .	5.8	10.6	34.1	45.2	46.9
on social and cultural measures . . . . .	4.1	8.0	24.9	40.8	42.9
of them:					
education . . . . .	2.3	3.8	10.3	18.7	19.7
public health services and sports . . . . .	0.9	1.4	4.8	7.1	7.4
social maintenance . . . . .	0.3	1.8	6.5	9.8	10.4
of which:					
from the state social insurance fund . . . . .	0.2	0.3	4.2	7.1	7.8
state social insurance . . . . .	0.5	0.7	2.8	4.3	4.6
state allowances to mothers of large families and unmarried mothers . . . . .	0.1	0.3	0.5	0.5	0.4
money turned over to the centralised all-Union social maintenance fund for collective farmers . . . . .	—	—	—	0.4	0.4
on defence . . . . .	5.7	7.4	9.3	13.4	14.5
on administration . . . . .	0.7	1.2	1.1	1.4	1.4
payments and outlays on state loans . . . . .	0.3	0.5	0.7	0.1	0.2

## STRUCTURE OF STATE BUDGET REVENUE AND EXPENDITURE

(percentages)

	1918	1928/29	1940	1946	1960	1966	1967 (plan)
<b>Revenue — total</b> . . . . .	100	100	100	100	100	100	100
of which:							
turnover tax . . . . .		35.6	58.7	58.7	40.7	37.0	36.9
profit tax . . . . .		15.3	12.1	5.1	24.2	33.6	33.7
income tax paid by collective farms . . . . .		—	0.4	0.5	1.6	0.7	0.6
income tax paid by co-operatives and enterprises of mass organisations . . . . .		1.8	1.0	0.3	0.8	0.4	0.4
state loans . . . . .		8.2	6.4	7.5	1.2	0.2	0.2
of which:							
bonds sold to the population of which by subscription . . . . .		} 3.0	5.1	6.5	0.1	0.2	0.2
bonds bought by state savings banks . . . . .			5.0	6.3	—	—	—
taxes paid by the population . . . . .		2.6	0.1	0.9	1.1	—	—
contributions to the state social insurance fund . . . . .		10.3	5.2	6.9	7.3	7.9	8.2
Total revenue received from state and co-operative enterprises and organisations . . . . .		13.8	4.8	3.6	4.9	5.7	5.8
Total revenue received from state and co-operative enterprises and organisations . . . . .		81.6	88.8	84.5	91.0	91.3	91.0
<b>Expenditure—total</b> . . . . .	100	100	100	100	100	100	100
of which:							
on the economy . . . . .	47.2	43.4	33.5	34.5	46.7	42.8	42.6
on social and cultural measures of them:	9.6	29.9	23.5	26.0	34.1	38.6	39.0
education . . . . .	6.4	12.7	12.9	12.3	14.1	17.8	17.9
public health services and sports . . . . .	0.7	3.7	5.2	4.4	6.6	6.7	6.7
social maintenance . . . . .		3.2	1.8	5.7	8.9	9.2	9.4
of which:							
from the state social insurance fund . . . . .		} 2.5	2.0	1.1	5.8	6.8	7.1
state social insurance . . . . .			10.3	2.9	2.4	3.8	4.1
state allowances to mothers of large families and unmarried mothers . . . . .	—	—	0.7	1.2	0.7	0.4	0.4
money turned over to the centralised all-Union social maintenance fund for collective farmers . . . . .	—	—	—	—	—	0.4	0.4
on defence . . . . .	33.4	10.0	32.6	23.9	12.7	12.7	13.2
on administration . . . . .	7.6	5.9	3.9	3.8	1.5	1.3	1.3
payments and outlays on state loans . . . . .	—	3.6	1.6	1.7	1.0	0.1	0.1

At all stages of socialist construction the Budget of the U.S.S.R. ensured the development of the economy and culture and the country's defence needs.

Receipts from state and co-operative enterprises and organisations make up the main part of all budget revenue. While in 1928/29 these receipts accounted for 82 per cent of all revenue, in 1967 their share will increase to 91 per cent. Only in the years of the Great Patriotic War did their share drop to 70 per cent. Budget revenue contributed by the population has always amounted to a relatively small part; after the war it was considerably reduced as a result of measures which discontinued the placing of loans by subscription among the population and considerably cut the agricultural tax paid by peasants and the taxes paid by industrial, office and other workers. At present many workers are released from the payment of taxes and in future the abolition and reduction of taxes on wages of some categories of workers will be continued.

In the State Budget of 1918 two-thirds of the expenditure was covered by the issue of money and only one-third by revenue; of the latter 64 per cent were special revolutionary taxes paid by the propertied classes. This directly reflected the situation in the initial period of Soviet rule.

Budget revenue has been mainly used for the further development of the country's economy and the satisfaction of the people's material and cultural requirements. As early as 1928/29, i.e., after the restoration period, 73 per cent of the entire budget expenditure went for financing the economy and social and cultural measures. In 1967, outlays on these purposes will rise to 82 per cent. The share of outlays on social and cultural measures increased from 30 to 39 per cent of the entire budget expenditure during these years.

The budget of the Soviet state is stable. In all years, except the initial post-revolutionary period and some years during the Great Patriotic War, the State Budget revenue exceeded expenditure, which was ensured by the steady development of the Soviet economy.

#### DEVELOPMENT OF FOREIGN TRADE

	1913 <sup>1</sup>	1938	1946	1960	1966
Foreign trade of the U.S.S.R. (in prices of the corresponding years; foreign currencies are recalculated in rubles at the rate of exchange as of January 1, 1961) — mill. rubles <sup>2</sup> . . . . .	2,270	475	1,280	10,073	15,076
Exports . . . . .	1,192	230	588	5,007	7,957
Imports . . . . .	1,078	245	692	5,066	7,119

Russia's foreign trade largely depended on the monopoly associations of Britain, France, Germany and the Netherlands; these countries accounted for 66 per cent of Russia's foreign commerce in 1913; Germany contributed 48 per cent of all Russian imports.

At present the U.S.S.R. is trading with almost all the countries in the world; with over 70 of them on the basis of long-term agreements.

The foreign trade of the U.S.S.R. has quadrupled in Soviet times.

<sup>1</sup> On territory within the frontiers of the former Russian Empire.

<sup>2</sup> The figures for all years, except 1913, are recalculated at the exchange rate of the ruble as of January 1, 1961, i.e., one U.S. dollar = 90 kopeks; for 1913 recalculation was made at the rate of one 1913 ruble = 0.78 of the present-day ruble.

**DEVELOPMENT OF SOVIET FOREIGN TRADE  
AFTER THE SECOND WORLD WAR**

	1946	1950	1955	1960	1966
<b>Million rubles:</b>					
Total foreign trade of the U.S.S.R. (in prices of the corresponding years; foreign currencies are recalculated in rubles at the rate of exchange as of January 1, 1961) — mill. rubles <sup>1</sup> . . . . .	1,280	2,925	5,838	10,073	15,076
of which trade					
with socialist countries . . . . .	698	2,373	4,630	7,371	10,023
with developed capitalist countries .	491	440	904	1,917	3,179
with developing countries . . . . .	91	112	304	785	1,874
<b>Percentage of 1946 (in comparable prices)</b>					
Total foreign trade of the U.S.S.R. . .	100	217	389	707	1,098
of which trade					
with socialist countries . . . . .	100	300	525	882	1,224
with developed capitalist countries	100	93	174	392	670
with developing countries . . . . .	100	136	300	773	2,114

Trade with the socialist countries increased more than 12 times after the war, and it now accounts for about 70 per cent of all Soviet foreign commerce.

Soviet trade with developing countries rose 21 times in post-war years. The economic relations of the Soviet Union with these countries are based on the principles of equality and mutual benefit, which facilitates the building up of an independent national economy.

<sup>1</sup> See footnote 2 on p. 50.

**COMPOSITION OF EXPORTS**  
(percentages)

	1913	1938	1946	1960	1966
Exports . . . . .	100	100	100	100	100
of which:					
machinery and equipment . . . . .	0.3	5.0	5.8	20.5	20.8
fuel and electric power . . . . .	3.5	8.9	5.4	16.2	16.4
ores and concentrates, metals and metal- wares, cable and wire . . . . .	2.8	3.9	9.5	20.4	20.1
chemical products, fertilisers and rubber	1.2	4.0	5.0	3.5	3.8
timber, cellulose, paper and articles therefrom . . . . .	10.9	20.3	4.3	5.5	7.0
textile raw materials and semi-manu- factures . . . . .	8.9	4.3	15.0	6.4	5.2
furs and skins . . . . .	0.4	9.4	11.2	0.8	0.8
foodstuffs and raw materials for their production . . . . .	54.7	29.5	29.8	13.1	9.2
manufactured consumer goods . . . . .	4.7	7.9	7.4	2.9	2.4

The conversion of the U.S.S.R. into a powerful industrial state has determined the fundamental change in the composition of exports.

In 1913, 70 per cent of all exports consisted of agricultural produce and only 30 per cent of industrial goods; at present the share of industrial goods reaches 85 per cent, while agricultural produce takes up 15 per cent. The U.S.S.R. is a big exporter of machinery and equipment; their share in total exports rose from 0.3 per cent in 1913 to 21 per cent in 1966. Exports of fuel, mineral raw materials and metals increased from 6 per cent in 1913 to 38 per cent in 1966.

**COMPOSITION OF IMPORTS**  
(percentages)

	1913	1938	1946	1960	1966
Imports . . . . .	100	100	100	100	100
of which:					
machinery and equipment . . . . .	15.9	34.5	28.5	29.8	32.4
fuel and electric power . . . . .	7.1	1.2	11.8	4.2	2.4
ores and concentrates, metals and metal- wares, cable and wire . . . . .	6.9	29.7	9.9	16.8	8.7
chemical products, fertilisers and rubber timber, cellulose, paper and articles there- from . . . . .	7.9	5.2	1.9	6.0	6.4
textile raw materials and semi-manu- factures . . . . .	3.3	0.8	3.9	1.9	1.9
foodstuffs and raw materials for their pro- duction . . . . .	18.3	10.0	6.6	6.5	4.8
manufactured consumer goods . . . . .	21.2	12.7	15.7	12.1	19.6
	10.3	1.0	7.2	17.2	16.4

In 1913 imports covered over 43 per cent of the country's consumption of machinery and equipment; at present the share is 4 per cent.

**EXPORTS OF CERTAIN GOODS <sup>1</sup>**

	1913	1938	1946	1960	1966
Metal-cutting lathes — '000 . . . . .	—	1.8	0.1	7.1	11.9
percentage of output . . . . .	—	3.3	0.2	4.6	6.2
Diesel engines and generators — '000 . . . . .	—	0.0	—	1.8	4.2
percentage of output . . . . .	—	0.0	—	3.1	6.2
Rolling mill equipment — '000 tons . . . . .	—	—	—	37.4	48.1
percentage of output . . . . .	—	—	—	31.0	39.9
Excavators — units . . . . .	—	14	—	880	1,905
percentage of output . . . . .	—	2.8	—	7.0	8.1
Bulldozers — units . . . . .	—	—	—	880	2,499
percentage of output . . . . .	—	—	—	6.8	11.2
Graders — units . . . . .	—	—	—	202	705
percentage of output . . . . .	—	—	—	6.4	16.0
Tractors — '000 . . . . .	—	0.2	0.2	19.1	21.9
percentage of output . . . . .	—	0.4	1.5	8.0	5.7
Lorries — '000 . . . . .	—	6.5	1.5	25.5	32.8
percentage of output . . . . .	—	3.6	1.6	7.0	8.0
Motorcars — '000 . . . . .	—	0.2	0.4	30.5	67.3
percentage of output . . . . .	—	0.7	6.5	21.9	29.2

<sup>1</sup> Including deliveries of complete plant.

*Continued*

	1913	1938	1946	1960	1966
Coal—mill. tons . . . . .	0.1	0.4	0.5	12.3	21.8
percentage of output . . . . .	0.3	0.3	0.4	3.3	5.0
Coke—mill. tons . . . . .	0.0	—	0.4	2.6	4.0
percentage of output . . . . .	0.0	—	2.3	4.7	5.9
Oil—mill. tons . . . . .	0.0	0.2	0.0	17.8	50.3
percentage of output . . . . .	0.0	0.7	0.1	12.0	19.0
Iron ore—mill. tons . . . . .	0.5	0.0	0.8	15.2	26.1
percentage of output . . . . .	5.1	0.0	4.1	14.3	16.3
Rolled ferrous metals—mill. tons . . . . .	0.03	0.1	0.1	2.8	5.2
percentage of output . . . . .	0.8	0.8	1.0	5.5	6.8
Steel pipes—'000 tons . . . . .	—	3	4.2	254.7	354.1
percentage of output . . . . .	—	0.3	0.5	4.4	3.6
Cement—'000 tons . . . . .	7.0	36.0	4.0	435	2,302
percentage of output . . . . .	0.3	0.6	0.1	1.0	2.9
Paper—'000 tons . . . . .	1.7	2.7	54.6	122.5	272
percentage of output . . . . .	0.4	0.3	10.6	5.2	7.7
Cotton fibre—'000 tons . . . . .	0.03	20.2	101.8	390.9	507.8
percentage of output . . . . .	0.0	2.4	18.5	25.3	26.5
Vegetable oil—'000 tons . . . . .	7.7	0.1	0.1	91.8	455.7
percentage of output . . . . .	2.5	0.02	0.03	5.8	16.7
Clocks and watches—'000 . . . . .	0.5	11.9	...	4,024	4,875
percentage of output . . . . .	0.1	0.3	...	15.5	15.1
Cameras—'000 . . . . .	—	...	—	76.2	353.6
percentage of output . . . . .	—	...	—	4.3	24.9

The powerful socialist industry built up in Soviet times has satisfied the growing needs of the economy and, moreover, made it possible to export modern machinery and equipment and other means of production and consumer goods. Pre-revolutionary Russia hardly exported any machinery, equipment and other means of production, while in 1966 exports claimed a considerable share in the production of certain goods.

The Soviet Union is one of the world's biggest exporters of oil, iron ore, coal and ferrous metals. In 1966, Soviet oil exports totalled 50 million tons which was over 50 per cent up on the country's entire production in 1940; 26 million tons of iron ore were exported in 1966, or 87 per cent of the 1940 production level.

**SHARE OF IMPORTS IN THE CONSUMPTION  
OF SOME INDUSTRIAL GOODS**  
(percentages)

	1913	1938	1946	1960	1966
Metal-cutting lathes . . . . .	85	10.2	11.3	4.9	2.9
Diesel engines and generators . . . . .	—	10.0	32.8	1.9	2.3
Excavators . . . . .	—	0.4	17.4	0.1	1.7
Compressors . . . . .	—	8.0	12.0	1.2	0.2
Motorcars . . . . .	100	0.04	0.1	2.7	0.05
Lorries . . . . .	100	0.03	0.01	1.0	0.3
Coal . . . . .	17.7	—	6.5	1.3	1.7
Coke . . . . .	18.0	—	2.2	1.2	1.0
Cement . . . . .	8.5	0.0	13.6	3.6	0.4
Paper . . . . .	21.0	0.2	20.7	3.1	4.5
Cotton fibre . . . . .	46.9	2.0	—	14.3	10.9

Prior to the revolution 100 per cent of all the motor vehicles, 85 per cent of the metal-cutting lathes, 47 per cent of the cotton fibre were imported.

The development of the U.S.S.R. into a powerful industrial state made it possible to satisfy the growing requirements of the economy in means of production and also to export them in large quantities.

*"The revolutionary rejuvenation of the world, begun by the October Revolution and embodied in the triumph of socialism in the Soviet Union, has been continued by the triumphant socialist revolutions in other countries. The emergence of the world socialist system is the greatest historic event after the victory of the Great October Socialist Revolution."*

From the Theses of the Central Committee of the C.P.S.U. "Fiftieth Anniversary of the Great October Socialist Revolution"

**SHARE OF THE SOCIALIST COUNTRIES IN WORLD TERRITORY AND POPULATION at the Beginning of 1967**

	Territory		Population (estimate)	
	mill. sq km	percent-age of world total	mill.	percent-age of world total
<b>The entire world . . . . .</b>	<b>135.8</b>	<b>100</b>	<b>3,380</b>	<b>100</b>
of which:				
Socialist countries . . . . .	35.2	25.9	1,190	35.2
of them, the U.S.S.R. . . . .	22.4	16.5	234.4	6.9
All other countries. . . . .	100.6	74.1	2,190	64.8
of which:				
developed capitalist countries . . . .	31.8	23.4	639	18.9
of them, the U.S.A. . . . .	9.4	6.9	198.0	5.9
developing countries . . . . .	68.8	50.7	1,551	45.9

While prior to the Second World War the socialist system accounted for 17 per cent of the territory and about 9 per cent of the population of the world, now the socialist countries take up 25.9 per cent of the globe's territory inhabited by 35.2 per cent of the world population. In Europe the socialist countries account for about 65 per cent of the territory and 48 per cent of the population, and in Asia for about 64 per cent of the territory and 45 per cent of the population.

**SHARE OF THE SOCIALIST COUNTRIES IN WORLD INDUSTRIAL OUTPUT**

1917 . . . . .	less than 3 per cent
1937 . . . . .	less than 10 per cent
1950 . . . . .	about 20 per cent
1955 . . . . .	about 27 per cent
1966 All socialist countries . . . . .	about 38 per cent

of which the Soviet Union contributes almost one-fifth of world industrial output

Pre-revolutionary Russia produced a little over 4 per cent of world industrial output in 1913.

In 1966, the socialist countries accounted for about 38 per cent of world industrial production; developing countries, for nearly 7 per cent and the developed capitalist countries, for approximately 55 per cent. In 1966, total industrial output of the socialist countries amounted approximately to two-thirds of the total production of the economically developed capitalist countries.

**NUMBER OF ENTERPRISES, INSTALLATIONS AND OTHER PROJECTS  
BUILT AFTER THE WAR, UNDER CONSTRUCTION AND TO BE BUILT  
ABROAD WITH SOVIET TECHNICAL ASSISTANCE UNDER  
INTER-GOVERNMENT AGREEMENTS**

as of January 1, 1967

	Number of enterprises, installations and other projects
<b>Total</b> . . . . .	<b>2,018</b>
including	
Socialist countries . . . . .	1,413
of which:	
Bulgaria . . . . .	166
Czechoslovakia . . . . .	27
German Democratic Republic . . . . .	26
Hungary . . . . .	76
Mongolian People's Republic . . . . .	257
Poland . . . . .	108
Rumania . . . . .	101
Albania . . . . .	45
China . . . . .	256
Democratic Republic of Vietnam . . . . .	143
Korean People's Democratic Republic . . . . .	58
Cuba . . . . .	104
Yugoslavia . . . . .	46
Developing countries . . . . .	599
of which:	
Afghanistan . . . . .	59
Algeria . . . . .	74
Burma . . . . .	5
Cambodia . . . . .	4
Ceylon . . . . .	11
Ethiopia . . . . .	6
Ghana . . . . .	20
Guinea . . . . .	31
India . . . . .	45
Indonesia . . . . .	20
Iran . . . . .	21
Iraq . . . . .	49
Mali . . . . .	13
Nepal . . . . .	6
Pakistan . . . . .	21
Somalia . . . . .	17

*Continued*

	Number of enterprises, installations and other projects
Sudan . . . . .	14
Syria . . . . .	19
Tunisia . . . . .	7
United Arab Republic . . . . .	102
Yemen . . . . .	13

Alongside trade relations, technical and economic co-operation of the Soviet Union with socialist and developing countries has assumed large scope in post-war years.

By the beginning of 1967, as many as 1,413 enterprises, installations and other projects had been built with Soviet technical assistance in 13 socialist countries and 599 projects in 31 developing countries.

*"The turning of the Soviet Union into a mighty industrial power is one of the greatest accomplishments of the working class and the entire nation. The Soviet working class cherishes and develops the labour traditions of the early five-year plan periods."*

From the Resolution of the Central  
Committee of the C.P.S.U. on Pre-  
parations for the 50th Anniversary  
of the Great October Socialist  
Revolution

## **THE U.S.S.R.—A MIGHTY INDUSTRIAL POWER**

**BASIC INDICES OF INDUSTRIAL DEVELOPMENT  
DURING SOVIET YEARS**

	1913	1917	1928	1940	1945	1960	1966	1967 (plan)
Gross industrial product (1913=1) . . . . .	1	0.7	1.3	7.7	7.1	40.3	66	71 <sup>1</sup>
Output of means of produc- tion (Group A) . . . . .	1	0.8	1.6	13.4	15.0	89.4	155	166
Output of consumer goods (Group B) . . . . .	1	0.7	1.2	4.6	2.7	15.0	22	23
Gross industrial product (1917=1) . . . . .		1	1.8	11.9	10.9	62.5	103	110
Output of means of produc- tion (Group A) . . . . .		1	1.9	19.2	21.5	128	221	238
Output of consumer goods (Group B) . . . . .		1	1.8	7.5	4.4	24.4	35.5	37.8
Share of total output — percentages:								
output of means of produc- tion (Group A) . . . . .	35.1	38.1	39.5	61.2	74.9	72.5	75	75
output of consumer goods (Group B) . . . . .	64.9	61.9	60.5	38.8	25.1	27.5	25	25
Gross output of individual industries (1913=1)								
fuel industry . . . . .	1	...	1.5	6.4	4.8	22.5	33	35
chemical industry . . . . .	1	...	1.5	16.9	15.6	132	294	322
engineering and metal- working industries . . . . .	1	1.3	1.8	29.6	38.2	268	538	588
light industry . . . . .	1	...	1.4	4.7	2.9	13.0	16.2	17.2
food industry . . . . .	1	...	1.0	3.8	1.9	8.6	12.8	13.6
Fixed productive assets of industry (1913=1) . . . . .	1	0.9	1.1	6.9	6.6	29.3	53.6	58.4

<sup>1</sup> On the territory of the former Russian Empire the total industrial output in 1967 was about 64 times greater than in 1913.

Continued

	1913	1917	1928	1940	1945	1960	1966	1967 (plan)
Average annual number of industrial personnel <sup>1</sup> — millions . . . . .	4.1	...	4.3	13.1	10.7	22.3	28.1	29
of which: workers . . . . .	3.9	...	3.6	10.0	8.1	18.6	22.9	24
Labour productivity per worker (1913=1) . . . . .	1	...	1.2	3.8	4.3	11.1	14.7	15.4
Power available per worker (1913=1) . . . . .	1	...	2	5	...	14	21	22
Electric power available per worker (1913=1) . . . . .	1	...	2	8	...	24	34	36

<sup>1</sup> Exclusive of workers employed in industrial enterprises of the collective farms and a number of small auxiliary plants.

The 1913 figures are for the territory within the present frontiers of the U.S.S.R. but do not include artisans. In 1913 the number of industrial personnel within the territory of the U.S.S.R. prior to September 17, 1939, totalled 3,700,000 (exclusive of artisans), of whom 3,500,000 were workers.

In 1913 the number of industrial personnel and artisans (including seasonal workers) on the territory within the present frontiers of the U.S.S.R. totalled 6,200,000, of whom 6,000,000 were workers; the corresponding figures for the territory within the frontiers of the U.S.S.R. prior to September 17, 1939, were 5,600,000 and 5,400,000.

### OUTPUT OF KEY INDUSTRIAL PRODUCTS

	1913							1967 (plan)	
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939	1917	1928	1940	1945	1960		1966
Electricity,—'000 mill. kWh . . . . .	2.0	1.9	2.6 <sup>1</sup>	5.0	48.3	43.3	292	545	598
Oil—mill. tons . . . . .	10.3	9.2	8.8	11.6	31.1	19.4	148	265	286
Gas—'000 mill. cu m . . . . .	0.02	0.02	...	0.3	3.4	3.4	47.2	145	160
Coal—mill. tons . . . . .	29.2	29.1	31.3	35.5	166	149	510	586	591
Pig-iron—mill. tons . . . . .	4.2	4.2	3.0	3.3	14.9	8.8	46.8	70.3	74.7
Steel—mill. tons . . . . .	4.3	4.2	3.1	4.3	18.3	12.3	65.3	96.9	102

<sup>1</sup> 1916.

	1913		1917	1928	1940	1945	1960	1966	1967 (plan)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939							
Rolled ferrous metals—mill. tons . . . . .	3.6	3.5	2.4	3.4	13.1	8.5	51.0	76.7	80.6
of which, finished rolled stock . . . . .	3.4	3.3	2.3	3.2	11.4	7.4	43.7	66.1	70.5
Iron ore—mill. tons . . . . .	9.2	9.2	5.3	6.1	29.9	15.9	106	160	163
Mineral fertilisers (conventional units)—mill. tons . . . . .	0.09	0.07	...	0.1	3.2	1.1	13.9	35.9	38.7
Sulphuric acid in monohydrate—mill. tons . . . . .	0.15	0.12	...	0.2	1.6	0.8	5.4	9.4	10.0
Synthetic resins and plastics—'000 tons . . . . .	—	—	...	...	10.9	21.3	312	974	1,131
Chemical fibres—'000 tons . . . . .	—	—	—	0.2	11.1	1.1	211	458	507.5
Turbines—mill. kW . . . . .	0.01	0.01	...	0.04	1.2	0.2	9.2	15.2	16.2
Turbine generators—mill. kW . . . . .	—	—	...	0.1	0.5	0.3	7.9	13.4	14.9
Metal-cutting lathes—'000 . . . . .	1.8	1.5	0.2	2.0	58.4	38.4	156	192	196
Forge and press equipment (exclusive of hand-operated machines and shears)—'000 . . . . .	...	...	...	...	4.7	2.9	29.9	38.4	40.5
Instruments and means of automation and spare parts to them (at wholesale prices as of July 1, 1955)—mill. rubles . . . . .	...	...	...	...	30.9	66.0	1,182	2,388	2,626
Metallurgical equipment—'000 tons . . . . .	...	...	...	...	24	27	218	252	292
of which, rolling equipment . . . . .	1.0	1.0	—	2.0	10.2	7.0	121	121	150
Chemical equipment and spare parts (at wholesale prices as of July 1, 1955)—mill. rubles . . . . .	...	...	...	...	...	...	226	419	432
Automobiles—'000 . . . . .	0.0	0.0	—	0.8	145	75	524	675	731
Tractors (physical units)—'000 . . . . .	—	—	—	1.3	31.6	7.7	239	382	407

	1913		1917	1928	1940	1945	1960	1966	1967 (plan)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939							
Excavators—'000 . . . . .	—	—	—	—	0.3	0.01	12.6	23.5	25.8
Commercial timber— mill. Fest metres . . . . .	31	27	...	36	118	62	262	272	276
Cement—mill. tons . . . . .	1.8	1.5	1.0	1.8	5.7	1.8	45.5	80.0	85
Textiles									
mill. lin. m . . . . .	3,006	2,910	1,630	3,010	4,522	1,822	8,226	9,437	9,719
mill. sq m . . . . .	2,194	2,125	1,212	2,198	3,300	1,353	6,636	7,863	8,131
Knitwear—mill. pcs . . . . .	...	...	...	8.3	183	50	584	992	1,059
Leather footwear—mill. pairs . . . . .	68	60	50	58	211	63	419	522	545
Clocks and watches— mill. . . . .	0.7	0.7	0.7	0.9	2.8	0.3	26.0	32.4	34.0
Radio receivers and ra- diograms—'000 . . . . .	—	—	—	...	160	14	4,165	5,842	6,200
TV sets—'000 . . . . .	—	—	—	—	0.3	—	1,726	4,415	4,900
Household refrigerators— '000 . . . . .	—	—	—	—	3.5	0.3	529	2,205	2,770
Granulated sugar—'000 tons . . . . .	1,363	1,352	912	1,283	2,165	465	6,363	9,740	9,745
Meat (including grade I by-products) <sup>1</sup> —'000 tons . . . . .	1,273	1,042	1,078	678	1,501	663	4,406	5,774	5,994
Fish, sea mammals, whales, sea products— '000 tons . . . . .	1,051	1,018	893	840	1,404	1,125	3,541	6,093	6,341
Butter, cheese and other dairy products (in terms of milk)—mill. tons . . . . .	...	2.3	1.3	1.9	6.5	2.9	26.3	40	41
Vegetable oil—'000 tons	538	471	...	448	798	292	1,586	2,736	2,891
Canned food—mill. con- ventional cans . . . . .	116	95	85	125	1,113	558	4,864	7,540	8,486
Soap (in terms of 40% fatty acid content) and synthetic detergents— '000 tons . . . . .	192	168	87	311	700	229	1,474	1,854	1,934

<sup>1</sup> This figure refers only to industrial production, and does not include collective-farm output or the output from the subsidiary husbandries of the population.

During Soviet years the U.S.S.R. became a highly developed industrial power, having rapidly surmounted age-old backwardness.

These years witnessed the fulfilment of a colossal building programme, which made it possible to create huge production capacities in all industries, fundamentally change the branch structure of the fixed assets and raise the technical level of production. In 1967, as compared with 1913, the fixed productive assets of industry are to increase 58-fold. Modern productive machinery has been installed in industrial enterprises and mechanisation and automation of production has become widespread.

In industry the power available per worker is to rise 22-fold and the electric power per worker is to increase 36-fold in 1967. This is ensuring a substantial rise of labour productivity, which is the key to the successful growth of industry. In industry labour productivity is to rise more than 15-fold, while the per hour productivity (taking the shortened working day into account) is to increase about 22-fold. Higher labour productivity is a major factor promoting the growth of production. During the past few years over 60 per cent of the increase in industrial output stemmed from the growth of labour productivity.

The increase of production capacities and the rise of the technical level were major factors furthering the rapid growth of industrial output with priority for the production of the means of production. In 1913 the output of the means of production comprised 35 per cent of the industrial product; on the eve of the Great Patriotic War this share topped 60 per cent and in 1967 will reach 75 per cent.

Many new industries were built.

The economic potential built up during the pre-war years in many ways predetermined the victory in the Great Patriotic War.

Despite the enormous destruction and losses sustained during that war, Soviet industry was restored with unprecedented rapidity and today continues to develop at a stable, high rate.

At present there are some 47,000 industrial enterprises operating on a self-paying basis. They account for the bulk of the Soviet industrial product.

In recent years, thanks to the high level of Soviet industrial development, it became possible to bring the rate of growth of the output of consumer goods closer to that of the means of production while giving the latter priority.

Geological surveying, undertaken during Soviet years, has led to the discovery and development of numerous mineral deposits. The Soviet Union has the world's largest explored reserves of coal, iron and manganese ores, copper, lead, nickel, bauxite, tungsten, peat, timber and hydropower; it also has great reserves of oil, natural gas and other minerals.

**AVERAGE ANNUAL ABSOLUTE GROWTH OF OUTPUT  
OF KEY INDUSTRIAL PRODUCTS BY FIVE-YEAR PLANS<sup>1</sup>**

	First 5-Year Plan (1929-32)	Second 5-Year Plan (1933-37)	Three years of Third 5-Year Plan (1938-40)	Fourth 5-Year Plan (1946-50)	Fifth 5-Year Plan (1951-55)	Three years of Sixth 5-Year Plan (1956-58)	7-Year Plan (1959-65)	Last five years (1961-65)
Electricity—'000 mill. kWh . . . . .	2.1	4.5	4.0	9.6	15.8	21.7	38.8	42.9
Oil—mill. tons . . .	2.4	1.4	0.9	3.7	6.6	14.1	18.5	19.0
Gas—'000 mill. cu m	0.19	0.25	0.36	0.55	0.84	6.5	14.2	16.4
Coal—mill. tons . . .	7.2	12.7	12.7	22.4	25.8	34.5	12.1	13.6
Pig-iron—mill. tons	0.7	1.7	0.1	2.1	2.8	2.1	3.8	3.9
Steel—mill. tons . .	0.4	2.4	0.2	3.0	3.6	3.2	5.2	5.1
Rolled ferrous metals— mill. tons . . . . .	0.2	1.7	0.05	2.5	2.9	2.6	4.0	4.0
Mineral fertilisers (conventional units) —'000 tons . . . . .	196	464	-0.8	875	834	917	2,691	3,477
Sulphuric acid in mono- hydrate—'000 tons . . . . .	85.4	163	72.7	269	335	335	531	624
Synthetic resins and plastics—'000 tons	...	...	...	9.2	18.6	25.6	80.6	98.0
Chemical fibres—'000 tons . . . . .	0.7	1.2	0.8	4.6	17.3	18.5	34.5	39.2
Automobile tyres— '000 . . . . .	117	429	103	1,206	558	1,402	1,720	1,842
Turbines—'000 kW .	63.6	172	7.8	495	573	358	1,140	1,085
Metal-cutting lathes —'000 . . . . .	4.4	5.8	3.3	6.4	9.3	7.1	6.8	6.0
Forge and press equip- ment (exclusive of manual machines and manual shears) —'000 . . . . .	...	0.4	0.5	1.0	1.9	3.0	1.2	0.9
Automobiles—'000 . .	5.8	35.2	-18.2	57.6	16.5	21.9	15.0	18.5
Tractors (physical units)—'000 . . . . .	11.9	0.4	-6.4	21.8	9.3	18.8	19.3	23.2
Excavators . . . . .	21.3	87.4	-82.7	706.0	340.4	1,634.3	1,636.4	1,802.2
Paper—'000 tons . . .	46.7	72.1	-6.4	172	134	107	152	179
Cement—'000 tons . .	407	395	74	1,670	2,458	3,608	5,583	5,374
Textiles								
mill. lin. m . . . . .	-5.8	201	176	540	511	154	227	180
mill. sq m . . . . .	-8.5	170	95.6	404	394	212	216	172
Knitwear—mill. pcs .	7.7	23.5	8.8	29.5	46.8	21.6	58.5	64.5

<sup>1</sup> The minus sign signifies a drop.

Continued

	First 5-Year Plan (1929-32)	Second 5-Year Plan (1933-37)	Three years of Third 5-Year Plan (1938-40)	Fourth 5-Year Plan (1946-50)	Fifth 5-Year Plan (1951-55)	Three years of Sixth 5-Year Plan (1956-58)	7-Year Plan (1959-65)	Last five years (1961-65)
Leather footwear— mill. pairs . . . . .	7.2	19.2	9.4	28.0	13.6	28.4	18.5	13.3
Radio receivers and radiograms—'000 . . . . .	...	34.1	-13.1	212	495	117	180	199
TV sets—'000 . . . . .	—	—	—	3.9 <sup>1</sup>	96.6	162	382	386
Household refrigera- tors—'000 . . . . .	—	—	—	0.2	30.0	69.4	188	229
Granulated sugar— '000 tons . . . . .	-114	319	-85	412	179	671	801	935
Fish, sea mammals, whales and sea prod- ucts—'000 tons . . . . .	123	55.2	-68.3	126	196	66.4	405	447
Vegetable oil—'000 tons . . . . .	11	9.7	86	105	70	99	186	237
Butter, cheese and other dairy products (in terms of milk)— mill. tons . . . . .	-0.0	0.6	0.5	1.1	1.0	2.9	2.4	2.5
Canned food—mill. conventional cans	142	58.0	43.6	195	337	285	429	443

<sup>1</sup> The figures are for 1948-50; no TV sets were produced in 1946; in 1947 production amounted to 197 units.

Industrialisation was launched following the period of rehabilitation after the First World War, the foreign intervention and the Civil War.

In industry the main target of the First Five-Year Plan was to start industrialisation and thereby build the foundation of socialist economy.

The First Five-Year Plan was carried out in four years and three months. In 1932, as compared with 1928, gross output doubled, while the output of the means of production increased 2.7-fold.

Successful fulfilment of the First Five-Year plan made it possible to set the completion of the economy's technical reconstruction as one of the principal objectives of the Second Five-Year Plan.

In 1937, at the end of the Second Five-Year Plan period, gross industrial output was 120 per cent above the 1932 level.

During the Third Five-Year Plan period the Soviet Union began the completion of socialist construction and the gradual transition from socialism to communism.

Fulfilment of the tasks of the Third Five-Year Plan was cut short by the attack on the Soviet Union by nazi Germany.

In the course of the Great Patriotic War, in spite of the occupation of a number of regions, Soviet industry swiftly switched over to war-time production to meet the requirements of the Armed Forces.

The main target of the Fourth Five-Year Plan in industry was to regain the pre-war output level and then substantially exceed it. This target was achieved. In gross industrial output the plan was fulfilled in four years and three months.

This allowed the Fifth Five-Year Plan (1951-55) to envisage tasks ensuring the further expansion of all branches of the economy. By 1955 gross industrial output had surpassed the 1950 level by 85 per cent.

The directives for the Sixth Five-Year Plan were approved in 1956, and three years later they were replaced by the control figures for economic development in 1959-65.

The principal aim of the Seven-Year Plan was to effect a further upsurge of all branches of the economy on the basis of the priority growth of the heavy industry.

Fulfilment of this plan ensured substantial industrial progress. In 1965, as compared with 1958, gross output increased 84 per cent instead of the 80 per cent envisaged by the seven-year plan.

**INDUSTRIAL DEVELOPMENT OF THE EASTERN REGIONS  
OF THE U.S.S.R.**

	1913	1928	1940	1945	1960	1966
<b>Capacity of power stations—total—</b> mill. kW . . . . .	1.1	1.9	11.2	11.1	66.7	123.0
of which:						
in the Eastern regions . . . . .	0.1	0.2	2.6	4.8	25.2	51.3
east of the Urals . . . . .	0.03	0.06	1.3	2.3	15.3	34.5
Share: percentages						
all Eastern regions . . . . .	10.6	11.0	23.5	42.9	37.7	41.7
east of the Urals . . . . .	2.3	3.2	11.7	20.9	22.9	28.0
<b>Power output—total—'000 mill. kWh</b>	2.0	5.0	48.3	43.3	292.3	544.6
of which:						
in the Eastern regions . . . . .	0.2	0.5	10.7	21.0	117.5	222.9
east of the Urals . . . . .	0.04	0.1	4.5	8.7	63.2	133.9
Share: percentages						
all Eastern regions . . . . .	10.0	9.4	22.1	48.5	40.2	40.9
east of the Urals . . . . .	2.1	2.5	9.2	20.1	21.6	24.6
<b>Oil output—total—mill. tons . . . . .</b>	10.3	11.6	31.1	19.4	147.9	265.1
of which:						
in the Eastern regions . . . . .	0.3	0.3	3.6	4.5	39.5	79.6
east of the Urals . . . . .	0.3	0.3	2.0	2.7	10.6	21.3
Share: percentages						
all Eastern regions . . . . .	2.6	2.4	11.5	23.0	26.7	30.0
east of the Urals . . . . .	2.6	2.4	6.3	13.8	7.2	8.0
<b>Output of natural gas (including con-</b> <b>current gas)—total—'000 mill.</b> <b>cu m . . . . .</b>	—	0.3	3.2	3.3	45.3	143.0
of which:						
in the Eastern regions . . . . .	—	0.002	0.03	0.3	2.9	29.8
east of the Urals . . . . .	—	0.002	0.02	0.1	1.1	25.3
Share: percentages						
all Eastern regions . . . . .	—	0.5	0.96	9.2	6.5	20.9
east of the Urals . . . . .	—	0.5	0.5	3.0	2.4	17.7
<b>Output of coal—total—mill. tons . . . . .</b>	29.2	35.5	165.9	149.3	509.6	585.6
of which:						
in the Eastern regions . . . . .	3.5	7.0	59.5	86.2	241.4	294.9
east of the Urals . . . . .	2.2	5.0	47.6	60.5	182.9	237.1
Share: percentages						
all Eastern regions . . . . .	11.9	19.6	35.9	57.7	47.4	50.4
east of the Urals . . . . .	7.7	14.0	28.7	40.5	35.9	40.5
<b>Output of pig-iron—total—mill. tons</b>	4.2	3.3	14.9	8.8	46.8	70.3
of which:						
in the Eastern regions . . . . .	0.9	0.7	4.3	6.7	18.7	26.5
east of the Urals . . . . .	—	0.01	1.5	1.6	3.6	6.6

	1913	1928	1940	1945	1960	1966
Share: percentages						
all Eastern regions . . . . .	21.4	21.4	28.5	75.9	40.0	37.7
east of the Urals . . . . .	—	0.2	10.3	17.8	7.7	9.4
<b>Output of steel—total—mill. tons . .</b>	<b>4.3</b>	<b>4.3</b>	<b>18.3</b>	<b>12.3</b>	<b>65.3</b>	<b>96.9</b>
of which:						
in the Eastern regions . . . . .	0.9	1.0	5.9	9.1	28.0	39.1
east of the Urals . . . . .	—	0.01	1.9	2.6	6.1	8.3
Share: percentages						
all Eastern regions . . . . .	20.8	23.6	32.0	74.2	43.0	40.3
east of the Urals . . . . .	—	0.1	10.6	21.2	9.3	8.5
<b>Ferrous rolled stock output—total—</b>						
<b>mill. tons . . . . .</b>	<b>3.4</b>	<b>3.2</b>	<b>11.4</b>	<b>7.4</b>	<b>43.7</b>	<b>66.1</b>
of which:						
in the Eastern regions . . . . .	0.6	0.8	3.7	5.6	18.9	26.5
east of the Urals . . . . .	—	0.01	1.3	1.8	5.0	6.5
Share: percentages						
all Eastern regions . . . . .	17.8	25.7	32.3	76.4	43.2	40.0
east of the Urals . . . . .	—	0.2	11.3	24.8	11.4	9.9
<b>Iron ore output—total—mill. tons . .</b>	<b>9.2</b>	<b>6.1</b>	<b>29.9</b>	<b>15.9</b>	<b>105.9</b>	<b>160.3</b>
of which:						
in the Eastern regions . . . . .	1.8	1.1	8.6	11.6	39.0	53.2
east of the Urals . . . . .	0.003	0.01	0.5	0.8	11.7	25.9
Share: percentages						
all Eastern regions . . . . .	19.3	18.0	28.7	73.0	36.8	33.2
east of the Urals . . . . .	0.03	0.1	1.7	5.2	11.1	16.1
<b>Output of mineral fertilisers (conven-</b>						
<b>tional units)—total—mill. tons . .</b>	<b>0.09</b>	<b>0.1</b>	<b>3.2</b>	<b>1.1</b>	<b>13.9</b>	<b>35.9</b>
of which:						
in the Eastern regions . . . . .	0.01	0.03	1.0	0.5	5.6	11.3
east of the Urals . . . . .	—	—	0.2	0.4	2.2	5.7
Share: percentages						
all Eastern regions . . . . .	13.8	21.3	31.5	46.9	40.6	31.6
east of the Urals . . . . .	—	—	6.9	34.3	15.9	15.9
<b>Output of sulphuric acid in mono-</b>						
<b>hydrate—total—mill. tons . . . . .</b>	<b>0.15</b>	<b>0.2</b>	<b>1.6</b>	<b>0.8</b>	<b>5.4</b>	<b>9.4</b>
of which:						
in the Eastern regions . . . . .	—	0.02	0.3	0.3	2.1	3.7
east of the Urals . . . . .	—	—	0.07	0.06	1.0	2.0
Share: percentages						
all Eastern regions . . . . .	—	11.2	17.7	44.3	39.1	39.6
east of the Urals . . . . .	—	—	4.2	7.1	18.7	21.1

	1913	1928	1940	1945	1960	1966
<b>Output of soda ash (95%)—total—</b> '000 tons . . . . .	160	217	536	235	1,887	2,963
of which:						
in the Eastern regions . . . . .	41	41.6	102	106.6	969	1,864
east of the Urals . . . . .	0.1	1.1	13.7	30.3	59	33.4
Share: percentages						
all Eastern regions . . . . .	25.6	19.2	19.0	45.3	51.4	62.9
east of the Urals . . . . .	0.1	0.5	2.5	12.9	3.1	1.1
<b>Output of caustic soda (92%)—</b> total—'000 tons . . . . .	55.1	58.6	190	128	765	1,393
of which:						
in the Eastern regions . . . . .	15.5	15.8	40.2	44.8	217	417
east of the Urals . . . . .	—	—	—	9.4	70	168
Share: percentages						
all Eastern regions . . . . .	28.1	27.0	21.1	35.0	28.4	29.9
east of the Urals . . . . .	—	—	—	7.4	9.1	12.1
<b>Output of chemical fibres—total—</b> '000 tons . . . . .	—	0.2	11.1	1.1	211.2	458.3
of which:						
in the Eastern regions . . . . .	—	—	—	0.01	43.1	86.8
east of the Urals . . . . .	—	—	—	—	39	81.7
Share: percentages						
all Eastern regions . . . . .	—	—	—	0.9	20.4	18.9
east of the Urals . . . . .	—	—	—	—	18.5	17.8
<b>Output of metal-cutting lathes—</b> total—'000 . . . . .	1.8	2.0	58.4	38.4	155.9	192.1
of which:						
in the Eastern regions . . . . .	0.03	—	4.1	9.4	31.0	33.1
east of the Urals . . . . .	—	—	0.9	2.0	11.1	10.2
Share: percentages						
all Eastern regions . . . . .	1.7	—	7.1	24.5	19.9	17.2
east of the Urals . . . . .	—	—	1.6	5.2	7.1	5.3
<b>Output of metallurgical equipment—</b> total—'000 tons . . . . .	...	...	23.7	26.9	218.3	252.2
of which:						
in the Eastern regions . . . . .	...	...	7.5	6.9	85.8	107.9
east of the Urals . . . . .	...	—	—	2.6	15.4	22.4
Share: percentages						
all Eastern regions . . . . .	...	...	31.9	25.6	39.3	42.8
east of the Urals . . . . .	...	—	—	9.7	7.1	8.9
<b>Output of tractors—total—'000 . . . . .</b>	—	1.3	31.6	7.7	238.5	382.5
of which:						
in the Eastern regions . . . . .	—	—	8.6	2.9	50.1	70.8
east of the Urals . . . . .	—	—	—	2.9	29.0	45.1

	1913	1928	1940	1945	1960	1966
Share: percentages						
all Eastern regions . . . . .	—	—	27.1	37.3	21.0	18.5
east of the Urals . . . . .	—	—	—	37.3	12.2	11.8
<b>Output of tractor ploughs—total—</b> <b>'000 . . . . .</b>	—	0.5	38.4	8.5	149.1	177.5
of which:						
in the Eastern regions . . . . .	—	—	18.7	8.3	67.6	88.7
east of the Urals . . . . .	—	—	7.4	2.0	63.5	86.7
Share: percentages						
all Eastern regions . . . . .	—	—	48.5	98.5	45.3	50.0
east of the Urals . . . . .	—	—	19.2	23.6	42.6	48.8
<b>Output of tractor seeders—total—</b> <b>'000 . . . . .</b>	—	0.6	21.4	1.6	111.9	219.5
of which:						
in the Eastern regions . . . . .	—	—	0.5	1.0	24.7	61.6
east of the Urals . . . . .	—	—	0.5	1.0	24.7	61.6
Share: percentages						
all Eastern regions . . . . .	—	—	2.4	61.2	22.1	28.1
east of the Urals . . . . .	—	—	2.4	61.2	22.1	28.1
<b>Output of grain harvesters—total—</b> <b>'000 . . . . .</b>	—	—	12.8	0.3	59.0	92.0
of which:						
in the Eastern regions . . . . .	—	—	—	0.3	8.8	16.9
east of the Urals . . . . .	—	—	—	0.3	8.8	16.9
Share: percentages						
all Eastern regions . . . . .	—	—	—	100	14.9	18.3
east of the Urals . . . . .	—	—	—	100	14.9	18.3
<b>Output of commercial timber—</b> <b>total—mill. Fest metres . . . . .</b>	30.5	36.0	117.9	61.6	261.5	271.7
of which:						
in the Eastern regions . . . . .	...	...	45.8	24.2	117.5	129.9
east of the Urals . . . . .	...	...	27.6	12.4	68.5	82.9
Share: percentages						
all Eastern regions . . . . .	...	...	38.8	39.4	44.9	47.8
east of the Urals . . . . .	...	...	23.4	20.2	26.2	30.5
<b>Output of sawn timber—total—mill.</b> <b>cu m . . . . .</b>	14.2	13.6	34.8	14.7	105.6	106.8
of which:						
in the Eastern regions . . . . .	...	...	12.8	5.8	41.5	44.8
east of the Urals . . . . .	...	...	8.5	3.1	27.4	31.0
Share: percentages						
all Eastern regions . . . . .	...	...	36.6	39.6	39.4	41.9
east of the Urals . . . . .	...	...	24.5	20.9	25.9	29.0

	1913	1928	1940	1945	1960	1966
<b>Output of cellulose—total—'000 tons</b>	257.6	86.0	529	275.9	2,282	3,605
of which:						
in the Eastern regions . . . . .	...	...	139	126	648	902
east of the Urals . . . . .	...	—	—	5.6	212	423
Share: percentages						
all Eastern regions . . . . .	...	...	26.2	45.8	28.4	25.0
east of the Urals . . . . .	...	—	—	2.0	9.3	11.7
<b>Output of paper—total—'000 tons</b>	269	284	812	321	2,334	3,550
of which:						
in the Eastern regions . . . . .	12.6	...	160	105	691	1,036
east of the Urals . . . . .	4.7	...	2.8	15.2	179	295
Share: percentages						
all Eastern regions . . . . .	4.7	...	19.7	32.6	29.6	29.2
east of the Urals . . . . .	1.7	...	0.3	4.7	7.7	8.3
<b>Output of cement—total—mill. tons</b>	1.8	1.8	5.7	1.8	45.5	80.0
of which:						
in the Eastern regions . . . . .	0.1	0.1	1.1	0.6	16.2	28.7
east of the Urals . . . . .	0.1	0.06	0.8	0.4	9.7	18.9
Share: percentages						
all Eastern regions . . . . .	4.8	7.8	19.5	34.4	35.7	35.9
east of the Urals . . . . .	4.8	3.5	13.5	19.4	21.4	23.6
<b>Output of cotton fabrics—total—mill. lin. m</b>	2,672	2,678	3,954	1,616	6,387	7,238
of which:						
in the Eastern regions . . . . .	—	—	151	125	532	697
east of the Urals . . . . .	—	—	151	124	517	682
Share: percentages						
all Eastern regions . . . . .	—	—	3.8	7.7	8.3	9.6
east of the Urals . . . . .	—	—	3.8	7.6	8.1	9.4
<b>Output of woollen fabrics—total—mill. lin. m</b>	107.7	86.8	119.7	53.6	341.8	397.9
of which:						
in the Eastern regions . . . . .	2.3	2.3	3.3	3.5	14.8	22.6
east of the Urals . . . . .	0.1	0.5	1.3	1.4	9.2	12.8
Share: percentages						
all Eastern regions . . . . .	2.2	2.7	2.8	6.4	4.3	5.7
east of the Urals . . . . .	0.1	0.6	1.1	2.7	2.7	3.2
<b>Output of silk fabrics—total—mill. lin. m</b>	42.6	9.6	77.3	36.4	809.7	1,012
of which:						
in the Eastern regions . . . . .	—	—	6.3	6.2	78.5	127.9
east of the Urals . . . . .	—	—	6.3	6.2	78.1	127.9
Share: percentages						
all Eastern regions . . . . .	—	—	8.2	17.1	9.7	12.6
east of the Urals . . . . .	—	—	8.2	17.0	9.6	12.6

The data for the Eastern regions of the U.S.S.R. include figures for the Ural, West-Siberian, East-Siberian, Far Eastern, Central Asian and Kazakhstan regions and the Bashkirian Autonomous Republic; the data for east of the Urals include figures for the West-Siberian, East-Siberian, Far Eastern, Central Asian and Kazakhstan regions.

## ANNUAL AVERAGE NUMBER OF WORKERS AND EMPLOYEES IN INDUSTRY

	1928	1940	1960	1966
<b>thousands</b>				
Industrial production personnel . . . . .	4,339	13,079	22,291	28,105
of which:				
workers . . . . .	3,593	9,971	18,574	22,896
apprentices . . . . .	155	393	339	498
engineers and technicians . . . . .	137	1,023	2,008	3,087
office staff . . . . .	272	943	897	1,135
<b>percentages of total</b>				
Industrial production personnel . . . . .	100	100	100	100
of which:				
workers . . . . .	83	76	83	82
apprentices . . . . .	4	3	1.5	1.8
engineers and technicians . . . . .	3	8	9	11
office staff . . . . .	6	7	4	4

In this and subsequent tables the figures do not include workers and employees at enterprises run by the collective farms or the workers and employees of small subsidiary industrial enterprises.

## ANNUAL AVERAGE NUMBER OF INDUSTRIAL WORKERS IN KEY INDUSTRIES (thousands)

	1913 <sup>1</sup>		1928	1940	1960	1966
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939				
<b>Total . . . . .</b>	<b>3,900</b>	<b>3,536</b>	<b>3,593</b>	<b>9,971</b>	<b>18,574</b>	<b>22,896</b>
of which:						
coal industry . . . . .	196	196	232	436	1,031	1,011
iron and steel industry . . . . .	310	307	234	405	886	1,000
chemical industry . . . . .	59	50	77	297	584	991
engineering and metal-working industries . . . . .	595	510	480	2,575	5,655	7,885
building materials industry . . . . .	...	...	...	295	1,310	1,433
light industry . . . . .	1,190	1,133	1,091	2,334	3,371	3,872
food industry . . . . .	780	735	...	1,161	1,743	2,160

<sup>1</sup> See footnote to p. 62

## ANNUAL AVERAGE NUMBER OF ENGINEERS AND TECHNICIANS IN KEY INDUSTRIES

(thousands)

	1928	1940	1960	1966
<b>Total</b> . . . . .	<b>137</b>	<b>1,023</b>	<b>2,008</b>	<b>3,087</b>
of which:				
coal industry . . . . .	11	42	111	132
iron and steel industry . . . . .	8	42	85	122
chemical industry . . . . .	4	46	79	153
engineering and metal-working industries . . . . .	30	430	880	1,504
building materials industry . . . . .	...	22	105	157
light industry . . . . .	26	140	193	244
food industry . . . . .	10	117	194	266

## RATE OF GROWTH OF LABOUR PRODUCTIVITY BY INDUSTRIES

(1940 = 100)

	1960	1966
<b>All industries</b> (exclusive of collective-farm industries)—in terms of gross output per worker . . . . .	<b>296</b>	<b>391</b>
Oil industry—oil output per worker . . . . .	248	391
Coal industry—coal output per worker . . . . .	137	166
Iron and steel industry—gross output per worker . . . . .	265	352
Chemical industry—gross output per worker . . . . .	453	671
Engineering and metal-working industries—gross output per worker . . . . .	472	692
Timber industry—comprehensive working of timber per worker . . . . .	176	201
Building materials industry—gross output per worker . . . . .	365	553
Light industry—gross output per worker . . . . .	213	232
Food industry—gross output per worker . . . . .	190	240

In industry labour productivity is rising steadily thanks to modern machinery, greater efficiency and the increasing skill of workers and employees. In 1966 the 1913 level in industry as a whole was topped 14.7-fold; in the engineering and metal-working industries more than 30-fold, in the chemical industry 18-fold and in the iron and steel industry approximately 16-fold.

**OUTLAY CHANGES PER RUBLE OF COMMODITY OUTPUT  
OF INDUSTRY**  
(as a percentage of the previous year)

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967 (plan)
In current prices of the corresponding year . . . . .	-1.7	-0.7	-0.6	+0.2	-1.4	+0.2	-0.7	+0.7	-0.2	-0.8
In prices comparable with previous year . . . . .	-2.1	-1.6	-1.8	-0.9	-1.9	-0.4 <sup>1</sup>	-1.3	-0.2	-0.8	-1.2

The cost of industrial output dropped as a result of higher productivity of social labour, and more efficient and economical utilisation of the means drawn into production.

<sup>1</sup> On the basis of the 1962 depreciation norm, the drop was equal to 1.3 per cent.

**PATTERN OF PRODUCTION EXPENDITURES**  
(in percentages)

	Total	of which						
		raw and basic materials	auxiliary materials	fuel	power	depreciation	wages and deductions for social insurance	miscellaneous
1940	100	58.1	5.9	4.1	1.3	2.2	22.5	5.9
1960	100	64.0	4.8	3.4	1.8	3.5	19.3	3.2
1966	100	64.0	4.5	3.1	2.1	5.2	17.9	3.2

Higher labour productivity makes it possible to draw into production, with the least outlay of labour, a relatively larger share of raw and other materials that have already consumed labour.

*"Communism is Soviet power plus the electrification of the whole country."*

V. I. Lenin

**THE BUILDING UP AND ENLARGEMENT  
OF THE U.S.S.R. POWER INDUSTRY**

	1913		1916	1928	1940	1945	1960	1966
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
Capacity of all power stations (end-of-year figures) —mill. kW . . . . .	1.1	1.1	1.2	1.9	11.2	11.1	66.7	123.0
of which:								
thermal power stations	1.1	1.1	1.2	1.8	9.6	9.9	51.9	99.9
hydropower stations . .	0.02	0.02	0.02	0.1	1.6	1.2	14.8	23.1
Output by all power stations — '000 mill. kWh . .	2.0	1.9	2.6	5.0	48.3	43.3	292.3	544.6
of which:								
by thermal power stations . . . . .	2.0	1.9	2.6	4.6	43.2	38.4	241.4	452.8
by hydropower stations	0.04	0.04	0.04	0.4	5.1	4.9	50.9	91.8

The Soviet state inherited a backward power economy from tsarist Russia. In pre-revolutionary Russia the power industry consisted of small power stations. The energy of rivers was hardly tapped at all. In power output Russia was eighth in the world.

A plan for the electrification of Russia, known as the GOELRO plan, was drawn up in 1920 on Lenin's initiative. Covering a period of 10-15 years, it envisaged the building of large power-generating capacities and the development of the entire economy on the basis of electrification. Daring for its day, it was fulfilled ahead of schedule. By the end of 1935 a total of 40 district power stations were in operation instead of the 30 provided for by the GOELRO plan.

By carrying out Lenin's plan of complete electrification, the Soviet Union has forged into the lead in power engineering, and for the output of electric power it is first in Europe and second in the world.

Under the plan for 1967 the power output is to equal 598,000 million kWh.

More electric power is now produced every 36 hours than during the whole of 1913.

The Soviet power industry consists mainly of thermal power stations, which account for 83 per cent of the total power output.

All the hydropower stations were built during Soviet years.

The first of these was the Volkhov Project built in 1926, on instructions from Lenin. Since then the Soviet Union has built dozens of huge hydropower developments.

The first atomic power station became operational in 1954.

## CONCENTRATION OF ELECTRIC POWER OUTPUT

	1940	1960	1966	
			'000 mill. kWh	percent- ages of total
<b>Total power output</b> —'000 mill. kWh . . . . .	<b>48.3</b>	<b>292.3</b>	<b>544.6</b>	<b>100</b>
of which by power stations of				
up to 10,000 kW capacity . . . . .	15.9	28.3	24.5	4.5
from 10,000 to 100,000 kW capacity . . . . .	12.3	56.7	61.7	11.3
from 100,000 to 1,000,000 kW capacity . . . . .	20.1	186.3	312.8	57.4
a capacity of 1,000,000 kW and over . . . . .	—	21.0	145.6	26.8

A feature of the Soviet power industry is the high concentration of power generation at large power stations. Eighteen huge power stations, with a capacity of 1,000,000 kW and over, account for one-fourth of the total power output. These include mammoth thermal power stations such as the Dnieper (2,400,000 kW) and the Staro Beshevo (2,100,000 kW) projects; the largest of the hydropower stations are the Bratsk (4,000,000 kW), the 22nd Party Congress (2,500,000 kW) and Lenin (2,300,000 kW) developments, the last two on the Volga.

Soviet power engineering is developing along the line of concentrating power output in grids: general-purpose power stations and block-stations account for 93 per cent of the country's power output. The Single Power Grid of the European part of the U.S.S.R., which will satisfy half of the economy's power requirements, is nearing completion. The creation of grids has become possible thanks to the large-scale building of power-transmission lines.

The total length of the transmission lines for a voltage of 35 kV and higher has exceeded 300,000 kilometres, which is a 16-fold increase over 1940. There are 10,000 kilometres of transmission lines with a voltage of 400-800 kV. The 800 kV D. C. Volgograd-Donbas transmission line was put in operation in 1962.

## POWER OUTPUT AND CONSUMPTION IN THE ECONOMY (\*000 million kWh)

	Power output	Power consumption				
		industry	transport	agriculture	other branches	Losses in general-purpose networks
1913	2.04	1.57	0.02	0.001	0.38	0.07
1928	5.0	3.4	0.3	0.04	0.9	0.4
1940	48.3	34.7	2.6	0.5	7.1	3.4
1945	43.3	31.0	1.8	0.4	6.5	3.6
1960	292.3	207.5	17.7	10.0	39.3	17.8
1966	544.6 <sup>1</sup>	372.9	40.6	23.2	67.8	38.5

<sup>1</sup> Power exports from the U.S.S.R. amount to 1,600 million kWh.

In the U.S.S.R. the growth of the output of electric power facilitated the development of all branches of the economy.

During Soviet years electricity became part and parcel of production processes. Today industry consumes about 70 per cent of the entire power output. Of the total capacities serving production processes, 88 per cent are accounted for by electric motors and apparatuses. Mechanical motors serve mainly hoisting, transport and auxiliary operations.

Hardly any electric power was used for technological needs before the October Revolution. Today, more than one-fourth of the power consumed in industry is used for technological needs.

The electrification of industry has ensured large-scale mechanisation and automation of production processes.

Compared with 1940, the capacity of high-pressure installations at general-purpose thermal power stations increased more than 430-fold and at the beginning of 1967 was 83 per cent of the total capacity of the thermal power stations.

Within the same period, the number of boiler units with automatically controlled combustion increased 120-fold, while their share of the total steam output of boiler units rose from 6 to 88 per cent.

At present all hydropower stations are fully automated, and those needing it are equipped with remote control devices. Prior to 1950 such devices were not used at Soviet power substations; today their number tops 700.

Remote control is widely used at the distribution centres of power systems and grids. By 1967 a total of 90 per cent of panel-controlled power systems were using remote control.

Some of the huge power stations are remote-controlled from a distance of thousands of kilometres. Automation and remote control are used to regulate the flow of surpluses between power grids in some of the regions and from the western power systems to the Peace Grid, transmitting power to member-countries of the Council for Mutual Economic Assistance.

Automatic anti-accident devices are used widely and effectively in Soviet power systems.

New machinery has enabled the power stations to operate efficiently and with the minimum of waste. Compared with 1940 the consumption of conventional fuel per kWh has dropped by 240 grams, or 37 per cent.

*The tapping of extremely rich deposits of oil, gas and coal and the supply of modern machinery to fuel industry enterprises have ensured a high rate of fuel output. The accelerated development of the oil and gas industries has fundamentally changed the country's fuel pattern.*

### GRÖWTH OF FUEL OUTPUT

	1913		1928	1940	1945	1960	1966	1967 (plan)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
Oil—mill. tons . . . . .	10.3	9.2	11.6	31.1	19.4	147.9	265.1	286.3
Gas, natural and concurrent —'000 mill. cu m . . . . .	—	—	0.3	3.2	3.3	45.3	143.0	158.3
Coal—mill. tons . . . . .	29.2	29.1	35.5	165.9	149.3	509.6	585.6	590.7
Peat—mill. tons . . . . .	1.7	1.7	5.3	33.2	22.4	53.6	65.4	59.0
Shale—mill. tons . . . . .	—	—	0.0	1.7	1.4	14.1	21.4	21.2
Firewood <sup>1</sup> —mill. Fest cu m	36.5	33.4	25.7	128.2	106.8	108.0	120.0	120.0

<sup>1</sup> Including output by all non-industrial organisations.

### OUTPUT OF DIFFERENT KINDS OF FUEL (in terms of conventional fuel—7,000 kilocalories)

	1913		1928	1940	1945	1960	1966	1967 (plan)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
<b>Total—mill. tons . . . . .</b>	<b>48.2</b>	<b>45.9</b>	<b>54.2</b>	<b>237.7</b>	<b>185.0</b>	<b>692.8</b>	<b>1,033</b>	<b>1,079</b>
Percentage of total:								
oil . . . . .	30.5	28.8	30.7	18.7	15.0	30.5	36.7	37.8
gas, natural and concurrent coal . . . . .	—	—	0.8	1.9	2.3	7.9	16.5	17.4
peat . . . . .	48.0	50.3	52.0	59.1	62.2	53.9	40.7	39.2
shale . . . . .	1.4	1.5	4.0	5.7	4.9	2.9	2.3	2.0
firewood . . . . .	—	—	0.0	0.3	0.2	0.7	0.7	0.7
	20.1	19.4	12.5	14.3	15.4	4.1	3.1	2.9

Fundamental changes have taken place in the fuel industry during Soviet years, particularly after the Second World War. In the total output of basic fuels the share of oil and gas is to rise in 1967 to 55 per cent as against 17.3 per cent in 1945 and 20.6 per cent in 1940.

Today the monthly output of oil is over 100 per cent greater than the annual output of pre-revolutionary Russia.

The gas industry was built entirely in Soviet years.

Natural gas is being used more and more as a cheap fuel as well as a technological raw material for the chemical industry. It is used extensively at power stations, iron and steel plants and other industries. Gas for domestic purposes is being piped to a steadily increasing number of towns and townships.

For the output of coal pre-revolutionary Russia was sixth in the world and fifth in Europe. Since 1958 the Soviet Union has been the largest coal producer in the world.

Coal concentration and the production of graded coal have been considerably stepped up in recent years. Compared with 1940 the volume of coal processing at concentration plants is to increase 9-fold in 1967.

In 1967 the output of coking coal is to exceed 140 million tons and surpass the 1940 level by 300 per cent.

The geography of coal production has undergone substantial changes.

In pre-revolutionary Russia most of the coal, 87 per cent, came from the Donets Basin. Large new coal bases—the Kuznetsk and the Karaganda Basin—have been built during Soviet years in the country's Eastern regions. Mining is being developed in Central Asia, Siberia and the Soviet Far East. At present the Eastern regions account for half of the Soviet Union's coal.

The technique and technology of oil extraction have changed radically during Soviet years. New methods of developing oilfields have become widespread, particularly trans-contour and inner-contour flooding, the pumping of gas and air to sustain the bed pressure, hydraulic blasting and so forth. At present about two-thirds of the oil is extracted by the modern jet method.

Automation is widely used at oil and gas wells. Nearly half of the wells have now been switched over to automatic control from central dispatcher panels.

### SHARE OF THE MAIN OIL REGIONS IN THE TOTAL OUTPUT (percentage of the total)

	1913	1917	1928	1940	1945	1960	1966
U.S.S.R. . . . .	100	100	100	100	100	100	100
Volga Area and the Urals . . . . .	—	—	—	6.0	14.6	70.5	70.0
North Caucasus . . . . .	12.6	20.6	31.7	14.8	9.9	8.2	8.9
Azerbaijan . . . . .	74.6	75.5	65.9	71.5	59.4	12.1	8.2
Central Asia and Kazakhstan . . . . .	2.6	3.9	2.4	4.7	9.9	6.1	6.0

In 1913 three-fourths of the country's oil came from Azerbaijan. Today most of the oil is produced in the Urals-Volga regions, where a new oil base has been developed during Soviet years. In 1967 as compared with 1940 the oil output of these regions is to increase 106-fold.

New oil regions have lately begun to be developed in Western Siberia and Western Kazakhstan, where nearly 9 million tons of oil is to be produced in 1967.

## GROWTH OF THE VOLUME OF OIL AND GAS WELL BORING

	1913 <sup>1</sup>	1940	1945	1960	1966
Oil and gas well boring—'000 m . . . . .	277	1,947	927	7,715	11,251
of which:					
exploitation boring . . . . .	...	1,416	532	3,692	5,603
exploration boring . . . . .	...	531	395	4,023	5,648
Boring speed per boring unit per month—m:					
exploitation boring . . . . .	} 35	412	319	993	1,137
exploration boring . . . . .		233	185	401	367

The number of wells sunk in the U.S.S.R. in 1966 was 41 times greater than in 1913.

Percussion boring, an arduous and inefficient method, predominated in pre-revolutionary Russia. Wells were sunk to the small depth of 500-600 metres, and the underlying layers were not tapped.

Today 80 per cent of the boring is performed by turbobores and electric bores. The oil industry is widely employing industrial methods of erecting boring installations, directed cluster boring of deep wells and the sinking of wells with reduced and small diameter bits. In 1966 the changes in boring techniques and technologies have made it possible to sink wells 16 times faster than in 1913.

<sup>1</sup> For the territory within the frontiers of the U.S.S.R. prior to September 17, 1939.

### MECHANISATION AT COAL MINES

(volume of mechanisation in per cent of total volume of work)

	1913	1940	1945	1960	1966
Cutting and breaking . . . . .	1.7	94.8	93.2	99.2	99.6
Heaping at stopes in level and steeply inclined seams . . . . .	—	0.1	0.1	48.8	71.3
Delivery in stopes <sup>1</sup> . . . . .	—	90.4	82.8	99.9	99.96
Haulage of coal and rock—freightage <sup>2</sup> . . . . .	—	75.2	86.5	99.9	100
Loading coal and rock in main level entry pits . . . . .	—	—	—	67.0	79.1
Loading coal into railway cars . . . . .	—	86.5	83.2	99.98	100

Soviet-made equipment has enabled the coal industry to practically complete the mechanisation of arduous work like cutting, breaking and transporting coal at stopes, and hauling and loading coal into railway cars.

<sup>1</sup> For 1940 and 1945 the figures show delivery at stopes and in entry pits.

<sup>2</sup> The 1940 and 1945 figures are for the haulage of coal and rock only along the main level haulage pits, and those for the subsequent years are for all level haulage pits.

## BASIC MACHINES AND MECHANISMS IN THE COAL INDUSTRY (end-of-year figures)

	1940	1945	1960	1966
Drawing combines . . . . .	24	7	4,249	4,291
Cutters . . . . .	—	—	601	541
Cutter-drillers . . . . .	—	99	1,425	1,958
Coal loaders . . . . .	—	—	1,135	1,767
Rock-loaders . . . . .	36	55	5,434	4,270
Scraper-conveyors . . . . .	—	2,049	43,624	46,175
Belt conveyors . . . . .	2,920	3,374	12,860	13,935
Electric locomotives . . . . .	1,841	1,887	16,254	16,025

A steadily increasing number of mines are using various types of equipment ensuring the complete mechanisation of the most arduous work. For example, in recent years the Soviet engineering industry has started the manufacture of the KM-100 equipment which mechanises cutting and haulage, timbering and roof regulation in 1.25-1.6-metre thick level seams and increases labour productivity by 90 per cent as compared with the Donbas cutter with individual timbering. The new A-3 automatically cuts coal in level seams, increasing labour productivity by 400 per cent.

Since 1960 more than 50 per cent of the mining units and installations have been fitted with automatic and remote control, comprehensive mechanisation has been introduced at 1,146 stopes and 95 mines, and 22 concentration plants have been switched over to automation and comprehensive mechanisation.

### OPEN-CAST MINING

	1913	1928	1940	1945	1960	1966
Output of open-cast mines—mill. tons	0.2	0.3	6.3	17.8	102.0	146.0
Share of open-cast mining in total coal output—percentage . . . . .	0.6	0.8	3.8	11.9	20.0	24.9

The open-cast method, under which labour productivity is about six times higher than in mines, is spreading swiftly.

Prior to the revolution only a small quantity of coal was mined by the open-cast method (in the Urals).

Today this method is used in the Kuznetsk Basin, in Eastern Siberia, the Soviet Far East, the Urals, Uzbekistan, the Ukraine (along the right bank of the Dnieper), Bashkiria, the Ekibastuz Basin and other regions.

Compared with 1940, 23 times more coal was mined by the open-cast method in 1966.

**CLASSIFICATION OF MINES AND PITS  
BY THE AVERAGE DAILY OUTPUT OF COAL**  
(percentages)

	1940	1945	1960	1966
<b>Mines</b>				
Average daily output—tons				
up to 100	4.1	39.6	1.5	0.2
101- 300	17.9	30.3	11.8	4.6
301- 500	20.7	11.6	13.1	7.9
501-1,000	30.4	11.7	27.4	24.7
1,001-2,000	19.2	5.3	29.9	36.9
2,001-3,000	5.7	0.8	9.8	15.1
3,001-5,000	2.0	0.6	5.4	9.2
over 5,000	—	0.1	1.1	1.4
<b>Pits</b>				
Average daily output—tons				
up to 1,000	—	15.8	6.0	10.8
1,001-3,000	71.4	57.9	22.0	24.6
3,001-5,000	28.6	10.5	30.0	20.0
5,001-8,000	—	15.8	20.0	21.5
over 8,000	—	—	22.0	23.1

A high concentration of coal output has been achieved in the Soviet Union. Compared with 1940 the average daily output per mine doubled in 1966, while the average daily output per pit increased by 160 per cent.

**FUEL AND POWER RESOURCES**  
(in terms of conventional fuel; million tons)

	1913	1940	1960	1965
<b>Resources—total</b> . . . . .	64.4	283.6	836.5	1,121.5
Output of fuel . . . . .	48.2	237.7	692.8	966.6
Output of hydropower . . . . .	0.0	0.6	6.3	10.0
Import . . . . .	8.0	3.1	10.7	9.1
Other receipts . . . . .	2.4	10.2	32.7	35.5
Remainder at the beginning of the year . . . . .	5.8	32.0	94.0	100.3
<b>Distribution—total</b> . . . . .	64.4	283.6	836.5	1,121.5
Expended . . . . .	57.6	249.5	678.0	897.8
of which:				
for electrical and thermal power . . . . .	2.0	44.7	221.2	335.0
for technological and other requirements, including losses during storage and trans- portation . . . . .	55.6	204.8	456.8	562.8
Export . . . . .	1.2	1.1	59.8	116.7
Remainder at the end of the year . . . . .	5.6	33.0	98.7	107.0

The fuel resources have been considerably boosted as a result of the expansion of the leading branches of the fuel industry.

In 1965 the fuel and power resources increased more than 17-fold as compared with 1913 and four-fold as compared with 1940 mainly through the output of fuel, which has grown more than 20-fold as compared with 1913, exceeding the 1940 level 300 per cent.

The distribution of fuel and power resources has also changed, and there was a particularly sharp increase in 1965 in the expenditure of fuel for transformation into other forms of energy (electrical and thermal): this expenditure increased 167-fold as compared with 1913 and 7.5-fold as compared with 1940.

Much has been done in Soviet years to build up the raw material base of the fuel industry, especially in regard to oil and gas, which are the cheapest fuels.

The discovery in 1932 of the Ishimbai oil deposit sparked off large-scale geological surveying in the region between the Volga and the Urals. This led to the discovery of many large deposits in the Tatar Autonomous Republic, Bashkiria and Kuibyshev and Perm regions.

Natural gas was discovered in Saratov Region as well as in the Northern Caucasus, the Ukraine and Turkmenia. The Soviet Union's largest gas deposit was discovered in 1956 at Gazli, Uzbekistan. Off-shore oil deposits have been found and developed in the Caspian, Azerbaijan.

Great importance attaches to the large oil and gas deposits discovered in recent years in Western Siberia. Sub-surface deposits of high-grade oil have been brought to light on Mangyshlak Peninsula, Western Kazakhstan. The Rechitsa and Ostashkov deposits, discovered in 1964, have turned Byelorussia into an oil producer.

The oil and gas reserves in the Soviet Union are among the largest in the world.

In Soviet years there has been a powerful expansion of the coal industry: the main coal basins—Donbas and Kuzbas—have been enlarged; the Kansk-Achinsk, Irkutsk, Lena and Tunguska coal basins have been reassessed; new large basins and deposits—Lvov-Volhynia, Taimyr, South Yakutia and so on—have been discovered. Compared with 1913, the geological reserves of coal have been found to be 38 times greater.

*The iron and steel industry has departed far from the state described by Lenin: "With regard to iron, one of the most important products of modern industry, one of the foundations of civilisation, one might say, Russia's backwardness and barbarism is particularly great."*

*During Soviet years this industry has forged into the lead; it is equipped with the most powerful open-hearth and blast furnaces in the world.*

## GROWTH OF THE SOVIET IRON AND STEEL INDUSTRY

	1913		1917	1928	1940	1945	1960	1966	1967 (plan)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939							
<b>Output</b>									
Pig-iron—mill. tons	4.2	4.2	3.0	3.3	14.9	8.8	46.8	70.3	74.7
Steel—mill. tons	4.3	4.2	3.1	4.3	18.3	12.3	65.3	96.9	102.1
Rolled ferrous metals—mill. tons	3.6	3.5	2.4	3.4	13.1	8.5	51.0	76.7	80.6
of which:									
finished . . . .	3.4	3.3	2.3	3.2	11.4	7.4	43.7	66.1	70.5
Steel tubes <sup>1</sup> —'000 tons . . . . .	78	78	56	171	966	571	5,805	9,905	10,480
Iron ore—mill. tons	9.2	9.2	5.3	6.1	29.9	15.9	105.9	160.3	163.0

Since the revolution the Soviet iron and steel industry has developed rapidly and is now one of the largest in the world.

The U.S.S.R. leads the world in the output of iron ore, coke and steel tubes and is second, after the U.S.A., in the output of pig-iron, steel and ferrous metals rolled stock.

The U.S.S.R. produces more pig-iron and steel than leading capitalist countries like Britain, France, the Federal Republic of Germany and Italy combined.

Alone, four iron and steel plants—the Kuznetsk Iron and Steel Complex, the Azovstal Plant, the Krivoi Rog Plant and the Zaporozhstal Plant—built in Soviet years, produce more pig-iron than Britain.

A feature of the development of the Soviet iron and steel industry is the concentration of production at huge plants. The output of pig-iron per plant averaged about 50,000 tons in 1913, and more than 2,000,000 tons in 1967. In the U.S.S.R. the concentration level of blast-furnace production is the world's highest. At present more than 90 per cent of the Soviet Union's pig-iron is produced at plants with an annual output capacity of over 1,000,000 tons.

The growth of the Soviet iron and steel industry played a tremendous role in furthering socialist industrialisation, in the technical re-equipment of the entire economy.

<sup>1</sup> The output of steel tubes was 883 million metres in 1960 and 1,503 million metres in 1966.

## UTILISATION OF OPEN-HEARTH AND BLAST FURNACES

	1913	1928	1940	1945	1960	1966
Blast-furnace useful volume efficiency— cu m per ton . . . . .	2.30	1.86	1.19	1.15	0.753	0.654
Average daily steel output per sq m of open-hearth furnace bottom—tons . .	...	2.09	4.24	3.75	7.69	8.74

In 1966, as compared with 1913, the output of pig-iron per cu m of useful blast-furnace volume was 3.5 times higher and, compared with 1928, the steel output per sq m of open-hearth furnace bottom was more than 4 times higher.

In the smelting of pig-iron the agglomerate content in the ore charge amounted to 90 per cent in 1966, which is a three-fold increase over the 1940 level.

The growth of the iron and steel industry was ensured by the building up of huge mineral and raw material resources.

The end-of-year explored reserves of iron ore were ('000 million tons):

1913	1940	1945	1960	1966
0.8	4.3	5.2	43.6	58.0

Today there are iron ore resources for the iron and steel industry in many regions.

Open-cast mining of iron ore has been promoted on a growing scale in recent years; this is reducing mining costs and greatly enhancing labour productivity. More than 70 per cent of the Soviet Union's iron ore is now mined by the open-cast method.

The Soviet Union's explored reserves of iron ore are three times greater than those of the U.S.A., Britain, France and the Federal Republic of Germany combined.

The iron ore deposits in the Urals and in the Krivoi Rog and Kerch iron ore basins have been surveyed in detail during Soviet years.

One of the world's largest iron ore basins—the Kursk Magnetic Anomaly, situated in a central region of the Soviet Union—has been developed. It plays an important economic role in supplying ore to operating plants in the South and the Centre and for the building of new large industrial projects.

Great deposits providing a reliable mineral and raw material base for the iron and steel industry have been discovered in the North-Western regions and in Kazakhstan and Siberia.

The explored reserves of manganese ore have been considerably increased during Soviet years. Additional reserves have been found in the Chiatura and Nikopol basins and new deposits have been explored in the North Urals and in Central Kazakhstan.

## INTRODUCTION OF ADVANCED TECHNOLOGICAL METHODS AT IRON AND STEEL COMPLEXES

	1950	1960	1966
Share of blast furnaces switched over to increased gas pressure beneath the furnace top—percentage			
number of blast furnaces . . . . .	3.3	65.8	81.5
blast-furnace volume . . . . .	6.4	83.7	93.6
Pig-iron production with the use of natural gas:			
mill. tons . . . . .	—	19.3	58.6
percentage of total pig-iron output . . . . .	—	41.3	83.4
Share of blast furnaces working on natural gas (number of blast furnaces)—percentage . . . . .	—	38.3	75.4
Output of fluxed agglomerate:			
mill. tons . . . . .	1.8	64.0	116.2
percentage of total agglomerate output . . . . .	15.3	98.3	99.1
Steel output in open-hearth furnaces using oxygen <sup>1</sup> :			
mill. tons . . . . .	0.2	14.6	43.3
percentage of total output of open-hearth steel . . . . .	0.9	28.6	58.4
Share of open-hearth furnaces working with oxygen-enriched blowing (number of open-hearth furnaces)—percentage . . . . .	1.5	21.3	41.3

The steadily growing useful volume of the blast furnaces being put in operation is one of the most important indices of technical progress in blast-furnace production. In 1958 the maximum blast-furnace volume did not exceed 1,719 cu m; blast furnaces with a useful volume of 2,000 cu m and over have been built and put in operation in recent years. One of the world's largest blast furnaces became operational in 1965 at the Ilyich Iron and Steel Plant in Zhdanov. It has a useful volume of 2,300 cu m. Construction has been started of blast furnaces with a useful volume of 2,700 cu m. The latest achievements of science and technology are utilised in the design and construction of new blast furnaces.

Appreciable progress has been made in the smelting of high-alloy, heat-resisting, stainless, acid-proof, electrotechnical and other steels and alloys for the power engineering and aircraft engineering industries and for jet technology. New grades of steels and economical rolled stock sections have been developed and put in production. The range of ferrous metals rolled stock has been considerably widened.

These achievements were made possible by the powerful expansion of the heavy industry, the engineering industry in particular. The equipment produced in recent years for the iron and steel industry includes: the "2500", Europe's largest wide-band rolling mill with an annual output capacity of 3,850,000 tons of rolled stock; and the "1300", a comprehensively mechanised and automated blooming mill with an annual output capacity of 6,000,000 tons of slabs (the blooms are flame cleaned and automatically stamped)—the capacity of this blooming mill is more than twice that of the blooming mills used abroad.

Continuous steel pouring is becoming more and more widespread in steel production. At present there are 25 continuous steel-pouring installations in operation; in 1966 some 2,000,000 tons of steel were poured by this method.

The transfer of blast furnaces to work with increased gas pressure beneath the furnace top, and the use of oxygen in the smelting of steel in open-hearth furnaces were started in 1950. The production of fluxed agglomerate was organised at the same time. The oxygen-converter method of smelting steel was introduced into open-hearth production in 1956. Natural gas has been used in blast-furnace production since 1958. In 1966 more than 80 per cent of the Soviet Union's pig-iron was produced with the use of natural gas.

<sup>1</sup> Steel production with the utilisation of oxygen at iron and steel plants totalled 18,600,000 tons in 1960 and 52,600,000 tons in 1966, or 32.3 per cent and 61 per cent respectively, of the aggregate steel output.

*In Soviet years, particularly during the past few years, the chemical industry has been transformed from a backward branch into a powerful factor of technical progress.*

## GROWTH OF THE CHEMICAL INDUSTRY

	1913		1928	1940	1945	1960	1966	1967 (plan)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
<b>Output—'000 tons</b>								
<b>Mineral fertilisers:</b>								
in terms of 100 % content of nutritional substance . . . .	16.9	13.1	25.6	746	253	3,281	8,438	9,096
in conventional units	89	69	135	3,238	1,121	13,867	35,866	38,671
<b>Plant protection chemicals:</b>								
in terms of 100 % active base . . . .	...	...	...	...	...	32.3	115	122
in conventional units	...	...	...	...	...	62.6	207	216
Soda ash (95 %) . . . .	160	160	217	536	235	1,887	2,963	3,101
Caustic soda (92 %) . .	55	55	59	190	128	765	1,393	1,560
Sulphuric acid in monohydrate . . . . .	145	121	211	1,587	781	5,398	9,367	10,003
Synthetic resins and plastics . . . . .	—	—	...	10.9	21.3	312	974	1,131
Synthetic dyes . . . . .	9	9	10.3	34.3	15.3	84.1	88.8	86.1
Chemical fibres . . . .	—	—	0.2	11.1	1.1	211	458	507.5
Automobile tyres—'000 . . . . .	...	...	85	3,007	1,370	17,225	27,656	29,100

In pre-revolutionary Russia the chemical industry was backward and operated mainly on imported raw materials; raw material deposits in the country itself were not developed.

Soviet years have witnessed the discovery of the huge Khibiny apatite-nepheline deposits, deposits of potassium salts near Solikamsk, phosphorites in the region of the Kara-Tau Range, Kazakhstan, pyrite in the Urals, and other chemical raw materials in different parts of the country. This has given the chemical industry reliable mineral resources.

During the half century after the October Revolution the chemical industry has grown into a powerful versatile branch of the economy.

Compared with 1913 its output is to increase 322-fold in 1967, with the output of mineral fertilisers increasing 435-fold, of soda ash 19-fold, of caustic soda 28-fold and sulphuric acid 69-fold.

In that span of time the U.S.S.R. has built new branches of the chemical industry such as the production of synthetic rubber, synthetic ammonia, chemical fibres, plastics and synthetic resins, many plant protection chemicals and other vital items.

In the production of some key chemical goods the U.S.S.R. now occupies first place in Europe. For example, it is second only to the U.S.A. in the output of sulphuric acid, soda ash, synthetic ammonia and mineral fertilisers.

The growth of the output of synthetic resins and plastics has ensured the wide use of these items in all branches of the economy.

Chemistry is playing an important role in promoting agriculture, supplying it with growing quantities of mineral fertilisers, plant protection chemicals as well as with synthetic proteins, vitamins and antibiotics for raising livestock productivity.

Many key chemical goods are now produced from more effective oil-chemical raw materials. In the period since 1959 the quantity of chemical products made from oil and gas raw material has nearly doubled. In 1966, for instance, more than half of the country's synthetic ammonia and 90 per cent of its synthetic rubber was produced from natural gas.

*The engineering industry plays the decisive role in the technical re-equipment of the economy and in raising labour productivity.*

### GROWTH OF THE OUTPUT OF THE ENGINEERING INDUSTRY

	1913	1917	1940	1945	1960	1966	1967 (plan)
Growth of the output of the engineering and metal-working industries:							
1913 = 1 . . . . .	1	1.3	30	38	268	538	588
1917 = 1 . . . . .		1	27	35	245	491	538

Pre-revolutionary Russia had a very small engineering industry. Most of the modern equipment was imported. Power and electrical engineering equipment, equipment for the iron and steel and fuel industries, metal-working equipment, automobiles and many other basic machines and equipment were either not produced at all or produced in very small quantities.

After rehabilitation the key task facing Soviet economy was the building up of an engineering industry.

As far back as before the war the Soviet engineering industry moved into first place in Europe and second place in the world.

The development of the engineering industry systematically outstripped the growth of industry as a whole and this made it possible to maintain a high rate of growth of industrial output. Today it is one of the main branches of industry. During the Second World War many engineering plants manufacturing machines for civilian requirements were rapidly switched over to war production.

After the war the engineering industry continued to grow quickly. A substantial growth was registered by new branches such as radio engineering and electronics. A high technical level was reached by the instrument-making industry. Today more than one-third of the industrial workers in the Soviet Union are employed at engineering or metal-working plants.

The designing and experiment base of the engineering industry has been considerably enlarged. On the average there are more than 40 designing sub-divisions and six experiment establishments per ten engineering plants.

The Soviet engineering industry has won priority for the U.S.S.R. in the production of efficient equipment and instruments for space exploration.

## PRODUCTION OF POWER AND ELECTRICAL EQUIPMENT

	1913		1928	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
Steam boilers <sup>1</sup>								
'000 sq m . . . . .	24.2	19.1	87.9	276.3	90.3			
'000 t steam/hour . . . .						50.3	91.6	100
Steam and gas turbines —								
'000 kW . . . . .	5.9	5.9	35.7	972	189	7,462	12,667	14,182
Hydraulic turbines —								
'000 kW . . . . .	—	—	8.4	208	40.6	1,738	2,505	2,037
of which large . . . . .	—	—	—	200	—	1,700	2,492	2,023
Diesels (motor and tractor excluded) — '000 hp . . . .	39.3	35.1	38.9	255.2	18.7	9,631	14,060	14,730
Turbine generators —								
'000 kW . . . . .	—	—	75	468	265	7,915	13,447	14,902
A. C. electric motors with a capacity over 100 kW —								
'000 kW . . . . .	—	—	55	527	681	4,104	5,511	5,492
A. C. electric motors with a capacity from 0.25 to 100 kW — '000 kW . . . .	280 <sup>2</sup>	280 <sup>2</sup>	204	1,328	559	13,493	22,663	22,340

In pre-revolutionary Russia there was no production of power and electrical equipment to speak about.

In Soviet years large thermal and hydropower stations were equipped with modern, powerful, highly efficient Soviet-made machinery. Compared with 1940, the average capacity of steam turbines manufactured in the Soviet Union has gone up 3.7 times, and that of hydraulic turbines 38 times. Maximum capacity of steam turbines with low steam parameters manufactured in 1940 was 50,000 kW. Today our industry batch-produces 100,000-, 200,000-, 300,000-kW steam turbines with high steam parameters. An 800,000-kW steam turbine and a 500,000-kW hydraulic turbines have been manufactured. A giant steam boiler with 2,500 t steam/hour capacity has gone into operation. Maximum capacity of generators for steam turbines have reached 500,000 kW. The hydrogenerators manufactured for the Krasnoyarsk and Bratsk hydroelectric power stations are the best in the world.

<sup>1</sup> Beginning with 1955 the production of steam boilers in the U.S.S.R. is planned and estimated in thousand tons of steam/hour; the production of steam boilers in 1954 equalled 745,400 sq m, or 33,000 tons of steam/hour.

<sup>2</sup> Including explosion-proof ones.

## EQUIPMENT FOR IRON AND STEEL AND FUEL INDUSTRIES

	1913									
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939								
			1917	1928	1940	1945	1960	1966	1967 (estimated)	
Metallurgical equipment — '000 tons . . . . .	...	...	...	...	24	27	218	252	292	
including rolled stock . . .	1	1	—	2	10	7	121	121	150	
Coal drawing combines . . . . .	—	—	—	—	22	5	881	1,041	1,135	
Oil equipment — '000 tons . . .	—	—	—	—	16	1	93	148	147	
Bore-hole pumps — '000 units	—	—	—	4	32	40	82	89	91	
Turboboresh . . . . .	—	—	—	—	90	244	6,222	8,487	8,500	

Before the October Revolution practically all the equipment for the iron and steel and fuel industries was imported.

The creation of the metallurgical engineering industry so essential for boosting the production of pig-iron, steel and rolled stock and thus providing the basis for the development of all branches of the engineering and building industries, was one of the most urgent tasks of industrialisation. The rapidly developing coal and oil industries also needed equipment.

The production of modern highly efficient equipment for the metallurgical, oil, gas, coal and peat industries has been organised in Soviet times.

Our metallurgical enterprises are equipped with highly efficient modern rolling mills.

Powerful, fully-mechanised and automated bar mill "2000" for continuous hot rolling, which at present is in the building stage, will produce annually 6.5 million tons of rolled stock or 1.8 times more than the total output of ferrous metals in Russia in 1913. Our industry also manufactures large tube-rolling units with pilger mills each producing annually 400,000 tons of highly durable hot-rolled pipes.

Engineering plants put out highly efficient machines for coal mining. Coal-cutters and combines have eliminated the arduous manual labour of the miners.

Oil extracting, gas and oil processing industries are equipped with Soviet-made modern equipment: bores, turbo-electric bores, pumps and various other oil equipment.

## OUTPUT OF METAL-WORKING EQUIPMENT

	1913		1917	1928	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to Sept. 17, 1939							
Metal-cutting lathes—'000 . . .	1.8	1.5	0.2	2.0	58.4	38.4	156	192	196
of which:									
large, heavy and special-purpose . . . . .	—	—	—	—	0.2	0.04	4.8	7.7	7.9
precision . . . . .	—	—	—	—	0.02	0.02	10.5	36.9	38.1
Automatic and semi-automatic lines for engineering and metal-working industries—sets . . . . .	—	—	—	—	1	—	174	219	298
Forge and press equipment (exclusive of hand-operated machines and shears) — '000 . . . . .	...	...	...	...	4.7	2.9	29.9	38.4	40.5
of which:									
automatic forges and presses	—	—	—	—	1.5 <sup>1</sup>	0.3 <sup>1</sup>	2.3	1.1	1.3
forges . . . . .	—	—	—	—	—	0.01	0.3	0.1	0.13

Before the revolution only the most simple turning, drilling and planing machines were manufactured in the country. A powerful engineering industry has been created in Soviet times. The output of metal-cutting lathes has gone up 112 times in 1967 as compared with 1913, and of forges and presses 36 times as compared with 1932.

Soviet machine-building developed both in quantity and quality. The precision of the machines increased; large and special-purpose machines, automats and semi-automats, programmed-control machines and machines for electrophysical and electrochemical metal-processing were built. Over 1,000 machines for electrophysical and electrochemical metal-processing were built in 1966 alone. Heavy engineering plants have manufactured special-purpose machines: vertical turning lathes for working parts 20 m in diameter, plano-milling machines with a 3.6 m table, planing machines for working parts 5 m in width, gear-milling machines for cutting gear wheels up to 12.5 m in diameter, turning lathes for working parts up to 4 m in diameter and roll-grinding lathes for working parts up to 2 m in diameter.

Machine-building plants manufacture a wide range of automatic machine lines.

<sup>1</sup> Including specialised presses.

## METAL-CUTTING, FORGE AND PRESS EQUIPMENT IN THE NATIONAL ECONOMY

	1908 (accord. to census)	1940, November	1962, April	1967, January
Metal-cutting lathes—'000 . . . . .	75	710	2,442	3,010
1908 = 1	1	9.5	32.6	40.1
1940 = 1		1	3.4	4.2
Forge and press equipment—'000 . .	18	119	497	650
1908 = 1	1	6.6	27.6	36.1
1940 = 1		1	4.2	5.5

Improved, highly efficient lathes and machines have been added to the pool of metal-cutting machines, bettering its structure.

## PRODUCTION OF CHEMICAL, PUMP, COMPRESSOR AND REFRIGERATOR EQUIPMENT

	1940	1945	1960	1966	1967 (estimated)
Chemical equipment and spare parts (in wholesale prices as of July 1, 1955)—mill. rubles . . . . .	...	...	226	419	432
Centrifugal pumps—'000 . . . . .	21.2	16.8	316.2	761.8	832
Steam piston pumps—'000 . . . . .	3.5	1.3	11.6	11.1	13.3
Piston drive pumps—'000 . . . . .	1.4	2.4	30.1	43.2	43.1
Vacuum pumps—'000 . . . . .	0.8	0.9	31.9	46.7	46.9
Air and gas driven compressors (including small autorepair shop and sprayer-compressors)—'000 . . . . .	4.8	1.6	38.6	69.9	83.5
Refrigerators—'000 units . . . . .	1.1	0.0	78.2	160.8	176.6

Chemical machine-building became particularly intensive after the Second World War.

A vast range of chemical equipment is being manufactured at present. In 1957 chemical equipment was manufactured to the value of 100.3 million rubles, in 1967 it will amount to 432 million rubles, i.e., 4.3 times up on the 1957 figure.

The production of pumps, compressors and refrigerators has also grown considerably. In 1967 the output of centrifugal pumps, for instance, will grow 39 times as compared with 1940, that of vacuum pumps—59 times and of refrigerator units—162 times.

## PRODUCTION OF INSTRUMENTS AND MEANS OF AUTOMATION

	1940	1945	1960	1966	1967 (esti- mated)
Instruments, means of automation and spare parts (in wholesale prices as of July 1, 1955)—mill. rubles . . . . .	30.9	66.0	1,182.2	2,388.4	2,626.2
optical and mechanical instruments and apparatus . . . . .	5.8	16.6	230.0	312.4	326.0
electrical measuring instruments . .	3.9	4.8	140.6	275.0	309.9
radio measuring instruments . . . . .	2.1	2.4	90.2	164.7	178.1
calculators and computers . . . . .	0.3	0.5	79.9	287.5	332.5
instruments for controlling and regulating technological processes . . .	5.0	11.0	206.5	520.9	559.9
instruments for physical research . .	2.0	2.8	71.5	97.6	108.4
instruments for mechanical measurements . . . . .	4.1	8.9	87.2	163.5	181.5
instruments for medicine, physiology and biology . . . . .	0.2	2.2	38.3	74.8	83.7
timing instruments . . . . .	3.4	12.2	194.2	383.0	420.4
means of mechanisation and automation of engineering and managerial work . . . . .	4.1	4.6	43.8	109.0	125.8

Production of instruments will go up 85 times in 1967 as compared with 1940. Of late the structure of instrument-making has undergone considerable changes owing to the increased output of new progressive groups of instruments. Thus, in 1967, the share of computers will be 12.7 per cent, as compared with 6.8 per cent in 1960, of instruments for controlling and regulating technological processes—21 per cent as against 17.5 per cent. New modern computers have been developed.

Instruments for mechanical testing of heat-resistant alloys in aggressive and neutral media at 3,000° C were also developed. Unified systems (US), mass-spectrometers, chromatographs, now widely used both in research and in industry, have been developed and put into production. The instrument-making industry has considerably increased the output of analytical instruments: gas-analysers, pH-meters (instruments for determining acidity of media) and concentration meters. The production of instruments and chemico-laboratory glass, porcelain and quartz ware has considerably expanded. The production of instruments for mechanising and automating managerial work has been started.

Instrument-making founded in the years of Soviet power promotes the development of science and technology, the automation of production processes in industry, transport, agriculture and other branches of the economy.

## OUTPUT OF LOCOMOTIVES, CARS AND CARRIAGES

	1913		1928	1940	1945	1960	1966	1967 (estimated)
	with the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to Sept. 17, 1939						
Mainline locomotives . . . . .	477	477	479	914	8	—	—	—
Diesel locomotives — sections . . . . .	—	—	—	5	—	1,303	1,529	1,500
'000 hp. . . . .	—	—	—	5	—	2,618	3,450	3,553
Electric locomotives . . . . .	—	—	—	9	—	396	600	400
'000 hp. . . . .	—	—	—	29.4	—	2,082	3,437	2,942
Railway freight cars — '000 . . . . .	12.9	9.7	7.9	30.9	0.8	36.4	40.2	43.7
Railway passenger carriages . . . . .	1,507	1,065	387	1,051	5	1,656	1,981	2,000
Tramcars . . . . .	405	270	414	252	—	907	1,333	1,305

Before the October Revolution only low-powered locomotives were produced in Russia. During the early five-year plan periods Soviet industry built powerful steam engines; in 1957 the production of steam engines was discontinued and they were gradually replaced by diesel and electric locomotives.

Before the revolution and in the initial five-year plan periods industry put out mainly twin-axle freight cars. Today it is building four- and eight-axle cars, self-unloading dump-cars and other specialised cars of large carrying capacity.

### AUTOMOBILE PRODUCTION (thousands)

	1913	1928	1940	1945	1960	1966	1967 (estimated)
Automobiles, total . . . . .	0.0	0.8	145.4	74.7	524	675	731
of which:							
lorries . . . . .	—	0.7	136.0	68.6	362	408	437
passenger cars . . . . .	0.0	0.05	5.5	5.0	139	230	254
buses . . . . .	—	0.05	3.9	1.1	23	37	40

The automobile industry began to develop in the U.S.S.R. in 1924. The number of automobiles produced in tsarist Russia was negligible.

A number of large motor works, including the Gorky, Moscow Likhachov Motor Works, the Minsk, the Urals, Moscow Moskvitch Plant, etc., have all been built after the revolution. As production extended, new types of motorcars of a better performance and higher load-carrying capacity were put out.

Today the motorcar industry produces a wide range of modern lorries such as ZIL-130, MAZ-500 and GAZ-53 with improved dynamic properties and higher durability. The production of specialised automobiles intended for carrying various cargoes, and of highly mobile motorcars has greatly increased.

The development of the motor industry was a result of the achievements of a number of branches of the engineering and of the metallurgical, chemical, fuel and textile industries.

**OUTPUT OF TRACTORS AND AGRICULTURAL MACHINERY**  
(thousands)

	1913	1917	1928	1940	1945	1960	1966	1967 (es- timated)
Tractors:								
physical units . . . . .	—	—	1.3	31.6	7.7	239	382	407
in terms of 15-hp units . . . . .	—	—	1.8	66.2	14.7	475	879	
Tractor ploughs . . . . .	—	—	0.5	38.4	8.5	149	177	197
Tractor drills . . . . .	—	—	0.6	21.4	1.6	112	219	181
Tractor cultivators . . . . .	—	—	—	32.3	0.9	84.8	208	209
Tractor mowers . . . . .	—	—	—	3.3	—	87.5	130	136
Grain harvester combines . . . . .	—	—	—	12.8	0.3	59.0	92.0	102
Beet-harvester combines . . . . .	—	—	—	—	—	4.7	10.5	11.0
Forage harvesters . . . . .	—	—	—	—	—	15.0	12.4	18.3
Cotton-pickers . . . . .	—	—	—	5 units	8 units	3.2	7.2	7.0

Tractor-building has been initiated during the years of Soviet power. The first two tractors were manufactured in 1923. In 1967 the tractor industry will put out 407,000 tractors. This year more tractors roll off the assembly line in one month than were manufactured in the whole of 1940. The rated efficiency of the tractor engines and their power have gone up considerably. At present our industry puts out DT-75, T-4, K-700, DET-250 tractors with engines ranging from 50 to 300 hp. There are also extra-powerful tractors for high-speed soil cultivation.

Before the October Revolution manual labour and primitive farm implements prevailed in agriculture. Extensive agricultural machine-building created after the revolution made it possible to mechanise on a broad scale various agricultural processes. There will be 5.1 times more tractor ploughs produced in 1967 than in 1940, 6.5 times more tractor cultivators, 8 times more grain combines. In 1940 we had chiefly grain combines, whereas today our industry manufactures beet-harvesters, forage harvesters, flax harvesters, potato diggers, cotton-pickers and other farm machinery.

Less metal-consuming and more manoeuvrable mounted machines are manufactured along with conventional trail-type machines. The production of machines for stock-breeding and poultry farms and for the chemisation of agriculture is gaining in scope.

**OUTPUT OF BUILDING AND ROAD-BUILDING MACHINES**  
(units)

	1913	1928	1940	1945	1960	1966	1967 (es- timated)
Excavators . . . . .	—	—	274	10	12,589	23,453	25,750
Scrapers . . . . .	—	—	2,104	34	3,094	7,374	7,650
Bulldozers . . . . .	—	—	118	1	12,850	22,235	23,538
Trail-type graders . . . . .	—	97	693	98	2,123	5,317	4,500
Motor graders . . . . .	—	—	—	—	3,135	4,397	3,800
Tower cranes . . . . .	—	—	57	3	2,826	3,506	3,670
Crawler cranes . . . . .	—	—	—	—	835	1,264	1,400
Lorry-mounted cranes . . . . .	—	—	139	17	6,344	12,123	12,370

Before the revolution all construction and particularly labour-intensive earth work was done manually.

At present, our industry manufactures highly efficient earth-moving machines: motor graders, bulldozers, scrapers, all-purpose excavators. The coal and mining industries are supplied with rotary excavators complete with belt conveyors, dumpers and coal-cutter loaders, handling 500, 1,000 and 3,000 cu m of coal an hour, walking excavators with a 15-cu m bucket and a 90-m boom; a giant excavator with a 25-cu m bucket and a 100-m boom has been lately put into operation.

Powerful cranes, including crawler cranes with a lifting capacity of up to 100 tons, have been developed and put into production to mechanise construction and installation work.

### OUTPUT OF EQUIPMENT FOR LIGHT INDUSTRY (pieces)

	1913		1917	1928	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to Sept. 17, 1939							
Hackling cotton machines . . .	—	—	—	—	1,312	2	1,894	4,078	4,200
Spinning machines	—	—	—	66	1,109	11	2,679	3,928	3,800
Looms . . . . .	4,620	4,620	3,374	3,708	1,823	18	16,472	23,856	24,000
of which automatic .	—	—	—	1,141	1,735	8	15,430	22,857	23,260
Industrial sewing machines . . .	—	—	—	—	20,281	3,229	103,469	120,422	124,910

Tsarist Russia imported most of her machinery for the light industry. During the years of Soviet power the light industry enterprises were fitted out with Soviet-made machines. Operating enterprises have been remodelled to a considerable degree through the introduction of flow lines, modern automatic machines and of other highly efficient equipment. New designs of spinning machines, jet looms and other textile machines have been developed.

In 1967 the production of hackling cotton machines will go up 220 per cent as compared with 1940, spinning machines—240 per cent, self-shuttling looms—13 times, and industrial sewing machines—520 per cent.

## OUTPUT OF EQUIPMENT FOR FOOD INDUSTRY, MILLS, ELEVATORS AND GRAIN STORAGES, TRADE AND PUBLIC CATERING

	1960	1966	1967 (estimated)
Technological equipment and spare parts for the food industry (in wholesale prices as of July 1, 1955)—mill. rubles . . . . .	185	279	302
automated pasteurising and laminated cooling units processing 3,000-10,000 l/h—units . . . . .	801	1,327	1,690
automatic bottle-washing machines, machines for bottling milk and yoghurt and capping bottles of a capacity of 2,000-12,000 bottles per hour—units . . . . .	96	148	264
Technological equipment and spare parts for mills, elevators and grain storages (in wholesale prices as of July 1, 1955)—mill. rubles . . . . .	53.6	78.5	79.3
Technological equipment and spare parts for trading and public catering enterprises (in wholesale prices as of July 1, 1955)—mill. rubles. . . . .	91.3	187	200
electrically, gas and coal heated canteen pots—'000 . . . . .	8.8	25.1	30.0
dish-washing machines—'000 . . . . .	3.0	5.9	6.2
meat, vegetable and dough processing machines—'000 . . . . .	21.1	60.4	86.7

In the last few years engineering works have taken up the batch production of a wide range of new types of food industry machines. The production of technological equipment for trading and public catering establishments is also developing apace.

### PROGRESS IN WELDING

	1960	1966
Welded structures—mill. tons . . . . .	20.7	40.6
Fluxing operations—'000 tons of fluxed metal . . . . .	24.8	45.3
Operations carried out with the help of the automatic, semi-automatic welders and machines—percentage:		
welding operations . . . . .	35.4	48.9
fluxing operations . . . . .	15.0	42.5
Output of the electrical welding equipment—'000 . . . . .	96.7	205.2
Output of the equipment for gas welding—mill. rubles . . . . .	8.5	15.5
Output of filling wire—'000 tons . . . . .	290.7	407.3
Output of welding flux—'000 tons . . . . .	49.8	90.2
of which:		
electrically smelted . . . . .	23.1	44.3
gas smelted . . . . .	26.5	45.9
Output of welding electrodes—'000 tons . . . . .	279.3	457.6

The production of modern welding equipment was begun under Soviet power. Welding, being advantageous both technologically and economically, has become one of the leading technological processes used in the engineering and construction industries. Progress in the field of welding virtually brought about a revolution in

many branches and made it possible to develop principally new, highly economical designs of machines and structures. Welding technique is gradually invading neighbouring branches, notably iron and steel industry (electrical fluxing of steels, cathode-ray and plasma metallurgy). Welding introduces technological progress in practically every branch of the national economy. A large-scale material and technical basis has been established for the welding industry between 1959 and 1965. During this period progressive welding machines and technologies provided an economic effect amounting to 707.7 million rubles and a saving of 6.9 million tons of steel.

#### DEVELOPMENT OF NEW TYPES OF MACHINERY AND EQUIPMENT

	1950	1960	1966
Total . . . . .	650	3,099	3,605
of which:			
metal-cutting lathes . . . . .	133	201	301
forge and press equipment . . . . .	51	140	73
foundry equipment . . . . .	8	37	54
iron-and-steel and mining-industry equipment . . . . .	44	171	146
fuel industry equipment . . . . .	35	156	141
power plant . . . . .	42	103	31
electrical engineering equipment . . . . .	48	313	527
transporting, hoisting and handling machines . . . . .	33	138	206
automobiles, tractors, and auto-tractor equipment . . . . .	15	66	43
agricultural machines . . . . .	53	204	93
chemical, pump and compressor equipment . . . . .	53	398	481
building and earth-moving machines . . . . .	47	189	174
wood-working and paper-making equipment . . . . .	8	86	54
light industry equipment . . . . .	39	174	199
food industry equipment . . . . .	7	255	171

#### DEVELOPMENT OF NEW TYPES OF INSTRUMENTS AND MEANS OF AUTOMATION

	1960	1966
Instruments and means of automation—total . . . . .	942	1,468
of which:		
optical and mechanical instruments and apparatus . . . . .	89	85
electrical measuring instruments . . . . .	125	202
radio measuring instruments . . . . .	41	59
calculators and computers and means of mechanisation and automation of engineering and managerial work . . . . .	41	65
instruments for controlling and regulating technological processes . . . . .	322	514
instruments for physical research . . . . .	85	134
instruments for mechanical measurements . . . . .	216	329
instruments for medicine, physiology and biology . . . . .	14	58
timing instruments . . . . .	9	22

The modern scientific and technological basis, providing for the technological progress of the country's economy, has been created in the Soviet Union, and is continuously being expanded. Scientific discoveries, the joint creative work of scientists, engineers, technicians and workers find their practical implementation in thousands of new highly efficient machines, apparatus and instruments, which are introduced into production and further advance the national economy.

In the last ten years alone (1957-66) research and design organisations and industrial enterprises developed over 29,000 new machines and apparatus and over 10,000 new types of instruments.

**MECHANISED FLOW AND AUTOMATIC LINES INSTALLED  
AT ENTERPRISES IN DIFFERENT INDUSTRIES  
as of July 1, 1965**

	Mechanised flow (includ- ing semi- automatic) lines	Automatic lines
<b>Industry, total . . . . .</b>	<b>42,947</b>	<b>5,981</b>
Iron and steel industry . . . . .	1,258	211
Chemical industry (exclusive of chemico-pharmaceutical industry) . . . . .	1,053	158
Engineering and metal-working (exclusive of enterprises producing medical instruments, equipment and apparatus) . . . . .	9,862	2,965
of which in the following industries:		
electrical engineering . . . . .	1,383	296
machine-building and instrument-making . . . . .	313	183
motor . . . . .	1,535	434
tractor and farm machines . . . . .	1,404	402
ball-bearing . . . . .	140	233
Timber, wood-working and pulp and paper industry . . . . .	2,655	235
Building materials industry . . . . .	3,822	154
Glass, porcelain and pottery industry (exclusive of enterprises producing medical glass ware) . . . . .	702	205
Light industry . . . . .	7,224	152
Food industry . . . . .	15,279	1,784
Other industries . . . . .	1,092	117

The growth in the number of industrial enterprises is constantly attended by the improvement of their equipment and the introduction of mechanisation and automation.

In the pre-war years mechanisation and automation were introduced only in a few industries and automatic and semi-automatic lines were designed and installed only in certain branches of engineering. At present the close on 50,000 mechanised flow and automatic lines operating in all industries replace and lighten the work of a huge army of workers.

Over 6,000 lines are commissioned annually. As their number increases, the already operating mechanised flow and automatic lines (about 10 per cent annually) are being remodelled due to the continuous concentration and improvement of the existing production processes.

The problem of the comprehensive mechanisation and automation of production is being successfully solved.

**COMPREHENSIVELY MECHANISED, AUTOMATED AND  
COMPREHENSIVELY AUTOMATED WORKSHOPS AND ENTERPRISES  
as of July 1, 1965**

	Workshops	Enterprises
<b>Industry, total . . . . .</b>	<b>8,579</b>	<b>1,906</b>
Production of electric and thermal power . . . . .	482	220
Fuel industry . . . . .	387	227
Iron and steel industry . . . . .	324	34
Chemical industry (exclusive of chemico-pharmaceutical) . . . . .	443	42
Engineering and metal-working (exclusive of enterprises producing medical instruments, equipment and apparatus) . . . . .	545	53
Timber, wood-working and pulp and paper industry	819	92
Building materials industry . . . . .	1,863	411
Light industry . . . . .	620	58
Food industry . . . . .	2,510	595
Other industries . . . . .	586	174

Comprehensive mechanisation and automation of production is being widely introduced in industry, agriculture, building, transport and the municipal economy, and more and more fully automated workshops and enterprises, ensuring high technical and economic efficiency, are being commissioned.

*The Soviet Union is a country possessing vast timber resources.*

**PROGRESS IN TIMBER, WOOD-WORKING  
AND PULP AND PAPER INDUSTRY**

	1913		1928	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to Sept. 17, 1939						
Timber carted out— mill. Fest metres . . . . .	67	61	62	246	168	370	373	379
including commercial timber . . . . .	31	27	36	118	62	262	272	276
Production:								
sawn timber—mill. cu m . . . . .	14.2	11.9	13.6	34.8	14.7	106	107	108
plywood—'000 cu m	203	130	185	732	192	1,354	1,772	1,918
woodfibre boards— mill. sq m . . . . .	—	—	—	—	—	68	149	187
wood-shavings boards—'000 cu m	—	—	—	—	—	161	1,035	1,379
cellulose—'000 tons	258	41	86	529	276	2,282	3,605	4,200
paper—'000 tons . . . . .	269	197	284	812	321	2,334	3,550	3,723
cardboard—'000 tons	41	29	47	151	56	893	1,656	1,925

In Soviet times the amount of timber carted out has gone up 6 times and that of commercial timber—9 times. The U.S.S.R. holds first place in the world in timber cutting. In tsarist Russia more than half of the procured timber was used for firewood. At present nearly three-fourths of it go for processing and are used for furniture making, as building material and as raw material for the pulp and paper and timber-chemical industries.

Compared with 1913, the production of sawn timber in 1967 will go up 8 times, and that of plywood—9 times. The production of wood-shavings and woodfibre boards has been organised. Chemical and mechanical-chemical processing of wood is rapidly developing.

The pulp and paper industry has undergone radical changes in Soviet times. Instead of small paper factories with obsolete machinery operating in tsarist Russia, large modern pulp and paper works were built, for instance, in Balakhna, Solikamsk, Kondopoga, Segezha, Arkhangel'sk, Kotlas, Krasnoyarsk, on the Kama River and in the Mari Autonomous Republic.

Compared with 1913, the production of paper in 1967 will increase 14 times and that of pulp—16 times. At present, the Balakhna Works alone produces more paper than all the enterprises of tsarist Russia did in the whole of 1913.

Timber, wood-working and pulp and paper industry has vast reserves of raw materials. One-third of the country's territory is afforested.

Forest land area:	
million ha . . . . .	747
percentage of the entire territory of the U.S.S.R. . . . .	33
Total forest reserves—'000 mill. cu m . . . . .	80

The U.S.S.R. possesses 36 per cent of the world wood reserves in the already developed forests. Four-fifths of these reserves are coniferous: larch, pine, spruce, cedar, fir-tree. Over 80 per cent of the woods are concentrated in Eastern Siberia, the Far East, in the Urals and in Western Siberia.

#### DEVELOPMENT OF DENSE TIMBERLAND

	1913	1940	1945	1960	1966
Timber brought in—mill. Fest metres					
from dense timberland . . . . .	18.8	136.5	79.7	254.2	268.9
from thin timberland . . . . .	48.2	109.6	88.7	115.3	104.5
Of the total timber brought in, commercial timber—mill. Fest metres					
from dense timberland . . . . .	9.3	71.9	32.4	189.9	206.7
from thin timberland . . . . .	21.2	46.0	29.2	71.6	65.0
Timber brought in, percentages of the total:					
from dense timberland . . . . .	28	55	47	69	72
from thin timberland . . . . .	72	45	53	31	28
Commercial timber brought in—percentages of the total:					
from dense timberland . . . . .	31	61	53	73	76
from thin timberland . . . . .	69	39	47	27	24

The systematic shifting of timber procurement from areas not abounding in forests to such where there is a profusion of forests is of great importance for the development of the timber industry.

In 1966, 29 per cent of the timber was procured in Siberia and the Far East, 24 per cent in the North-western regions of the country and 16 per cent in the Urals.

#### MECHANISATION OF TIMBER PROCUREMENT (the volume of mechanised work as a percentage of the total volume of work done)

	1913	1940	1945	1960	1966
Timber felling . . . . .	—	—	—	97.0	99.1
Hauling of timber to primary collecting station . . . . .	—	5.6	2.1	91.6	96.5
Transportation of timber . . . . .	—	32.8	26.9	94.5	99.3

In Soviet times the timber industry has come a long way from a backward branch of the national economy in which manual labour reigned supreme to a highly mechanised industry.

At present timber procurement organisations have a pool of 34,000 timber trucks, nearly 61,000 tractors of all types and over 234,000 electro- and petrol-powered saws.

*The rapid growth of the production of building materials in the Soviet Union has ensured the implementation of the vast construction programme.*

## DEVELOPMENT OF THE BUILDING MATERIALS INDUSTRY

Production	1913		1917	1928	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939							
Cement—mill. tons . . . .	1.8	1.5	1.0	1.8	5.7	1.8	45.5	80	85
Building brick—'000 mill. pcs	3.4	2.9	0.7	2.8	7.5	2.0	35.5	37.8	39
Asbestos cement slates—mill. conventional sheets . . .	9	9	...	38.5	206	84	2,991	4,512	4,800
Rolled roofing material—mill. sq m	10.2	8.8	...	19.2	127	71.2	750	1,153	1,192
Asbestos cement pipes—'000 conventional km . . . . .	—	—	—	—	1.3	0.5	18.7	37.5	40
Window glass—mill. sq m .	24.7	23.7	9.7	34.2	44.7	23.3	147	201	210

Mechanisation of building processes and the creation of modern building materials industry opened up tremendous possibilities for large-scale construction in the Soviet Union. The U.S.S.R. holds first place in the production of such important building materials as cement, prefabricated reinforced concrete, brick, window glass.

At present our industry produces almost as much cement in a week as the whole of Russia did in 1913. In 1913, Russia produced only Portland cement. Today the Soviet Union produces a whole range of cements: quick-hardening, sulphate-resistant, hydrophobic, filling, decorative, etc.

Compared with 1913, the production of building brick is to increase in 1967 12 times. Being more economical, silicate brick is lately replacing conventional red brick. In 1966 its percentage in the building brick production was 24 as against 10 in 1940.

In 1967 our industry is to produce 1.5 times more slate in one day than was produced in the whole of Russia in 1913, when slate was manufactured only in the Bryansk and Rostov regions. Today slate is manufactured in every Union republic and in the 19 regions, territories and autonomous republics of the Russian Federation.

Compared with 1950, the production of dry gypsum plaster is in 1967 to go up 12 times, of mineral cotton and its products—15 times.

The production of gravel, crushed stone, new light fillers (volcanite, vermiculite, ceramzite, thermozite and perlite) is extending rapidly. The production of materials and building parts from synthetic resins and plastics is developing rapidly.

## OUTPUT OF PREFABRICATED PARTS

	1950	1960	1966	1967 (esti- mated)
Prefabricated parts and elements—mill. cu m of articles . . . . .	1.2	30.2	63.7	69
of which:				
prestressed—mill. cu m of articles . . . . .	...	4.1	12.6	15
wall panels—mill. sq m . . . . .	—	5.5	37.8	41

The newly initiated production of prefabricated parts and elements promotes industrial methods of construction and improves the architectural, building and exploitation characteristics of buildings and structures. In 1967, as compared with 1950, the output of prefabricated parts and elements is to go up 58 times.

The production of prestressed parts and elements from light-weight, cellular and cementless concretes has considerably increased.

Prestressed elements account for 20 per cent of the total amount of prefabricated parts.

## UTILISATION OF EQUIPMENT IN THE CEMENT INDUSTRY

	1940	1960	1966
<b>Hourly productivity—tons</b>			
Cement kilns:			
rotary . . . . .	7.8	15.6	22.4
tunnel, automatic . . . . .	2.4	6.2	6.4
Cement mills . . . . .	10	17.7	23.6
<b>Coefficient of use of capacity (by calendar working time)</b>			
Cement kilns:			
rotary . . . . .	0.51	0.88	0.89
tunnel, automatic . . . . .	0.52	0.91	0.89
Cement mills . . . . .	0.54	0.82	0.79

Highly efficient 170-185-m rotary kilns have been put into operation in the cement industry.

The hourly productivity of rotary kilns in 1966 increased 3 times as compared with 1940, and the average annual output of clinker per kiln—more than 5 times. This has been achieved through the commissioning of new kilns, reconstructing and remodelling of the operating ones and through the more efficient use of equipment.

The building materials industry has vast resources of raw materials.

Numerous rich deposits of magnesite, kaolin, refractory clays, cement and gypsum, sands for the glass industry, perlite, vermiculite and other raw materials have been recently discovered. The U.S.S.R. possesses large known deposits of graphite in the Urals, in Eastern Siberia, in the Ukraine and Uzbekistan. The asbestos deposits in the Urals have been considerably extended and new deposits of high-quality asbestos discovered in the Buryat Autonomous Republic.

*The achievements of Soviet industry in the production of consumer goods make possible the fuller satisfaction of the Soviet people's growing requirements and versatile tastes.*

### OUTPUT OF THE BASIC PRODUCTS OF THE LIGHT INDUSTRY

	1913 <sup>a</sup>		1917	1928	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939							
Fabrics of all kinds									
mill. lin. m	3,006	2,910	1,630	3,010	4,522	1,822	8,226	9,437	9,719
mill. sq m	2,194	2,125	1,212	2,198	3,300	1,353	6,636	7,863	8,131
cotton fabrics									
mill. lin. m	2,672	2,582	1,400	2,678	3,954	1,616	6,387	7,238	7,390
mill. sq m	1,817	1,756	952	1,821	2,704	1,149	4,838	5,703	5,836
woollen fabrics									
mill. lin. m	108	103	70	87	120	54	342	398	420
mill. sq m	138	132	90	112	152	65	439	510	540
linen fabrics									
mill. lin. m	121	120	97	174	285	106	559	621	658
mill. sq m	121	120	97	177	268	98	516	592	631
silk fabrics									
mill. lin. m	43	43	18	9.6	77	36	810	1,012	1,070
mill. sq m	35	35	15	8.0	64	29	675	869	924
Hosiery—mill. pairs . . . .	...	...	...	68	485	91	964	1,444	1,530
Knitted underwear—mill. pcs . . . . .	...	...	...	6.9	124	27	472	770	817
Knitted outerwear—mill. pcs . . . . .	...	...	...	1.4	59	23	112	222	242
Leather footwear—mill. pairs . . . . .	68	60	50	58	211	63	419	522	545

After the October Revolution light industry has considerably increased its output both as regards the total volume of production and the range of the basic products.

Compared with 1913, the gross output of the light industry in 1967 is to go up 17 times, that of cotton fabrics—2.8 times, woollen fabrics—3.9 times, linen fabrics—5.4 times, silk fabrics—25 times and leather footwear—8 times.

In 1967, 31 linear m of cotton fabrics are to be manufactured per head of population, which is nearly twice as much as in 1913. The output of woollen fabrics is to go up 2.6 times, of linen fabrics—3.7 times, of silk—17 times and of leather footwear—5.4 times. The U.S.S.R. holds first place in the world in the production of woollen fabrics.

**OUTPUT OF FABRICS AND KNITWEAR WITH SYNTHETIC FIBRES  
AND OF ARTIFICIAL FUR PRODUCTS**

	1940	1960	1966	1967 (esti- mated)
Products with synthetic fibres:				
silk fabrics—mill. lin. m. . . . .	39.4	755	970	1,027
hosiery—mill. pairs . . . . .	21.0	189	502	555
knitted underwear—mill. pcs . . . . .	5.5	156	310	323
knitted outerwear—mill. pcs . . . . .	1.5	6.6	41	47
Artificial fur products:				
coats, short coats and jackets for adults — '000 pcs . . . . .	—	106	536	590
children's coats—'000 pcs . . . . .	—	243	368	474
head-dress—mill. pcs . . . . .	—	3.4	6.0	6.0

The light industry initiated the production of artificial leather, synthetic fabrics, artificial furs, dubbed-in materials, water-proof fabrics with various coatings and impregnations, and a whole range of other new materials.

**INSTALLATION OF RING SPINNING MACHINES  
AND AUTOMATIC LOOMS AT TEXTILE MILLS**

	Ring spinning machines and automatic looms (end-of-year figures)		
	1913	1960	1966
Ring spinning machines with attachments for high and super-high racking in the cotton textile industry			
spindles—'000 . . . . .	—	9,489	13,785
as a percentage of the total number of spindles in the spinning machines of the cotton textile industry . . . . .	—	85.9	99.0
Ring spinning machines of continuous action in woollen textile industry			
spindles—'000 . . . . .	—	696	1,158
as a percentage of the total number of spindles in the spinning machines of the woollen textile industry . . . . .	—	89.1	97.8
Automatic looms:			
in cotton textile industry—'000 . . . . .	2.0	131.0	209.2
as a percentage of the total number of looms operating in the cotton textile industry . . . . .	1.2	55.5	75.7
in woollen textile industry—'000 . . . . .	—	6.7	11.3
as a percentage of the total number of looms operating in the woollen textile industry . . . . .	—	34.1	48.9
in linen textile industry—'000 . . . . .	—	7.9	20.8
as a percentage of the total number of looms operating in the linen textile industry . . . . .	—	49.1	95.4
in the silk textile industry—'000 . . . . .	—	5.5	18.1
as a percentage of the total number of looms operating in the silk textile industry . . . . .	—	25.8	51.7

## GROWTH OF OUTPUT OF CONSUMER DURABLES

	1913		1917	1928	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939							
Output of consumer durables (1913=1)	1		...	...	5.0	0.6	32	56	65
Clocks and watches—mill.	0.7	0.7	0.7	0.9	2.8	0.3	26.0	32.4	34.0
Radio sets and radiograms—'000 . . . . .	—	—	—	...	160	14	4,165	5,842	6,200
TV sets—'000	—	—	—	—	0.3	—	1,726	4,415	4,900
Vacuum cleaners—'000	—	—	—	—	—	1.1	501	899	1,100
Refrigerators—'000 . . . . .	—	—	—	—	3.5	0.3	529	2,205	2,770
Washing machines—'000	—	—	—	—	—	—	895	3,869	4,294.5
Sewing machines—'000	272	272	...	286	175	—	3,096	1,025	1,250
Bicycles, motor-bicycles and mopeds—'000	11.2	4.9	1.3	10.8	255	24	2,783	4,048	4,265
Motorcycles and scooters—'000	0.1	0.1	—	—	7	5	553	753	781
Photocameras—'000 . . . . .	—	—	—	—	355	0.01	1,764	1,420	1,572
Pianos and grand pianos—'000	...	...	...	...	10	0.7	88	176	182.4

The production of consumer durables is rapidly growing. Compared with 1913, the total volume of output of consumer durables is to rise in 1967 65 times.

## GROWTH OF BASIC OUTPUT OF THE FOOD INDUSTRY

	1913		1917	1928	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939							
Granulated sugar—'000 tons	1,363	1,352	912	1,283	2,165	465	6,363	9,740	9,745
Meat, including grade I by-products—'000 tons . .	1,273	1,042	1,078	678	1,501	663	4,406	5,774	5,994
Fish, sea mammals, whales and sea products—'000 tons . . . . .	1,051	1,018	893	840	1,404	1,125	3,541	6,093	6,341
Butter— '000 tons <sup>1</sup> . . . . .	129	104	...	82	226	117	737	1,042	1,016
Vegetable oil—'000 tons . .	538	471	...	448	798	292	1,586	2,736	2,891
Margarine and compound fats—'000 tons	—	—	—	...	121	27.8	431	599	693
Champagne — mill. bottles	...	...	...	...	8.0	2.5	37.4	60.8	65
Confectionery—'000 tons . .	125	109	...	98.9	790	212	1,744	2,238	2,352
Soap (in terms of 40% content of fatty acids) and detergents—'000 tons . .	192	168	87	311	700	229	1,474	1,854	1,934

<sup>1</sup> The above data refer to industrial production and do not include products of individual subsidiary farming, the figures for meat output do not include that of the collective farms. The total production of meat in 1966 was 10.8 million tons; of butter—1,157,000 tons.

The production of foodstuffs has increased considerably in Soviet times. Compared with 1913, the total volume of production of foodstuffs is to go up 14 times in 1967.

In 1967 4.7 times more meat has been produced than in 1913, 7.1 times more granulated sugar, 5.4 times more vegetable oil. The basic foodstuffs produced per head of population have increased considerably. In 1913 8.0 kg of meat were produced per head of population (industrial output); in 1967 25.4 kg, or 3.2 times more.

The output of butter is to be 4.3 kg per head of population in 1967, or 5.3 times more than in 1913. The production of vegetable oil in the same period will go up 3.6 times, of granulated sugar—4.8 times, of fish 4.1 times.

Compared with 1913, production of confectioneries is to go up in 1967 13 times.

The production of margarine, food concentrates, frozen fruit and vegetables, foodstuffs enriched with vitamins has been set up from scratch.

The U.S.S.R. is the world leader in sugar and butter production.

### CANNED FOOD PRODUCTION

	1913		1928	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
Canned food, total— mill. conventional cans . . . . .	116	95	125	1,113	558	4,864	7,540	8,486
of which:								
meat, vegetable- and-meat . . . .	83.1	67.6	33.6	108	127	668	893	714
fish . . . . .	14.3	9.6	38.4	120	126	726	1,028	1,048
vegetable . . . .	17.9	17.9	23.4	109	35.2	1,055	1,679	2,040
tomato . . . . .	—	—	22.0	341	55.9	670	970	1,300
fruit . . . . .	—	—	7.6	263	164	960	1,204	1,510
milk . . . . .	—	—	—	70.4	18.8	466	805	810
juices . . . . .	—	—	—	43.7	3.9	311	947	1,050

Compared with 1913, the production of canned food will go up 73 times in 1967. New kinds of canned foodstuffs, such as canned milk, tomato and fruit, have appeared in foodstores and the assortment of canned meat, meat-and-vegetable and fish has been considerably enlarged.

*In rates of the economic growth the socialist countries outstrip the capitalist states.*

## GROWTH OF INDUSTRIAL OUTPUT IN THE SOCIALIST COUNTRIES AND IN OTHER COUNTRIES

(on comparable territory; as a percentage of 1937)

	World output	of which	
		socialist countries	other countries
1937	100	100	100
1950	156	177	152
1951	175	209	167
1952	184	239	171
1953	200	272	184
1954	206	303	184
1955	230	337	206
1956	244	374	214
1957	257	414	221
1958	266	485	216
1959	298	561	238
1960	324	625	255
1961	336	651	263
1962	362	706	283
1963	383	754	298
1964	415	822	321
1965	447	899	343
1966	480	982	364

In 1966 the industrial output of the socialist countries was about ten times greater than in 1937 (on the same territory), while that of the capitalist countries was 3.6 times greater. If we compare the present industrial output of all socialist countries with that in 1937 (i.e., of the U.S.S.R. and Mongolia), we shall find that it has increased 20 times, whereas the industrial output of other countries has grown but 230 per cent.

## RATES OF GROWTH OF INDUSTRIAL OUTPUT IN SOME SOCIALIST AND CAPITALIST COUNTRIES

(as a percentage of 1950)

	1950	1960	1966	Average annual growth rate for 1951-66
World . . . . .	100	207	307	7.3
Socialist countries . . . . .	100	354	556	11.3
U.S.S.R. . . . .	100	304	498	10.6
Bulgaria . . . . .	100	397	775	13.7

Continued

	1950	1960	1966	Average annual growth rate for 1951-66
Hungary . . . . .	100	267	412	9.2
German Democratic Republic . . . . .	100	292	415	9.3
Mongolian People's Republic . . . . .	100	283	501	10.6
Poland . . . . .	100	338	545	11.2
Rumania . . . . .	100	340	725	13.1
Czechoslovakia . . . . .	100	282	391	8.9
Albania . . . . .	100	603	940	15.0
Chinese People's Republic . . . . .	No data published since 1960			
Democratic Republic of Vietnam . . . . .	100 <sup>1</sup>	504	929 <sup>2</sup>	25.0 <sup>3</sup>
Korean People's Democratic Republic . . . . .	100 <sup>4</sup>	635	14 times	16.7 <sup>5</sup>
Cuba . . . . .		100 <sup>6</sup>	138 <sup>7</sup>	6.7 <sup>8</sup>
Yugoslavia . . . . .	100	262	452	9.9
Other countries . . . . .	100	168	241	5.6
Developed capitalist countries . . . . .	100	164	231	5.4
Developing countries . . . . .	100	227	364	8.4

<sup>1</sup> 1955.

<sup>2</sup> 1965 as a percentage of 1955.

<sup>3</sup> For 1956-65.

<sup>4</sup> 1949.

<sup>5</sup> For 1950-66.

<sup>6</sup> 1959.

<sup>7</sup> 1964 as a percentage of 1959.

<sup>8</sup> For 1960-64.

**AVERAGE ANNUAL RATES OF INCREASE IN INDUSTRIAL OUTPUT  
IN THE U.S.S.R. AND IN SOME CAPITALIST COUNTRIES**  
(percentages)

	U.S.S.R.	U.S.A.	Britain	France	F.R.G.
For 49 years (1918-66) . . . . .	9.9	3.7	2.1	3.7	3.4
of which:					
for 38 years (1929-66) . . . . .	11.1	4.0	2.5	2.5	3.7
for 32 years (12 pre-war and 20 post-war years excluding years of the Great Patriotic War, i.e., on an average from 1929 to 1940 and from 1947 to 1966) . . . . .	14.3	3.8	3.2	4.2	8.4
in 16 years (1951-66) . . . . .	10.6	4.7	3.0	5.7	7.6

## PLACE HELD BY SOVIET INDUSTRY IN THE WORLD AND IN EUROPE

	1913		1966	
	In the world	In Europe	In the world	In Europe
Total industrial output . . . . .	5	4	2	1
Electricity . . . . .	8	6	2	1
Oil . . . . .	2	1	2	1
Gas . . . . .	In tsarist Russia gas was extracted in insignificant quantities		2	1
Coal . . . . .	6	5	1	1
Pig-iron . . . . .	5	4	2	1
Steel . . . . .	5	4	2	1
Iron ore . . . . .	5	4	1	1
Coke . . . . .	4	3	1	1
Chemical industry products . . . . .	...	...	2	1
Mineral fertilisers . . . . .	...	...	2	1
Sulphuric acid . . . . .	...	...	2	1
Engineering products . . . . .	4	3	2	1
Diesel and electric locomotives . . . . .	...	...	1	1
Tractors (in terms of 15-hp units) . . . . .	Were not manufactured in tsarist Russia		2	1
Timber . . . . .	2	1	1	1
Sawn timber . . . . .	2	1	1	1
Cement . . . . .	5	4	1	1
Prefabricated parts and elements . . . . .	...	...	1	1
Cotton fabrics (coarse) . . . . .	3	2	2	1
Woollen fabrics . . . . .	...	...	1	1
Granulated sugar (from domestic raw materials) . . . . .	4	2	1	1
Butter . . . . .	...	...	1	1

### COUNTRIES WHICH PRODUCED MORE GOODS THAN WAS PRODUCED ON THE PRESENT TERRITORY OF THE U.S.S.R.

	In 1913	In 1966
Total industrial output . . . . .	U.S.A. Germany Britain France	U.S.A.
Electricity	U.S.A. Germany Britain	U.S.A.

	In 1913	In 1966
	Canada	
	Italy	
	France	
	Norway	
Oil . . . . .	U.S.A.	U.S.A.
Gas . . . . .	An insignificant amount of gas was extracted in tsarist Russia	U.S.A.
Coal . . . . .	U.S.A.	—
	Britain	
	Germany	
	France	
	Territory of present-day Poland	
Pig-iron . . . . .	U.S.A.	U.S.A.
	Germany	
	Britain	
	France	
Steel . . . . .	U.S.A.	U.S.A.
	Germany	
	Britain	
	France	
Iron ore . . . . .	U.S.A.	—
	France	
	Britain	
	Germany	
Coke . . . . .	U.S.A.	—
	Germany	
	Britain	
Chemical industry products . .	...	U.S.A.
Mineral fertilisers . . . . .	...	U.S.A.
Sulphuric acid . . . . .	...	U.S.A.
Engineering products . . . . .	U.S.A.	U.S.A.
	Germany	
	Britain	
Tractors (in terms of 15-hp units . . . . .)	No tractors were manufactured in tsarist Russia	U.S.A.
Timber . . . . .	U.S.A.	—
Sawn timber . . . . .	U.S.A.	—
Cement . . . . .	U.S.A.	—
	Germany	
	Britain	
	France	

Continued

	In 1913	In 1966
Cotton fabrics (coarse) . . . .	U.S.A. Britain	U.S.A.
Granulated sugar (from domestic raw materials) . . . . .	Cuba Germany India	—

**OUTPUT OF BASIC INDUSTRIAL PRODUCTS IN THE U.S.S.R.  
AND IN SOME CAPITALIST COUNTRIES**

	U.S.S.R.	U.S.A.	Britain	France	F. R. G.
<b>Electricity (total output) — '000 mill. kWh</b>					
1913	2.0	25.5	4.65	2.1	2.8
1921	0.5	55.4	8.7	4.6	9.9
1928	5.0	113.1	16.2	14.9	17.3
1932	13.5	104.1	20.2	15.7	14.7
1937	36.2	153.6	33.1	21.1	28.7
1940	48.3	188.4	39.9	19.7	36.6
1945	43.3	284.6	47.6	19.4	18.6
1950	91.2	408.4	67.2	34.8	46.2
1960	292.3	889.5	136.9	76.1	116.4
1966	544.6	1,317	202	111	175
1966 over 1913 (times)	267	52	43	53	62
<b>Oil — mill. tons</b>					
1913	10.3	34.1			
1921	3.8	64.7			
1928	11.6	123.6			
1932	21.4	107.6			
1937	28.5	172.9			
1940	31.1	182.9			
1945	19.4	231.6			
1950	37.9	266.7			
1960	147.9	348.0			
1966	265.1	410.7			
1966 over 1913 (times)	26	12			
			Oil extraction insignificant		

	U.S.S.R.	U.S.A.	Britain	France	F.R.G.
<b>Coal — mill. tons</b>					
1913	28.6	516.9	292.0	44.3	139.6
1921	8.8	458.8	165.9	28.7	120.1
1928	34.1	521.6	241.3	52.0	151.5
1932	61.1	325.4	212.1	46.9	105.9
1937	119.4	450.0	244.3	45.0	170.6
1940	153.7	463.6	227.9	42.0	171.3
1945	125.3	572.8	185.7	34.3	46.2
1950	224.5	507.1	219.8	51.9	148.5
1960	444.3	393.0	196.7	57.3	171.1
1966	517.7	492.9	177.4	51.9	155.4
1966 over 1913 (times)	18.1	5 % less	39 % less	1.2	1.1
<b>Pig-iron — mill. tons</b>					
1913	4.2	31.5	10.4	9.1	12.1
1921	0.1	16.9	2.7	3.4	8.2
1928	3.3	38.6	6.7	9.9	13.5
1932	6.2	8.8	3.6	5.5	5.1
1937	14.5	37.4	8.6	7.9	15.3
1940	14.9	42.6	8.3	3.7	...
1945	8.8	49.1	7.2	1.2	...
1950	19.2	59.4	9.8	7.8	11.2
1960	46.8	61.1	16.0	14.1	25.7
1966	70.3	82.6	16.0	15.6	25.4
1966 over 1913 (times)	16.7	2.6	1.5	1.7	2.1
<b>Steel — mill. tons</b>					
1913	4.3	31.8	7.8	7.0	12.9
1921	0.2	20.1	3.8	3.1	9.1
1928	4.3	52.4	8.7	9.5	14.9
1932	5.9	13.9	5.3	5.6	6.6
1937	17.7	53.0	13.2	7.9	18.0
1940	18.3	62.5	13.2	4.4	...
1945	12.3	75.1	12.0	1.7	...
1950	27.3	90.0	16.6	8.7	14.0
1960	65.3	92.1	24.7	17.3	34.1
1966	96.9	125.0	24.7	19.6	35.3
1966 over 1913 (times)	22.5	3.9	3.2	2.8	2.7

	U.S.S.R.	U.S.A.	Britain	France	F.R.G.
<b>Cement — mill. tons</b>					
1913	1.8	15.9	2.9	2.0	5.2
1921	0.06	16.9	2.5	1.7	2.5
1928	1.8	30.4	4.4	4.2	5.8
1932	3.5	13.2	4.3	5.8	2.2
1937	5.5	20.1	7.4	4.3	10.0
1940	5.7	22.6	7.3	...	7.6
1945	1.8	17.5	4.1	1.8	...
1950	10.2	38.7	9.9	7.4	11.1
1960	45.5	56.1	13.5	14.4	25.8
1966	80.0	66.5	17.1	23.4	34.7
1966 over 1913 (times)	45	4.2	5.9	11.7	6.7
<b>Cotton fabrics (coarse) — mill. sq m</b>					
1913	1,894	5,695	7,358	...	...
1928	1,987	6,560	2,842	...	...
1932	1,994	5,249	2,930	...	...
1937	2,620	7,898	3,384	1,404	...
1940	3,004	8,028	2,241	...	...
1945	1,228	8,023	1,425	...	...
1950	2,991	9,216	1,971	1,123	914
1960	5,214	9,153	1,202	1,366	1,399
1966	6,173	8,644	861	1,227	1,040
1966 over 1913 (times)	3.3	1.5	88 % less	...	...
<b>Granulated sugar (from domestic raw materials) — '000 tons</b>					
1913	1,363	1,444	...	717	...
1921	51	1,698	...	278	...
1928	1,283	1,841	197	816	...
1932	828	2,360	330	920	...
1937	2,421	2,351	383	872	...
1940	2,165	2,703	493	...	...
1945	465	2,178	512	415	...
1950	2,523	2,999	666	1,290	915
1960	5,266	3,538	903	2,509	1,800
1966	8,295	4,505	859	1,620	1,800
1966 over 1913 (times)	6.1	3.1	...	2.3	...

**OUTPUT OF THE PRINCIPAL INDUSTRIAL PRODUCTS IN THE U.S.S.R.  
AND THE U.S.A.**

(U.S.S.R. as a percentage of the U.S.A.)

	1913 <sup>1</sup>	1928	1940	1945	1950	1960	1966
Electricity (gross output) . . . . .	9	4	26	15	22	33	41
Electricity consumed in industry . . . . .	13	5	34	20	31	47	63
Oil . . . . .	27	9	17	8	14	42	65
Gas . . . . .	0.1	0.6	4	3	3	13	30
Coal . . . . .	7	7	33	22	44	113	105
Pig-iron . . . . .	15	9	35	18	32	77	85
Steel . . . . .	15	8	29	16	30	71	78
Iron ore . . . . .	15	10	40	18	40	117	174
Mineral fertilisers . . . . .	3	...	...	...	31	42	68
Synthetic fibres . . . . .	—	0.4	5	0.3	4	27	28
Cement . . . . .	13	6	25	11	26	81	120
Cotton fabrics (coarse) . . . . .	40	30	37	15	32	57	71
Woollen fabrics . . . . .	...	33	35	12	36	131	164
Granulated sugar (from domestic raw materials) . . . . .	103	70	80	21	84	149	184

**PER CAPITA OUTPUT OF THE PRINCIPAL INDUSTRIAL PRODUCTS  
IN THE U.S.S.R. AND THE U.S.A.**

(U.S.S.R. as a percentage of the U.S.A.)

	1913 <sup>1</sup>	1928	1940	1945	1950	1960	1966
Electricity (gross output) . . . . .	5	4	18	13	19	28	35
Electricity consumed in industry . . . . .	8	4	24	16	26	39	54
Oil . . . . .	16	7	12	7	12	36	55
Gas . . . . .	0.05	0.5	3	2	3	11	25
Coal . . . . .	4	5	22	18	37	95	89
Pig-iron . . . . .	9	7	24	15	27	65	72
Steel . . . . .	9	6	20	13	26	60	65
Iron ore . . . . .	9	8	27	15	34	99	147
Mineral fertilisers . . . . .	2	...	...	...	26	36	57
Synthetic fibres . . . . .	—	0.3	4	0.2	3	23	24
Cement . . . . .	7	5	18	9	22	69	102
Cotton fabrics (coarse) . . . . .	24	24	26	13	27	48	60
Woollen fabrics . . . . .	...	26	24	10	30	110	139
Granulated sugar (from domestic raw materials) . . . . .	61	55	54	18	71	126	155

<sup>1</sup> Within the frontiers of the former Russian Empire.

**RATE OF GROWTH OF THE LABOUR PRODUCTIVITY OF INDUSTRIAL WORKERS IN THE U.S.S.R. AND IN CERTAIN CAPITALIST COUNTRIES**  
 (as a percentage of 1913)

	U.S.S.R.	U.S.A.	Britain	France
1913	100	100	100	100
1921	...	96	73	58
1928	120	137	94	104
1932	169	122	81	105
1937	318	146	113	127
1950	580	202	122	128
1960	1,139	297	160	225
1966	1,528	383	194	287

*"The 50th anniversary of the October Revolution marks the implementation of Lenin's co-operative plan, the creation of large-scale socialist agricultural production. The triumph of the collective-farm system has wrought a social revolution in the rural way of life."*

From the Resolution of the Central Committee of the C.P.S.U. on Preparations for the 50th Anniversary of the Great October Socialist Revolution

## **THE U.S.S.R. — A COUNTRY OF THE LARGE-SCALE SOCIALIST AGRICULTURAL PRODUCTION**

*The Great October Socialist Revolution has realised the age-old aspirations of millions of peasants for the abolition of the ownership of land by big landowners.*

**DISTRIBUTION OF AGRICULTURAL LANDS  
IN PRE-REVOLUTIONARY RUSSIA**

	Million hectares
Peasants . . . . .	215
of them kulaks (rich peasants) . . . . .	over 80
Landowners, the tsar's family and monasteries . . . . .	152
All lands (within the frontiers of the U.S.S.R. prior to September 17, 1939) <sup>1</sup> . . . . .	367

The Great October Socialist Revolution radically changed the conditions in the countryside. One of the first acts of the proletarian revolution was the Decree on Land. The private ownership of land was abolished and replaced by state ownership. The land, formerly owned by the landowners, monasteries and the tsar's family, was transferred for use to the working peasants, free of charge. They received from the Soviet state a total of over 150 million hectares of land over and above the land they owned before. Besides, the peasants no longer had to pay rent to the landlords and did not have to purchase land, which saved them 700 million gold rubles a year. The nationalisation of the land was instrumental for the socialist development of the Soviet countryside.

<sup>1</sup> Including all arable lands, hay fields and pastures, as well as part of forest and brushwood used for agricultural purposes.

*The historic task second in difficulty only to the winning of power by the working class—the transfer of millions of small and very small peasant farms to socialism—has been successfully solved. The all-embracing system of the collective and state farms is a firm socialist basis in the countryside.*

### COLLECTIVISATION OF AGRICULTURE IN THE U.S.S.R.

	Share of collectivised peasant farms, as of July 1 (percentages)
1918	0.1
1927	0.8
1928	1.7
1929	3.9
1930	23.6
1931	52.7
1932	61.5
1937	93.0
1940	96.9
1966	99.99

Implementing Lenin's co-operative plan, the Soviet Union has built up the socialist system of farming and attained the highest agricultural output in the world.

The transition of the Soviet countryside to large-scale socialist economy brought about a revolution in economic relations, in the entire way of life of the peasantry. The massive collectivisation abolished the kulaks, the last exploiting class in the country. Individual poor and middle peasant farms, which totalled 23.7 millions in 1927, joined the collective farms.

### NUMBER OF AGRICULTURAL ENTERPRISES AND HOUSEHOLDS BEFORE MASS COLLECTIVISATION AND AT PRESENT

	1927	1940	1950	1966
Collective farms <sup>1</sup> —'000 . . . . .	14.8	236.9	123.7	37.1
State farms—'000 . . . . .	1.4	4.2	5.0	12.2
Individual peasant farms—mill. . . . .	23.7	3.6	0.7	0.04
Kulak farms—mill. . . . .	1.1	—	—	—

<sup>1</sup> The reduction in the number of collective farms was due to their merger and the reorganisation of some into state farms in accordance with decisions adopted by the general meetings of collective farmers.

## PRINCIPAL INDICATORS OF AVERAGE COLLECTIVE FARM

	Average per collective farm						
	Collective-farm households	Crop area ('000 ha)	Livestock (head)				Number of tractors in terms of 15-hp units (prior to 1960, including tractors belonging to the MTSs <sup>1</sup> and RMSs <sup>2</sup> )
			Cattle	of which cows	Pigs	Sheep and goats	
1928	13	0.04	5	2	2	7	0.2
1932	71	0.4	42	13	15	54	0.4
1934	68	0.4	44	13	15	51	0.8
1940	81	0.5	85	24	35	177	2.4
1945	83	0.4	72	16	12	167	1.8
1950	165	1.0	224	56	98	546	6
1958	275	1.9	463	166	334	1,083	16
1960	383	2.7	807	286	609	1,612	24
1964	418	2.9	967	358	581	1,409	35
1965	421	2.9	1,038	371	667	1,478	38
1966	417	2.8	1,072	378	667	1,509	41

Today, the fixed productive assets (taken at actual balance-sheet value) average 829,000 rubles per collective farm.

To render help and service to the collective farms, the state MTSs were set up in 1929 and 1930, which constituted the material and technical basis of the collective-farm system. At the end of 1957, the country had about 8,000 MTSs with 1,047,000 tractors (in terms of 15-hp units), 321,000 grain harvesters and many other farming machines.

The machine and tractor stations were of great importance for the socialist transformation of the countryside, the establishment and consolidation of the collective-farm system and for strengthening the alliance between the working class and the peasantry. In 1958, the MTSs were reorganised, and all their machinery was sold to the collective farms.

<sup>1</sup> MTS—machine and tractor station.

<sup>2</sup> RMS—repair and maintenance station.

## PRINCIPAL INDICATORS OF AVERAGE STATE FARM

	Average per state farm						
	Number of workers	Crop area ('000 ha)	Livestock (head)				Number of tractors in terms of 15-hp units
			Cattle	of which cows	Pigs	Sheep and goats	
1928	134	0.8	97	32	31	403	2
1934	434	2.4	648	284	344	1,305	23
1940	330	2.8	592	229	459	1,420	24
1945	281	1.7	389	118	138	1,135	15
1950	334	2.6	562	170	500	1,530	26
1958	639	8.7	1,370	472	1,355	4,401	90
1960	745	9.0	1,957	689	1,715	4,280	103
1964	721	8.6	2,201	803	1,144	4,378	121
1965	663	7.6	2,098	782	1,073	3,975	114
1966	651	7.3	2,071	742	1,049	4,060	114

Today the fixed productive assets (taken at actual balance-sheet value) average 2,100,000 rubles per state farm.

**FIXED PRODUCTIVE ASSETS (including cattle) OF THE COLLECTIVE AND STATE FARMS, AND OTHER STATE AGRICULTURAL ENTERPRISES**  
(end-of-year figures; in comparable prices; without depreciation deductions; '000 million rubles)

	Fixed productive assets of the collective and state farms, and other state agricultural enterprises	of which fixed productive assets of the collective farms
1928	1.1	0.2
1932	4.7	2.2
1937	9.0	5.6
1940	12.0	7.1
1945	8.5	5.4
1950	14.0	9.3
1955	22.6	14.1
1958	30.8	19.8
1960	36.5	21.9
1965	56.1	27.4
1966	59.6	29.1

**STRUCTURE OF THE FIXED PRODUCTIVE ASSETS OF COLLECTIVE AND STATE FARMS AND OTHER STATE AGRICULTURAL ENTERPRISES AT THE BEGINNING OF 1967**

(taken at actual balance-sheet value, without depreciation deductions; percentages of the total)

	In the collective and state farms and other state agricultural enterprises	In the collective farms	In the state farms
Fixed productive assets . . . . .	100	100	100
of which:			
buildings, installations and mechanical transmission gear . . . . .	49.1	51.8	42.0
power machines and equipment . . . . .	8.5	8.0	9.7
agricultural machinery and equipment . . . . .	12.8	11.6	15.1
means of transportation . . . . .	4.2	4.5	4.4
draught animals . . . . .	1.5	1.5	1.6
productive animals . . . . .	15.6	16.3	16.5

The fixed productive assets of the collective and state farms are up-to-date means of labour, of which over 25 per cent constitute machines, equipment and means of transportation.

As of 1967, the collective and state farms and other state-operated agricultural enterprises possessed:

Tractors:	
in physical units . . . . .	1,660,000
in terms of 15-hp units . . . . .	3,233,000
Grain harvesters . . . . .	531,000
Lorries . . . . .	1,017,000
and millions of other complex farm machines.	

The fixed productive assets are steadily growing. In 1967, agriculture will be supplied with 287,000 tractors in physical units, or over 600,000 in terms of 15-hp units, 96,000 grain harvesters and a great number of lorries.

### AGRICULTURAL OUTPUT

	Gross agricultural output (in comparable prices of 1958; '000 million rubles)	Output (mill. tons)		
		Grain	Meat	Milk
1909-1913 (annual average)				
within the present frontiers of the U.S.S.R. . . . .	20.9	72.5	4.8	28.8
within the frontiers of the U.S.S.R. prior to September 17, 1939 . . . . .	17.9	65.2	3.9	24.1
1913				
within the present frontiers of the U.S.S.R. . . . .	22.4	86.0	5.0	29.4
within the frontiers of the U.S.S.R. prior to September 17, 1939 . . . . .	19.2	76.5	4.1	24.8
1924-1928 (annual average) . . . . .	22.0	69.3	4.2	29.3
1936-1940 (annual average) . . . . .	23.5	77.4	4.0	26.5
1937 . . . . .	25.2	97.4	3.0	26.1

Continued

	Gross agricultural output (in comparable prices of 1958: '000 million rubles)	Output (mill. tons)		
		Grain	Meat	Milk
1940 . . . . .	30.4	95.6	4.7	33.6
1945 . . . . .	18.6	47.3	2.6	26.4
1946-1950 (annual average) . . . . .	27.3	64.8	3.5	32.3
1946 . . . . .	21.0	39.6	3.1	27.7
1947 . . . . .	26.1	65.9	2.5	30.2
1948 . . . . .	28.9	67.2	3.1	33.4
1949 . . . . .	30.0	70.2	3.8	34.9
1950 . . . . .	30.4	81.2	4.9	35.3
1951-1955 (annual average) . . . . .	32.8	88.5	5.7	37.9
1951 . . . . .	29.0	78.7	4.7	36.2
1952 . . . . .	31.2	92.2	5.2	35.7
1953 . . . . .	32.3	82.5	5.8	36.5
1954 . . . . .	34.2	85.6	6.3	38.2
1955 . . . . .	37.6	103.7	6.3	43.0
1956-1960 (annual average) . . . . .	46.7	121.5	7.9	57.2
1956 . . . . .	42.5	125.0	6.6	49.1
1957 . . . . .	44.1	102.6	7.4	54.7
1958 . . . . .	48.5	134.7	7.7	58.7
1959 . . . . .	48.7	119.5	8.9	61.7
1960 . . . . .	49.8	125.5	8.7	61.7
1961-1965 (annual average) . . . . .	52.4	130.3	9.3	64.7
1961 . . . . .	51.3	130.8	8.7	62.6
1962 . . . . .	51.9	140.2	9.5	63.9
1963 . . . . .	48.0	107.5	10.2	61.2
1964 . . . . .	54.9	152.1	8.3	63.3
1965 . . . . .	56.0	121.1	10.0	72.6
1966 . . . . .	61.5	171.2	10.8	76.0

As compared with the pre-revolutionary period, the gross agricultural output increased by 180 per cent (of which cropping products—by 180 per cent and livestock products—by 170 per cent), whereas the average yearly proportion of the workers employed in agriculture dropped by over 50 per cent.

The nazi invasion inflicted enormous damage to agriculture. Thanks to the selfless efforts of the working people in the countryside and the assistance of the whole Soviet people, the pre-war level of production was regained by 1950.

The September (1953) Plenary Meeting of the Central Committee of the C.P.S.U. was of great importance to the further development of agriculture. Certain progress was made in agriculture up to 1959. However, the successes achieved were not consolidated, and between 1960 and 1964 the agricultural advance slowed down. The average annual increase in output in this period was 2.4 per cent as against 7.6 per cent between 1955 and 1959.

The decisions adopted by the March (1965) Plenary Meeting of the C.C. C.P.S.U. created favourable conditions for the further development of agriculture. In 1966, agricultural output increased by 10 per cent, as compared with 1965.

*The collective and state farms hold the leading place in agricultural production and in supplying the country with farm products.*

**SHARE OF OUTPUT OF STAPLE AGRICULTURAL PRODUCTS BY THE COLLECTIVE AND STATE FARMS AND OTHER STATE AGRICULTURAL ENTERPRISES IN TOTAL OUTPUT**  
(percentages)

	Grain	Raw cotton	Sugar-beet	Pota-toes	Vege-tables	Meat	Milk	Eggs	Wool
1928 . . . . .	2.7	3.5	33.4	1.3	2.1	0.5	0.6	0.1	1.5
1932 . . . . .	76	84	84	...	...	32	22	6	42
1940 . . . . .	88	100	94	35	52	28	23	6	61
1945 . . . . .	81	100	90	25	44	39	18	10	68
1950 . . . . .	93	100	100	27	56	33	25	11	79
1960 . . . . .	98	100	100	37	56	59	53	20	78
1961 . . . . .	98	100	100	36	55	54	54	22	78
1962 . . . . .	98	100	100	30	58	56	55	24	78
1963 . . . . .	98	100	100	34	59	57	55	25	79
1964 . . . . .	98	100	100	40	61	58	58	27	79
1965 . . . . .	98	100	100	37	59	60	61	33	80
1966 . . . . .	98	100	100	36	58	58	60	34	80

The collective and state farms and other state agricultural enterprises produce the bulk of the grain, raw cotton and sugar-beet, and a considerable part of other products. Potatoes, vegetables and livestock products going for personal consumption are produced chiefly on the individual subsidiary plots of the collective farmers, workers and office employees.

The share of the socialist sector (including the individual subsidiary plots of the collective farmers, workers and office employees) accounts for 100 per cent of the gross agricultural product.

**SHARE OF STATE PURCHASES OF STAPLE AGRICULTURAL PRODUCTS FROM THE COLLECTIVE AND STATE FARMS AND OTHER STATE AGRICULTURAL ENTERPRISES IN THE TOTAL PURCHASES**  
(percentages)

	Grain	Raw cotton	Sugar-beet	Pota-toes	Vege-tables	Cattle and poultry	Milk	Eggs	Wool
1932 . . . . .	80	84	85	...	...	25	58	—	71
1940 . . . . .	97	100	94	63	98	63	66	7	76
1945 . . . . .	94	100	94	64	99	70	66	17	81
1950 . . . . .	97	100	100	60	98	69	57	39	85
1960 . . . . .	100	100	100	76	93	87	93	63	86
1961 . . . . .	100	100	100	82	93	89	94	66	85
1962 . . . . .	100	100	100	74	93	86	95	66	85
1963 . . . . .	100	100	100	66	95	84	95	66	87
1964 . . . . .	100	100	100	71	95	88	96	70	87
1965 . . . . .	100	100	100	73	93	91	96	74	86
1966 . . . . .	100	100	100	82	93	86	96	77	86

**MARKETABLE AGRICUL**  
(million)

	1913		1932	1940
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939		
<b>Cropping products (from the harvest of the corresponding year)</b>				
Grain . . . . .	22.4	21.3	20.3	38.3
Raw cotton . . . . .	0.74	0.74	1.2	2.24
Sugar-beet . . . . .	11.3	10.8	6.1	17.4
Sunflower seeds . . . . .	0.43	0.42	0.68	1.87
Potatoes . . . . .	6.1	4.7	5.8	12.9
Vegetables . . . . .	1.1	0.9	2.8	6.1
<b>Livestock products (for the calendar year)</b>				
Meat . . . . .	2.1	1.7	0.9	2.6
Milk and dairy products (in terms of milk) . . . . .	7.0	5.8	4.5	10.8
Eggs—'000 million . . . . .	4.5	3.9	...	4.7
Wool—'000 tons . . . . .	77	72	41	120

<sup>1</sup> The marketable agricultural product includes all farm products sold to five-farm markets, excluding the turnover within the agricultural sphere, and the rural population.

**STATE PURCHASES OF STAPLE**

	1928	1932	1940	1945
<b>Cropping products (from the harvest of the corresponding year)</b>				
Grain—mill. tons . . . . .	10.8	19.0	36.4	20.0
Raw cotton—mill. tons . . . . .	0.79	1.2	2.24	1.16
Sugar-beet—mill. tons . . . . .	9.4	6.1	17.4	4.7
Sunflower seeds—mill. tons . . . . .	1.07	0.56	1.50	0.49
Flax fibre—'000 tons . . . . .	173	287	245	65
Potatoes—mill. tons . . . . .	1.1	4.5	8.5	4.5
Vegetables—mill. tons . . . . .	—	1.4	3.0	1.8
Fruit and berries—'000 tons . . . . .	—	272	596	295
of which:				
seed and stone fruits . . . . .	—	222	262	138
grapes . . . . .	—	11	306	137
citruses . . . . .	—	0.7	23.4	18.0
Tea leaves (high grade)—'000 tons . . . . .	1.06	1.6	52	21
<b>Livestock products (for the calendar year)</b>				
Cattle and poultry (live weight)—mill. tons . . . . .	1.8	1.2	2.2	1.3
Cattle and poultry (in terms of dead weight)—mill. tons . . . . .	1.1	0.7	1.3	0.7
Milk and dairy products (in terms of milk)—mill. tons . . . . .	1.9	1.9	6.5	2.9
Eggs—'000 mill. . . . .	2.6	0.4	2.7	1.1

**TURAL PRODUCT<sup>1</sup>**  
(tons)

1945	1950	1960	1961	1962	1963	1964	1965	1966
23.2	38.2	54.1	57.6	62.1	48.4	74.8	41.1	82.0
1.16	3.54	4.29	4.52	4.30	5.21	5.28	5.66	5.98
4.7	19.7	52.2	47.7	43.9	41.5	76.1	67.5	69.7
0.59	1.34	2.72	3.27	3.28	3.24	4.37	4.27	5.06
11.8	14.0	13.7	13.6	11.4	12.7	17.7	15.8	15.6
4.1	4.3	8.0	8.2	8.8	8.4	10.4	9.9	10.2
1.3	2.5	6.0	5.8	6.7	7.3	5.8	7.0	7.8
5.4	11.4	29.1	31.0	32.5	31.3	34.2	40.9	42.1
1.5	3.5	10.5	11.4	12.3	11.8	11.4	13.9	15.2
73	138	319	330	337	339	315	331	344

<sup>1</sup>the state and co-operatives, as well as to the non-rural population on collec-  
i.e., direct sales or barter of farm products between agricultural enterprises

**AGRICULTURAL PRODUCTS**

1950	1960	1961	1962	1963	1964	1965	1966
32.3	46.7	52.1	56.6	44.8	68.3	36.3	75.0
3.54	4.29	4.52	4.30	5.21	5.28	5.66	5.98
19.7	52.2	47.7	43.9	41.5	76.1	67.5	69.7
1.08	2.29	2.92	3.08	3.04	3.93	3.89	4.66
174	369	369	395	368	317	433	426
6.9	7.1	7.0	5.7	8.0	11.1	9.9	9.3
2.0	5.1	5.5	5.9	6.3	7.9	7.7	8.0
597	1,951	2,326	2,937	3,061	3,415	4,477	4,473
290	820	866	909	1,203	1,471	1,533	1,744
302	1,087	1,405	1,964	1,786	1,906	2,875	2,644
2.4	27.7	32.5	36.2	43.7	10.5	28.6	40.3
85	164	162	179	196	194	197	238
2.3	7.9	7.3	8.6	9.3	8.3	9.3	10.3
1.3	4.8	4.5	5.3	5.7	5.0	5.8	6.5
8.5	26.3	27.5	29.2	28.5	31.4	38.7	40.1
1.9	6.5	7.4	8.5	8.7	8.3	10.5	11.6

**INCOMES OF COLLECTIVE FARMS, COLLECTIVE FARMERS,  
WORKERS AND OFFICE EMPLOYEES FROM SELLING  
AGRICULTURAL PRODUCTS TO THE STATE, CO-OPERATIVE AND  
STATE TRADING ORGANISATIONS**

(in prices for the corresponding year; million rubles)

	1958	1960	1961	1962	1963	1964	1965	1966
<b>Total . . . . .</b>	<b>13,409</b>	<b>14,155</b>	<b>14,505</b>	<b>17,080</b>	<b>18,446</b>	<b>18,966</b>	<b>21,521</b>	<b>24,998</b>
From products sold to the state . . . . .	12,815	13,507	13,835	15,648	17,118	17,643	20,173	23,457
including:								
cropping products	7,041	6,427	7,274	7,448	8,272	10,018	9,829	11,494
of which:								
grain . . . . .	1,961	1,757	2,149	2,524	2,266	2,864	2,237	3,525
raw cotton . . . .	1,243	1,244	1,298	1,206	1,681	1,649	2,088	2,096
sugar-beet . . . .	1,096	1,103	1,101	995	1,098	1,991	1,749	1,787
sunflower seeds .	341	319	428	472	474	615	739	893
flax (fibre and seeds) . . . . .	751	517	599	490	691	435	544	678
potatoes, vegetables and melons	535	512	535	544	825	1,006	926	889
fruit (including grapes and cit-ruses) . . . . .	441	375	445	520	494	558	670	659
livestock products	5,774	7,080	6,561	8,200	8,846	7,625	10,344	11,963
of which:								
cattle . . . . .	2,529	3,506	3,018	4,324	5,088	3,805	5,437	6,889
milk . . . . .	1,900	2,052	2,038	2,275	2,168	2,344	3,368	3,485
wool . . . . .	723	778	761	773	771	717	745	774
eggs . . . . .	199	282	294	372	372	328	389	402
From products sold to co-operative and state trading organisations . . . . .	594	648	670	1,432	1,328	1,323	1,348	1,541

**TOTAL INCOME OF THE COLLECTIVE FARMS**  
(in prices for the corresponding years)

	1958	1960	1961	1962	1963	1964	1965	1966
Total income of the collective farms <sup>1</sup> —'000 mill. rubles . . . . .	13.6	12.2	12.4	14.4	12.5	15.7	17.9	20.3
including:								
gross income, corresponding to the number of collective farms existing in 1966	11.0	11.0	11.7	13.7	11.9	15.3	17.8	20.3
Total income:								
per collective farm—'000 rubles . . . . .	202	280	308	365	324	418	494	557
per collective-farm household—rubles . . .	723	715	759	889	777	986	1,161	1,323

<sup>1</sup> The gross income (net product) of the collective farms is the value of the gross output minus total productive costs (seeds, fodder, fuel, fertilisers, depreciation, etc.).

**LABOUR PRODUCTIVITY IN AGRICULTURE**  
(as a percentage of 1940)

	In collective and state farms, and in auxiliary agricultural enterprises <sup>1</sup>	In collective farms (commonly-owned sector)	In state farms
1940 . . . . .	100	100	100
1945 . . . . .	60	57	71
1950 . . . . .	100	99	91
1960 . . . . .	203	185	156
1961 . . . . .	214	195	154
1962 . . . . .	221	198	161
1963 . . . . .	206	185	145
1964 . . . . .	243	216	176
1965 . . . . .	239	218	162
1966 . . . . .	269	237	191

The annual labour productivity in Soviet agriculture has increased by 340 per cent in comparison with 1913; taking into account shorter working day, the labour productivity per hour has risen more than 5-fold.

<sup>1</sup> The growth rates of labour productivity in the collective and state farms and auxiliary agricultural enterprises, taken as a whole, are higher than those in collective farms and state farms taken separately. This is explained by the considerable increase in the percentage of state farms, in which the labour productivity is higher than in collective farms.

**PRODUCTION COSTS OF STAPLE AGRICULTURAL PRODUCTS  
IN COLLECTIVE FARMS IN 1966**

(taking into account the labour remuneration of collective farmers according  
to actual payments in cash and kind)

	Rubles per ton
<b>Cropping products</b>	
Grain (excluding maize) . . . . .	45
Raw cotton . . . . .	332
Sugar-beet (for factory processing) . . . . .	22
Sunflower seeds . . . . .	45
Potatoes . . . . .	47
Vegetables . . . . .	88
<b>Livestock products</b>	
Liveweight gains of young stock and store animals:	
cattle . . . . .	1,048
pigs . . . . .	1,173
sheep . . . . .	692
Milk . . . . .	160
Eggs (per '000) . . . . .	75
Wool . . . . .	3,346

**CHANGE IN THE PRODUCTION COSTS OF THE COLLECTIVE FARMS'  
STAPLE PRODUCTS**

(estimated by standard units of labour expenditure of collective farmers at  
rates of payment established in the state farms in 1958; as a percentage of 1958)

	1958	1960	1964	1965	1966
<b>Cropping products</b>					
Grain (excluding maize) . . . . .	100	91	86	91	77
Raw cotton . . . . .	100	99	97	95	94
Sugar-beet (for factory processing) . . . . .	100	117	117	133	117
Sunflower seeds . . . . .	100	116	75	109	100
Potatoes . . . . .	100	94	94	106	106
Vegetables . . . . .	100	107	93	110	97
<b>Livestock products</b>					
Liveweight gains of young stock and store animals:					
cattle . . . . .	100	97	85	86	79
pigs . . . . .	100	94	85	72	66
sheep . . . . .	100	106	97	96	93
Milk . . . . .	100	100	98	93	83
Eggs . . . . .	100	101	76	68	59
Wool . . . . .	100	106	99	99	95

*Land is a source of wealth, the basis of agricultural production. The maintenance of this wealth, its effective use and the raising of its fertility is a matter of state importance.*

**TOTAL LAND OF THE U.S.S.R. AND DISTRIBUTION OF AGRICULTURAL AREAS AMONG USERS, as of November 1, 1966**  
(million hectares)

	Total land	Total agricultural areas (arable land, fallows, orchards, vineyards, meadows and pastures excluding reindeer pastures)	of which		
			arable land	meadows	pastures
Land of collective farms . . . . .	464.1	227.2	114.6	18.0	89.6
of which:					
land for common use (including areas for long-term use out of the State Land Fund and forestry organisations) . . . . .	458.8	222.2	110.4	17.8	89.6
individual subsidiary plots of the collective farmers . . . . .	5.0	4.7	4.0	0.2	—
collective-farm land in personal use of industrial, office and other workers . . . . .	0.33	0.30	0.25	0.01	—
Land belonging to the state farms and other state-operated agricultural enterprises (including areas for long-term use belonging to the State Land Fund and forestry organisations) . . . . .	595.4	313.6	106.1	23.6	178.5
Land in personal use of workers and office employees (excluding plots on collective-farm fields) . . . . .	3.2	3.0	2.2	0.4	—
<b>Total land in use of agricultural enterprises and farms . . . . .</b>	<b>1,062.7</b>	<b>543.8</b>	<b>222.9</b>	<b>42.0</b>	<b>268.1</b>
besides:					
Land belonging to the State Land Fund and forestry organisations (without areas for long-term use of the collective and state farms) . . . . .	1,106.9	45.7	0.5	6.0	38.8
Other land users . . . . .	57.6	19.4	0.7	1.1	17.2
<b>Total land (territory) . . . . .</b>	<b>2,227.2<sup>1</sup></b>	<b>608.9</b>	<b>224.1</b>	<b>49.1</b>	<b>324.1</b>

<sup>1</sup> Including the Sea of Asov and the White Sea, the territory of the U.S.S.R. is 2,240.2 million hectares.

**CROP**  
(million)

	1913		1928	1940	1945
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939			
<b>Total crop area . . . . .</b>	<b>118.2</b>	<b>105.0</b>	<b>113.0</b>	<b>150.6</b>	<b>113.8</b>
Grain crops . . . . .	104.6	94.4	92.2	110.7	85.3
of which:					
wheat . . . . .	33.0	31.6	27.7	40.3	24.9
rye . . . . .	29.1	25.8	24.6	23.3	20.5
Industrial crops . . . . .	4.9	4.5	8.6	11.8	7.7
of which:					
cotton . . . . .	0.69	0.69	0.97	2.08	1.21
sugar-beet (for factory processing) . . . . .	0.68	0.65	0.77	1.23	0.83
long-fibre flax . . . . .	1.25	1.02	1.36	2.10	1.00
sunflower seeds . . . . .	0.98	0.97	3.90	3.54	2.93
Potatoes, vegetables and melons . . . . .	5.1	3.8	7.7	10.0	10.6
of which:					
potatoes . . . . .	4.2	3.1	5.7	7.7	8.3
vegetables . . . . .	0.6	0.5	0.8	1.5	1.8
Fodder crops . . . . .	3.3	2.1	3.9	18.1	10.2
including annual and perennial grasses . . . . .	3.3	2.1	3.6	16.3	9.0

**DISTRIBUTION OF CROP AREAS BY**  
(million)

	1928	1940	1945
<b>Total crop area of all types of farms . . . . .</b>	<b>113.0</b>	<b>150.6</b>	<b>113.8</b>
of which:			
State farms and other agricultural enterprises . . . . .	1.7	13.3	11.6
Collective farms . . . . .	1.4	117.7	83.9
Individual subsidiary plots of collective farmers, industrial, office and other workers . . . . .	1.2	5.3	6.6
Individual peasant farms and households of other population groups . . . . .	108.7	14.3	11.7

In 1928, the share of the collective and state farms and other state agricultural farms was 1.5 per cent. In 1940, the share of the collective farms was 78.2 per cent. In 1966, the percentage went up to 96.7 per cent.

**AREAS**  
hectares)

1950	1958	1960	1961	1962	1963	1964	1965	1966
<b>146.3</b>	<b>195.6</b>	<b>203.0</b>	<b>204.6</b>	<b>216.0</b>	<b>218.5</b>	<b>212.8</b>	<b>209.1</b>	<b>206.8</b>
102.9	121.5	115.6	122.3	128.7	130.0	133.3	128.0	124.8
38.5	66.6	60.4	63.0	67.4	64.6	67.9	70.2	70.0
23.7	18.0	16.2	16.8	16.9	15.0	16.8	16.0	13.6
12.2	12.3	13.1	13.6	14.3	14.9	15.5	15.3	15.1
2.32	2.15	2.19	2.33	2.39	2.48	2.46	2.44	2.46
1.31	2.50	3.04	3.12	3.17	3.75	4.11	3.88	3.80
1.90	1.60	1.62	1.62	1.70	1.46	1.57	1.48	1.40
3.59	3.91	4.19	4.21	4.39	4.39	4.61	4.87	5.00
10.5	11.6	11.2	10.8	10.7	10.5	10.6	10.6	10.3
8.6	9.5	9.1	8.9	8.7	8.5	8.5	8.6	8.4
1.3	1.5	1.5	1.4	1.5	1.4	1.5	1.4	1.4
20.7	50.2	63.1	57.9	62.3	63.1	53.4	55.2	56.6
18.2	31.3	36.1	36.1	27.3	31.1	26.5	30.0	32.0

**TYPES OF AGRICULTURAL ENTERPRISES**  
hectares)

1950	1958	1960	1961	1962	1963	1964	1965	1966
<b>146.3</b>	<b>195.6</b>	<b>203.0</b>	<b>204.6</b>	<b>216.0</b>	<b>218.5</b>	<b>212.8</b>	<b>209.1</b>	<b>206.8</b>
15.9	56.9	73.2	87.3	94.9	97.8	95.7	97.4	96.9
121.0	131.4	123.0	110.6	114.4	114.0	110.8	105.1	103.2
7.5	7.3	6.8	6.7	6.7	6.7	6.3	6.6	6.7
1.9	—	—	—	—	—	—	—	—

tural enterprises accounted for only 2.7 per cent of the total arable land. In

## OUTPUT AND YIELDS

	1913		1928	1940
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939		
<b>Total harvest — mill. tons</b>				
Grain . . . . .	86.0	76.5	73.3	95.6
Raw cotton . . . . .	0.74	0.74	0.79	2.24
Sugar-beet (for factory processing) . . . . .	11.3	10.9	10.1	18.0
Sunflower seeds . . . . .	0.75	0.74	2.13	2.64
Flax fibre — '000 tons . . . . .	401	330	324	349
Potatoes . . . . .	31.9	23.3	46.4	76.1
Vegetables . . . . .	5.5	4.4	10.5	13.7
<b>Crop yield—tons per ha</b>				
Grain . . . . .	0.82	0.81	0.79	0.86
Raw cotton . . . . .	1.08	1.08	0.81	1.08
Sugar-beet (for factory processing) . . . . .	16.8	16.8	13.2	14.6
Sunflower seeds . . . . .	0.76	0.76	0.54	0.74
Flax fibre . . . . .	0.32	0.33	0.24	0.17
Potatoes . . . . .	7.6	7.6	8.2	9.9
Vegetables . . . . .	8.4	...	13.2	9.1

In the years of Soviet power, the yields of agricultural crops have considered ton per hectare, while between 1961 and 1965, the average was over one ton (for factory processing) 15 and 16.5 tons, and that of potatoes 7.8 and 9.4 tons per

Total output of grain increased for the same period by 80 per cent; that that of potatoes by 170 per cent.

<sup>1</sup> Until 1954, the publications for 1933-53 cited data on the unharvested contain amended data and give actual volumes of harvested crops.

*"An increase in the yield of all farm crops must be considered as the principal way to step up agricultural production."*

From the Directives of the 23rd  
C.P.S.U. Congress

## OF AGRICULTURAL CROPS<sup>1</sup>

1945	1950	1958	1960	1961	1962	1963	1964	1965	1966
47.3	81.2	134.7	125.5	130.8	140.2	107.5	152.1	121.1	171.2
1.16	3.54	4.34	4.29	4.52	4.30	5.21	5.28	5.66	5.98
5.5	20.8	54.4	57.7	50.9	47.4	44.1	81.2	72.3	74.0
0.84	1.80	4.63	3.97	4.75	4.80	4.28	6.06	5.45	6.15
150	255	438	425	399	432	380	346	480	461
58.3	88.6	86.5	84.4	84.3	69.7	71.8	93.6	88.7	87.9
10.3	9.3	14.9	16.6	16.2	16.0	15.2	19.5	17.6	17.9
0.56	0.79	1.11	1.09	1.07	1.09	0.83	1.14	0.95	1.37
0.96	1.53	2.02	1.96	1.93	1.80	2.10	2.15	2.32	2.43
6.6	15.9	21.8	19.1	16.4	15.2	12.0	19.9	18.8	19.5
0.29	0.50	1.18	0.94	1.12	1.09	0.97	1.31	1.11	1.22
0.15	0.13	0.27	0.26	0.25	0.25	0.26	0.22	0.33	0.33
7.0	10.4	9.1	9.2	9.5	8.0	8.4	11.0	10.3	10.5
5.8	7.2	10.1	11.1	11.3	10.9	10.4	13.0	12.3	12.5

erably grown: between 1909 and 1913 the average output of grain was 0.69 per hectare; that of raw cotton 1.3 and 2.06 tons respectively; that of sugar-beet hectare respectively.

of raw cotton by 600 per cent; that of sugar-beet by 500 per cent; and

crops (i.e., on the biological yield). All tables published in this collection

**GRAIN**  
(million)

	1913		1928	1940
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939		
Grain crops . . . . .	86.0	76.5	73.3	95.6
of which:				
wheat . . . . .	26.3	25.0	22.0	31.8
rye . . . . .	23.2	20.4	19.3	21.1
maize . . . . .	2.1	1.1	3.2	5.2
barley . . . . .	12.1	10.3	5.7	12.0
oats . . . . .	17.0	14.7	16.5	16.8
millet . . . . .	2.53	2.50	3.02	4.39
buckwheat . . . . .	1.10	1.01	1.63	1.31
rice . . . . .	0.32	0.32	0.43	0.30
legumes (including vetch and its mixtures, lupine and serradilla for grain)	1.09	0.85	...	2.18

**YIELD OF**  
(tons per

	1913		1928	1940
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939		
Grain crops . . . . .	0.82	0.81	0.79	0.86
Winter wheat . . . . .	1.00	0.99	0.78	1.01
Spring wheat . . . . .	0.73	0.73	0.80	0.66
Winter rye . . . . .	0.80	0.80	0.78	0.91
Maize . . . . .	0.94	0.88	0.72	1.38
Winter barley . . . . .	0.65	0.65	0.85	0.86
Spring barley . . . . .	0.92	0.92	0.77	1.08
Oats . . . . .	0.89	0.87	0.96	0.83
Millet . . . . .	0.72	0.72	0.53	0.74
Buckwheat . . . . .	0.51	0.51	0.56	0.64
Rice . . . . .	1.19	1.19	2.00	1.73
Legumes (including vetch and its mixtures, lupine and serradilla for grain)	0.70	0.68	...	0.69

*"In achieving an upsurge of all branches of agriculture and a higher standard of living, grain production is of decisive importance."*

From the Directives of the 23rd  
C.P.S.U. Congress

**PRODUCTION**  
(tons)

1945	1950	1958	1960	1961	1962	1963	1964	1965	1966
47.3	81.2	134.7	125.5	130.8	140.2	107.5	152.1	121.1	171.2
13.4	31.1	76.6	64.3	66.5	70.8	49.7	74.4	59.7	100.5
10.6	18.0	15.8	16.4	16.7	17.0	11.9	13.6	16.2	13.1
3.1	6.6	10.2	9.8	17.1	15.5	11.1	13.8	8.0	8.4
6.9	6.4	13.0	16.0	13.3	19.5	19.8	28.6	20.3	27.9
9.1	13.0	13.4	12.0	8.9	5.7	4.0	5.5	6.2	9.2
1.69	1.70	2.88	3.23	2.89	2.78	1.84	3.49	2.20	3.10
0.61	1.33	0.66	0.64	0.87	0.87	0.50	0.71	0.95	0.93
0.22	0.20	0.22	0.19	0.25	0.27	0.38	0.47	0.58	0.71
1.36	2.26	1.82	2.71	4.04	7.58	8.03	11.11	6.69	7.03

**GRAIN CROPS**  
(hectare)

1945	1950	1958	1960	1961	1962	1963	1964	1965	1966
0.56	0.79	1.11	1.09	1.07	1.09	0.83	1.14	0.95	1.37
0.63	0.91	1.62	1.51	1.69	1.68	1.29	1.38	1.61	2.04
0.48	0.76	0.97	0.95	0.82	0.82	0.59	0.99	0.55	1.20
0.52	0.76	0.88	1.01	1.00	1.01	0.79	0.81	1.01	0.97
0.73	1.38	2.33	1.93	2.39	2.21	1.59	2.70	2.52	2.60
0.62	0.65	1.55	1.45	1.27	1.55	1.51	1.30	1.32	1.72
0.66	0.75	1.31	1.31	0.96	1.16	0.91	1.32	1.01	1.41
0.63	0.81	0.90	0.93	0.77	0.82	0.69	0.96	0.93	1.28
0.29	0.45	0.77	0.84	0.75	0.65	0.46	0.98	0.68	0.95
0.34	0.45	0.39	0.45	0.45	0.38	0.27	0.51	0.53	0.50
1.29	1.46	2.01	1.97	2.11	2.26	2.56	2.43	2.69	2.87
0.55	0.64	0.85	0.82	0.92	1.05	0.74	1.04	0.99	1.18

**GRAIN PRODUCTION BY**

	1913	1940	1945	1950
<b>U.S.S.R.</b>				
Crop area—'000 ha . . . . .	104,648	110,728	85,329	102,877
Gross harvest—'000 tons . . . . .	86,030	95,638	47,332	81,200
Yield—tons per ha . . . . .	0.82	0.86	0.56	0.79
<b>R.S.F.S.R.</b>				
Crop area—'000 ha . . . . .	62,939	70,143	50,871	64,948
Gross harvest—'000 tons . . . . .	50,468	55,637	25,354	46,826
Yield—tons per ha . . . . .	0.80	0.79	0.50	0.72
<b>Ukrainian S.S.R.</b>				
Crop area—'000 ha . . . . .	24,696	21,385	17,804	20,047
Gross harvest—'000 tons . . . . .	23,157	26,420	12,397	20,448
Yield—tons per ha . . . . .	0.94	1.24	0.70	1.02
<b>Byelorussian S.S.R.</b>				
Crop area—'000 ha . . . . .	3,630	3,475	2,829	3,392
Gross harvest—'000 tons . . . . .	2,568	2,727	1,703	2,684
Yield—tons per ha . . . . .	0.71	0.80	0.61	0.79
<b>Uzbek S.S.R.</b>				
Crop area—'000 ha . . . . .	1,553	1,502	1,260	1,138
Gross harvest—'000 tons . . . . .	1,032	615	543	443
Yield—tons per ha . . . . .	0.66	0.41	0.43	0.39
<b>Kazakh S.S.R.</b>				
Crop area—'000 ha . . . . .	3,881	5,795	4,886	6,019
Gross harvest—'000 tons . . . . .	2,155	2,502	1,892	4,747
Yield—tons per ha . . . . .	0.56	0.43	0.39	0.79
<b>Georgian S.S.R.</b>				
Crop area—'000 ha . . . . .	707	749	829	760
Gross harvest—'000 tons . . . . .	428	538	594	796
Yield—tons per ha . . . . .	0.61	0.66	0.72	1.02
<b>Azerbaijan S.S.R.</b>				
Crop area—'000 ha . . . . .	833	797	861	737
Gross harvest—'000 tons . . . . .	486	567	541	523
Yield—tons per ha . . . . .	0.58	0.71	0.63	0.71
<b>Lithuanian S.S.R.</b>				
Crop area—'000 ha . . . . .	1,558	1,638	1,448	1,493
Gross harvest—'000 tons . . . . .	1,449	1,536	1,356	1,172
Yield—tons per ha . . . . .	0.93	0.94	0.94	0.79
<b>Moldavian S.S.R.</b>				
Crop area—'000 ha . . . . .	1,981	1,672	1,565	1,382
Gross harvest—'000 tons . . . . .	2,008	1,810	962	1,299
Yield—tons per ha . . . . .	1.01	1.08	0.61	0.94
<b>Latvian S.S.R.</b>				
Crop area—'000 ha . . . . .	949	1,132	749	805
Gross harvest—'000 tons . . . . .	880	1,372	684	732
Yield—tons per ha . . . . .	0.93	1.21	0.91	0.91

## THE UNION REPUBLICS

1958	1960	1961	1962	1963	1964	1965	1966
121,417	115,537	122,243	128,676	129,980	133,321	128,024	124,807
134,721	125,490	130,790	140,183	107,492	152,071	121,141	171,184
1.11	1.09	1.07	1.09	0.83	1.14	0.95	1.37
72,524	71,372	74,509	79,181	79,398	81,645	77,594	76,102
76,763	76,201	73,694	86,754	65,789	87,010	69,665	99,896
1.06	1.07	0.99	1.10	0.83	1.07	0.90	1.31
16,323	13,729	17,032	16,048	16,974	17,201	16,495	15,836
27,500	21,790	34,011	28,693	21,935	30,448	31,651	34,067
1.68	1.58	1.99	1.79	1.29	1.77	1.92	2.15
2,748	2,590	2,687	2,614	2,797	2,987	2,890	2,832
1,790	2,165	2,211	1,802	2,245	2,147	3,335	2,960
0.65	0.84	0.82	0.69	0.80	0.72	1.15	1.05
1,015	912	955	1,013	1,131	1,412	1,275	1,126
706	721	479	656	891	1,326	637	764
0.69	0.78	0.50	0.64	0.78	0.93	0.50	0.67
23,201	21,932	21,984	24,572	24,174	24,415	24,297	23,680
21,952	18,693	14,586	15,888	10,592	23,850	7,595	25,572
0.94	0.85	0.66	0.65	0.44	0.98	0.31	1.08
591	472	425	462	500	507	501	485
712	629	585	582	705	732	658	615
1.19	1.33	1.36	1.25	1.39	1.43	1.30	1.26
755	699	528	717	702	662	658	698
623	725	368	700	484	660	645	800
0.82	1.04	0.70	0.98	0.69	0.99	0.98	1.15
972	924	955	886	1,018	1,078	1,043	895
713	855	819	723	996	1,202	1,691	1,319
0.74	0.93	0.86	0.82	0.98	1.12	1.62	1.47
1,040	823	972	1,005	965	946	968	921
2,054	1,601	2,383	2,375	1,637	1,861	2,494	2,420
1.98	1.95	2.45	2.36	1.69	1.96	2.57	2.62
520	564	634	559	627	654	623	550
444	570	547	407	449	779	946	657
0.85	1.01	0.86	0.73	0.72	1.19	1.52	1.19

	1913	1940	1945	1950
<b>Kirghiz S.S.R.</b>				
Crop area—'000 ha . . . . .	555	778	664	704
Gross harvest—'000 tons . . . . .	436	588	377	434
Yield—tons per ha . . . . .	0.78	0.76	0.57	0.62
<b>Tajik S.S.R.</b>				
Crop area—'000 ha . . . . .	438	567	608	552
Gross harvest—'000 tons . . . . .	202	324	246	209
Yield—tons per ha . . . . .	0.46	0.57	0.40	0.38
<b>Armenian S.S.R.</b>				
Crop area—'000 ha . . . . .	308	340	358	319
Gross harvest—'000 tons . . . . .	174	223	223	281
Yield—tons per ha . . . . .	0.56	0.66	0.62	0.88
<b>Turkmen S.S.R.</b>				
Crop area—'000 ha . . . . .	202	183	183	128
Gross harvest—'000 tons . . . . .	159	124	90	84
Yield—tons per ha . . . . .	0.79	0.57	0.49	0.65
<b>Estonian S.S.R.</b>				
Crop area—'000 ha . . . . .	418	572	414	453
Gross harvest—'000 tons . . . . .	428	655	370	522
Yield—tons per ha . . . . .	1.02	1.15	0.89	1.15

#### GRAIN PRODUCTION IN REGIONS OF VIRGIN

	1913	1940	1945	1950
<b>Crop area—mill. ha</b>				
U.S.S.R.—total crop area . . . . .	24.3	35.1	23.9	32.4
of which:				
R.S.F.S.R. . . . .	20.4	29.3	19.0	26.4
including:				
Siberia and the Far East . . . . .	6.7	12.8	9.3	12.1
the Urals . . . . .	4.9	7.0	4.3	6.1
the Volga area . . . . .	8.8	9.5	5.4	8.2
Kazakh S.S.R. . . . .	3.9	5.8	4.9	6.0
<b>Gross harvest—mill. tons</b>				
U.S.S.R.—total crop area . . . . .	17.7	23.0	10.7	25.6
of which:				
R.S.F.S.R. . . . .	15.5	20.5	8.8	20.9
including:				
Siberia and the Far East . . . . .	4.8	8.4	3.8	9.9
the Urals . . . . .	4.0	4.7	2.5	6.0
the Volga area . . . . .	6.7	7.4	2.5	5.0
Kazakh S.S.R. . . . .	2.2	2.5	1.9	4.7

Continued

1958	1960	1961	1962	1963	1964	1965	1966
711	593	618	631	657	678	607	652
677	649	402	683	815	833	560	989
0.95	1.09	0.65	1.08	1.24	1.23	0.92	1.52
407	361	356	370	393	424	397	384
187	256	164	246	264	304	226	228
0.46	0.71	0.46	0.66	0.67	0.71	0.57	0.59
250	222	207	237	233	235	219	222
237	232	131	250	228	229	244	272
0.94	1.04	0.63	1.07	0.98	0.98	1.11	1.23
80	71	81	86	96	148	133	121
55	40	45	58	69	148	83	104
0.69	0.56	0.56	0.73	0.71	0.98	0.63	0.87
280	273	300	295	315	329	324	303
308	363	365	366	393	542	711	521
1.10	1.33	1.22	1.24	1.24	1.64	2.20	1.72

AND LONG FALLOW LAND DEVELOPMENT

1953	1958	1960	1961	1962	1963	1964	1965	1966
36.1	60.2	60.3	60.5	65.9	65.0	65.8	63.9	62.6
29.1	37.0	38.4	38.5	41.3	40.9	41.4	39.6	38.9
13.3	18.7	19.1	19.2	20.5	19.8	19.9	19.0	18.6
7.0	8.4	8.6	8.8	9.4	9.9	9.8	9.4	9.2
8.8	9.9	10.7	10.5	11.4	11.2	11.7	11.2	11.1
7.0	23.2	21.9	22.0	24.6	24.1	24.4	24.3	23.7
27.1	58.5	58.7	50.6	55.8	37.9	66.4	34.8	75.9
21.7	36.5	40.0	36.0	39.9	27.3	42.5	27.2	50.3
9.5	19.1	19.4	18.1	15.3	10.4	18.8	11.3	24.6
6.8	6.0	10.5	8.2	10.2	7.6	9.7	6.1	12.7
5.4	11.4	10.1	9.7	14.4	9.3	14.0	9.8	13.0
5.4	22.0	18.7	14.6	15.9	10.6	23.9	7.6	25.6

	1913	1940	1945	1950
<b>Share of regions of virgin and long fallow land development in the total grain production of the U.S.S.R. (percentages)</b>				
U.S.S.R.—total grain production . . . . .	20.6	24.0	22.7	31.5
of which:				
R.S.F.S.R. . . . .	18.1	21.4	18.7	25.7
Kazakh S.S.R. . . . .	2.5	2.6	4.0	5.8

The development of new lands has greatly increased grain production. As in the Kazakh S.S.R., 2.8-fold in Siberia and the Far East, and nearly 2-fold

#### STATE PURCHASES OF GRAIN IN REGIONS OF (million)

	1940	1950	1953
U.S.S.R.—total crop area . . . . .	11.9	11.3	10.9
of which:			
R.S.F.S.R. . . . .	10.6	9.2	8.5
including:			
Siberia and the Far East . . . . .	4.0	4.7	3.3
the Urals . . . . .	2.5	2.4	3.0
the Volga area . . . . .	4.1	2.1	2.2
Kazakh S.S.R. . . . .	1.3	2.1	2.4
<b>Share of the regions of virgin and long fallow land development in the total state purchases of grain in the U.S.S.R. (percentages)</b>			
U.S.S.R.—total grain purchases . . . . .	33	35	35
of which:			
R.S.F.S.R. . . . .	29	28	27
Kazakh S.S.R. . . . .	4	7	8

Continued

1953	1958	1960	1961	1962	1963	1964	1965	1966
32.9	43.5	46.8	38.8	39.8	35.3	43.6	28.7	44.3
26.3	27.2	31.9	27.6	28.5	25.4	27.9	22.4	29.4
6.6	16.3	14.9	11.2	11.3	9.9	15.7	6.3	14.9

a result, the area under grain crops expanded as compared with 1913: 6-fold in the Urals.

#### VIRGIN AND LONG FALLOW LAND DEVELOPMENT (tons)

1958	1960	1961	1962	1963	1964	1965	1966
32.7	29.0	23.8	27.1	16.3	37.5	11.1	41.6
17.9	18.5	16.3	18.9	11.5	22.1	8.7	24.6
9.4	8.8	7.5	5.5	3.0	9.0	2.7	11.5
2.3	5.0	3.7	5.3	3.7	4.8	1.9	6.7
6.2	4.7	5.1	8.1	4.8	8.3	4.1	6.4
14.8	10.5	7.5	8.2	4.8	15.4	2.4	17.0
58	62	45	48	37	55	31	56
32	40	31	33	26	32	24	33
26	22	14	15	11	23	7	23

**COTTON**

	1913	1940	1945	1950
<b>U.S.S.R.</b>				
Crop area—'000 ha . . . . .	688	2,076	1,213	2,316
Gross harvest—'000 tons . . . . .	744	2,237	1,161	3,539
Yield—tons per ha . . . . .	1.08	1.08	0.96	1.53
of which:				
<b>Uzbek S.S.R.</b>				
Crop area—'000 ha . . . . .	429	948	779	1,135
Gross harvest—'000 tons . . . . .	522	1,416	850	2,282
Yield—tons per ha . . . . .	1.22	1.49	1.09	2.01
<b>Tajik S.S.R.</b>				
Crop area—'000 ha . . . . .	27	106	96	126
Gross harvest—'000 tons . . . . .	32	172	81	289
Yield—tons per ha . . . . .	1.21	1.62	0.85	2.29
<b>Turkmen S.S.R.</b>				
Crop area—'000 ha . . . . .	69	150	110	153
Gross harvest—'000 tons . . . . .	69	211	98	276
Yield—tons per ha . . . . .	1.00	1.40	0.89	1.80
<b>Azerbaijan S.S.R.</b>				
Crop area—'000 ha . . . . .	103	188	107	151
Gross harvest—'000 tons . . . . .	64	154	65	284
Yield—tons per ha . . . . .	0.62	0.82	0.61	1.87
<b>Kirghiz S.S.R.</b>				
Crop area—'000 ha . . . . .	22	64	47	65
Gross harvest—'000 tons . . . . .	28	95	24	120
Yield—tons per ha . . . . .	1.31	1.48	0.52	1.84

Before the Great October Socialist Revolution, the output of raw cotton meet Russia's requirements. Nearly half the cotton needed by industry was 6,000,000 tons, which makes it possible to meet the country's requirements

*The Soviet Union is second in the world in cotton output and the first in yields among the main cotton producers.*

## PRODUCTION

1958	1960	1961	1962	1963	1964	1965	1966
2,149	2,192	2,335	2,387	2,480	2,461	2,442	2,463
4,340	4,289	4,518	4,304	5,210	5,285	5,662	5,981
2.02	1.96	1.93	1.80	2.10	2.15	2.32	2.43
1,451	1,450	1,510	1,567	1,628	1,623	1,617	1,625
3,047	2,949	3,154	3,006	3,689	3,671	3,904	4,083
2.10	2.03	2.09	1.92	2.27	2.26	2.41	2.51
169	172	204	204	217	224	228	230
422	399	484	435	540	546	609	631
2.50	2.32	2.37	2.13	2.49	2.44	2.67	2.74
188	222	249	241	257	255	257	268
384	363	391	378	460	463	553	656
2.05	1.63	1.57	1.57	1.79	1.81	2.15	2.45
207	220	240	241	245	227	215	218
272	366	244	277	273	340	335	336
1.32	1.66	1.02	1.15	1.12	1.50	1.56	1.54
70	71	76	79	79	57	73	73
136	126	154	125	170	168	167	184
1.94	1.77	2.04	1.58	2.17	2.24	2.29	2.53

amounted to only 700,000-750,000 tons which was far from adequate to imported. Today, the output of cotton in the U.S.S.R. has reached some in full and export cotton.

SUGAR-BEET

	1913	1940	1945	1950
<b>U.S.S.R.</b>				
Crop area—'000 ha . . . . .	676	1,226	831	1,308
Gross harvest—'000 tons . . . . .	11,319	18,018	5,480	20,819
Yield—tons per ha . . . . .	16.8	14.6	6.6	15.9
of which:				
<b>R.S.F.S.R.</b>				
Crop area—'000 ha . . . . .	115	336	268	342
Gross harvest—'000 tons . . . . .	1,967	3,239	752	3,614
Yield—tons per ha . . . . .	17.1	9.6	2.8	10.6
<b>Ukrainian S.S.R.</b>				
Crop area—'000 ha . . . . .	558	820	438	828
Gross harvest—'000 tons . . . . .	9,337	13,052	3,402	14,624
Yield—tons per ha . . . . .	16.7	15.9	7.8	17.7
<b>Byelorussian S.S.R.</b>				
Crop area—'000 ha . . . . .	—	—	2	5
Gross harvest—'000 tons . . . . .	—	—	17	70
Yield—tons per ha . . . . .	—	—	8.5	14.9
<b>Kazakh S.S.R.</b>				
Crop area—'000 ha . . . . .	—	15	21	20
Gross harvest—'000 tons . . . . .	—	385	210	541
Yield—tons per ha . . . . .	—	25	10	26.6
<b>Georgian S.S.R.</b>				
Crop area—'000 ha . . . . .	—	6	6	6
Gross harvest—'000 tons . . . . .	—	72	80	115
Yield—tons per ha . . . . .	—	13	13.6	19.2
<b>Lithuanian S.S.R.</b>				
Crop area—'000 ha . . . . .	—	13	15	26
Gross harvest—'000 tons . . . . .	—	255	171	349
Yield—tons per ha . . . . .	—	20.3	11	13.5
<b>Moldavian S.S.R.</b>				
Crop area—'000 ha . . . . .	3	4	6	11
Gross harvest—'000 tons . . . . .	15	119	68	274
Yield—tons per ha . . . . .	6.4	27.1	10.4	25.5
<b>Latvian S.S.R.</b>				
Crop area—'000 ha . . . . .	—	15	11	17
Gross harvest—'000 tons . . . . .	—	251	88	247
Yield—tons per ha . . . . .	—	16.8	8.2	14.4
<b>Kirghiz S.S.R.</b>				
Crop area—'000 ha . . . . .	—	15	21	20
Gross harvest—'000 tons . . . . .	—	628	213	587
Yield—tons per ha . . . . .	—	40.8	10.4	29.2
<b>Armenian S.S.R.</b>				
Crop area—'000 ha . . . . .	—	2	3	4
Gross harvest—'000 tons . . . . .	—	17	30	48
Yield—tons per ha . . . . .	—	10.8	11.1	12.1

The Soviet Union is leading the world in sugar-beet production. Sugar-beet years supplied industry with over 70,000,000 tons of sugar-beet a year.

At present, 3,800,000 hectares are under sugar-beet, or 460 per cent more

Since 1928, the sugar-beet crops began to spread beyond the old sugar-Russia. Today it is also cultivated in the Volga area, the Altai territory, stan, Kirghizia, Georgia, Armenia, Latvia and Lithuania. The new sugar-

*A powerful basis for sugar-beet growing has been created in the U.S.S.R., which has enabled it to lead the world in sugar production.*

## PRODUCTION

1958	1960	1961	1962	1963	1964	1965	1966
2,497	3,043	3,120	3,166	3,748	4,107	3,882	3,803
54,392	57,728	50,911	47,435	44,052	81,174	72,276	74,037
21.8	19.1	16.4	15.2	12	19.9	18.8	19.5
954	1,333	1,369	1,410	1,632	1,850	1,669	1,597
16,051	20,830	16,222	15,736	13,731	26,731	20,655	23,783
16.8	15.8	12	11.6	8.8	14.7	12.6	15
1,319	1,457	1,490	1,480	1,788	1,922	1,863	1,861
33,520	31,761	29,414	26,234	24,577	46,633	43,793	41,399
25.4	21.8	19.7	17.7	13.9	24.2	23.5	22.2
23	29	33	35	49	52	59	56
253	383	391	394	636	812	856	1,065
11.1	13.2	11.7	11.2	12.9	17	15.2	19.7
45	60	59	64	60	63	67	67
1,235	1,148	1,139	1,372	1,381	1,639	1,930	2,365
27.2	19.2	19.3	21.4	22.9	25.8	28.5	34.8
5	5	6	6	6	4	4	4
130	136	110	104	129	93	124	139
24.8	25.2	20.1	18.8	24	21.4	30.7	34.2
31	32	32	29	42	40	36	33
327	484	350	174	546	659	569	692
10.7	15.2	11	6.1	13.1	16.7	15.7	21.2
65	68	70	78	94	100	103	106
1,311	1,322	1,642	1,739	1,196	2,510	2,019	2,046
20.3	19.3	23.3	22.4	12.9	25.1	19.6	19.4
19	20	20	19	26	22	23	22
252	359	273	127	238	403	330	375
13.4	18.2	13.3	7.2	9.2	18.1	14.9	17
32	35	37	41	47	50	54	53
1,220	1,194	1,279	1,448	1,519	1,595	1,875	2,055
38.1	34.1	34.1	34.8	31.9	32	34.7	38.7
4	4	4	4	4	4	4	4
92	111	91	107	99	99	125	118
24.8	30.3	24.4	28.1	24	23.7	29.9	26

growing is fully concentrated in the collective and state farms which in recent

than in pre-revolutionary Russia.

beet-growing regions of the Ukraine and the central black-earth gubernias of Primorye territory (Far East), the Buryat A.S.S.R., and in Byelorussia, Kazakh-beet-growing regions produce 14 per cent of the total.

FLAX

	1913	1940	1945	1950
<b>U.S.S.R.</b>				
Crop area—'000 ha . . . . .	1,246	2,099	1,002	1,903
Gross harvest—'000 tons . . . . .	401	349	150	255
Yield—tons per ha . . . . .	0.32	0.17	0.15	0.13
of which:				
<b>R.S.F.S.R.</b>				
Crop area—'000 ha . . . . .	969	1,525	769	1,384
Gross harvest—'000 tons . . . . .	314	239	103	172
Yield—tons per ha . . . . .	0.32	0.16	0.13	0.12
<b>Ukrainian S.S.R.</b>				
Crop area—'000 ha . . . . .	17	118	51	126
Gross harvest—'000 tons . . . . .	4	19	10	12
Yield—tons per ha . . . . .	0.26	0.16	0.20	0.09
<b>Byelorussian S.S.R.</b>				
Crop area—'000 ha . . . . .	104	275	91	257
Gross harvest—'000 tons . . . . .	33	36	15	42
Yield—tons per ha . . . . .	0.32	0.13	0.16	0.16

The Soviet Union is the world leader in the production of long-fibre flax. In Soviet times, the area under flax has considerably grown: in the

## PRODUCTION

1958	1960	1961	1962	1963	1964	1965	1966
1,595 438 0.27	1,620 425 0.26	1,625 399 0.25	1,697 432 0.25	1,465 380 0.26	1,569 346 0.22	1,476 480 0.33	1,403 461 0.33
1,000 253 0.25	1,024 240 0.23	1,005 228 0.23	1,051 238 0.23	820 198 0.24	923 210 0.23	888 262 0.30	832 257 0.31
212 71 0.34	223 74 0.33	221 66 0.30	228 80 0.35	229 71 0.31	237 39 0.16	224 78 0.35	225 79 0.35
278 88 0.32	270 85 0.31	298 82 0.28	310 93 0.30	315 95 0.30	314 74 0.24	282 114 0.41	275 104 0.38

Ukraine, by 1,300 per cent and in Byelorussia, by 160 per cent.

## TEA PRO

	1913	1928	1940	1945
Area under tea plantations of all ages—'000 ha:				
U.S.S.R. . . . .	0.9	3.5	55.3	54.5
R.S.F.S.R. . . . .	—	—	0.6	0.5
Georgian S.S.R. . . . .	0.9	3.5	49.6	51.5
Azerbaijan S.S.R. . . . .	—	—	5.1	2.5
Gross harvest of high-grade tea leaf—'000 tons:				
U.S.S.R. . . . .	0.55	1.06	51.6	20.8
R.S.F.S.R. . . . .	—	—	0.01	0.04
Georgian S.S.R. . . . .	0.55	1.06	51.3	20.3
Azerbaijan S.S.R. . . . .	—	—	0.24	0.5

In tsarist Russia tea production was extremely low (the area under tea annually imported.

Today, the area under tea plants amounts to over 70,000 hectares. In suppliers of tea leaf are the collective and state farms in Georgia.

## DEVELOPMENT OF ORCHARDS

	1913	1928	1940	1945
Area under fruit and berry orchards (including citrus)—'000 ha . . . . .	655	657	1,790	1,105
Area under vineyards—'000 ha . . . . .	215	206	425	332
Gross harvest of fruit and berries (including grapes)—'000 tons . . . . .	...	3,015	3,873	1,753
of which gross vintage . . . . .	...	992	1,131	523

In Soviet years, the area under fruit and berry orchards and vineyards has gions of the Urals, Siberia and the Far East.

Big specialised enterprises have been set up in the U.S.S.R. to grow fruit, and grapes are concentrated in the collective and state farms and other state

*The U.S.S.R. has created its own raw material base for the tea industry.*

## DUCTION

1950	1958	1960	1961	1962	1963	1964	1965	1966
54.3	61.2	64.4	63.4	65.9	67.8	69.8	71.0	71.3
1.6	2.3	2.4	2.0	2.1	2.0	2.0	2.0	2.0
48.6	51.9	55.6	55.0	57.3	59.2	61.1	62.6	62.7
4.1	7.0	6.4	6.4	6.5	6.6	6.7	6.4	6.6
84.9	138.2	163.7	161.6	178.9	195.6	193.7	197.0	238.2
0.4	1.4	2.2	2.0	2.2	2.7	2.7	2.7	3.7
83.7	132.9	156.8	154.6	170.5	186.0	184.0	186.1	226.2
0.8	3.9	4.7	5.0	6.2	6.9	7.0	8.2	8.3

plantations was less than a thousand hectares). Over 75,000 tons of tea was

1966, the tea leaf harvest in the U.S.S.R. reached 238,000 tons. The chief

## AND VINEYARDS

1950	1958	1960	1961	1962	1963	1964	1965	1966
1,396	2,415	2,921	3,071	3,302	3,434	3,545	3,626	3,673
342	778	1,046	1,034	1,042	1,052	1,063	1,064	1,069
2,850	4,846	4,942	5,050	5,978	6,411	6,866	8,100	7,805
753	1,734	1,871	2,235	2,972	2,572	2,629	3,723	3,378

extended over 5-fold, as compared with 1913. Horticulture has spread to re-

berries and grapes. Approximately two-thirds of the output of fruit, berries enterprises.

*"Irrigation ... is especially important as a means of advancing agriculture and livestock breeding."*

V. I. Lenin

### IRRIGATED AND RECLAIMED LANDS (million hectares)

	Before the revo- lution	1940	1960	1962	1963	1964	1965	1966
Irrigated lands . . . . .	4.0	...	9.4	9.5	...	9.8	9.9	10.0
Reclaimed lands, total . . .	3.2	5.5	9.4	...	9.6	...	10.6	10.6
including sub-drainaged lands . . .	0.04	0.2	0.9	...	1.5	...	2.0	2.2

### MELIORATED LANDS IN THE COLLECTIVE AND STATE FARMS AND OTHER STATE AGRICULTURAL ENTERPRISES (thousand hectares)

	Irrigated lands		Reclaimed lands	
	1965	1966	1965	1966
Total land . . . . .	9,270.2	9,494.9	7,150.1	7,262.2
including ploughland (crops sown for the corresponding year and bare fallows) . . . . .	7,407.1	7,594.7	3,497.8	3,480.3
Total arable land . . . . .	7,254.9	7,471.7	3,296.7	3,382.4
of which under:				
grain crops . . . . .	2,216.6	2,235.6	1,441.1	1,348.8
industrial crops . . . . .	2,705.0	2,734.3	198.1	202.7
potatoes, vegetables and melons . . .	596.5	575.0	227.0	215.8
fodder crops . . . . .	1,736.8	1,926.8	1,430.5	1,615.1
Fruit, berries, grapes and other perennial plants . . . . .	889.2	935.9	62.1	47.5
Meadows and pastures . . . . .	526.5	506.3	3,486.1	3,624.3
Individual subsidiary plots of collective farmers, industrial, office and other workers . . . . .	447.4	458.0	104.1	110.1

In Soviet years, the area of irrigated lands increased from 4 million to 10 million hectares, or 150 per cent. Before the Great Patriotic War, irrigation jobs were in the main carried out with the mass participation of collective farmers, and therefore many of the canal-building sites were called national projects. In the post-war period, the construction of irrigation systems was further developed, especially in Uzbekistan, Kazakhstan and Tajikistan.

Much has been done to reclaim swamps and marsh lands. The area of the reclaimed lands has grown more than 3-fold.

The May (1966) Plenary Meeting of the C.C. C.P.S.U. worked out an extensive programme of land melioration.

*Stockbreeding is a major branch of agriculture which meets the growing requirements of the population in foodstuffs and of industry in raw materials.*

### OUTPUT OF LIVESTOCK PRODUCTS

	Meat (mill. tons)	Milk (mill. tons)	Eggs ('000 mill.)	Wool ('000 tons)
1913				
within the present frontiers of the U.S.S.R.	5.0	29.4	11.9	192
within the frontiers of the U.S.S.R. prior to September 17, 1939 . . . . .	4.1	24.8	10.2	180
1928 . . . . .	4.9	31.0	10.8	182
1940 . . . . .	4.7	33.6	12.2	161
1945 . . . . .	2.6	26.4	4.9	111
1950 . . . . .	4.9	35.3	11.7	180
1960 . . . . .	8.7	61.7	27.4	357
1961 . . . . .	8.7	62.6	29.3	366
1962 . . . . .	9.5	63.9	30.1	371
1963 . . . . .	10.2	61.2	28.5	373
1964 . . . . .	8.3	63.3	26.7	341
1965 . . . . .	10.0	72.6	29.1	357
1966 . . . . .	10.8	76.0	31.7	371

### SHARE OF DIFFERENT CATEGORIES OF AGRICULTURAL ENTERPRISES IN TOTAL OUTPUT OF LIVESTOCK PRODUCTS (percentages)

	1928			1966		
	Meat	Milk	Wool	Meat	Milk	Wool
All categories of agricultural enterprises . . . . .	100	100	100	100	100	100
of which:						
collective farms . . . . .	0.2	0.2	0.5	30	34	41
state farms and other agricultural enterprises . . . . .	0.3	0.4	1.0	28	26	39
individual subsidiary farming of collective farmers, workers and office employees . . . . .	0.9	0.9	1.5	42	40	20
private farming of peasants and other groups of the population . . . . .	98.6	98.5	97.0	0.0	0.0	0.0

In the course of the socialist reconstruction of agriculture large livestock departments were set up by collective and state farms, thus providing a basis for the country's socialist stockbreeding. In 1928 the collective farms, state farms and other state agricultural enterprises produced under one per cent of meat and milk and 1.5 per cent of wool; today these enterprises produce 58 per cent of meat, 60 per cent of milk and 80 per cent of wool.

The rest is produced by collective farmers, workers and office employees on their individual subsidiary plots and is mostly for their own consumption. The bulk of the fodder for individual subsidiary farming comes from collective and state farmland.

**PRODUCTIVE LIVESTOCK POPULATION**  
(as of January 1; million head)

	Cattle	of which cows	Pigs	Sheep and goats	of which sheep	Total productive livestock in terms of cattle
1916 <sup>1</sup>						
within the present frontiers of the U.S.S.R. . . . .	58.4	28.8	23.0	96.3	89.7	59.5
within the frontiers of the U.S.S.R. prior to September 17, 1939 . . .	51.7	24.9	17.3	88.7	82.5	52.5
1929 . . . . .	58.2	29.2	19.4	107.1	97.4	59.7
1941 . . . . .	54.8	28.0	27.6	91.7	80.0	57.0
1946 . . . . .	47.6	22.9	10.6	70.0	58.5	46.3
1951 . . . . .	57.1	24.3	24.4	99.0	82.6	59.0
1961 . . . . .	75.8	34.8	58.7	140.3	133.0	83.8
1962 . . . . .	82.1	36.3	66.7	144.5	137.5	90.7
1963 . . . . .	87.0	38.0	70.0	146.4	139.7	95.4
1964 . . . . .	85.4	38.3	40.9	139.5	133.9	88.3
1965 . . . . .	87.2	38.8	52.8	130.7	125.2	91.0
1966 . . . . .	93.4	40.1	59.6	135.3	129.8	97.7
1967 . . . . .	97.1	41.2	58.0	141.0	135.5	100.8

<sup>1</sup> Data for 1916 are taken from an agricultural census; official statistics for 1910-14 and earlier periods cannot be used as it fell short of the actual headage.

**PEDIGREE LIVESTOCK POPULATION IN COLLECTIVE AND STATE FARMS**

	1932	1939	1945	1955	1966	1964 <sup>1</sup>
Pedigree livestock population in collective and state farms — mill. head:						
cattle . . . . .	1.3	4.5	4.1	19.2	33.3	44.0
of which, cows . . . . .	0.6	1.4	1.4	8.3	13.6	19.1
pigs . . . . .	0.5	5.8	2.4	11.9	22.5	14.1
sheep . . . . .	3.3	24.1	22.9	59.9	73.5	76.9
Percentage of the total population of pedigree livestock in each category:						
cattle . . . . .	10	29	30	74	83	90
of which, cows . . . . .	11	25	34	73	84	91
pigs . . . . .	12	59	56	85	94	95
sheep . . . . .	21	66	59	87	93	95

<sup>1</sup> According to data from the latest pedigree survey.

Since the establishment of Soviet power extensive work has been done to upgrade the country's livestock.

At present pedigree livestock accounts for 90-95 per cent of the total headage on collective and state farms which has resulted in a considerable increase in the output of livestock products. Thus in 1966 an annual average milk yield per cow and a wool clip per sheep were respectively almost 100 per cent and 50 per cent higher than in pre-revolutionary farming.

### MILK AND WOOL YIELDS (kilograms)

	Average annual milk yield per cow				Average annual wool clip per sheep			
	in all categories of agricultural enterprises	in collective and state farms and other state enterprises	in collective farms	in state farms	in all categories of agricultural enterprises	in collective and state farms and other state enterprises	in collective farms	in state farms
1913 . . . . .	982	—	—	—	2.0	—	—	—
1928 . . . . .	1,042	—	—	—	1.8	—	—	—
1940 . . . . .	1,185	1,190	1,017	1,803	2.2	2.5	2.5	2.9
1945 . . . . .	1,143	1,024	945	1,424	1.8	2.0	2.0	2.4
1950 . . . . .	1,370	1,137	1,027	2,256	2.2	2.2	2.2	2.7
1960 . . . . .	1,779	1,941	1,854	2,185	2.6	2.6	2.4	3.0
1961 . . . . .	1,744	1,851	1,764	2,030	2.7	2.7	2.6	3.1
1962 . . . . .	1,693	1,765	1,684	1,873	2.7	2.7	2.6	2.9
1963 . . . . .	1,600	1,599	1,504	1,734	2.7	2.7	2.6	2.9
1964 . . . . .	1,655	1,700	1,583	1,870	2.5	2.5	2.4	2.7
1965 . . . . .	1,853	2,002	1,906	2,121	2.8	2.9	2.8	3.0
1966 . . . . .	1,880	2,037	1,949	2,134	2.9	2.9	2.8	3.0

**POWER CAPACITIES**  
(end-of-year figures;

	1916	1928	1940	1945
<b>All power capacities . . . . .</b>	<b>23.9</b>	<b>21.3</b>	<b>47.5</b>	<b>28.0</b>
Mechanical motors . . . . .	0.2	1.1	36.9	21.7
of which:				
tractors (capacity of motors) . . . . .	—	0.5	17.6	12.9
motors of harvester combines . . . . .	—	—	5.8	4.5
motor vehicles . . . . .	—	0.02	11.9	3.4
electric installations . . . . .	—	—	0.6	0.1
other motors . . . . .	0.2	0.6	1.0	0.8
Draught animals (in terms of mechanical power) .	23.7	20.2	10.6	6.3

The swift pace of socialist industrialisation and the victory of the collectives in the pre-revolutionary times, power capacities in 1966 increased more than tenfold. Mechanical motors now account for 98 per cent of the total, draught animals

**POWER CAPACITIES PER**  
(horse

	In peasant farms		In collective farms	
	1913-1917	1928	1940	1945
<b>Total power capacities per:</b>				
worker . . . . .	0.5	0.4	1.5	1.1
100 ha of sown area . . . . .	20	19	32	26
<b>Mechanical motors per:</b>				
worker . . . . .	0.0	0.02	1.2	0.9
100 ha of sown area . . . . .	0.2	1	25	21

<sup>1</sup> Data for 1940-60 include the MTSs and RMSs.

*"... Russia will not remain a country of manual labour, or of the primitive wooden plough, but will go forward to different times."*

V. I. Lenin

**IN AGRICULTURE**  
(millions of horse power)

1950	1960	1961	1962	1963	1964	1965	1966
62.3	155.9	165.1	188.3	205.6	218.6	236.6	250.1
55.0	151.2	160.6	184.0	201.6	214.8	232.9	246.5
22.3	50.3	55.4	63.3	70.4	77.4	85.5	91.2
8.0	24.8	25.8	29.3	31.5	33.3	35.6	37.7
21.3	64.3	65.9	73.6	78.5	79.7	84.5	89.3
0.9	8.9	10.6	12.7	15.2	18.0	20.8	22.5
2.5	2.9	2.9	5.1	6.0	6.4	6.5	5.8
7.3	4.7	4.5	4.3	4.0	3.8	3.7	3.6

five-farm system ensured extensive mechanisation of agriculture. Compared to fold. Moreover, there was a drastic change in their composition: whereas were almost the only source of motive power in agriculture before the revolution.

**WORKER IN AGRICULTURE**  
(power)

farms and state farms<sup>1</sup>

1950	1960	1961	1962	1963	1964	1965	1966
1.7	5.4	5.5	6.1	6.8	7.2	7.7	8.2
47	74	74	76	83	92	100	108
1.5	5.2	5.3	5.9	6.6	7.1	7.6	8.1
30	71	71	74	81	88	96	106

*"Electrification based on the Soviet system will mean the complete success of the foundations of communism in our country — foundations of a cultured life, without exploiters, without capitalists, without landlords, without merchants."*

V. I. Lenin

### ELECTRIFICATION OF AGRICULTURE

	1928	1940	1945	1950	1960	1961	1962	1963	1964	1965	1966
Total consumption of electricity by agriculture (including that from state power stations) — mill. kWh	35	538	398	1,538	9,970	11,978	14,078	16,130	18,410	21,099	23,209
Capacity of rural power stations—'000 kW	29	265	199	794	3,676	4,100	4,513	4,600	5,025	5,295	5,108
Their output of electricity — mill. kWh	35	303	188	912	5,735	6,457	6,935	6,263	6,246	6,033	5,472

### ELECTRIFICATION OF COLLECTIVE AND STATE FARMS, 1966

	Collective farms	State farms
Number of farms using electricity (end of the year), as a percentage of the total number of farms . . . . .	97	99
Percentage of farms supplied with electricity:		
only by their own power stations . . . . .	17	21
only by other power stations . . . . .	68	50
both by their own and other power stations . . . . .	15	29
Electricity generated by their own power stations—mill. kWh . . . . .	2,139	2,548
Electricity supplied by other power stations — mill. kWh	7,343	5,791
Total electricity received — mill. kWh . . . . .	9,482	8,339
Total electricity consumed — mill. kWh . . . . .	8,654	7,682
including electricity used for production purposes . .	4,903	5,319

Successes scored in industrialisation and collectivisation promoted the electrification of agriculture.

Electrification of agriculture has made rapid headway during post-war years. Whereas in 1950 only 15 per cent of the collective farms and 76 per cent of the state farms used electricity, in 1966 it was used by almost all collective and state farms. Compared to 1940 the consumption of electricity by agriculture increased 43-fold and was 11 times that of the total consumption of electricity in pre-revolutionary Russia (by industry, agriculture, etc.).

*Labour in the countryside is being increasingly mechanised.*

**MECHANISATION OF MAIN AGRICULTURAL JOBS IN CROP FARMING  
IN STATE AND COLLECTIVE FARMS**  
(percentages of total amount of work in each job)

	1940	1945	1950	1960	1964	1965	1966
Ploughing for spring crops . .	69	66	84	100	100	100	100
Drilling of grain crops . . . .	61	39	75	100	100	100	100
Drilling of sugar-beet . . . . .	93	75	92	100	100	100	100
Drilling of cotton . . . . .	81	71	92	100	100	100	100
Planting of potatoes . . . . .	4	0.8	6	58	69	73	78
Inter-row cultivation of:							
sugar-beet . . . . .	...	...	...	86	85	87	87
potatoes . . . . .	...	...	...	72	83	86	90
Combine harvesting of:							
grain crops (including maize)	47	27	53	92	97	97	99
sugar-beet . . . . .	—	—	2	54	58	67	74
Cotton picking . . . . .	...	...	...	11	19	22	29
Potato lifting . . . . .	2	0.4	3	34	48	54	58
Hay mowing . . . . .	12	8	24	68	76	79	81

Almost all agricultural jobs in pre-revolutionary Russia were done either manually or with the help of draught animals. Nowadays the main jobs in crop farming (ploughing, drilling of grain crops, cotton and sugar-beet, harvesting of grain and silage crops) are completely mechanised.

The level of farm mechanisation by the end of 1966 was 98 per cent in grain cleaning, 78 per cent in grain drying, 87 per cent in grain handling and 63 per cent in sugar-beet handling. Hay stacking is 62 per cent mechanised, and fertiliser application, 75 per cent.

**MECHANISATION OF JOBS IN STOCKBREEDING  
IN COLLECTIVE AND STATE FARMS IN 1966**  
(percentages of total number of each kind of livestock)

	In state and collective farms	In collective farms	In state farms
Machine milking of cows . . . . .	31	23	43
Mechanisation of water supply on:			
cattle farms . . . . .	59	61	56
pig farms . . . . .	75	74	77
Machine sheep shearing (percentage of sheep shorn electrically) . . . . .	87	80	94

**NUMBER OF TRACTORS, HARVESTER**  
(end-of-year figures;

	1928	1940	1945
Tractors:			
physical units . . . . .	27	531	397
in terms of 15-hp units . . . . .	18	684	491
Grain harvester combines . . . . .	2 units	182	148
of which self-propelled . . . . .	—	—	—
Lorries (including tank-cars) . . . . .	0.7	228	62

**NUMBER OF MAIN AGRICULTURAL**  
(end-of-year figures;

	In peasant farms		1940	1945
	Prior to the revolution	1927		
Tractor ploughs . . . . .	0.3 <sup>2</sup>	9.3	491	330
Tractor drills . . . . .	—	0.5	306	200
Tractor cultivators . . . . .	—	...	272	167
Windrowers . . . . .	—	—	1.7	0.6
Beet harvesters . . . . .	—	—	—	—
Flax harvesters . . . . .	—	—	—	—
Tractor flax pullers . . . . .	—	—	11	4
Cotton-picking machines . . . . .	—	—	0.8	0.1
Potato harvesters . . . . .	—	—	—	—
Grain cleaners . . . . .	—	—	8	7

<sup>1</sup> Data for 1940-60 include the MTSs and RMSs.

<sup>2</sup> Steam engine ploughs.

**COMBINES AND LORRIES IN AGRICULTURE**  
(thousands)

1950	1960	1961	1962	1963	1964	1965	1966
595	1,122	1,212	1,329	1,442	1,539	1,613	1,660
933	1,985	2,171	2,400	2,612	2,821	3,032	3,233
211	497	498	520	517	513	520	531
35	233	235	335	386	435	487	520
283	778	796	875	922	954	982	1,017

**MACHINES IN AGRICULTURE**  
(thousands)

In collective and state farms <sup>1</sup>

1950	1960	1961	1962	1963	1964	1965	1966
519	782	790	830	884	907	891	864
350	1,003	987	1,040	1,066	1,154	1,202	1,208
317	755	759	817	814	864	918	935
1.3	281	295	305	326	352	382	368
0.1	34	34	41	48	57	64	62
1.7	0.8	} 16	1.8	2.6	3.1	3.4	3.3
8	16		17	19	21	23	24
4.8	11	12	17	20	27	33	38
0.1	10	7	8	10	15	19	21
14	95	118	118	140	128	120	122

**SUPPLY OF MINERAL FERTILI**

	1913	1928	1940	1945
Supply of mineral fertilisers — '000 tons				
in conventional units, total . . . . .	188	234	3,159	624
of which:				
nitrogenous . . . . .	15	11	789	367
phosphate . . . . .	136	207	1,371	206
phosphorite meal . . . . .	8	12	473	5
potash . . . . .	29	4	526	46
in terms of 100% content of nutrients, total . . . . .	42	45	727	134
of which:				
nitrogenous . . . . .	3	2	162	75
phosphate . . . . .	25	39	256	39
phosphorite meal . . . . .	2	2	90	1
potash . . . . .	12	2	219	19
Supply of mineral fertilisers per hectare of arable (in terms of 100 % content of nutrients), total — kg . . . . .	0.03	0.04	3.7	1.0
of which:				
nitrogenous . . . . .	0.00	0.00	0.8	0.5
phosphate . . . . .	0.02	0.04	1.3	0.3
phosphorite meal . . . . .	0.00	0.00	0.5	...
potash . . . . .	0.01	0.00	1.1	0.2

In Soviet times increasingly greater quantities of mineral fertilisers have 3,159,000 tons of fertilisers, that is 13 times as much as in 1928; in 1966 the in 1960 and almost 10 times as much as in 1940. In 1967 it is planned to

## SERS TO AGRICULTURE

1950	1960	1961	1962	1963	1964	1965	1966
5,350	11,404	12,073	13,645	15,965	21,961	27,066	30,535
1,497	3,749	4,189	5,218	6,634	8,584	11,132	12,955
2,366	4,403	4,506	4,562	5,184	6,865	8,044	8,896
472	1,392	1,609	1,764	1,852	2,972	3,246	4,004
1,015	1,842	1,690	1,985	2,166	3,416	4,547	4,573
1,261	2,624	2,717	3,094	3,594	5,040	6,303	6,992
307	769	859	1,070	1,360	1,759	2,282	2,656
442	823	842	853	969	1,284	1,504	1,664
90	265	306	335	352	565	617	761
422	766	703	826	901	1,421	1,891	1,902
7.3	12.2	12.4	14.0	16.2	22.8	28.5	31.8
1.8	3.6	3.9	4.8	6.1	8.0	10.3	12.1
2.6	3.8	3.8	3.9	4.4	5.8	6.8	7.6
0.5	1.2	1.4	1.5	1.6	2.6	2.8	3.5
2.4	3.6	3.2	3.7	4.0	6.4	8.6	8.6

been made available to agriculture. In 1940 agriculture was supplied with amount available was increased to 30.5 million tons, or 2.7 times as much as supply agriculture with 32 million tons of mineral fertilisers.

**NUMBER OF PEOPLE ENGAGED IN COLLECTIVE FARMS,  
(annual averages;**

	1928	1940
Total number of people engaged in all branches of the collective and state farms and other agricultural enterprises . . .	1.1	31.3
of whom:		
in collective farms <sup>1</sup> . . . . .	0.8	29.0
in state farms and other agricultural enterprises . . . . .	0.3	1.8
in machine and tractor and repair and maintenance stations	—	0.5
Additional people from other enterprises and organisations employed for work in collective and state farms . . . . .	—	0.1
Out of total number of people (including those from other enterprises and organisations) those engaged in agriculture, total . . . . .	1.0	28.1
of whom:		
in collective farms . . . . .	0.7	26.1
in state farms and auxiliary agricultural enterprises . . . .	0.3	1.6
in machine and tractor and repair and maintenance stations . . . . .	—	0.4

In 1966, 18.6 million people were engaged in all branches of the collective and welfare) and including those from other enterprises and organisations,

The state farms and other agricultural enterprises employed a total of 8.8 million), of whom 8.1 million worked in agriculture.

Altogether the collective farms, the state farms and other agricultural engaged in agriculture. This figure (25.4 million) did not include those men were exclusively engaged in individual subsidiary farming. With the addition annual number of people engaged in agriculture was estimated at 31 million.

<sup>1</sup> The average annual number of collective farmers working in the collecters (including youngsters and old people) who joined in the work of the

**STATE FARMS AND OTHER AGRICULTURAL ENTERPRISES**  
 (millions)

1950	1960	1961	1962	1963	1964	1965	1966
30.7	29.0	28.1	27.7	27.3	27.3	27.5	27.4
27.6	22.3	20.7	20.0	19.4	19.2	18.9	18.6
2.4	6.3	7.4	7.7	7.9	8.1	8.6	8.8
0.7	0.4	0.0	—	—	—	—	—
0.2	0.5	0.5	0.4	0.4	0.4	0.5	0.5
27.9	26.1	25.5	25.2	24.9	25.2	25.6	25.4
25.1	20.1	18.7	18.1	17.6	17.7	17.6	17.3
2.2	5.8	6.8	7.1	7.3	7.5	8.0	8.1
0.6	0.2	—	—	—	—	—	—

farms (agriculture, building, processing of products, major repair, services 19.0 million, of whom 17.3 million worked in agriculture.

million people (including those from other enterprises and organisations, 8.9

enterprises employed in 1966 27.9 million people, of whom 25.4 million were members of the families of collective farmers, workers and office employees who of the outlay of labour in individual subsidiary farming, the average

tive farms was computed by dividing by 12 the number of all collective farm-collective farm every month irrespective of the actual number of days worked.

**NUMBER OF SPECIALISTS WITH A HIGHER OR SPECIALISED  
SECONDARY EDUCATION ENGAGED IN COLLECTIVE AND STATE  
FARMS AND OTHER AGRICULTURAL ENTERPRISES**

(thousands)

	1940	1953	1960	1961	1962	1963	1964	1965	1966
<b>In collective farms <sup>1</sup></b>									
Number of specialists with a higher or specialised secondary education of all specialities . .	29	83	222	199	207	205	223	232	265
of whom those of agricultural specialities (agronomists, livestock experts, veterinary surgeons) . . . . .	19	69	161	156	159	154	164	165	180
<b>In state farms and other agricultural enterprises</b>									
Number of specialists with a higher or specialised secondary education of all specialities . .	21	31	166	201	209	211	234	264	292
of whom those of agricultural specialities (agronomists, livestock experts, veterinary surgeons) . . . . .	15	27	118	141	147	147	158	174	189
<b>Altogether in collective and state farms and other agricultural enterprises <sup>1</sup></b>									
Number of specialists with a higher or specialised secondary education of all specialities . .	50	114	388	400	416	416	457	496	557
of whom those of agricultural specialities (agronomists, livestock experts, veterinary surgeons) . . . . .	34	96	279	297	306	301	322	339	369

Before the revolution the number of agronomists, livestock experts and veterinary surgeons was insignificant. In 1928 there were 58,000 of them.

By the end of 1966, the total number of persons with a higher or specialised secondary education engaged in agriculture (including those working in organisations catering for agriculture, the veterinary service and in agricultural research institutes) was 745,000, of whom 510,000 people had an agricultural training. In addition, 104,000 specialists with a higher or specialised secondary education worked in agricultural administration boards, of whom 42,000 people had a training of agronomists, livestock experts or veterinary surgeons.

<sup>1</sup> Data for 1940-60 include specialists employed by the MTSs and RMSs.

**NUMBER OF FARM MACHINE OPERATORS IN COLLECTIVE  
AND STATE FARMS  
(thousands)**

	1928	1940	1950	1960	1961	1962	1963	1964	1965	1966	1967
Number of tractor, combine and lorry drivers—total . .	18.2	1,401	1,356	2,579	2,589	2,663	2,844	2,950	3,094	3,199	3,293
of whom:											
in collective farms <sup>1</sup> . . . .	10.8	1,298	1,230	1,767	1,658	1,611	1,691	1,793	1,876	1,908	1,966
in state farms . . . .	7.4	103	126	812	931	1,052	1,153	1,157	1,218	1,291	1,327
Of the total number:											
tractor and combine drivers—total . . . .	17.5	1,237	1,182	1,818	1,828	1,924	2,072	2,139	2,245	2,304	2,358
of whom:											
in collective farms . . . .	10.8	1,153	1,087	1,252	1,172	1,174	1,242	1,315	1,383	1,399	1,432
in state farms . . . .	6.7	84	95	566	656	750	830	824	862	905	926
lorry drivers—total . . . .	0.7	164	174	761	761	739	772	811	849	895	935
of whom:											
in collective farms . . . .	—	145	143	515	486	437	449	478	493	509	534
in state farms . . . .	0.7	19	31	246	275	302	323	333	356	386	401

<sup>1</sup> Data for 1940-60 include those employed by the MTSs and RMSs.

*“What is the material basis for the exchange between agriculture and industry? It is railway and water transport”.*

V. I. Lenin

## **TRANSPORT AND COMMUNICATIONS**

## GROWTH OF FREIGHT TURNOVER ON ALL TYPES OF GENERAL-PURPOSE TRANSPORT

('000 million ton/kilometres)

	1913		1917	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
All types of transport . . .	126.0	114.5	85.8	487.6	374.8	1,885.7	2,918.1	3,064.2
Railway . . .	76.4	65.7	63.0	415.0	314.0	1,504.3	2,016.0	2,050.0
Marine . . .	20.3	19.9	7.7	23.8	34.2	131.5	442.8	526.9
Inland waterways . . .	28.9	28.5	15.0	36.1	18.8	99.6	137.7	143.4
Pipeline (oil) . . .	0.3	0.3	0.005	3.8	2.7	51.2	165.0	180.0
Motor <sup>1</sup> . . .	0.1	0.1	0.1	8.9	5.0	98.5	155.1	162.2
Air . . . . .	—	—	—	0.02	0.06	0.56	1.45	1.70

Since the revolution, the U.S.S.R. has built up its own motor and air transport, extensively developed pipeline transport, and strengthened the material and technical basis of the railway, sea and inland waterways transport. All types of transport developed as an integral transport network.

In 1967 the freight carriage by transport and the passenger traffic handled by it will be 24 and 13 times greater than the respective figures for 1913.

Transport in the U.S.S.R. by far surpasses that in the U.S.A. in the rates of growth of freight turnover. In the period from 1918 to 1966 the average annual growth rates of freight turnover (exclusive of overseas shipments) in the U.S.S.R. were almost 2.6 times higher than in the U.S.A., and in the period from 1951 to 1966 almost three times higher.

The gap between the total volume of freight carriage in the U.S.S.R. and the U.S.A. is rapidly closing. In 1966 the total volume of freight carriage by all types of transport in the U.S.S.R. was about 80 per cent of the U.S. level as compared with 34 per cent in 1950.

<sup>1</sup> Including the motor transport of all departments, organisations and collective farms.

## THE U.S.S.R. IS A GREAT RAILWAY POWER

*"The railways are the key, they are one of the most striking manifestations of the connection between town and country, between industry and agriculture, on which socialism is entirely based."*

V. I. Lenin

### BASIC INDICES OF THE DEVELOPMENT OF GENERAL-PURPOSE RAILWAY TRANSPORT

	1913		1917	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
Total length of railway track in use (end-of-year figures) —'000 km . . . . .	71.7	58.5	70.3	106.1	112.9	125.8	132.5	133.3
Freight turnover —'000 mill. ton/km . . . . .	76.4	65.7	63.0	415.0	314.0	1,504.3	2,016.0	2,050.0
Total volume of freight—mill. tons . . . . .	157.6	132.4	115.2	592.6	395.2	1,884.9	2,481.9	2,559.5
of which:								
coal and coke . . . . .	31.4	26.3	18.3	152.5	142.1	492.5	583.3	
oil products . . . . .	6.9	5.8	3.5	29.5	21.2	151.0	240.2	
ferrous metals (including scrap iron) . . . . .	4.9	4.1	3.6	27.1	21.4	106.4	153.6	
various ores . . . . .	10.6	8.9	4.2	35.2	17.9	127.4	200.3	
timber . . . . .	14.5	12.2	3.3	42.8	26.6	140.7	142.3	
grain . . . . .	21.7	18.3	2.1	44.6	20.3	78.8	85.5	
Passenger traffic —'000 mill. passenger/km . . . . .	30.3	25.2	22.0	98.0	65.9	170.8	219.4	222.0
Number of passengers carried—millions . . . . .	248.5	184.8	160.8	1,343.5	843.8	1,949.7	2,450.4	2,503.0

Railway transport plays a leading role in both freight and passenger traffic.

By the close of 1967 the length of track in general-purpose operation will be about twice as long as in 1913. As compared with 1913 the railway network in the areas of Central Asia and Kazakhstan has increased 3.9-fold. In addition to the length of railways mentioned in the above table, there are railway lines owned by industrial enterprises and organisations. By the beginning of 1967 their length totalled 115,000 kilometres and total volume of freight carriage in 1966 amounted to 6,500 million tons.

In Soviet years major trunklines were built: the more than 2,000-kilometre South-Siberian Railway line (Magnitogorsk-Tselinograd-Barnaul-Novokuznetsk), the Turkestan-Siberian (Jambul-Alma Ata-Semipalatinsk) and the Pechora (Konosha-Kotlas-Vorkuta) lines each over 1,500 kilometres long, the railway linking Petropavlovsk, Karaganda and Chu also about 1,500 kilometres long and the about 1,000-kilometre Volga line (Kazan-Ulyanovsk-Saratov-Ilovlya).

The 1967 railway freight turnover will top the 1913 figure by more than 27 times.

Currently the volume of freight turnover on Soviet railways equals that of all the capitalist countries taken together and surpasses that of the U.S.A. by almost twofold.

Rail freightage in 1967 will exceed the 1913 level by more than 16-fold. The present monthly freightage exceeds that for the whole of 1913 by 40 per cent, while the number of passengers carried by railways in 1967 has increased tenfold.

### TECHNICAL RECONSTRUCTION OF RAILWAY TRANSPORT

	1913	1940	1945	1960	1966
Total length of electric railways (end-of-year figures) —'000 km . . . . .	—	1.9	2.0	13.8	27.0
percentage of total length in use . . . . .	—	2	2	11	20
Length of railways serviced by diesel locomotives—'000 km . . . . .	—	0.3	1.5	17.7	61.9
percentage of total length in use . . . . .	—	0.3	1	14	47
Share of various types of traction in railway freight turnover (percentages):					
electric and diesel . . . . .	—	2.2	2.9	43.2	88.8
electric . . . . .	—	2.0	2.4	21.8	42.0
diesel . . . . .	—	0.2	0.5	21.4	46.8
steam engine . . . . .	100	97.8	97.1	56.8	11.2
Average gross weight of a freight train (all types of traction)— tons . . . . .	573	1,301	1,249	2,099	2,406
electric . . . . .	—	1,367	1,362	2,383	2,592
diesel . . . . .	—	1,343	1,191	2,385	2,500
Average running speed of freight trains— km/h . . . . .	22.0	33.1	29.2	40.4	45.6

A very important element of the technical reconstruction of railway transport is the switch-over to electric and diesel traction. As a result of the successful fulfilment of the technical reconstruction plan of the railway transport, electric and diesel

trains in 1967 will account for 92 per cent of the total rail freight turnover as against two per cent in 1940. The switch-over to electric traction on railways in the U.S.S.R. was initiated in 1926 when the Baku-Sabunchi-Surkhany electrified line was commissioned. By the beginning of 1967 there were 27,000 kilometres of electric railways in the country, including the Moscow-Baikal, Moscow-Sverdlovsk, Leningrad-Moscow-Mineralniye Vody and other major trunklines. The suburban railways of many towns and industrial centres are serviced by fast comfortable electric trains. For the length of electric railways the U.S.S.R. occupies first place in the world. Their length surpasses the length of electric railways in such countries as the U.S.A., Britain, France, the F.R.G. and Japan taken together.

The chief trunklines have automatic block systems, centralised dispatcher service, electric centralised system of points and signals and automatic signal devices installed in the locomotives. The radio communication system between route dispatchers and engine drivers has been further expanded.

The railway carriage fleet has been replenished by a large number of big-capacity freight cars and all-metal comfortable passenger coaches. All carriages on Soviet railways are equipped with automatic coupling and automatic brakes.

In 1966 the average weight of a freight train increased more than 300 per cent as compared with that in 1913 and the speed of freight trains went up 110 per cent.

#### DENSITY OF THE RAILWAYS AND OF FREIGHT AND PASSENGER TRAFFIC

	1913	1940	1945	1960	1966
Density of the railways per 1,000 sq km — km . . . . .	3.2	4.8	5.0	5.6	5.9
Average density of goods carried per km of track in use—mill. ton/km . . . . .	1.1	4.3	2.8	12.1	15.3
Average density of passengers carried—million passenger/kilometres . . . . .	0.4	1.0	0.6	1.4	1.7

Compared with the 1913 level the density of the railways per 1,000 sq km increased almost twofold in 1966.

Soviet railways lead the world for density of freightage per kilometre of track in use in terms of ton/km. In 1966 the average density on Soviet railways surpassed the 1913 level by almost 14 times and by more than five times the figure in the U.S.A.

#### INDICES OF THE USE OF THE ROLLING STOCK

	1913	1917	1940	1945	1960	1966
Average daily run of a locomotive in freight traffic—km:						
electric engines . . . . .	—	—	367.0	306.7	557.0	613.8
diesel engines . . . . .	—	—	356.7	375.8	486.1	511.2
steam engines . . . . .	119.1	91.5	255.1	212.8	316.6	314.6
Average daily run of a freight car—km . . . . .	72.0	65.8	139.9	123.5	227.0	247.9
Average turnover of a freight car (days) . . . . .	12.27	14.79	7.37	10.84	5.59	5.32
Average speed of a freight train (all types of traction)—km/h . .	13.6	13.1	20.3	17.1	28.3	33.7

Compared with 1913 the turnover of a freight car has been cut down by 56.5 per cent, while its average daily run has increased by over 200 per cent. The utilisation of the locomotives has been considerably improved.

### NUMBER OF WORKERS SERVICING FREIGHT TRAINS AND THE PRODUCTIVITY OF LABOUR ON GENERAL-PURPOSE RAILWAY TRANSPORT

	1913	1940	1945	1960	1966
Average annual number of workers servicing freight trains <sup>1</sup> —thousands . . .	846	1,394	1,517	2,011	1,977
Labour productivity per worker servicing freight trains—'000 ton/km . . .	126.2	368.0	250.5	832.9	1,130.9

In 1966 the productivity of labour on railway transport was 800 per cent higher than in 1913, while the working day was reduced. As a result of the technical reconstruction of railway transport in recent years, the volume of freight carriage is growing steadily without an increase in the number of workers, the entire increment in freight carriage being due to the rising productivity of labour.

<sup>1</sup> Total number of railway workers is given on p. 224.

### MECHANISATION OF LOADING AND UNLOADING OPERATIONS ON RAILWAY TRANSPORT (percentages)

	1940	1945	1960	1966
Level of mechanisation of loading and unloading operations:				
on the spur tracks of industrial establishments and organisations . . . . .	45	49	87	89
in the freight yards of the railways of the Ministry of Transport . . . . .	12	16	67	81

## SEA TRANSPORT

### BASIC INDICES OF THE DEVELOPMENT OF GENERAL-PURPOSE SEA TRANSPORT

	1913		1920	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
Freight turnover—'000 mill. ton/miles . . . .	11.0	10.7	1.1	12.8	18.5	71.0	239.1	284.5
Goods freighted—mill. tons . . . . .	15.1	13.9	2.9	31.2	20.2	75.9	131.2	143.6
Passenger traffic—thousand million passenger/miles . . . .	0.6	0.6	0.2	0.5	0.3	0.7	0.9	0.9
Number of passengers carried—millions . . . .	3.7	3.4	1.2	9.6	2.2	22.7	32.3	33.1

During the Civil War the interventionists seized a large part of the merchant marine and the remainder was made almost completely unfit for service in the course of military operations. Thus the merchant marine had to be built from scratch.

In 1940, the sea-borne freight turnover totalled 12,800 million ton/miles, or 17 per cent over the 1913 figure.

In the Great Patriotic War of the U.S.S.R. the sea transport was once again heavily damaged, but in the post-war years it was not only rehabilitated but even further developed.

In 1967, the sea-borne freight turnover will be 26 times greater than in 1913, the volume of goods freighted will grow almost 10-fold and the number of passengers will increase 9-fold.

The merchant marine underwent radical changes in the years following the establishment of Soviet rule. In 1913, sailing vessels accounted for 77 per cent of the total number of ships. Today diesel and diesel-electric ships equipped with the latest navigational aids account for more than 90 per cent of self-propelled vessels. Merchant marine has received new modern passenger liners and cargo ships with passenger accommodation.

**NUMBER OF WORKERS SERVICING CARGO VESSELS,  
GROWTH OF LABOUR PRODUCTIVITY AND LEVEL  
OF MECHANISATION OF LOADING AND UNLOADING OPERATIONS  
ON GENERAL-PURPOSE SEA TRANSPORT**

	1928	1940	1945	1960	1966	1967 (esti- mated)
Average annual number of workers—thousands . . . . .	9.3	17.4	19.9	47.9	72.3	78.2
Labour productivity per worker — '000 ton/km . . . . .	1,030	1,414	1,751	2,774	6,146	6,762
Share of loading and unloading operations with the help of com- plex mechanisation (percentages)	—	—	—	68.5	81.7	82.2

In 1913, loading and unloading mechanisms were almost totally absent in Russian ports. Today all Soviet seaports have gantry and cantilevered gantry cranes, electric loaders, special mechanisms for handling cargo in ships' holds, and floating and other trans-shipping facilities. In 1967, complex mechanisation will account for more than 82 per cent of all the cargo handled in Soviet seaports.

# INLAND WATERWAYS TRANSPORT

## BASIC INDICES OF THE DEVELOPMENT OF GENERAL-PURPOSE INLAND WATERWAYS TRANSPORT

	1913		1917	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
Total length of navigable inland waterways in use by all organisations— '000 km. . . . .	64.6	59.4	42.5	107.3	117.2	137.9	141.0	142.2
including lines with signalling installations . . . . .	39.9	36.7	26.0	101.3	107.0	123.8	128.7	129.0
among them with electrified and reflecting signalling installations . . . . .	35.9	33.0	23.5	69.6	66.0	70.6	74.9	75.0
Freight turnover— '000 mill. ton/km . . . . .	28.9	28.5	15.0	36.1	18.8	99.6	137.7	143.4
Total weight of freight transported—mill. tons . . . . .	35.1	32.7	20.0	73.1	36.9	210.3	279.0	286.4
including:								
oil and oil products . . . . .	5.4	5.4	6.3	9.7	5.5	18.5	27.0	28.3
timber and firewood . . . . .	11.0	10.0	6.6	40.2	20.9	89.3	88.0	86.3
coal . . . . .	0.9	0.9	0.4	2.2	1.4	11.0	15.5	15.3
mineral building materials . . . . .	1.5	1.2	0.6	7.6	1.8	70.3	122.8	128.8
grain . . . . .	6.1	6.0	1.7	5.2	2.4	6.8	6.0	6.7
Passenger turnover— thousand million passenger/kilometres	1.4	1.4	1.0	3.8	2.3	4.3	5.2	5.2
Passengers carried— millions . . . . .	11.5	11.2	9.5	73.0	38.5	118.6	146.0	143.7

In 1967, the length of inland waterways routes will be 78,000 km above the 1913 figure. More than 50 per cent of the routes in use today are serviced with electrified or gasified automatic signalling installations.

In the fifty years that have passed since the establishment of Soviet rule about 15,000 kilometres of artificial waterways were built and commissioned including the White Sea-Baltic Canal, the Moscow Canal, the Lenin Volga-Don Canal and the Kara-Kum Canal. With the commissioning in 1964 of the Volga-Baltic waterway, a single system of navigable routes joining the seas in the European part of the U.S.S.R. was completed. The Rybinsk, Tsimlyanskoye, Kakhovka, Kuibyshev, Gorky, Volgograd, Bratsk and other artificial seas were built.

Moscow, the capital of the U.S.S.R., has become a port of five seas—the Baltic, White, Caspian, Black and Azov. Large cargo ships are now ensured through traffic between Moscow, Rostov, Astrakhan, Leningrad and other industrial centres. Some Siberian and Far North rivers are also used for transporting cargo.

The self-propelled fleet of river vessels has been supplemented with more efficient and powerful diesel and diesel-electric ships. There has been a particular increase in the self-propelled fleet of cargo vessels (self-propelled barges). Today diesel and diesel-electric ships account for about 90 per cent of self-propelled river vessels. Large tugs adapted for pushing barges, and icebreakers are being used on the rivers, as well as water-jet launches on small rivers.

The non-self-propelled fleet has been fully renewed: instead of the wooden barges which in 1913 had comprised 98 per cent of the total number of non-self-propelled vessels, more than 98 per cent of the barges today are made of metal.

The passenger fleet has been replenished with modern diesel-electric hydrofoil boats which can travel at 75 km/h, passenger launches and floating holiday homes.

**PRODUCTIVITY OF THE RIVER CARGO  
FLEET AND OIL TANKERS**

	1933	1940	1945	1960	1966
Productivity per ton of freight-carrying capacity for one day of exploitation (ton/km):					
self-propelled cargo ships . . . . .	29.5 <sup>1</sup>	37.7	36.6	100.9	102.3
non-self-propelled oil tankers . . . . .	33.7	36.6	30.1	56.5	71.5
non-self-propelled cargo ships . . . . .	10.0	13.5	13.5	32.4	42.1

In 1966 the productivity of the river fleet increased by approximately 70 per cent as compared with 1913.

<sup>1</sup> 1934.

**NUMBER OF WORKERS, GROWTH OF LABOUR PRODUCTIVITY  
AND THE LEVEL OF MECHANISATION OF LOADING  
AND UNLOADING OPERATIONS ON THE INLAND  
WATERWAYS TRANSPORT**

	1928	1940	1945	1960	1966
Average annual number of cargo transport workers—thousands . . . . .	42.2	83.0	65.3	115.0	107.5
Labour productivity per cargo transport worker—'000 ton/km . . . . .	425	481	324	903	1,328
Share of loading and unloading operations fulfilled with the help of complex mechanisation (percentages) . . . . .	—	—	—	78.1	93.3

Before the revolution all loading and unloading operations in the river ports were done manually. Today 99 per cent of them are performed by machines and 93 per cent with the help of complex mechanisation. There are 5,500 loading and unloading mechanisms in the river ports and on piers, including about 2,000 cranes with a hoisting capacity of up to 100 tons each. Mechanised piers comprise more than 60 per cent of the total length of the river port piers today.

# PIPELINE TRANSPORT

## TRUNK OIL PIPELINES

	1913		1917	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
Total length of trunk oil pipelines (end-of-year figures)—'000 km . . .	1.1	1.1	1.1	4.1	4.4	17.3	29.5	
Freight turnover of trunk oil pipelines—'000 mill. ton/km . . . . .	0.3	0.3	0.005	3.8	2.7	51.2	165.0	180
Amount of oil, and oil products transported by pipeline—mill. tons .	0.4	0.4	0.006	7.9	5.6	129.9	247.7	294.4

By the beginning of 1967 the total length of trunk oil pipelines added up to 30,000 km, which was 27 times the 1913 figure. Today approximately 85 per cent of all the extracted oil is transported by trunk pipelines.

In 1964, the U.S.S.R. completed the construction and commissioned the world's longest Druzhba (Friendship) oil pipeline which supplies oil to several countries of the socialist community.

## GAS PIPELINES

	1950	1960	1966
<b>All Gas Pipelines</b>			
Total length (end-of-year figures)—'000 km . . . . .	2.3	21.0	47.4
<b>Gas Pipelines of the Gas Industry Ministry</b>			
Length (end-of-year figures)—'000 km . . . . .	1.5	16.5	44.1
Supply of marketable gas—'000 mill. cu m . . . . .	1.0	26.0	119.8

Trunk gas pipeline transport was built in the U.S.S.R. in the post-war period.

The rapid growth of the gas industry and the economic efficiency obtained from using gas both as fuel and as an industrial raw material determined the need for large-scale construction of trunk gas pipelines.

In recent years a network of highly efficient trunk gas pipelines ensuring an uninterrupted supply of gas to industrial centres and the population has been built in the Soviet Union. Among the major trunk pipelines built in this period were the Stavropol-Moscow, the Dashava-Minsk-Leningrad with lines branching off to Riga and Vilnius, the Saratov-Moscow, and the Bukhara-Urals pipelines.

## MOTOR TRANSPORT

### BASIC INDICES OF THE DEVELOPMENT OF MOTOR TRANSPORT

	1913		1917	1940	1945	1960	1966	1967 (estimated)
	within the present frontiers of the U.S.S.R.	within the frontiers of the U.S.S.R. prior to September 17, 1939						
Total length of hard-surface roads (end-of-year figures) — '000 km . . . . .	37.3	24.3	25.0	143.4	155.3	270.8	405.6	430.6
Freight turnover of motor transport — '000 mill. ton/km . . . . .	0.1	0.1	0.1	8.9	5.0	98.5	155.1	162.2
of which general-purpose motor transport . . . . .	—	—	—	0.3	0.3	27.2	52.2	53.2
Freight transported — mill. tons . . . . .	10.0	10.0	10.0	858.6	420.0	8,492.7	11,446.1	11,800
of which by general-purpose motor transport . . . . .	—	—	—	15.5	16.0	1,719.1	3,357.2	3,412.7
Passenger turnover — thousand mill. passenger/kilometres . . . . .	—	—	—	3.4	0.5	61.0	137.0	148.3
Number of passengers transported by the buses of the general-purpose motor transport — mill. passengers . . . . .	—	—	—	590	80	11,316	20,489	22,095

In the years of Soviet rule the U.S.S.R. built up its motor transport equipped exclusively with home-made motor vehicles.

The freight turnover of the motor transport in 1967 will amount to 162,000 million ton/km, registering an 18-fold increase over the 1940 figure, or a 32-fold increase over the 1945 level, while the amount of goods carried will rise 14- and 28-fold respectively.

In almost all Soviet towns there are passenger and freight taxis at the service of the population. In 1966, their paid runs totalled 3,800 million km, or over 40 times as much as in 1940.

In 1967 there will be 431,000 km of hard-surface roads, or 12 times the 1913 figure; the total length of motor roads will add up to 1,400,000 km.

Many highways have been built, including Moscow-Kharkov-Simferopol, Kiev-Kharkov-Rostov, Rostov-Mineralniye Vody-Orjonikidze and Moscow-Minsk-Brest.

**DEVELOPMENT OF CITY ELECTRIC-TRACTION  
PASSENGER TRANSPORT**  
(end-of-year figures)

	Before the revo- lution	1928	1940	1945	1960	1966
<b>Tramcars</b>						
Number of cities with tramcars	41	47	81	72	108	111
Length of track in use in terms of single track—km . . . . .	1,690	2,323	4,475	4,013	6,375	7,511
Number of passenger cars . . . . .	4,391	5,363	11,391	9,762	17,115	21,334
Number of passengers carried—mill.	1,128	1,940	7,283	3,020	7,842	8,078
<b>Trolleybuses</b>						
Number of cities with trolleybuses	—	—	8	15	53	81
Length of track in use in terms of single track—km . . . . .	—	—	329	410	3,030	5,596
Number of passenger trolleybuses	—	—	795	683	5,385	11,294
Number of passengers carried—mill.	—	—	294	248	3,054	4,643
<b>Underground</b>						
Length of track in use in terms of double track—km . . . . .	—	—	23	37	95	168
Number of passenger coaches . . . . .	—	—	278	278	1,159	1,865
Number of passengers trans- ported—mill. . . . .	—	—	377	617	1,148	1,822

Before the revolution 41 towns on the present territory of the U.S.S.R. had tramcars. Today 111 towns have tramcars, 81 have trolleybuses, and Moscow, Leningrad, Kiev and Tbilisi have underground railways, which are also being built in Baku and Kharkov.

The buses account for a huge share of the passenger traffic. In 1966, they transported 51 per cent of the passengers in towns, tramcars carried 27 per cent, trolleybuses 16 per cent and the underground railways 6 per cent.

## AIR TRANSPORT

### BASIC INDICES OF THE DEVELOPMENT OF THE AIR TRANSPORT OF THE MINISTRY OF CIVIL AVIATION

	1928	1940	1945	1960	1966	1967 (estimated)
Total length of air routes without overlapping stretches — '000 km . . . . .	9.3	143.9	184.7 <sup>1</sup>	360.1	474.6	
Passenger turnover—thousand million passenger/km . . . .	0.003	0.2	0.5	12.1	45.1	50.0
Number of passengers transported—mill. . . . .	0.007	0.4	0.6	16.0	47.2	53.0
Freight turnover, including post—mill. ton/km . . . . .	0.1	23.2	63.7	562.8	1,445.1	1,700.0
Total weight of cargo and post transported—'000 tons . . . .	0.2	58.4	74.1	696.5	1,335.5	1,450.0

The first regular Moscow-Nizhni Novgorod (now Gorky) airline was inaugurated in 1923. Compared with 1928 the aggregate length of the air routes of the transport aviation in 1966 has increased 51 times and by 230 per cent as compared with 1940. The length of the international air routes serviced by the Soviet transport aviation has considerably grown in the post-war period. In 1966 their aggregate length exceeded the 1940 figure 13 times.

In recent years the Soviet civil aviation has replenished its fleet of aircraft with modern turbo-jet passenger and cargo liners.

In 1967 passenger traffic and that of cargo and post will surpass the 1940 figures 133 and 25 times respectively.

The volume of work performed by the planes of the agricultural and forestry aviation in 1966 amounted to 63 million hectares as against 20.1 million hectares in 1960 and 900,000 hectares in 1940.

<sup>1</sup> 1946.

## COMMUNICATIONS

### BASIC INDICES OF THE DEVELOPMENT OF THE COMMUNICATIONS SERVICES

	1913	1940	1945	1960	1966
Number of post, telegraph and telephone offices (end-of-year figures)—'000 . . .	11	51	50	63	74
including those in rural areas . . .	3	44	43	49	55
Total length of postal routes (end-of-year figures)—mill. km . . . . .	0.3	1.4	1.2	2.2	2.9
of which:					
railway . . . . .	0.1	0.24	0.22	0.5	0.6
motorcar . . . . .	—	0.1	0.04	0.5	0.9
air . . . . .	—	0.2	0.2	0.8	1.2
Distance covered by postal transport (railway, motorcar, water, cartage)—mill. km . . . . .	223	972	688	1,725	2,508
of which:					
railway . . . . .	154	533	337	1,172	1,694
motorcar . . . . .	—	60	16	355	685
Post carried by air transport—'000 tons	—	12.1	5.3	146.8	278.4
Number of items posted—mill.:					
letters . . . . .	981	2,580	2,927	4,171	5,659
newspapers and magazines . . . . .	443	6,698	2,819	14,403	25,497
parcels . . . . .	20	45	8	91	138
telegrams . . . . .	42	141	167	241	300
money orders and pension payments	35	99	166	326	544
Number of long-distance calls—mill. . .	7	92	67	185	283
Number of telephones installed by Ministry of Communications (end-of-year figures)—mill. . . . .	0.3	1.2	0.9	2.7	5.1 <sup>1</sup>
of which in:					
towns and urban-type settlements	0.3	1.0	0.8	2.3	4.3
rural localities . . . . .	—	0.2	0.1	0.4	0.8
Number of automatic telephones—mill.	—	0.4	0.3	1.5	3.9
of which in:					
towns and urban-type settlements	—	0.4	0.3	1.4	3.5
rural localities . . . . .	—	—	—	0.06	0.4

As compared with 1913 the number of communications offices by the beginning of 1967 had increased 7-fold. In the rural areas at the beginning of 1967 there were

<sup>1</sup> By the beginning of 1967 there was a total of about 7.9 million telephones in all departments.

55,000 post, telegraph and telephone offices, or 74 per cent of the total number. Moreover, there were 617 travelling post and telegraph offices in the countryside.

In tsarist Russia post was delivered to the homes of the addressees in only 3 per cent of her towns and villages. Today it is delivered directly to the homes of the addressees in all towns and villages.

Compared with 1913 the total postal exchange increased 22-fold, including a 58-fold increase in the number of newspapers and magazines delivered through the post; the number of telegrams dispatched rose seven times and that of long-distance calls 40 times.

In pre-revolutionary Russia only a few large towns had long-distance telephone services. Today in the U.S.S.R. long-distance calls can be made to and from all towns, urban-type settlements and district centres. The U.S.S.R. has telephone communications with all countries.

The recent development of multi-channel cables and radio-relay lines and the installation of modern equipment make it possible to increase the number and the length of telephone, telegraph, radio and television channels; the development of automatic and semi-automatic intercity telephone communications is proceeding apace.

The rural telephone service developed only after the establishment of Soviet rule. By the beginning of 1967, telephones were installed in 98.3 per cent of the village Soviets, 99.4 per cent of the state farms and 99.4 per cent of the collective farms. In recent years many state and collective farms were outfitted with inter-communication systems.

In 1967 postal revenue will amount to 2,420 million rubles, or four times as much as in 1940.

#### DEVELOPMENT OF RADIO AND TELEVISION (end-of-year figures)

	1913	1940	1945	1960	1966
Number of TV centres and TV relay stations . . . . .	—	2	—	275	748
of which:					
TV centres . . . . .	—	2	—	82	121
large TV relay stations . . . . .	—	—	—	18	79
Number of radio and TV receivers and rediffusion loudspeakers—mill. . . . .	—	7.0	6.1	63.4	95.8
of which:					
radio receivers . . . . .	—	1.1	0.5	27.8	39.8
of which:					
in rural localities . . . . .	—	0.3	0.1	10.1	13.4
TV sets . . . . .	—	400 units	—	4.8	19.0
of which:					
in rural localities . . . . .	—	—	—	0.4	3.3
rediffusion loudspeakers . . . . .	—	5.9	5.6	30.8	37.0
of which:					
in rural localities . . . . .	—	1.3	1.0	16.1	17.3

The telephone-telegraph radio communication system, and broadcasting and television have been extensively developed.

In 1965, the first cosmic link was established between Moscow and the Far East via the Molnia-1 satellite ensuring telephone and telegraph communications and the relay of TV and radio programmes.

*"The courageous builders of the new factories and collective and state farms during the period of the first five-year plans, all those who built socialism and fortified the might of the world's first socialist state will never be forgotten."*

From the Theses of the Central Committee of the C.P.S.U. "Fiftieth Anniversary of the Great October Socialist Revolution."

## **THE U. S. S. R.—A COUNTRY OF GIANT CONSTRUCTION**

**COMMISSIONED FIXED ASSETS**  
(in comparable prices<sup>1</sup>; '000 million rubles)

	Total fixed assets commissioned by state and co- operative enter- prises and organ- isations, collec- tive farms and the population	including state and co-operative enterprises and organisa- tions
<b>Total for 1918-67</b> . . . . .	<b>598.4</b>	<b>504.7</b>
1918-28 (exclusive of fourth quarter of 1928)	3.6	1.2
First Five-Year Plan (1929-32, including fourth quarter of 1928) . . . . .	7.8	7.1
Second Five-Year Plan (1933-37) . . . . .	14.5	13.0
Three and a half years of Third Five-Year Plan (1938-first half of 1941) . . . . .	15.6	13.2
Four and a half years (from July 1, 1941 to January 1, 1946) . . . . .	16.1	13.1
Fourth Five-Year Plan (1946-50) . . . . .	36.6	29.7
Fifth Five-Year Plan (1951-55) . . . . .	69.4	57.7
Three years of Sixth Five-Year Plan (1956-58)	71.8	58.8
Seven-Year Plan (1959-65) . . . . .	262.3	224.1
5 last years (1961-65) . . . . .	198.6	172.4
of which:		
1961 . . . . .	33.2	28.1
1962 . . . . .	37.1	31.9
1963 . . . . .	40.5	35.4
1964 . . . . .	43.1	37.8
1965 . . . . .	44.7	39.2
1966 . . . . .	47.8	41.7
1967 (estimated) . . . . .	52.9	45.1

<sup>1</sup> In this and in all other tables on capital construction the comparable prices represent current estimated prices as of July 1, 1955, taking into account the new unit rates introduced as per 1956, the reduction of overhead quotas as per 1958, the reduction on the prices for the installation of equipment as per 1959 and the reduction on design and surveying work and of unit rates for some types of building and installation work as per 1962.

## NUMBER OF LARGE INDUSTRIAL STATE ENTERPRISES BUILT, REHABILITATED AND COMMISSIONED

	Number of enterprises
<b>Total for 1918-66</b> . . . . .	<b>40,160</b>
1918-28 . . . . .	2,200
First Five-Year Plan . . . . .	1,500
Second Five-Year Plan . . . . .	4,500
Three and a half years of Third Five-Year Plan . . . . .	3,000
Between July 1, 1941 and January 1, 1946 . . . . .	11,000
of which:	
newly built . . . . .	3,500
rehabilitated . . . . .	7,500
Fourth Five-Year Plan . . . . .	6,200
Fifth Five-Year Plan . . . . .	3,200
Three Years of Sixth Five-Year Plan . . . . .	2,690
Seven-Year Plan . . . . .	5,470
of which five last years . . . . .	3,290
1966 . . . . .	400

During the half century of Soviet power more than 40,000 large industrial enterprises have been built, restored and brought into operation. This figure includes a number of large enterprises which were restored or built anew on the basis of tsarist Russia's small and technologically backward factories and workshops.

Already at the end of 1919 the Soviet Government adopted a decision to launch the construction of power stations. In December 1920 the Eighth All-Russia Congress of Soviets approved the State Plan for the Electrification of Russia (GOELRO), worked out on the initiative and under direct guidance of Lenin.

In accordance with Lenin's plan, the Kashira District Power Station and the Krasny Oktyabr Power Station in Leningrad were built and began to generate power already during the rehabilitation period (1918-28). The Kizel District Power Station in the Urals was commissioned in 1924, the Lenin Power Station in Shatura and the Gorky District Power Station in 1925. The capacities of power stations increased rapidly. The Lenin Hydroelectric Power Station on the Volkhov, and the Shterovka District Thermal Power Station in the Donbas were put into operation in 1926, the Zemo-Avchala Hydroelectric Power Station in Georgia in 1927.

Many new and restored factories began to operate at that time. Among the large enterprises built during the rehabilitation period were the Moscow Prozhektor Factory, the Leningrad Elektropribor Factory, the Yaroslavl Electric Motor Works, the Chernorechensk Chemical Plant, the Balakhna Pulp and Paper Mills, the Konstantinov Glass Factory and many others.

Construction assumed an enormous scale during the five-year plan periods.

A thousand five hundred new large industrial state enterprises were commissioned during the **First Five-Year Plan period (1929-32)**.

Power stations were supplied with capacities for 2.8 million kW, which exceeded the capacities of all power stations in Russia in 1913. The power stations commissioned during that period included the Lenin hydroelectric power station on the Dnieper, the Zuyevka, Chelyabinsk, Volgograd and Byelorussian district thermal power stations.

The country's second coal and steel base, the Ural-Kuznetsk complex, was created in the country's East.

A total of 179 mines with an aggregate capacity of 57 million tons of coal a year were opened up.

Industrial giants such as the Kuznetsk and the Magnitogorsk Iron and Steel Works, the Kerch Iron and Steel Works, the Chelyabinsk Ferroalloy Factory and the Volkhov Aluminium Mills were put into operation.

The data below characterise the capacities in the iron and steel industry commissioned during that period (1929-32):

	mill. tons a year
Capacities for the extraction of iron ore . . . . .	10
Capacities for the production of:	
pig-iron . . . . .	4.5
steel . . . . .	2.8
ferrous rolled stock (finished) . . . . .	1.7
coke . . . . .	6.1

Many chemical plants were made operative, including the Berezniki Nitrogenous Fertiliser Factory, the Konstantinov Chemical Plant, the Voskresensk Chemical Works, the Apatit Mining and Chemical Complex, and the Klin Artificial Fibre Factory. Production of synthetic rubber was begun for the first time in the Soviet Union at the Yaroslavl and Voronezh plants. Among the engineering works put into operation during that period were the Volgograd and Kharkov tractor works, the Rostov, Gomel and Tashkent agricultural machinery works, the Moscow and the Gorky motor works, and the First State Bearing Factory in Moscow.

During the First Five-Year Plan period capacities were installed to produce 2.2 million tons of cement a year. Pulp and paper mills were commissioned at Kondopoga and Vishera.

Among the light industry enterprises commissioned during that period were the Ivanovo Melange Yarn Factory, the Kirovabad, Ferghana and Ashkhabad spinning and weaving mills, the worsted mills in Tbilisi, the Frunze Tannery, and the shoe factory in Minsk. During the First Five-Year Plan period a million new spindles were installed at textile mills, and capacities for an additional output of 25 million pairs of shoes were set up.

The large number of food industry enterprises built in that period included five new sugar refineries, meat-packing factories at Poltava, Omsk, Petropavlovsk, Kiev, Vinnitsa and other towns, and a fish cannery at Astrakhan.

The Turkestan-Siberian railway was brought into operation.

Four thousand five hundred large state industrial enterprises were commissioned during the **Second Five-Year Plan period (1933-37)**. These included the Dubrova, Novo-Moskovsk, Kemerovo, Central-Urals district thermal power stations, the Lower Svir, Rioni and Kanaker hydroelectric power stations. Power stations were supplied with additional capacities for 3.6 million kW.

Capacities for the extraction of 78.4 million tons of coal a year were made operative in the coal industry.

Many factories were built and brought into operation in the metallurgical industry, such as the Krivoi Rog and Novo-Lipetsk iron and steel works, the Azovstal and Zaporozhstal iron and steel works, the Dnieper aluminium and Chelyabinsk zinc mills and the Chimkent lead factory. The addition to capacity in the iron and steel industry during the Second Five-Year Plan period provided for the supplementary extraction of 12.2 million tons of iron ore, and production of 7.3 million tons of pig-iron, 7.6 million tons of steel, and 7.9 million tons of finished rolled metal a year.

The Novo-Moskovsk Chemical Works, the Yefremov Synthetic Rubber Plant, the Solikamsk Potash Factory and the Aktyubinsk Chemical Works were put into operation during that period. Production was also begun at the newly built Khabarovsk and Ishimbai oil refineries. This period also marked the building and launching of the Urals and Kramatorsk heavy engineering works, the machine-tool factories

in Moscow, Gorky, Tbilisi, the Urals Coach-Building and the Chelyabinsk Tractor Works; the Solombala and Kama pulp and paper mills, the Lisichansk and Gomel glass factories, the Gigant Cement Factory. Light industry too expanded as the first section of the Barnaul Melange Yarn Factory and the Tashkent Textile Mills, the shoe factories in Tashkent and Tbilisi, and the Dushanbe Tannery came into operation.

Additional capacities installed at shoe factories raised their output by 44 million pairs of leather shoes a year.

Additional capacities for the processing of 11,800 tons of sugar-beet a day were installed at sugar refineries. Large meat-packing factories were commissioned in Moscow, Leningrad, Semipalatinsk and Baku.

Railway lines extending for over 1,500 kilometres were transferred to electric traction.

The Moscow and White Sea-Baltic canals were built and opened for navigation. In 1935 the first section of the Moscow Metro (Underground) was completed and put into operation.

**In three and a half years of the Third Five-Year Plan period** (from 1938 to the first half of 1941) 3,000 large state enterprises came into operation.

Capacities for the generation of 2.8 million kW were installed in the country's power stations. District thermal power stations were commissioned at Kurakhovka, Kuvasai and Tkvarcheli and hydroelectric power stations at Uglich and Komsomolsk.

Capacities for the extraction of 54 million tons of coal a year became operative during that period in the coal-mining industry.

Metallurgy made rapid headway as the Novy Tagil and Petrovsk-Zabaikalsky iron and steel works, the Central-Urals and Balkhash copper smelting mills, the first section of the Urals Aluminium Mill and the Tikhvin Alumina Mill became operative. Capacities introduced during that period raised the production of iron ore by 7.2 million tons, of pig-iron by 2.8 million tons, of steel by 3.5 million tons, of finished rolled metal by 2.2 million tons.

The Ufa Oil Refinery, the Chirchik Electrochemical Works, the Karacharovo Plastics Factory, the chemical plant-building works in the Urals, the Moskvich Motor Works, the Yenakievo Cement Factory, the Krichev Cement and Slate Factory and the Ashkhabad Glass Works, the Segezha and Mari pulp and paper mills all became operative during that period.

An additional 1.2 million spindles were installed at textile mills. The Leninakan Textile Factory was commissioned. Capacities for 20 million pairs of leather footwear a year were installed at shoe factories.

Capacities for the processing of 8,600 tons of sugar-beet a day became operative at sugar refineries. The second section of the Moscow Metro was opened to traffic. Capital construction did not stop during the Great Patriotic War.

**During the war years** (between July 1, 1941 and January 1, 1946) 3,500 large state industrial enterprises were built and 7,500 devastated large state factories restored.

The first Economic Mobilisation Plan for the third quarter of 1941 was adopted a week after the outbreak of the Patriotic War, and on August 16, 1941, the Soviet Government adopted the War Economic Plan for the fourth quarter of 1941 and for 1942.

The War Economic Plan greatly helped in organising the evacuation of the productive forces to the country's East, in rehabilitating and developing the production of the Eastern regions of the U.S.S.R. Within a short time 1,360 factories were evacuated to the East and resumed operation there. Alongside the rehabilitation of the evacuated enterprises, large-scale construction was launched in the Eastern regions, especially of iron and steel works, power stations, coal mines and war industry enterprises.

The following enterprises were built during the war: the Chelyabinsk Iron and Steel Works and the Chelyabinsk Pipe-Rolling Plant, the Amurstal iron and steel works, the Uzbek and Kazakh iron and steel works, the Aktyubinsk Ferroalloy Factory, the Bogoslovsk Aluminium Mill, the Norilsk Ore Mining and Metallurgical Complex, the Kuibyshev Oil Refinery, the Syzran Heavy Engineering Works, the

South-Urals Engineering Works, the Uzbekkhimmash Chemical Engineering Works, the Orsk Building-Machinery Works, the Urals and Ulyanovsk motor works, the Altai and Vladimir tractor works, the Krasnoyarsk, Kuznetsk and Dushanbe cement plants, the Dushanbe Textile Mills. The building of the Moscow Metro also continued during the war; the third section became operative in 1943.

Gigantic work was carried out during the war to rehabilitate and make operative the coal mines of the Moscow and Donets basins, the power stations and heavy industry enterprises in the liberated areas.

Between 1943 and 1945 capacities for the production of 1.7 million kW of power a year, mines for about 70 million tons of coal a year, 18 blast furnaces with a total capacity of 3.6 million tons of pig-iron a year, 102 steel smelting installations for 4.1 million tons of steel a year, 47 rolling mills with a capacity of 2.7 million tons of finished rolled metal a year; 172,000 spindles at textile mills, capacities for the processing of 90,900 tons of sugar-beet a day were all made operative in the regions of the U.S.S.R. liberated from German occupation.

Capital construction assumed a large scale in the **Fourth (first post-war) Five-Year Plan period (1946-50)**.

The number of large state industrial enterprises restored and built anew during that period reached a total of 6,200. Among them were the Nizhnaya Tura and Shchekino thermal district power stations, the Farkhad and Khrami Hydroelectric Power Stations, the Niva III Hydroelectric Power Station, the Transcaucasian Iron and Steel Works, the Ust-Kamenogorsk Lead and Zink Plant and the Kanaker Aluminium Mill.

New chemical industry enterprises were built; among them are the Djambul and Kokand superphosphate factories and the Tashkent Varnish and Paint Factory. The engineering enterprises put into operation during that period included the Kaluga Turbine Works, the Kolomna Heavy Machine-Tool Works, the Ryazan Machine-Tool Works and the Kutaisi Motor Works, the Baku Power-Machine Works, the Krasnoyarsk and Ferghana hydrolysis factories, the Baku Asbesto-Cement and Ceramic Articles Factory, the Krasnokamsk and Angren meat-packing plants.

The large Saratov-Moscow, Kohtla-Järve-Leningrad, Dashava-Kiev gas pipelines were laid at that time and put into operation.

The fourth section of the Moscow Metro became operative.

Herculean efforts were devoted during that period to restore the factories ruined during the war. The Dnieper Hydroelectric Power Station was restored in the Ukraine, the iron and steel works in the southern regions, including the Zaporozhye, Donets and Makeyevka works and a large number of coal mines and other enterprises were restored or built anew.

**During the Fifth Five-Year Plan period (1951-55)** 3,200 large state industrial enterprises were built and made operative. Among them were the Pridneprovskaya, Cherepet, South-Kuzbas, Serov and South-Urals district thermal power plants.

The first atomic power station in the world was commissioned in 1954. In 1955 the Lenin Hydroelectric Power Station in Kuibyshev on the Volga, the Kama, Gorky, Tsimlyanskaya, Kakhovka, Ust-Kamenogorsk, Mingechaur and Gyumush hydroelectric power stations began to generate power; a large number of giant industrial projects were commissioned, such as the Orsk-Khalilovo Iron and Steel Works and the Cherepovets Iron and Steel Works, the Azerbaijan Pipe-Rolling Works, the Sumgait, Kandalaksha and Nadvoitsy aluminium mills, the Berezniki Potash Factory, the Sterlitamak Soda Plant, the Krasnoyarsk Chemical Fibre Plant, the Novokuibyshevsk Oil Refinery, the Novo-Ufimskaya and Omsk oil refineries, the Dniepropetrovsk Press Works, the Second Barnaul, Kherson, Cheboksary and Kamyslin cotton mills, the Krasnodar Worsted Factory, the Baku Worsted Factory and a new creamery in Moscow.

The Lenin Volga-Don Shipping Canal was completed and put into service. The Leningrad Metro was put into operation.

As many as 2,690 large state industrial enterprises were commissioned during **three years of the Sixth Five-Year Plan period (1956-58)**. The Lenin Hydroelectric Power Station on the Volga was completed and the high-tension transmission line from the station to Moscow began to function. The huge power station on the Volga

named in honour of the 22nd Congress of the C.P.S.U. began to generate commercial power in 1958. The Irkutsk, Novosibirsk, Kairakkum, Tkibuli and Arzni hydroelectric power stations were commissioned during that period. Thermal power plants for large power grids were generally built in regions where fuel was excavated and were equipped with 100,000-150,000 kW power generators.

District thermal power plants were commissioned in Tom-Usinskoye, Verkhni Tagil, Staro-Beshevo and Angren.

Commissioned were also the first mine of the Sokolovsk-Sarbai Ore-Dressing Plant, the Serov Ferroalloy Factory, the Chirchik Refractory Alloy Mill, Novogorky, Volgograd and Perm oil refineries, the Saratov Chemical Works, the Novokuibyshevsk and Ufa synthetic spirits distilleries, the Bryansk works for manufacturing irrigation equipment, the Chimkent, Semipalatinsk, Yemanzhelinsk, Alekseyevka and Angarsk cement plants, the Kuibyshev Building Materials Plant, the Sterlitamak Slate Factory, the Alma-Ata and Orel shoe factories, the Belgorod and Volgograd meat-packing plants and many other enterprises. In 1956 the Stavropol-Moscow gas pipeline was put into service.

**During the Seven-Year Plan period (1959-65)** 5,470 large state industrial enterprises were commissioned. Power-generating capacities were set up for 60.8 million kW, which more than doubled the installed capacity of the country's power stations. Capacities of district thermal power plants were increased by the installation of power-generating units for 150,000, 200,000 and 300,000 kW each. A number of new big thermal power plants were built, such as the Belovo and Nazarovo plants in Siberia, the Troitsk and Yaiva in the Urals, the Zai plant in the Tatar Republic, the Konakovo power plant in Kalinin Region, the Novocherkassk plant in Rostov Region, the Zmiyev, Krivoi Rog No. 2 and Burshtyn power plants in the Ukraine, the Beryozovka plant in Byelorussia, the Tashkent and Navoi plants in Uzbekistan, the Tbilisi power plant in Georgia, the Ali-Bairamly Power Station in Azerbaijan, the Pribaltiiskaya Power Plant in Estonia, and also district thermal power plants in Lithuania and Moldavia. The Novo-Voronezh and Beloyarskoye atomic power stations were commissioned.

The Bratsk Hydroelectric Power Station, one of the largest in the world, was built and brought up to rated capacity, giving Siberia's industry a mighty power source. Commissioned were also the Votkinsk, Dneprodzerzhinsk, Kremenchug, Kiev and Bukhtarminsky hydroelectric power stations.

High-tension transmission lines were rapidly built to ensure the further link-up of power grids; among them are the transmission line linking the Volga Hydroelectric Power Station with Moscow, the Bratsk-Irkutsk transmission line and the Trans-Siberian transmission line connecting the Irkutsk power grid with the Krasnoyarsk and West-Siberian power grids. The Volgograd-Donbas 800,000 V D.C. commercial power transmission line was completed.

Among the large enterprises to be commissioned during that period were the West-Siberian and Karaganda iron and steel works, the Almaznaya Ferroalloy Factory, the Korshunovka Ore-Dressing Plant in Eastern Siberia, the Kachkanar Ore-Dressing Plant in the Urals, the Central, Northern, Novo-Krivoi Rog and the Ingulets ore-dressing works in the Krivoi Rog basin, the Irkutsk and Krasnoyarsk aluminium mills, the Agarak Copper-Molybdenum Plant, the Ust-Kamenogorsk Titanium-Magnesium Plant, the Zhdanov Ore-Dressing Plant; the Polotsk, Ryazan, Novo-Yaroslavl and Angarsk oil refineries; the Sterlitamak, Kuibyshev, Omsk and Volzhsk synthetic rubber factories, the Barnaul Tyre Factory, the Krasnoyarsk, Baku and Dniepropetrovsk tyre factories.

The building of chemical industry enterprises assumed a sweeping scale during the seven-year period: huge chemical works were built in Nevinnomyssk, Cheboksary, Shchekino, Cherkassy, Navoi, and Kedainy, two potash plants in Soligorsk, superphosphate factories in Sumgait, Chardzhou and Gomel, nitrogen fertiliser factories in Dorogobuzh, Ferghana, Grodno and Ionava, chemical fibre factories in Balakovo, Ryazan, Kursk, Engels, Cherkassy, Chernigov, Svetlogorsk, Rustavi and Davgavpils.

The seven-year plan period also saw the commissioning of the paper-making equipment works in Petrozavodsk, the Minsk Motor Works, the oil equipment factory in Ashkhabad, the Ulyanovsk, Lipetsk, Ust-Kamenogorsk, Akhan-Garan and

Kant cement plants, the asbestos plant in Dzhetysay, the Krasnoyarsk and Kotlas cellulose and paper mills.

The following light industry enterprises were commissioned: the first section of the Baranovich Cotton Mills, the Alma-Ata Cotton Mills, the Chernigov and Frunze worsted factories, the silk staple fibre factory in Chaikovsky; the tanning and shoe-making factory in Djambul, the hosiery factory in Chervonograd and other enterprises.

A large number of food industry enterprises were built, including 60 sugar refineries, new meat-packing plants in Yaroslavl, Chelyabinsk, Armavir, Magnitogorsk, Stavropol, Donetsk, Cherkassy, Rovno, Chimkent, Pavlodar, Balkhash, Kalinkovich and other towns; large creameries in Moscow, Sverdlovsk, Krasnodar, Donetsk, Odessa, Lvov, Minsk and Dushanbe; the dairy produce canning factory in Alexeyevka, Belgorod region; many butter-churning and cheese-making factories, canning plants and mechanised bakeries.

A large number of new gas pipelines of a total length of over 30,000 km were built; among them is the large Bukhara-Urals gas pipeline, conveying Central Asian gas to the Urals.

The Moscow-Irkutsk railway line, extending for over 5,000 km, was electrified. The Kiev Metro was put into service.

In 1966, the first year of the new Five-Year Plan, 400 large industrial enterprises were commissioned and also a lot of new shops and plants at modernised and expanded enterprises.

Among the large heavy industry enterprises to be commissioned in 1966 were the Kirishi and Kremenchug oil refineries, the Bratsk aluminium and the Leninogorsk zinc mills, the Uvarovo Chemical Works, the Novo-Stebnik Potash Factory, the phosphorous salt factory in Chimkent, the synthetic spirits distillery in Guryev, the Volzhsk Chemical Fibre Factory, the Topki and Savino cement plants, and the Baikal Cellulose Factory.

The following light industry enterprises were put into operation: the Chernogorsk Worsted Factory, the Karpinsk Cotton Spinning Mills, the shoe factory of the Ussuri Tannery, the hosiery and knitwear mills in Birobikan, Cheremkhovo, Cherepovets, Ishimbai, Karaganda, Semipalatinsk, Djezkazgan, Ura-Tyube and other towns. Among the food industry enterprises commissioned in that year were the sugar refineries in Yareski, Zai, Kirnasovka, the second refinery in Olymskoye, the fats and oil plant in Irkutsk, the vegetable oil extraction factory in Ali Bairamly, new meat-packing plants, a large number of dairies, butter-churning, cheese-making, canning plants and mechanised bakeries.

In 1967, too, many large industrial enterprises and projects were commissioned, new capacities for over 10 million kW were installed at power stations, including 8 million kW at thermal power plants. The bulk of the newly installed power-generating units are designed for 200,000-300,000 kW each. The first units for 500,000 kW were installed at the Krasnoyarsk Hydroelectric Power Station, the largest in the world. Additional equipment was installed to raise the primary processing of oil by 14 million tons a year. The first section of the gas pipeline taking Central Asian gas to the European part of the country was put into service. New blast furnaces were built at the Novo-Lipetsk and West-Siberian Iron and Steel works; there were put into operation huge blast furnaces at the Krivoi Rog Iron and Steel Works and a powerful sheet steel rolling mill at the Karaganda Iron and Steel Works. The chemical industry also made headway: the nitrogen fertiliser factory was commissioned in Vakhsh; shops for production of polyethylene were completed at the Ufa Synthetic Spirits Distillery, at the Kazan Organic Synthesis Plant, and at the Sumgait and Polotsk chemical works.

Productive capacities were considerably extended in the food and light industries in 1967. The building of three cotton and one worsted mills was completed, as was also that of six hosiery and knitwear factories. Ten new shoe factories are to be commissioned; capacities for making an additional 18 million pairs of leather footwear a year are to be put into operation. Seven sugar refineries, a number of canneries, a fats and oil plant and other enterprises were built.

**PRODUCTIVE CAPACITIES COMMISSIONED BY BUILDING, EXPANDING  
AND MODERNISING EXISTING ENTERPRISES BETWEEN 1946 AND 1967**

	Fourth Five-Year Plan	Fifth Five-Year Plan	Three years of Sixth Five-Year Plan	Seven-Year Plan	including five last years	1966	1967 (estimated)
Power stations—total—mill. kW	8.4	17.6	16.4	60.8	48.2	10	—
including turbine power stations	6.9	14.5	13.6	54.6	44.0	9.5	9.7
Coal-mining capacities—mill. tons a year . . . . .	107.3	116.1	88.0	119.8	80.0	20.6	21.7
Coal-enriching capacities—mill. tons a year . . . . .	37.2	46.6	31.1	70.9	56.2	25.7	12.3
Capacities for production of pig-iron—mill. tons a year . . .	8.9	10.3	8.7	18.8	12.6	1.3	4.1
steel—mill. tons a year . . . .	8.9	8.9	5.7	23.0	15.6	5.1	2.6
rolled ferrous metals (finished)—mill. tons a year . . . . .	5.6	6.4	2.5	17.2	9.1	4.8	2.7
steel pipes—'000 tons a year . .	...	828	426	3,477	2,432	595	313
coke—mill. tons a year . . . .	11.8	13.9	7.7	15.6	10.2	2.8	1.4
Capacities for the extraction of iron ore—mill. tons a year . .	22.7	41.2	28.6	172.2	129.9	21.8	31.2
Capacities for production of mineral fertilisers (conventional units)—mill. tons a year . . . .	...	...	3.0	24.4	23.3	3.4	4.1
sulphuric acid—'000 tons a year	802	949	508	4,586	4,124	914	1,070.5
soda ash—'000 tons a year . .	380	611	117	1,013	758	180	120
chemical fibre—'000 tons a year	28.8	70.3	29.9	312.6	220.9	47.2	33.3
automobile tyres—'000 a year	4,659	2,373	2,372	12,807	9,974	1,302	2,680
steam and gas turbines—'000 kW a year . . . . .	2,419	1,702	1,347	6,465	2,702	660	830
power transformers—mill. kVa a year . . . . .	...	8.9	3.0	64.5	56.1	10.4	8.7
excavators—pcs a year . . . .	1,366	1,315	250	7,001	4,648	818	1,704
metal-cutting lathes—'000 a year . . . . .	...	12.0	7.5	42.9	35.0	5.0	7.8
lorries—'000 a year . . . . .	155	67.7	2.0	119.4	103.6	40.2	45.8
passenger cars—'000 a year . .	58.6	24	22.5	60.5	53	26.5	56.5
roller bearings—mill. a year . .	68.7	76.4	24.3	230.2	161.9	36.1	60.6
tractors—'000 a year . . . . .	95.1	57.2	12.6	146.8	135.1	29.5	46.6
combine harvesters—'000 a year	53.6	18	22.3	34.5	23.5	5	7
cement—mill. tons a year . . . .	6.3	8.3	10.3	37.4	28.2	3.9	3.9
slate—mill. conventional slates a year . . . . .	425	696	394	2,442	1,835	136	317
window glass—mill. sq m a year . . . . .	24.1	7.5	—	58.7	44.2	12.8	8
sawn timber—mill. cu m a year	3.4	5.0	2.9	9.1	6.1	0.3	1.6

Continued

	Fourth Five-Year Plan	Fifth Five-Year Plan	Three years of Sixth Five-Year Plan	Seven-Year Plan	including five last years	1966	1967 (estimated)
paper—'000 tons a year . . . . .	580	312	56	1,468	1,291	51.9	167.7
cellulose—'000 tons a year . . . . .	776	244	—	1,375	1,329	553	940
Spindles installed—'000 . . . . .	2,200	1,886	374	3,947	3,193	563	1,030
Looms—'000 . . . . .	23.8	45.2	16.3	71.6	52.4	12.6	9.5
Capacities for production of							
leather footwear—mill. pairs a year . . . . .	76	58	20	95	55	14	18
granulated sugar—'000 tons of beet processed per day . . . . .	84.4	52.8	30.9	232.6	118	24.8	22.2
vegetable oil—tons of oil seeds processed per day . . . . .	3,183	3,459	1,036	5,179	3,676	1,418	1,400
meat—tons per shift . . . . .	680	1,075	753	7,494	4,813	839	570
butter and cheese—'000 tons of milk processed per shift . . . . .	9.1	5.7	2.1	18.5	13.0	2.0	2.5
whole milk products—'000 tons of milk per shift . . . . .	0.5	1.1	1.8	16.8	12.3	1.6	2.2
canned meat—'000 conventional cans per shift . . . . .	209.5	192.8	75	245.5	174.5	45	25
canned milk—'000 conventional cans per shift . . . . .	87.6	183.2	180	164.5	97.5	—	2.5
canned vegetables and fruits—mill. conventional cans per year . . . . .	...	264	192	1,659	1,357	304	366
Constructed:							
gas pipelines, mains and branches—'000 km . . . . .	1.8	2.1	7.0	30.3	21.9	5.3	4.8
oil and oil product pipelines, mains—'000 km . . . . .	1.3	5.3	4.0	14.6	11.8	1.4	3.4
general-purpose railways—'000 km . . . . .	2.3	3.1	1.6	7.7	5.1	1.2	0.8
Electrified railways—'000 km . . . . .	1.0	2.3	4.1	15.2	10.8	2.1	1.8
Railways with automatic block systems and centralised routing—'000 km . . . . .	5.5	5.7	4.0	13.7	10.4	2.3	1.7
Grain elevators—mill. tons . . . . .	0.6	2.3	1.8	4.6	3.5	0.9	1.8
Grain stores—mill. tons . . . . .	19.3	32.7	15.3	32.0	26.2	4.2	2.9

Along with the building of new enterprises and the expansion and modernisation of existing ones, the productive capacities of factories were expanded through mechanisation, intensification of production, improvement of technology, modernisation of equipment and other organisational and technological measures. Thus, for example, between 1961 and 1966 the capacities for production of pig-iron at the existing enterprises were increased through these measures by 6 million tons a year, of steel by almost 9 million tons, of finished rolled ferrous metals by almost 4 million tons.

## CAPITAL INVESTMENTS

(in comparable prices; '000 million rubles)

	Total	including		
		by state and co-operative enterprises and organisations	by collective farms	by the population on the building of private houses and flats
<b>Total for 1918-1967</b> . . . . .	<b>647.8</b>	<b>550.1</b>	<b>56.6</b>	<b>41.1</b>
1918-1928 (exclusive of fourth quarter of 1928) . . . . .	4.1	1.7	0.03	2.4
First Five-Year Plan . . . . .	7.3	6.6	0.3	0.4
Second Five-Year Plan . . . . .	16.6	15.0	1.0	0.6
Three and a half years of Third Five-Year Plan . . . . .	17.3	14.8	1.3	1.2
From July 1, 1941 to January 1, 1946 . . . . .	17.5	14.3	1.5	1.7
Fourth Five-Year Plan . . . . .	41.2	34.1	3.2	3.9
Fifth Five-Year Plan . . . . .	77.7	65.7	6.7	5.3
Three years of Sixth Five-Year Plan . . . . .	77.1	63.6	7.3	6.2
Seven-Year Plan . . . . .	281.0	240.8	24.8	15.4
including five last years:	211.8	184.1	18.1	9.6
1961 . . . . .	37.5	31.9	3.2	2.4
1962 . . . . .	39.3	34.0	3.3	2.0
1963 . . . . .	41.3	36.1	3.4	1.8
1964 . . . . .	45.0	39.4	3.9	1.7
1965 . . . . .	48.7	42.7	4.3	1.7
1966 . . . . .	52.2	45.6	4.9	1.7
1967 (estimated) . . . . .	55.8	47.9	5.6	2.3

Capital construction in the U.S.S.R. is enormous and steadily expanding. The total volume of capital investments during the years of Soviet power amounts to about 650,000 million rubles.

Capital investments during the past five-year period (1961-65) grew 29 times as compared with the First Five-Year Plan, 13 times as compared with the Second Five-Year Plan period, 5 times as compared with the Fourth Five-Year Plan and 2.7 times as compared with the Fifth Five-Year Plan.

**STRUCTURE OF CAPITAL INVESTMENTS**  
(in comparable prices)

	Total	including		
		building and installation	equipment, tools and implements	Other capital expenditure
<b>'000 million rubles</b>				
<b>Total for 1918-1967</b> . . . . .	<b>647.8</b>	<b>421.5</b>	<b>182.8</b>	<b>43.5</b>
1918-1928 (exclusive of fourth quarter of 1928) . . . . .	4.1	3.7	0.3	0.1
First Five-Year Plan . . . . .	7.3	6.2	0.8	0.3
Second Five-Year Plan . . . . .	16.6	13.3	2.3	1.0
Three and a half years of Third Five-Year Plan . . . . .	17.3	13.7	2.6	1.0
From July 1, 1941 to January 1, 1946 . . . . .	17.5	13.9	2.5	1.1
Fourth Five-Year Plan . . . . .	41.2	28.2	10.3	2.7
Fifth Five-Year Plan . . . . .	77.7	51.7	19.8	6.2
Three years of Sixth Five-Year Plan . . . . .	77.1	49.9	22.2	5.0
Seven-Year Plan . . . . .	281.0	176.0	86.6	18.4
including five last years: . . . . .	211.8	129.9	67.8	14.1
1961 . . . . .	37.5	24.3	10.8	2.4
1962 . . . . .	39.3	24.7	12.1	2.5
1963 . . . . .	41.3	25.2	13.4	2.7
1964 . . . . .	45.0	26.7	15.2	3.1
1965 . . . . .	48.7	29.0	16.3	3.4
1966 . . . . .	52.2	31.0	17.3	3.9
1967 (estimated) . . . . .	55.8	33.9	18.1	3.8
<b>Percentages</b>				
1918-1928 (exclusive of fourth quarter of 1928) . . . . .	100	92	7	1
First Five-Year Plan . . . . .	100	84	11	5
Second Five-Year Plan . . . . .	100	80	14	6
Three and a half years of Third Five-Year Plan . . . . .	100	79	15	6
From July 1, 1941 to January 1, 1946 . . . . .	100	80	14	6
Fourth Five-Year Plan . . . . .	100	68	25	7
Fifth Five-Year Plan . . . . .	100	66	26	8
Three years of Sixth Five-Year Plan . . . . .	100	65	29	6
Seven-Year Plan . . . . .	100	63	31	6
including five last years: . . . . .	100	61	32	7
1961 . . . . .	100	65	29	6
1962 . . . . .	100	63	31	6
1963 . . . . .	100	61	32	7
1964 . . . . .	100	59	34	7
1965 . . . . .	100	60	33	7
1966 . . . . .	100	60	33	7
1967 (estimated) . . . . .	100	61	32	7

**STRUCTURE OF CAPITAL INVESTMENTS BY STATE AND  
CO-OPERATIVE ENTERPRISES AND ORGANISATIONS (EXCLUSIVE  
OF COLLECTIVE FARMS) FOR PRODUCTIVE AND NON-PRODUCTIVE  
PURPOSES**

(in comparable prices; '000 million rubles)

	Total	including		
		building and installation	equipment, tools and implements	other capital expenditure
<b>Total for 1918-1967</b> . . . . .	<b>550.1</b>	<b>343.4</b>	<b>166.1</b>	<b>40.6</b>
1918-1928 (exclusive of fourth quarter of 1928) . . . . .	1.7	1.3	0.3	0.1
First Five-Year Plan . . . . .	6.6	5.5	0.8	0.3
Second Five-Year Plan . . . . .	15.0	11.8	2.2	1.0
Three and a half years of Third Five-Year Plan . . . . .	14.8	11.5	2.5	0.8
From July 1, 1941 to January 1, 1946 . . . . .	14.3	11.0	2.3	1.0
Fourth Five-Year Plan . . . . .	34.1	21.9	9.8	2.4
Fifth Five-Year Plan . . . . .	65.7	41.7	18.3	5.7
Three Years of Sixth Five-Year Plan . . . . .	63.6	38.9	20.1	4.6
Seven-Year Plan . . . . .	240.8	145.4	78.1	17.3
including five last years: . . . . .	184.1	109.4	61.3	13.4
1961 . . . . .	31.9	19.8	9.9	2.2
1962 . . . . .	34.0	20.6	11.0	2.4
1963 . . . . .	36.1	21.4	12.1	2.6
1964 . . . . .	39.4	22.8	13.7	2.9
1965 . . . . .	42.7	24.8	14.6	3.3
1966 . . . . .	45.6	26.3	15.5	3.8
1967 (estimated) . . . . .	47.9	28.1	16.2	3.6

**STRUCTURE OF CAPITAL INVESTMENTS BY STATE AND  
CO-OPERATIVE ENTERPRISES AND ORGANISATIONS (EXCLUSIVE  
OF COLLECTIVE FARMS) FOR PRODUCTIVE AND NON-PRODUCTIVE  
PURPOSES**

(percentages)

	Total	including		
		building and installation	equipment, tools and implements	other capital expenditure
1918-1928 (exclusive of fourth quarter of 1928) . . . . .	100	79	18	3
First Five-Year Plan . . . . .	100	83	11	6
Second Five-Year Plan . . . . .	100	79	15	6

	Total	including		
		building and installation	equipment, tools and implements	other capital expenditure
Three and a half years of Third Five-Year Plan . . . . .	100	78	16	6
From July 1, 1941 to January 1, 1946 . . . . .	100	77	16	7
Fourth Five-Year Plan . . . . .	100	64	29	7
Fifth Five-Year Plan . . . . .	100	63	28	9
Three Years of Sixth Five-Year Plan . . . . .	100	61	32	7
Seven-Year Plan . . . . .	100	61	32	7
including five last years: . . . . .	100	60	33	7
1961 . . . . .	100	62	31	7
1962 . . . . .	100	61	32	7
1963 . . . . .	100	59	34	7
1964 . . . . .	100	58	35	7
1965 . . . . .	100	58	34	8
1966 . . . . .	100	58	34	8
1967 (estimated) . . . . .	100	59	34	7

**STATE CENTRALISED CAPITAL INVESTMENTS**  
(in comparable prices; '000 million rubles)

	Total	including building and installation
<b>Total for 1918-1967 . . . . .</b>	<b>494.2</b>	<b>303.8</b>
1918-1928 (exclusive of fourth quarter of 1928) . . . . .	1.7	1.3
First Five-Year Plan . . . . .	6.2	5.2
Second Five-Year Plan . . . . .	14.1	11.1
Three and a half years of Third Five-Year Plan . . . . .	14.1	10.9
From July 1, 1941 to January 1, 1946 . . . . .	14.0	10.8
Fourth Five-Year Plan . . . . .	32.8	21.1
Fifth Five-Year Plan . . . . .	62.8	39.7
Three Years of Sixth Five-Year Plan . . . . .	56.8	34.2
Seven-Year Plan . . . . .	211.5	124.6
including five last years: . . . . .	162.8	94.6
1961 . . . . .	28.1	17.0
1962 . . . . .	30.4	18.1
1963 . . . . .	32.4	19.0
1964 . . . . .	34.9	19.7
1965 . . . . .	37.0	20.8
1966 . . . . .	39.0	21.7
1967 (estimated) . . . . .	41.2	23.2

**CAPITAL INVESTMENTS BY STATE AND CO-OPERATIVE ORGANISATIONS  
BY ECONOMIC  
(in comparable**

	Total for 1918-66	1918-28 (excl. IV quarter of 1928)	First 5-Year Plan	Second 5-Year Plan	3.5 years of Third 5-Year Plan
<b>Million rubles</b>					
<b>Total investments in the national economy</b> . . . . .	<b>591,860</b>	<b>4,069</b>	<b>7,318</b>	<b>16,563</b>	<b>17,293</b>
By branches:					
industry—total . . . . .	216,430	631	2,763	6,155	5,924
Group A . . . . .	188,234	438	2,307	5,052	4,960
Group B . . . . .	28,196	193	456	1,103	964
construction industry . . . . .	15,690	—	68	111	171
agriculture (including forestry, procure- ments and collective farms) <sup>2</sup> . . . . .	93,487	124	1,190	2,115	2,002
transport and communications . . . . .	61,588	400	1,245	3,229	3,055
including railway transport . . . . .	27,215	317	727	1,715	1,796
housing construction (incl. individual construction) . . . . .	117,924	2,755	1,177	2,177	3,052
construction of trading and utility enterprises, scientific, cultural, edu- cational and health establishments including scientific, cultural and edu- cational establishments . . . . .	86,741	159	875	2,776	3,089
. . . . .	30,130	25	191	781	720
<b>Percentages of total investments</b>					
<b>Total capital investments in the national economy</b> . . . . .	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
By branches:					
industry—total . . . . .	36.6	15.5	37.8	37.2	34.3
Group A . . . . .	31.8	10.8	31.5	30.5	28.7
Group B . . . . .	4.8	4.7	6.3	6.7	5.6
construction industry . . . . .	2.6	—	0.9	0.7	1.0
agriculture (including forestry, procure- ments and collective farms) . . . . .	15.8	3.1	16.3	12.8	11.6
transport and communications . . . . .	10.4	9.8	17.0	19.4	17.7
including railway transport . . . . .	4.6	7.8	9.9	10.4	10.4
housing construction (incl. individual construction) . . . . .	19.9	67.7	16.1	13.1	17.6
construction of trading and utility en- terprises, scientific, cultural, educa- tional and health establishments . . . . .	14.7	3.9	11.9	16.8	17.8
including scientific, cultural and edu- cational establishments . . . . .	5.1	0.6	2.6	4.7	4.2

<sup>1</sup> In this table and that on pp. 210-11 investments by branches cover build housing and in utility, cultural and public facilities, etc., are not included

<sup>2</sup> Investments in agriculture do not cover those made by fishing artels tively in industry and in the construction industry. Capital investments in construction organisations are given on page 212.

AND ENTERPRISES, COLLECTIVE FARMS AND THE POPULATION  
BRANCHES<sup>1</sup>  
(prices)

From July 1, 1941 to Jan. 1, 1946	Fourth 5-Year Plan	Fifth 5-Year Plan	3 years of Sixth 5-Year Plan	7-Year Plan	including					1966
					1961	1962	1963	1964	1965	
17,506	41,161	77,709	77,106	280,960	37,424	39,291	41,320	44,986	48,733	52,175
7,440	15,732	31,449	27,269	100,554	13,125	13,976	14,884	16,718	17,676	18,513
6,916	13,651	28,098	23,485	87,127	11,373	12,149	12,976	14,644	15,495	16,200
524	2,081	3,351	3,784	13,427	1,752	1,827	1,908	2,074	2,181	2,313
305	1,108	2,260	2,430	7,697	1,118	1,045	1,074	1,200	1,312	1,540
1,722	5,371	12,224	12,904	46,278	5,680	6,288	6,946	8,201	8,967	9,557
2,613	4,976	7,050	6,453	27,547	3,618	3,923	4,215	4,525	4,845	5,020
1,932	3,119	3,843	2,762	9,414	1,249	1,358	1,460	1,490	1,529	1,590
2,829	8,265	15,551	18,054	55,108	7,821	7,671	7,654	7,334	8,162	8,956
2,597	5,709	9,175	9,996	43,776	6,062	6,388	6,547	7,008	7,771	8,589
327	1,344	2,865	3,290	17,251	2,354	2,541	2,554	2,806	3,040	3,336
100	100	100	100	100	100	100	100	100	100	100
42.5	38.2	40.5	35.4	35.8	35.1	35.5	36.0	37.2	36.3	35.5
39.5	33.2	36.2	30.5	31.0	30.4	30.9	31.4	32.6	31.8	31.1
3.0	5.0	4.3	4.9	4.8	4.7	4.6	4.6	4.6	4.5	4.4
1.8	2.7	2.9	3.1	2.7	3.0	2.7	2.6	2.7	2.7	2.9
9.8	13.0	15.7	16.7	16.5	15.2	16.0	16.8	18.2	18.4	18.3
14.9	12.1	9.1	8.4	9.8	9.6	10.0	10.2	10.0	10.0	9.6
11.0	7.6	4.9	3.6	3.4	3.3	3.5	3.5	3.3	3.1	3.0
16.2	20.1	20.0	23.4	19.6	20.9	19.5	18.5	16.3	16.7	17.2
14.8	13.9	11.8	13.0	15.6	16.2	16.3	15.9	15.6	15.9	16.5
1.9	3.3	3.7	4.3	6.1	6.3	6.5	6.2	6.2	6.2	6.4

ing and installations for production purposes only. Capital investments in these branches.

and inter-collective-farm construction organisations, which are included respectively in agriculture, including those made by fishing artels and inter-collective-farm

**INVESTMENTS BY STATE AND CO-OPERATIVE ORGANISATIONS AND  
BY ECONOMIC  
(in comparable)**

	Total for 1918-66	1918-28 (excl IV quarter of 1928)	First 5-Year Plan	Second 5-Year Plan	3.5 years of Third 5-Year Plan
<b>Million rubles</b>					
<b>Total investments in the national economy . . . . .</b>	<b>502,134</b>	<b>1,656</b>	<b>6,611</b>	<b>14,922</b>	<b>14,801</b>
By branches:					
industry—total . . . . .	215,880	630	2,757	6,143	5,914
Group A . . . . .	188,234	438	2,307	5,052	4,960
Group B . . . . .	27,646	192	450	1,091	954
construction industry . . . . .	15,329	—	68	111	171
agriculture (including forestry and procurements without collective farms) . . . . .	49,045	101	899	1,195	783
transport and communications . . . . .	61,588	400	1,245	3,229	3,055
including railway transport . . . . .	27,215	317	727	1,715	1,796
housing construction (except individual construction) . . . . .	78,689	367	775	1,529	1,877
construction of trading and utility enterprises, scientific, cultural, educational and health establishments including scientific, cultural and educational establishments . . . . .	81,603	158	867	2,715	3,001
including scientific, cultural and educational establishments . . . . .	25,481	24	183	725	640
<b>Percentages of total investments</b>					
<b>Total investments in the national economy . . . . .</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
By branches:					
industry—total . . . . .	43.0	38.0	41.7	41.2	40.0
Group A . . . . .	37.5	26.4	34.9	33.9	33.5
Group B . . . . .	5.5	11.6	6.8	7.3	6.5
construction industry . . . . .	3.0	—	1.0	0.7	1.2
agriculture (including forestry and procurements without collective farms) . . . . .	9.8	6.1	13.6	8.0	5.3
transport and communications . . . . .	12.3	24.2	18.8	21.6	20.6
including railway transport . . . . .	5.4	19.1	11.0	11.5	12.1
housing construction (except individual construction) . . . . .	15.7	22.2	11.7	10.3	12.7
construction of trading and utility enterprises, scientific, cultural, educational and health establishments including scientific, cultural and educational establishments . . . . .	16.2	9.5	13.2	18.2	20.2
including scientific, cultural and educational establishments . . . . .	5.1	1.4	2.8	4.6	4.3

**ENTERPRISES (EXCLUSIVE OF COLLECTIVE FARMS)  
BRANCHES**  
prices)

From July 1, 1941 to Jan. 1, 1946	Fourth 5-Year Plan	Fifth 5-Year Plan	3 years of Sixth 5-Year Plan	7-Year Plan	including					1966
					1961	1962	1963	1964	1965	
14,300	34,096	65,731	63,572	240,858	31,911	33,967	36,116	39,422	42,725	45,587
7,436	15,707	31,394	27,210	100,239	13,093	13,939	14,850	16,669	17,616	18,450
6,916	13,651	28,098	23,485	87,127	11,373	12,149	12,976	14,644	15,495	16,200
520	2,056	3,296	3,725	13,112	1,720	1,790	1,874	2,025	2,121	2,250
305	1,108	2,260	2,407	7,439	1,097	1,012	1,029	1,149	1,238	1,460
295	2,495	6,359	6,699	24,719	2,962	3,358	3,867	4,778	5,295	5,500
2,613	4,976	7,050	6,453	27,547	3,618	3,923	4,215	4,525	4,845	5,020
1,932	3,119	3,843	2,762	9,414	1,249	1,358	1,460	1,490	1,529	1,590
1,112	4,350	10,300	11,831	39,473	5,433	5,590	5,834	5,629	6,318	7,075
2,539	5,460	8,368	8,972	41,441	5,708	6,145	6,321	6,672	7,413	8,082
275	1,118	2,157	2,348	15,111	2,026	2,316	2,344	2,494	2,732	2,900
100	100	100	100	100	100	100	100	100	100	100
52.0	46.0	47.8	42.8	41.6	41.0	41.0	41.1	42.3	41.2	40.5
48.4	40.0	42.8	36.9	36.2	35.6	35.7	35.9	37.1	36.2	35.6
3.6	6.0	5.0	5.9	5.4	5.4	5.3	5.2	5.2	5.0	4.9
2.1	3.3	3.4	3.8	3.1	3.4	3.0	2.8	2.9	2.9	3.2
2.1	7.3	9.7	10.5	10.3	9.3	9.9	10.7	12.1	12.4	12.1
18.3	14.6	10.7	10.2	11.4	11.4	11.5	11.7	11.5	11.3	11.0
13.5	9.2	5.8	4.3	3.9	3.9	4.0	4.0	3.8	3.6	3.5
7.8	12.8	15.7	18.6	16.4	17.0	16.5	16.2	14.3	14.8	15.5
17.7	16.0	12.7	14.1	17.2	17.9	18.1	17.5	16.9	17.4	17.7
1.9	3.3	3.3	3.7	6.3	6.3	6.8	6.5	6.3	6.4	6.4

**CAPITAL INVESTMENTS BY THE STATE  
AND BY COLLECTIVE FARMS IN AGRICULTURE  
FOR PRODUCTIVE AND NON-PRODUCTIVE PURPOSES  
(in comparable prices; million rubles)**

	Total	of them for produc- tive purposes	Of the total investments			
			state invest- ments	of them for productive purposes	collective- farm invest- ments	of them for productive purposes
<b>Total for 1918-1966 . . . . .</b>	<b>109,250<sup>1</sup></b>	<b>94,398</b>	<b>58,269</b>	<b>49,045</b>	<b>50,981</b>	<b>45,353</b>
1918-1928 (exclusive of fourth quar- ter of 1928) . . . . .	131	125	106	101	25	24
First Five-Year Plan . . . . .	1,333	1,196	1,028	899	305	297
Second Five-Year Plan . . . . .	2,353	2,127	1,360	1,195	993	932
Three and a half years of Third Five-Year Plan . . . . .	2,192	2,012	875	783	1,317	1,229
From July 1, 1941 to January 1, 1946 . . . . .	1,803	1,726	314	295	1,489	1,431
Fourth Five-Year Plan . . . . .	5,809	5,396	2,659	2,495	3,150	2,901
Fifth Five-Year Plan . . . . .	13,903	12,279	7,176	6,359	6,727	5,920
Three years of Sixth Five-Year Plan . . . . .	15,065	12,986	7,754	6,699	7,311	6,287
Seven-Year Plan . . . . .	55,161	46,851	30,397	24,719	24,764	22,132
including five last years: . . . . .	42,946	36,518	24,874	20,260	18,072	16,258
1961 . . . . .	6,860	5,733	3,705	2,962	3,155	2,771
1962 . . . . .	7,426	6,358	4,152	3,358	3,274	3,000
1963 . . . . .	8,176	7,025	4,760	3,867	3,416	3,158
1964 . . . . .	9,721	8,301	5,812	4,778	3,909	3,523
1965 . . . . .	10,763	9,101	6,445	5,295	4,318	3,806
1966 . . . . .	11,500	9,700	6,600	5,500	4,900	4,200

<sup>1</sup> In addition, expenditure on the construction of repair shops of Selkhoztekhnika, enterprises of the hulling, milling and concentrates industries, agricultural higher educational and research establishments has between 1918 and 1966 amounted to 2,700 million rubles.

**CAPITAL INVESTMENTS BY THE STATE AND BY COLLECTIVE FARMS  
IN THE WATER ECONOMY  
(in comparable prices)**

	Million rubles
<b>Total for 1918-1966 . . . . .</b>	<b>10,013</b>
1918-1928 (exclusive of fourth quarter of 1928) . . . . .	23
First Five-Year Plan . . . . .	113

Continued

	Million rubles
Second Five-Year Plan . . . . .	240
Three and a half years of Third Five-Year Plan . . . . .	321
From July 1, 1941 to January 1, 1946 . . . . .	168
Fourth Five-Year Plan . . . . .	585
Fifth Five-Year Plan . . . . .	1,178
Three Years of Sixth Five-Year Plan . . . . .	901
Seven-Year Plan . . . . .	5,184
including five last years: . . . . .	4,344
1961 . . . . .	586
1962 . . . . .	666
1963 . . . . .	836
1964 . . . . .	1,074
1965 . . . . .	1,182
1966 . . . . .	1,300

**VOLUME OF BUILDING AND INSTALLATION WORK  
CARRIED OUT BY CONTRACTORS**  
(in comparable prices; '000 million rubles)

	Total volume of building and installation work carried out by contrac- tors and by enterprises themselves	including building and installation work carried out by		As a percent- age of the total volume of building and installa- tion work car- ried out by		Volume of work carried out by contractors
		contrac- tors	enterpri- ses them- selves	contrac- tors	enter- prises them- selves	
Total for 1918-1967 . . . . .	343.4	276.2	67.2	80	20	296.6
1918-1928 (exclusive of fourth quar- ter of 1928) . . . . .	1.3	0.1	1.2	10	90	0.1
First Five-Year Plan . . . . .	5.5	2.0	3.5	36	64	2.2
Second Five-Year Plan . . . . .	11.8	3.9	7.9	33	67	4.0
Three and a half years of Third Five- Year Plan . . . . .	11.5	6.4	5.1	56	44	6.5
From July 1, 1941 to January 1, 1946	11.0	6.4	4.6	59	41	6.6
Fourth Five-Year Plan . . . . .	21.9	15.9	6.0	73	27	16.4
Fifth Five-Year Plan . . . . .	41.7	34.0	7.7	82	18	35.2
Three years of Sixth Five-Year Plan	38.9	32.8	6.1	84	16	34.0
Seven-Year Plan . . . . .	145.4	125.5	19.9	86	14	136.7
including five last years: . . . . .	109.4	95.0	14.4	87	13	104.7
1961 . . . . .	19.8	16.9	2.9	85	15	18.2
1962 . . . . .	20.6	17.4	3.2	85	15	19.1

Continued

	Total volume of building and installation work carried out by contractors and by enterprises themselves	including building and installation work carried out by		As a percentage of the total volume of building and installation work carried out by		Volume of work carried out by contractors
		contractors	enterprises themselves	contractors	enterprises themselves	
1963 . . . . .	21.4	18.6	2.8	87	13	20.6
1964 . . . . .	22.8	20.1	2.7	88	12	22.4
1965 . . . . .	24.8	22.0	2.8	89	11	24.4
1966 . . . . .	26.3	23.7	2.6	90	10	26.4
1967 (estimated) . . . . .	28.1	25.5	2.6	91	9	28.5

With the growth of capital investments the volume of work being carried out by contractors increases rapidly. In 1967 alone contractors will carry out a volume of work exceeding that effected during the first 30 years of Soviet power (1918-48).

#### NUMBER OF BASIC BUILDING AND INSTALLATION CONTRACTORS (end-of-year figures)

	Total	including	
		general building organisations	specialised organisations

#### Number of Organisations

1930	1,500	1,230	270
1940	4,000	2,920	1,080
1955	8,240	4,779	3,461
1958	8,883	5,062	3,821
1965	11,612	5,482	6,130
1966	12,789	6,042	6,747

#### Percentage of the Total

1930	100	82	18
1940	100	73	27
1955	100	58	42
1958	100	57	43
1965	100	47	53
1966	100	47	53

## BASIC BUILDING AND INSTALLATION CONTRACTORS BY THEIR SPECIALISATION

	1961		1964		1965		1966	
	Number of organisations	Percentage of total construction carried out by these organisations	Number of organisations	Percentage of total construction carried out by these organisations	Number of organisations	Percentage of total construction carried out by these organisations	Number of organisations	Percentage of total construction carried out by these organisations
<b>Total number of basic contractors . . . . .</b>	<b>9,568</b>	<b>100</b>	<b>10,676</b>	<b>100</b>	<b>11,612</b>	<b>100</b>	<b>12,789</b>	<b>100</b>
including:								
General building organisations . . . . .	5,126	52	5,286	46	5,482	44	6,042	43
Specialised building organisations . . . . .	4,442	48	5,390	54	6,130	56	6,747	57
of which by type of work:								
earthwork . . . . .	316	2.5	543	3.3	663	4.0	742	4.5
external communications . . . . .	328	3.5	357	3.5	386	3.5	411	3.2
construction of railways . . . . .	128	1.3	105	0.9	80	0.8	76	0.6
construction of motor roads . . . . .	441	4.0	447	3.4	532	3.8	568	3.9
construction of large-panelling housing and of structures of prefabricated parts . . . . .	156	2.7	161	2.5	155	2.5	153	2.3
finishing . . . . .	287	3.2	302	3.0	318	2.9	356	2.9
special work connected with mine-building and other sub-surface construction . . . . .	93	1.3	125	1.7	117	1.3	134	1.5
sanitary engineering . . . . .	513	5.4	519	4.9	631	5.1	683	4.9
electric wiring . . . . .	460	5.4	540	5.7	594	5.9	499	4.8
mounting of technological, power, hoisting and other equipment . . . . .	458	6.0	458	6.3	542	7.0	525	6.6
hydraulotechnical construction . . . . .	156	2.1	113	1.5	124	1.6	133	1.6
low-voltage installations . . . . .	166	1.1	219	1.4	251	1.7	243	1.4
construction in water economy . . . . .	193	1.4	288	1.8	361	2.3	577	2.7

## MACHINERY USED IN CONSTRUCTION

(end-of-year figures; '000)

	1940	1950	1960	1966
Excavators . . . . .	2.1	5.9	36.8	75.4
Scrapers . . . . .	1.1	3.0	12.2	21.5
Bulldozers . . . . .	0.8	3.0	40.5	74.0
Travelling cranes . . . . .	1.1	5.6	55.0	90.0

The construction industry is equipped with modern machines and mechanisms, ensuring the fulfilment of the constantly growing construction programme. During the past 16 years alone (1951-66) the fleet of building machines has grown as follows: excavators—13 times, scrapers—7 times, bulldozers—25 times and travelling cranes—16 times.

## LEVEL OF MECHANISATION OF BASIC CONSTRUCTION WORK

(mechanised work as a percentage of total volume of construction)

	Earthwork	Plastering	Painting
1940	60	7	25
1950	79	33	50
1960	96	58	61
1961	96	58	64
1962	96	59	64
1963	96	58	65
1964	97	59	67
1965	98	59	67
1966	98	61	69

The share of comprehensive mechanisation of basic construction work in 1966 comprised 94 per cent in earthwork, 96 per cent in the mounting of concrete and reinforced concrete structures, 77 per cent in the preparation of concrete, 59 per cent in the preparation of mortar, 83 per cent in the laying of concrete and ferrous concrete.

## GROWTH OF LABOUR PRODUCTIVITY IN CONSTRUCTION

	Per worker employed in construction and installation work and in subsidiary enterprises <sup>1</sup>		Per worker employed in construction and installation work and in subsidiary enterprises <sup>1</sup>
<b>As a percentage of 1928</b>		1961	294
1928	100	1962	313
1940	247	1963	326
1945	223	1964	347
1946	219	1965	367
1950	309	1966	385
1955	459	1967 (estimated)	410
1956	498	<b>As a percentage of the preceding year</b>	
1957	544	1940	104
1958	594	1945	94
1959	653	1946	98
1960	705	1950	105
1961	727	1951	110
1962	774	1952	106
1963	805	1953	104
1964	859	1954	110
1965	908	1955	111
1966	953	1956	109
1967 (estimated)	1,013	1957	109
<b>As a percentage of 1940</b>		1958	109
1940	100	1959	110
1945	90	1960	108
1946	89	1961	103
1950	125	1962	107
1955	186	1963	104
1956	202	1964	107
1957	220	1965	106
1958	241	1966	105
1959	264	1967 (estimated)	106
1960	285		

<sup>1</sup> Exclusive of building-and-repair offices and inter-collective-farm construction organisations.

**AVERAGE ANNUAL EMPLOYMENT IN THE CONSTRUCTION INDUSTRY**  
(thousand workers)

	1928	1940	1945	1960	1966
<b>Total number of people employed in the construction industry . . . . .</b>	<b>749</b>	<b>2,567</b>	<b>2,343</b>	<b>6,555</b>	<b>7,460</b>
of whom:					
workers (including apprentices) . . . . .	672	1,988	1,962	5,674	6,247
engineers and technicians . . . . .	23	198	148	458	726
office employees . . . . .	28	209	134	256	327
<b>Out of the total number of people employed in the construction industry—people engaged in building and installation work—total . . . . .</b>	<b>749</b>	<b>1,620</b>	<b>1,527</b>	<b>5,143</b>	<b>5,768</b>
of whom:					
workers (including apprentices) . . . . .	672	1,335	1,312	4,554	4,913
engineers and technicians . . . . .	23	109	93	385	588
office employees . . . . .	28	82	64	140	193

The figures given above include also people employed in building-and-repair offices, at machine-hiring centres catering for construction sites, and also people employed in inter-collective-farm construction organisations.

*"Fifty years of the October Revolution have been a steady advance in the people's living standards. The Soviet people now consider the right to work and rest, free education, medical services and pensions as natural and ordinary. Socialism has given people security in the morrow: they need entertain no fear of unemployment, lawlessness and poverty. In socialist society care for the people, for their welfare and for their good is the supreme aim of the Party and the Government."*

From the Resolution of the Central Committee of the C.P.S.U. on Preparations for the 50th Anniversary of the Great October Socialist Revolution

## **GROWTH OF THE SOVIET PEOPLE'S MATERIAL WELFARE**

*"Citizens of the U.S.S.R. have the right to work, that is, the right to guaranteed employment and payment for their work in accordance with its quantity and quality.*

*["The right to work is ensured by the socialist organisation of the national economy, the steady growth of the productive forces of Soviet society, the elimination of the possibility of economic crises, and the abolition of unemployment."*

Constitution of the U.S.S.R.

**DISTRIBUTION OF THE POPULATION ENGAGED  
IN THE NATIONAL ECONOMY BY BRANCHES**  
(exclusive of students and servicemen, percentages)

	1913	1940	1950	1960	1966
In the entire national economy . . . . .	100	100	100	100	100
Industry and construction . . . . .	9	23	27	32	36
Agriculture and forestry (including individual subsidiary farming) . . . . .	75	54	48	39	31
Transport and communications . . . . .	2	5	5	7	8
Trade, public catering, procurements, material and technical supplies . . . . .	9	5	5	6	6
Public education, public health, science and science services, art . . . . .	1	6	8	11	14
State administration, administration of co-operative and mass organisations; credit and insurance institutions . . . . .	4	3	3	2	2
Other branches of national economy (housing and communal services, etc.) . . . . .					

**DISTRIBUTION OF THE POPULATION ENGAGED IN THE NATIONAL  
ECONOMY BY PRODUCTIVE AND NON-PRODUCTIVE BRANCHES**  
(exclusive of students and servicemen, percentages)

	1940	1950	1960	1966
In the entire national economy . . . . .	100	100	100	100
In productive branches (including freight transportation, communications servicing production, trade and individual subsidiary farming) <sup>1</sup> . . . . .	88.3	86.2	83.0	79.7

<sup>1</sup> In 1913, about 95 per cent of the whole gainfully employed population was engaged in the sphere of material production.

	1940	1950	1960	1966
of whom:				
industrial, office and other workers <sup>1</sup> . . . . .	30.4	37.0	48.8	55.8
collective farmers engaged in collective and individual subsidiary farming . . . . .	44.2	44.0	30.0	19.3
members of industrial, office and other workers' families engaged in individual subsidiary farming . . . . .	2.5	3.2	4.0	4.5
others (individual farmers, artisans, etc.) . . . . .	11.2	2.0	0.2	0.1
<b>In non-productive branches . . . . .</b>	<b>11.7</b>	<b>13.8</b>	<b>17.0</b>	<b>20.3</b>
of whom in:				
public health, public education, science and science services, art . . . . .	5.9	7.7	11.2	14.0
other non-productive branches (housing and communal services, passenger traffic, communications servicing the population and non-productive branches; state administration and the administration of co-operative and mass organisations; credit and insurance institutions) . . . . .	5.8	6.1	5.8	6.3

During the years of Soviet power there was a redistribution of the population among the different economic branches. As a result of the industrialisation of the country and the creation of large-scale socialist industry the share of the population engaged in industry and building had increased by 1966 by 300 per cent over the 1913 figure. The collectivisation of agriculture and mechanisation of farming considerably raised the labour productivity and decreased the number of workers engaged in agriculture and forestry from 75 per cent in 1913 to 31 per cent in 1966. The share of workers engaged in transport and communications increased by more than 300 per cent as compared with 1913. The share of workers in the field of education, public health and science comprised about one per cent of the whole gainfully employed population in 1913. In 1966, as a result of the improvement of cultural and medical services, the share of workers in these spheres increased considerably and comprised 14 per cent of the total.

The rational utilisation of labour resources is of great importance to the acceleration of production growth rates and to the advance of the people's living standard. At present 88 per cent of the able-bodied population of the U.S.S.R. is engaged in the economy or is studying; 79 per cent of the women are working or studying.

The growth of the productivity of social labour brought about a considerable increase in the number of workers engaged in non-productive branches. Between 1940 and 1966 the share of workers engaged in production decreased from 88.3 per cent to 79.7 per cent, whereas the share of those engaged in non-productive branches increased from 11.7 to 20.3.

<sup>1</sup> Including members of former producer co-operatives turned over to the system of state enterprises.

*The working class is the most advanced and guiding force of Soviet society on the road to communism.*

**AVERAGE ANNUAL NUMBER OF INDUSTRIAL, OFFICE AND OTHER WORKERS IN THE NATIONAL ECONOMY**

	Mil- lions
1913	
on the territory within the present frontiers of the U.S.S.R. . . .	12.9
on the territory within the frontiers of the U.S.S.R. prior to Sep- tember 17, 1939 . . . . .	11.4
1920 . . . . .	5.0
1928 . . . . .	11.4
1932 . . . . .	24.2
1937 . . . . .	28.6
1940 . . . . .	33.9
1945 . . . . .	28.6
1950 . . . . .	40.4
1960 . . . . .	62.0
1966 . . . . .	79.7
1967 (plan) . . . . .	83.0

The steady development of the socialist economy is accompanied by a systematic growth of the number of industrial, office and other workers. In 1967 their number is to increase more than 500 per cent as compared with 1913.

There is no unemployment in the U.S.S.R. Whereas at the beginning of 1928, 1,576,000 people were registered as unemployed at labour exchanges, their number was only 240,000 by October 1, 1930, and by the end of 1930, unemployment was completely abolished.

**AVERAGE ANNUAL NUMBER OF INDUSTRIAL,  
OFFICE AND OTHER WORKERS BY BRANCHES  
OF THE NATIONAL ECONOMY<sup>1</sup>**  
(thousands)

	1928	1940	1945	1960	1966
<b>Total</b> . . . . .	<b>11,444</b>	<b>33,926</b>	<b>28,566</b>	<b>62,032</b>	<b>79,716</b>
of whom workers, junior service personnel and guards . . . . .	8,500	22,800	19,700	44,400	55,900
<b>Number of industrial, office and other workers by branches of the economy:</b>					
industry (production personnel in industry) . . . . .	4,339	13,079	10,665	22,291	28,105
construction (personnel engaged in building and installation work) .	749	1,620	1,527	5,143	5,768
agriculture . . . . .	1,660	2,703	2,731	7,123	9,412
state farms and subsidiary agri- cultural enterprises . . . . .	345	1,760	2,147	6,324	8,772
machine and tractor stations and repair and maintenance sta- tions <sup>2</sup> . . . . .	—	530	385	348	—
forestry . . . . .	75	280	199	359	409
transport . . . . .	1,302	3,525	3,126	6,279	7,364
railway . . . . .	971	1,767	1,841	2,348	2,317
waterway . . . . .	104	206	190	322	347
automobile, urban electric and other transport; loading and unloading operations . . . . .	227	1,552	1,095	3,609	4,700
communications . . . . .	95	484	426	738	1,073
trade, public catering, procure- ments, material and technical sup- plies . . . . .	606	3,351	2,445	4,675	6,261
housing and communal services . .	158	1,516	1,046	1,920	2,489
public health . . . . .	399	1,512	1,419	3,461	4,427
public education (schools, education- al establishments, and cultural institutions) . . . . .	725	2,678	2,352	4,803	6,895
science and science services . . .	82	362	289	1,763	2,741
credit and insurance institutions .	95	267	197	265	313
machinery of state administration and economic management and the administration of co-opera- tive and mass organisations . .	1,010	1,837	1,645	1,245	1,546
other branches (capital repairs, bor- ing, survey and project, etc.) .	149	712	499	1,967	2,913

<sup>1</sup> For details see pages 62, 74, 170-71, 218.

<sup>2</sup> In 1958 machine and tractor stations were reorganised into repair and maintenance stations. In 1961 they were turned over to district branches of Selkhoztekhnika whose personnel was in 1966 related to the appropriate branches, i.e., the personnel of repair shops was related to industry, transport workers—to transport, and so on.

The number of industrial, office and other workers grows in all branches of the Soviet economy. In 1966, their number in industry, construction, agriculture and transport and communications exceeded by 44,000,000, i.e., 6.3 times the 1928 figure. The increase of the number of industrial, office and other workers in these branches comprises about two-thirds of the total increase in the number of industrial, office and other workers in the economy during this period. The number of workers in trade and public catering increased by 5,700,000, or 10-fold between 1928 and 1966. The number of workers in education and public health in 1966 rose by 10,000,000 as compared with 1928, i.e., 10-fold. The number of workers in science and science services increased by 2,700,000 men, or 33-fold.

**AVERAGE ANNUAL NUMBER OF INDUSTRIAL, OFFICE  
AND OTHER WORKERS IN THE UNION REPUBLICS**  
(thousands)

	1928	1940	1945	1960	1966
U.S.S.R. . . . .	11,444	33,926	28,566	62,032	79,716
R.S.F.S.R. . . . .	7,864	22,173	19,627	39,505	48,983
Ukrainian S.S.R. . . . .	2,322	6,578	4,298	10,659	13,973
Byelorussian S.S.R. . . . .	295	1,135	610	1,887	2,566
Uzbek S.S.R. . . . .	178	766	732	1,565	2,228
Kazakh S.S.R. . . . .	217	908	1,033	2,942	4,197
Georgian S.S.R. . . . .	183	494	442	940	1,251
Azerbaijan S.S.R. . . . .	205	486	409	748	1,098
Lithuanian S.S.R. . . . .		179	189	674	987
Moldavian S.S.R. . . . .	15	101	148	439	720
Latvian S.S.R. . . . .		262	262	725	941
Kirghiz S.S.R. . . . .	32	175	187	434	647
Tajik S.S.R. . . . .	24	149	126	320	472
Armenian S.S.R. . . . .	50	156	155	427	670
Turkmen S.S.R. . . . .	59	188	169	314	407
Estonian S.S.R. . . . .		176	179	453	576

**CHANGES IN THE NUMBER OF WORKERS  
IN SOME LEADING PROFESSIONS IN INDUSTRY**  
(thousands)

	1925	1965
Metal-working lathe-operators . . . . .	52	1,336
of them turners . . . . .	27	747
Machine-operators, motormen and their assistants . . . . .	50	1,242
Electricians . . . . .	14	641
Equipment-operators and their assistants . . . . .	1	259
Adjusters, setters for machine tools and automatic devices . . . . .	12	262
Fitters, electrical fitters . . . . .	72	2,613
Electric welders . . . . .	—	259
Gas welders . . . . .	0.7	101

Technological progress, the mechanisation and automatisisation of production, the equipment of industrial enterprises with modern machinery raise considerably the labour productivity, radically change the character of labour and lead to a speedy growth of the number of workers engaged in mechanised labour, to the emergence of new skilled professions and to the disappearance of a number of professions involving arduous manual labour.

In 40 years (1926-65) the number of industrial workers increased 9-fold, and the number of workers engaged in mechanised labour 15-fold.

The engineering and metal-working industry underwent especially great changes during this period. While the number of workers in engineering and metal-working increased 20-fold, the number of machine-operators rose 31-fold, of turners 30-fold; in 1925 such trades as adjusters, setters for machine tools and automatic devices were practically non-existent, whereas in 1965, 128,000 people were engaged in these trades.

In the coal industry forty years ago coal was generally extracted and transported by hand. Coal getters, cutters, haulers, loaders, truck pushers, horse drivers, etc., were the chief trades in coal pits. In 1965, 16,000 cutter-loader operators, 22,000 conveyor operators and 33,000 mine electric locomotive drivers were working in the coal pits. Enginemen and motormen accounted for 15 per cent of the total number of coal miners. The number of manual workers in mining is considerably decreasing. The working methods in these trades have undergone qualitative changes.

In the iron and steel industry a number of new trades have emerged owing to the installation of modern equipment. Thus, for example, in blast-furnace production highly skilled adjusters of automatic conveyor loaders have taken the place of rollers and bloomers, charge weighers, and other workers engaged in arduous manual labour. In steel-smelting highly skilled operators of installations for the continuous pouring of steel have replaced workers engaged in pouring, bottom pouring and other labour-intensive trades.

Formerly in timber cutting trees were felled mostly by hand, and logs were carted out by draught animals. Nowadays the felling of trees is almost completely mechanised, and petrol saw and electric saw operators have become the leading trades. Logs are carted out mostly by tractors, motor and railway transport. During the past twenty years the number of tractor drivers in timber cutting has grown 30-fold and that of log transporters 8-fold.

In the cement industry forty years ago all production was carried out by hand; quarry-stone breakers, crushers and clinker-bakers were the leading trades. In 1925 there were practically no machine-operators in cement industry, whereas at present the cement industry has become one of the most mechanised branches of industry. In 1965 the number of machine-operators reached 23,000, i.e., 26 per cent of the total workers employed in the industry.

In the food industry working methods have also changed radically. Bread-baking, for example, where formerly all processes were carried out by hand, is now employing 23,000 dough-cutting machine-operators, more than 7,000 operators of mechanical and automatic kneaders and so on.

**AVERAGE WORKING WEEK FOR ADULT WORKERS IN INDUSTRY**  
(hours)

	1913	1955	1966
Total for all industry . . . . .	58.5 <sup>1</sup>	47.8	40.6

<sup>1</sup> For 1913 the working week is given for large-scale industry. In small-scale and handicrafts industry the working day and working week were not regulated by legislation and were considerably longer than in large-scale industry.

**AVERAGE WORKING WEEK FOR ADULT WORKERS**  
**IN THE VARIOUS BRANCHES OF INDUSTRY**  
(hours)

	1955	1966
Total for all industry . . . . .	47.8	40.6
including:		
Power production . . . . .	47.9	41.0
Coal industry . . . . .	47.6	37.5
Oil-extracting industry . . . . .	47.9	40.8
Iron and steel industry . . . . .	47.9	40.7
Chemical industry . . . . .	46.4	40.0
Engineering and metal-working industry . . . . .	47.8	40.9
Pulp and paper industry . . . . .	47.8	41.0
Light industry . . . . .	47.9	40.9
Food industry . . . . .	48.0	41.0

The transfer of all industrial and office workers to a seven- and six-hour working day, begun in 1956, was completed in 1960. This measure provided for the retention of the former wages, while the wage reform being carried out at the same time raised the wages of industrial, office and other workers, especially of those in the lower-paid bracket.

The average working week for workers in industry was 40.6 hours in 1966. The working week has become 18 hours shorter as compared with 1913. If we take into account the short working days before holidays and holidays and also days off, the industrial workers' average working week is 40 hours, and the average for all industrial, office and other workers in the Soviet economy (taking into account the shorter working day of teachers, medical and other workers)—39.4 hours.

In accordance with the decisions of the 23rd Congress of the C.P.S.U., the C.C. C.P.S.U., the Council of Ministers of the U.S.S.R. and All-Union Central Council of Trade Unions in March 1967 adopted a resolution to transfer all industrial, office and other workers of state and co-operative enterprises, institutions and mass organisations to a five-day working week (with two days off), while preserving the existing total length of the working week.

The transition to the five-day working week is an important social and economic measure, improving the working conditions of industrial, office and other workers and giving them greater opportunities for further raising their qualifications and cultural level.

*The right to rest and leisure is ensured by the institution of annual vacations with full pay for industrial, office and other workers.*

**DISTRIBUTION OF INDUSTRIAL, OFFICE  
AND OTHER WORKERS ACCORDING TO THE DURATION  
OF VACATIONS AFFORDED TO THEM IN THE DIFFERENT  
BRANCHES OF THE NATIONAL ECONOMY, as of March 31, 1964**

	Total industrial, office and other work- ers (percentages)	Vacations due—number of working days							Average vacations due (working days)
		12	15	18	21	24	27	over 27	
<b>Total . . . . .</b>	<b>100</b>	<b>36.6</b>	<b>10.8</b>	<b>14.2</b>	<b>4.8</b>	<b>20.1</b>	<b>5.5</b>	<b>8.0</b>	<b>19.3</b>
<b>Industry . . . . .</b>	<b>100</b>	<b>25.6</b>	<b>18.6</b>	<b>13.2</b>	<b>8.8</b>	<b>18.8</b>	<b>11.1</b>	<b>3.9</b>	<b>18.8</b>
including:									
coal industry . . .	100	2.7	2.0	6.2	9.9	26.3	42.7	10.2	25.7
iron and steel indus- try . . . . .	100	6.7	12.2	10.2	19.4	16.3	32.7	2.5	22.2
engineering and met- tal-working indus- try . . . . .	100	19.3	31.9	12.2	10.5	14.6	10.3	1.2	18.2
forestry exploitation	100	15.8	0.3	4.3	0.2	56.9	0.1	22.4	25.3
light industry . . .	100	46.2	27.4	10.1	6.1	8.2	1.6	0.4	15.3
food industry . . .	100	39.4	0.6	30.2	0.7	23.6	0.3	5.2	18.0
Construction . . . . .	100	35.2	27.2	9.4	5.3	15.0	4.3	3.6	17.1
State farms . . . . .	100	79.8	0.2	10.0	0.1	9.3	0.0	0.6	13.8
Transport . . . . .	100	18.8	21.2	15.6	10.7	17.3	13.2	3.2	19.4
Communications . . . .	100	50.4	0.2	26.9	1.2	16.4	0.1	4.8	16.7
Trade, public catering, procurements and ma- terial and technical sup- plies . . . . .	100	54.7	0.5	24.8	0.4	17.1	0.1	2.4	16.1
Housing and communal services . . . . .	100	52.2	3.4	24.6	1.1	16.2	0.7	1.8	16.1
Public health . . . . .	100	40.6	0.2	18.8	0.3	32.2	0.0	7.9	19.0
Public education . . . .	100	26.1	0.1	4.2	0.1	15.5	0.0	54.0	33.0
Science and science ser- vices . . . . .	100	22.5	5.5	14.4	3.9	44.4	2.7	6.6	20.8
Credit and insurance in- stitutions . . . . .	100	39.2	0.0	22.3	0.6	34.9	0.1	2.9	18.2
Machinery of state admin- istration and economic management and the administration of co- operative and mass or- ganisations . . . . .	100	12.8	0.1	14.1	0.5	68.7	0.1	3.7	22.1

Adult industrial, office and other workers receive annual paid vacations of not less than 12 working days. Almost two-thirds of the industrial, office and other workers receive longer vacations. Longer vacations are granted to industrial, office and other workers in arduous trades, to workers in a number of industries, in transport and at large construction sites for uninterrupted service at the same place of work, to workers with an unnormed working day and to some others. As of March 31, 1964 the average length of vacations for adult industrial, office and other workers was 19.3 working days.

Workers below 18 years of age receive annual vacations with full pay for a month. In tsarist Russia few workers received paid vacations.

**AVERAGE WAGES OF INDUSTRIAL, OFFICE AND OTHER WORKERS,  
WITH ALLOWANCES AND BENEFITS RECEIVED FROM THE SOCIAL  
CONSUMPTION FUNDS ADDED in 1966**  
(rubles)

	Average yearly	Average monthly
<b>All industrial, office and other workers engaged in the national economy</b>		
Average wages of industrial, office and other workers, with allowances and benefits received from the social funds . . . . .	1,605	134
Average money wages of industrial, office and other workers . . . . .	1,188	99
of which, paid vacations . . . . .	77	6
Allowances and benefits, received by industrial, office and other workers from the social funds (excluding paid vacations)—average per worker . . . . .	417	35
<b>Industrial workers</b>		
Average wages of industrial workers with allowances and benefits received from the social funds . . . . .	1,729	144
Average money wages of industrial workers . . . . .	1,252	104
of which, paid vacations . . . . .	86	7
Allowances and benefits received by industrial workers from the social funds (excluding paid vacations)—average per worker . . . . .	477	40

In 1966 average monthly wages of industrial, office and other workers engaged in the national economy together with the allowances and benefits received from the social funds as social insurance payments, various grants, pensions, scholarships, free education and medical treatment, expenditures on kindergartens, nurseries, sanatoria, holiday homes, etc., were 134 rubles and those of industrial workers—144 rubles.

The above data characterise the average wages including the allowances and benefits per employed person. Considering that generally several people in the families of industrial, office and other workers are gainfully employed, the average monthly wages including allowances and benefits were in 1966 214 rubles per family.

Moreover, the state annually expends an additional 150 rubles per family on the construction of housing, schools, cultural, communal and medical establishments.

The working people of the Soviet Union enjoy great advantages as compared with the working people in the capitalist countries. They know no unemployment and are confident of their future; they pay the lowest rents in the world, receive education, higher education included, free of charge, and get free medical treatment and many other privileges.

**AVERAGE MONTHLY WAGES OF INDUSTRIAL, OFFICE AND OTHER WORKERS IN THE NATIONAL ECONOMY WITH ALLOWANCES AND BENEFITS FROM THE SOCIAL CONSUMPTION FUNDS ADDED**  
(rubles)

	Average monthly money wages	Average monthly wages including allowances and benefits
1940	33.0	40.6
1946	47.5	62.4
1950	63.9	82.4
1955	71.5	91.8
1960	80.1	107.7
1966	99.2	134

**AVERAGE MONTHLY MONEY WAGES OF INDUSTRIAL, OFFICE AND OTHER WORKERS BY BRANCHES OF THE NATIONAL ECONOMY**  
(rubles)

	1940	1945	1960	1966
<b>In the whole of national economy . . . . .</b>	<b>33.0</b>	<b>43.4</b>	<b>80.1</b>	<b>99.2</b>
including:				
Industry (production personnel in industry) . . .	34.0	47.0	91.3	106.8
of whom, workers . . . . .	32.3	45.0	89.8	104.4
Construction (personnel engaged in construction and installation) . . . . .	33.9	41.3	91.7	113.1
of whom, workers . . . . .	31.0	36.1	88.7	110.0
State farms and subsidiary agricultural enterprises . . . . .	21.9	21.3	53.9	79.8
Transport . . . . .	34.7	48.2	86.7	109.6
railway . . . . .	34.1	52.5	82.4	100.3
waterway . . . . .	40.9	49.3	106.0	139.4
automobile, urban electric and other types of transport; loading and unloading operations . . . . .	34.5	40.9	87.8	111.9
Communications . . . . .	28.1	35.4	62.3	75.4
Trade, public catering, procurements, material and technical supplies . . . . .	25.0	26.9	58.6	79.3
Housing and communal services . . . . .	26.1	31.0	57.6	75.5
Public health . . . . .	25.5	39.4	58.9	80.7
Public education . . . . .	32.3	47.2	69.9	95.5
Science and science services . . . . .	46.7	64.2	104.2	118.6
Credit and insurance institutions . . . . .	33.4	51.2	70.3	89.3
The machinery of state administration and economic management and the administration of co-operative and mass organisations . . . . .	38.8	50.4	85.6	110.4

**NUMBER OF WORKERS ENGAGED MAINLY IN MENTAL WORK,  
IN THE NATIONAL ECONOMY<sup>1</sup>**

(thousands)

	1926	1939	1959	1967
<b>Total number of brain workers . . . . .</b>	<b>2,888<sup>2</sup></b>	<b>13,821</b>	<b>20,495</b>	<b>27,360</b>
of whom:				
managers of organs of state and economic administration; managers of industrial enterprises, building organisations, agriculture and forestry, transport and communications, leaders of Party, Komsomol and trade union bodies, co-operative and other mass organisations, heads of departments of the above organisations and enterprises . . . . .	266	1,214	1,372	1,805
engineers and technicians (including chief engineers, work superintendents, foremen, laboratory assistants, but exclusive of laboratory-workers, etc.); agronomists, zootechnicians, veterinary workers, etc. . . . .	249	1,951	4,683	7,070
medical workers (chief surgeons and other managers of public health establishments, doctors, doctor's assistants, midwives, pharmacutists, nurses, personnel in crèches, etc.)	182	680	1,702	2,590
research workers, university and school teachers and educators (managers of research institutes, scientific workers, directors and teachers of higher and secondary specialised schools and courses, school head masters and teachers, directors and teachers of children's homes, kindergartens, etc.); writers, workers of the press, in culture and the arts . . . . .	463	2,039	3,593	5,050
juridical personnel (judges, procurators, lawyers, barristers, etc.) . . . . .	26	62	79	83

<sup>1</sup> Data for 1926, 1939 and 1959 are given according to censuses. Data for 1967 refer to the beginning of the year.

<sup>2</sup> Data given are more precise as compared with those in previous publications.

Continued

	1926	1939	1959	1967
communications workers (radio telegraphists, telegraphists, telephone operators, etc.) . . .	64	265	476	565
workers in trade, public catering, procurements, supply and marketing (shop managers, managers of public catering establishments, superintendents of shop departments, stalls and buffets, shop assistants, heads of supply, marketing and procurement organisations, etc.)	313	1,626	2,268	2,715
workers in planning and accounting (heads of planning, finance, economic accounting and statistics departments of enterprises, institutions and organisations, exclusive of organs of state administration; economists, engineer-economists, inspectors, controllers, bookkeepers, accountants, statisticians, cashiers, operators of mechanical computing stations, recorders, etc.) . . . . .	577	3,102	3,502	3,715

According to the 1897 census, in pre-revolutionary Russia the number of people engaged mainly in mental labour was 870,000, of whom only 280,000 worked in the field of science, education and public health, the bulk of the intelligentsia comprising chiefly officials, lawyers and barristers, army officers, landowners and factory owners.

A numerous intelligentsia has been created during the years of Soviet power. According to the 1926 census, there were 2,900,000 brain workers in the U.S.S.R., whereas by the beginning of 1967 their number rose to 27,400,000, that is increased nearly 10-fold.

*Millions of highly skilled specialists have been trained during the years of Soviet power.*

**NUMBER OF SPECIALISTS WITH A HIGHER OR SPECIALISED  
SECONDARY EDUCATION IN THE NATIONAL ECONOMY<sup>1</sup>**

(thousands)

	1913	1928	1941, Jan. 1	1960, Dec. 1	1966, Nov. 15
<b>Total</b> . . . . .	<b>190</b>	<b>521</b>	<b>2,401</b>	<b>8,784</b>	<b>12,924</b>
of whom:					
with a higher education . . . . .	136	233	909	3,545	5,227
with a specialised secondary education . . . . .	54	288	1,492	5,239	7,697

Only 190,000 specialists with a higher or specialised secondary education worked in pre-revolutionary Russia's economy. By the end of 1966 close on 13,000,000 specialists with a higher or specialised secondary education worked in Soviet economy.

By the end of 1966 the number of people with a higher or specialised secondary education reached 18,300,000 (housewives, servicemen and pensioners included).

<sup>1</sup> These and other data do not include servicemen.

**NUMBER OF CERTIFIED ENGINEERS ENGAGED IN THE ECONOMY  
OF THE U.S.S.R. AND THE U.S.A.**

(thousands)

	1940	1950	1960	1965	1966
U.S.S.R. . . . .	295	400	1,135	1,631	1,789
U.S.A. . . . .	170	310	590	725	755

**NUMBER OF SPECIALISTS WITH A HIGHER  
OR SPECIALISED SECONDARY EDUCATION  
ENGAGED IN THE NATIONAL ECONOMY, BY SPECIALITY**  
(thousands)

	1928	1941, Jan. 1	1960, Dec. 1	1966, Nov. 15
<b>Total number of specialists with a higher education engaged in the national economy . . . . .</b>	<b>233</b>	<b>909</b>	<b>3,545</b>	<b>5,227</b>
including specialities received in educational establishments:				
engineers . . . . .	48	295	1,135	1,789
agronomists, zootechnicians and veterinary surgeons . . . . .	27	65	222	323
economists . . . . .	} 13	57	198	333
commodity experts . . . . .		2.3	19	39
lawyers . . . . .	13	21	70	88
doctors (dentists with a secondary medical education excluded) . . . . .	63	142	401	519 <sup>1</sup>
teachers and university graduates, <sup>2</sup> workers of libraries and educational institutions . . . . .	59	300	1,378	1,956
<b>Total number of specialists with a specialised secondary education . . . . .</b>	<b>288</b>	<b>1,492</b>	<b>5,239</b>	<b>7,697</b>
including specialities received in educational establishments:				
technicians . . . . .	51	324	1,956	3,145
agronomists, zootechnicians, veterinary surgeon's assistants and veterinary technicians . . . . .	31	89	356	500
planners and statisticians . . . . .	} 6	31	338	637
commodity experts . . . . .		5	107	251
lawyers . . . . .	2	6	17	17
medical workers (dentists included) . . . . .	48	393	1,187	1,536
teachers, librarians, workers in educational institutions . . . . .	137	536	1,062	1,329

<sup>1</sup> On November 15, 1966, the number of doctors of all specialities (dentists with a secondary medical education included) was 567,000 and on January 1—578,000.

<sup>2</sup> This table and the table on p. 242 do not include university-trained geologists who are referred to as engineers, and also lawyers, doctors and economists referred to the corresponding groups of specialists.

**GRADUATION OF ENGINEERS IN THE U.S.S.R. AND THE U.S.A.**  
(thousands)

	1950	1960	1965	1966
U.S.S.R. . . . .	37	120	170	180
U.S.A. . . . .	61	43	41	(43)

There are more than twice as many certified engineers in the Soviet economy as in the U.S. economy.

More than four times as many engineers graduate from institutions of higher learning in the U.S.S.R. than in the U.S.A.

**NUMBER OF SPECIALISTS WITH A HIGHER OR SPECIALISED  
SECONDARY EDUCATION ENGAGED IN THE NATIONAL ECONOMY,  
BY BRANCHES**  
(thousands)

	1941, Jan. 1			1966, Nov. 15		
	Total number of specialists	of whom		Total number of specialists	of whom	
		with a higher education	with a specialised secondary education		with a higher education	with a specialised secondary education
<b>Total number of specialists with a higher or secondary specialised education engaged in the national economy . . . . .</b>	<b>2,401</b>	<b>909</b>	<b>1,492</b>	<b>12,924</b>	<b>5,227</b>	<b>7,697</b>
of whom in:						
industry . . . . .	311	153	158	2,747	784	1,963
construction . . . . .	41	17	24	552	177	375
designing and designing and surveying organisations, servicing construction . . . . .	33	22	11	295	191	104
collective farms <sup>1</sup> . . . . .	29	5	24	265	54	211
state farms and subsidiary agricultural enterprises . . . . .	21	7	14	292	89	203
transport and communications . . . . .	62	17	45	519	112	407
trade, public catering, procurements, material and technical supplies . . . . .	13	2	11	557	90	467
public health . . . . .	466	115	351	1,937	480	1,457

<sup>1</sup> Data for 1941 include specialists at machine and tractor stations.

Continued

	1941, Jan. 1			1966, Nov. 15		
	Total number of specialists	of whom		Total number of specialists	of whom	
		with a higher education	with a specialised secondary education		with a higher education	with a specialised secondary education
public education (schools, educational establishments, cultural and educational institutions) . . .	944	344	600	3,293	1,903	1,390
science and science services . . . .	106	66	40	1,069	703	366
machinery of state administration and economic management and the administration of co-operative and mass organisations; credit and insurance institutions . . .	291	140	151	941	465	476

**AGE COMPOSITION OF SPECIALISTS WITH A HIGHER OR SPECIALISED SECONDARY EDUCATION EMPLOYED IN THE NATIONAL ECONOMY as of November 15, 1966 (percentages)**

	Total number of specialists	including	
		with a higher education	with a specialised secondary education
<b>Total number of specialists with a higher or specialised secondary education in the national economy</b>	<b>100</b>	<b>100</b>	<b>100</b>
of whom the age of:			
up to 30 . . . . .	32.3	24.5	37.6
30-34 . . . . .	19.7	20.8	18.9
35-39 . . . . .	17.1	19.0	15.9
40-44 . . . . .	13.9	15.0	13.1
45-49 . . . . .	8.1	8.9	7.6
50-54 . . . . .	5.1	5.9	4.5
55 and over . . . . .	3.8	5.9	2.4

Over two-thirds of the total number of specialists with a higher or specialised secondary education, engaged in the national economy, are below 40.

**SPECIALISTS WITH A HIGHER OR SPECIALISED SECONDARY  
EDUCATION BY NATIONALITIES COMPRISING THE UNION AND  
AUTONOMOUS REPUBLICS AND AUTONOMOUS REGIONS  
(thousands)**

	as of December 1, 1957			as of November 15, 1966		
	Total number of specialists	of whom		Total number of specialists	of whom	
		with a higher education	with a special- ised secondary education		with a higher education	with a special- ised secondary education
<b>Total number of specialists with a higher or specialised secondary education in the national economy . . . .</b>	<b>6,821.6</b>	<b>2,805.5</b>	<b>4,016.1</b>	<b>12,923.7</b>	<b>5,226.9</b>	<b>7,696.8</b>
of whom:						
Russians . . . . .	4,268.6	1,627.2	2,641.4	8,075.1	3,091.6	4,983.5
Ukrainians . . . . .	1,024.5	401.0	623.5	2,013.0	778.2	1,234.8
Byelorussians . . . . .	196.7	71.6	125.1	402.4	148.0	254.4
Uzbeks . . . . .	66.8	32.8	34.0	176.9	88.7	88.2
Kazakhs . . . . .	55.5	26.3	29.2	133.0	63.4	69.6
Georgians . . . . .	130.4	76.0	54.4	214.5	121.9	92.6
Azerbaijanians . . . . .	76.1	37.6	38.5	148.7	68.5	80.2
Lithuanians . . . . .	52.8	21.5	31.3	121.1	48.1	73.0
Moldavians . . . . .	20.7	6.8	13.9	52.6	20.5	32.1
Letts . . . . .	48.9	19.9	29.0	88.1	34.8	53.3
Kirghiz . . . . .	14.1	6.9	7.2	32.3	16.9	15.4
Tajiks . . . . .	17.5	7.6	9.9	38.4	19.4	19.0
Armenians . . . . .	108.1	62.2	45.9	182.1	100.5	81.6
Turkmens . . . . .	14.6	7.0	7.6	33.5	17.2	16.3
Estonians . . . . .	38.5	15.3	23.2	68.4	27.6	40.8
Abkhazians . . . . .	1.5	0.8	0.7	3.3	1.9	1.4
Balkars . . . . .	0.5	0.2	0.3	2.1	0.8	1.3
Bashkirs . . . . .	13.4	5.1	8.3	28.3	11.8	16.5
Buryats . . . . .	7.1	3.6	3.5	16.2	8.1	8.1
Ingushi . . . . .	0.4	0.1	0.3	1.8	0.8	1.0
Kabardinians . . . . .	3.0	1.3	1.7	7.9	3.4	4.5
Kalmyks . . . . .	0.8	0.3	0.5	3.6	1.4	2.2
Kara-Kalpaks . . . . .	3.1	1.3	1.8	6.4	3.1	3.3
Karelians . . . . .	4.1	1.0	3.1	7.1	2.0	5.1
Komi . . . . .	12.0	3.4	8.6	21.2	6.2	15.0
Mari . . . . .	6.3	1.9	4.4	11.7	4.3	7.4
Mordvinians . . . . .	15.1	4.8	10.3	27.9	9.0	18.9
Peoples of Daghestan . . . . .	11.3	4.6	6.7	33.9	13.4	20.5

Continued

	as of December 1, 1957			as of November 15, 1966		
	Total number of specialists	of whom		Total number of specialists	of whom	
		with a higher education	with a specialised secondary education		with a higher education	with a specialised secondary education
Ossets . . . . .	14.1	7.7	6.4	28.3	13.4	14.9
Tatars . . . . .	102.8	39.1	63.7	200.7	77.2	123.5
Tuvinians . . . . .	1.2 <sup>1</sup>	0.4	0.8	4.4	1.9	2.5
Udmurts . . . . .	10.6	3.3	7.3	18.8	6.4	12.4
Chechens . . . . .	0.8	0.4	0.4	4.5	1.7	2.8
Chuvashi . . . . .	29.4	11.1	18.3	49.6	18.2	31.4
Yakuts . . . . .	6.7	2.2	4.5	15.3	5.6	9.7
Adyghei . . . . .	2.6	0.8	1.8	5.0	2.2	2.8
Altaians . . . . .	1.3 <sup>1</sup>	0.5	0.8	2.8	1.2	1.6
Jews . . . . .	368.9	260.9	108.0	497.1	327.8	169.3
Karachais . . . . .	0.6	0.2	0.4	4.5	2.5	2.0
Khakassi . . . . .	1.1 <sup>1</sup>	0.4	0.7	2.3	0.9	1.4
Circassians . . . . .	0.6	0.3	0.3	1.7	0.9	0.8

In tsarist Russia there were practically no specialists with a higher education among many nationalities, for example, among the Uzbeks, Kazakhs, Kirghiz, Tajiks and Turkmens. In the U.S.S.R. all opportunities have been created for the growth of national specialists. At present, among specialists with a higher education engaged in the national economy there are people of all nationalities, including 89,000 Uzbeks, 63,000 Kazakhs, 17,000 Kirghiz, 19,000 Tajiks and 17,000 Turkmens.

<sup>1</sup> As of December 1, 1959.

*"Socialism has guaranteed the political and economic equality of women. As a result of the October Revolution they have become active participants in the new life. At the time of the war and during the building of socialism and communism the valiant Soviet women displayed and continue to display great courage, self-dedication and perseverance in their work. In all spheres of endeavour — in industry and agriculture, education and public health, in science and culture, in the upbringing of the new generation, and in the administration of the state — women are in the front ranks of the builders of communism."*

From the Resolution of the Central Committee of the C.P.S.U. on Preparations for the 50th Anniversary of the Great October Socialist Revolution

**AVERAGE ANNUAL NUMBER OF WOMEN EMPLOYED AS INDUSTRIAL, OFFICE AND OTHER WORKERS**

	Number of women employed as industrial, office and other workers (thousands)	Percentage of women in the total number of industrial, office and other workers		Number of women employed as industrial, office and other workers (thousands)	Percentage of women in the total number of industrial, office, and other workers
1928	2,795	24	1950	19,180	47
1940	13,190	39	1960	29,250	47
1945	15,920	56	1966	39,500	50

**PERCENTAGE OF WOMEN IN THE TOTAL NUMBER OF INDUSTRIAL, OFFICE AND OTHER WORKERS BY BRANCHES OF THE NATIONAL ECONOMY**

	1928	1940	1945	1960	1966
Percentage of women in the total number of industrial, office and other workers . . .	24	39	56	47	50
industry . . . . .	26	38	52	45	47
construction . . . . .	6	23	32	29	28
agriculture . . . . .	24	30	57	41	43
of whom in state farms and subsidiary agricultural enterprises . . . . .	45	34	61	43	44
transport . . . . .	7	21	40	24	24
communications . . . . .	28	48	70	64	66

Continued

	1928	1940	1945	1960	1966
trade, public catering, procurements, material and technical supplies . . . . .	19	44	69	66	73
public health . . . . .	63	76	85	85	85
education . . . . .	55	59	76	70	72
science and science services . . . . .	40	42	53	42	45
credit and insurance institutions . . . . .		41	71	68	74
state administration and economic management bodies, and in administration of co-operative and mass organisations	20	34	57	51	56

The number of women employed as industrial, office and other workers in the national economy in 1966 reached 39.5 million, as compared with 2.8 million in 1928. The share of women in the total number of industrial, office and other workers rose from 24 per cent in 1928 to 50 per cent in 1966.

### WOMEN EMPLOYED IN THE NATIONAL ECONOMY BY BRANCHES

(percentages)

	1928	1940	1945	1960	1966
Total number of women employed as industrial, office and other workers . . . . .	100	100	100	100	100
of whom in:					
industry . . . . .	41	37	35	34	33
construction . . . . .	2	3	3	5	4
agriculture . . . . .	14	6	10	10	10
of whom:					
at state farms and subsidiary agricultural enterprises . . . . .	6	5	8	9	10
transport and communications . . . . .	4	8	10	7	6
trade, public catering, procurements, material and technical supplies . . . . .	4	11	10	11	12
education, public health, science, and science services . . . . .	24	22	20	24	25
state administration and economic management bodies and in administration of co-operative and mass organisations; in credit and insurance institutions . . . . .	8	6	7	3	3
other branches . . . . .	3	7	5	6	7

In pre-revolutionary Russia, according to the 1897 census, 55 per cent of the gainfully employed women worked as domestic servants at the homes of capitalists, landowners and officials, 25 per cent were farm-hands at kulak farms and landowners' estates, only 13 per cent worked in factories and construction sites and 4 per cent in education and public health.

The Soviet Government created all conditions for the active participation of women in all branches of the national economy. In 1966 of the total number of women employed as industrial, office and other workers, 37 per cent were engaged in industry and construction and 25 per cent—in public health, education, science and science services.

**WOMEN SPECIALISTS WITH A HIGHER  
OR SPECIALISED SECONDARY EDUCATION  
IN THE NATIONAL ECONOMY**

	Total number of women with a higher or specialised secondary education	including	
		with a higher education	with a specialised secondary education

thousands

1928 . . . . .	151	65	86
1941, January 1 . . . . .	864	312	552
1960, December 1 . . . . .	5,189	1,865	3,324
1966, November 15 . . . . .	7,540	2,717	4,823

**As a percentage of the total number of specialists with a higher or specialised secondary education in the national economy**

1928 . . . . .	29	28	30
1941, January 1 . . . . .	36	34	37
1960, December 1 . . . . .	59	53	63
1966, November 15 . . . . .	58	52	63

In the U.S.S.R. higher and specialised secondary education is equally accessible to women and men. By the end of 1966 the number of women specialists with a higher or specialised secondary education in the country's economy increased 50 times as compared with 1928 and by November 15, 1966, it reached 7.5 million, or 58 per cent of the total of certified specialists.

In pre-revolutionary Russia very few women, chiefly from the privileged social estates, attended higher or specialised secondary schools.

**WOMEN SPECIALISTS WITH A HIGHER EDUCATION IN THE NATIONAL ECONOMY BY PROFESSIONS**

	Thousands			As a percentage of the total number of specialists of the given profession		
	1941, Jan. 1	1960, Dec. 1	1966, Nov. 15	1941, Jan. 1	1960, Dec. 1	1966, Nov. 15
<b>Total number of women specialists with a higher education employed in the national economy . . . . .</b>	<b>312</b>	<b>1,865</b>	<b>2,717</b>	<b>34</b>	<b>53</b>	<b>52</b>
of whom:						
trained in specialised higher educational establishments as engineers . . . . .	44	324	544	15	29	30
agronomists, zootechnicians and veterinary surgeons . . . . .	17	91	129	25	41	40
economists . . . . .	18	113	209	31	57	63
doctors (exclusive of dentists and stomatologists with a secondary medical education) . . . . .	85	302	375	60	75	72
teachers and other university graduates, librarians, cultural and educational workers . . . . .	144	901	1,332	49	65	68

**NUMBER OF WOMEN SPECIALISTS WITH A SPECIALISED SECONDARY EDUCATION IN THE NATIONAL ECONOMY BY PROFESSIONS**

	Thousands			As a percentage of the total number of specialists of the given profession		
	1957, Dec. 1	1960, Dec. 1	1966, Nov. 15	1957, Dec. 1	1960, Dec. 1	1966, Nov. 15
<b>Total number of women specialists with a specialised secondary education engaged in the national economy . . . . .</b>	<b>2,623</b>	<b>3,324</b>	<b>4,823</b>	<b>65</b>	<b>63</b>	<b>63</b>
of whom:						
trained in specialised secondary educational establishments as technicians . . . . .	503	706	1,197	39	36	38
agronomists, zootechnicians, veterinary surgeon's assistants . . . . .	119	150	229	41	42	46

	Thousands			As a percentage of the total number of specialists of the given profession		
	1957, Dec. 1	1960, Dec. 1	1966, Nov. 15	1957, Dec. 1	1960, Dec. 1	1966, Nov. 15
planning engineers and statisticians . . . . .	175	239	478	74	71	75
medical workers (including dentists and stomatologists) . . . . .	895	1,088	1,423	91	92	93
teachers, librarians and cultural and educational workers . . . . .	773	861	1,114	80	81	84

### TRAINING OF SKILLED WORKERS

The Communist Party and the Soviet Government have successfully coped with the task of providing skilled workers for the developing national economy at all stages of socialist construction.

After the Civil War and intervention there was a great shortage of skilled workers in the country. During these years necessary steps were taken to train workers of the required qualifications.

Of particular importance to the training of workers for industry was the decree of the Council of People's Commissars "On Compulsory Technical Vocational Training", signed by Lenin on July 29, 1920. The decree envisaged the organisation of short-term evening courses at enterprises.

During the first years after the revolution there was no unified system of training workers and of improving their skills. Workers were trained at the time at technical vocational schools, production shops and various courses. In the main, however, workers were trained individually at the bench.

At the end of 1920 factory schools were opened at enterprises, which for many years played a great role in training young skilled workers. Only between 1929 and 1940 these factory schools trained over 2.3 million skilled workers. Later on, when vocational technical schools were set up and part of the factory schools were transferred to the system of technical vocational training in 1960, the number of workers trained at factory schools decreased.

In 1940 a wide network of technical vocational schools was set up under the state labour reserves system to provide skilled workers for industry, construction and transport. It embraced trade and railway schools, factory schools and, later on, other types of educational establishments. From 1953 onwards the technical vocational schools began to train mechanics for agriculture. Up to that period they had been trained only at schools and courses under the Ministry of Agriculture. In 1954 technical schools for training junior technical personnel and skilled workers were founded for graduates of general secondary schools. At present the former types of technical vocational schools have been reorganised into urban and rural technical vocational schools.

All in all technical vocational schools have trained 17 million workers (for the period from 1940 to 1966).

At present there are 4,790 technical vocational schools in the country under the State Committee of the Council of Ministers of the U.S.S.R. for Technical Vocational Training, in which about 2 million youths are undergoing training.

Training of specialists is organised on a mass scale directly at factories by individual or group training or through a system of courses organised by enterprises.

Annually these forms of training embrace several millions. Thus, in 1966, 4 million industrial and office workers acquired new professions and 10 million improved their skills at courses organised by enterprises, institutions and organisations.

In addition, collective farms train many specialists. In 1966 over a million collective farmers acquired new professions or improved skills.

Training at enterprises, institutions and organisations, as well as at technical vocational schools is free of charge. Students of technical vocational schools are supported by the state during the period of training, industrial, office and other workers who are enrolled as full-time students draw their wages or in a number of cases receive scholarships.

**TRAINING OF WORKERS  
AT TECHNICAL VOCATIONAL SCHOOLS**  
(thousands)

	1941- 45	1946- 50	1951- 55	1956- 60	1961- 65	1966
Total trainees of technical vocational schools . . . . .	2,475	3,392	2,364	3,285	4,521	1,063
of whom at:						
trade, railway, mining-industry schools . . . . .	685	1,024	718	529	392	—
industrial training schools, builders' and miners' schools . . . .	1,790	2,368	991	722	70	—
agricultural mechanisation schools and trade schools for agricultural mechanisation . . . . .	—	—	628	1,409	930	—
technical schools . . . . .	—	—	27	470	329	—
builders' schools . . . . .	—	—	—	126	342	—
factory schools . . . . .	—	—	—	29	127	—
urban technical vocational schools	—	—	—	—	1,067	556
rural technical vocational schools	—	—	—	—	873	361
at evening (shift) technical vocational schools and their branches . . . . .	—	—	—	—	391	146

**TRAINING AND EXTENSION COURSES  
FOR INDUSTRIAL, OFFICE AND OTHER WORKERS  
AT ENTERPRISES, INSTITUTIONS AND ORGANISATIONS <sup>1</sup>**  
(thousands)

	1940	1946	1960	1966
<b>Training of cadres</b>				
Total number of industrial, office and other workers trained in new occupations . . . . .	1,950	2,939	2,972	3,967
of whom:				
industrial workers . . . . .	1,606	2,464	2,807	3,713
<b>Extension courses</b>				
Total number of industrial, office and other workers who improved their skills . . . . .	1,655	4,036	6,793	10,091
of whom:				
industrial workers . . . . .	1,472	2,871	5,358	7,662

<sup>1</sup> The figures do not include the personnel trained at collective farms and by on-the-job industrial training schools. In 1966 over 1,000,000 collective farmers acquired new professions or raised their skills. The on-the-job industrial training schools which were not transferred to the system of technical vocational education trained 76,000 young skilled workers during 1966.

**TRAINING OF MACHINE-OPERATORS FOR AGRICULTURE <sup>1</sup>**  
(thousands)

	1950	1960	1966
<b>Total number of trainees . . . . .</b>	<b>513</b>	<b>534</b>	<b>714</b>
of whom:			
tractor drivers and tractor machinists . . .	329	449	505
harvester combine operators and mechanics .	46	18	73
lorry drivers . . . . .	21	41 <sup>2</sup>	58

The socialist reorganisation of agriculture brought a radical change in the peasants' working conditions. Agricultural labour is to a growing extent becoming a variety of industrial labour. In collective and state farms there are many skilled machine-operators trained at technical vocational schools or directly at collective farms, state farms and other agricultural enterprises.

<sup>1</sup> The figures include machine-operators trained at collective farms, state farms and other agricultural enterprises as well as at technical vocational schools.

<sup>2</sup> 1962.

**GROWTH OF NATIONAL INCOME**  
(‘000 million rubles)

	In real prices	In comparable prices
1960 . . . . .	145.0	147.9
1961 . . . . .	152.9	157.9
1962 . . . . .	164.6	166.9
1963 . . . . .	168.8	173.7
1964 . . . . .	181.3	189.8
1965 . . . . .	193.4	202.9
1966 . . . . .	205.3	218.1

**GROWTH OF REAL INCOMES  
OF THE POPULATION OF THE U.S.S.R.**  
(1966 compared with 1913, percentages)

**Growth of real incomes of workers**

Real wages of industrial and construction workers minus taxes and pensions, allowances, free tuition, free medical services and other state benefits (per gainfully employed) . . . . .	360
Ditto, with allowance for the abolition of unemployment . . . . .	410
Ditto, with allowance for reduced working hours . . . . .	560

**Growth of real incomes of peasants<sup>1</sup>**

Income in cash and kind derived by working peasants from the commonly-owned and from individual subsidiary farming minus taxes and duties (per working peasant) . . . . .	540
Real incomes of working peasants from agriculture (with allowance for free tuition, free medical services, pensions grants and other state allowances and benefits) . . . . .	750

The growth of real incomes of workers in the U.S.S.R. over those of the pre-revolutionary period was furthered by a number of factors. Wages have risen much more rapidly than prices and utility costs. Rent and utility costs, which formerly made up over 20 per cent and in some cases even over 30 per cent of the workers' budget, have now been reduced by 83 to 80 per cent. In addition to individual wages,

<sup>1</sup> Kulaks (rich peasants) have been excluded from the figure given for the pre-revolutionary peasantry.

workers receive considerable sums from social funds in the form of social insurance, grants, pensions, scholarships, paid vacations, free education, free medical services and so on. In pre-revolutionary Russia sums of money paid out to workers over and above their wages as well as the funds allocated for the free education of and medical aid to their families were negligible.

It is estimated that all allowances and benefits paid out to workers in industry and construction over and above their individual wages were approximately 30 times greater in 1966 than in 1913 (in comparable prices).

In computing real incomes account has been taken of the fact that unemployment has been completely eliminated in the U.S.S.R. It should also be borne in mind that the working day in the U.S.S.R. has been much reduced compared with pre-revolutionary Russia, and that therefore, a worker receives a higher wage per hour.

The living standard of working peasants was extremely low before the revolution. Low as it was the living standard of urban workers was still considerably higher than that of the labouring peasants.

In pre-revolutionary Russia enormous sums of all kinds of taxes were levied upon the working peasants (such as land taxes, ground rent, insurance fees, various other taxes and duties), totalling nearly 20 per cent of their agricultural incomes. Today taxes and levies paid by the collective farmers add up to about 3 per cent of their incomes from farming.

The working day of peasants before the revolution averaged about 11 hours and in summer as much as 16 hours.

At present extensive mechanisation of agriculture and the introduction of two shift work in many processes have made it possible to shorten the working day of collective farmers. In accordance with the Rules of the Agricultural Artel the working day in collective farms is fixed by a general meeting of members for every agricultural season.

Collective farmers now work an average of 8 hours per day taken over the year on the commonly-owned sector of the farm.

The cultural level of the pre-revolutionary village was appallingly low. The overwhelming majority of the peasants was illiterate. Not many peasants could afford to send their children even to primary schools. The situation was even worse as regards medical services.

It is estimated that allowances and benefits drawn by collective-farm peasants from social consumption funds, including pensions, grants to mothers of large families, free education, free medical services and other types of social and cultural services, were approximately 50 times greater in 1966 per working peasant than in 1913 (in comparable prices). Of great importance to the growth of the peasants' real incomes was the introduction of state pensions for collective farmers and guaranteed payment for their work.

**EXPENDITURE ON SOCIAL AND CULTURAL SERVICES  
FROM THE STATE BUDGET AND OTHER SOURCES**  
( '000 million rubles)

	1940	1946	1960	1966
<b>Expenditure on social and cultural services</b> <sup>1</sup> . . .	4.7	8.7	29.3	48.4
of which:				
enlightenment . . . . .	2.7	4.3	13.6	24.5
thereof:				
education . . . . .	2.0	3.3	8.5	14.8
science . . . . .	0.3	0.6	3.9	7.5
cultural and educational work, art, etc. . . . .	0.4	0.4	1.2	2.2
public health and physical culture . . . . .	1.1	1.6	5.7	8.3
social insurance and social maintenance . . . . .	0.9	2.8	10.0	15.6
thereof: pensions . . . . .	0.3	1.8	7.2	11.8

<sup>1</sup> Including capital investments.

**ALLOWANCES AND BENEFITS RECEIVED BY THE POPULATION  
OUT OF PUBLIC CONSUMPTION FUNDS**

	1940	1960	1966	1967 (plan)
<b>Allowances and benefits</b> — total '000 mill. rubles	4.6	27.3	45.5	48.7
ditto, per capita of population — rubles . . . . .	24	127	195	207

Expenditure on social and cultural measures is financed by allocations from the state budget, state, co-operative, trade union and other public enterprises and organisations and also by funds contributed by the collective farms. In 1966 this expenditure increased by 930 per cent over the 1940 figure. Accordingly, expenditure on education increased 800 per cent, public health and physical culture 650 per cent and social insurance and maintenance 1,600 per cent.

An important indicator of the rising living standard of the population is the growth of various allowances and benefits being received by the population from social consumption funds. The state allocates increasing sums for free education, scholarships, the upkeep of kindergartens and crèches, free medical services, free or cut-rate accommodation at health and holiday homes, pensions and grants, the maintenance of houses for the aged, etc.

The population derives considerable benefits from low rents, which cover less than 30 per cent of the total expenditure on the maintenance of dwelling houses, over 70 per cent being paid by the state.

In 1967 allowances and benefits totalled 48,700 million rubles; they increased by 960 per cent as compared with 1940, and by 760 per cent in terms of per capita of the population.

**HOUSING CONSTRUCTION IN THE U.S.S.R. <sup>1</sup>**  
(million sq m of the total useful floor-space)

	Built in towns and countryside by state and co-operative enterprises and organisations (excluding those built in collective farms), and also by industrial, office and other workers at their expense and with the help of state credits	of which:			Total useful floor-space of dwelling houses built by state and co-operative enterprises and organisations, collective farms and population
		by state and co-operative enterprises and organisations and by housing co-operatives	by industrial, office and other workers at their expense and with the help of state credits	Built in collective farms (by collective farms, collective farmers and by rural intellectuals)	
<b>Total for 1918-67</b> . . . . .	<b>1,438.4</b>	<b>1,021.5</b>	<b>416.9</b>	<b>695.2</b>	<b>2,133.6</b>
1918-28 . . . . .	51.2	23.7	27.5	151.8	203.0
First Five-Year Plan (1929-32)	40.2	32.6	7.6	16.7	56.9
Second Five-Year Plan (1933-37)	44.3	37.2	7.1	23.0	67.3
Three and a half years of Third Five-Year Plan (1938-first half of 1941) . . . . .	45.2	34.4	10.8	36.4	81.6
Four and a half years (from July 1, 1941 to January 1, 1946) <sup>2</sup>	54.9	41.3	13.6	47.6	102.5
Fourth Five-Year Plan (1946-50) <sup>2</sup>	117.1	72.4	44.7	83.8	200.9
Fifth Five-Year Plan (1951-55)	178.1	113.0	65.1	62.4	240.5
Three years of Sixth Five-Year Plan (1956-58)	174.3	114.7	59.6	75.0	249.3
Seven-Year Plan (1959-65) . . . . .	557.9	409.7	148.2	157.2	715.1
including five last years (1961-65) . . . . .	394.4	300.4	94.0	95.9	490.3
1961 . . . . .	80.2	56.6	23.6	22.5	102.7
1962 . . . . .	80.5	59.8	20.7	19.5	100.0
1963 . . . . .	79.3	61.9	17.4	18.3	97.6
1964 . . . . .	75.1	58.9	16.2	17.6	92.7
1965 . . . . .	79.3	63.2	16.1	18.0	97.3
1966 . . . . .	81.8	65.9	15.9	20.3	102.1
1967 (estimated) . . . . .	93.4	76.6	16.8	21.0	114.4

<sup>1</sup> The figures have been corrected as compared with those appearing in earlier publications:

In all previous publications (up to 1956) dwelling houses built by workers and office employees residing in the countryside were included in the dwelling houses built in collective farms. In the present report the figures for the dwelling houses built by the workers and office employees residing in the countryside for all years have been included in the total number of houses built by industrial, office and other workers; the figures on housing construction in collective farms represent not the number of houses but the total (useful) floor-space in sq m.

<sup>2</sup> Including rehabilitation.

**NUMBER OF FLATS AND THEIR TOTAL  
(useful) FLOOR-SPACE**

	Built by state and co-operative enterprises and organisations, collective farms and the population	
	'000 flats	million sq m
1950 . . . . .	1,073	40.4
Fifth Five-Year Plan (1951-55) . . . . .	6,052	240.5
Three years of Sixth Five-Year Plan (1956-58) . . . . .	5,990	249.3
Seven-Year Plan (1959-65) . . . . .	16,853	715.1
including five last years (1961-65) . . . . .	11,551	490.3
1961 . . . . .	2,435	102.7
1962 . . . . .	2,383	100.0
1963 . . . . .	2,322	97.6
1964 . . . . .	2,184	92.7
1965 . . . . .	2,227	97.3
1966 . . . . .	2,291	102.1
1967 (estimated) . . . . .	2,560	114.4

**NUMBER OF FLATS BUILT IN DIFFERENT COUNTRIES  
(thousands)**

	1950	1960	1965	1966
U.S.S.R. . . . .	1,073	2,591	2,227	2,291
Austria . . . . .	46.2	38.9	44.0	
Belgium . . . . .	44.7	48.9	56.4	
Britain . . . . .	214.7	307.3	398.5	402.5
Canada . . . . .	89.0	123.8	153.0	162.2
Denmark . . . . .	20.4	28.0	40.5	39.6
Federal Republic of Germany . . . . .	360.0	550.8	574.1	586.2
Finland . . . . .	26.0	31.5	36.7	36.0
France . . . . .	70.6	316.6	411.6	414.4
Italy . . . . .	74.1	290.6	385.0	288.1
Japan . . . . .	...	500.8	920.6	934.2
Netherlands . . . . .	54.8	84.6	115.6	122.1
Norway . . . . .	22.4	28.4	29.9	
Spain . . . . .	53.4	128.4	283.3	270.4
Sweden . . . . .	44.9	68.3	96.7	89.4
Switzerland . . . . .	25.0	50.5	59.9	
U.S.A. . . . .	2,080	1,295	1,541	1,252

**NUMBER OF FLATS PER 1,000 OF THE POPULATION  
IN DIFFERENT COUNTRIES**

	1950	1960	1965	1966
U.S.S.R. . . . .	6.0	12.1	9.7	9.8
Austria . . . . .	6.7	5.5	6.1	
Belgium . . . . .	5.2	5.3	6.0	
Britain . . . . .	4.5	5.9	7.3	7.3
Canada . . . . .	6.5	6.9	7.8	8.1
Denmark . . . . .	4.8	6.1	8.5	8.3
Federal Republic of Germany . . . . .	7.5	10.5	10.1	10.2
Finland . . . . .	6.5	7.1	7.9	7.8
France . . . . .	1.7	6.9	8.4	8.4
Italy . . . . .	1.6	5.9	7.5	5.5
Japan . . . . .	...	5.3	9.4	9.4
Netherlands . . . . .	5.4	7.3	9.4	9.8
Norway . . . . .	6.9	7.5	8.0	
Spain . . . . .	1.9	4.2	9.0	8.5
Sweden . . . . .	6.4	9.1	12.5	11.4
Switzerland . . . . .	5.3	9.4	10.2	
U.S.A. . . . .	13.7	7.2	7.9	6.4

**NUMBER OF INDIVIDUALS WHO RECEIVED NEW HOUSING  
(millions)**

	Total number of individuals who received new housing	of whom	
		in new houses built by state and co-oper- ative enterprises, collective farms and the population	in old state-owned houses
<b>Total for 1950-60</b>	<b>155.4</b>	<b>119.4</b>	<b>36.0</b>
1950 . . . . .	5.3	4.0	1.3
1951 . . . . .	5.5	4.1	1.4
1952 . . . . .	5.4	4.0	1.4
1953 . . . . .	6.1	4.4	1.7
1954 . . . . .	6.5	4.7	1.8
1955 . . . . .	7.1	5.3	1.8
1956 . . . . .	7.8	5.7	2.1
1957 . . . . .	10.1	7.6	2.5
1958 . . . . .	11.5	8.8	2.7
1959 . . . . .	12.6	10.0	2.6
1960 . . . . .	12.0	9.6	2.4
1961 . . . . .	11.3	9.0	2.3
1962 . . . . .	11.2	8.8	2.4
1963 . . . . .	11.0	8.6	2.4
1964 . . . . .	10.3	8.1	2.2
1965 . . . . .	10.8	8.2	2.6
1966 . . . . .	10.9	8.5	2.4

The U.S.S.R. holds the first place in the world as regards the scale and rate of housing development. Of late 10-11 million people move into new houses every year. For the past 10 years nearly half of the country's population has moved to new or better flats and houses.

**HOUSING FACILITIES IN TOWNS AND URBAN-TYPE SETTLEMENTS**  
(end-of-year figures; million sq m of total [useful] floor-space)

	1913	1926	1940	1950	1960	1966
<b>Total housing facilities . . . . .</b>	<b>180</b>	<b>216</b>	<b>421</b>	<b>513</b>	<b>958</b>	<b>1,290</b>
of which:						
state- or commonly-owned . . . . .	—	103	267	340	583	854
privately-owned by citizens (figures for 1913 include capitalist private property and houses of enterprises) . . . . .	180	113	154	173	375	436

The Soviet state inherited very meagre and dilapidated housing facilities from tsarist Russia, which comprised mainly one- or two-storied wooden dwelling houses with stove heating. In pre-revolutionary Russia only 215 towns had water supply and 23 towns sewage systems. There was electric lighting only in the flats of the bourgeoisie, and only 178 towns had electric power supply systems. Workers' families, generally, lived in houses without electric lighting, running water and sewage.

Assuming power the Soviet Government immediately directed all its efforts at the speediest restoration of the housing facilities and municipal services.

The Soviet Government annually allots large sums of money to housing development, which has assumed a particularly wide scale in the post-war years. These measures have considerably improved the living conditions of the urban population. Thus, in 1913 the total floor-space per resident in cities was 6.3 sq m, in 1950 it was 7 sq m and by the end of 1966—10 sq m.

The housing facilities have also undergone a radical change in quality. Dwelling houses are built mainly of durable materials—stone, brick, small and big prefabricated blocks.

Since the war dwelling houses with modern conveniences are being built. For example, 88 per cent of the housing built between 1962 and 1965 has running water, sewage and central heating. Almost 100 per cent of the housing facilities in towns have electric lighting.

**ANNUAL CONSUMPTION OF FOODSTUFFS**  
(kilograms per capita)

	1913	1950	1960	1966
Meat and fats (including poultry and unprocessed by-products) . . . . .	29	26	40	43
Fish and fish products . . . . .	6.7	7.0	9.9	12.9
Milk and dairy products in terms of milk . . . . .	154	172	240	259
Eggs . . . . .	48	60	118	130
Flour products (bread in terms of flour, flour, cereals, legumes, macaroni products) . . . . .	200	172	164	154
Potatoes . . . . .	114	241	143	136
Vegetables and melons . . . . .	40	51	70	72
Sugar . . . . .	8.1	11.6	28.0	35.3

In 1966 compared with 1913 the consumption of meat and meat products increased by 50 per cent, fish and fish products by 90 per cent, milk and dairy products by 70 per cent, eggs by 170 per cent, sugar by 340 per cent. It should be borne in mind, that in 1913 the food consumption of the working people was far below the average for the whole population. Thus, the average per capita consumption of meat by the working population was about 20 kg, of milk—about 120 kg a year.

**ANNUAL CONSUMPTION OF STAPLE CONSUMER GOODS**  
(per capita)

	1913	1950	1960	1966
Textiles (exclusive of textiles used for industrial purposes), total—sq m . . . . .	13.40	16.47	26.06	27.1
of which:				
cotton fabrics . . . . .	11.58	13.92	19.21	19.9
woollen fabrics . . . . .	0.87	1.26	2.19	2.3
silk fabrics . . . . .	0.24	0.55	3.41	3.6
linen fabrics . . . . .	0.71	0.74	1.25	1.3
Knitted outerwear—pcs . . . . .	...	0.26	0.57	1.0
Knitted underwear—pcs . . . . .	...	0.83	2.32	3.6
Hosiery (socks and stockings)—pairs . . . . .	...	2.63	4.90	5.5
Leather footwear—pairs . . . . .	0.43	1.13	1.86	2.5
Soap and detergents—kg . . . . .	1.2	3.99	6.75	7.0

In 1966 the per capita consumption of textiles increased by 110 per cent as compared with 1913, of woollen fabrics by 160 per cent, of silk fabrics 15 times. The per capita consumption of leather footwear was 2.5 pairs in 1966 as compared with 0.43 in 1913.

In 1913 the per capita consumption of the working people was far below the average consumption. Therefore the increase in the working people's consumption of staple consumer goods in Soviet times is even higher than indicated.

**CONSUMER DURABLE SALES**  
(thousand pieces)

	1913	1928	1940	1945	1960	1966
Clocks and watches . . . . .	700	900	2,500	336	22,326	23,789
of which watches . . . . .	—	—	188	66	13,172	11,988
TV sets . . . . .	—	—	0.3	—	1,488	3,973
Radio sets and radiograms . . . . .	—	—	156	13.9	4,179	4,768
Photo cameras . . . . .	16	—	355	—	1,506	1,157
Bicycles, motorcycles and mopeds . . . . .	29	34	200	23.8	3,000	3,962
Motorcycles and scooters . . . . .	0.1	—	7	4.7	501	738
Pianos and grand pianos . . . . .	26	0.1	10.1	0.7	91	165
Sewing machines . . . . .	272	286	175	—	3,337	1,488
Household refrigerators . . . . .	—	—	—	0.3	518	1,948
Washing machines . . . . .	—	—	—	—	907	3,561
Vacuum cleaners . . . . .	—	—	—	1.1	417	721

One of the basic indicators of the people's rising living standard is the growth of consumer durable sales. In 1966 the Soviet population bought about 24 million watches (the 1913 figure being only 0.7 million), about 4 million bicycles, motorcycles and mopeds (in 1913 the figure was 29,000), 4.8 million radio sets and radiograms and 4 million TV sets.

The production of domestic machines and appliances is increasing. In 1966 about 2 million refrigerators and 3.6 million washing machines were sold to the population.

**RETAIL TRADE TURNOVER**  
**OF THE STATE AND CO-OPERATIVES**

	Total volume of trade turnover in 1966 prices ('000 mill. rubles)	Retail trade turnover	
		as a percentage of 1928	as a percentage of 1940
1928	10.5	100	
1932	13.9	134	
1937	20.8	199	
1940	24.2	233	100
1945	10.8	104	45
1950	26.8	257	110
1955	50.6	484	208
1958	66.5	637	274
1960	78.5	758	326
1965	103.9	1,012	435
1966	113.0	1,099	473

As compared with 1928 retail trade turnover of the state and co-operatives increased eleven-fold. In 1928 private trade (subsequently abolished) comprised 24 per cent of the total retail trade turnover. Besides, in 1928 agricultural products sold by peasants on the open market were still important in supplying the population. The present volume of the trade by collective farms comprises 89 per cent of the total volume of the peasant market trade in 1928.

In 1966, as compared with 1928, the total volume of goods sold to the population through all trade channels increased by 670 per cent.

**SHARE OF THE STATE, CO-OPERATIVES AND COLLECTIVE  
FARMS IN THE TOTAL RETAIL TRADE TURNOVER**  
(as a percentage of the total)

	Total	of which	
		state and co-operative trade	collective-farm trade
<b>Total volume of retail trade turnover</b>			
1932 . . . . .	100	83.5	16.5
1940 . . . . .	100	85.7	14.3
1945 . . . . .	100	54.1	45.9
1950 . . . . .	100	88.0	12.0
1960 . . . . .	100	95.5	4.5
1966 . . . . .	100	96.9	3.1
<b>Total volume of foodstuffs sold . . . . .</b>			
1932 . . . . .	100	74.2	25.8
1940 . . . . .	100	79.8	20.2
1945 . . . . .	100	49.1	50.9
1950 . . . . .	100	81.9	18.1
1960 . . . . .	100	92.6	7.4
1966 . . . . .	100	95.0	5.0
<b>Total volume of foodstuffs sold by state, co-operative and collective-farm trading enterprises</b>			
1932 . . . . .	100	53.1	46.9
1940 . . . . .	100	69.8	30.2
1945 . . . . .	100	24.4	75.6
1950 . . . . .	100	71.3	28.7
1960 . . . . .	100	86.1	13.9
1966 . . . . .	100	90.3	9.7

As the absolute volume of products sold on the collective-farm market increased, the share of collective-farm trade in the total trade turnover decreased steadily, especially after 1950. In 1932 sales on the collective-farm market of food products such as meat, milk, eggs, potatoes, vegetables, fruit, etc., which are also sold by the state and co-operative enterprises comprised 47 per cent of the total; in 1966 the figure was only 10 per cent. Prices on the collective-farm market are higher than state prices, consequently the drop of the share of the collective-farm trade in the total sales tends to raise the working people's real wages.

## DEVELOPMENT OF PUBLIC CATERING

	1928	1940	1960	1966
Number of public catering establishments (end-of-year figures)—'000 . . . . .	14.6	87.6	147.2	200.5
Public catering turnover:				
in 1966 prices—'000 mill. rubles . .	0.5	3.4	7.3	10.7
in comparable prices as a percentage of 1928 . . . . .	100	638	1,359	1,947
Share of public catering in total sale of foodstuffs—percentage . . . . .	7.4	20.7	15.7	15.9

Public catering in the U.S.S.R. is one of the main factors helping to free women from household chores. About 48 million Soviet people avail themselves of the services of public catering establishments.

## DEVELOPMENT OF TRADING NETWORK

	1928	1940	1960	1966
Shops and stalls (end-of-year figures)—'000 . .	155.2	407.2	567.3	654.0
in towns and urban-type settlements . . .	67.8	153.4	278.3	328.0
in rural localities . . . . .	87.4	253.8	289.0	326.0
Number of retail outlets—'000 . . . . .	230.7	590.0	976.7	1,322.5
in towns and urban-type settlements . . .	131.9	305.9	621.5	873.1
in rural localities . . . . .	98.8	284.1	355.2	449.4
Number of retail outlets per 10,000 of the population . . . . .	15	30	45	56
in towns and urban-type settlements . . .	46	47	57	68
in rural localities . . . . .	8	22	33	42
Average number of workers per trading establishment . . . . .	2.3	3.5	3.9	4.8

**NETWORK OF STATE-OWNED SPECIALISED  
AND DEPARTMENT STORES**

(end-of-year figures)

	1935	1940	1960	1966
<b>Total number of state-owned shops</b>	<b>96,967</b>	<b>101,034</b>	<b>154,800</b>	<b>185,905</b>
<b>Specialised and department stores</b>	<b>34,817</b>	<b>44,673</b>	<b>72,542</b>	<b>100,580</b>
Number of specialised and department stores as a percentage of the total . . . . .	35.9	44.2	46.9	54.1
<b>Total number of specialised and department stores includes:</b>				
specialised food stores . . . . .	18,633	21,815	31,484	43,345
for the following products:				
bread and flour products . . . . .	9,935	6,879	9,186	11,813
meat, meat and fish, meat, fish and vegetables, fish . . . . .	668	1,800	3,904	4,658
fruit and vegetables and canned goods . . . . .	572	1,893	4,665	6,758
groceries and provisions . . . . .	902	4,361	8,615	12,958
dairy products . . . . .	314	605	2,441	3,218
dietary and baby foods . . . . .	...	...	93	189
specialised stores for non-foodstuffs selling:	16,040	22,568	40,708	56,533
textiles . . . . .	393	212	1,439	2,142
footwear . . . . .	265	205	1,600	2,544
outerwear and underwear . . . . .	} 573	173	1,569	2,665
fur and head gear . . . . .		386	259	273
haberdashery, knitwear and perfumery . . . . .	221	1,317	2,450	4,029
children's goods . . . . .	63	...	596	892
books . . . . .	2,071	2,446	4,352	5,978
crocery and hardware . . . . .	1,229	2,042	4,511	5,874
furniture . . . . .	437	719	1,244	2,034
building materials . . . . .	464	...	862	1,256
medicines, sanitary and hygiene goods . . . . .	6,557	11,111	15,290	20,460
department stores . . . . .	144	290	350	702

The network of the specialised and department stores, which are best suited to satisfy the consumer demand, has greatly extended; there has been a particularly steep increase in the number of shops selling children's goods, clothes, footwear, books and of chemist's shops.

**SPECIALISATION OF CONSUMER CO-OPERATIVE SHOPS**  
(end-of-year figures)

	1936	1940	1960	1966
Total number of consumer co-operative shops . . . . .	114,017	197,600	254,055	287,642
of which specialised and department stores . . . . .	10,476	31,150	95,972	142,685
Specialised and department stores as a percentage of the total . . . . .	9.2	15.8	37.8	49.6

In 1936, following the delimitation of the sphere of activity of state and co-operative trading enterprises, the consumer co-operatives became the main trading system in rural areas. Today, as compared with 1936, their trading network has extended by 150 per cent, and owing to the growing consumer demand the number of specialised stores has increased 13.6 times. A broad network of specialised stores selling textiles, clothes and footwear has been set up.

**NUMBER OF SHAREHOLDERS IN CONSUMER CO-OPERATIVES**  
(end-of-year figures)

	1913	1940	1950	1960	1966
Number of consumer co-operatives—'000 . . . . .	10.1	32.4	26.0	17.6	16.5
Number of shareholders—mill. . . . .	1.4	44.1	32.4	42.3	54.7

Under socialism the consumer co-operatives are socialist enterprises based on collective public property. In implementing Lenin's co-operative plan the Communist Party attaches great importance to the development of consumer co-operatives. Trade in rural areas is carried on by consumer co-operatives and accounts for 30 per cent of the total trade turnover of the state and co-operatives. In 1966 the co-operatives had 54.7 million shareholders, as compared with 1.4 million in 1913. The number of co-operatives has also grown. In recent years the number of co-operatives has decreased because of the merger of co-operatives by decision of the shareholders.

**DEPOSITS BY THE POPULATION IN SAVINGS BANKS**  
(end-of-year figures)

	1940	1946	1960	1966
Number of savings banks—'000 . . . .	41.6	32.1	66.5	75.1
in towns and urban-type settle- ments . . . . .	10.3	7.7	19.5	22.8
in rural localities . . . . .	31.3	24.4	47.0	52.3
Total deposits—mill. rubles . . . .	725	1,221	10,909	22,915
in towns and urban-type settle- ments . . . . .	576	1,117	8,728	16,963
in rural localities . . . . .	149	104	2,181	5,952
Average deposit (rubles) . . . . .	42	195	209	377
in towns and urban-type settle- ments . . . . .	50	253	228	380
in rural localities . . . . .	26	58	157	370
Deposits per capita (rubles) . . . . .	4	7	50	98

The total deposits made by the population in 1966 increased 32 times as compared with 1940, the number of depositors 3.5 times and the average deposit nine times.

Deposits grew particularly rapidly during the post-war period owing to the increase in the real wages of industrial, office and other workers and the higher incomes of collective farmers. In 1966, as compared with 1960, the total deposits doubled while the average deposit rose by 80 per cent. Deposits of the rural population grew faster than those of the urban population. Thus in 1966, the average deposit in rural localities exceeded the 1960 average by 140 per cent, in towns by 70 per cent.

*"The socialist state is the only state which undertakes to protect and continuously improve the health of the whole population."*

Programme of the C.P.S.U.

**NUMBER OF DOCTORS AND HOSPITAL BEDS**  
(end-of-year figures)

	1913	1940	1960	1966
Number of doctors of all specialities (excluding military doctors)—thousands . . . . .	28.1	155.3	431.7	577.7
of whom:				
doctors excluding stomatologists and dentists . . . . .	23.2	134.9	385.4	503.3
stomatologists . . . . .	—	6.8	16.2	28.3
dentists . . . . .	4.9	13.6	30.1	46.1
Number of doctors per 10,000 of the population . . . . .	1.8	7.9	20.0	24.6
Number of hospital beds (excluding military hospitals)—'000 . . . . .	207.6	790.9	1,739.2	2,321.0
Number of hospital beds per 10,000 of the population . . . . .	13	40	80	99

During the Soviet years a large network of medical institutions has grown in the country. There has been a considerable growth in the number of doctors and hospital beds. By the end of 1967 the number of doctors will exceed 600 thousand and the number of hospital beds 2.4 million, i.e., there will be 25 doctors of all specialities and more than 100 beds per 10 thousand of the population.

In the U.S.S.R. medical service is free of charge. Industrial, office and other workers in case of illness besides free medical treatment get sick benefits which reach 90 per cent of their monthly wages. In case of temporary disablement due to injuries received at work or professional diseases the allowances are equal to their monthly wages.

**NUMBER OF DOCTORS IN DIFFERENT COUNTRIES**  
(excluding servicemen)

		Number of doctors of all specialities	
		'000	per 10,000 of the population
U.S.S.R. . . . .	1966	577.7	24.6
R.S.F.S.R. . . . .		328.3	25.8
Ukrainian S.S.R. . . . .		114.0	24.8
Byelorussian S.S.R. . . . .		19.8	22.6
Uzbek S.S.R. . . . .		19.5	17.9
Kazakh S.S.R. . . . .		23.4	18.9
Georgian S.S.R. . . . .		16.4	35.5
Azerbaijan S.S.R. . . . .		11.6	24.1
Lithuanian S.S.R. . . . .		7.0	23.1
Moldavian S.S.R. . . . .		6.3	18.5
Latvian S.S.R. . . . .		7.5	32.6
Kirghiz S.S.R. . . . .		5.3	19.4
Tajik S.S.R. . . . .		4.1	15.4
Armenian S.S.R. . . . .		6.3	28.1
Turkmen S.S.R. . . . .		4.2	21.4
Estonian S.S.R. . . . .		4.0	30.7
Britain . . . . .	1963	(79.1)	(14.7)
Federal Republic of Germany . . . . .	1965	110.4	19.3
France . . . . .	1964	75.2	15.4
India . . . . .	1961	83.3	1.9
Iran . . . . .	1964	8.4	3.7
Italy . . . . .	1961	81.2	16.3
Japan . . . . .	1964	139.6	14.3
Pakistan . . . . .	1960	8.7	0.9
Turkey . . . . .	1963	10.1	3.3
U.S.A. . . . .	1964	360.3	18.6

There are over 2 million doctors in the world, including 578,000 in the U.S.S.R., which account for a quarter of the total.

*The U.S.S.R. is a country with a low mortality rate.*

### BIRTH-RATE, DEATH-RATE AND NATURAL INCREMENT OF POPULATION

Years	per thousand of the population			Mortality of infants under one year of age per thousand births
	births	deaths	natural increment	
1913 . . . . .				
within the present frontiers of the U.S.S.R. . . . .	45.5	29.1	16.4	269
within the frontiers prior to September 17, 1939 . . . . .	47.0	30.2	16.8	273
1926 . . . . .	44.0	20.3	23.7	174
1940 . . . . .	31.2	18.0	13.2	182
1946 . . . . .	23.8	10.8	13.0	87
1950 . . . . .	26.7	9.7	17.0	81
1955 . . . . .	25.7	8.2	17.5	60
1960 . . . . .	24.9	7.1	17.8	35
1964 . . . . .	19.6	6.9	12.7	29
1965 . . . . .	18.4	7.3	11.1	27
1966 . . . . .	18.2	7.3	10.9	26

Pre-revolutionary Russia had a higher death-rate than most European countries, the U.S.A. and Japan. In 1913 the death-rate in Russia was 29.1 per thousand of the population. Infant mortality was particularly high. Nearly two million children under one year of age died annually, which comprised a quarter of the total number of the new-born.

From the very first days of its existence the Soviet state organised the health protection of the population. The Soviet Government always regarded the protection of the health and lives of children as one of its primary tasks. Among the first government decrees were such providing for measures to combat the high infant mortality and to organise the protection of mother and child.

During the Soviet years the death-rate has sharply decreased, particularly infant mortality. The mortality rate in the U.S.S.R. is one-quarter of that in pre-revolutionary Russia and infant mortality is less than one-tenth.

On an average for the country infant mortality was reduced by 85.7 per cent of the 1940 figure, while in towns it decreased by 87.4 per cent. In towns the mortality of infants aged up to one year due to diphtheria declined by 99.75 per cent, to scarlet fever by 99.71 per cent, to whooping-cough by 99.28 per cent, to tuberculosis by 98.71 per cent, to measles by 98.6 per cent, to toxic dyspepsia, gastroenteritis and colitis by 97.4 per cent, to dysentery by 95 per cent and to pneumonia by 85.7 per cent.

**BIRTH-RATE IN DIFFERENT COUNTRIES**  
(number of births per 1,000 of the population)

	1913 <sup>1</sup>	1940	1950	1960	1966 <sup>2</sup>	Average for the five last years <sup>3</sup>
U.S.S.R. . . . .	45.5	31.2	26.7	24.9	18.2	19.9
Australia . . . . .	28.0	17.9	23.3	22.4	19.6	21.3
Austria . . . . .	24.9	21.8	15.6	17.9	17.6	18.3
Belgium . . . . .	22.7	13.6	16.9	16.9	16.4	16.9
Britain . . . . .	24.3	14.6	16.3	17.5	18.3	18.3
Denmark . . . . .	26.3	18.3	18.6	16.6	18.0	17.3
Federal Republic of Germany . . . . .	...	...	16.5	17.8	17.9	18.3
Finland . . . . .	30.1	17.8	24.5	18.5	16.9	17.8
France . . . . .	18.1	13.8	20.7	17.9	17.4	17.8
Italy . . . . .	31.7	23.5	19.6	18.3	18.9	19.1
Japan . . . . .	34.1	29.4	28.2	17.2	18.6	17.5
Netherlands . . . . .	28.1	20.8	22.7	20.8	19.2	20.3
Norway . . . . .	25.4	16.1	19.1	17.3	17.5	17.3
Sweden . . . . .	23.6	15.1	16.4	13.7	15.8	15.3
Switzerland . . . . .	23.8	15.2	18.1	17.6	18.4	18.8
U.S.A. . . . .	25.0	17.9	23.5	23.7	18.5	20.6

**DEATH-RATE IN DIFFERENT COUNTRIES**  
(number of deaths per 1,000 of the population)

	1913 <sup>1</sup>	1940	1950	1960	1966 <sup>2</sup>	Average for the five last years <sup>3</sup>
U.S.S.R. . . . .	29.1	18.0	9.7	7.1	7.3	7.2
Australia . . . . .	10.9	9.8	9.6	8.6	8.8	8.7
Austria . . . . .	18.8	14.8	12.4	12.7	12.5	12.7
Belgium . . . . .	15.3	16.2	12.5	12.4	12.1	12.0
Britain . . . . .	14.2	14.4	11.8	11.5	11.5	11.8
Denmark . . . . .	13.0	10.4	9.2	9.5	10.1	9.8
Federal Republic of Germany . . . . .	...	...	10.5	11.4	11.2	11.1
Finland . . . . .	17.3	19.4	10.1	9.0	9.6	9.3
France . . . . .	19.0	18.9	12.8	11.4	10.6	11.1

<sup>1</sup> U.S.A.—1915, the rest of the countries for 1911-13.

<sup>2</sup> Data for 1965 for the capitalist countries except Austria, France, Italy, Netherlands, Sweden, Switzerland and the U.S.A.

<sup>3</sup> According to data available for the past five years.

Continued

	1913 <sup>1</sup>	1940	1950	1960	1966 <sup>2</sup>	Average for the five last years <sup>3</sup>
Italy . . . . .	19.3	13.6	9.8	9.7	9.5	9.9
Japan . . . . .	20.2	16.4	10.9	7.6	7.1	7.2
Netherlands . . . . .	13.1	9.9	7.5	7.7	8.1	8.0
Norway . . . . .	13.3	10.9	9.1	9.1	9.1	9.4
Sweden . . . . .	13.9	11.4	10.0	10.0	10.0	10.1
Switzerland . . . . .	14.8	12.0	10.1	9.7	9.5	9.5
U.S.A. . . . .	13.2	10.8	9.6	9.5	9.5	9.5

**POPULATION INCREASE IN DIFFERENT COUNTRIES**  
(natural increment per 1,000 of the population)

	1913 <sup>1</sup>	1940	1950	1960	1966 <sup>2</sup>	Average for the five last years <sup>3</sup>
U.S.S.R. . . . .	16.4	13.2	17.0	17.8	10.9	12.7
Australia . . . . .	17.1	8.1	13.7	13.8	10.8	12.6
Austria . . . . .	6.1	7.0	3.2	5.2	5.1	5.6
Belgium . . . . .	7.4	-2.6	4.4	4.5	4.3	4.9
Britain . . . . .	10.1	0.2	4.5	6.0	6.8	6.5
Denmark . . . . .	13.3	7.9	9.4	7.1	7.9	7.5
Federal Republic of Germany	...	...	6.0	6.4	6.7	7.2
Finland . . . . .	12.8	-1.6	14.4	9.5	7.3	8.5
France . . . . .	-0.9	-5.1	7.9	6.5	6.8	6.7
Italy . . . . .	12.4	9.9	9.8	8.6	9.4	9.2
Japan . . . . .	13.9	13.0	17.3	9.6	11.5	10.3
Netherlands . . . . .	15.0	10.9	15.2	13.1	11.1	12.3
Norway . . . . .	12.1	5.2	10.0	8.2	8.4	7.9
Sweden . . . . .	9.7	3.7	6.4	3.7	5.8	5.2
Switzerland . . . . .	9.0	3.2	8.0	7.9	8.9	9.3
U.S.A. . . . .	11.8	7.1	13.9	14.2	9.0	11.1

<sup>1</sup> U.S.A. — 1915, the rest of the countries for 1911-13.

<sup>2</sup> Data for 1965 for the capitalist countries except Austria, France, Italy, Netherlands, Sweden, Switzerland and the U.S.A.

<sup>3</sup> According to data available for the past five years.

**AVERAGE LIFE EXPECTANCY IN THE U.S.S.R.  
AND IN PRE-REVOLUTIONARY RUSSIA**  
(years)

	Total			Urban population			Rural population		
	men and women	of whom		men and women	of whom		men and women	of whom	
		men	women		men	women		men	women
1896-97 (50 gubernias of European Russia) . . . . .	32	31	33	...	...	...	...	...	...
1926-27 (European part of the U.S.S.R.) . . . . .	44	42	47	46	43	49	44	42	46
1958-59 . . . . .	69	64	72	68	64	71	69	65	72
1960-61 . . . . .	70	65	73	69	64	72	70	66	73
1962-63 . . . . .	70	65	73	69	65	72	70	66	73
1965-66 . . . . .	70	66	74	70	65	73	70	66	74

With the considerable decline in the death-rate, the average 1965-66 life expectancy in the U.S.S.R. was 120 per cent longer than the average in pre-revolutionary Russia, and 60 per cent longer than the 1926-27 average in the U.S.S.R.

**AVERAGE LIFE EXPECTANCY FOR VARIOUS AGE GROUPS**  
(years)

	1896-97	1926-27	1965-66
Infants . . . . .	32	44	70
Five years of age . . . . .	50	57	68
10 " " . . . . .	49	54	63
20 " " . . . . .	41	45	54
30 " " . . . . .	34	38	45
40 " " . . . . .	27	30	36
50 " " . . . . .	20	23	27
60 " " . . . . .	14	16	19
70 " " . . . . .	10	10	13
80 " " . . . . .	7	6	8

Before the revolution 43 per cent of the new-born died under five years of age, the average life expectancy of those who reached the age of five was 50 years. Before the revolution the average life expectancy was 32 years. Now in the U.S.S.R. only 3.7 per cent die under the age of five and those who reach the age of five are to live another 68 years; the death-rate of other age groups has considerably decreased. The average life expectancy in the U.S.S.R. is 70 years (of men—66, of women—74).

**AVERAGE LIFE EXPECTANCY IN DIFFERENT COUNTRIES <sup>1</sup>**  
(years)

	Years	Average life expectancy of the whole population	of whom	
			men	women
Pre-revolutionary Russia . . . . .	1896-97 <sup>2</sup>	32	31	33
U.S.S.R. . . . .	1926-27 <sup>3</sup>	44	42	47
	1958-59	69	64	72
	1965-66	70	66	74
Norway . . . . .	1956-60	73	71	76
Sweden . . . . .	1962	73	71	75
Netherlands . . . . .	1962	73	71	76
Denmark . . . . .	1962-63	72	70	74
Switzerland . . . . .	1959-61	72	70	75
Britain . . . . .	1901-10 <sup>4</sup>	50	49	52
	1963-65	71	68	74
France . . . . .	1898-1903	47	45	49
	1964	71	68	75
Belgium . . . . .	1959-63	71	68	74
U.S.A., total population . . . . .	1900-02 <sup>5</sup>	49	48	51
	1964	70	67	74
white population . . . . .	1964	71	68	74
the rest of the population . . . . .	1964	64	61	67
Federal Republic of Germany . . . . .	1963-64	70	67	73
Japan . . . . .	1964	70	68	73
Austria . . . . .	1959-61	69	66	72
Finland . . . . .	1956-60	68	65	72
Italy . . . . .	1954-57	68	66	70
Canada . . . . .	1960-62	71	68	74
New Zealand, total population . . . . .	1960-62	71	68	74
Europeans . . . . .	1960-62	72	69	75
Maoris . . . . .	1960-62	60	59	61

<sup>1</sup> The average life expectancy is the number of years which a given generation is expected to live, provided the prevailing death-rate for the various age groups remains unchanged as this generation passes from one age group to another. This method of computing the average life expectancy is adopted in international statistics and for life insurance purposes.

<sup>2</sup> Fifty gubernias of European Russia.

<sup>3</sup> European part of the U.S.S.R.

<sup>4</sup> Exclusive of Scotland and Northern Ireland.

<sup>5</sup> Ten states where the death-rate was registered in 1900.

Continued

	Years	Average life expectancy of the whole population	of whom	
			men	women
Venezuela . . . . .	1960	63	61	66
Mexico . . . . .	1960	59	57	60
Argentina . . . . .	1959-61	66	63	69
United Arab Republic . . . . .	1960	53	52	54
Brazil . . . . .	1940-50	42	39	46
India . . . . .	1951-60	41	42	41

In pre-revolutionary Russia the average life expectancy was much shorter than in the U.S.A. At present the U.S.S.R. has reached the U.S. level of life expectancy.

**GENERAL HEALTH SERVICES FOR WOMEN**  
(end-of-year figures; thousands)

	1940	1960	1966
Number of obstetricians and gynaecologists . . . . .	10.6	28.7	36.3
of midwives . . . . .	12.8	76.2	80.2
of assistant midwives . . . . .	68.1	139.3	180.3
Number of hospital beds (general and obstetric) for pregnant women and women in child-birth . .	147	213	225
of hospital beds for gynaecological patients . .	33.6	91.3	134.7
of maternity and children's consultation centres and polyclinics (independent and attached) . .	8.6	16.4	19.9

In the U.S.S.R. medical aid for women in child-birth is free of charge. In 1966 there were 225,000 beds for women in child-birth in hospitals, maternity homes and obstetric centres, while in 1913 there were only 7,500.

All women working in factories, offices and on other jobs, as well as on collective farms are entitled to a paid maternity and post-confinement leave for a period of four months (112 calendar days); in the event that two or more babies are born or in cases of pathological labour, the post-confinement leave is extended.

In tsarist Russia there was practically no obstetric service, especially in rural localities. Ninety-five per cent of women gave birth without medical aid. Women had no paid maternity and post-confinement leaves.

*A happy childhood for every child is one of the most important and noble aspects of communist construction.*

**GENERAL HEALTH SERVICES FOR CHILDREN**  
(end-of-year figures; thousands)

	1913	1940	1960	1966
Number of children in permanent kindergartens, nurseries and nursery-kindergartens . . . . .	4.55	1,953	4,428	8,192
of which:				
in permanent kindergartens and nursery-kindergartens . . . . .	4.0 <sup>1</sup>	1,172	3,115	6,782
in permanent nurseries . . . . .	0.55	781	1,313	1,410
Number of pediatricians . . . . .	...	19.4	58.9	73.6
Number of hospital beds for children	...	89.7	260.1	383.0
Number of beds in children's sanatoriums . . . . .	0.3	94.9 <sup>2</sup>	120.0	138.5

Child health protection is provided by a wide and steadily expanding network of health service institutions for children: hospitals (or hospital departments) for children and polyclinics, nurseries, kindergartens, nursery-kindergartens, sanatoriums and other medical institutions attached to them.

In 1966 there were 8.2 million children in pre-school educational institutions.

In addition to permanent nurseries and kindergartens, there are summer nurseries and playgrounds. In 1966 over 4 million children availed themselves of their services.

<sup>1</sup> At the end of 1914 within the frontiers of the U.S.S.R. prior to September 17, 1939.

<sup>2</sup> 1939 within the present frontiers of the U.S.S.R.

**PRE-SCHOOL INSTITUTIONS, CHILDREN'S HOSPITALS  
AND POLYCLINICS PUT INTO OPERATION**

(by state and co-operative enterprises and organisations,  
exclusive of collective farms)

	Commissioned under the state construction plan	
	pre-school institutions ( '000 places)	hospitals and polyclinics ( '000 beds)
<b>Total for 1918-1967 . . . . .</b>	<b>4,755</b>	<b>750</b>
1918-28 . . . . .	22.7	5.7
First Five-Year Plan . . . . .	38.2	10.7
Second Five-Year Plan . . . . .	183.5	19.9
Three and a half years of Third Five-Year Plan From July 1, 1941 to January 1, 1946 . . . . .	236.8	28.7
Fourth Five-Year Plan . . . . .	56.9	23.5
Fifth Five-Year Plan . . . . .	101.8	63.5
Sixth Five-Year Plan . . . . .	416.5	77.3
Three years of Sixth Five-Year Plan . . . . .	448.4	86.1
Seven-Year Plan . . . . .	2,322.9	337.2
including five last years . . . . .	1,846.3	254.7
of which:		
1961 . . . . .	265.5	40.3
1962 . . . . .	344.1	56.4
1963 . . . . .	401.5	51.1
1964 . . . . .	400.3	49.4
1965 . . . . .	434.9	57.5
1966 . . . . .	427.7	49.5
1967 (estimated) . . . . .	500.0	47.6

During the Soviet years pre-school institutions with an accommodation for nearly five million and medical institutions for children with an accommodation for 750 thousand have been built at state expense. The building of these institutions assumed a particularly large scope after the war and especially in recent years. In 1961-65 the number of children's institutions, hospitals and polyclinics was 300 per cent up on the pre-war figure.

In addition, children's institutions for 1.3 million and hospitals and polyclinics for 87,000 children were built in 1956-66 on the initiative and at the expense of collective farms.

In 1966 alone collective farms built pre-school institutions accommodating 126,000 children and children's hospitals and polyclinics with 9,000 beds.

*Protection of motherhood in our country is a prime concern of the Communist Party and the Government.*

**NUMBER OF MOTHERS OF LARGE FAMILIES  
RECEIVING MONTHLY ALLOWANCES FROM THE STATE  
(thousands)**

	1945	1960	1966
<b>Total number of mothers of large families receiving monthly allowances . . . . .</b>	<b>844</b>	<b>3,455</b>	<b>3,541</b>
of whom:			
mothers of four children . . . . .	287	1,660	1,508
mothers of five children . . . . .	181	899	885
mothers of six children . . . . .	100	484	560
mothers of seven and more children . . . . .	276	412	588

From the first days of its existence the Soviet state focussed its attention on elaborating and implementing an extensive range of measures for the protection of mothers and children. Soviet society provides all possible conditions for the comprehensive physical and mental development of children.

The Soviet Government renders material help to mothers of large families and to pregnant women. Mothers are entitled to a lump sum grant upon the birth of the third and every subsequent child, and receive a monthly allowance upon the birth of the fourth and every subsequent child.

In 1966 3,541,000 mothers of four or more children received monthly allowances. Moreover, lump sum grants were given to 524,000 mothers on the birth of their third child.

**NUMBER OF MOTHERS OF LARGE FAMILIES  
WHO HAVE BEEN AWARDED  
THE TITLE OF MOTHER-HEROINE  
AND DECORATED WITH ORDERS OF MOTHERHOOD GLORY  
AND MOTHERHOOD MEDALS  
(thousands)**

	July 1944- 1949	1950- 60	1961- 66	Total
Mother-Heroine title . . . . .	31	34	30	95
Order of Motherhood Glory				
I Degree . . . . .	67	89	82	238
II Degree . . . . .	193	228	199	620
III Degree . . . . .	468	534	433	1,435
Motherhood Medal				
I Degree . . . . .	754	1,073	800	2,627
II Degree . . . . .	1,434	2,032	1,314	4,780

Mothers of large families were decorated with government orders and medals in appreciation of their role in the upbringing of the new generation. Since July 8, 1944 when the relevant decree of the Presidium of the U.S.S.R. Supreme Soviet was issued, 95,000 mothers who have given birth and brought up ten children have been conferred the honourable title of Mother-Heroine, millions of mothers of seven, eight or nine children have been decorated with the orders of Motherhood Glory, and mothers of five or six children with Motherhood Medals.

### SANATORIUMS AND REST HOMES

	1913	1939 <sup>1</sup>	1945	1960	1966
Number of round-the-clock sanatoriums and sanatorium-dispensaries, rest homes (exclusive of one-day rest homes) and boarding houses . . . . .	60	3,436	2,119	4,059	4,678
Accommodation—'000 beds . . . . .	3	450	183	547	845
Number of round-the-clock sanatoriums (for adults and children) . . . . .	60	1,838	1,107	2,073	2,197
Accommodation—'000 beds . . . . .	3	240	119	321	407
Of the total number of sanatoriums:					
Children's . . . . .	14	957	724	1,106	1,157
Accommodation—'000 beds . . . . .	0.3	95	62	120	139
Number of sanatorium-dispensaries . . . . .	—	328	496	1,066	1,496
Accommodation—'000 beds . . . . .	—	15	18	43	79
Number of rest homes (exclusive of one-day rest homes) . . . . .	—	1,270	516	874	829
Accommodation—'000 beds . . . . .	—	195	46	176	215
Number of boarding houses . . . . .	—	—	—	46	156
Accommodation—'000 beds . . . . .	—	—	—	7	44

The few sanatoriums and rest homes there were in Russia before the revolution were all privately-owned and were beyond the reach of the working people.

At present all sanatoriums, rest homes, polyclinics and boarding houses at health resorts belong to the working people. In 1966, 9 million people underwent medical treatment and recuperated at health resorts, more than seven million of whom were industrial, office and other workers whose expenses were paid out of the social insurance funds or by the state, i.e., received these services free of charge or at a discount of 30 per cent. Besides, hundreds of thousands of industrial, office and other workers received accommodation and medical treatment free of charge or at cut rates from the funds of enterprises for social needs, and so on.

Tourist and alpine camps were attended by over two million people. In 1966 more than seven million children and adolescents spent their summer holidays in pioneer camps.

<sup>1</sup> Within the present frontiers.

*"Citizens of the U.S.S.R. have the right to maintenance in old age and also in case of sickness or disability."*

Constitution of the U.S.S.R.

**NUMBER OF PENSIONERS**  
(beginning-of-year figures; millions)

	Total	of whom	
		old age, disability, prolonged meritorious service, loss of bread-winner, special pensions and others	ex-servicemen (disabled during World War I, the Civil War and the Patriotic War) and members of their families
1941 . . . . .	4	3.6	0.4
1959 . . . . .	20	13	7
1960 . . . . .	21	15	6
1961 . . . . .	22	16	6
1962 . . . . .	24	18	6
1963 . . . . .	25	19	6
1964 . . . . .	26	21	5
1965 . . . . .	26	21	5
1966 . . . . .	32	27	5
1967 . . . . .	34	29	5

In pre-revolutionary Russia there were practically no pensions for the working people. They had to rely mainly on sick benefit societies and charity contributions made by individuals, which were few and far between. State pensions were paid only to military officers and government officials.

In 1920 there were one million pensioners in Soviet Russia. A system of stable and guaranteed pensions has been established during the Soviet years. The State Pension Law adopted in 1956 envisaged a considerable increase of the size of old-age pensions, pensions paid in case of the loss of bread-winner or disability, and pensions paid to servicemen and their families. In the period from 1940 to 1966 expenses on pensions increased 36 times and the number of pensioners by 750 per cent. At the beginning of 1967 there were 34 million pensioners of whom 8.9 million were collective farmers who draw pensions in accordance with the Law on Pensions and Allowances for Collective Farmers.

Pensions are paid from the state and collective-farm funds without deductions from the working people's incomes. The old-age pension is equal to 50 or 100 per cent of the monthly wages.

Industrial, office and other workers are entitled to old-age pension on reaching specified age, for men it is 60 years, for women—55. For people engaged in underground work, or in hot shops and at some other arduous jobs the pensionable age is five or ten years lower. A lower pensionable age has been established also for some other groups of the population. For collective farmers the pensionable age is 65 for men and 60 for women.

Working mothers of five or more children who have brought them up to the age of eight are entitled to additional privileges both as regards the pensionable age and the length of service required.

In capitalist countries the pensionable age is higher than in the U.S.S.R. In the U.S.A. it is 65 for men and 62 for women, in Switzerland 65 for men and 63 for women, in the F.R.G., Netherlands, Finland 65 for men and women alike, in Sweden it is 67, in Canada, Ireland and Norway—70. Besides, considerable sums are deducted from the wages of the working people as social insurance tax to pay for pensions.

**HOMES FOR THE AGED AND INVALIDS**  
(beginning-of-year figures)

	1941	1960	1967
Number of homes . . . . .	785	1,177	1,425
of which:			
for the aged and invalids (adults) . . . . .	666	1,019	1,150
for disabled children . . . . .	119	158	275
Accommodation—'000 . . . . .	93	166	249
of which:			
for the aged and invalids (adults) . . . . .	83	150	211
for disabled children . . . . .	10	16	38

In addition to the above there were in collective farms in 1966 homes for the aged and disabled with accommodations for 20 thousand people.

The Soviet state displays great concern for the aged and disabled. A large network of homes for these groups of population has been set up in the country.

*"Fifty years of the October Revolution have seen the implementation of the cultural revolution. Socialism has brought the Soviet people education and enlightenment, has immeasurably raised and enriched the spiritual life of society. Soviet scientists loyally serve their people. Soviet science has scored wonderful successes in all fields of modern scientific and technological progress. To it must be given great credit in the conquest of space. Socialist culture, literature and art, which have assimilated the best achievements of the past, have become an integral part of the general proletarian cause and actively help in educating the comprehensively developed Man of communist society."*

From the Resolution of the Central Committee of the C.P.S.U. on Preparations for the 50th Anniversary of the Great October Socialist Revolution

## **THE FLOURISHING OF SOCIALIST CULTURE**

*During the years of Soviet power the Soviet Union has practically turned into a country of complete literacy.*

**LITERACY OF THE POPULATION IN THE 9-49 AGE GROUP**  
(according to the censuses of 1897, 1926, 1939 and 1959)

	Percentage of the literates in the 9-49 age group		
	both sexes	males	females
<b>Urban and rural population</b>			
1897 . . . . .	28.4	40.3	16.6
1926 . . . . .	56.6	71.5	42.7
1939 . . . . .	87.4	93.5	81.6
1959 . . . . .	98.5	99.3	97.8
<b>Urban population</b>			
1897 . . . . .	57.0	66.1	45.7
1926 . . . . .	80.9	88.0	73.9
1939 . . . . .	93.8	97.1	90.7
1959 . . . . .	98.7	99.5	98.1
<b>Rural population</b>			
1897 . . . . .	23.8	35.5	12.5
1926 . . . . .	50.6	67.3	35.4
1939 . . . . .	84.0	91.6	76.8
1959 . . . . .	98.2	99.1	97.5

In pre-revolutionary Russia almost three-fourths of the population were illiterate. Peoples of the Far North, Central Asia and other outlying regions of Russia were almost completely illiterate. The literacy of the rural population which made up 80 per cent of the country's population was considerably lower than that of the urban population; the literacy among the men was one half and among women 73 per cent lower than in town.

As a result of the measures taken by the Soviet Government in the first years of Soviet power the number of literates almost doubled by the end of 1926. During the 1959 census 98.7 per cent of the urban population and 98.2 per cent of the rural population in the 9-49 age group qualified themselves literate; so the gap in literacy between the urban and rural population was almost closed. After 1959 measures were taken to wipe out illiteracy completely. The Soviet Union is now essentially a country of complete literacy.

**LITERACY OF THE POPULATION IN THE UNION REPUBLICS**  
(percentages of literates in the 9-49 age group)

	Both sexes				Males				Females			
	1897	1926	1939	1959	1897	1926	1939	1959	1897	1926	1939	1959
U.S.S.R. . . . .	28.4	56.6	87.4	98.5	40.3	71.5	93.5	99.3	16.6	42.7	81.6	97.8
R.S.F.S.R. . . . .	29.6	60.9	89.7	98.5	44.4	77.1	96.0	99.3	15.4	46.4	83.9	97.7
Ukrainian S.S.R. . . . .	27.9	63.6	88.2	99.1	41.7	81.1	93.9	99.6	14.0	47.2	82.9	98.8
Byelorussian S.S.R. . . . .	32.0	59.7	80.8	99.0	43.5	79.1	90.7	99.5	20.7	41.3	71.4	98.6
Uzbek S.S.R. . . . .	3.6	11.6	78.7	98.1	5.6	15.3	83.6	99.0	1.2	7.3	73.3	97.3
Kazakh S.S.R. . . . .	8.1	25.2	83.6	96.9	12.0	35.4	90.3	98.8	3.6	14.5	75.8	95.1
Georgian S.S.R. . . . .	23.6	53.0	89.3	99.0	29.1	61.2	93.4	99.4	17.1	44.6	85.2	98.6
Azerbaijan S.S.R. . . . .	9.2	28.2	82.8	97.3	13.1	36.1	88.8	98.8	4.2	19.2	76.1	96.0
Lithuanian S.S.R. . . . .	54.2	...	76.7	98.5	57.1	...	78.7	98.9	51.4	...	75.0	98.1
Moldavian S.S.R. . . . .	22.2	...	45.9	97.8	31.2	...	59.0	99.1	12.7	...	33.1	96.6
Latvian S.S.R. . . . .	79.7	...	92.7	99.0	80.5	...	94.6	99.4	78.9	...	91.0	98.8
Kirghiz S.S.R. . . . .	3.1	16.5	79.8	98.0	5.0	23.9	84.9	99.0	0.8	8.4	74.4	97.0
Tajik S.S.R. . . . .	2.3	3.8	82.8	96.2	3.9	6.4	87.4	98.0	0.3	0.9	77.5	94.6
Armenian S.S.R. . . . .	9.2	38.7	83.9	98.4	14.5	53.7	92.7	99.2	2.9	22.7	74.7	97.6
Turkmen S.S.R. . . . .	7.8	14.0	77.7	95.4	11.5	18.3	83.0	97.7	2.7	8.8	71.9	93.4
Estonian S.S.R. . . . .	96.2	...	98.6	99.6	96.0	...	98.9	99.7	96.3	...	98.3	99.5

**NUMBER OF PUPILS AND STUDENTS**  
**ACCORDING TO TYPES OF EDUCATION**  
(at the beginning of the academic year; thousands)

	1914/15	1940/41	1945/46	1960/61	1966/67
<b>Total number . . . . .</b>	<b>10,588</b>	<b>47,547</b>	<b>37,385</b>	<b>52,600</b>	<b>73,559</b>
including:					
in general educational schools of all types . . . . .	9,656	35,552	26,808	36,187	48,170
of whom:					
in elementary, incomplete secondary and secondary schools . . . . .	9,656	34,784	26,094	33,417	43,529
in schools for young people and schools for adults (including in correspondence departments) . . . . .	—	768	714	2,770	4,641
in professional, vocational and trades schools . . . . .	106	717	945	1,113	1,961
in specialised secondary educational establishments . . . . .	54	975	1,008	2,060	3,994
in institutions of higher learning . . . . .	127	812	730	2,396	4,123
those who learned new trades and took refresher courses at enterprises or training centres and attended other courses . . . . .	645	9,491	7,894	10,844	15,311

During the years of Soviet power public education has scored spectacular successes. In the U.S.S.R., 73.6 million people or over one-third of the country's population (exclusive of children of pre-school age) are studying at various educational establishments. It should be added that general schools, higher and specialised secondary educational establishments are attended by over 56 million people, which is by 46 million more than in 1914.

**NUMBER OF GENERAL EDUCATIONAL [SCHOOLS OF ALL TYPES,  
PUPILS AND TEACHERS**  
[(at the beginning of academic year; thousands)]

	1914/15	1940/41	1945/46	1960/61	1966/67
Number of general educational schools of all types . . . . .	124	199	199	224	210
Pupils in them . . . . .	9,656	35,552	26,808	36,187	48,170
including in:					
1st-4th forms . . . . .	9,031	21,731	20,170	18,747	20,740
5th-8th forms . . . . .	523	12,530	6,069	14,843	20,128
of whom:					
in the 8th form . . . . .	51	1,282	524	2,531	4,795
in the 9th-10th (11th) forms . . . . .	102	1,291	569	2,597	7,302
Number of teachers . . . . .	280	1,238	1,056	2,043	2,530

In pre-revolutionary Russia, school was out of reach of four-fifths of all children of school age. Today eight-year schooling is compulsory in the U.S.S.R., and in the new five-year plan period (1966-70) the transfer of the youth to a compulsory secondary education will in the main be completed.

In the 1966/67 academic year 48 million people, or five times more than in the 1914/15 academic year, attended schools of all types; over 27 million, or 44 times more than before the October Revolution, studied in the 5th-10th (11th) forms.

In tsarist Russia, instruction was carried out mainly in the Russian language and only after the October Revolution all nationalities inhabiting the country were given the right to education in their native languages. Now instruction is carried on in 57 languages.

**EVENING SCHOOLS FOR YOUNG PEOPLE AND ADULTS**  
(at the beginning of academic year; thousands)

	1940/41	1945/46	1960/61	1966/67
Total number of schools <sup>1</sup> . . . . .	7,276	12,482	25,229	21,903
including independent evening schools . . . . .	...	...	12,331	12,547
Number of learners (including in correspondence departments)—thousands . . . . .	768	714	2,770	4,641
of whom:				
in the 1st-4th forms . . . . .	107	236	54	66
in the 5th-8th forms . . . . .	551	412	1,655	1,467
in the 9th-11th forms . . . . .	110	66	1,061	3,108

<sup>1</sup> Inclusive of ordinary general educational schools in town and country with evening classes and independent correspondence schools.

In the Soviet Union there is a wide network of evening schools for young people who can receive a secondary general education without discontinuing work. In the 1966/67 academic year 4.6 million people, or six times more than in the 1940/41 academic year, attended these schools.

### CONSTRUCTION OF PRIMARY, INCOMPLETE SECONDARY AND SECONDARY SCHOOLS

(by state and co-operative enterprises  
and organisations, exclusive of collective farms)

	Built and commissioned under the state construction plan		of which			
			in towns and urban-type settlements		in countryside	
	number of schools	number of seats in them ('000)	number of schools	number of seats in them ('000)	number of schools	number of seats in them ('000)
<b>Total for 1918-1967</b> . . . . .	<b>91,569</b>	<b>28,166</b>	<b>27,921</b>	<b>14,674</b>	<b>63,648</b>	<b>13,492</b>
1918-1928 . . . . .	7,780	1,061	856	496	6,924	565
First Five-Year Plan . . . . .	13,128	3,771	1,884	1,093	11,244	2,678
Second Five-Year Plan . . . . .	18,778	5,576	3,671	2,138	15,107	3,438
Three and a half years of Third Five-Year Plan . . . . .	5,325	1,593	1,432	761	3,893	832
From July 1, 1941 to January 1, 1946	8,412	1,177	772	342	7,640	835
Fourth Five-Year Plan . . . . .	4,345	1,181	1,744	695	2,601	486
Fifth Five-Year Plan . . . . .	5,819	1,912	4,347	1,537	1,472	375
Three years of Sixth Five-Year Plan	4,600	1,452	2,817	1,068	1,783	384
Seven-Year Plan . . . . .	18,998	8,183	8,587	5,163	10,411	3,020
including the last five years . . .	14,088	6,460	6,287	4,025	7,801	2,435
of which:						
1961 . . . . .	2,458	1,050	1,227	719	1,231	331
1962 . . . . .	3,099	1,348	1,519	911	1,580	437
1963 . . . . .	3,168	1,439	1,366	869	1,802	570
1964 . . . . .	2,717	1,304	1,068	721	1,649	583
1965 . . . . .	2,646	1,319	1,107	805	1,539	514
1966 . . . . .	2,224	1,203	907	736	1,317	467
1967 (estimated) . . . . .	2,160	1,057	904	645	1,256	412

[ During the years of Soviet power, general educational schools with over 28 million seats were built at the expense of state allocations alone, almost half of them in rural areas. Besides in the post-war period (1946-66) 50,000 schools with 6.2 million seats were built on the initiative and at the expense of collective farms, while 2,000 schools with 430,000 seats were commissioned in 1966 alone.

**HIGHER AND SPECIALISED SECONDARY EDUCATIONAL  
ESTABLISHMENTS**  
(at the beginning of academic year)

	1914/15	1940/41	1945/46	1960/61	1966/67
Number of higher educational establishments . . . . .	105	817	789	739	767
Students in them—thousands . . . . .	127	812	730	2,396	4,123
including students:					
at day courses . . . . .	127	558	525	1,156	1,740
at evening courses . . . . .	—	27	14	245	618
in correspondence departments . . . . .	—	227	191	995	1,765
Number of specialised secondary educational establishments . . . . .	450	3,773	3,169	3,328	3,980
Students in them—thousands . . . . .	54	975	1,008	2,060	3,994
including students:					
at day courses . . . . .	54	787	886	1,091	2,111
at evening courses . . . . .	—	32	21	370	677
in correspondence departments . . . . .	—	156	101	599	1,206

The training of qualified specialists for all branches of the country's economy and culture has assumed a sweeping scale in the U.S.S.R.

In the 1914/15 academic year, slightly more than 180,000 students attended all of Russia's higher and specialised secondary educational establishments. Today their number has reached eight million, which is 45 times more than in the 1914/15 academic year. Over four million students are attending institutions of higher learning.

Before the October Revolution, Byelorussia, Azerbaijan, Lithuania, Armenia, Moldavia, Central Asia and Kazakhstan had no institutions of higher learning. In the 1966/67 academic year, there were 28 institutions of higher learning with a student body of 116,000 in Byelorussia, respectively 12 and 78,000 in Azerbaijan, 11 and 51,000 in Lithuania, 12 and 43,000 in Armenia, 7 and 41,000 in Moldavia, 55 and 283,000 in Central Asia, and 41 and 163,000 in Kazakhstan.

Now in the U.S.S.R. there are 176 students of institutions of higher learning and 170 students of specialised secondary educational establishments per 10,000 of the population as against 8 and 3 students respectively in 1914.

Students from many developing countries are studying at Soviet institutions of higher learning.

**NUMBER OF PEOPLE WITH HIGHER OR SECONDARY  
(complete or incomplete) EDUCATION  
(millions)**

	As of January 17, 1939	As of January 15, 1959	As of January 1, 1967 (estimate)
Number of people with:			
complete higher education . . . . .	1.2	3.8	6.4
incomplete higher education . . . . .		1.7	2.8
specialised secondary education (graduates from technical schools or similar institu- tions) . . . . .	14.7	7.9	11.9
secondary general education (graduates from complete secondary schools) . . . . .		9.9	14.5
incomplete secondary education (including those who completed seven-year schooling)		35.4	48.9
<b>Total number of people with higher or second- ary (complete or incomplete) education . .</b>	<b>15.9</b>	<b>58.7</b>	<b>84.5</b>

**NUMBER OF PEOPLE WITH HIGHER OR SECONDARY  
(complete or incomplete) EDUCATION  
per 1,000 INHABITANTS**

	As of January 17, 1939	As of January 15, 1959	As of January 1, 1967 (estimate)
Per 1,000 people of the corresponding groups of the population:			
<b>All population</b>			
Complete higher education . . . . .	6	18	27
Incomplete higher, secondary or incom- plete secondary education . . . . .	77	263	333
Total number of people with higher or secondary (complete and incomplete) edu- cation . . . . .	83	281	360
<b>Gainfully employed population</b>			
Complete higher education . . . . .	13	33	49
Incomplete higher, secondary or incom- plete secondary education . . . . .	110	400	515
Total number of people with higher or secondary (complete and incomplete) edu- cation . . . . .	123	433	564
<b>Workers</b>			
Higher, secondary (complete and incom- plete) education . . . . .	82	386	500
<b>Industrial workers</b>			
Higher, secondary (complete and incom- plete) education . . . . .	99	451	594

Continued

	As of January 17, 1939	As of January 15, 1959	As of January 1, 1967 (estimate)
<b>Collective farmers</b>			
Higher, secondary (complete and incomplete) education . . . . .	18	226	330
<b>Professional and office workers</b>			
Higher education . . . . .	76	165	197
Incomplete higher, secondary or incomplete secondary education . . . . .	443	728	731
Total number of people with higher or secondary (complete and incomplete) education) . . . . .	519	893	928

During the years of Soviet power a cultural revolution has taken place in the U.S.S.R. In 1897, there were only 1.4 million people in Russia who had more than an elementary education. In 1913, only about 290,000 people (including non-working) had a higher, incomplete higher or specialised secondary education. These were largely representatives of the privileged classes: capitalists, landowners, officials, ministers of religion and members of their families. There were no workers and peasants with a secondary, let alone a higher education. There were no people with a secondary or higher education among many nationalities inhabiting Russia's outlying regions. These nationalities were to all intents and purposes deprived of education and very few of them had a written language.

Now in the U.S.S.R. 84.5 million people have a secondary (complete and incomplete) or higher education, and 21.1 million people have a higher, incomplete higher or secondary specialised education. Now 56 per cent of the working population has a higher or secondary (complete or incomplete) education, including 50 per cent of the workers and 33 per cent of the collective farmers.

**GRADUATION OF SPECIALISTS FROM HIGHER AND SPECIALISED  
SECONDARY EDUCATIONAL ESTABLISHMENTS**  
(thousands)

	Graduates of higher educational establishments		Graduates of specialised secondary educational establishments	
	Total	Average per year	Total	Average per year
1914 . . . . .	12		7	
1918-28 . . . . .	340	30.9	198	18.0
1929-32 . . . . .	170	42.5	291	72.8
1933-37 . . . . .	370	74.0	623	124.6
1938-40 . . . . .	328	109.3	678	226.0
1941-45 . . . . .	302	60.4	540	108.0
1946-50 . . . . .	652	130.4	1,278	255.7
1951-55 . . . . .	1,121	224.3	1,560	311.9
1956-60 . . . . .	1,498	299.7	2,577	515.4
1961-65 . . . . .	1,732	346.3	2,572	514.4
1966 . . . . .	432		685	

From 1918 to 1966, the higher and specialised secondary educational establishments have trained 17.9 million specialists, including 6.9 million with a higher and 11 million with a specialised secondary education.

### NUMBER OF STUDENTS IN DIFFERENT COUNTRIES

	Academic year	Number of students	
		total — thousands	per 10,000 of the pop- ulation
U.S.S.R. . . . .	1914/15	127	8
	1966/67 — total	4,123	176
	including engineers	1,975	84
Of them in the Union republics			
R.S.F.S.R. . . . .	1966/67	2,470	194
Ukrainian S.S.R. . . . .	1966/67	739	161
Byelorussian S.S.R. . . . .	1966/67	116	133
Uzbek S.S.R. . . . .	1966/67	188	173
Kazakh S.S.R. . . . .	1966/67	163	131
Georgian S.S.R. . . . .	1966/67	81	177
Azerbaijan S.S.R. . . . .	1966/67	78	163
Lithuanian S.S.R. . . . .	1966/67	51	168
Moldavian S.S.R. . . . .	1966/67	41	119
Latvian S.S.R. . . . .	1966/67	36	157
Kirghiz S.S.R. . . . .	1966/67	37	133
Tajik S.S.R. . . . .	1966/67	35	131
Armenian S.S.R. . . . .	1966/67	43	192
Turkmen S.S.R. . . . .	1966/67	23	115
Estonian S.S.R. . . . .	1966/67	22	169
U.S.A. . . . .	1965/66 — total	4,044	208
	including engineers	283	15
Japan . . . . .	1964/65	810	84
France . . . . .	1963/64	340	71
Britain . . . . .	1964/65	316	58
Federal Republic of Germany . . . .	1964/65	254	45
Italy . . . . .	1964/65	259	50
Turkey . . . . .	1964/65	88	28
India . . . . .	1960/61	1,041	24
Pakistan . . . . .	1963/64	218	22
Iran . . . . .	1964/65	24	10

In the U.S.S.R. tuition in institutions of higher learning is free; moreover, over 70 per cent of the students of day courses receive monthly stipends, while in the capitalist countries the overwhelming majority of students has to pay for their education.

*The Great October Socialist Revolution has opened the road to education for all nationalities.*

## NUMBER OF STUDENTS OF MAJOR NATIONALITIES OF THE UNION REPUBLICS

(at the beginning of academic year; thousands)

	Students of higher educational establishments			Students of specialised secondary educational establishments		
	1927/28	1960/61	1966/67	1927/28	1960/61	1966/67
<b>Total</b> . . . . .	<b>168.5</b>	<b>2,396.1</b>	<b>4,123.2</b>	<b>189.4</b>	<b>2,059.5</b>	<b>3,993.9</b>
including:						
Russians . . . . .	94.5	1,480.1	2,494.7	105.1	1,302.3	2,536.4
Ukrainians . . . . .	24.6	343.6	590.2	21.0	331.6	610.5
Byelorussians . . . . .	4.9	63.7	122.6	4.5	66.0	141.0
Uzbeks . . . . .	0.5	53.5	112.4	3.6	28.0	68.6
Kazakhs . . . . .	0.3	40.8	75.9	2.5	28.3	55.6
Georgians . . . . .	4.0	48.5	77.0	5.7	22.6	37.1
Azerbaijanians . . . . .	1.9	28.5	63.9	5.7	21.4	50.0
Lithuanians . . . . .	...	25.8	46.0	...	28.8	52.7
Moldavians . . . . .	0.2	12.0	26.4	0.1	10.1	23.9
Letts . . . . .	...	16.5	22.7	...	16.7	21.7
Kirghiz . . . . .	0.1	9.9	18.7	0.4	6.4	11.3
Tajiks . . . . .	0.1	11.9	19.9	0.3	6.4	13.6
Armenians . . . . .	3.4	36.7	67.7	3.6	21.7	49.1
Turkmens . . . . .	0.1	9.5	17.8	0.6	6.3	12.2
Estonians . . . . .	...	12.9	18.8	...	12.6	17.9

In the U.S.S.R., people of all nationalities have equal possibilities for receiving a higher or secondary specialised education. Each Union republic now trains top- and medium-level specialists. The number of students at higher and specialised secondary educational establishments in the Union republics has grown immensely. The number of Uzbek students in higher and specialised secondary] educational establishments increased in the 1966/67 academic year 225 times and 19 times respectively, as compared with the 1927/28 academic year; of Kazakhs—253 and 22 times, of Kirghiz—187 and 28 times, of Tajiks—199 and 45 times, of Turkmens—178 and 20 times, respectively.

**NUMBER OF STUDENTS OF MAJOR NATIONALITIES  
OF THE AUTONOMOUS REPUBLICS AND AUTONOMOUS REGIONS  
as of the Beginning of the 1966/67 Academic Year  
(thousands)**

	Students of higher education- al estab- lishments	Students of specialised secondary edu- cational estab- lishments
Abkhazians . . . . .	2.2	0.7
Balkars . . . . .	1.2	0.8
Bashkirs . . . . .	12.7	11.5
Buryats . . . . .	9.0	4.8
Ingushi . . . . .	1.6	1.0
Kabardinians . . . . .	4.5	2.9
Kalmyks . . . . .	1.8	2.0
Kara-Kalpaks . . . . .	3.7	2.4
Karelians . . . . .	1.4	1.9
Komi . . . . .	4.2	7.4
Mari . . . . .	4.1	5.7
Mordvinians . . . . .	10.7	12.8
Peoples of Daghestan . . . . .	16.2	15.0
Ossets . . . . .	11.6	6.9
Tatars . . . . .	73.2	75.7
Tuvinians . . . . .	1.9	1.5
Udmurts . . . . .	6.1	8.0
Chechens . . . . .	3.6	3.6
Chuvashi . . . . .	15.9	16.0
Yakuts . . . . .	4.9	3.9
Adyghei . . . . .	2.6	1.5
Altaians . . . . .	0.7	1.0
Jews . . . . .	106.3	51.6
Karachais . . . . .	2.5	1.0
Khakassi . . . . .	0.9	1.1
Circassians . . . . .	0.8	0.7

Before the October Revolution, the nationalities inhabiting the autonomous republics and autonomous regions were almost completely illiterate, while now a large number of young men and women of these nationalities study at higher and specialised secondary educational establishments.

**WOMEN STUDENTS IN HIGHER AND SPECIALISED SECONDARY  
EDUCATIONAL ESTABLISHMENTS  
(at the beginning of academic year)**

	1927/28	1960/61	1966/67
<b>Percentage of women in higher educational establishments</b> . . . . .	28	43	45
including educational establishments training for:			
industry, construction, transport and communica- tions . . . . .	13	30	32
agriculture . . . . .	17	27	26
economics and law . . . . .	21	49	57
public health, physical culture and sports . . . .	52	56	55
education, arts and cinematography . . . . .	49	63	65
<b>Percentage of women in specialised secondary educational establishments</b> . . . . .	38	47	51
including educational establishments training for:			
industry, construction, transport and communica- tions . . . . .	9	33	37
agriculture . . . . .	15	38	35
economics and law . . . . .	36	75	81
public health, physical culture and sports . . . .	89	84	88
education, arts and cinematography . . . . .	53	76	81

In the 1966/67 academic year, women constituted 45 per cent of the students of institutions of higher learning and 51 per cent of the enrolment in specialised secondary educational establishments. In technical higher educational establishments women comprised 32 per cent, in agricultural—26 per cent of the student body, while in the 1914/15 academic year the respective figures were one and five per cent.

**NUMBER OF RESEARCH WORKERS  
(end-of-year figures; thousands)**

	1947	1960	1966
<b>Total</b> . . . . .	145.6	354.2	712.4
including those holding the academic degree of:			
Doctor of Science . . . . .	7.7	10.9	16.6
Candidate of Science . . . . .	36.9	98.3	152.4
Of all research workers those holding the academic degree of:			
Academician, Associate Member, Professor . . . . .	8.9	9.9	13.6
Docent . . . . .	20.2	36.2	52.8
Senior Research Worker . . . . .	9.8	20.3	30.2
Junior Research Worker and Assistant . . . . .	25.6	26.7	47.7

In the past 50 years a huge army of research workers and educators has been trained in the U.S.S.R. In 1914, the number of research workers was 11,600, in 1940—98,300 and in 1966—712,400. Every fourth research worker in the world lives in the U.S.S.R.

Soviet women play a significant role in research and education. In 1966, the number of women engaged in research was 273,500, or 38 per cent of all scientists, including the 43,000 women holding academic degree of Doctor and Candidate of Sciences.

**NUMBER OF RESEARCH WORKERS OF MAJOR NATIONALITIES  
OF THE UNION REPUBLICS  
(end-of-year figures; thousands)**

	1939 (according to the census)	1947	1960	1966
<b>Total . . . . .</b>	<b>95.9</b>	<b>145.6</b>	<b>354.2</b>	<b>712.4</b>
of them:				
Russians . . . . .	58.2	85.1	229.5	470.5
Ukrainians . . . . .	9.5	12.8	35.4	75.3
Byelorussians . . . . .	1.7	2.4	6.4	13.9
Uzbeks . . . . .	0.5	0.6	3.7	7.9
Kazakhs . . . . .	0.3	0.5	2.3	5.3
Georgians . . . . .	2.1	3.7	8.3	13.7
Azerbaijanians . . . . .	0.9	1.7	5.0	9.8
Lithuanians . . . . .	...	1.1	3.0	5.9
Moldavians . . . . .	...	0.1	0.6	1.7
Letts . . . . .	...	1.4	2.7	4.8
Kirghiz . . . . .	0.04	0.05	0.6	1.2
Tajiks . . . . .	0.13	0.1	0.9	1.6
Armenians . . . . .	2.1	3.5	8.0	15.2
Turkmens . . . . .	0.07	0.1	0.7	1.4
Estonians . . . . .	...	1.2	2.0	3.7

A large number of national scientific personnel has been trained in the U.S.S.R. From 1939 to 1966 the total number of scientific workers in the country increased 7 times, including that of Kirghiz—32 times, Kazakhs—19 times, Turkmens—18 times, Uzbeks—17 times and Tajiks—12 times.

**NUMBER OF RESEARCH WORKERS OF MAJOR NATIONALITIES  
OF THE AUTONOMOUS REPUBLICS AND AUTONOMOUS REGIONS  
at the End of 1966**

Abkhazians . . . . .	132	Ossets . . . . .	1,141
Balkars . . . . .	49	Tatars . . . . .	8,455
Bashkirs . . . . .	990	Tuvinians . . . . .	45
Buryats . . . . .	848	Udmurts . . . . .	409
Ingushi . . . . .	63	Chechens . . . . .	85
Kabardinians . . . . .	289	Chuvashi . . . . .	1,296
Kalmyks . . . . .	136	Yakuts . . . . .	440
Kara-Kalpaks . . . . .	251	Adyghei . . . . .	137
Karelians . . . . .	139	Altaians . . . . .	43
Komi . . . . .	488	Jews . . . . .	56,070
Mari . . . . .	211	Karachais . . . . .	63
Mordvinians . . . . .	779	Khakassi . . . . .	64
Peoples of Dagestan . . . . .	1,203	Circassians . . . . .	66

**U.S.S.R. ACADEMY OF SCIENCES, THE ACADEMIES  
OF SCIENCES OF THE UNION REPUBLICS AND BRANCH ACADEMIES  
at the End of 1966**

Academies	Year of establishment	Number of Academicians, Members and Associate Members	Number of research institutions affiliated to the Academy	Number of research workers
U.S.S.R. Academy of Sciences . . . . .	1725	603	194	27,098
Ukrainian Academy of Sciences . . . . .	1919	223	64	7,878
Byelorussian Academy of Sciences . . . . .	1928	94	30	2,332
Uzbek Academy of Sciences . . . . .	1943	89	24	2,782
Kazakh Academy of Sciences . . . . .	1945	92	34	2,600
Georgian Academy of Sciences . . . . .	1941	78	40	3,469
Azerbaijan Academy of Sciences . . . . .	1945	60	22	2,834
Lithuanian Academy of Sciences . . . . .	1941	33	10	811
Moldavian Academy of Sciences . . . . .	1961	27	15	587
Latvian Academy of Sciences . . . . .	1946	40	16	1,169
Kirghiz Academy of Sciences . . . . .	1954	50	19	942
Tajik Academy of Sciences . . . . .	1951	37	19	841
Armenian Academy of Sciences . . . . .	1943	84	33	1,722
Turkmen Academy of Sciences . . . . .	1951	39	15	646
Estonian Academy of Sciences . . . . .	1946	40	15	643
U.S.S.R. Academy of Arts . . . . .	1947	103	5	228
All-Union Academy of Agriculture . . . . .	1929	148	95	3,945
U.S.S.R. Academy of Medical Sciences . . . . .	1944	240	31	3,653
U.S.S.R. Academy of Pedagogical Sciences <sup>1</sup>	1944	98	17	831
Academy of Communal Services of the Russian Federation . . . . .	1931	—	4	479

<sup>1</sup> Prior to August 1966 it was the Academy of Pedagogical Sciences of the Russian Federation.

The U.S.S.R. Academy of Sciences with its 194 research institutions and 27,000 researchers is a major centre for the development of science.

In the years of Soviet power Academies of Sciences were set up in all Union republics, to which were added some specialised Academies. Another measure promoting the development of science was the establishment of the Siberian Department of the U.S.S.R. Academy of Sciences. Besides, the U.S.S.R. Academy of Sciences has branches in some autonomous republics and regions; they are the Kola, Komi, Daghestan, Ural and Karelian branches. The Siberian Department of the U.S.S.R. Academy of Sciences, too, has branches: the East-Siberian, Far-Eastern, Yakutian and Buryat. Each Academy has research establishments which carry on research work in various fields of knowledge.

## NUMBER OF POST-GRADUATE STUDENTS AND THEIR GRADUATION

	1940	1945	1960	1966
<b>Total number of post-graduates (end-of-year figures)</b> . . . . .	<b>16,863</b>	<b>9,794</b>	<b>36,754</b>	<b>93,755</b>
of whom:				
full-time . . . . .	14,425	8,676	22,978	52,936
spare-time . . . . .	2,438	1,118	13,776	40,819
In institutions of higher learning . . . . .	13,169	6,857	20,406	55,026
of whom:				
full-time . . . . .	11,506	6,101	13,463	34,509
spare-time . . . . .	1,663	756	6,943	20,517
In research establishments . . . . .	3,694	2,937	16,348	38,729
of whom:				
full-time . . . . .	2,919	2,575	9,515	18,427
spare-time . . . . .	775	362	6,833	20,302
<b>Annual graduation</b> . . . . .	<b>1,978</b>	<b>1,366</b>	<b>5,517</b>	<b>21,820</b>
From institutions of higher learning . . . . .	1,472	1,200	3,020	13,156
of whom:				
full-time . . . . .	1,411	1,092	2,407	9,261
spare-time . . . . .	61	108	613	3,895
From research establishments . . . . .	506	166	2,497	8,664
of whom:				
full-time . . . . .	454	129	1,718	4,988
spare-time . . . . .	52	37	779	3,676

Post-graduate courses are major training centres of research workers in the U.S.S.R. In 1966, the post-graduate courses were attended by 94,000 students, or by 5.6 times more than in 1940.

In 1966 these courses trained 11 times more post-graduates than in 1940.

**LIBRARIES OF ALL TYPES**  
(at the beginning of year)

	1914	1941	1965
<b>All libraries</b>			
Number of libraries—'000 . . . . .	76	277	368
Books and magazines in them—mill. copies . . . . .	46	527	2,331
<b>Public libraries</b>			
Number of libraries—'000 . . . . .	14	95	127
Books and magazines in them—mill. copies . . . . .	9	185	1,002
<b>Libraries of general educational schools and children's homes</b>			
Number of libraries—'000 . . . . .	59	164	190
Books and magazines in them—mill. copies . . . . .	22	68	334
<b>Technical and other specialised libraries</b>			
Number of libraries—'000 . . . . .	3	18	51
Books and magazines in them—mill. copies . . . . .	15	274	995

A wide network of all sorts of libraries (mass, scientific, technical, educational and other specialised ones) containing a wealth of books has been set up all over the country.

In 1965 the number of libraries of all types and books in them was respectively 5 times and 51 times larger than in 1914. In 1965 there were 1,017 books and magazines per 100 people of the population as against 29 in 1914.

Among all the libraries there were 164 with a book depository of over 500,000 copies each, the most prominent being the Lenin Library (Moscow) with its book depository of 23 million copies and the Saltykov-Shchedrin Public Library (Lenin-grad) with its 14 million books.

**PUBLIC LIBRARIES**  
(at the beginning of year)

	1914	1941	1946	1967
Total number of public libraries—'000 . . . . .	14	95	47	124
of which:				
in towns and urban-type settlements . . . . .	3	18	9	38
in rural areas . . . . .	11	77	38	86
Total number of books and magazines in them—mill. copies . . . . .	9	185	109	1,105
of which:				
in towns and urban-type settlements . . . . .	5	121	78	599
in rural areas . . . . .	4	64	31	506

The public libraries which dot the whole territory of the U.S.S.R. have universal book depositories.

By the beginning of 1914, on Russia's territory within the present frontiers of the U.S.S.R. there were only 14,000 public libraries, while in Uzbekistan, Kirghizia, Tajikistan and Turkmenia there were none, Georgia and Azerbaijan had 25 public libraries each and Armenia—13. Now, every republic, region, and territory has a wide network of public libraries.

At the beginning of 1967 as compared with 1914 the number of public libraries grew ninefold and their book depositories 117-fold. Now there are 471 books and journals per 100 people of the population as against 6 and 94 in 1914 and 1941 respectively.

**CLUBS AND CLUB ESTABLISHMENTS**  
(at the beginning of year; thousands)

	1914	1941	1946	1967
<b>Total</b> . . . . .	<b>0.2</b>	<b>118</b>	<b>94</b>	<b>129</b>
of which:				
in towns and urban-type settlements . . . . .	0.1	10	6	17
in rural areas . . . . .	0.1	108	88	112

Club establishments—palaces and houses of culture, clubs—enjoy great popularity in the U.S.S.R. because they are important centres of cultural and educational work among the population, centres where people can express and develop their gifts and talents.

By the beginning of 1914 on the territory within the present frontiers of the U.S.S.R. there were 237 club establishments (people's houses), including 94 in the countryside. By the beginning of 1967, the country had 129,000 club establishments of which 87 per cent functioned in the countryside.

*A major achievement of Soviet culture is the spread of the cinema, which has penetrated to the remotest corners of the country.*

### FILM PROJECTORS

	1914	1940	1945	1966
<b>Number of film projectors (end-of-year figures)—'000 . . . . .</b>	<b>1.5</b>	<b>28.0</b>	<b>14.5</b>	<b>149.7</b>
of which:				
stationary . . . . .	1.5	15.5	9.1	136.8
mobile . . . . .	—	12.5	5.4	12.9
<b>Of the total number in the rural areas . . . . .</b>	<b>0.1</b>	<b>19.5</b>	<b>8.7</b>	<b>127.1</b>
of which:				
stationary . . . . .	0.1	8.0	3.9	115.5
mobile . . . . .	—	11.5	4.8	11.6
<b>Total number of cinemagoers—mill. . . . .</b>	<b>106</b>	<b>883</b>	<b>621</b>	<b>4,192</b>
<b>Average attendance of cinemas per capita . . . . .</b>	<b>0.7</b>	<b>5</b>	<b>4</b>	<b>18</b>

"Of all arts the most important for us is cinema"—this was how Lenin defined the significance and place of Soviet cinema art among the other arts. All Union republics now have a wide network of cinemas and film studios producing their own national films.

In 1966, there were over 149,000 film projectors in the U.S.S.R., or 99 times more than in pre-revolutionary Russia. Their number rose sharply in rural areas—in 1966 there were 127,100 film projectors, as against 142 in 1914.

In 1966, cinema attendance was 4,200 million, or 40 times more than in 1914. On an average there were 18 cinema attendances per capita in 1966, as against less than one in 1914. The number of rural cinemagoers rose immensely—in 1966 the rural dweller saw 16 films, as against two in 1940.

Now the country has over 40 film studios which in 1966 alone produced 159 full-length and 999 short films, not counting newsreels.

## THEATRES

	1913	1966
<b>Number of theatres</b> (professional; end-of-year figures) . . . . .	<b>177</b>	<b>508</b>
including:		
opera and ballet theatres . . . . .	16	37
drama, comedy and musical theatres . . . . .	161	344
children's and young people's theatres . . . . .	—	127
<b>Number of theatregoers—mill.</b> . . . . .	<b>13</b>	<b>105</b>

In the years of Soviet power a great many professional children's and young people's theatres were set up, at the same time the network of traditional ones was expanded. Now every Union republic has its national theatres. In 1966 besides the professional theatres, there were 907 amateur theatres whose performances were visited by over 14 million people.

## MUSEUMS

	1913	1966
<b>Total number</b> (including their branches; end-of-year figures)	<b>213</b>	<b>986</b>
of which:		
history of the revolution . . . . .	—	32
historical . . . . .	57	107
memorial . . . . .	9	189
local lore . . . . .	76	446
natural science . . . . .	19	35
arts . . . . .	22	145
specialised . . . . .	30	32
<b>Attendance—mill.</b> . . . . .	<b>5</b>	<b>79</b>

Before the revolution the overwhelming majority of museums were situated in Russia's central regions; on the present territory of the Azerbaijan, Kirghiz, Tajik and Armenian republics there were no museums at all. Now every Union republic has several museums.

In 1966 as compared with 1913 the attendance of museums increased 16 times. In addition, 4.8 million people visited the U.S.S.R. Exhibition of Economic Achievement in 1966.

*Publishing has developed in the U.S.S.R. on a grand scale. Books, magazines and newspapers are produced in millions of copies in many languages of the peoples inhabiting the Soviet Union.*

**CIRCULATION OF BOOKS, MAGAZINES AND NEWSPAPERS**  
(million copies)

	1913	1940	1945	1966
Printings of books . . . . .	99	462	298	1,260
Annual circulation of magazines and other periodicals . . . . .	117	245	73	1,956
Circulation of newspapers . . . . .	3	38	23	110

In Soviet years the publication of books, magazines and newspapers which help Soviet people mould their scientific world outlook, communist culture and morality has grown gigantically.

From 1918 to 1966, the U.S.S.R. produced 31,000 million copies of books, while in 1966 alone book printings reached 1,300 million copies, surpassing the 1913 total 13 times.

In 1966 as compared with 1913 circulation of magazines and newspapers rose 17 and 34 times respectively. Dailies account for 58 per cent of the total newspaper circulation, the most popular among them being *Pravda* (6.5 million copies), *Izvestia* (7.9 million copies), *Komsomolskaya Pravda* (6.4 million copies) and *Selskaya Zhizn* (6.2 million copies).

**PUBLICATION OF WORKS BY K. MARX, F. ENGELS,  
V. LENIN IN THE U.S.S.R. in 1917-66**

	Number of titles	Printings ('000 copies)
<b>All languages</b>		
Works by K. Marx and F. Engels . . . . .	2,351	83,788
Works by V. Lenin . . . . .	8,914	330,691
<b>In Russian</b>		
Works by K. Marx and F. Engels . . . . .	932	69,024
Works by V. Lenin . . . . .	2,545	249,217
<b>In other languages of the peoples of the U.S.S.R.</b>		
Works by K. Marx and F. Engels . . . . .	981	9,628
Works by V. Lenin . . . . .	4,848	59,623
<b>In foreign languages</b>		
Works by K. Marx and F. Engels . . . . .	438	5,136
Works by V. Lenin . . . . .	1,521	21,851

Works by K. Marx, F. Engels and V. Lenin were published in many languages of the peoples of the U.S.S.R. and other countries.

**PUBLICATION OF BOOKS IN LANGUAGES OF THE PEOPLES  
OF THE U.S.S.R.**

	1913		1966	
	Number of titles	Printings ('000 copies)	Number of titles	Printings ('000 copies)
Russian . . . . .	23,805	80,218	54,968	1,012,515
Ukrainian . . . . .	228	686	3,026	80,059
Byelorussian . . . . .	2	4	336	7,716
Uzbek . . . . .	37	86	794	18,373
Kazakh . . . . .	40	161	557	8,998
Georgian . . . . .	232	453	1,657	11,408
Azerbaijani . . . . .	91	112	1,062	9,313
Lithuanian . . . . .	...	...	1,541	11,873
Moldavian . . . . .	none	none	564	7,337
Latvian . . . . .	...	...	1,007	10,583
Kirghiz . . . . .	none	none	382	2,710
Tajik . . . . .	none	none	372	3,614
Armenian . . . . .	257	349	846	6,584
Turkmenian . . . . .	none	none	307	2,982
Estonian . . . . .	...	...	1,453	8,960
Bashkirian . . . . .	none	none	135	792
Buryat . . . . .	none	none	55	232
Kabardinian and Balkar . . . . .	none	none	70	176
Kalmyk . . . . .	none	none	17	33
Komi and Komi-Permyak . . . . .	2	1	34	124
Mari (Valley and Mountain) . . . . .	18	28	78	274
Mordvinian (Moksha and Erzya) . . . . .	none	none	53	84
Languages of the peoples of Daghes- tan—total . . . . .	16	26	176	379
Avar . . . . .	3	6	28	88
Dargin . . . . .	1	1	28	72
Lak . . . . .	12	19	27	39
Kumyk . . . . .	none	none	34	63
Lesghin . . . . .	none	none	43	99
Tabasaran . . . . .	none	none	12	13
Tat . . . . .	none	none	4	5
Ossetian . . . . .	5	3	95	152
Tatar . . . . .	340	1,671	252	3,966
Tuvinian . . . . .	none	none	55	234
Udmurt . . . . .	19	29	23	95
Chechen and Ingush . . . . .	none	none	35	147
Chuvash . . . . .	56	93	111	805
Yakut . . . . .	1	2	85	578

During Soviet years books were published in 140 languages—89 languages of the peoples of the U.S.S.R. and 51 foreign languages. Over 40 nationalities inhabiting the Soviet Union acquired a written language after the October Revolution.

**DISTRIBUTION OF BOOKS  
ACCORDING TO MAJOR FIELDS OF KNOWLEDGE**

	1913 <sup>1</sup>	1940	1960	1966
<b>Total number of copies—mill. . . . .</b>	<b>86.7</b>	<b>462.2</b>	<b>1,239.6</b>	<b>1,260.5</b>
of which:				
political, sociological and economic literature . . . . .	17.7	88.2	169.9	199.1
natural sciences and mathematics . . . . .	1.1	58.8	123.1	184.9
technology, industry, transport, communications, communal services . . . . .	1.2	35.3	180.5	124.2
agriculture . . . . .	3.0	23.9	48.0	35.2
public health and medicine . . . . .	1.6	13.5	40.1	38.8
culture, education, science . . . . .	1.4	19.3	40.8	39.8
linguistics . . . . .	0.9	66.7	96.1	102.1
fiction (including children's literature) . . . . .	15.9	46.6	385.9	419.1
art . . . . .	1.5	7.5	18.8	22.6
printing, book publishing, library science, bibliography . . . . .	4.9 <sup>2</sup>	4.2	13.9	12.9

<sup>1</sup> On the territory within the frontiers of the U.S.S.R. prior to September 17, 1939.

<sup>2</sup> Printing, book publishing, reference books.

*“Fifty years of Soviet power have established the indissoluble socialist brotherhood of all the peoples of this country. All the free and equal peoples—Russian, Ukrainian, Byelorussian, Uzbek, Kazakh, Georgian, Azerbaijanian, Lithuanian, Moldavian, Latvian, Kirghiz, Tajik, Armenian, Turkmen and Estonian, all the nations and nationalities have merged in an indestructible Union of Soviet Socialist Republics, by their combined endeavours built socialism, emerged on the path of prosperity, and achieved tremendous successes in economic and cultural development. In the united brotherhood of Soviet peoples we have upheld the gains of the October Revolution and achieved magnificent results on the path we have chosen.”*

From the Resolution of the Central Committee  
of the C.P.S.U. on Preparations for the 50th  
Anniversary of the Great October Socialist  
Revolution

## **THE ECONOMIC DEVELOPMENT OF THE UNION REPUBLICS — BASIC INDICES**

## THE TRIUMPH OF LENIN'S NATIONALITIES POLICY

The Great October Socialist Revolution freed all the peoples of Russia from age-long oppression, and ensured the active participation of the working people of all nationalities in the building of socialism and communism.

Tsarist autocracy held many of the peoples of Russia, and particularly those of the national border regions, in the position of colonies where national discord was fanned and the working people were kept in ignorance and poverty, subjected to merciless exploitation and deprived of the most elementary human rights. Some peoples were even threatened with extinction.

No sooner was Soviet power established than the Communist Party set about implementing its policy of creating a brotherhood of nations. Lenin's nationalities policy adopted by the C.P.S.U., which aims at achieving the balanced development of the economy and culture of all the fraternal republics, has strengthened and increased ties between them, brought about a flourishing of the national economy, science and culture, education and public health, and a substantial rise in the material and cultural standards of all the peoples of the Soviet Union. The indestructible brotherhood of the Soviet peoples was established in the process of socialist construction. Socialism was achieved through the common endeavour of all the nations and nationalities in the country, who have now emerged on the path of prosperity and progress.

There are now over 100 nations and nationalities in the friendly family of Soviet peoples. The U.S.S.R. consists of 15 Union republics, in many of which autonomous republics, autonomous regions and national areas have been formed. At the beginning of 1967 these totalled 20, 8, and 10 respectively.

First of the equal Soviet republics is the **Russian Soviet Federative Socialist Republic**. Through the endeavours of the workers, peasants and intelligentsia tremendous advances have been made in every branch of the republic's economy in the fifty years of Soviet power. Industry includes all modern branches of production, and accounts for about half the whole country's output of pig-iron, steel, rolled metal, coal, gas, mineral fertilisers, sulphuric acid, and metal-cutting lathes; two-thirds of the electric power and chemical equipment, over 80 per cent of the crude oil, motorcars, paper and textiles; three-quarters of the synthetic fibres, over 60 per cent of the cement and more than 90 per cent of the timber extracted. By 1966 the volume of industrial production was 67 times the 1913 level.

Industry developed at a particularly fast rate in the Eastern regions and the autonomous republics.

Agricultural output is now two and a half times the 1913 level, despite the substantial decrease in the labour force engaged in farming. The Russian Federation produces about 50 per cent of the country's vegetables and sunflower seeds, and more than 50 per cent of the grain, flax fibre, potatoes, meat and milk.

The years of Soviet power have seen flowering of the culture of all the peoples inhabiting the republic, the building of numerous general and specialised secondary schools, higher educational establishments, public libraries, clubs, theatres, and other cultural and educational institutions.

There have also been fundamental changes in the distribution of the productive forces.

**The North-West** is one of the major industrial regions in the country. This region, particularly the city of Leningrad, accounts for a large share of the output of the power and electrical engineering, shipbuilding, instrument-building, machine-tool and other engineering industries. Great strides forward have been made in metallurgy, timber cutting and processing, pulp and paper, chemicals, and light, fishing and food industries.

The region produces 84 per cent of the country's total output of hydraulic turbines, a third of the paper and 100 kW electric motors, and nearly 20 per cent of mainline railway coaches and TV sets. The forests provide one-quarter of all the timber felled in the Soviet Union. Very important for local industry are the Pechora coal basin and the oil and gas deposits in the Komi Autonomous Republic.

The region is approaching self-sufficiency in milk, vegetables and potatoes. Flax production is now 13 per cent of the country's total.

**The Central region** has become a vast complex of engineering, chemical and light industries with Moscow as the chief centre.

The region produces over half the country's total output of mainline railway coaches, a third of the cars and lorries, electric motors, synthetic fibres and tyres; two-thirds of the textiles; a quarter of the TV sets and almost 20 per cent of the metal-cutting lathes and refrigerators.

In the years of Soviet power ferrous metallurgical, chemical, light and food industries have expanded rapidly.

The region also produces one-third of the gross yield of flax fibre, and vast quantities of milk, potatoes and vegetables. The flax yield per acre is the highest in the Russian Federation.

**The Volga-Vyatka area.** Growth rates have been high for engineering—especially the motor industry and shipbuilding—timber and wood processing, pulp and paper, building materials, textiles, leather, furs, footwear and food. Several important industries, notably electric power and chemicals, have been developed from scratch.

Flax, potatoes and stockbreeding are the mainstays of the region's agriculture. For potatoes the region occupies third place in the Russian Federation.

**The Black-Earth Centre.** Engineering, especially the production of tractors, equipment for the chemical industry, and agricultural machinery, has developed rapidly, as have ferrous metallurgy and the chemical industry. Food industries are also important, notably sugar refining.

This is a region of highly efficient mixed farming, producing 16 per cent of the country's sugar-beet, 10 per cent of the sunflower seeds as well as large quantities of grain and potatoes.

Stockbreeding, the traditional branch, continues to develop apace.

**The Volga area.** Flourishing industries created from scratch include engineering—especially tractors and machine tools, oil, gas, chemicals, and electric power. The two largest hydroelectric power stations in the world have been built on the Volga: the Lenin and the 22nd Party Congress power stations. This region accounts for two-thirds of the country's crude oil, mainly from the oilfields of the Bashkirian and Tatar autonomous republics; over 40 per cent of the country's oil-drilling and oil-refining equipment and soda ash; 30 per cent of the tractor drills; 25 per cent of the caustic soda, and 14 per cent of the metal-cutting lathes.

One of the most important agricultural regions in the Soviet Union, the Volga region produces nearly 15 per cent of the country's grain, 13 per cent of the wool, and 12 per cent of the sunflower seeds. Here lie a quarter of the Russian Federation's grainlands. Stockbreeding has developed considerably.

**The Northern Caucasus.** Many new industries, including electric locomotives, machine tools, gas, chemicals and agricultural machinery, have been developed. Oil, coal, non-ferrous metal and footwear industries, production of building mate-

rials, and many branches of the food industry have registered remarkable progress. The region accounts for one-third of the country's natural gas, 18 per cent of oil-drilling and oil-refining equipment, over 80 per cent of the combine harvesters, 10 per cent of the forges and presses. This is an important region for mixed farming, producing 12 per cent of the country's grain yield, 24 per cent of the sunflower seeds, over 10 per cent of fruit and berries, almost 20 per cent of grapes. It can boast of advanced stockbreeding yielding 16 per cent of the country's wool output.

**The Urals** has become one of the major industrial areas of the Soviet Union. Variety is the keyword. The region produces one-third of the country's ferrous metals and metallurgical plant, and practically 20 per cent of the iron ore. Its non-ferrous metallurgy and engineering are extremely important for the country as a whole. The region's share in the total U.S.S.R. output is 16 per cent for forge and press equipment, 14 per cent for excavators and diesel engines, and 37 per cent for railway wagons. The chemical industry has forged ahead; the figures as percentages of the U.S.S.R. total are: mineral fertilisers—14 per cent, soda ash—21 per cent, and sulphuric acid—17 per cent. Paper stands at 20 per cent and timber extraction—at almost 17 per cent.

The output of potatoes, vegetables and animal products is high and grain production has marked a substantial increase.

**Western Siberia.** Industry was developed here practically from scratch during the Five-Year plans, and the region is now one of the most important industrial areas in the country. The major industries are ferrous and non-ferrous metallurgy, fuel, chemicals, mining, power and electrical engineering, tractors and agricultural machinery, light and food industries. The Kuznetsk coal basin has become the second in importance in the Soviet Union after the Donets Basin. Large deposits of oil and natural gas have been discovered and are already being exploited.

Western Siberia is also one of the country's chief agricultural regions. The basic branches are grain, potatoes and vegetables. Stockbreeding has developed considerably over the last few years.

**Eastern Siberia.** Advanced power-consuming branches of the non-ferrous metal and chemical industries have been created using vast local fuel, hydropower, mineral and timber resources. Coal-mining has developed apace. The largest HEP station in the world, with a capacity of 4 million kW has been commissioned at Bratsk. Agricultural engineering has been built up from scratch. The timber resources of the region are now being widely exploited.

Cereals and sheep farming are the main branches of agriculture.

**The Far East** has been developed all round economically during the years of Soviet power. The main industries of the region are fuel, shipbuilding, pulp and paper, building materials, and fishing. A third of the country's fish and sea mammals is caught in that region.

Agriculture has made considerable progress lately. The region is the country's major soya producer.

**The Ukrainian S.S.R.** has twice been obliged to rebuild its war-ruined economy, first after the foreign armed intervention and the Civil War, and again after World War II. With the fraternal aid of the Russian and other peoples of the U.S.S.R. the republic accomplished its economic recovery with remarkable success. By 1966 industrial output was 44 times the 1913 figure. The Ukraine is the Soviet Union's major coal-mining and metallurgical base. The other chief industries include engineering, chemicals and foodstuffs. The republic produces half the country's pig-iron, over 40 per cent of the steel and rolled metal, more than 50 per cent of the iron ore, and a third of the coal and gas. The factories of the Ukrainian S.S.R. manufacture almost all the country's diesel locomotives, all the beet-harvesting combines, about half the metal-working plant, and enormous quantities of metal-cutting lathes, tractors, cars and lorries; and power, electrical engineering, chemical, conveying and hoisting equipment. In 1966, 184 times more electric power was produced than in 1913. The chemical, footwear, sugar, vegetable oil, butter and canning industries have expanded remarkably.

The Ukraine is the chief agricultural region of the U.S.S.R., now accounting for 20 per cent of the country's grain, about 60 per cent of the sugar-beet, almost half the sunflower seeds, more than a third of the fruit and berries and over a quarter

of the grapes. Advanced cattle-breeding accounts for almost one-quarter of the country's meat, milk and eggs.

The tremendous progress the republic has made in education and culture can be gauged from the following figures: The number of school children in the 5th-10th forms is 30 times the 1914 figure. There are 849 higher educational establishments and specialised secondary schools with 31 times as many students as before the revolution.

A wide network of educational and cultural institutions and a fine health service have been created in the republic.

There are three major economic regions in the Ukraine, which are developing in step as a single economic entity.

**The Donets-Dnieper Region** is the number one coal-mining and metallurgical area in the Soviet Union, producing half the country's output of iron ore, almost a third of the coal, half the pig-iron, and over 40 per cent of the steel and rolled ferrous metals; 22 per cent of the natural gas, 17 per cent of the mineral fertilisers, 16 per cent of the sulphuric acid and 29 per cent of the soda ash. The region accounts for almost all the country's output of diesel locomotives, about half the metallurgical equipment and railway wagons and a third of the tractors. Other important products include turbines, generators, electric motors, diesel engines, agricultural machinery, cars and lorries, wireless and TV sets, refrigerators, sugar, butter and vegetable oil.

The region has a highly developed agriculture, which over the last few years has accounted for 9 per cent of the country's grain production, almost a third of the sunflower seeds, and 17 per cent of the sugar-beet.

**The South-West.** Instrument-making, machine tools, excavators, building materials, chemicals, pulp and paper, light and food industries, especially sugar refining, have developed apace. The region accounts for 27 per cent of the country's output of excavators, 12 per cent of the forges and presses, 9 per cent of the leather footwear and over 6 per cent of the TV sets and refrigerators.

The food industry is among the most advanced in the country, producing 41 per cent of the total sugar output and 11 per cent of the butter.

The South-West region is the most important in the country for the production of sugar-beet, the second for milk and vegetables, and the third for flax.

**The South.** Engineering, especially shipbuilding, agricultural machinery and building materials, light industry, fishing, canning, butter and oil production are developing apace.

A quarter of the country's grapes are grown here. The cultivation of cereals, sugar-beet and sunflowers has extended.

**The Byelorussian S.S.R.** has become one of the most highly developed regions in the country, despite colossal losses incurred during the two world wars, after which industry had to be created practically anew. Industry, which in 1913 was mainly limited to small-scale peat digging and timber felling, paper and cement mills, is now highly advanced. Gross industrial output in 1966 was 64 times its 1913 level.

Many important industries have been created from scratch in the years of Soviet power. These include the machine-tool, motor, tractor, radio engineering, and instrument-making industries. The republic now produces 20 per cent of the country's tractors and nearly 13 per cent of the metal-cutting lathes. The production of wireless and TV sets, mineral fertilisers, and synthetic fibres is also considerable.

While in 1913 only 3 million kWh electricity were produced in Byelorussia, the figure is now 9,500 million kWh. The chemical industry is developing especially fast. Peat constitutes an important share in the fuel budget of the republic. In 1966 nearly 12,375,000 tons were extracted as against 14,000 in 1913. Light and food industries are developing apace.

Agriculture occupies an important place in the republic's economy. The principal cultures are potatoes and flax, of which over three times more than in 1913 are produced. Fruit and vegetables are also important, and stockbreeding is highly developed.

Large land reclamation works have been undertaken in the years of Soviet power, and 1,231,000 hectares of marshland have been drained in all.

After the revolution education was made available to the masses and Byelorussia's national culture flourished. There are nearly two million school children in the republic, and while before the revolution there was not a single higher educational establishment, there are now 28 with a total student enrolment of 115,900. The number of specialised school pupils in 1966 was 95 times the 1914 figure. There are 16,100 research workers in the republic.

Thanks to tremendous efforts of their own and the assistance of the fraternal republics, the peoples of **Central Asia and Kazakhstan** have made a gigantic leap forward from the patriarchal way of life to modern industrial society.

Before the revolution there was not a single higher educational establishment in the whole area, and elementary schools were few and far between. There was no local intelligentsia. In the years of Soviet power the Central Asian republics have made such remarkable progress in education and the development of their national culture that they have outstripped not only their capitalist neighbours but many of the most advanced Western countries.

Before the revolution **Uzbekistan** was to all intents and purposes a feudal colony of tsarist Russia. Today it is a flourishing Soviet republic, with highly developed industry.

Industrial production in 1966 was 32 times the 1913 level. The republic produced 6 times as much electric power as the whole of tsarist Russia did in 1913. Among the most important industries that have been created are ferrous and non-ferrous metallurgical, chemical, heavy engineering producing tractors, agricultural machinery—including almost all kinds of machines for cotton picking and processing—machines for cotton cleaning, spinning and weaving, diesel engines, excavators, chemical plant, conveying and hoisting equipment, and other kinds of machines and equipment.

Enormous deposits of natural gas are now being exploited at Gazli and in 1966 the republic produced 16 per cent of the country's total output.

Light, food and other industries have also advanced rapidly.

**Uzbekistan** is the Soviet Union's chief cotton producer, accounting for over two-thirds of the country's total output. The gross output of raw cotton has increased eight times in the years of Soviet power. The republic accounts for more than half the country's production of silk cocoons.

**Uzbekistan** is number one supplier of kenaf. Fruit-, vine- and citrus-growing is extensively developed. Stockbreeding has also developed rapidly, and the republic produces one-third of the country's astrakhan pelts.

Extensive irrigation is necessary for agriculture. The area of irrigated land has been doubled since the revolution.

In tsarist times almost the entire population of **Uzbekistan** was illiterate, and there was not a single higher educational establishment. There are now 145 times more school children than before the revolution, and 351 times more in the senior forms. The total number of students enrolled in the higher educational establishments is 188,300. There are 17,900 research workers, or half as many again as there were in the whole Russian Empire before the revolution. In 1913 there was only one newspaper in the Uzbek language, and it had a very limited circulation. Today the total circulation of newspapers in the republic is two and a half million.

**Kazakhstan** was transformed in a remarkably short time from an economically backward land to a highly industrialised socialist republic. Ferrous and non-ferrous metallurgy, fuel and power, chemicals, cement, engineering, and light and food industries now flourish there. A few comparative figures serve to drive home the tremendous leap forward **Kazakhstan** has made in the years of Soviet power; coal output has increased from 100,000 tons in 1913 to 48 million tons in 1966, which is 1.7 the total for the whole of tsarist Russia. Over the same period production of electric power has risen from 1,300,000 kWh to over 21,000 million kWh, while the total volume of industrial production has increased 101 times.

The **Kazakh Republic** now has become one of the chief grain producers in the country, largely thanks to the opening up of virgin lands which increased the area planted to grain to 24 million hectares, or 6 times the 1913 area. The republic has supplied 12 per cent of the country's total grain yield on the average for the last five years. Stockbreeding is also practised extensively and especially sheep-raising:

the republic now supplies 25 per cent of the country's wool and over 30 per cent of the astrakhan pelts.

The Kazakhs were by and large as downtrodden as the other peoples of Central Asia before the revolution. There were no higher educational establishments, and it was difficult for the working people to get any sort of education. There are now 27 times as many school children in the republic as there were in 1914, while the 200 odd higher educational establishments, technical colleges and specialised schools, have a total student body of 357,000. A wide network of educational and cultural institutions has been set up. There are more than 20,000 research workers in the republic.

With the help of the fraternal republics **Kirghizia**, once a backward colony of tsarist Russia, has become a highly developed country with advanced and diversified industry and agriculture. Industrial production is now 117 times the 1913 level. The republic produces: non-ferrous metals, coal, oil, gas, cement, prefabricated building units, metal-cutting lathes, precision instruments, electric motors, agricultural machinery, textiles, footwear, various foodstuffs, and many other manufactures. Before the revolution the territory produced no electric power whatsoever. The 2,700 million kWh produced in 1966 is more than was produced in the whole of tsarist Russia. Kirghizia is the country's leading mercury producer.

Agriculture has been radically reformed, and the total volume of farm produce in 1966 was 5.1 times what it was in 1913.

Stockbreeding has developed further, and the raising of fine-fleeced sheep occupies an especially important place. Kirghizia is also a big producer of cotton, sugar-beet and tobacco.

Before the revolution illiteracy was widespread, and there was not a single higher educational establishment or technical school. Now compulsory eight-year schooling is universal, while the specialised schools and higher educational establishments of the republic have a total student body of 72,000 and there are no less than 4,200 research workers. In pre-revolutionary Kirghizia there were no public libraries, theatres or museums, and no newspapers or publishing houses. There are now 1,296 public libraries, with a total of 8,700,000 books, 979 film projectors and 928 clubs, while more than 5 million books are published annually.

**The Tajik S.S.R.** Industry has been built up practically from scratch. The chief industries are engineering, textiles, cement, clothes, footwear, and canning. The colossal reserves of water power were unexploited before the revolution. There was not a single power station in the territory before 1917. In 1966 the republic produced 2,100 million kWh of electricity, or more than the whole of tsarist Russia in 1913.

As regards the volume of output the Tajik cotton-cleaning industry holds the second place among the Union republics.

An example of the tremendous advances in agricultural output is provided by the leading crop, cotton, production of which has increased almost 20-fold in the years of Soviet power. The republic has the world's highest cotton yield per acre, 2.7 tons per hectare, in 1966. Tajikistan is the country's leading producer of fine-fibre cotton. Market gardening, viticulture, and the production of silk cocoons are also highly important. The chief branch of stockbreeding is sheep-farming for wool and astrakhan.

In 1966 the republic's gross agricultural output was 5.9 times the 1913 figure.

The Tajiks did not have their own written language before the revolution. Now Tajikistan is a country of total literacy, with compulsory eight-year schooling and a large network of specialised secondary schools and higher educational establishments. There are 39 universities and specialised secondary schools with a total of 62,000 students, and 3,900 research workers. Before the revolution there were no public libraries, cinemas or theatres, not a single newspaper or publishing house. Now there are over a thousand public libraries, 829 cinemas, and about 800 clubs. More than half the books and newspapers are published in Tajik.

**The Turkmen S.S.R.** was another of the backward feudal appendages of tsarist Russia. Industry was built up from scratch during the years of Soviet power. The chief industries are oil refining, chemicals, gas, textiles, canning and confectionery. The output of crude oil is now 80 times the 1913 figure. Sulphur and sodium sulphate mining are also important. Industrial output is 33 times what it was in 1913.

Agriculture has developed tremendously, and the Turkmen S.S.R. is an important producer of cotton, silk cocoons and astrakhan. Ten times more cotton was produced in 1966 than in 1913. Stockbreeding is important, and the republic produces one-fifth of the country's astrakhan pelts.

The gross agricultural production has increased 3.9 times in the years of Soviet power.

Before the revolution there were only 7,000 children at school in Turkmenia. There was not a single higher educational establishment or technical college, and no public library network. Today, there are 455,000 school children, 33 higher educational establishments and specialised secondary schools, with a total of 48,000 students and 2,900 research workers, including 750 Doctors and Candidates of Science, while over 800 public libraries dispose of 5,000,000 books.

#### **The Caucasian republics.**

**The Georgian S.S.R.**, before the revolution an agricultural appendage of tsarist Russia, is now one of the most highly industrialised regions of the Soviet Union. Many industries, like ferrous metallurgy, engineering, chemicals, cement, textiles, sugar and canning have been built up from scratch. Coal, power and various light and food industries have developed rapidly.

Industrial output in 1966 was 62 times the 1913 figure. Georgia is the country's second most important producer of manganese. The chief branches of engineering are electric locomotives, lorries, instruments, mining equipment, metal-cutting lathes, heavy electric motors, and plant for the tea, canning and wine-making industries. The republic now manufactures twice as many metal-cutting lathes as the whole of tsarist Russia in 1913. In 1966 it produced 6,500 million kWh of electricity as compared with 20 million kWh in 1913.

Viticulture and tea-growing have developed on an enormous scale. Tea plantations now occupy over 60,000 hectares, and the total tea output has increased from 600 tons in 1913 to 226,000 tons in 1966. Georgia is also the country's chief producer of citrus fruits. Market gardening, viticulture and the production of silk cocoons are widespread.

Georgian culture has flourished anew in the years of Soviet power. There are now 81,000 students in the republic's 18 higher educational establishments, while the number of specialised school students has increased 82 times over. Eight-year education has become obligatory. The fifteen million copies of books published in 1966 was 16 times the figure for 1913, while newspaper circulation has increased 11 times.

**The Azerbaijan S.S.R.** is now a highly developed industrial republic. The chief industries are gas, engineering—notably equipment for the oil industry and electric motors, instruments and other equipment—ferrous and non-ferrous metallurgy and chemicals. The oil industry, traditionally and still today the chief industry of the republic, has been thoroughly overhauled. Light industry and the food industry have also achieved remarkable growth rates.

The output of electric power in 1966 was 93 times more than in 1913.

Agriculture is now highly developed in the republic, which is now one of the country's chief regions for viticulture, cotton growing and market gardening. Tea and silk cocoons are cultivated. Stockbreeding is also important, especially sheep farming.

Before the revolution 90 per cent of the population was illiterate, for education was practically inaccessible to the masses. Now that there is universal eight-year schooling, as throughout the Soviet Union, the number of school children has multiplied more than sixteen times since 1914, or 91 times in the case of 5th-10th form pupils. There was not a single higher educational establishment before the revolution. Now there are 12 with a total enrolment of 78,000 apart from the 65,000 specialised secondary school students. In 1966 there were 14,000 research workers. The press has developed remarkably. In 1913 books were published in a total of 137,000 copies, while in 1966 the figure was 12,600,000.

**The Armenian S.S.R.** is now a highly advanced industrial republic. Gross industrial output has increased 119 times as compared with the 1913 level.

The engineering works of the republic produce electric motors, transformers, metal-cutting lathes, plant for the chemical industry, instruments and various other plant and machinery.

In 1966, 3,600 million kWh of electricity were produced as compared with 5 million kWh in 1913.

The republic's highly advanced chemical industry produces mineral fertilisers, sulphuric acid, caustic soda, calcium carbide, paint and varnish, plastics, and tyres. Light industry and food industry have developed remarkably.

The socialist transformation of agriculture has made possible a fourfold increase in output in the years of Soviet power. Market gardening and viticulture are highly developed and various types of tobacco are grown. Stockbreeding, and sheep-raising in particular, are now practised extensively, and much fine and semi-fine wool is produced.

The years of Soviet power have brought an unprecedented flourishing of Armenian culture. A large network of schools, technical colleges, higher educational establishments and other cultural and educational institutions, has been created. Sixteen times more children attend school than before the revolution—no less than 124 times as many 5th-10th form pupils. Whereas in 1914 Armenia could boast only one specialised secondary school, which had a grand total of 131 students, there are now many, with a total enrolment of 36,000. Some 43,000 students are enrolled at the 12 higher educational establishments. There are 9,100 research workers, including 2,600 Doctors and Candidates of Science. Over two thousand clubs and public libraries function in the republic.

**The Moldavian S.S.R.** was formed in 1940. Bessarabia, the part of the republic that lies on the right bank of the River Dniester, had been seized from the Soviet state by Rumania in the early years of Soviet power, and this considerably hampered its development.

Today, Moldavia has a highly developed food industry, especially wine-making and fruit and vegetable canning, and many other industries have been built up in the years of Soviet power, including electrical engineering, instrument-making, cement, light and various other industries. No less than 229 times as much electric power was produced in 1966 as in 1940. Moldavia occupies third place among the Union republics for wine-making and canning. Industrial output is 99 times the 1913 level and 17 times what it was in 1940.

The chief branches of Moldavia's agriculture are market gardening and viticulture, and production has doubled since 1940. The republic produces one-quarter of the country's grapes, and large quantities of fruit, tobacco, grain, sunflower seeds, and sugar-beet. Since 1940 the output of meat and milk has increased by approximately 200 per cent and 300 per cent respectively.

Before the establishment of Soviet power illiteracy was high, reaching as much as 85 per cent in certain areas. General eight-year education is now universal and there are almost twice as many school pupils as in 1940. There are more students in the republic's higher educational establishments per 10,000 people than in any European capitalist country. In 1966 the total number of students enrolled in the higher educational establishments and specialised secondary schools was 80,400. A wide network of educational and cultural institutions has been created.

**The Baltic republics** were wrested from the socialist road of development shortly after the victory of the October Revolution. With the aid of the imperialist countries the local bourgeoisie seized power and kept it for 22 years, greatly hampering the economic development of Lithuania, Latvia and Estonia, which were entirely at the mercy of the big Western monopolies. In 1940 Soviet power was established. Then followed four years of nazi occupation. After the liberation the Baltic republics salvaged their war-ravaged economy and embarked on the socialist road of development.

**The Lithuanian S.S.R.** has become an industrial country, whose major industries are electrical engineering, shipbuilding, instrument-making, machine tools, chemicals, cement and textiles. Industrial output is 20 times the 1940 level, that of electric power—53 times. The wood-working, peat, food and light industries have developed rapidly. In 1966 paper production had increased 7 times over the 1940 figure, leather footwear—18 times, and the amount of fish caught—223 times.

Enormous changes have taken place in agriculture, with collectivisation and the application of modern technology in farming. Stockbreeding is particularly well

developed, especially pig-raising for bacon. Vast land reclamation work has been carried out.

Science and culture have flourished. The number of 5th to 11th form pupils is four times what it was in 1940, the number of students in the schools of higher learning has increased by 8.5 times, and the number attending specialised secondary schools by 9.6 times. A vast network of cultural and educational institutions has been created.

The Latvian S.S.R. has become a highly developed industrial republic. The gross volume of industrial output in 1966 was 19 times the 1940 level, whereas under bourgeois government, that is between the wars, it never got back to the 1913 level. Engineering has developed at a particularly fast rate. Latvia produces railway passenger coaches, trams, electrical equipment, wireless sets, automatic telephone exchanges, and various precision instruments. Every third railway coach and every fourth wireless set produced in the U.S.S.R. are "Made in Latvia". For telephones the figure is 50 per cent, and for trams—17 per cent. Other industries to have advanced rapidly include electric power, chemicals, building materials, peat, wood-working, paper, foodstuffs, and various light industries. In 1966 the republic's fisheries brought home catches 27 times greater than in 1940.

Agriculture has been radically reorganised with the introduction of the collective-farm system and the mechanisation of farming. Meat and dairy produce occupy an extremely important place, especially milk and bacon. The total agricultural production is twice the 1913 level. Large-scale land reclamation has been carried out in the republic.

Latvian culture has flourished anew in the years of Soviet power. The number of school children is 1.4 times the 1940 figure, the number of students at higher educational establishments—3.6, and the number of specialised secondary students—4. There were 6,600 research workers in 1966. Many theatres, cinemas, libraries, clubs and other cultural and educational institutions have been opened in the years of Soviet power to satisfy the increasing requirements of the population. In 1966 over 13 million books were published.

The Estonian S.S.R. The economy and culture of Estonia have changed beyond recognition in the years of Soviet power. Very rapid growth rates have been achieved in industry and in 1966 gross output totalled 20 times the 1940 level.

Estonia is now a highly developed industrial republic. The years of Soviet power have seen the creation of a big power base, electrical engineering, instrument-making, chemicals, gas and shale, and many other industries.

In 1966 the republic produced 40 times more electric power than in 1940, and 8 times more shale were quarried. Electrical engineering and instrument-making are now thriving industries. Estonia also produces equipment for gas and shale industry and oil-drilling, excavators, ships, and plant for the food industry. The pulp and paper industries, foodstuffs and various light industries have made great strides. The republic's fisheries have achieved an output 9 times the 1940 level, the canning industry—30 times.

The republic's agriculture is highly productive, and output is rising all the time, especially the produce of livestock farming. The chief branches are pig-raising for bacon, and cattle for milk. The area of reclaimed land has increased considerably since 1940.

Education, culture and science are flourishing. Between 1940 and 1966 the number of 5th-11th form pupils has increased 2.7 times, the number of students in the higher educational establishments and specialised secondary schools—7 times.

In Estonia, just as in Lithuania and Latvia, there are more students per ten thousand population than in any European capitalist country.

There are 11 times more books in the public libraries than in 1940, and 9 times more film projectors. The comparative figures for book output were 2.1 million in 1940 and 10.4 million in 1960; for newspapers—191,000 and 802,000.

The basic indices for the development of the economies of the Union republics are given below.

## R.S.F.S.R.

Founded on November 7, 1917      Territory—17.1 million sq km

The R.S.F.S.R. includes 16 autonomous republics,  
5 autonomous regions, 10 national areas.

The republic has 6 territories and 49 regions.

	1913	1940	1966
Population (end-of-year figures)—mill. . . . .	89.9	110.1 <sup>1</sup>	127.3
urban . . . . .	15.7	37.9	76.7
rural . . . . .	74.2	72.2	50.6
Growth of gross industrial output (1913=1) . . . . .	1	8.7	67
Growth of gross agricultural output (1913=1) . . . . .	1	1.3	2.5

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—'000 mill. kWh . . . . .	1.3	30.8	34.4	63.4	356.8
Oil—mill. tons . . . . .	1.3	7.0	5.7	18.2	218.0
Gas—'000 mill. cu m . . . . .	0.02	0.4	1.6	3.1	70.2
Coal—mill. tons . . . . .	6.0	72.8	105.0	160.2	329.2
Pig-iron—mill. tons . . . . .	1.3	5.3	7.2	10.0	32.5
Steel—mill. tons . . . . .	1.8	9.3	10.8	18.5	52.0
Rolled ferrous metals (finished)—mill. tons . . . . .	1.3	5.7	6.5	11.9	35.2
Mineral fertilisers (conventional units)—'000 tons . . . . .	33	2,164	836	3,093	18,442
Chemical fibres—'000 tons . . . . .	—	7.0	1.1	18.7	339.3
Automobile tyres—mill. . . . .	...	3.0	1.4	7.2	23.0
Metal-cutting lathes—'000 . . . . .	1.4	39.5	35.2	49.5	104.1
Turbines—mill. kW . . . . .	0.01	1.0	0.08	2.3	10.7
A.C. electric motors with a capacity of over 100 kW—'000 kW . . . . .	—	503	678	2,188	4,555
Automobiles—'000 . . . . .	0.0	145.4	74.7	342.2	565.7
Tractors—'000 . . . . .	—	21.2	7.2	94.0	159.5
Timber, commercial—mill. Fest metres . . . . .	24.0	101.7	50.2	137.7	250.5
Paper—'000 tons . . . . .	161	691	297	980	2,948
Cement—mill. tons . . . . .	1.2	3.6	1.1	6.6	48.7
Cotton fabrics—mill. lin. m . . . . .	2,566	3,707	1,464	3,537	6,141
Woollen fabrics—mill. lin. m . . . . .	97.5	101.5	49.2	132.3	303.3
Linen fabrics—mill. lin. m . . . . .	120.0	263.4	104.5	250.7	484.1
Silk fabrics—mill. lin. m . . . . .	42.6	61.6	24.3	94.0	780.3
Leather footwear—mill. pairs . . . . .	...	141.3	48.8	136.3	283.5
Clocks and watches—mill. . . . .	...	2.8	0.3	7.4	27.9

Continued

	1913	1940	1945	1950	1966
Radio sets and radiograms —'000 . . . . .	—	144	8.4	853	3,224
TV sets—'000 . . . . .	—	0.3	—	11.9	3,253
Household refrigerators —'000 . . . . .	—	3.2	0.3	1.2	1,453
Household washing ma- chines—'000 . . . . .	—	—	—	0.2	2,447
Bicycles and mopeds—'000	4.9	179	0.02	285	2,154
Granulated sugar—'000 tons	249	359	63	429	2,596
Fish, sea mammals, whales and sea products—'000 tons . . . . .	822	1,079	915	1,320	4,378
Butter (excluding production in individual subsidiary households)—'000 tons . .	...	141	83	197	543
Vegetable oil—'000 tons . .	323	422	139	363	1,014
Canned food—mill. conven- tional cans . . . . .	63	549	305	757	3,193

Agriculture

	1913	1940	1945	1950	1966
Total crop area—mill. ha . . . . .	69.8	92.1	67.1	89.0	122.6
Productive livestock population (in terms of cattle; end-of-year figures) — mill. head . . . . .	32.7 <sup>1</sup>	29.1	25.0	30.4	50.7
<i>Agricultural output</i>					
Cereals—mill. tons . . . . .	50.5	55.6	25.4	46.8	99.9
Flax fibre—'000 tons . . . . .	314	239	103	172	257
Sugar-beet (for factory processing) —mill. tons . . . . .	2.0	3.2	0.8	3.6	23.8
Sunflower seeds—'000 tons . . . . .	659	1,430	315	867	2,790
Potatoes—mill. tons . . . . .	16.1	36.4	34.7	50.1	44.5
Vegetables—mill. tons . . . . .	...	6.4	5.8	5.0	8.2
Fruit and berries—'000 tons . . . . .	...	1,093	446	567	1,677
including grapes . . . . .	...	73	36	78	618
Meat—mill. tons . . . . .	2.4	2.4	1.5	2.6	5.5
Milk—mill. tons . . . . .	19.3	17.8	16.6	21.4	42.0
Eggs—'000 mill. . . . .	7.1	6.6	2.8	6.0	18.4
Wool—'000 tons . . . . .	94.0	98.0	58.7	90.9	174.8

<sup>1</sup> 1916.

### Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . .	5,684 <sup>1</sup>	20,633	15,421	19,399	26,187
including pupils of the 5-10 (11) forms. . . . .	353 <sup>1</sup>	8,257	4,007	8,376	15,197
Number of children in permanent crèches and kindergartens—thousands . . . .	...	1,266	1,480	1,239	5,209
Number of institutions of higher learning . . . . .	72 <sup>1</sup>	481	456	516	435
Students in them—thousands . . . . .	86.5 <sup>1</sup>	478.1	456.0	796.7	2,470.5
Number of specialised secondary schools . . . . .	297 <sup>1</sup>	2,188	1,881	2,005	2,293
Students in them—thousands . . . . .	35.4 <sup>1</sup>	594.0	657.3	810.0	2,423.9
Number of public libraries	9,342	56,119	31,239	59,407	61,151
Books and magazines in them—'000 copies . . . . .	6,698	124,480	84,168	159,192	634,317
Printings of books—'000 copies . . . . .	74,979	353,505	244,115	646,798	983,509
Circulation of newspapers—'000 copies . . . . .	1,965	25,156	15,996	25,451	76,709
Number of film projectors . . . . .	1,055 <sup>1</sup>	17,646	10,238	27,205	94,856
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . . .	—	4,641	4,713	9,560	58,019
Number of hospital beds (excluding military hospitals)—'000 . . . . .	133	482	544	610	1,290
Number of doctors of all specialities (excluding military doctors)—thousands	16	91	88	160	328

<sup>1</sup> 1914.

### UKRAINIAN S.S.R.

Founded on December 25, 1917      Territory—603,700 sq km  
The republic has 26 regions.

	1913	1940	1966
Population (end-of-year figures)—mill. . . . .	35.2	41.3 <sup>1</sup>	46.0
urban . . . . .	6.8	14.0	24.3
rural . . . . .	28.4	27.3	21.7
Growth of gross industrial output (1913=1) . . . . .	1	7.3	44
Growth of gross agricultural output (1913=1) . . . . .	1	1.6	2.7

<sup>1</sup> Beginning of the year.

## Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—'000 mill. kWh	0.5	12.4	3.1	14.7	99.9
Oil—'000 tons . . . . .	1,047	353	250	293	9,288
Natural gas (including concurrent gas)—'000 mill. cu m . . . . .	—	0.5	0.8	1.5	43.6
Coal—mill. tons . . . . .	22.8	83.8	30.3	78.0	196.4
Pig-iron—mill. tons . . . . .	2.9	9.6	1.6	9.2	35.2
Steel—mill. tons . . . . .	2.4	8.9	1.4	8.4	40.5
Rolled ferrous metals (finished)—mill. tons . . . . .	1.9	5.6	0.9	5.8	28.2
Mineral fertilisers (conventional units)—'000 tons	35.6	1,012	136	1,536	7,926
Soda ash (95%)—'000 tons	119	434	129	559	860
Sulphuric acid—'000 tons	45.3	407	72.2	395	1,892
Chemical fibres—'000 tons	—	1.6	—	2.9	50.8
Metal-cutting lathes—'000	0.07	11.7	1.7	10.5	25.6
Metallurgical plant—'000 tons . . . . .	...	16.0	10.1	42.7	117.4
Mainline diesel locomotives—sections . . . . .	—	1	—	125	1,473
Automobiles—'000 . . . . .	—	—	—	18.3	72.6
Tractors—'000 . . . . .	—	10.4	0.5	22.6	124.2
Cement—'000 tons . . . . .	269	1,218	335	2,013	13,749
Cotton fabrics—mill. lin. m	4.7	13.8	2.1	20.6	206
Woollen fabrics—mill. lin. m	5.3	12.0	0.4	7.9	25.0
Leather footwear—mill. pairs . . . . .	...	40.8	3.8	28.8	102.6
Household refrigerators—'000 . . . . .	—	0.2	—	—	358
Household washing machines—'000 . . . . .	—	—	—	—	328
Granulated sugar—'000 tons	1,108	1,580	329	1,806	5,950
Fish, sea mammals, whales, and sea products—'000 tons . . . . .	37.1	139.1	59.8	190.3	645.1
Butter (excluding production in individual subsidiary households)—'000 tons . . . . .	...	33.3	10.1	60.7	265
Vegetable oil—'000 tons . . . . .	...	158.7	70.0	181.5	961
Canned food—mill. conventional cans . . . . .	30.3	339.2	55.4	297.9	1,843

## Agriculture

	1913	1940	1945	1950	1966
Total crop area—mill. ha . . . . .	28.0	31.3	23.6	30.7	33.4
Productive livestock population (in terms of cattle; end-of-year figures)—mill. head . . . . .	9.1 <sup>1</sup>	11.1	7.4	11.0	21.6

<sup>1</sup> 1916.

Continued

	1913	1940	1945	1950	1966
<i>Agricultural output</i>					
Cereals—mill. tons . . . . .	23.2	26.4	12.4	20.4	34.1
Sugar-beet (for factory processing)—mill. tons . . . . .	9.3	13.1	3.4	14.6	41.4
Sunflower seeds—'000 tons . . . . .	71	946	413	727	2,835
Flax fibre—'000 tons . . . . .	4	19	10	12	79
Potatoes—mill. tons . . . . .	8.6	20.7	13.8	20.3	21.6
Vegetables—mill. tons . . . . .	...	5.5	2.8	2.3	5.3
Fruit and berries—'000 tons . . . . .	...	951	410	831	2,708
including grapes . . . . .	...	161	78	66	929
Meat—mill. tons . . . . .	1.1	1.1	0.4	1.2	2.6
Milk—mill. tons . . . . .	4.7	7.1	4.4	6.8	17.2
Eggs—'000 mill. . . . .	3.0	3.3	1.2	3.5	7.5
Wool—'000 tons . . . . .	14.8	13.4	4.4	11.9	23.5

## Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . .	2,607 <sup>1</sup>	6,830	5,151	7,134	8,468
including pupils of the 5-10 (11) forms . . . .	169 <sup>1</sup>	2,866	1,085	3,217	5,078
Number of children in permanent crèches and kindergartens—thousands . . .	...	319	213	251	1,291
Number of institutions of higher learning . . . . .	27 <sup>1</sup>	173	154	160	132
Students in them—thousands	35.2 <sup>1</sup>	196.8	137.0	201.6	739.1
Number of specialised secondary schools . . . . .	88 <sup>1</sup>	693	532	584	717
Students in them—thousands	12.5 <sup>1</sup>	196.2	164.1	227.7	718.7
Number of public libraries	3,153	22,295	4,844	34,913	26,932
Books and magazines in them—'000 copies . . . .	1,917	36,728	8,636	42,945	238,351
Printings of books—'000 copies . . . . .	11,552	51,370	19,061	77,649	109,732
Circulation of newspapers—'000 copies . . . . .	781	6,916	2,749	4,627	14,707
Number of film projectors . . . . .	265 <sup>1</sup>	5,822	1,769	7,188	26,984
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . .	—	1,303	629	2,010	18,973
Number of hospital beds (excluding military hospitals)—'000 . . . . .	48	158	145	194	449
Number of doctors of all specialities (excluding military doctors)—thousands	8	35	23	52	114

<sup>1</sup> 1914.

## BYELORUSSIAN S.S.R.

Founded on January 1, 1919      Territory—207,600 sq km  
The republic has 6 regions.

	1913	1940	1966
Population (end-of-year figures)—thousands . . . . .	6,899	9,046 <sup>1</sup>	8,744
urban . . . . .	990	1,925	3,548
rural . . . . .	5,909	7,121	5,196
Growth of gross industrial output (1913=1) . . . . .	1	8.1	64
Growth of gross agricultural output (1913=1) . . . . .	1	1.7	2.7

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	3.0	508	82.1	749	9,525
Fuel peat—'000 tons . . . . .	14	3,361	1,211	3,912	12,375
Mineral fertilisers (conventional units)—'000 tons . . . . .	—	13.2	—	—	2,715
Chemical fibres—'000 tons . . . . .	—	2.5	—	2.2	33.2
Metal-cutting lathes—'000 . . . . .	—	6.0	0.2	4.8	25.3
A. C. electric motors with a capacity from 0.25 to 100 kW—'000 kW . . . . .	—	11.8	—	53.3	657.7
Lorries—'000 . . . . .	—	—	—	2.4	23.0
Tractors—'000 . . . . .	—	—	—	0.04	75.1
Timber, commercial—'000 Fest metres . . . . .	2,220	6,108	2,963	5,693	4,872
Paper—'000 tons . . . . .	21.3	51.3	0.5	39.9	91.6
Cement—'000 tons . . . . .	33	200	50	342	1,841
Woollen fabrics—mill. lin. m . . . . .	0.04	0.3	—	1.4	21.2
Linen fabrics—mill. lin. m . . . . .	0.01	15.8	0.03	19.1	56.1
Leather footwear—mill. pairs . . . . .	...	9.8	0.5	7.5	30.4
Radio sets and radiograms—'000 . . . . .	—	0.4	—	46.3	424
TV sets—'000 . . . . .	—	—	—	—	332
Bicycles—'000 . . . . .	—	—	—	70	449
Granulated sugar—'000 tons . . . . .	—	—	—	—	138
Butter (excluding production in individual subsidiary households)—'000 tons . . . . .	...	7.3	1.5	10.9	56.3

## Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	4,542	5,212	3,846	4,913	5,997
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head . . . . .	2,459 <sup>1</sup>	2,961	1,500	2,616	4,806
<i>Agricultural output</i>					
Cereals—'000 tons . . . . .	2,568	2,727	1,703	2,684	2,960
Sugar-beet (for factory processing)—'000 tons . . . . .	—	—	17	70	1,065
Potatoes—mill. tons . . . . .	4.0	11.9	5.4	9.5	13.4
Vegetables—'000 tons . . . . .	...	673	452	483	805
Flax fibre—'000 tons . . . . .	33	36	15	42	104
Meat—'000 tons . . . . .	219	275	89	222	558
Milk—'000 tons . . . . .	1,429	2,005	896	1,643	4,403
Eggs—mill. . . . .	413	612	189	568	1,240

<sup>1</sup> 1916.

## Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . . .	489 <sup>1</sup>	1,737	1,358	1,555	1,769
including pupils of the 5-10 (11) forms . . . . .	32 <sup>1</sup>	562	197	657	993
Number of children in permanent crèches and kindergartens—thousands . . . . .	...	64	24	29	220
Number of institutions of higher learning . . . . .	—	25	24	29	28
Students in them—thousands . . . . .	—	21.5	12.8	31.6	115.9
Number of specialised secondary schools . . . . .	15 <sup>1</sup>	128	94	107	126
Students in them—thousands . . . . .	1.4 <sup>1</sup>	35.0	26.2	41.8	134.8
Number of public libraries . . . . .	851	4,172	2,539	4,847	7,301
Books and magazines in them—'000 copies . . . . .	423	5,028	1,411	6,543	44,278
Printings of books—'000 copies . . . . .	254	10,370	3,853	12,559	21,019
Circulation of newspapers—'000 copies . . . . .	72	1,115	683	948	3,097
Number of film projectors . . . . .	56 <sup>1</sup>	763	265	1,531	5,212
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . . .	—	191	72	290	2,962
Number of hospital beds (excluding military hospitals)—'000 . . . . .	6.4	29.6	26.4	32.0	83.5
Number of doctors of all specialities (excluding military doctors)—thousands . . . . .	1.2	5.2	3.1	7.2	19.8

<sup>1</sup> 1914.

## UZBEK S.S.R.

Founded on October 27, 1924      Territory—449,600 sq km

The republic includes one autonomous republic.

The republic has 9 regions.

	1913	1940	1966
Population (end-of-year figures)—thousands . . . . .	4,366	6,645 <sup>1</sup>	10,896
urban . . . . .	1,060	1,624	3,864
rural . . . . .	3,306	5,021	7,032
Growth of gross industrial output (1913=1) . . . . .	1	4.7	32
Growth of gross agricultural output (1913=1) . . . . .	1	1.8	4.5

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	3.3	482	1,187	2,682	12,125
Oil—'000 tons . . . . .	13	119	478	1,342	1,721
Natural gas (including concurrent gas)—mill. cu m. . . . .	—	0.7	8.9	52.2	22,566
Coal—'000 tons . . . . .	—	3.4	103	1,475	4,435
Steel—'000 tons . . . . .	—	11.4	20.5	119	383
Rolled ferrous metals (finished)—'000 tons . . . . .	—	—	—	75.6	268
Mineral fertilisers (conventional units)—'000 tons . . . . .	—	1.6	129.3	521.9	2,548
Sulphuric acid—'000 tons . . . . .	—	—	—	72.7	452
Cotton-picking machines—'000 . . . . .	—	5 pcs	8 pcs	4.6	7.2
Spinning machines—pcs . . . . .	—	—	—	870	705
Cement—'000 tons . . . . .	—	267	101	356	2,631
Cotton fibre—'000 tons . . . . .	179	538	218	670	1,325
Cotton fabrics—mill. lin. m . . . . .	—	107	85	161	229
Silk fabrics—mill. lin. m . . . . .	—	4.5	4.7	8.7	43.1
Leather footwear—mill. pairs . . . . .	—	3.8	1.6	4.4	14.9
Vegetable oil—'000 tons . . . . .	65	141.7	41.3	152.2	327

### Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	2,214	3,099	2,480	2,899	3,353
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head . . . . .	1,475 <sup>1</sup>	1,914	1,536	1,695	2,961

<sup>1</sup> 1916.

Continued

	1913	1940	1945	1950	1966
<i>Agricultural output</i>					
Raw cotton—'000 tons . . . . .	522	1,416	850	2,282	4,083
Cereals—'000 tons . . . . .	1,032	615	543	443	764
Fruit and berries—'000 tons . . . . .	...	268	114	295	412
including grapes . . . . .	...	130	52	84	270
Meat—'000 tons . . . . .	94	84	74	57	165
Milk—'000 tons . . . . .	237	461	316	300	1,031
Eggs—mill. . . . .	92	139	49	95	607
Wool—'000 tons . . . . .	5.9	7.1	7.9	11.7	23.1
Cocoons—'000 tons . . . . .	4.0	9.8	9.6	12.6	18.4

### Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . . .	18 <sup>1</sup>	1,325	948	1,347	2,592
including pupils of the 5-10 (11) forms . . . . .	4 <sup>1</sup>	402	270	429	1,297
Number of children in permanent crèches and kindergartens—thousands . . . . .	...	74	95	67	306
Number of institutions of higher learning . . . . .	—	30	33	37	35
Students in them—thousands . . . . .	—	19.1	21.2	42.2	188.3
Number of specialised secondary schools . . . . .	1 <sup>1</sup>	98	71	91	129
Students in them—thousands . . . . .	0.1 <sup>1</sup>	25.1	20.3	40.4	122.0
Number of public libraries . . . . .	—	1,792	645	1,527	5,115
Books and magazines in them—'000 copies . . . . .	—	2,553	1,887	3,333	23,117
Printings of books—'000 copies . . . . .	118	11,187	2,957	15,753	25,901
Circulation of newspapers—'000 copies . . . . .	44	893	339	541	2,487
Number of film projectors . . . . .	25 <sup>1</sup>	633	422	961	3,743
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . . .	—	72	85	184	2,990
Number of hospital beds (excluding military hospitals)—'000 . . . . .	1.0	20.6	27.2	32.4	102.7
Number of doctors of all specialities (excluding military doctors)—thousands . . . . .	0.14	3.2	3.8	6.6	19.5

<sup>1</sup> 1914.

## KAZAKH S.S.R.

Founded on August 26, 1920      Territory—2,715,100 sq km  
The republic has 15 regions.

	1913	1940	1966
Population (end-of-year figures)—thousands . . . . .	5,565	6,054 <sup>1</sup>	12,413
urban . . . . .	541	1,815	6,022
rural . . . . .	5,024	4,239	6,391
Growth of gross industrial output (1913=1) . . . . .	1	7.8	101
Growth of gross agricultural output (1913=1) . . . . .	1	1.0	6.0

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	1.3	632	1,148	2,617	21,484
Oil—'000 tons . . . . .	118	697	788	1,059	3,103
Natural gas (including concurrent gas)—mill. cu m . . . . .	—	3.9	4.9	7.4	46.1
Coal—mill. tons . . . . .	0.1	7.0	12.0	17.4	48.2
Pig-iron—'000 tons . . . . .	—	—	—	—	1,701
Steel—'000 tons . . . . .	—	—	4.6	131.2	1,257
Rolled ferrous metals (finished)—'000 tons . . . . .	—	—	—	107	395
Mineral fertilisers (conventional units)—'000 tons . . . . .	—	—	—	22.3	856.5
Sulphuric acid—'000 tons . . . . .	—	49.2	17.1	58.2	1,000
Chemical fibres—'000 tons . . . . .	—	—	—	0.1	9.4
Tractor ploughs—'000 . . . . .	—	—	—	—	7.3
Tractor rakes—'000 . . . . .	—	—	—	—	20.4
Cement—'000 tons . . . . .	—	—	—	15.7	4,512
Cotton fibre—'000 tons . . . . .	1.9	28.8	10.2	13.7	34.7
Cotton fabrics—mill. lin. m . . . . .	—	0.1	0.5	4.9	33.5
Woollen fabrics—'000 lin. m . . . . .	139	406	827	2,154	4,093
Leather footwear—mill. pairs . . . . .	...	1.2	1.6	3.3	18.0
Household washing machines—'000 . . . . .	—	—	—	—	217
Granulated sugar—'000 tons . . . . .	—	70.9	23.0	71.8	168
Fish and sea mammals—'000 tons . . . . .	31.8	87.1	84.8	102.2	89.9
Butter (excluding production in individual subsidiary households)—'000 tons . . . . .	...	12.1	9.5	22.2	47.2
Vegetable oil—'000 tons . . . . .	...	4.7	8.4	27.8	61.6
Canned food—mill. conventional cans . . . . .	—	30.2	52.1	92.6	271.4

## Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	4,146	6,746	5,978	7,759	30,005
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head . . . . .	5,696 <sup>1</sup>	3,461	3,707	5,197	9,054
<i>Agricultural output</i>					
Cereals—'000 tons . . . . .	2,155	2,502	1,892	4,747	25,572
Raw cotton—'000 tons . . . . .	10	63	32	62	88
Sugar-beet (for factory processing) —'000 tons . . . . .	—	385	210	541	2,365
Sunflower seeds—'000 tons . . . . .	8	23	5	31	104
Potatoes—'000 tons . . . . .	178	394	577	1,158	1,407
Vegetables—'000 tons . . . . .	...	168	227	182	666
Meat—'000 tons . . . . .	435	224	173	242	657
Milk—'000 tons . . . . .	851	1,089	1,266	1,555	3,534
Eggs—mill. . . . .	228	307	80	255	1,135
Wool—'000 tons . . . . .	42.1	13.4	16.3	31.3	84.7

<sup>1</sup> 1916.

## Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . . .	105 <sup>1</sup>	1,148	794	1,349	2,866
including pupils of the 5- 10 (11) forms . . . . .	5 <sup>1</sup>	482	182	452	1,513
Number of children in perman- ent crèches and kindergar- tens—thousands . . . . .	...	37	67	45	457
Number of institutions of higher learning . . . . .	—	20	24	26	41
Students in them—thousands	—	10.4	15.1	31.2	163.1
Number of specialised secondary schools . . . . .	7 <sup>1</sup>	118	92	112	179
Students in them—thousands	0.3 <sup>1</sup>	30.3	29.9	41.9	193.4
Number of public libraries . .	139	3,915	1,674	4,335	6,824
Books and magazines in them —'000 copies . . . . .	98	4,851	3,254	6,329	42,718
Printings of books—'000 copies	4	5,775	3,231	11,489	19,588
Circulation of newspapers— '000 copies . . . . .	36	1,019	737	787	3,177
Number of film projectors . . .	20 <sup>1</sup>	1,259	565	1,539	7,802
Number of radio and TV receiv- ers and rediffusion loud- speakers—'000 . . . . .	—	151	181	295	4,044
Number of hospital beds(exclud- ing military hospitals)—'000	1.8	25.1	29.9	35.1	128.5
Number of doctors of all speci- alities (excluding military doctors)—thousands . . . . .	0.2	2.7	3.1	6.4	23.4

<sup>1</sup> 1914.

## GEORGIAN S.S.R.

Founded on February 25, 1921      Territory — 69,700 sq km

The republic includes two autonomous republics and one autonomous region.

	1913	1940	1966
Population (end-of-year figures)—thousands	2,601	3,612 <sup>1</sup>	4,611
urban	666	1,106	2,201
rural	1,935	2,506	2,410
Growth of gross industrial output (1913=1)	1	10	62
Growth of gross agricultural output (1913=1)	1	2.5	5.8

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh	20	742	740	1,385	6,483
Coal—'000 tons	70	625	661	1,725	2,582
Pig-iron—'000 tons	—	—	—	—	814
Steel—'000 tons	—	0.2	0.4	77.1	1,423
Rolled ferrous metals (finished) —'000 tons	—	—	—	—	1,007
Mineral fertilisers (conventional units)—'000 tons	—	—	—	—	446
Metal-cutting lathes—pcs	—	803	411	2,481	3,938
Mainline electric locomotives—pcs	—	—	—	—	176
Lorries—'000	—	—	—	—	11.5
Cement—'000 tons	—	119	74	264	1,465
Cotton fabrics—mill. lin. m	—	0.4	0.8	5.4	60.9
Woollen fabrics—mill. lin. m	—	1.9	1.5	2.6	4.1
Silk fabrics—mill. lin. m	—	5.3	4.2	7.2	21.5
Granulated sugar—'000 tons	—	13.1	7.0	12.3	51.5
Canned food—mill. conventional cans	0.1	29.1	29.7	45.8	170.7
Bohea tea of primary processing—'000 tons	0.1	11.1	4.5	20.2	55.2
Grape wine (excluding production in individual subsidiary households) <sup>1</sup> —mill. decalitres	...	1.7	1.3	2.9	4.7

<sup>1</sup> Excluding wine further processed and bottled in other republics.

## Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	748	896	947	913	780
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head . .	1,277 <sup>1</sup>	1,593	1,467	1,489	1,582
<i>Agricultural output</i>					
Tea leaves (graded)—'000 tons . . . . .	0.55	51.3	20.3	83.7	226.2
Cereals—'000 tons . . . . .	428	538	594	796	615
Sugar-beet (for factory processing)—'000 tons	—	72	80	115	139
Sunflower seeds—'000 tons . . . . .	0.3	11	7	12	13
Potatoes—'000 tons . . . . .	48	139	100	134	192
Vegetables—'000 tons . . . . .	...	104	98	84	232
Fruit and berries—'000 tons . . . . .	...	293	219	311	648
of which:					
citruses . . . . .	...	30	20	3	49
grapes . . . . .	...	150	131	158	374
Meat—'000 tons . . . . .	49	75	37	51	99
Milk—'000 tons . . . . .	222	358	266	293	493
Eggs—mill. . . . .	119	251	104	156	323

<sup>1</sup> 1916.

## Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . .	157 <sup>1</sup>	767	628	738	928
including pupils of the 5-10 (11) forms	17 <sup>1</sup>	341	229	340	519
Number of children in permanent crèches and kindergartens—thousands . . . . .	...	48	40	33	105
Number of institutions of higher learning	1 <sup>1</sup>	21	20	19	18
Students in them—thousands . . . . .	0.3 <sup>1</sup>	28.5	30.3	35.0	81.4
Number of specialised secondary schools .	5 <sup>1</sup>	192	126	119	92
Students in them—thousands . . . . .	0.5 <sup>1</sup>	26.1	25.6	23.8	43.2
Number of public libraries . . . . .	25	1,598	1,604	2,183	3,014
Books and magazines in them—'000 copies	18	1,745	1,916	5,097	18,557
Printings of books—'000 copies . . . . .	965	5,618	2,689	8,181	15,030
Circulation of newspapers—'000 copies . .	164	716	430	592	1,855
Number of film projectors . . . . .	29 <sup>1</sup>	351	280	515	1,647
Number of radio and TV receivers and re-diffusion loudspeakers—'000 . . . . .	—	67	86	177	1,367
Number of hospital beds (excluding military hospitals)—'000 . . . . .	2.1	13.3	16.5	19.4	39.3
Number of doctors of all specialities (excluding military doctors)—thousands .	0.5	4.9	5.1	9.5	16.4

<sup>1</sup> 1914.

## AZERBAIJAN S.S.R.

Founded on April 28, 1920      Territory—86,600 sq km

The republic includes one autonomous republic and one autonomous region.

	1913	1940	1966
Population (end-of-year figures)—thousands . . . . .	2,339	3,274 <sup>1</sup>	4,802
urban . . . . .	556	1,212	2,422
rural . . . . .	1,783	2,062	2,380
Growth of gross industrial output (1913=1) . . . . .	1	5.9	25
Growth of gross agricultural output (1913=1) . . . . .	1	1.6	3.2

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	111	1,827	1,659	2,923	10,249
Oil—mill. tons . . . . .	7.7	22.2	11.5	14.8	21.7
Natural gas (including concurrent gas)—mill. cu m . . . . .	—	2,498	977	1,233	6,173
Steel—'000 tons . . . . .	—	23.7	23.3	44.1	819
Rolled ferrous metals (finished)—'000 tons . . . . .	—	8.5	7.1	12.7	651
Mineral fertilisers (conventional units)—'000 tons . . . . .	—	—	—	—	654
Automobile tyres—'000 . . . . .	—	—	—	—	1,037
Oil equipment—'000 tons . . . . .	—	2.6	0.4	2.7	5.6
A.C. electric motors with a capacity of over 100 kW—'000 kW . . . . .	—	—	—	124	485
A.C. electric motors with a capacity from 0.25 to 100 kW—'000 kW . . . . .	—	—	0.1	7.4	2,384
Cement—'000 tons . . . . .	46	112	88	130	1,336
Cotton fibre—'000 tons . . . . .	22.4	58.2	17.6	64.9	117.8
Cotton fabrics—mill. lin. m . . . . .	11.9	49.1	32.2	49.2	120.7
Woollen fabrics—'000 lin. m . . . . .	—	512	194	407	6,533
Silk fabrics—mill. lin. m . . . . .	—	0.2	0.8	2.2	12.5
Leather footwear—mill. pairs . . . . .	...	2.1	1.8	3.8	8.6
TV sets—'000 . . . . .	—	—	—	—	99.5
Household refrigerators—'000 . . . . .	—	—	—	—	69
Fish and sea mammals—'000 tons . . . . .	97.3	33.2	21.7	27.3	67.5
Vegetable oil—'000 tons . . . . .	...	10.8	3.2	12.3	23.1
Canned food—mill. conventional cans . . . . .	1.0	20.0	22.6	35.4	115.9
Grape wine (excluding production in individual subsidiary households) <sup>1</sup> —'000 decalitres . . . . .	824	906	572	1,103	2,488

<sup>1</sup> See footnote on p. 321.

## Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	962	1,124	1,067	1,057	1,212
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head	1,339 <sup>1</sup>	1,369	1,259	1,314	1,679
<i>Agricultural output</i>					
Raw cotton—'000 tons . . . . .	64	154	65	284	336
Cereals—'000 tons . . . . .	486	567	541	523	800
Potatoes—'000 tons . . . . .	38	82	81	119	115
Vegetables—'000 tons . . . . .	...	63	58	67	301
Fruit and berries—'000 tons . . . . .	...	196	74	143	185
including grapes . . . . .	...	81	44	81	137
Meat—'000 tons . . . . .	40	41	32	33	76
Milk—'000 tons . . . . .	203	275	238	235	459
Eggs—mill. . . . .	94	158	78	105	309
Wool—'000 tons . . . . .	4.1	4.2	4.5	4.8	7.8

<sup>1</sup> 1916.

## Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . . .	73 <sup>1</sup>	695	504	660	1,199
including pupils of the 5-10 (11) forms	7 <sup>1</sup>	284	157	256	609
Number of children in permanent crèches and kindergartens—thousands . . . . .	...	57	50	31	95
Number of institutions of higher learning	—	16	17	20	12
Students in them—thousands . . . . .	—	14.6	19.6	28.6	78.3
Number of specialised secondary schools . . . . .	3 <sup>1</sup>	91	69	81	78
Students in them—thousands . . . . .	0.5 <sup>1</sup>	17.4	17.8	20.3	65.0
Number of public libraries . . . . .	25	1,383	764	2,290	2,504
Books and magazines in them—'000 copies	18	2,612	2,130	4,203	19,278
Printings of books—'000 copies . . . . .	137	4,974	3,126	7,967	12,558
Circulation of newspapers—'000 copies . . . . .	48	619	280	415	1,251
Number of film projectors . . . . .	17 <sup>1</sup>	426	183	576	1,778
Number of radio and TV receivers and re-diffusion loudspeakers—'000 . . . . .	—	64	85	181	1,319
Number of hospital beds (excluding military hospitals)—'000 . . . . .	1.1	12.6	16.6	17.0	41.5
Number of doctors of all specialities (excluding military doctors)—thousands . . . . .	0.4	3.3	3.7	6.4	11.6

<sup>1</sup> 1914.

## LITHUANIAN S.S.R.

Founded on July 21, 1940

Territory—65,200 sq km

	1913	1940	1966
Population (end-of-year figures)—'000 . . . . .	2,828	2,925 <sup>1</sup>	3,026
urban . . . . .	367	674	1,381
rural . . . . .	2,461	2,251	1,645
Growth of gross industrial output (1913=1) . . . . .	1	2.6	52
Growth of gross agricultural output (1913=1) . . . . .	1	1.4	2.2

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	5.7	81	35	221	4,264
Fuel peat—'000 tons . . . . .	—	102	82	505	1,453
Mineral fertilisers (conventional units)— '000 tons . . . . .	—	—	—	11.5	699
Metal-cutting lathes—'000 . . . . .	—	—	—	1.2	16.7
Electric meters—'000 . . . . .	—	—	—	20.1	4,032
Sawn timber—'000 cu m . . . . .	384	427	164	605	991
Paper—'000 tons . . . . .	7.4	11.0	0.3	19.5	75.9
Cement—'000 tons . . . . .	—	—	—	—	809
Cotton fabrics—mill. lin. m . . . . .	—	2.4	0.1	5.4	23.2
Woollen fabrics—mill. lin. m . . . . .	0.1	2.0	0.1	1.9	8.7
Linen fabrics—mill. lin. m . . . . .	—	1.6	0.2	2.8	19.1
Leather footwear—'000 pairs . . . . .	...	500	244	2,080	9,211
Bicycles—'000 . . . . .	—	—	—	—	333
Granulated sugar—'000 tons . . . . .	—	24.0	6.0	32.5	156
Fish and sea products—'000 tons . . . . .	3.0	1.2	0.4	15.0	268
Butter (excluding production in individual subsidiary households)—'000 tons . . . . .	...	16.0	1.7	7.0	36.6
Canned food—mill. conventional cans . . . . .	...	0.9	0.2	5.2	136.8
Confectionery—'000 tons . . . . .	...	2.6	1.4	9.8	33.7

### Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	1,890	2,497	2,237	2,294	2,344
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head . . . . .	991 <sup>1</sup>	1,092	672	751	1,637
<i>Agricultural output</i>					
Cereals—'000 tons . . . . .	1,449	1,536	1,356	1,172	1,319
Sugar-beet (for factory processing)—'000 tons . . . . .	—	255	171	349	692
Potatoes—'000 tons . . . . .	1,375	2,726	1,763	3,122	2,743
Vegetables—'000 tons . . . . .	...	170	218	401	338
Meat—'000 tons . . . . .	159	134	72	126	321
Milk—'000 tons . . . . .	832	1,383	710	851	2,198
Eggs—mill. . . . .	264	187	159	266	578

<sup>1</sup> 1916.

### Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . . .	118 <sup>1</sup>	380	310	430	562
including pupils of the 5-10 (11) forms . . . . .	...	82	74	143	329
Number of children in permanent crèches and kindergartens—thousands . . . . .	...	14	8	8	55
Number of institutions of higher learning . . . . .	—	7	10	11	11
Students in them—thousands . . . . .	—	6.0	5.7	11.4	50.7
Number of specialised secondary schools . . . . .	13 <sup>1</sup>	24	37	45	82
Students in them—thousands . . . . .	1.5 <sup>1</sup>	6.4	8.4	11.5	60.9
Number of public libraries . . . . .	27	200	503	3,726	2,157
Books and magazines in them—'000 copies . . . . .	31	585	575	2,609	16,595
Printings of books—'000 copies . . . . .	2,474	3,778	3,084	8,144	15,845
Circulation of newspapers—'000 copies . . . . .	37	305	417	577	1,564
Number of film projectors . . . . .	7 <sup>1</sup>	66	63	266	1,502
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . . .	...	96	15	86	922
Number of hospital beds (excluding military hospitals)—'000 . . . . .	2.2	8.9	6.7	10.8	28.0
Number of doctors of all specialities (excluding military doctors)—thousands . . . . .	0.4	2.0	1.0	2.8	7.0

<sup>1</sup> 1914.

## MOLDAVIAN S.S.R.

Founded on August 2, 1940

Territory—33,700 sq km

	1913	1940	1966
Population (end-of-year figures)—thousands . . . . .	2,056	2,468 <sup>1</sup>	3,425
urban . . . . .	277	332	986
rural . . . . .	1,779	2,136	2,439
Growth of gross industrial output (1913=1) . . . . .	1	5.8	99
Growth of gross agricultural output (1913=1) . . . . .	1	1.6	3.9

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	0.9	17.2	8.3	99.6	3,931
Metal-cutting lathes—pcs . . . . .	—	—	—	283	2,108
Cable ware in copper weight—'000 tons . . . . .	—	—	—	—	17.1
Centrifugal pumps—'000 . . . . .	—	—	—	0.4	44.0
A.C. electric motors (with a capacity from 0.25 to 100 kW—'000 kW . . . . .	—	—	—	—	263
Cement—'000 tons . . . . .	—	—	—	—	604
Silk fabrics—mill. lin. m. . . . .	—	—	—	—	8.8
Leather footwear—'000 pairs . . . . .	—	159	73	1,737	7,568
Granulated sugar—'000 tons . . . . .	6.0	11.8	1.9	11.2	316
Butter (excluding production in individual subsidiary households)—'000 tons . . . . .	...	0.1	0.2	1.2	11.7
Vegetable oil—'000 tons . . . . .	...	14.0	11.8	27.1	155.3
Canned food—mill. conventional cans . . . . .	...	48.5	5.3	81.2	738.6
Grape wine (excluding production in individual subsidiary households) <sup>1</sup> —mill. decalitres . . . . .	...	1.3	0.9	6.5	17.7

<sup>1</sup> See footnote on p. 321.

### Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	2,072	2,057	1,896	1,895	1,917
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head . . . . .	584 <sup>1</sup>	605	523	593	1,148

<sup>1</sup> 1916.

Continued

	1913	1940	1945	1950	1966
<i>Agricultural output.</i>					
Fruit and berries—'000 tons . . . . .	...	580	203	315	1,175
including grapes . . . . .	...	403	124	201	690
Cereals—'000 tons . . . . .	2,008	1,810	962	1,299	2,420
Sugar-beet (for factory processing)—'000 tons . . . . .	15	119	68	274	2,046
Sunflower seeds—'000 tons . . . . .	9	162	101	156	404
Potatoes—'000 tons . . . . .	119	147	146	605	413
Vegetables—'000 tons . . . . .	...	98	42	196	550
Meat—'000 tons . . . . .	53	51	31	62	159
Milk—'000 tons . . . . .	210	182	113	285	724
Eggs—mill. . . . .	275	235	111	253	451

## Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . .	92 <sup>1</sup>	440	431	481	763
including pupils of the 5-10 (11) forms . . .	...	44	35	157	421
Number of children in permanent crèches and kindergartens—thousands . . . .	...	5	4	7	70
Number of institutions of higher learning . . . . .	—	6	6	8	7
Students in them—thousands . . . . .	—	2.5	3.2	8.7	40.6
Number of specialised secondary schools . . . . .	5 <sup>1</sup>	22	26	36	44
Students in them—thousands . . . . .	0.5 <sup>1</sup>	4.1	3.5	12.8	39.8
Number of public libraries . . . . .	72	249	423	1,654	1,710
Books and magazines in them—'000 copies . . . . .	54	1,173	256	2,110	14,083
Printings of books—'000 copies . . . . .	38	1,469	852	4,457	10,715
Circulation of newspapers—'000 copies . . . . .	15	61	203	286	1,092
Number of film projectors . . . . .	7 <sup>1</sup>	106	81	394	1,298
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . .	—	18	10	59	1,103
Number of hospital beds (excluding military hospitals)—'000 . . . . .	2.5	6.1	7.5	10.8	31.5
Number of doctors of all specialities (excluding military doctors)—thousands . . . . .	0.3	1.1	0.9	2.5	6.3

<sup>1</sup> 1914.

## LATVIAN S.S.R.

Founded on July 21, 1940

Territory—63,700 sq km

	1913	1940	1966
Population (end-of-year figures)—thousands . . . . .	2,493	1,886 <sup>1</sup>	2,285
urban . . . . .	939	662	1,428
rural . . . . .	1,554	1,224	857
Growth of gross industrial output (1913=1) . . . . .	1	0.9	18
Growth of gross agricultural output (1913=1) . . . . .	1	1.8	2.0

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	14.8	251	81.7	493	2,158
Fuel peat—'000 tons . . . . .	—	213	145	623	1,819
Steel—'000 tons . . . . .	76.1	27.9	3.4	55.1	333
Rolled ferrous metals (finished)—'000 tons . . . . .	85.1	23.9	0.5	58.0	275
Mineral fertilisers (conventional units)—'000 tons . . . . .	19.6	98.8	15.7	176.8	332.7
Passenger mainline carriages—pcs . . . . .	292	—	—	225	581
Tramway cars—pcs . . . . .	64	—	—	75	225
Incandescent electric bulbs—mill. . . . .	—	1.5	—	0.9	114
Paper—'000 tons . . . . .	29.5	24.4	4.8	44.8	111.8
Cement—'000 tons . . . . .	76	125	16	217	780
Cotton fabrics—mill. lin. m. . . . .	10.4 <sup>1</sup>	20.6	3.0	24.2	60.0
Woollen fabrics—mill. lin. m. . . . .	3.6	1.8	0.4	3.9	12.1
Linen fabrics—mill. lin. m. . . . .	1.4	3.8	0.8	5.9	14.3
Leather footwear—mill. pairs . . . . .	...	1.0	0.4	2.7	10.2
Radio sets and radiograms—'000 . . . . .	—	21.5	5.2	138.1	1,410
Bicycles, motorbicycles and mopeds—'000 . . . . .	6.3	45.0	8.5	76.6	232
Granulated sugar—'000 tons . . . . .	—	41.0	1.2	31.2	156
Fish and sea products—'000 tons . . . . .	9.0	12.4	5.6	26.9	333
Butter (excluding production in individual subsidiary households)—'000 tons . . . . .	...	23.0	3.4	14.8	34.7
Canned food—mill. conventional cans . . . . .	...	8.8	4.3	19.0	185
Confectionery—'000 tons . . . . .	...	8.0	2.7	18.4	39.2

<sup>1</sup> Coarse cotton fabrics.

## Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	1,396	1,964	1,415	1,413	1,526
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head . . . . .	764 <sup>1</sup>	950	639	792	1,089
<i>Agricultural output</i>					
Cereals—'000 tons . . . . .	880	1,372	684	732	657
Sugar-beet (for factory processing)—'000 tons . . . . .	—	251	88	247	375
Potatoes—'000 tons . . . . .	645	2,093	675	1,934	1,660
Vegetables—'000 tons . . . . .	...	87	64	241	248
Meat—'000 tons . . . . .	122	123	50	81	186
Milk—'000 tons . . . . .	673	1,537	716	945	1,715
Eggs—mill. . . . .	136	174	63	205	369

<sup>1</sup> 1916.

## Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . . .	172 <sup>1</sup>	242	223	295	343
including pupils of the 5-10 (11) forms . . . . .	...	69	79	118	198
Number of children in permanent crèches and kindergartens—thousands . . . . .	...	6	5	10	58
Number of institutions of higher learning . . . . .	1 <sup>1</sup>	7	8	11	10
Students in them—thousands . . . . .	2.1 <sup>1</sup>	9.9	6.7	14.2	36.0
Number of specialised secondary schools . . . . .	11 <sup>1</sup>	41	70	66	54
Students in them—thousands . . . . .	1.3 <sup>1</sup>	9.6	11.8	17.7	41.2
Number of public libraries . . . . .	112	174	390	2,343	1,578
Books and magazines in them—'000 copies . . . . .	126	820	996	2,863	14,121
Printings of books—'000 copies . . . . .	6,969	2,936	6,702	9,301	13,373
Circulation of newspapers—'000 copies . . . . .	44	404	418	526	1,075
Number of film projectors . . . . .	15 <sup>1</sup>	77	65	288	1,317
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . . .		167	43	146	1,091
Number of hospital beds (excluding military hospitals)—'000 . . . . .	6.2	12.0	10.6	14.0	26.6
Number of doctors of all specialities (excluding military doctors)—thousands . . . . .	0.6	2.5	1.1	2.9	7.5

<sup>1</sup> 1914.

## KIRGHIZ S.S.R.

Founded on December 5, 1936

Territory—198,500 sq km

	1913	1940	1966
Population (end-of-year figures)—thousands . . . . .	864	1,528 <sup>1</sup>	2,749
urban . . . . .	106	332	1,060
rural . . . . .	758	1,196	1,689
Growth of gross industrial output (1913=1) . . . . .	1	9.9	117
Growth of gross agricultural output (1913=1) . . . . .	1	2.0	5.1

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	—	51.6	77.3	196.8	2,713
Oil—'000 tons . . . . .	—	23.8	19.4	47	311
Natural gas (including concurrent gas)— mill. cu m. . . . .	—	—	0.1	—	163
Coal—'000 tons . . . . .	103	1,475	1,053	1,848	3,857
Metal-cutting lathes—pcs. . . . .	—	110	112	630	2,501
A.C. electric motors with a capacity from 0.25 to 100 kW—'000 kW . . . . .	—	—	—	—	269
Tractor rakes—'000 . . . . .	—	—	—	0.4	28.7
Cement—'000 tons . . . . .	—	—	—	—	765
Cotton fibre—'000 tons . . . . .	—	27.9	11.6	30.7	58.6
Woollen fabrics—'000 lin. m. . . . .	—	254	152	350	4,362
Silk fabrics—'000 lin. m. . . . .	—	44	142	1,077	8,544
Leather footwear—'000 pairs . . . . .	...	181	248	679	4,916
Bicycles—'000 . . . . .	—	—	—	—	65
Household washing-machines—'000 . . . . .	—	—	—	—	182
Granulated sugar—'000 tons . . . . .	—	65.5	18.9	80.8	180
Canned food—mill. conventional cans . . . . .	—	7.3	17.0	28.8	62.9
Confectionery—'000 tons . . . . .	...	1.3	0.9	5.3	22.6

### Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha. . . . .	640	1,056	934	1,061	1,250
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head	648 <sup>1</sup>	688	560	952	1,513

<sup>1</sup> 1916.

Continued

	1913	1940	1945	1950	1966
<i>Agricultural output</i>					
Cereals—'000 tons . . . . .	436	588	377	434	989
Raw cotton—'000 tons . . . . .	28	95	24	120	184
Sugar-beet (for factory processing)—'000 tons . . . . .	—	628	213	587	2,055
Potatoes—'000 tons . . . . .	19	105	71	135	238
Vegetables—'000 tons . . . . .	...	45	41	45	168
Meat—'000 tons . . . . .	39	41	31	46	106
Milk—'000 tons . . . . .	91	210	175	213	499
Eggs—mill. . . . .	19	47	21	58	196
Wool—'000 tons . . . . .	4.7	3.3	3.1	6.8	22.8

### Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . . .	7 <sup>1</sup>	343	228	343	657
including pupils of the 5-10 (11) forms . . . . .	0.3 <sup>1</sup>	110	72	118	343
Number of children in permanent crèches and kindergartens—thousands . . . . .	...	7	14	10	73
Number of institutions of higher learning . . . . .	—	6	6	7	8
Students in them—thousands . . . . .	—	3.1	3.8	8.6	36.7
Number of specialised secondary schools . . . . .	—	33	25	29	36
Students in them—thousands . . . . .	—	6.0	5.8	10.6	35.4
Number of public libraries . . . . .	—	588	285	1,004	1,296
Books and magazines in them—'000 copies . . . . .	—	756	539	1,233	8,742
Printings of books—'000 copies . . . . .	—	1,283	881	2,853	5,290
Circulation of newspapers—'000 copies . . . . .	—	192	123	181	691
Number of film projectors . . . . .	1 <sup>1</sup>	213	119	384	979
Number of radio and TV receivers and re-diffusion loudspeakers—'000 . . . . .	—	24	30	53	647
Number of hospital beds (excluding military hospitals)—'000 . . . . .	0.1	3.8	5.9	7.1	25.6
Number of doctors of all specialities (excluding military doctors)—thousands . . . . .	0.02	0.6	0.8	1.8	5.3

<sup>1</sup> 1914.

## TAJIK S.S.R.

Founded on October 16, 1929      Territory—143,100 sq km  
The republic includes one autonomous region.

	1913	1940	1966
Population (end-of-year figures)—thousands . . .	1,034	1,525 <sup>1</sup>	2,654
urban . . . . .	95	293	970
rural . . . . .	939	1,232	1,684
Growth of gross industrial output (1913=1) . . .	1	8.8	64
Growth of gross agricultural output (1913=1) . .	1	2.5	5.9

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	—	62.1	72.1	169.5	2,113
Oil—'000 tons . . . . .	9.7	30	20	20	81
Coal—'000 tons . . . . .	28	204	244	449	929
Weaving looms—pcs . . . . .	—	—	—	—	1,915
Tractor cultivators—pcs . . . . .	—	—	—	—	4,305
Cement—'000 tons . . . . .	—	—	3	17	909
Asbestos cement slate—mill. conventional sheets . . . . .	—	—	—	6.4	57.0
Cotton fibre—'000 tons . . . . .	—	60.9	22.7	71.1	201.6
Cotton fabrics—mill. lin. m. . . . .	—	0.2	3.3	16.6	96.6
Silk fabrics—mill. lin. m. . . . .	—	1.6	1.2	6.0	36.7
Leather footwear—'000 pairs . . . . .	—	455	256	769	4,045
Vegetable oil—'000 tons . . . . .	—	3.5	3.0	12.8	65.9
Canned food—mill. conventional cans . . . . .	—	13.9	13.4	30.3	80.3
Confectionery—'000 tons . . . . .	—	3.0	0.5	4.0	21.6

### Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	494	807	823	837	765
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head . . . . .	765 <sup>1</sup>	663	594	697	966
<i>Agricultural output</i>					
Raw cotton—'000 tons . . . . .	32	172	81	289	631
Cereals—'000 tons . . . . .	202	324	246	209	228

<sup>1</sup> 1916.

Continued

	1913	1940	1945	1950	1966
Potatoes—'000 tons . . . . .	10	38	19	36	41
Vegetables—'000 tons . . . . .	...	44	27	26	77
Fruit and berries—'000 tons . . . . .	...	170	64	75	109
including grapes . . . . .	...	49	18	16	69
Meat—'000 tons . . . . .	48	30	30	21	51
Milk—'000 tons . . . . .	102	135	138	86	260
Eggs—mill. . . . .	20	38	11	30	89
Wool—'000 tons . . . . .	2.1	1.6	1.9	2.9	4.6

## Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . . .	0.4 <sup>1</sup>	315	244	322	613
including pupils of the 5-10 (11) forms . . . . .	—	53	56	86	298
Number of children in permanent crèches and kindergartens—thousands . . . . .	...	8	15	10	59
Number of institutions of higher learning . . . . .	—	6	7	8	7
Students in them—thousands . . . . .	—	2.3	2.7	7.1	34.7
Number of specialised secondary schools . . . . .	—	30	24	32	32
Students in them—thousands . . . . .	—	5.9	7.5	10.8	27.2
Number of public libraries . . . . .	—	401	171	962	1,008
Books and magazines in them—'000 copies . . . . .	—	495	454	1,340	6,574
Printings of books—'000 copies . . . . .	—	2,823	1,002	2,784	4,854
Circulation of newspapers—'000 copies . . . . .	—	282	212	252	631
Number of film projectors . . . . .	—	140	72	332	829
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . . .	—	17	20	53	614
Number of hospital beds (excluding military hospitals)—'000 . . . . .	0.04	4.5	6.4	6.8	23.5
Number of doctors of all specialities excluding military doctors)—thousands . . . . .	0.02	0.6	0.6	1.3	4.1

<sup>1</sup> 1914.

## ARMENIAN S.S.R.

Founded on November 29, 1920

Territory—29,800 sq km

	1913	1940	1966
Population (end-of-year figures)—thousands . . . . .	1,000	1,320 <sup>1</sup>	2,253
urban . . . . .	104	375	1,250
rural . . . . .	896	945	1,003
Growth of gross industrial output (1913=1) . . . . .	1	8.7	119
Growth of gross agricultural output (1913=1) . . . . .	1	1.6	4.3

<sup>1</sup> Beginning of the year.

## Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh. . . . .	5.1	395	450	949	3,628
Mineral fertilisers (conventional units)— '000 tons . . . . .	—	—	1.6	57.9	106
Caustic soda (92%)—'000 tons . . . . .	—	2.9	5.6	11.5	48.6
Automobile tyres—'000 . . . . .	—	—	7.9	195	1,195
Centrifugal pumps—'000 . . . . .	—	—	—	2.7	68.1
Metal-cutting lathes—pcs . . . . .	—	—	35	904	10,232
Power transformers—'000 kVa . . . . .	—	—	—	609	4,797
Cement—'000 tons . . . . .	—	95	64	151	655
Cotton fabrics—mill. lin. m. . . . .	—	26.8	18.8	34.6	92.4
Woolen fabrics—mill. lin. m. . . . .	—	0.02	0.1	0.6	4.0
Silk fabrics—mill. lin. m. . . . .	—	0.2	0.5	1.5	9.2
Leather footwear—'000 pairs: . . . . .	...	943	513	2,029	8,287
Clocks and watches—'000 . . . . .	—	—	14	183	2,893
Canned food—mill. conventional cans	1.0	17.3	21.3	31.4	120.5
Confectionery—'000 tons . . . . .	—	3.0	1.5	7.6	13.7
Grape wine (excluding production in indi- vidual subsidiary households) <sup>1</sup> —mill. decalitres . . . . .	0.2	0.2	0.5	0.8	2.9

<sup>1</sup> See footnote on p. 321.

## Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	346	434	461	471	409
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head	679 <sup>1</sup>	600	531	527	775
<i>Agricultural output</i>					
Cereals—'000 tons . . . . .	174	223	223	281	272
Sugar-beet (for factory processing)—'000 tons . . . . .	—	17	30	48	118
Potatoes—'000 tons . . . . .	47	97	171	159	161
Vegetables—'000 tons . . . . .	...	33	46	67	172
Fruit and berries—'000 tons . . . . .	...	95	56	69	189
including grapes . . . . .	...	66	35	50	161
Meat—'000 tons . . . . .	19	23	14	16	40
Milk—'000 tons . . . . .	129	170	130	133	338
Eggs—mill. . . . .	54	46	23	43	194

<sup>1</sup> 1916.

### Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . . .	35 <sup>1</sup>	333	261	319	553
including pupils of the 5-10 (11) forms . . . . .	2 <sup>1</sup>	137	85	131	284
Number of children in permanent crèches and kindergartens—thousands . . . . .	...	18	17	13	71
Number of institutions of higher learning . . . . .	—	9	13	15	12
Students in them—thousands . .	—	11.1	10.0	15.1	43.3
Number of specialised secondary schools . . . . .	1 <sup>1</sup>	62	51	44	53
Students in them—thousands . .	0.1 <sup>1</sup>	8.9	9.7	10.3	36.0
Number of public libraries . . . .	13	908	1,029	1,467	1,180
Books and magazines in them—'000 copies . . . . .	9	711	811	2,239	9,004
Printings of books—'000 copies	80	2,819	1,289	4,878	7,789
Circulation of newspapers—'000 copies . . . . .	19	235	107	186	724
Number of film projectors . . . .	6 <sup>1</sup>	168	138	374	658
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . . .	—	38	45	66	624
Number of hospital beds (excluding military hospitals)—'000	0.2	4.1	5.6	6.5	18.5
Number of doctors of all specialities (excluding military doctors)—thousands . . . . .	0.07	1.0	1.3	2.6	6.3

<sup>1</sup> 1914.

### TURKMEN S.S.R.

Founded on October 27, 1924

Territory—488,100 sq km

	1913	1940	1966
Population (end-of-year figures)—thousands . . . . .	1,042	1,302 <sup>1</sup>	1,966
urban . . . . .	117	459	970
rural . . . . .	925	843	996
Growth of gross industrial output (1913=1) . . . . .	1	6.7	33
Growth of gross agricultural output (1913=1) . . . . .	1	1.5	3.9

<sup>1</sup> Beginning of the year.

## Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	2.5	83.5	94.2	186	1,519
Oil—'000 tons . . . . .	129	587	629	2,021	10,672
Natural gas (including concurrent gas)—mill. cu m . . . . .	—	9.2	14.9	64.5	1,265
Mineral fertilisers (conventional units)—'000 tons . . . . .	—	—	—	—	264
Bulldozers—pcs. . . . .	—	—	—	—	1,117
Cement—'000 tons . . . . .	—	—	—	9.6	403
Window glass—'000 sq m . . . . .	—	2,237	865	1,065	4,393
Cotton fibre—'000 tons . . . . .	17.7	71.5	27.1	63.3	175.2
Cotton fabrics—mill. lin. m. . . . .	—	9.7	6.2	10.5	23.6
Leather footwear—'000 pairs . . . . .	65	712	295	511	1,907
Fish—'000 tons . . . . .	10.5	6.7	5.8	7.6	39.7
Vegetable oil—'000 tons . . . . .	4.8	15.2	7.6	14.2	43.2
Confectionery—'000 tons . . . . .	—	5.3	1.5	2.8	16.5

## Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	318	411	353	368	521
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head . . . . .	662 <sup>1</sup>	455	444	506	743
<i>Agricultural output</i>					
Raw cotton—'000 tons . . . . .	69	211	98	276	656
Cereals—'000 tons . . . . .	159	124	90	84	104
Vegetables—'000 tons . . . . .	...	32	28	25	120
Fruit and berries—'000 tons . . . . .	...	21	15	17	49
including grapes . . . . .	...	16	4	13	37
Meat—'000 tons . . . . .	58	22	17	15	49
Milk—'000 tons . . . . .	63	107	83	67	170
Eggs—mill. . . . .	18	37	17	32	100
Wool—'000 tons . . . . .	9.7	4.9	5.6	6.9	14.0

<sup>1</sup> 1916.

## Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . . . .	7 <sup>1</sup>	252	181	224	455
including pupils of the 5-10 (11) forms	1.3 <sup>1</sup>	84	61	81	221

<sup>1</sup> 1914.

Continued

	1913	1940	1945	1950	1966
Number of children in permanent crèches and kindergartens—thousands . . . . .	...	25	29	27	78
Number of institutions of higher learning . . . . .	—	5	6	6	5
Students in them—thousands . . . . .	—	3.0	2.3	6.6	22.7
Number of specialised secondary schools . . . . .	—	36	25	26	28
Students in them—thousands . . . . .	—	7.7	10.1	7.6	25.3
Number of public libraries . . . . .	—	711	557	927	827
Books and magazines in them—'000 copies . . . . .	—	1,244	1,155	1,783	5,040
Printings of books—'000 copies . . . . .	0.4	2,170	788	2,344	4,851
Circulation of newspapers—'000 copies . . . . .	6	251	183	205	524
Number of film projectors . . . . .	6 <sup>1</sup>	274	158	272	628
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . . .	—	28	35	72	511
Number of hospital beds (excluding military hospitals)—'000 . . . . .	0.3	5.6	7.5	7.5	18.5
Number of doctors of all specialities (excluding military doctors)—thousands . . . . .	0.07	1.0	0.9	1.6	4.2

<sup>1</sup> 1914.

### ESTONIAN S.S.R.

Founded on July 21, 1940

Territory—45,100 sq km

	1913	1940	1966
Population (end-of-year figures)—thousands	954	1,054 <sup>1</sup>	1,294
urban . . . . .	177	354	816
rural . . . . .	777	700	478
Growth of gross industrial output (1913=1)	1	1.3	25
Growth of gross agricultural output (1913=1)	1	1.5	1.9

<sup>1</sup> Beginning of the year.

### Industry

	1913	1940	1945	1950	1966
<i>Output of main industrial products</i>					
Electricity—mill. kWh . . . . .	5.5	190	124	435	7,674
Generated gas—mill. cu m. . . . .	—	1.7	1.0	173	539
Shale—'000 tons . . . . .	—	1,892	861	3,543	16,062

Continued

	1913	1940	1945	1950	1966
Fuel peat—'000 tons . . . . .	—	283	155	470	886
Mineral fertilisers (conventional units)—'000 tons . . . . .	—	...	2.5	77.9	877
Sulphuric acid—'000 tons . . . . .	1.0	—	—	—	160
A. C. electric motors with a capacity from 0.25 to 100 kW—'000 kW . . . . .	...	6.7	29.3	486.1	1,535
Power transformers—'000 kVa . . . . .	—	—	—	—	2,791
Excavators—pcs. . . . .	—	—	—	—	1,000
Paper—'000 tons . . . . .	22.9	21.6	8.1	37.7	99.2
Cement—'000 tons . . . . .	115	70.9	45.6	90.6	902
Cotton fabrics—mill. lin. m. . . . .	77.5 <sup>1</sup>	22.8	0.9	26.8	132.9
Woollen fabrics—mill. lin. m. . . . .	0.9	1.1	0.6	1.3	3.9
Linen fabrics—mill. lin. m. . . . .	—	2.3	0.9	3.3	9.7
Leather footwear—mill. pairs . . . . .	...	0.6	0.4	1.2	6.1
Radio sets and radiograms—'000 . . . . .	—	10.1	0.01	20.0	24.2
Fish and sea mammals—'000 tons . . . . .	14.0	22.8	5.3	26.4	200
Butter (excluding production in individual subsidiary households)—'000 tons . . . . .	...	13.2	3.1	9.5	21.8
Canned food—mill. conventional cans . . . . .	0.3	3.6	2.5	9.5	108
Confectionery—'000 tons . . . . .	...	3.9	2.0	9.8	29.1

<sup>1</sup> Coarse cotton fabrics.

### Agriculture

	1913	1940	1945	1950	1966
Total crop area—'000 ha . . . . .	697	918	696	813	752
Productive livestock population (in terms of cattle; end-of-year figures)—'000 head . . . . .	437 <sup>1</sup>	509	387	448	624
<i>Agricultural output</i>					
Cereals—'000 tons . . . . .	428	655	370	522	521
Potatoes—'000 tons . . . . .	689	1,223	695	1,140	1,190
Vegetables—'000 tons . . . . .	...	23	81	93	116
Meat—'000 tons . . . . .	60	72	30	54	120
Milk—'000 tons . . . . .	415	782	393	508	978
Eggs—mill. . . . .	67	134	31	122	239

<sup>1</sup> 1916.

### Culture and Health Protection

	1913	1940	1945	1950	1966
Number of pupils in general educational schools of all types—thousands . . .	92 <sup>1</sup>	121	126	156	215
including pupils of the 5-10 (11) forms . . . . .	...	48	49	71	130
Number of children in permanent crèches and kindergartens—thousands . . .	...	5	5	8	45
Number of institutions of higher learning . . . . .	4 <sup>1</sup>	5	5	7	6
Students in them—thousands . . . . .	3.3 <sup>1</sup>	4.8	3.8	8.8	21.9
Number of specialised secondary schools . . . . .	4 <sup>1</sup>	17	46	47	37
Students in them—thousands . . . . .	0.2 <sup>1</sup>	2.1	9.7	10.4	27.1
Number of public libraries	117	896	773	1,492	977
Books and magazines in them—'000 copies . . . . .	50	986	959	2,424	10,373
Printings of books—'000 copies . . . . .	1,609	2,126	4,366	5,372	10,424
Circulation of newspapers—'000 copies . . . . .	21	191	372	390	802
Number of film projectors	8 <sup>1</sup>	56	61	207	515
Number of radio and TV receivers and rediffusion loudspeakers—'000 . . . . .		99	24	111	661
Number of hospital beds (excluding military hospitals)—'000 . . . . .	2.5	5.1	5.7	7.3	14.5
Number of doctors of all specialities (excluding military doctors)—thousands	0.5	1.1	0.7	1.5	4.0

<sup>1</sup> 1914.

## FROM THE EDITORS

All data referring to the years of Soviet power pertain to the territory within the frontiers of the U.S.S.R. at the corresponding time, whereas those applying to pre-revolutionary Russia refer to the present territory of the U.S.S.R., except where specified. The growth rates between 1917 and 1939 over the base year of 1913 are calculated on the basis of data for 1913 applying to the territory within the frontiers of the U.S.S.R. prior to September 17, 1939, and those from 1940 to 1967—on the basis of data for 1913 within the present frontiers of the U.S.S.R.

The growth rates over the base years of 1917 and 1928 are calculated on the basis of data for the territory of the U.S.S.R. in those years.

The growth rates of indicators expressed in terms of money (national income, fixed assets, gross industrial and agricultural output, capital investments, commodity turnover, etc.) are calculated in comparable prices. Where different comparable prices<sup>1</sup> are used for certain periods, the growth rates for long-term periods are calculated by the chain method, i.e., by multiplying the growth rates for the individual periods during which unified prices were used.

A number of tables contain targets for 1967. In the few cases, in which the state plan contains no direct targets, data for 1967 are calculated on the basis of other plan indicators (i.e., data concerning fixed productive assets are calculated on the basis of the plan for their commissioning).

In cases where the state plan does not include all enterprises of the given sector (for example, the production of lathes at some non-specialised enterprises), the plan target for 1967 embraces all enterprises including those not mentioned in the state plan.

The tables for the class structure of the population in 1928 and 1939 determine members of producer co-operatives and their dependents as co-operated artisans. In connection with the transformation of producer co-operatives into state enterprises from 1959 onwards, members of these co-operatives and their dependents have been included in the number of industrial, office and other workers.

In some cases data for 1966 are preliminary and may be concretised in future.

The book gives statistics for individual economic areas of the Russian Federation and the Ukrainian Republic. Below is a list of autonomous republics, territories and regions of which these economic areas are composed.

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<sup>1</sup> Thus, between 1913 and 1950 constant prices (1926/27) were used for industrial goods; up to 1955—wholesale prices of enterprises as of Jan. 1, 1952; from 1955 up to the present—wholesale prices of enterprises as of July 1, 1955.

## **R. S. F. S. R.**

### **North-West Area**

Archangel Region  
Vologda Region  
Leningrad  
Leningrad Region  
Murmansk Region  
Novgorod Region  
Pskov Region  
Karelian A.S.S.R.  
Komi A.S.S.R.

### **The Centre**

Bryansk Region  
Vladimir Region  
Ivanovo Region  
Kalinin Region  
Kaluga Region  
Kostroma Region  
Moscow  
Moscow Region  
Oryol Region  
Ryazan Region  
Smolensk Region  
Tula Region  
Yaroslavl Region

### **Volga-Vyatka Area**

Gorky Region  
Kirov Region  
Mari A.S.S.R.  
Mordovian A.S.S.R.  
Chuvash A.S.S.R.

### **The Black-Earth Centre**

Belgorod Region  
Voronezh Region  
Kursk Region  
Lipetsk Region  
Tambov Region

### **Volga Area**

Astrakhan Region  
Volgograd Region  
Kuibyshev Region  
Penza Region  
Saratov Region  
Ulyanovsk Region  
Bashkirian A.S.S.R.  
Kalmyk A.S.S.R.  
Tatar A.S.S.R.

### **The Northern Caucasus**

Krasnodar Territory  
including Adyghei Autonomous  
Region

Stavropol Territory  
including Karachai-Cherkess  
Autonomous Region  
Rostov Region  
Daghestan A.S.S.R.  
Kabardinian-Balkar A.S.S.R.  
North-Ossetian A.S.S.R.  
Checheno-Ingush A.S.S.R.

### **The Urals**

Kurgan Region  
Orenburg Region  
Perm Region  
Sverdlovsk Region  
Chelyabinsk Region  
Udmurt A.S.S.R.

### **Western Siberia**

Altai Territory  
including Gorny Altai Auto-  
nomous Region  
Kemerovo Region  
Novosibirsk Region  
Omsk Region  
Tomsk Region  
Tyumen Region

### **Eastern Siberia**

Krasnoyarsk Territory  
including Khakass Autonomous  
Region  
Irkutsk Region  
Chita Region  
Buryat A.S.S.R.  
Tuva A.S.S.R.

### **The Far East**

Primorye Territory  
Khabarovsk Territory  
including Jewish Autonomous  
Region  
Amur Region  
Kamchatka Region  
Magadan Region  
Sakhalin Region  
Yakut A.S.S.R.

## **U K R A I N I A N S. S. R.**

### **Donets-Dnieper Area**

Dniepropetrovsk Region  
Donetsk Region  
Zaporozhye Region  
Kirovograd Region  
Lugansk Region  
Poltava Region  
Sumy Region  
Kharkov Region

**The South-West**

Vinnitsa Region  
Volyn Region  
Zhitomir Region  
Trans-Carpathian Region  
Ivan-Franko Region  
Kiev  
Kiev Region  
Lvov Region  
Rovno Region  
Ternopol Region  
Khmelnitsky Region

Cherkassy Region  
Chernigov Region  
Chernovitsy Region

**The South**

Crimean Region  
Nikolayev Region  
Odessa Region  
Kherson Region  
Sevastopol

\* \* \*

The following symbols are used in the present volume:

“—” the given indicator did not apply in the corresponding year owing to the absence of the factor in question.

“...” the indicator did apply but no data are available.

## REQUEST TO READERS

Progress Publishers would be glad to have your opinion of this book, its translation and design and any suggestions you may have for future publications. Please send your comments to 21, Zubovsky Boulevard, Moscow, U.S.S.R.

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