THE U.S.S.R.

AN ECONOMIC AND SOCIAL SURVEY

THE U.S.S.R.

AN ECONOMIC AND SOCIAL SURVEY

by

S. P. TURIN, D.Sc. (Econ.), London

Lecturer in Russian Economic History and Institutions in the University of London from 1928 *to* 1943

Author of '*From Peter the Great to Lenin*'

WITH 8 MAPS, 20 DIAGRAMS AND
71 STATISTICAL TABLES

THIRD EDITION, REVISED AND ENLARGED

METHUEN & CO. LTD., LONDON

36 Essex Street, Strand, W.C.2

First Published . . . . . *15 June 1944*
Second Edition (Revised and Enlarged) *December 1945*
Third Edition (Revised and Enlarged) . *1948*

CATALOGUE NO. 3904/U

THIS BOOK IS PRODUCED IN COMPLETE
CONFORMITY WITH THE AUTHORIZED
ECONOMY STANDARDS

PRINTED IN GREAT BRITAIN

PREFACE

THE desire to know more about the U.S.S.R. has become so great in this country, that the author of this book has felt it his duty as a Russian and a teacher to write a text-book for students and a reference book for those who are interested in the developments of Russian culture and its continuity.

He felt, also, that his knowledge of his mother-country, based on his studies and teaching, first, in the University of Moscow, and then in the University of London, and on the experience gained by him through his participation in the Russian Liberation and Labour Movements, may be of some use in the understanding and elucidation of many Russian problems.

One of the difficulties which confronted the author in the preparation of this book, was that some valuable books and materials, collected by him over a period of many years, perished in the September raids of 1940.

Another difficulty, presented by the need for economy in paper, was the problem of how to write in a way which, according to the Russian saying, would provide plenty of space for thought, and very little for words (' mysli svobodno, a slovam tyesno ').

There was the further difficulty of introducing English readers to the mass of Russian statistics in a readable form.

To give information to the geographers without irritating them by a dry exposition of economic facts was another delicate task.

The difficulty of trying to steer a course between Scylla and Charybdis has naturally affected the style of this book but the author hopes that his critics will, according to the character of the British people, be understanding and patient.

The book consists of four parts.

1. A Geographical and Ethnographical Structure of the U.S.S.R.
2. Regional Structure of the U.S.S.R.
3. An Economic Survey with an Outline of the Economic Developments of the U.S.S.R.
4. Supplements.

The author has had neither time nor space to deal in this book with vast problems, such as international relations, finance, the internal market, and the social services. Nor has he been able to devote space to the results of the Third Five Year Plan, and the effects of the last war. All these will be dealt with in his next book.

He has, however, included in the supplements to the book, the diagrams on the present administrative and political structure of the U.S.S.R. in order that the reader can compare them with the earlier ones, kindly incorporated by Mr. and Mrs. Sidney Webb in their memorable work on Soviet Communism. (See *Soviet Communism*, V, pp. 456–61.) The author has also added some information collected by him on scientific and technical research in Soviet Russia.

All information given in this book is based, either on Soviet official publications and text-books admitted to the Soviet schools, or on sources published in Russia prior to the Revolution of 1917. The author has deliberately not utilized or quoted any publications written in languages other than Russian, or any publications on Russia published outside Russia, considering them as secondary and not primary sources.[1]

The author is very grateful to the University of London, his second Alma Mater, and to his teachers

[1] It would take too much space to enumerate all the sources used by the author. A few of them are given in the footnotes and in the text. The basic sources used were: Statistical Year Books, manuals such as *The U.S.S.R. as a Whole, Socialist Construction, Labour, Industry as a Whole, Socialist Agriculture*, etc.; periodicals such as *Plannovoye Khozyaistvo, Socialist Agriculture, Bolshevik, Party Construction*, etc. were also used; some monographs and several text-books were consulted and compared.

and colleagues there, from whom he learned much about the British approach to scientific problems.

He must thank his wife for her unfailing assistance and help in discussing the work, and in finding time to read the whole manuscript.

He must also thank Miss Gladys M. Bird, who, while preparing the MS. for publication, suggested many useful alterations in the style of writing.

The author takes this opportunity of thanking the Association of Special Libraries, The Royal Statistical Society, the Editors of the *Slavonic Review*, the *Manchester Guardian*, and the Publishers of the *Friends of the Soviet Union* for their kind permission to reproduce in this book some of his contributions to their publications, and to reprint some of the translations of Russian documents published by them.

S. P. T.

OXFORD,
Spring 1944

PREFACE TO THE SECOND EDITION

THE author of this book is sincerely grateful to all his critics for their valuable suggestions, in the light of which he has, as far as time and space permitted, revised this edition.

He has made only slight alterations in the text, and has given in Supplements 10–15 (see Contents) some detailed information, which may be of use to his readers.

S. P. T.

OXFORD,
Autumn 1945

PREFACE TO THE THIRD EDITION

MANY changes have occurred in the U.S.S.R. since the publication of the Second Edition of this book, and the author feels that he ought to bring the book up-to-date and to include in it the latest information available. But the necessity to comply with the paper regulations allows him only to make such additions in the text and tables as do not interfere with the pagination of the book, and to give the rest of the information in the form of a Supplement to this edition.

In the Supplement the author deals with the reconstruction of the devastated areas in the U.S.S.R. following the Second World War, and gives the outline of the Fourth Five Year Plan (1946–50). Apart from the general interest in the target figures set up by the Soviet Government for 1950, the new Five Year Plan illustrates the character and gradual development of agriculture and industry in each constituent republic of the Soviet Union.

The economic development of the U.S.S.R. is likely to proceed in accordance with the declared target figures for 1950, provided that the internal and external affairs of Russia are not disturbed by the outbreak of another war or by prolonged civil wars in Europe. The latter would affect the Soviet Union in the same way as any other European country: for the Second World War has created ties amongst countries and peoples which will gradually obliterate the old conceptions of the 'New World' and the Old World', 'East' and 'West', making them more and more equal and interdependent.

There is at present a great deal of speculation about the effect of the war on the Russian national economy. Those who disapprove of the Russian economic system are inclined to presume that her war losses were so great that the present Government of the U.S.S.R. will hardly

be able to find a way out of its difficulties. 'There is,' they say, 'a desperate shortage of consumer goods, which has a bad effect on public morale. Reconstruction efforts are parlously slow owing to lack of machinery and the undernourishment of labour.' On the other hand, those who think that the economic system of Russia is a sound one believe that the U.S.S.R. will emerge from the devastating effect of the war and will overcome her difficulties by her own efforts, in the same way as Great Britain.

Let us not forget that Russia entered the recent war well equipped as a result of her new economic policy and the high morale of her people, who were ready to sacrifice everything for the sake of their country. Owing to the German invasion of Russia in 1941, the Third Five Year Plan (1938–42) was followed for only three and a half years. Yet in spite of that the U.S.S.R., on the eve of the war in 1940, was already producing nearly four times as much iron as on the eve of the previous war with Germany in 1913, four and a half times as much steel, and five and a half times as much coal. Also her production of oil was three and a half times as great as in 1913, and she grew 17 million tons more grain.

During the war Russia saved a good deal of her basic industries by transferring them to the East and developed rich agricultural areas in and beyond the Ural Mountains. This made her largely invulnerable, and now, if the high morale of her people endures as it did through the hardships of war, Russia will surprise the world once again by her speedy and effective recovery.

In her fight against the Germans Russia suffered, in proportion, much greater losses of resources and human lives than any of her allies. This fact alone explains her present foreign policy, the amount of reparations she demands, and her desire to spread her influence as widely as possible in order to prevent any repetition of her experiences in the future.

The economic blight in industry and agriculture caused by the German invasion is no doubt very great, but the

Soviet Government is not alarmed by it and is doing its best to overcome it, as can be seen from the information on the work in the devastated areas, given in the Supplement to this edition. If Russia is prepared to supply Great Britain with grain and timber, as we are assured she will in the end, she must be well on the road to recovery.

As in every other country, the psychology of the 'masses' and of the 'demobbed' millions, the public morale in Russia must be taken into account. It is true that the desire to be rewarded for one's sacrifices to the common cause, the demand for greater individual freedom and industrial democracy, and for a higher standard of living is becoming more and more apparent. On the fulfilment of these desires will depend the success of the Soviet Union in the rehabilitation and development of the national economy and the successful completion of the Fourth Five Year Plan.

In the Supplement the reader will find data on the future development of the former Baltic States, illustrating how important it was for the national economy of the U.S.S.R. to re-incorporate them into the Russian boundaries.

The author would suggest that when reading the second part of the book on the Regional Structure of the U.S.S.R. the student should consult the corresponding tables of the Supplement. The picture of the various regions will thereby be more complete.

The tables of the Supplement on agriculture and industry illustrate the distribution of crops throughout the country, give the main regions of the textile industries, so important for the satisfaction of consumers' demands, and the location of industries connected with the production of power-producing minerals and metals.

The general outlines of the Russian national economy and its future aims clearly indicate that in the long run, and after the bargaining talks with the allies are over and the relations with the European countries are firmly established, Russia will be interested in an expansion of

trade and that collaboration with the outside world in the economic and social sphere will be not only advantageous, but vital, for her as well as for her neighbours and former allies, no matter whether their respective economic policies are run on a purely capitalistic, halfway Socialist or Communist lines.

Following the advice and desire of readers for more information about the position of Labour and the standard of life in the U.S.S.R., the author has included in the Supplement his article on ' Labour in the U.S.S.R.' written for the Penguin publication, *The Russian Review*. The author takes this opportunity of expressing his thanks to the Editors of *The Russian Review* for their permission to reprint here the articles written for them.

S. P. T.

' SEAGULL ',
PAGHAM BEACH,
Autumn 1947

CONTENTS

Part III

ECONOMIC SURVEY

Part IV

SUPPLEMENTS

MAPS AND DIAGRAMS

PART I

Geographical and Ethnographical Structure

CHAPTER I

INTRODUCTORY

AS can be seen from the following diagram, the British Empire, which occupies about one-quarter of the land surface of the globe, is the largest combination of states in the world; the U.S.S.R. covering about one-seventh of the world's land surface, comes second.

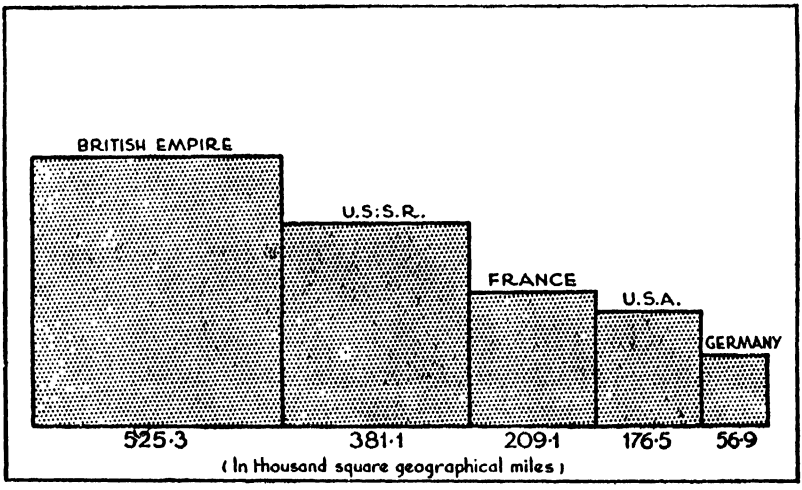


DIAGRAM I.—COMPARISON OF LAND SURFACE OF THE BRITISH EMPIRE, THE U.S.S.R., U.S.A., FRANCE AND GERMANY PRIOR TO THE FIRST WORLD WAR

The U.S.S.R., like China, represents one block of land, whereas the possessions of the British Empire are scattered all over the world.

This is a great advantage from the political point of view. Russia and China cannot be conquered by a military force. All the invaders, since the time when Russia first became a State, have been driven away from her soil. Napoleon

lost his armies there, and the same fate awaited Hitler. But the disadvantages are also great. Long distances, transport difficulties, and the absence of cheap maritime routes make the life of the Russian people much more strenuous and hard.

The former Russian Empire occupied 21,784,000 square kilometres. After the Revolution of 1917 the area of Russia equalled 21,175,200 square kilometres and had thus decreased by 608,800 square kilometres.

The shrinkage of the former Russian territory was due to the separation from Russia, after the Revolution, of the so-called Border States, which became known as the Baltic States: Finland, Estonia, Latvia, Lithuania, and Poland. Russia also lost the Kara region, which became Turkish, and Bessarabia, which ceased to belong to the U.S.S.R.

The loss of the Baltic States, owing to the proclaimed principle of self-determination of nations, had serious consequences for the economic development of the U.S.S.R., especially in the first years after the Revolution. It meant, in the first place, the diminution of the population by over 30 millions: and, in the second place, the loss of important industrial centres, of which Lodz, in Poland, which has been called the 'Russian Manchester', was one of the most important. In the third place, Russia lost with these territories rich natural resources. Fourthly, it meant the contraction of Russian marine trade, for, before the Revolution, 30 per cent of Russian exports and 35 per cent of her imports passed through the Baltic ports. Russia also lost all of her ice-free ports on the Baltic shore, and was left only with those on the Black Sea.

The territory of the U.S.S.R. consists of two disproportionate areas: the smaller—of 4·59 million square kilometres—comprises Russia in Europe, the larger—of 16·33 million square kilometres—is situated in Asia. This means that Russia in Europe covers only 25 per cent of the total Russian territory, while 75 per cent of it is in Asia. The distribution of the population in these areas has a reverse proportion: 83 per cent of the total Russian population inhabits Russia in Europe, and 17 per cent only are living in Russian Asia (census 1926). The population of the Urals, Siberia and the Far East has increased since 1926 by 5·9 millions (census 1939).

The national structure of the U.S.S.R. is as follows:

TABLE 1. *National Composition of the U.S.S.R. Census* 1939[1]

Union Republics	Territory Millions (square kilometres)	Population Millions
Russian S.F.S.R.	16·51	109·28
Ukrainian S.S.R.	0·44	30·96
White Russian S.S.R.	0·13	5·57
Uzbek S.S.R.	0·38	6·29
Kazakh S.S.R.	2·75	6·15
Kirghis S.S.R.	0·20	1·46
Tadzhik S.S.R.	0·14	1·48
Turkmen S.S.R.	0·44	1·26
Transcaucasian S.S.R.	0·19	8·05
Total	21·18	170·50

It is interesting to note here that the R.S.F.S.R. (Russian Soviet Federative Socialist Republic) is the largest republic in the whole Union. It occupies nearly the whole territory of the country, stretching from Archangel and Murmansk in the north to the Black and Caspian Seas in the south. It embraces the whole of Siberia and has a population of 109 millions out of the total population of 170 millions.

The Russian territory in its European part is a vast plain without any considerable heights, and this fact has had a considerable influence on the economic development of the country. The Russian plain did not provide much chance for the geographical and social division of labour. Its main natural resources were deposited on its outskirts: the Ural, Don, and Donetz basins. This explains the slow progress of the economic development of Russia in the past, and its backwardness as compared with other European capitalist countries. The absence of access to the sea had the same effect. Up to the eighteenth century the port of Archangel was the only sea port of Russia. Access to the Baltic was not gained until the reign of Peter the Great, at the beginning of the eighteenth century, and to the Black Sea at the end of the eighteenth century, during the reign of Catherine II. Strictly speaking, the Arctic Ocean has become accessible only since the Revolution of 1917, after the development of aviation and radio. There were only five polar stations before the Revolution. At present their number has increased to forty, and the scientific study of the regions and meteorological observations are now conducted on

[1] In 1940 five new Republics have been incorporated in the U.S.S.R. See p. 212.

a large scale. Many brave and daring Arctic Explorations have already been undertaken, and the dream of Amundsen and other Arctic explorers to establish a route from the Atlantic to the Pacific Ocean may be achieved by the present generation.

The climate of Russia varies from the arctic to the sub-tropical. It is polar in the north, temperate in the middle zone, and sub-tropical in the south. The incidence of rainfall splits Russia almost vertically into two parts; the west has from 20 to 30 inches mean annual fall, while the south-east has below 10 inches in places. It is true that Russia is too far east to feel the moderating influence of the Atlantic, or to receive much rain from the west. The Ural mountain system offers little barrier to the winds of Asia, whether hot or cold. The absence of high land in the north causes the Arctic winds to have free play over the Great Plain. The height of the Caucasus and of the land farther south acts as a hindrance to the southerly winds from the Indian Ocean.

The Russian climate on the whole is less clement than that of Western Europe. 'Cold winters make agricultural seasons very short. . . . Late spring, in the north, often brings cold spells and frosts, affecting winter sowings. . . . In the south, on the other hand, heat waves and dust-storms greatly damage the crops.' [1]

The vegetation of Russia, owing to the climate, represents a great variety. We can divide Russia into six different zones.[2]

(*a*) The Arctic Circle
(*b*) Tundra
(*c*) Coniferous Forests
(*d*) Deciduous Forests
(*e*) Fruit Trees
(*f*) Sub-Tropical Zone.

(*a*) The Arctic Circle includes Novaya Zemlya, the Penin-

[1] A. A. Kruber and others. *Essays on the Geography of Russia.* Moscow, 1910. Cited by S. P. Arzhanov, p. 31.

[2] Some of the Russian economists give the following classification based mainly on the difference of the soil:

1. Tundra
2. Marshes—Taiga (Northern Forests)
3. Mixed Forests (Polessye)
4. Forest—Steppe
5. Black Earth Land
6. South Steppe (desert)
7. Mountainous Oblasts

See N. P. Oganovsky. *Essays on the Economic Geography of the U.S.S.R.*, p. 50. Moscow, 1924 and *The Supplements* to this book, p. 215.

sula of Vaigach, and the northern part of Lapland to about the 70th parallel.

(*b*) The tundra begins at the 70th parallel and extends to the 66·5th parallel. It includes one-tenth of the territory of Russia in Europe, and one-fifth of Russia in Asia. S. P. Arzhanov estimated, on the basis of Prof. Wagner's calculations, that the tundra occupies in the U.S.S.R. from 5 to 6 million square kilometres. If we add to this figure sands, marshes, mountains, and other lands which cannot be cultivated, we receive a total of 8 or 9 million square kilometres, or 35–40 per cent of the total area of the U.S.S.R. which is entirely useless for cultivation.[1]

In the tundra the ground never thaws below a depth of a foot or so. Winter lasts for about nine months. The vegetation here consists mainly of mosses, lichens, and small berry-bearing plants and shrubs. The population is occupied in fishing, boiling down of blubber, hunting, and trading in furs, skins, and tallow.

(*c*) The first forest zone runs between the 60th and 66·5th parallels, and is wooded mainly with coniferous trees such as pines and firs. Barley and oats are cultivated here.

(*d*) The second forest zone is situated between the 53rd and 60th parallels; here the woods are deciduous. Rye, flax, and hemp are cultivated in this area as well as spring wheat and potatoes.

(*e*) The fruit trees zone includes the famous, fertile Black Earth Land. Here it is possible to grow winter wheat, millet, sugar beet, tobacco, and melons. The fertile Black Earth area occupies one-quarter of the total area of Russia in Europe, that is about one million square kilometres. It used to produce about 70 per cent of the total grain output of Russia, which was from 75 to 85 million tons per annum.

(*f*) The sub-tropical zone is, from the point of view of vegetation, no different from other southern countries of Europe, and here it is possible to grow grapes and maize.

Forests in Russia cover 38·8 per cent of the total area; next comes arable land—26·2 per cent; meadows, pastures and other useful lands—15·9 per cent; marshes and other useless, unfertile lands—19·5 per cent, or nearly one-fifth of the total Russian territory. In France and Germany such lands represent 5–10 per cent of the total territory.

[1] S. P. Arzhanov. Ibid. cited, p. 18.

Poor fertility of land and unfavourable climatic conditions explain why Russia has practised for so long an extensive system of cultivation: the three field system of rotation of crops, which meant that 30–40 per cent of land in any one year was totally unproductive. The difficulties of introducing an intensive system of agriculture were due also to low density of population, undeveloped transport facilities, and general poverty and illiteracy.

Russia has always been very rich in her mineral resources, especially in the Urals, Caucasus, Siberia and Altay. Deposits of almost every known metal may be found in one or another of these regions.

The deposits of some of the minerals are enormous, as for instance those of coal. Russia is richer in coal than any other European country. Her coal deposits are greater than those of Great Britain and Germany put together.[1]

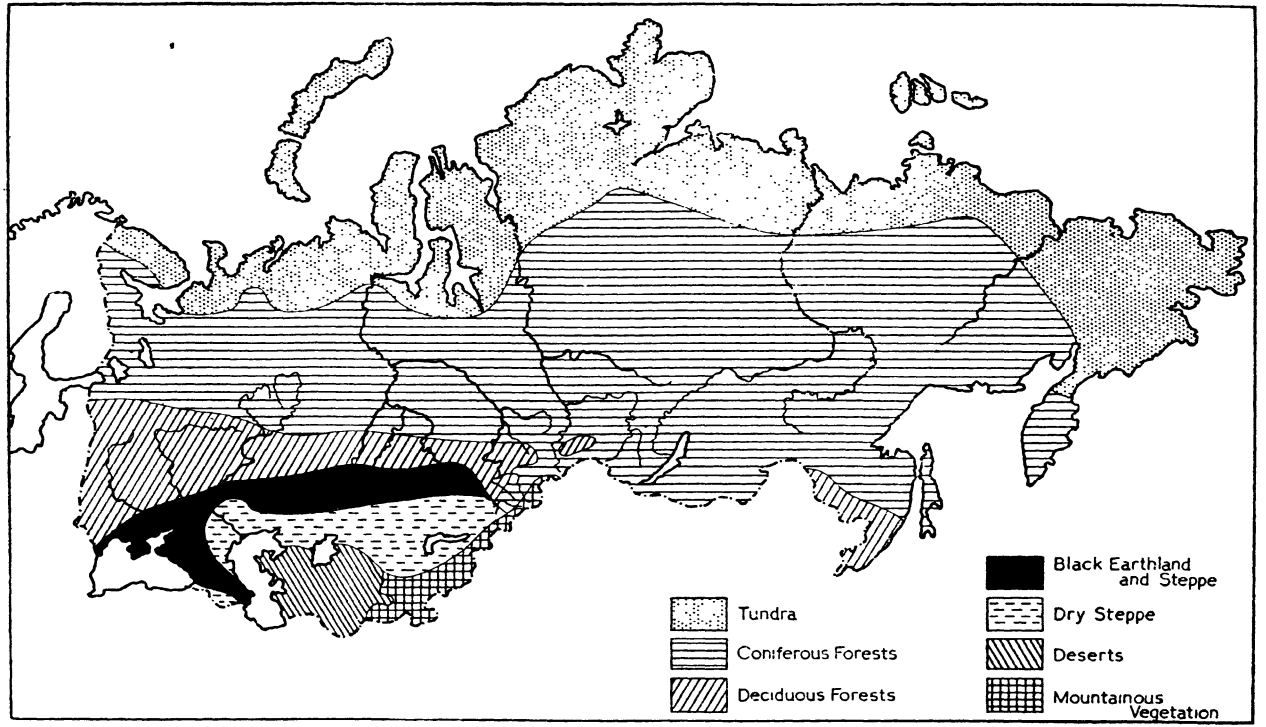
The deposits of oil (naphtha) in the U.S.S.R. amount, according to the estimates of Prof. Ramzin, to 2,874 million tons, and it competes in production with the rich oil countries like South America, U.S.A., Persia, and Mexico.[2]

Amongst other natural treasures of the U.S.S.R. must be mentioned here ferrous and non-ferrous metals, gold and platinum.

[1] The surveyed coal reserves have been estimated at 1,654,000 million tons. The main regions of coal deposits in the U.S.S.R. are:

I. *In the European part and the Caucasus*	1. Donetz Basin	59,613	million tons
	2. Moscow Region	11,578	,, ,,
	3. Urals: West	341	,, ,,
	4. East	469	,, ,,
	5. Caucasus	281	,, ,,
	6. Crimea	279	,, ,,
	7. South-Western Region	47	,, ,,
	Total	72,608	million tons
II. *In the Asiatic part*	1. Kuznetsk Basin	250,000	million tons
	2. Kirghiz Steppe	4,783	,, ,,
	3. Irkutsk Region	150,000	,, ,,
	4. Yenisseysk Region	6,057	,, ,,
	5. Sakhalin Island	1,660	,, ,,
	6. Amur Region	376	,, ,,
	7. Zabaykalye	201	,, ,,
	8. Primorsky Kray	41	,, ,,
	9. Yakutiya	1	,, ,,
	10. Turkestan	314	,, ,,
	Total	413,433	million tons

[2] The deposits of oil, according to the latest Soviet estimates, amount to 8,640 million tons.



MAP 1.—THE VEGETATION AND SOIL OF THE U.S.S.R.

CHAPTER II

POPULATION

GROWTH OF POPULATION

THE population of Russia has always grown rapidly. The first census of the population in Russia was made as early as the beginning of the eighteenth century. It was undertaken mainly for the purposes of taxation and wars, and could not, naturally, be very accurate.

TABLE 2

Growth of Population in Russia (in Millions)

Census	Year	Number of persons
1st Fiscal Census	1722	14
2nd ,, ,,	1742	16
3rd ,, ,,	1762	19
4th ,, ,,	1782	28
5th ,, ,,	1796	36
6th ,, ,,	1812	41
7th ,, ,,	1815	45
8th ,, ,,	1835	60
9th ,, ,,	1851	69
10th ,, ,,	1858	74
1st General Census	1897	129
Estimates for	1912	178
,, ,,	1917	140
,, ,,	1920	134
,, ,,	1923	137
2nd General Census	1926	147
3rd ,, ,,	1939	170·5

Prior to the First General Census, the population of Russia doubled, roughly speaking, every sixty years, and increased yearly from the Census of 1897 up to the outbreak of the First World War (1912) by more than 3 millions. The yearly increase of population in the U.S.S.R., according to the census of 1926, was also over 3 millions. But since 1926, according to the census of 1939, the population increased by only 23,439,271 or less than 2 millions a year, if the census of 1926 was correct.

The diagram below shows that Russia is one of the countries where the fertility is high. The growth of the population during the capitalist régime was almost the same as during the period when the socialist system was in full swing all over

the country. The balance of birth- and death-rates, as we shall see later on, confirms this phenomenon.

DENSITY

The density of the population in Russia was formerly, and is at the present time, far below that in other European countries. The average density per square kilometre in European Russia is twenty-five persons, and in Asiatic Russia, less than two persons. The average density for the whole Union in 1926 was

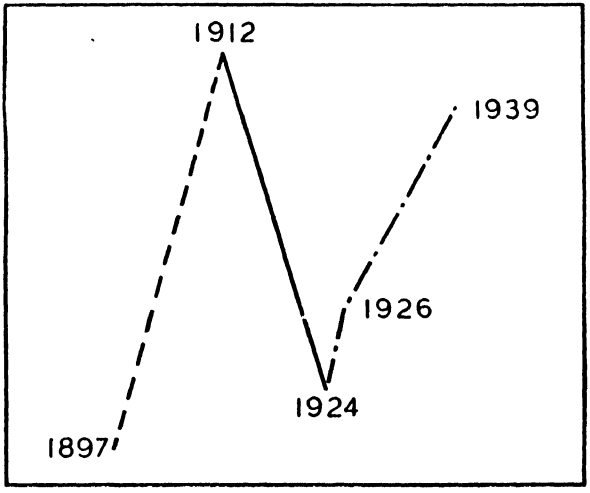


DIAGRAM II.—GROWTH OF THE RUSSIAN POPULATION BEFORE AND AFTER THE REVOLUTION OF 1917

only seven persons per square kilometre, or ten times less than the density of the population in France.

The density of population varies greatly according to the geographical regions.

The tundra is very sparsely populated, with a density of 0·3 to 1·0 persons per square kilometre.

In the north and north-east the density is less than ten persons per square kilometre.

The south-western part of the Union is more thickly populated. In the cities such as Kursk and Kharkov, and in some other Ukrainian towns, the density of population reaches sixty to seventy-five persons per square kilometre.

The most thickly populated areas are the Moscow area, and the area between Bessarabia and the River Dnieper, where

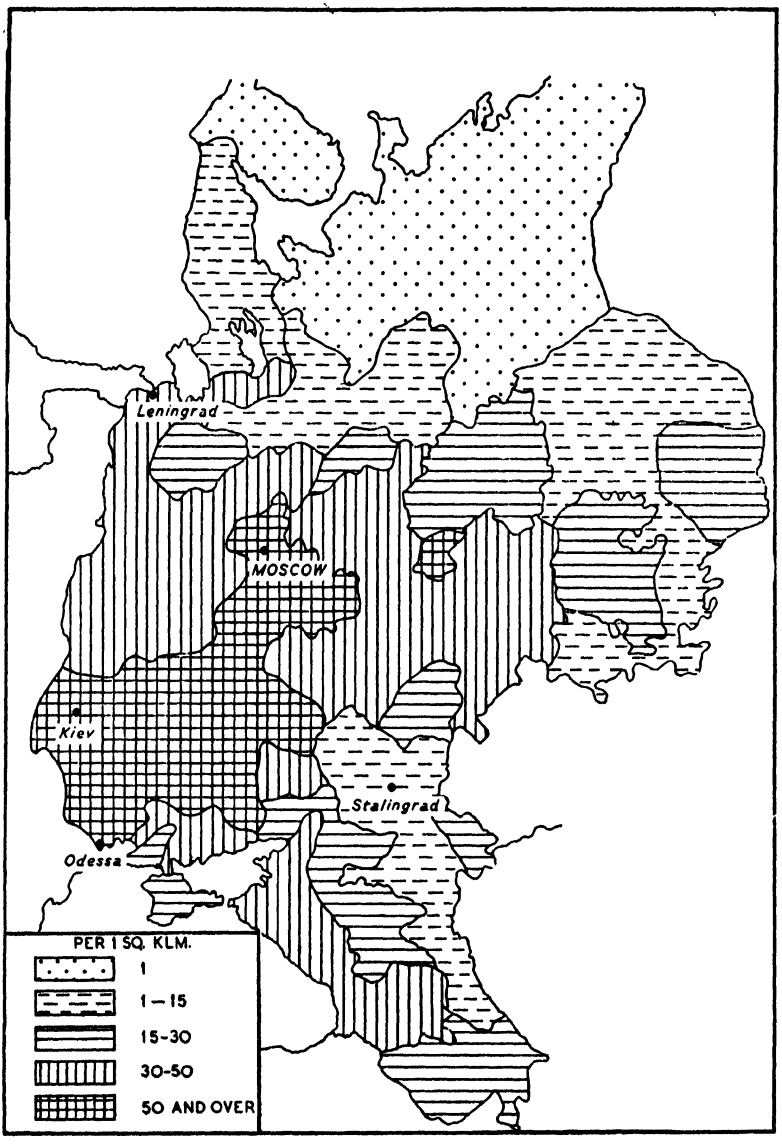


DIAGRAM III.—DENSITY OF POPULATION IN THE EUROPEAN PART OF THE U.S.S.R. (CENSUS 1926)

the density of population is seventy-five persons and over per square kilometre.

OCCUPATIONS

One must always bear in mind that the U.S.S.R. and the U.K. are quite opposite countries as far as distribution of population according to occupation, and urban and rural population is concerned.

The following diagram shows that Russia was, and still is, mainly an agricultural country, whereas the U.K. is an industrial and trading country.

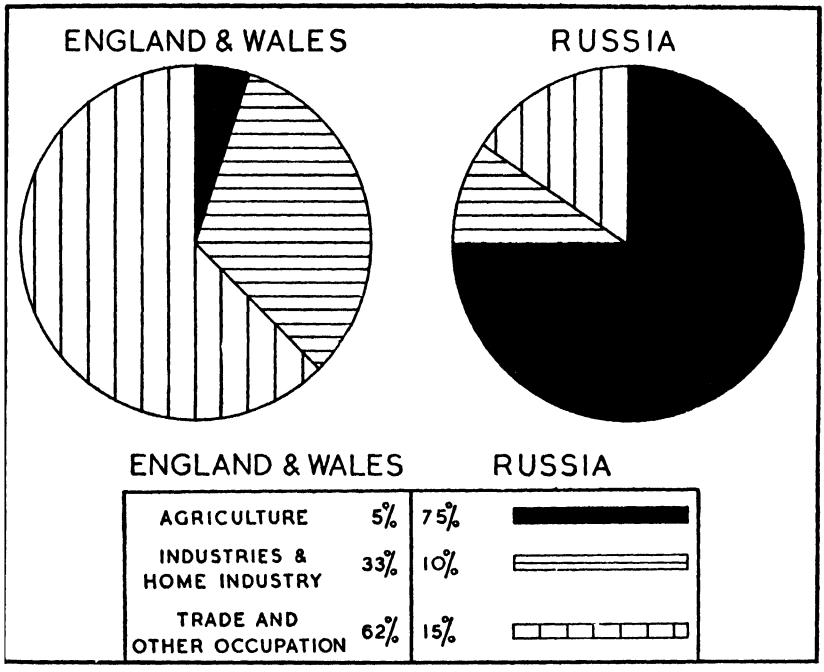


DIAGRAM IV.—POPULATION IN RELATION TO OCCUPATIONS IN ENGLAND AND WALES AND THE U.S.S.R., IN 1913

Great changes have occurred in the structure of social groups in Soviet Russia since the inauguration of five-year plans in agriculture and industry, and the collectivization of farms which has replaced the system of individual peasants' farms of the former Russia.

The structure of Russian population, as far as it concerns occupations, is as follows:

TABLE 3

Population (with families) in relation to Social Groups (Census 1939)

Social Group	No. of Persons in millions	Per cent
Workmen (town and village)	54·6	32·19
Employees	29·7	17·54
Collective Farmers (Kolkhozniks)	75·6	44·61
Co-operative Artisans	3·9	2·29
Non-co-operative Artisans	1·4	0·82
Individual Farmers (peasants)	3·0	1·78
Non-Labour Group [1]	0·6	0·04
Various [2]	1·2	0·73
Total	170·0	100·00

The following diagram shows that the Russia of to-day is a Russia of peasants and workers (including employees),

[1] In this group are included middlemen, clergy, criminals, &c.
[2] Those who have not indicated their occupation.

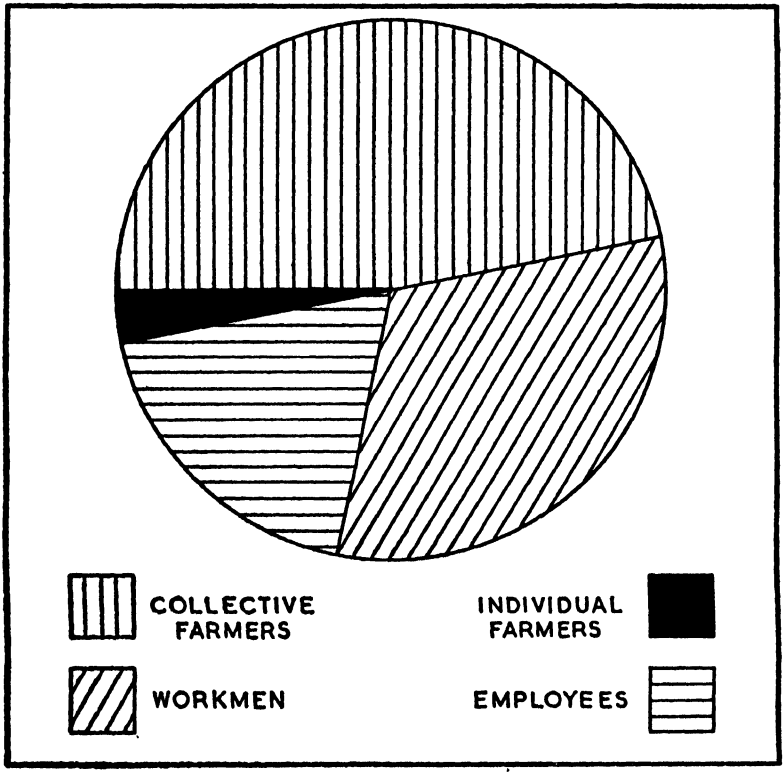


DIAGRAM V.—SOCIAL STRUCTURE OF THE U.S.S.R. (CENSUS 1939)

and that other classes, similar to those in capitalist countries, practically do not exist, or represent an insignificant minority.

URBAN AND RURAL POPULATION

The distribution of population as between town and country in the U.S.S.R. is also quite the reverse of that in this country, as can be seen from the following diagram.

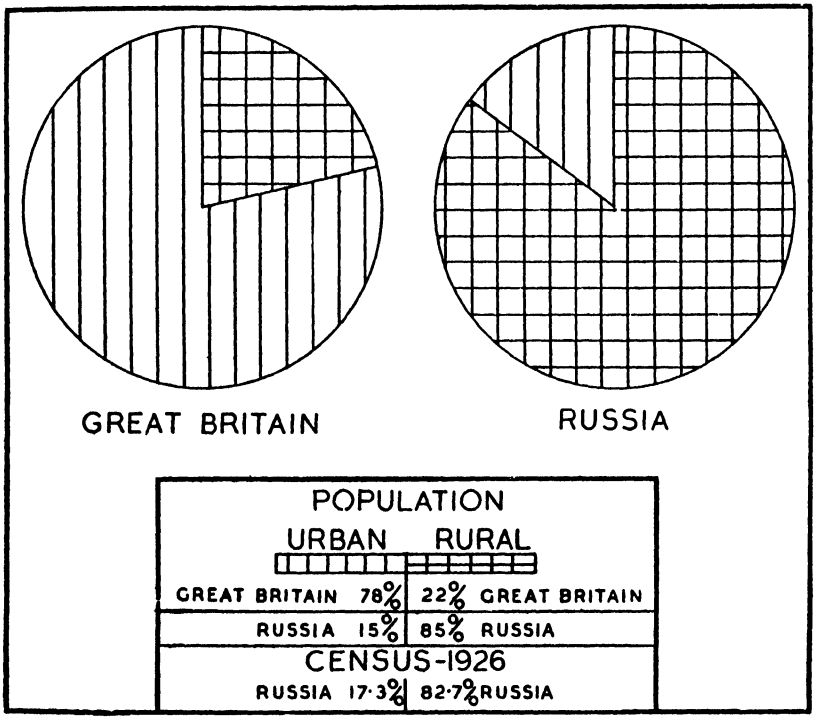


DIAGRAM VI.—COMPARISON OF URBAN AND RURAL POPULATION IN THE U.S.S.R. AND GREAT BRITAIN (WITH N. IRELAND), IN 1913 AND IN 1926

Since 1926 the industrialization of the country has proceeded very rapidly, and the urban population has more than doubled, increasing from 26·3 millions in 1926 to 55·9 millions in 1939. This huge increase was due chiefly to the growth of new small towns (called in the Soviet Union town-hamlets—Posselki), which was proceeding rapidly. In 1926 there were 709 cities and only 125 town-hamlets; in 1939 the number of cities had increased to 922, and of town-hamlets to 1,448. The latter enjoy the status of cities, although the municipal life in many

of them is still in an embryo state of development, and it would be better to describe them as workmen's settlements round big factories. In time, of course, they will become proper municipalities.

The distribution of urban and rural population in every constituent Republic is shown in the following table.

TABLE 4

Urban and Rural Population in the U.S.S.R.
(*Census* 1939)

Union Republics	Urban Pop. in millions	Rural Pop. in millions	Total
Russian S.F.S.R.	36·66	72·62	109·28
Ukrainian S.S.R.	11·20	19·76	30·96
White Russian S.S.R.	1·37	4·20	5·57
Uzbek S.S.R.	1·45	4·84	6·29
Kazakh S.S.R.	1·71	4·44	6·15
Azerbaidzhan S.S.R.	1·16	2·05	3·21
Georgian S.S.R.	1·07	2·48	3·55
Armenian S.S.R.	0·37	0·92	1·29
Tadzhik S.S.R.	0·25	1·23	1·48
Kirghiz S.S.R.	0·27	1·19	1·46
Turkmen S.S.R.	0·42	0·84	1·26
Total	55·93	114·57	170·50

The rural population in the first three Russian Republics, according to the table, equals 97 millions or 66 per cent of their total population. For the whole Union rural population is 67 per cent of the total population.

As a consequence of rapid urbanization there has been some decline in the rural population. Although in such areas there has been a natural increase of 18·2 millions, migration to the towns (24·4 millions), more than counteracted this. In 1926, therefore, the rural population was 120·7 millions, and in 1939 114·5 millions, showing a decline of over 6 millions.

LITERACY

It is a well-known fact that illiteracy in pre-revolutionary Russia was very great. The old régime did not encourage education amongst Russian people, and, in fact, sometimes deliberately tried to keep the people, especially national minorities, in constant ignorance. But the thirst for knowledge and

science, being a second nature to the Russians, was so great, and persisted so long, that the people won, by their prolonged liberation movement, revolts and revolutions, their right to education.

The capital sum spent on education, and the achievements of the Government and of the teachers themselves since the Revolution of 1917 have been enormous. But naturally they could not put right in a decade or two what had been wrong for centuries.

Literacy in the U.S.S.R. as illustrated by the Census of 1939, shows what has been achieved in this direction since 1926 and what remains to be done in the future.

At the beginning of 1926 there were 665 literate men and 371 literate women for every 1,000 of each sex, aged 9 and

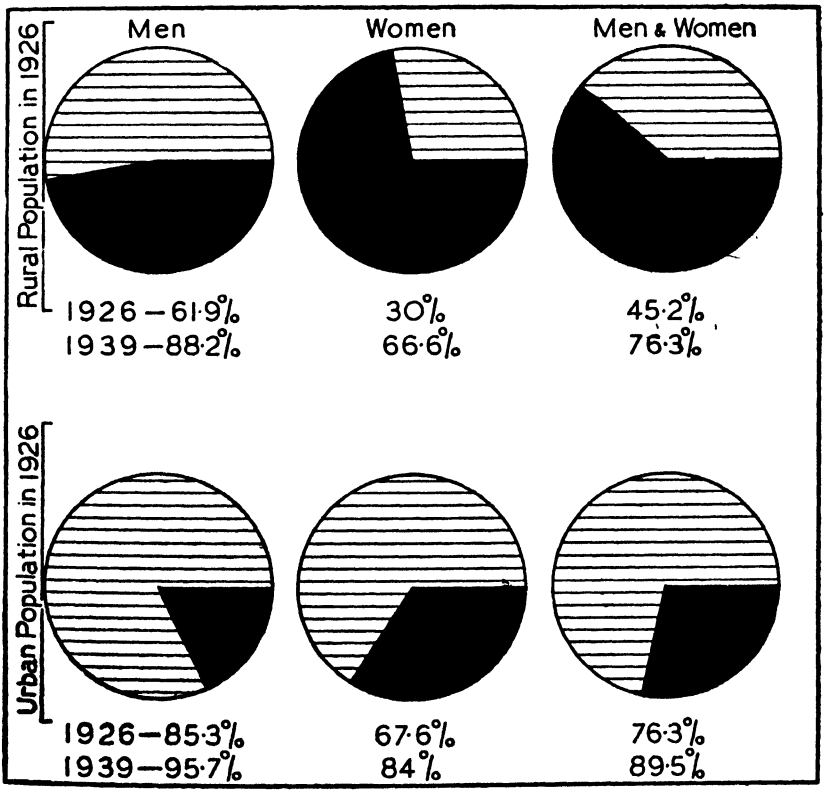


DIAGRAM VII.—LITERACY IN THE U.S.S.R. (CENSUSES 1926 AND 1939)

over. At the beginning of 1939 the corresponding figures were 908 literate men and 726 literate women. The following figures compare the state of literacy amongst the urban and rural sections of the population.

TABLE 5

Literacy in the U.S.S.R. according to Censuses 1926 *and* 1939

(*Percentage of Literate People aged* 9 *and over*)

	17 December 1926			17 January 1939		
	Men	Women	Men and Women	Men	Women	Men and Women
Urban population	85·3	67·6	76·3	95·7	84	89·5
Rural Population	61·9	30·0	45·2	88·2	66·6	76·3
Total	66·5	37·1	51·1	90·8	72·6	81·2

One-fifth of the total population in Soviet Russia is still illiterate, and in rural districts the percentage reaches one-quarter, while among women it is as much as one-third.

SEX

In pre-revolutionary Russia the percentage of male and female population was almost equal. According to the census of 1897 there were 99·8 women for every 100 men. But since then the proportion of sexes has changed. During the Civil War (1920) there were 115 women for every 100 men, and in 1926 48·3 per cent of the population were male and 51·7 per cent female.

BALANCE OF BIRTHS AND DEATHS

The birth- and death-rates changed also, as can be seen from the following table.

TABLE 6

Birth- and Death-rates in Russia

Year	Birth-rate per 1,000 Persons	Death-rate per 1,000 Persons
1913	45·5	28·6
1917	42·9	21·0
1926	44·0	20·3

The U.S.S.R. is very proud, and has reason to be proud, of the fall of the death-rate since the Revolution and Civil War. Prior to the Revolution the death-rate had been decreasing gradually, but it never fell lower than 27·5.[1]

The wide net of social services and considerable expenditure on the protection of National Health, of which the people in pre-revolutionary Russia would not have dared to dream, have proved what can be done under conditions of social and socialist reconstruction. The results would have been more striking still if reconstruction had proceeded in more normal conditions and if the Civil War, in which Russia lost more lives than during the first World War, had not taken such a toll of human life.[2]

MARRIAGE, DIVORCE, BIRTH CONTROL

Family life in former Russia was very patriarchal. The average size of a Russian family could be taken as five persons, but large families with nine, ten, and more children were not exceptions and could be found everywhere.

The Orthodox Church Regulations concerning marriage and married life were very strict. Divorces were rare and were granted only in exceptional cases.

[1] In Robert R. Kuczynski's book on *The Balance of Births and Deaths* (Washington D.C., 1931, Vol. II. p. 14) we find the following interesting data relating to Russia.

Period	Birth-rate	Death-rate
1867–70	49·7	37·4
1871–5	51·2	37·1
1876–80	49·5	35·7
1881–5	50·7	36·5
1886–90	50·2	34·6
1891–5	48·9	36·2
1896–1900	49·5	32·1
1901–5	47·7	31·0
1906–10	43·8	29·6
1911–13	44·4	27·5

[2] In N. P. Organovsky's book, *Essays on Economic Geography in the U.S.S.R.*, Moscow, 1924, p. 68, we find the following striking data relating to birth and death in Moscow and Leningrad during the Civil War:

Year	Birth-rate		Death-rate	
	Moscow	Leningrad	Moscow	Leningrad
1915	27·0	22·5	22·1	22·8
1916	22·0	19·1	20·2	23·2
1917	19·6	16·0	21·2	25·2
1918	14·8	15·5	28·0	43·7
1919	17·4	13·8	45·1	72·6
1920	22·1	21·4	46·2	50·6

But in spite of this, the attitude towards marriage in everyday life was very lenient. Morganatic marriages, companionships, and cohabitation without church approval were not prohibited by law, although these *de facto* marriages did not enjoy the privilege of legal protection as far as property, inheritance, &c. were concerned. However, this did not affect social life and relationships at all.

As a result of this state of affairs there were many illegitimate children in nineteenth-century Russia. The average percentage of them for the decade 1884–94 was 2·68. In the big cities this percentage reached a rather high figure. In Moscow, for instance, there were 30 per cent of illegitimate children, in St. Petersburg 26 per cent, and in Kiev 20·8 per cent.

After the Revolution of 1917 freedom of civil marriage was proclaimed. Divorces could be obtained at any marriage registration office without any difficulty; abortions were legally admitted. The effect of this freedom is shown in the following table.

TABLE 7. *Abortions in Moscow*[1] (per 1,000)

Year	Births	Abortions	Pregnant Women
1921	30·6	5·7	36·3
1922	25·6	5·5	31·1
1923	30·1	5·5	35·6
1924	29·3	5·7	35·5
1925	31·6	9·7	41·3
1926	29·7	16·3	44·0
1927	25·6	19·2	44·8
1928	22·7	27·9	50·6
1929	21·7	35·2	56·9

These alarming effects of the absence of strict legislation concerning marriages and divorces called for new legislation. In 1936 strict control of abortions, which henceforth were allowed to be performed only under the supervision of a doctor, was introduced; divorces were made more difficult; people were encouraged to produce more children, and large families were awarded a bonus.[2] In 1944 a new Maternity and Child Welfare Decree was published. See p. 224.

[1] *Statistical Review*, Moscow, 1929, p. 128 (in Russian).

[2] A woman with 6 children received a bonus for the seventh and all following children at the rate of 2,000 roubles a year until the newborn child attained the age of 5 years. A woman with 10 children received a bonus for the eleventh child at the rate of 5,000 roubles a year during the first year, and 3,000 roubles a year until the child attained the age of 6 years.

The family life in the U.S.S.R. now has the same features as in other European countries. The coefficient of marriages in the U.S.S.R. is 10·3 per 1,000 of the population, much higher than in any other European country, and nearly as high as in the U.S.A. In the cities it is even higher—12·6 per 1,000 of population (Census 1926). The complete data of the census of 1939 are not yet available, but it is very probable that they will correspond to the above information concerning marriages. Marriages between Soviet citizens and aliens were allowed all the time, until March 1947, when they were prohibited by decree of the Supreme Soviet.

ETHNOGRAPHICAL STRUCTURE

Ethnographically the U.S.S.R. consists of a great variety of nationalities and dialects, as can be seen from the following table.

TABLE 8. *Ethnographical Structure of the U.S.S.R*

Percentage		Nationalities
	53	Russians (Great Russians)
77	21	Ukrainians (Little Russians)
	3	White Russians
	3	Finns
	2	Tartars
	2	Jews
14	1	Georgians
	1	Armenians and Greeks
	1	Germans
	1	Poles, Lithuanians and Latvians
	3	Uzbeks and Turkmens
		Circassians, Lesghins, Kabardins, Osetines — Highlanders of Caucasus
9		Bashkirs, Kirghisians, Kalmuks, Buriyats, Yakuts, Zyriyans — Former Nomads of Upper Siberia and N. of U.S.S.R.

The variety of the ethnographical structure of the U.S.S.R. is due to the colonial policy of Imperialist Russia, which incorporated into the Russian State the following colonies.

I. Poland, Finland, Estonia, Latvia, Lithuania.
II. Crimea, Caucasus, Siberia, Kirghiziya, Turkestan, and Far East.

The first group ceased to belong to Russia after the Revolution of 1917. The second group was incorporated into the Soviet Union of Republics.

The great majority of the Russian population—77 per cent—belong to the Great, Little, and White Russians, who differ

from each other only in their dialects and local culture. The minorities represent 14 per cent of the population, and Highlanders and former Nomadic Tribes 9 per cent.

It is interesting to note here that Jews represent 2 per cent only of the total population. In former Russia there were 4 per cent of Jews, but they were all living either in Poland or in the Baltic States or in the south, and were not allowed to settle in Russia proper.

Another interesting fact is that Ukrainians are called ' Little Russians ' (Malorossy). Christianity was first introduced into the Ukraine, and, later on, spread from there all over the country. The Russian State also originated there. These two facts alone show the absurdity of statements advocating the separation of the Ukraine from its Mother Country.

From the racial point of view the U.S.S.R. consists of the Aryan group, Letto-Lithuanian, German, Roman, Greek, Iranian (Tadzhik and Turkestan), and Indians (Gypsies).

Two-thirds of the people of the U.S.S.R. speak Russian, and the remaining third use Ukrainian, White Russian, Polish, and other native languages.

RELIGION

Russia has often been called ' Holy Russia ', and many people believed that the Russians were an extremely religious people, that there were churches and chapels in nearly every village and hamlet, and that the convents and the monasteries were dominating influences in the country.

But this was true only to a certain extent. It must not be forgotten that the Orthodox Church was the State Church of Russia and that every Russian citizen was obliged to belong to one of the existing religions. Moreover, the teaching of religion was compulsory in all the elementary and secondary schools and in the Universities it was even necessary to pass an examination in the history of the Russian Orthodox Church.

The Imperial Government and the Orthodox Church were closely associated with each other, and both took full advantage of the ignorance and illiteracy of the Russian people until the monk Rasputin discredited them both, and hastened the collapse of the monarchy in 1917.

The religious composition of the Russian people prior to the Revolution of 1917 was as follows :

TABLE 9. *Religious Composition of the Russian Population*

Religion	Percentage per Total Population	Religion	Percentage per Total Population
Orthodox Church	69·9	Jews	4·0
Mahometans	10·9	Armenians	1·0
Catholics	8·9	Others	0·5
Protestants	4·8	Total	100·0

The highest percentage of the adherents of the Orthodox Church (called in Russian Pravoslavnye—true believers), was in Siberia (91·2 per cent). In Western Siberia 95 per cent of the total population belonged to the Orthodox Church, in the Central Industrial and Agricultural Region—84 per cent, and the lowest percentage was in Central Asia, Caucasus, and the Baltic Provinces.

Mahometans inhabited mainly Turkestan, Central Asia, and the eastern part of the Caucasus.

The Catholics lived chiefly in the basin of the River Vistula, and the Protestants in Finland and the Baltic Provinces. The Jewish population was settled on the banks of the Rivers Dvina and Dnieper, as well as in the Vitebsk Province.

The Revolution of 1917 brought with it a violent attack on the Orthodox Church and religion in general. One of the first revolutionary acts in connexion with the Church was the decree of 5 February 1918, signed by V. Lenin. According to this decree :

1. The Church is separated from the State.
3. Each citizen is free to profess any or no religion.
7. Religious Oaths are abolished.
9. The Schools are separated from the Church. Religious teaching is prohibited in all State, Public or Private educational establishments where a general education is given. Citizens may teach or be taught religion privately.
12. Churches and religious societies may not own property. They do not possess the rights of a juridical person.
13. All property belonging to Churches and religious societies existing in Russia is declared to be the property of the people.

This decree was, of course, a great blow to the Russian Orthodox Church, which was aggravated by a violent anti-God propaganda. The status of the Church and of the believers remained very obscure up to the issue of another decree on 8 April 1922, which put the religious associations on a more normal, although still a very insecure footing.

According to this decree, a religious association of believers of any cult had to be registered as a religious society or group of believers. A citizen could only belong to one religious association. Religious associations had no juridical rights. They were allowed to lease under contract, free of charge, special buildings for the purpose of worship, but they could not own property.

Also the decree did not allow religious associations to make any commercial or industrial transactions outside the association; or to create mutual credit societies; or to give financial assistance to their members; or to organize for children, young people and women special prayers, study circles, excursions, playgrounds, reading-rooms, &c. Only books necessary for the purposes of the cult could be kept in the buildings and premises used for worship.

In spite of the strict regulations and constant anti-religious propaganda, intended to offend the religious sentiments of the believers, the majority of the Russian population still continued to perform their religious rites and attended church regularly.

In one of the Soviet statistical manuals we find the following representative table concerning the attendance of peasants at religious services.

TABLE 10

Attendance of Peasants at Religious Services in the U.S.S.R.

Age	Men		Women	
	1922/23	1934	1922/23	1934
Young Persons up to 24	62·6%	1·0%	71·5%	12·2%
25–39 years	71·4%	3·2%	100·0%	26·5%
40–59 years	100·0%	14·5%	100·0%	47·9%

The percentage of people attending church in 1922/23 was, as can be seen, very high. During the following decade the anti-God propaganda and the persecutions of the clergy greatly affected the attendance at churches, but even then, as can be seen from the table, half of the elderly women, and a quarter of the women between 25 and 39 years still visited the churches. Only one per cent of the young men went to church, but the girls up to the age of 24 frequented the churches more often than the boys (12 per cent).

The outbreak of the last War has created a revival of

religious feeling amongst the population and a great increase of prayers in the Russian churches. The Government, evidently guided by this fact, and under pressure of public opinion in this country and in the U.S.A., have made many concessions and relaxed the severe restrictions imposed on the religious associations and on the clergy.

In September 1943 a convocation of bishops of the Russian Orthodox Church elected a Patriarch of Moscow and all Russia, and set up a holy synod. In this connexion, in October 1943, the Soviet Government appointed a Council for Russian Orthodox Church Affairs, whose function it is to act as a link between the Government and the Patriarch of Moscow and all Russia on questions affecting the Russian Orthodox Church which require a government decision. Similar councils were set up for the Roman Catholic Church, the Greek Catholic Church, Mohammedan, Jewish and Evangelical bodies, etc.

In July 1944 Alexey, the Metropolitan of Leningrad and Novgorod, issued a message to pastors and congregations of the Russian Orthodox Church in Soviet Russia, which we give in full on p. 225.[1]

Now paper is supplied from government stores for the printing of religious literature. On church holidays government trading bodies sell comestibles, such as Easter loaves.

The present composition of the various religions in the U.S.S.R. according to the Soviet official figures is as follows:

TABLE 11

The Orthodox Church	Number of	*The Moslem Church*	Number of
Churches	4,225	Mosques	1,312
Monasteries	37	Mullahs	8,052
Priests	5,665	Shieks	282
Deacons and Sacristans	3,100	Ishans	528
		Morids	35,947
The Catholic Church		*The Jewish Clerical Church*	
Churches	1,744	Synagogues	1,011
Priests	2,309	Rabbis	2,559

Altogether there are now 8,338 churches and places of worship in the U.S.S.R. with 58,442 ministers of religion. In 1940 the number of religious communities registered was 30,000. In 1914 there were in Russia 54,174 churches and 25,598 chapels.

[1] In February 1945 the Metropolitan Alexey was enthroned Patriarch of Moscow and all Russia.

CHAPTER III

MEANS OF COMMUNICATION

THE U.S.S.R., like every other country, depends on seven means of communication: rivers, roads, railways, postal, telegraph, air services, and seas.

Means of communication in the U.S.S.R. have a vital importance because of the vastness of the territory, the immense, but sparsely scattered, population, the unequal distribution of natural resources, the unfavourable location of industries, and the concentration of grain production mainly in the south of the country.

In spite of this, communication has always been, and still is, the most backward service. It has delayed for centuries the economic development of the country, and caused many obstacles and difficulties right up to the outbreak of the present war.

1. RIVERS

Since the very beginning of Russian history waterways have played an important part in the economic life of the country, and in the Middle Ages they were of international importance for the whole of European trade. Geographically speaking, they are situated favourably, originating from the centre of Russia.

The river system of Russia has several basins:

The Caspian Basin consists mainly of the Volga and its tributaries.

The Baltic Basin includes the Neva, Western Dvina, Svir, Volkhov, Nyeman, Vistula, and Narov.

The Black Sea Basin consists of the Dnieper, Dniester, and Bug.

In the Azov Basin there are the Don and Donets.

In the White Sea and Arctic Ocean Basin are Petchora, Northern Dvina, the Ob, Irtysh, Yenissey, Angora and Lena.

The longest rivers are the Lena (4,428 kilometres), and the Volga (3,694 kilometres).

TABLE 12

The Total Length of Russian Rivers in thousand kilometres

Region	Total length	Navigable	Floating	Others
U.S.S.R.	363·4	88	177	98·4
European Part	216·4	38	122	56·4
Asiatic Part	147·0	50	555	42·0

The following table shows the length of the most important rivers which, with their tributaries, comprise 80 per cent of the total length of rivers in the U.S.S.R.

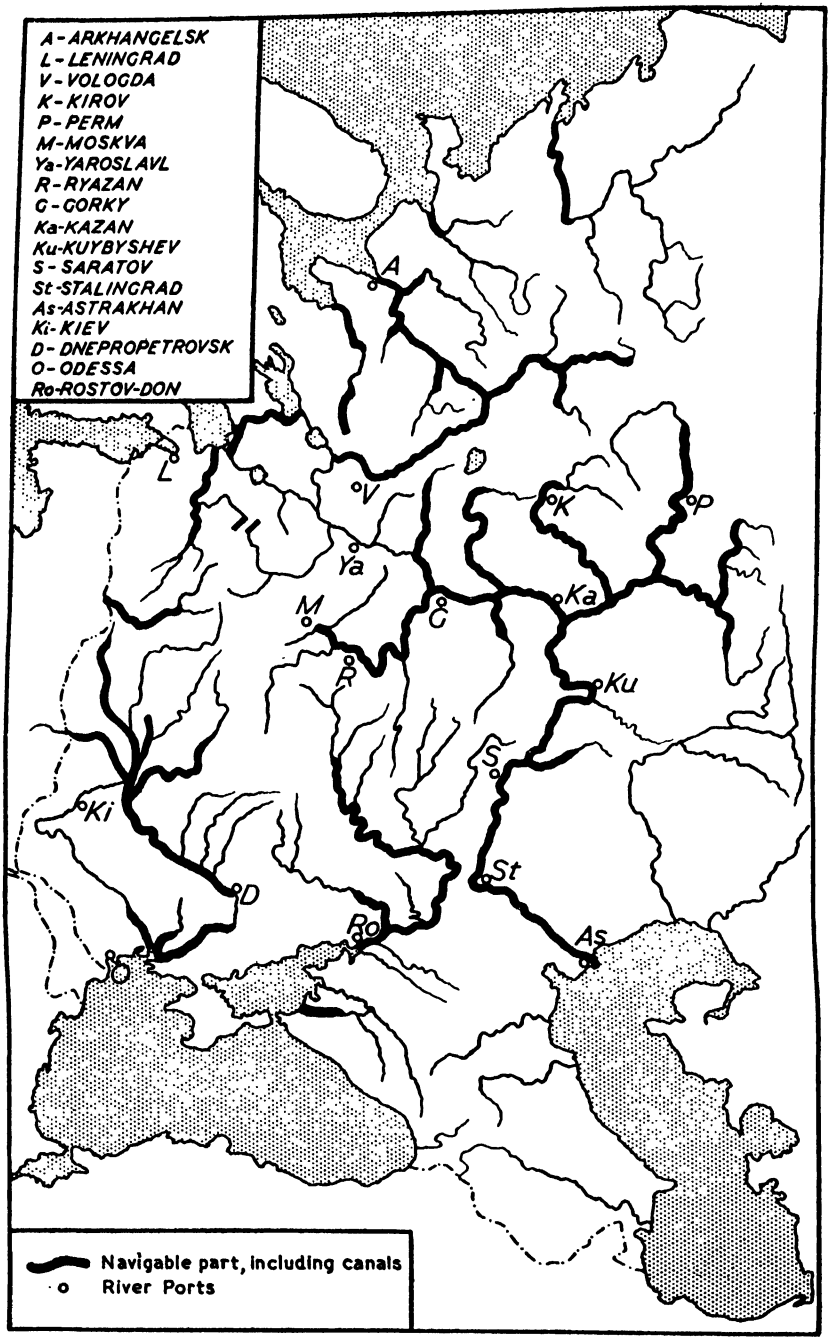
TABLE 13

Length of Biggest Russian Rivers in thousand kilometres

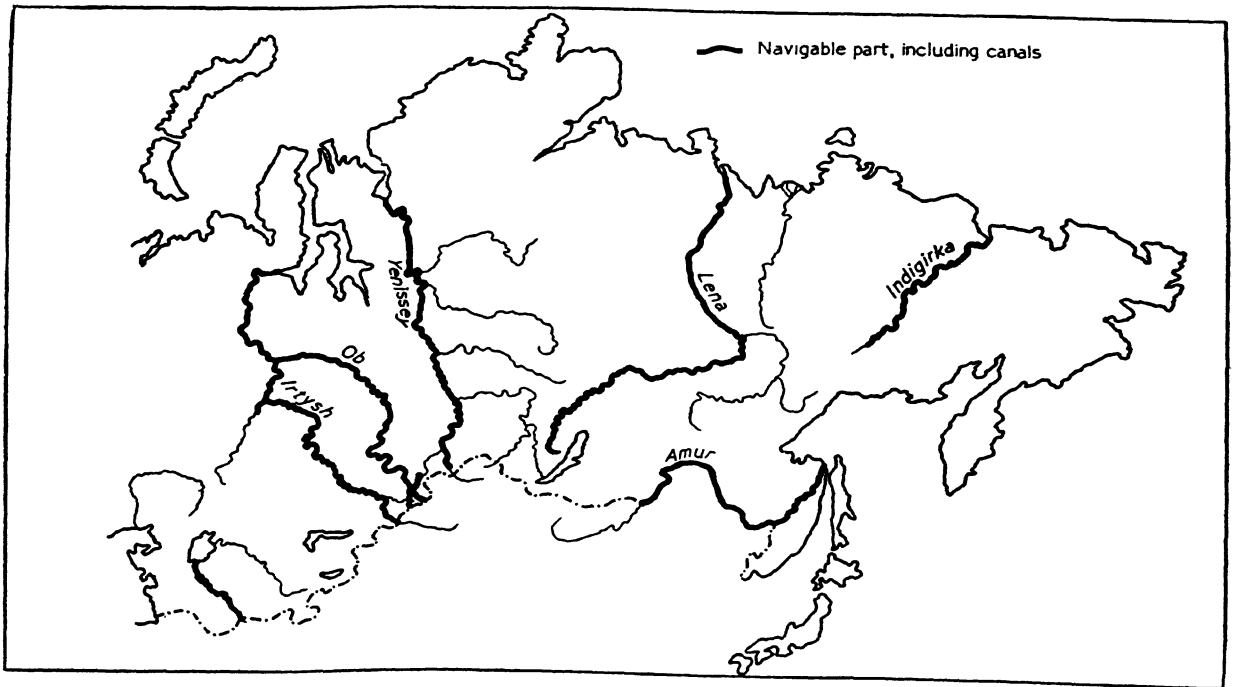
Name	Total length	With tributaries	Navigability, including tributaries	
			000 km.	(Per cent)
Volga	3·7	83·0	17·7	22·0
Northern Dvina	1·3	28·5	5·4	19·0
Dnieper	2·3	25·0	5·4	23·0
Neva	0·074	21·5	2·3	11·0
Pechora	1·8	7·3	1·9	27·0
Don	2·0	6·7	2·1	31·0
Onega	—	6·2	0·3	5·0
Ob	3·3	43·6	17·0	36·0
Yenissey	3·6	26·3	8·4	32·0
Lena	4·4	19·7	9·1	46·0
Amur	2·9	19·3	8·3	43·0

There are 42 rivers in the U.S.S.R., with a length of over one thousand kilometres each. According to the *Planovoye Khozyaistvo* (Moscow, 1940), the total length of all rivers and streams is 1,250,000 kilometres. The navigable and floating capacity of Russian rivers is now 520,000 kilometres, twice as much as it was ten years ago.

The Volga Basin is, from the point of view of freight traffic, the most important. It absorbs more than 50 per cent of the total rivers' freight. Next comes the basin of the Neva, and then the Dnieper Basin. The Siberian rivers are not yet exploited to their full capacity, except, perhaps, the northern Dvina.



MAP 2.—THE INTERNAL WATERWAYS OF THE U.S.S.R. (EUROPEAN PART)



MAP 3.—THE INTERNAL WATERWAYS OF THE U.S.S.R. (ASIATIC PART)

River traffic is used in the U.S.S.R. mainly for the transport of the following commodities:

PETROLEUM is transported from the south to the Moscow and Leningrad regions, and to and from the Urals.

FISH—transported mainly from the Caspian Sea.

GRAIN—from the Lower Volga (the grain-producing area) up to Kuibyshev (formerly Samara), and from there along the tributaries of the Volga and by railways to the grain-consuming areas.

TIMBER is taken from the Lake District of Leningrad down the northern tributaries of the Volga (Kostroma, Unzha, and Vetluga), and along the Rivers Kama and Vyatka; it then goes by railway and along the River Oka in the central part of the R.S.F.S.R., down the Volga to the south of the U.S.S.R., which has no forests suitable for building purposes or fuel.

SALT is sent from the Baskunchak Lake up the Volga to the centre, and down to Astrakhan, where it is used in the fisheries. It also comes from the Solikamsk salt-pits down the River Kama to the middle of the Volga and the centre of the U.S.S.R.

METALS and ORES come from the Urals by railways to Perm and then down the Kama.

The main ports and harbours of the Russian River system are Astrakhan, Leningrad, Perm, and Moscow; Rybinsk, Yaroslavl, Gorky (formerly Nizhni-Novgorod), Kazan, Kuibyshev, Samara, Saratov, and Stalingrad (formerly Tsaritsyn).

2. CANALS

There are certain disadvantages, in spite of the flatness of the Russian plain, for the development of a wide system of canals. This is due in some cases to the existence of natural locks, and in others to the fact that the mouths of some of the rivers are situated in other States. Also, short summer seasons limit the yearly traffic of goods by canal.

There were two main canal systems before the Revolution. These are in existence now and have been reconstructed and expanded greatly since the Revolution.

The first system connects the Volga with the Neva and with the northern Dvina. There are three canals in this system: the Vyshny-Volochok (85 miles), the Tikhvinsk (117 miles), and the Marie (428 miles). The Volga was connected with the

northern Dvina by the Duke Alexander of Wurtemberg Canal (34 miles).

The second system connects the Dnieper with the Baltic Sea by means of the Berezina Canal (66 miles), the Oghinsk Canal (67 miles), which connects the Dnieper with the Nyeman, and the Dnieper-Bug (127 miles), which links up the Dnieper with the Vistula.

There are also minor canals connecting the river systems of Archangel and Vologda with the River Perm and others.

The present system of canals, including the stretches of rivers where sluices were erected was 2,667 kilometres long in 1935. At the outbreak of the present war the length of canals reached, very probably, over 3,000 kilometres. The Marie-Tikhvinsk system alone is 874 kilometres long.

There was great hope, before the outbreak of the War, that the Caspian Sea would one day be connected, through the reconstructed Marinskaya system, with the Baltic Sea, and, through the Kama-Pechora-Vichegda combination, with the Arctic Ocean. The Volga-Don Canal was to connect the Caspian with the Sea of Azov and the Black Sea, the Oka, Zhizdra and Dyesna canals were to link it with the River Dnieper, and the Choussavaya, Isset, Tobol, and Irtysh canals with the River Ob. There was to be a connexion with Moscow through the Volga–Moscow Canal and also through the Oka and Klyazma canals.[1]

Part of this scheme has already been carried out, and there is no reason why the whole of it should not be realized if other means of communication and transport should prove inadequate to cope with the bulky freight traffic.

3. HIGH ROADS

Russia was—and still is—a backward country in the way of roads. In the European part of Russia, before the Revolution, there were only 35·8 thousand kilometres of high roads, whereas in the nine most important States in Europe the length of high roads was equal to 1,444 thousand kilometres. This means that for every hundred kilometres there were in Europe 40 kilometres of roads, while in Russia there were only 0·6 kilometres of roads, or 60 times less.

The absence of high roads in Russia is a symptom of the

[1] N. Mikhaylov, *Soviet Geography*. Methuen & Co. Ltd., London, 1935, p. 189.

general backwardness of former times. It is not generally realized that in Russia there were three times less high roads than railways. The absence of high roads in the villages is a very great obstacle to economic reconstruction. The loss which the national economy experiences is enormous. Since the introduction of systematic planning in 1928, the construction of high roads has proceeded at great speed, and their length increased more than ten times during the five years following 1928. During the same period roads with a stone surface increased to four times as much as they were before.

The following table illustrates the tempo of construction of roads with a stone surface, which were badly needed owing to the rapid growth of motor transport and tractor service.

TABLE 14

The Growth of Roads with Stone Surface in the U.S.S.R.

Year	Length in kilometres
1928	1,384
1930	3,108
1931	3,169
1932	5,227

4. RAILWAYS

Formerly Russia was, when compared with other countries, very backward in the way of railway communication. Taking the total length of the world's railways, prior to the First World War, as one million kilometres, the United States had over 500,000 kilometres, and Russia only 73,000 kilometres. The same applies to the density of railway lines. There were only twelve kilometres of railway lines per square kilometre in European Russia, and one kilometre in Asiatic Russia. If we consider the density per head of the population we find that there were only five kilometres per every 10,000 inhabitants in Russia, whereas there were over forty kilometres per 10,000 inhabitants in the United States, and over sixty kilometres in the Argentine and Canada.

Another drawback of the Russian railways was that for a long time the broad gauge (5 feet) was used. whereas everywhere else the narrow gauge was adopted. On the majority of lines ' non-preserved ' sleepers, the durability of which could only be counted on for five years, were used. Even in 1925 only half of the sleepers were changed, and the remaining half were naturally rotting very quickly.

For a long time after the Revolution and Civil War the number of locomotives in Russia was smaller than before the First World War. In 1928 there were only 17,000 old locomotives, and it is known as a fact that the average locomotive lasts only 15 years. All this shows the difficulties with which the present government were faced in reconstructing Russian railways.

It would, perhaps, be interesting to recall here that the first railway line to be built in Russia was in 1838 from St. Petersburg to Tsarskoe Selo (now Pushkin). Then in the sixties of the nineteenth century the famous Nicholas' railway was constructed, actually by forced labour. For a whole decade, as we wrote elsewhere, many thousands of peasants were forced to work at its construction with nothing but their hands and a few primitive tools, as they stood up to the waist in the marshes.

It was N. A. Nekrasov who wrote the famous poem, 'The Railway' in 1865, in which he says:

> We laboured in the heat and in the cold,
> Our backs were eternally bent,
> We lived in dug-outs, we starved and froze,
> Were soaked in rain and died of scurvy . . .
> The foreman flogged us, officials robbed us,
> Poverty crushed us,
> We suffered all,
> We, who are the warriors of God
> And the peace-loving children of toil.[1]

In 1850 there were 500 kilometres only of railway line in Russia. In 1880 there were 23,400 kilometres, and in 1900 53,000 kilometres. In 1913 the length had increased to 73,000 kilometres, of which 58,700 kilometres only remained on the territory of the U.S.S.R. after the Revolution of 1917. Ten years after—in 1927—the Soviet Union possessed 75,700 kilometres of railway line, or a little more than there was on the eve of the First World War.

The present position as regards railways and transport is as follows:

The density of railway lines in the Soviet Union is only 4 kilometres per 1,000 square kilometres, while in the U.S.A. it is 44 kilometres, and in Western Europe 65 kilometres per 1,000 square kilometres. There are 40 kilometres of railway

[1] S. P. Turin, *From Peter the Great to Lenin*. P. S. King Ltd., London, 1935, p. 28.

line per every 10,000 people in the U.S.A.; in the Soviet Union there are only five kilometres.

During the Civil War (1917–19), the total length of Russian railways, as compared with the length in pre-revolutionary times, shrank more than thrice (1913—58,549 kilometres; 1918—17,570 kilometres). The losses inflicted on Russian means of communication were very great. Two thousand kilometres of line were completely destroyed, 4,332 railway bridges were blown up, railway buildings, works and shops, water cisterns, &c. suffered tremendous damage. The total loss was accounted as more than three million gold roubles.

No wonder that the reconstruction of the railways required great efforts! Looking back now, and studying the map of the Soviet railway system, we must admit that the task of restoration was carried through by the Government, railwaymen, and local population with great energy and sacrifice.

During the New Economic Policy (N.E.P.)—1920–4—the mileage of Russian railways was not only brought up to the pre-revolutionary level (1917—63,240 kilometres), but increased to 76,887 kilometres in 1928.

During the First Five Year Plan (1928–32) 4,667 kilometres of railway line were constructed, but only 3,716 kilometres during the Second Plan; this was due to the fact that, during the Second Plan, railways were built in Siberia and the Far East, where more work was required owing to soil and climatic conditions. By 1950 it is planned to build 7,280 kilometres.

At the end of 1938 there were in operation the following important new lines:

The *Kazan-Sverdlovsk line* (885 kilometres), passing through the Tartar Republic, gave a valuable outlet from the Ural region to the Centre.

The *Kherson-Apostolovo-Dnyepropetrovsk-Kharkov line*, which runs through the richest part of the Ukraine.

The *Moscow-Voroshilovgrad secondary line*, which connected the heart of the Soviet Union with the Rostov-Don area and the whole southern part of the U.S.S.R. and relieved the pressure of traffic on this route.

The *Red Liman-Viluyki-Penza-Suzran-Kuibyshev* line, another secondary track, which doubled the traffic from the Volga to the Dnieper.

The whole life of the Ural was awakened by the net of railway lines and junctions, connecting *Saratov* with *Uralsk*,

Orsk, Magnitogorsk, Chelyabinsk, and the northern part of the Urals.

The Lake of Balkash was connected via *Karaganda* and *Aktubinsk,* with *Petropaviovsk, Omsk,* and the whole *Irtysh Basin.*

The *Turksib,* or Turkestan-Siberian line, was a great achievement. The Turksib, 1,442 kilometres long, passed through the Kazakhstan Republic, connecting Siberia with Central Asia, facilitating transport of timber, coal, and grain, and stimulating the development of the Cossack territory.

Tashkent now became connected with Alma-Ata, the capital of the Kazakh Republic, with Semipalatinsk, and with the Siberian administrative centre at Novosibirsk.

The branch line of the Siberian railway, which runs through Chelyabinsk, Omsk, Chishmy, greatly increased the tempo of the social-economic activities of Siberia, besides being of great military and strategic value.

The same must be said of the branch line connecting the Siberian railway at Karymskay (on the eastern side of Lake Baykal) with Khabarovsk and Vladivostok.

TRANSPORT

The length of Russian railway lines has increased by 40 per cent since the First World War, but the commercial goods traffic has since then increased more than five times, and it is obvious that Russian railways have to work beyond their capacity.

The following table shows the growth of freight traffic in the U.S.S.R.:

TABLE 15

Freight Traffic in the U.S.S.R.

1913—65,900,000 ton-kilometres

First Five Year Plan			Second Five Year Plan		
1928	93,400,000	ton-kilometres	1933	169,500,000	ton-kilometres
1929	113,000,000	„ „	1934	205,700,000	„ „
1930	133,900,000	„ „	1935	258,100,000	„ „
1931	151,900,000	„ „	1936	323,500,000	„ „
1932	169,300,000	„ „	1937	354,800,000	„ „

1938—369,100,000 ton-kilometres
1940—409,000,000 „ „
1950—532,000,000 „ „

In one of the Soviet surveys on the work of the railways, we find the following interesting table and a diagram, illustrating the increase in the volume of goods traffic and its com-

position. Coal, timber, and minerals, according to the table, were still the most important goods sent by rail in the Soviet Union. The proportion of grain transported, as compared with the total volume of goods carried, decreased considerably (7·5 per cent in 1937 as compared with 13·8 per cent in 1913), although the actual volume of grain had more than doubled.

TABLE 16

Comparison of Russian Goods Traffic in 1913 *and* 1937

	1913		1937	
	Million tons	Per cent	Million tons	Per cent
1. Coal	26·3	19·9	116·7	22·5
2. Oil	5·8	4·4	24·7	4·8
3. Wood	8·6	6·5	19·3	3·7
4. Ore	8·9	6·7	30·5	5·9
5. Metal	4·6	3·4	26·2	5·1
6. Timber	12·2	9·2	46·9	9·1
7. Mineral building material	12·8	9·7	102·4	19·8
8. Grain	18·3	13·8	38·9	7·5
9. Various	34·9	26·4	111·7	21·6
Total	132·4	100	517·3	100

In the diagram the comparison of goods traffic is represented as follows:

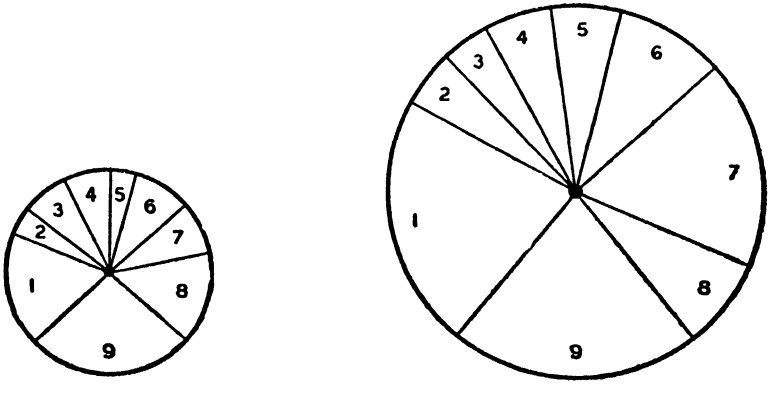


DIAGRAM VIII.—GOODS TRAFFIC IN 1913 AND 1937

Similarly, coal traffic increased four and a half times in terms of volume, but decreased, proportionally, by two and a half per cent.

Wood, oil, and timber increased in terms of volume considerably, but comprised only a small proportion of the total traffic. The volume of oil increased four and a half times, but its proportion remained the same as in 1913.

The problem of relieving the Russian railways of their onerous burden has occupied the minds of the leaders of the Soviet Union constantly.

They looked anxiously towards other means of transport. But the Russian high roads, in spite of their improvement and increase, could hardly render sufficient relief to the railways.

One would expect that the Russian rivers, situated, geographically speaking, very favourably, and originating from the centre of Russia, would become one of the most important means of transport. But out of the colossal length of Russian rivers, there are still only half a million kilometres which are navigable and may be used for floating.

Great hopes and large investments have been put into the Russian canal system, and it may be that the time is not far distant when the capital of the U.S.S.R. will not only be connected with all the seas in the European part of the country, but will also become a great trading centre and port. At present, as we have already mentioned, the total length of canals reaches 3,000 kilometres, of which the Marie-Tikhvin system occupies 874 kilometres.

On the sea and in maritime trade Russia has never been strong, and at present the Commercial Sea Fleet of the U.S.S.R. is three times less than the German, and seventeen times less than that of Great Britain. The average total freight dealt with by the Soviet ports before the present war was 60 to 65 million tons a year. Export cargoes carried by Soviet shipping amounted to about 5 million tons a year only.

All this indicates that the U.S.S.R. entered the last war with inadequate transport facilities, in spite of which she has driven away the invading hordes. And now, means of communication and transport have to be improved before anything else in order to cope with the speedy reconstruction of devastated areas.

5. POSTAL AND TELEGRAPH SYSTEMS

Postal and telegraphic communications in former Russia were, naturally, not very intensive, owing to the low density of the population, the rural character of the country, and the patriarchal life of the peasants, many of whom were illiterate.

The average Russian citizen in those 'good times' wrote about four letters a year, and felt quite pleased and satisfied with himself.

There were, before the First World War, a little over 100,000 localities with a regular mail service, dealing annually with over one thousand millions of inland letters and with about the same number of other postal dispatches.

After the Revolution of 1917 postal and telegraphic communications began to develop very quickly, and in 1927 the number of localities with a regular mail service had doubled. The rural population now enjoys a much better postal service, and there is quite an army of village postmen in the U.S.S.R.[1]

The telegraph and telephone systems were also extended very quickly after the Revolution. The length of the lines, which was half a million kilometres in 1913, reached two million kilometres in 1935. The use of broadcasting, since 1924, has given a new impulse to the utilization of the telephone as a transmitter. The use of the radio, since the erection of powerful electric stations, has spread all over the country.

Here are some interesting figures illustrating the gradual

TABLE 17

Postal Communications in the U.S.S.R., U.S.A. and Great Britain

Country	Post (Million Dispatches)		Telegraph (Million Telegrams)		Telephone (Thousand Receiving Sets)	
	1913	1936	1913	1935	1913	1935
U.S.S.R.	559	7,224	36·0	96·0	231	861 [2]
U.S.A.	18,567	22,953	107·0	190·0	10,524	17,424
Great Britain	5,879	7,759	84·0	59·0 ?	775	2,551

[1] Number of localities with regular service in 1913—112,335; in 1927—241,000. Number of village postmen in 1938—154,600. Total number of villages in U.S.S.R. is about 600,000, so every four villages have their own postman. 77 per cent of village soviets have telephone communication with their regional organizations.

[2] In 1936 there were 1,031 thousand receiving sets.

development of means of communication by post, telegraph and telephone in the U.S.S.R. as compared with that in the U.S.A. and Great Britain.

6. THE AIR SERVICE

The air service, owing to the favourable climatic conditions and comfortable relief of the country, also developed rapidly in the U.S.S.R. At present the Soviet Union uses the air service not only for War and Government purposes, and as a passenger service, but also for postal and goods traffic along regular routes.

In order that the reader may visualize the magnitude of civil aviation in the Soviet Union, and the work of the Northern Sea Air Service, we give below a comparison of what was achieved in 1935 and three years after, in 1938.

The length of the lines of the civil aviation service in 1935 equalled 55,000 kilometres; in 1938 it had been doubled, and reached 115,000 kilometres.

Forty-three thousand passengers were carried in 1935; three years later the number had reached 293,000, or seven times as many. This shows the intensity of communication by air during the years just before the outbreak of the present war.

Forty-six thousand goods packages were transferred by air in 1938, whereas three years before. in 1935, only two thousand packages were sent.

Postal dispatches by air increased five-fold during the period under review: (2,000 tons in 1935 and 10,700 tons in 1938).

Lively communications were registered also on the Northern Sea Air Route, which has been extended from 2,000 kilometres to 12,000 kilometres.

In 1935 only 374 people travelled along this route, whereas in 1938 already 12,270 people were carried.

Goods traffic increased correspondingly. Only 20 tons were carried in 1935 and the number had increased to 338 tons in 1938.

There was also a very great increase in Arctic air-mail. Two tons of dispatches were carried in 1935, and 204 tons in 1938.

The development of Russian aviation in recent years, to say nothing of the brave and daring achievements of Russian airmen at the Front, show that there is a great future for

Russian aviation, the mission of which will be to spread Russian culture once again to the remote places of taiga, and the sparsely populated Arctic regions. But, in order to achieve this, one thing must be remembered (and in this we agree with Prof. Schmidt); that the brilliant achievements of individual brave Russian airmen can never take the place of organization which, as yet, is very weak, and which is badly in need of improvement not only in the working of the airlines, but also at the bases.

The economic development of the regions in question, which was interrupted in its experimental stage by the last war, will certainly be continued now the war is finished. But they can be firmly established only when the density of population in these regions reaches the required minimum.

7. SEA PORTS

The U.S.S.R. has access to the White Sea, the Arctic Ocean, the Baltic Sea, the Pacific Ocean, and the Caspian, Black, and Azov Seas.

The most important ports are Nikolayev, Sevastopol, Odessa, Berdyansk, Taganrog, Mariupol, Novorossyísk, and Batumi on the Black and Azov Seas; Baku, Derbent, and Makhach-Kala on the Caspian Sea; Leningrad on the Baltic; Archangel, Murmansk, and Igarka on the Arctic Ocean, and Vladivostok on the Pacific.

Formerly, the majority of Russian ports were equipped very badly and were, as a rule, not big enough for big ships. The marine fleet was also very insignificant, its tonnage at sea, including the Caspian Sea, being equal in 1914 to only 1,770 thousand tons, or from 1 to 1·5 per cent of the world's marine fleet.

But during the last fifteen years all Russian seaports have been greatly improved. The most important of them are situated on the Black Sea.

BLACK SEA PORTS

ODESSA was in pre-revolutionary times the chief distributing centre for foreign imports in the Black Sea, and it remains

the most important Black Sea port, owing to its favourable climatic conditions, its geographical position, and the wide hinterland, rich agriculturally and industrially. The distance from Odessa to Istanbul is 336 miles, to Novorossyisk 465 miles, and to Batumi 589 miles. Since the Revolution of 1917 the port has been improved out of recognition. A large area for storage facilities, mechanized warehouses, cold storage plants, oil tanks, mechanized equipment for loading and unloading—all this has raised the port of Odessa to the level of modern British and American ports.

Odessa exports sugar, grain, wine, timber, machinery, and metals. The local trade brings in grain, cotton, fruit, tobacco, fish, salt, coal, oil, ores, building materials, &c. It attracts a considerable number of tourists and foreigners, being on the cross-roads to the Ukraine, Crimea, Caucasus, and the Near East. The population of Odessa is 604,000.

NIKOLAYEV is chiefly an exporting port, situated 74 nautical miles from Odessa. It is ice-bound from December to March, but with the aid of ice-breakers it is kept open throughout the year. It has two grain elevators with a capacity of 600,000 tons a year, and three floating elevators with an efficiency of 200,000 tons. The chief exports from Nikolayev are grain, iron, manganese, coal, and sugar.

KHERSON is the next port to Nikolayev, on the right bank of the Dnieper. Since the building of the Dnieper locks this port has grown rapidly. Timber and grain are the chief exports. The annual freight turn-over is only about a third of that of Nikolayev, probably not over a million metric tons.

SKADOVSK and KHORLI are auxiliary ports for Odessa and are also holiday resorts.

EVPATORIA was, and is, famous as a first-class health resort, with a splendid bathing-beach and fine climatic conditions. It is of great economic importance at present, exporting grain and salt from the vicinity. It has an open harbour with an area of about 17 square miles, with good anchorage at depths of 30 to 40 feet.

SEVASTOPOL is mainly a naval and military strategic point and the chief base of the Black Sea Fleet. It has had a famous history—eleven months of successful resistance to siege during the Crimean War, the insurrectionary action of the *Potemkin* during the Revolution of 1905, and the successful defeat of Wrangel's White armies during the Civil War of 1918–20. The

former commercial activities of Sevastopol have been transferred to Nikolayev, Theodosia, and Kerch.

On the eastern side of the Crimean Peninsula are YALTA, THEODOSIA and KERCH, well known as holiday resorts and favourite sea-side residences of the Tsarist aristocracy. Now these places are largely visited by Soviet working people, for whom new and comfortable health centres have been organized in the confiscated palaces. Yalta is not of great business importance, though wine, grapes, fruit, and tobacco are exported. Theodosia is the principal Crimean port; it is free from ice throughout the year.

AZOV SEA PORTS

KERCH.—The location of this port makes it important for both the Black Sea and the Azov Sea. It is hardly ever ice-bound, and with the help of ice-breakers in severe weather it is kept open all the year round. The harbour is well sheltered from winds and rough seas. Among the Azov sea ports Kerch holds second place. There are rich iron mines and important metallurgical combines in the vicinity, and ship repairs are carried on on a large scale. There are local fisheries and salt works.

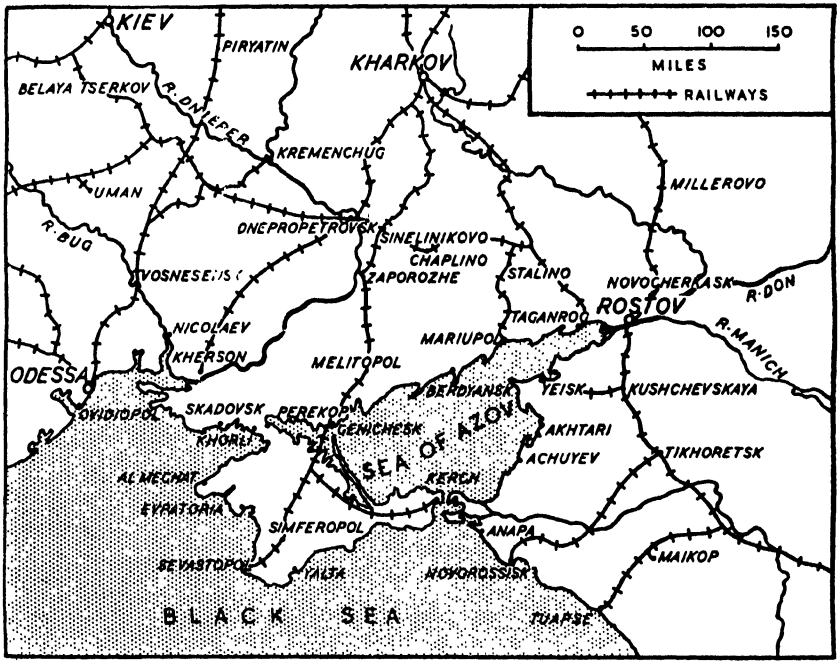
BERDYANSK was the main grain exporting port before the Revolution, and remains of importance in this respect. But the nearness of the big industrial centres of the Don Basin and Krivoy-Rog has made it of importance for the supply of manganese ore from Poti to those centres.

MARIUPOL is a first-class port, one of the five chief ports of the Union (Leningrad, Odessa, Baku, Astrakhan, Mariupol). It exports the coal and grain of the Donets coal-basin and the 'Black Earth' region. The colliery port has an area of about 300,000 and the grain port 350,000 square metres. The capacity of the grain elevator is 50,000 tons, and of the mechanized granary 5,500 tons. The port can easily handle up to 4 million tons a year at present, including 2,500,000 tons of coal, and one million tons of grain. The total freight turn-over is some 3 to 4 million metric tons a year The only disadvantage of Mariupol is that it is ice-bound from one to five months in the year. With the help of ice-breakers vessels are convoyed throughout the winter across the Azov Sea to Kerch.

TAGANROG is mainly a port for local trade, grain for export being diverted to Mariupol.

ROSTOV-ON-DON as a port is not so important as Mariupol, but with the development of the Volga-Don canal and the canal between Rostov-on-Don and Taganrog it will be one of the chief ports on the Azov Sea.

YEISK used to be a sister port to Rostov-on-Don in the export of grain. Now it mainly serves local trade. It was never convenient for navigation and loading, having a shallow open shore of sand and mud, exposed to winds and heavy seas.



MAP 4.—THE BLACK SEA AND AZOV SEA PORTS

ANAPA is within forty miles of Kerch. It is situated in a low and sandy bay and, as a port, has only local significance. The nearest railway station on the Northern Caucasian line is 18 miles away.

NOVOROSSYISK is the biggest port on the Black Sea. Situated in a large sheltered bay, with considerable natural depth, it allows the anchoring of big ships in the enclosed roads. It has good communications with the agricultural and industrial hinterland, and being surrounded by mountains, it is a natural fortress. The equipment of the port has been brought up to

modern standards since 1917. Novorossyisk has been always mainly an exporting port. Grain, timber, cement, oil, oil cakes and oil seeds are its main items of export. The Rostov-Tikhoretsk-Novorossyisk railway line runs to the port and all berths are connected with sidings. The population of Novorossyisk at the census of 1939 was 95,280.

TUAPSE is sheltered from heavy seas, and since 1917 it has been improved beyond recognition. A new oil-pipe from Grozny, and a new railway line from Armavir have multiplied the turn-over of the port nearly twenty times.

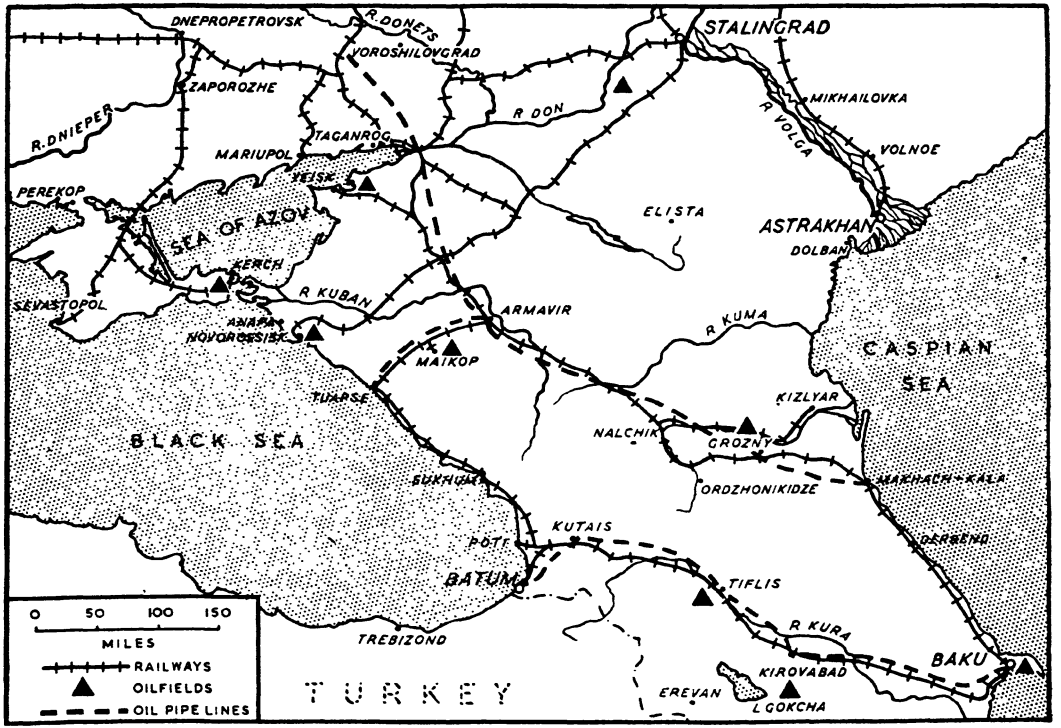
SUKHUMI is a central trading Black Sea port, 508 nautical miles from Odessa and 177 from Novorossyisk, and an attractive holiday resort. The sub-tropical climate and mountainous Caucasian hinterland, famous for its fine timber and rich deposits of coal, silver, and lead, promise a great future for this port.

POTI is primarily the port for manganese ore, of which the Soviet Union is the largest supplier in the world. Rich deposits of manganese ore are situated at Chiatury, 30 miles east of Kutais, near the Baku-Batumi oil pipe-line. The average annual production of manganese ore is now more than 3 million tons.

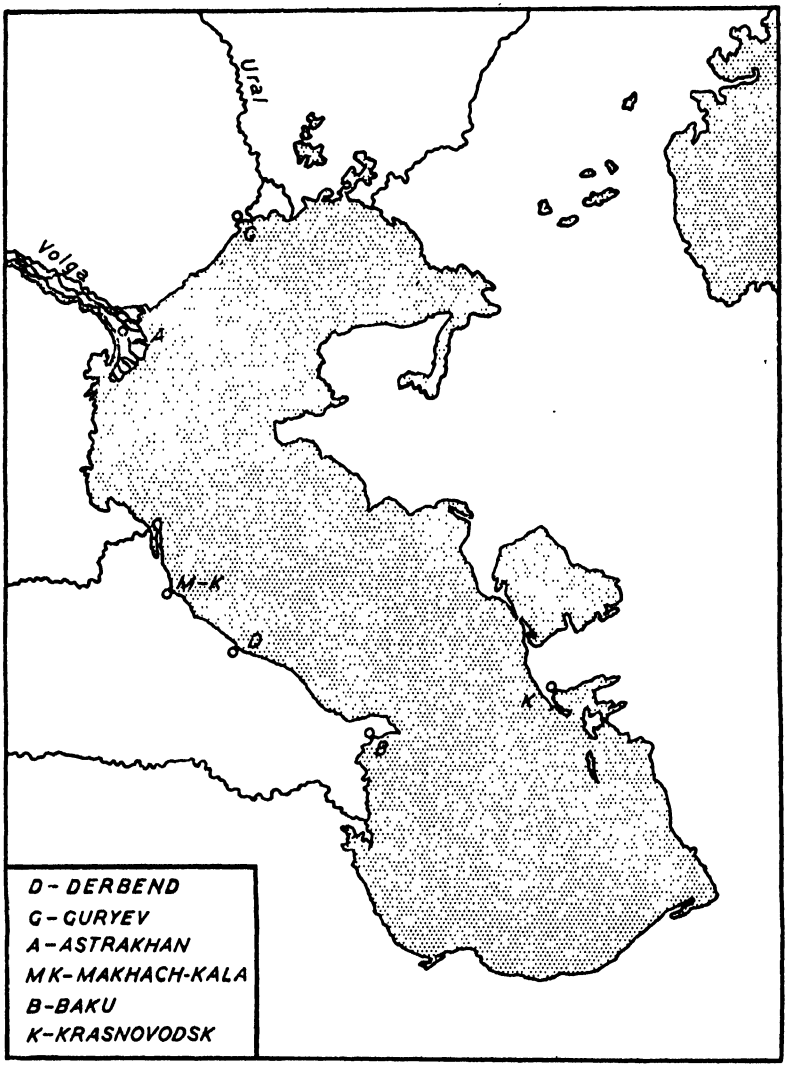
BATUMI is the economic centre for the whole of Transcaucasia. The oil pipe-line from Baku to Batumi and the huge modern refineries have made it the chief port for exports of oil. Iranian exports are also trans-shipped from Batumi. The port is well protected by a mole, and anchorage of big vessels is possible as the approach from the open sea has a depth of 100 metres. Modern storage facilities and good equipment of the port make it one of the best of the Black Sea ports. The population of Batumi at the census of 1939 was 70,807.

THE CASPIAN SEA PORTS

BAKU is the oldest oil-producing region. From 75–83 per cent of Russian oil comes from Baku. In addition to the old fields of Balakhany, Surakhany and Bibi-Eibat new regions were found after the Revolution of 1917 and the oil-fields as well as the port itself have been developed beyond recognition. Baku is connected by oil pipe-line with Batumi, and from another port, Makhach-Kala, a pipe-line runs to Grozny, Armavir and Tuapse. Baku itself has a large refinery capable of treating over 300,000 tons of oil yearly. The population of Baku has increased from 453,000 in 1926 to 809,000 in 1939. Apart from



MAP 5.—THE EASTERN BLACK SEA PORTS



MAP 6.—THE CASPIAN SEA PORTS

oil, Baku has developed metal, textile and timber industries, and has good trading connexions with Persia.

MAKHACH-KALA, which was mentioned above, is the right hand of Baku in the delivery of oil, and is also a very important port (together with Derbent and Petrovsk), in producing canned fish, dried fruit, &c. Its population, owing to the development of industries and of an irrigation system which attracted the nomadic peoples to come down to the valley, has increased from 34,000 in 1926 to 87,000 in 1939.

THE ARCTIC OCEAN PORTS

ARCHANGEL is the most important timber port on the White Sea. It is open for navigation from the end of May until the first weeks of November. It is 32 kilometres long and consists of five sections, one of which (Maimars) serves the sea-going vessels.

MURMANSK, on the Barents Sea, is navigable by ocean-going ships and open all the year round. Ten kilometres from the Murmansk railway there is the small port of KEM, which is navigable only by small ships.

Other ports are KERET, KOVIA, MEZEN, ONEGA, SOROKA, and UMBA. They all have timber mooring berths, open from the end of May until the end of October, but are navigable only by small ships. The timber loading, therefore, is conducted in some of these ports with the help of pontoons, situated in the neighbourhood of the saw mills. Since the Revolution, and during the last war against Hitler, Archangel and Murmansk, apart from their important economic significance, have become important as northern fortresses and centres of communication with the Allied Democracies.

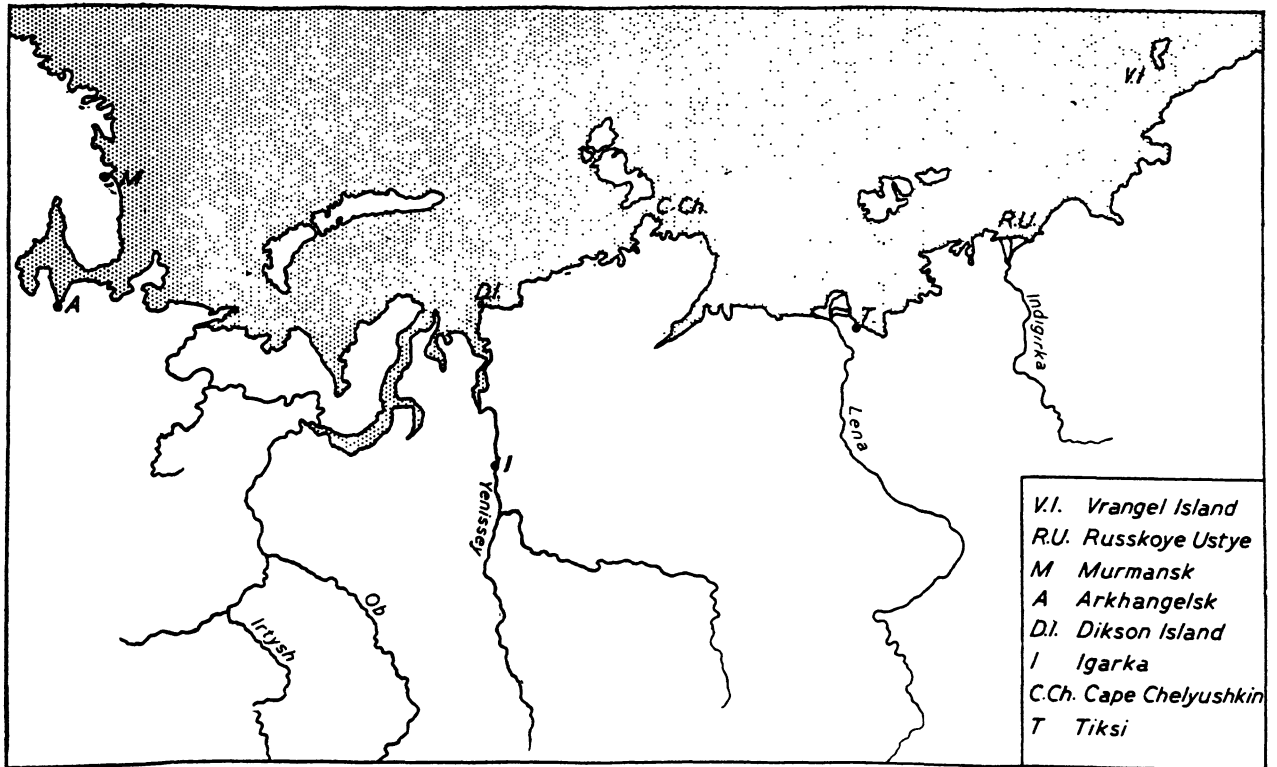
IGARKA, on the Kara Sea. This port is situated on the River Yenissey, and may be used by sea-going ships, but it is navigable only during two months of the year.

TIKSI is a new port on the River Lena.

DICKSON ISLAND has recently begun functioning as a coal base.

THE PACIFIC OCEAN PORTS

VLADIVOSTOK.—This is the most important port for Eastern Siberia, Manchuria, and Mongolia. It is navigable with the assistance of ice-breakers, all the year round. It has three



MAP 7.—THE ARCTIC OCEAN PORTS

docks, two of which are dry. Zolotoy Rog is the chief loading point at the bay. The port is well equipped with warehouses, elevators, oil tanks, pontoons, &c.

NIKOLAEVSK and MAGO are two ports on the River Amur. They are navigable from June until October only.

THE BALTIC SEA PORTS

LENINGRAD, since the Revolution of 1917, and up to August 1940, has been the sole port from which there was an outlet to the Baltic Sea. It is ice-bound from the end of November to the end of April, but nowadays ice-breakers are used so that the port can be used throughout the whole year. Leningrad port is equipped with all modern devices, and can compete with any of the European ports. Its quay is 21,000 feet long. It has several elevators, warehouses, and steam and electric cranes. There is an artificial sea canal 19 miles long and 350 feet wide, with a depth of 28 to 30 feet. Owing to its geographical position Leningrad has a great importance as a strategical and military post, on which the whole northern part of the country depends.

In August 1940 the former Baltic provinces were incorporated in the U.S.S.R. and Russia received back the old Baltic Sea ports: REVAL (TALLINN), DAGO (CHIUMAA), OESEL (SAAREMAA). The last ones are the islands of Estonia, RIGA, WINDAU (VENTSPILS), LIBAU (LIEPAJA), MEMEL (KLAIPEDA). After the last war KOENIGSBERG became a Russian Baltic port as well.

PART II

Regional Structure of the U.S.S.R.

CHAPTER IV

ECONOMIC REGIONS

SINCE the application of collective planning to the whole Russian National Economy the old administrative and economic divisions of Russia have been revised with a view to the building of a more rational economic structure. The old structure, which was created through the centuries, has not been abandoned entirely, but the State Planning Commission (GOSPLAN) took into consideration all the abnormalities of the location of industry, the distribution of the labour force, and the transport and railway systems, which were serving political and strategical purposes rather than economic and social requirements.

The Gosplan designed a new scheme for the economic regions of Russia, which is outlined in the Soviet text-books as follows :

1. The Central Industrial and Agricultural Region, consisting of the Moscow Industrial Oblast (Province), the Ivanovo-Vosnessensk Oblast, and the Central Black Earth Oblast. 2. The Northern Region, comprising the Leningrad-Karelian Oblast and the Northern Kray. 3. The Western Region, in which the whole of White Russia and the western part of the R.S.F.S.R. are included. 4. The Volga Region. 5. Ukraine and Crimea. 6. Caucasus. 7. Urals. 8. Siberia. 9. Central Asia.[1]

1. THE CENTRAL REGION

The Moscow and Ivanovo-Vosnessensk Oblasts.

The Moscow Industrial Oblast occupies the area between the Rivers Oka and Volga ; in the north it includes the northern tributaries of the Volga, and in the south the right bank of the River Oka. It is an area with a radius of 100–120 miles, with Moscow as its centre.

The climate and vegetation of this area vary greatly. In the north it links with Taiga, and has the severe climatic conditions of that region. In the south it approaches the Black

[1] This scheme of the economic regions naturally does not coincide with The Administrative Division of the U.S.S.R., given on page 201.

Earth Land, where the soil is fertile and the forests consist of deciduous and fruit trees.

The Ivanovo-Vosnessensk (now Ivanovo) Oblast occupies the eastern part of the same area between the Rivers Oka and Volga, and in the south it stretches beyond the Volga.

The Moscow Industrial Oblast may be graphically illustrated as follows:

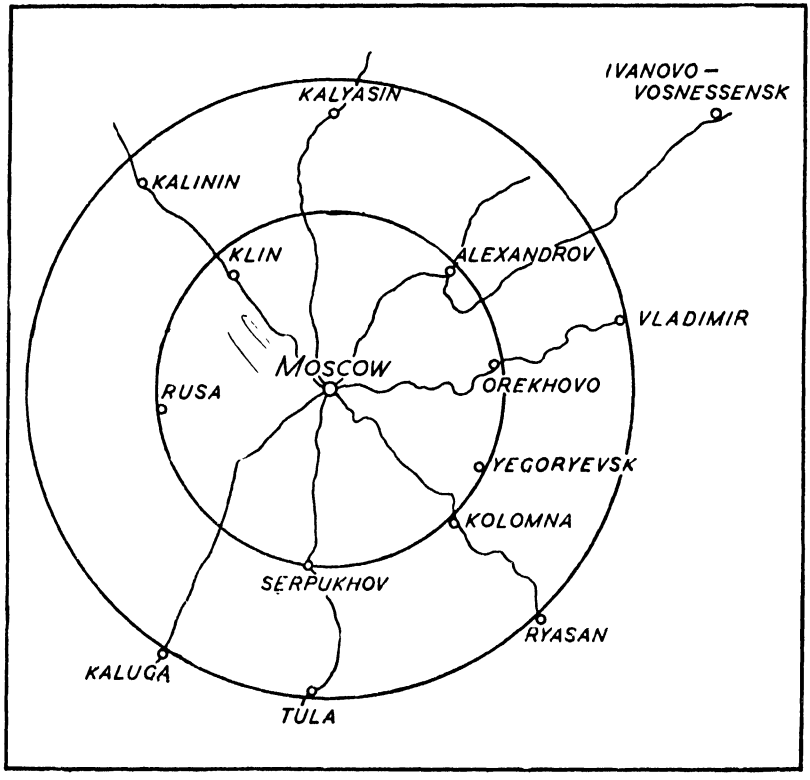


DIAGRAM IX.—THE MOSCOW INDUSTRIAL OBLAST

The Moscow Industrial Oblast is a kind of huge industrial unit. Every town in this area, every hamlet or village is part of one big industrial concern, run by the whole population of the region on the principle of collective planned economy.

This area represents only 1 per cent of the U.S.S.R. territory, but it absorbs 10 per cent of the total Russian population and more than one-quarter of the total industrial population, which

is engaged in this region in the textile, metal and chemical industries.

Moscow is the central stronghold of the oblast, which includes other important towns like TULA, KALUGA, TVER, KALYASIN, VLADIMIR, IVANOVO-VOSNESSENSK, RYASAN, SERPUKHOV, RUSA, KLIN, ALEXANDROV, and OREKHOVO-ZUEVO. These names are now very familiar to English readers since the unsuccessful onslaught on them by the German armies in 1941–3.

MOSCOW is not only the centre of the Moscow Industrial Oblast, but the political, social, and economic heart of the whole U.S.S.R. The population of Moscow is 4,137,018.[1] It cannot grow beyond five millions according to the Government Decree of 10 July 1935.

During the last two decades Moscow has changed beyond recognition, and has grown tremendously as a trading and transport centre. Being the capital of the whole country, it attracts the attention of the whole world as a social laboratory where experiments and the building of a socialist order are proceeding on a large scale and spreading over one-seventh of the world's land surface.

In future the Moscow-Volga Canal will increase the significance of Moscow, not only as a trading centre, but as an internal and external port connected with all the seas of the world, and will make it a centre for the International Co-operation of the peoples of the world.

The industrial significance of Moscow is derived from her central geographical position, and her position as the centre of the political, economic and cultural life of the country. The old-established branches of industry carried on here are textiles, metal works, and polygraphic industries.

TULA is situated on the River Upa, and connects, by railway line. Moscow with Kursk. The population of Tula is 272,000, and its most important industries are metal works and the famous rifle works. Russian Samovars (tea-urns) and sewing machines are manufactured here. Leather and food industries are also flourishing in Tula, and the cottage industry is centred nearby, in Venev and Likhvin. Coal is also extracted in the Tula province.

KALUGA is the next important centre on the outer circle. It lies on the River Oka, and the Syzryan-Vyazma railway

[1] All figures relating to the population in this book are taken from the Census of 1939.

line runs through it. The population of Kaluga is 89,000. In peace-time it was the centre of the production of agricultural machinery, but in war tanks instead of tractors were produced, and peaceful peasants—the men and women, who used to drive the tractors—automatically became drivers of tanks.

KALININ (TVER) is the third important centre. It is situated on the River Volga at the mouth of the River Tvertsa. The population of Kalinin is 216,007. Locomotive workshops, textile, leather, food, and timber industries are its main features.

KALYASIN lies on the River Volga, and the northern railway line runs through it. The timber industry is the main occupation of the local population, which now reaches something like 10,000.

VLADIMIR is on the north-west side of Moscow. It lies on the River Klyasma, not far from the Oka. The population of Vladimir is 67,000. It is a textile centre in the neighbourhood of the famous textile region of IVANOVO, which was a main artery of food and munition supply for the Red Army.

RYASAN completes the outer circle. The population of Ryasan is 95,000 and its railway line connects Moscow with Kasan. The main local industries are agricultural machinery, wine distilleries, and brick and timber industries. This province is also rich in phosphorites.

The most important centres in the inner circle are the following:

SERPUKHOV, half-way between Tula and Moscow. It is situated on the River Oka, connects Moscow with Kursk by railway line, and is a well-known textile centre. The population of Serpukhov is 91,000.

RUSA lies on the River Rusa, a tributary of the Moscow river. It is not densely populated, and proved to be an annoyance to the Germans because of its primitive roads and thick forests.

KLIN, half-way between Moscow and Kalinin, is a more highly developed centre. The population now reaches about 20,000. The main industries are glass, textiles, and metals.

ALEXANDROV, on the north-eastern side of Moscow, is an ancient town, and was the seat of John the Terrible. It has been greatly developed since the Revolution of 1917, especially in its glass and textile industries. The population reaches something like 35,000.

OREKHOVO-ZUEVO is an historic citadel of the Russian liberation and labour movements. It is situated on the River Klyasma, and its population is 99,000. The textile industry is its main feature. In the character of its industries and its people's traditions it links up with Vladimir, Alexandrov and the whole Ivanovo-Vosnessensk province.

The Ivanovo-Vosnessensk Oblast (Ivanovo Industrial Province)

The Ivanovo Industrial Province represents an area of 124,000 square kilometres, and it is inhabited by more than five million people. It has always been, and still is, an important centre of the Russian Textile Industry. Nearly a half of all the textiles of the U.S.S.R. are manufactured here. The Ivanovo Province produces more than one-third of the total value of all Russian cotton goods, and two-thirds of that of linen goods.

In olden times the whole oblast was a kind of workmen's settlement where conditions of work and life were scandalously bad. The economic history of Russia shows the Ivanovo-Vosnessensk Oblast as a centre of riots, strikes, and revolutionary movements.

Now it is changed beyond recognition, and is worthy of being shown to foreign visitors as an example of what can be achieved in a decade or two in town-planning and the improvement of workmen's conditions under the planned socialist system of production.

IVANOVO is the centre of the whole oblast, with a population of 285,069. Prior to the First World War the population of this town was 169,000 people. Ivanovo is situated on the River Uvodi and is connected with the railway line running from Alexandrovsk to Kineshma. The manufacture of cotton goods is the main occupation of the local population. Side by side with the old factories, giant workshops and huge electro-stations have sprung up, and the town is now really a ' Russian Manchester ', with small town-hamlets and villages like TEIKOVO, SHUYA, KOKHMA, SEREDA, and others surrounding it.

YAROSLAVL is at the junction of the Rivers Volga and Kostroma. It stands on the main railway line connecting Moscow with Archangel. Yaroslavl is a very old city, which was founded in the eleventh century and appears in history as an important trading centre. Its population, which, prior to the

First World War was 119,000, is 298,065. It is a big industrial city with automobile- and machine-building industries, food industries, and a new rubber-asbestos (synthetic rubber), combine.

KOSTROMA is situated on the river of the same name, and has a population of 121,205 people. This is also an ancient city, founded in the twelfth century. Not far from it is the famous Ipatievsky Monastery. At present the town is a centre for the timber industry of the whole Kostroma Basin, and has also linen and food industries. The association of linen workshops is now converted into a big combine, which is the largest in the whole province.

KINESHMA is a port for Ivanovo with big linen and chemical industries.

RYBINSK is a port standing at the junction of the Rivers Volga and Sheksna. It is an important railway junction. Timber and grain industries, flour mills, saw mills, shipbuilding and repair works and rope-making are the most important branches of industry in Rybinsk. The population is 139,000.

Central Black Earth Oblast

This province embraces the area of the former provinces (gubernias) of ORYOL, KURSK, VORONEZH, TAMBOV, and the southern part of TULA and the RYASAN provinces.

This is a purely agricultural area, without any large rivers, mountains or forests (which latter occupy only 7 per cent of the total land surface of the oblast). The Black Earth soil, mild climate, and many small rivers (tributaries of the Oka, Don, and Seim), which form a natural irrigation system, are very favourable for the development of agriculture.

In this region agriculture is not only the predominant, but the exclusive occupation of the population. Since the collectivization of farms and the wide use of tractors this fertile land has experienced considerable changes. The cultivation of wheat and maize now occupies first place instead of rye and oats; grasslands have increased considerably; great progress has been made in the cultivation of potatoes, beetroot and sunflowers, and in poultry farming and pig rearing.

The industrial activities of this province are naturally closely connected with the agricultural character of the area. The most important branches of industry are flour-milling, butter-

making, extracting oil from sunflower seeds, sugar and wine refineries, starch and timber industries.

The most important centres of the area are as follows:

VORONEZH is the main centre of the oblast. It is situated on the river of the same name which flows into the Don. It is a big railway junction, and all the industries enumerated above may be found here. The leather and boot industry must also be mentioned. The population of Veronezh, which, since the Census of 1926, has nearly trebled, is 326,836.

KURSK is on the River Seim, and railways connect it with Moscow, Kiev, Dnyepropetrovsk, and Sevastopol. It is an industrial town with flour mills, hemp works, and factories for the making of agricultural machinery. The population is 119,972.

ORYOL is situated on the River Oka, and has a population of 110,567. It has the same kind of industries as Kursk.

YELETS is a big railway junction with a population of 50,888. It is the centre of large flour-milling and leather industries.

TAMBOV is on the River Tsna, and has a population of 121,285. It is a big railway junction and grain collection centre, and has a highly developed leather and boot industry.

KOSLOV is an important railway junction with locomotive repair works and a large-scale meat industry.

BORISOGLEBSK is a centre for grain and sunflower collection, and has large flour mills and butteries.

2. THE NORTHERN REGION

The Leningrad-Karelian Oblast

The Leningrad-Karelian Oblast and the Northern Kray occupy the whole northern part of the European part of the U.S.S.R., from Finland to the Urals. The climatic conditions and vegetation here are of the same character as those in the Arctic Circle (tundra) and in the zone of the coniferous forests.[1]

The Leningrad-Karelian Oblast consists of—

(*a*) The Kola Peninsula, inhabited by Russian fishermen, called ' Pomory ', and ' Lapari ', with their reindeer.

(*b*) Karelia, covered with forests of Karelian birch, out of

[1] The word ' kray ' means in Russian—edge, border, the farthest end. In the olden days of Russian expansion the word was used literally, but nowadays it means a province, if it is large, or district, if it is small in size.

which Russian ' kustars ' (artisans) make cigarette cases known in this country as Russian cigarette cases. Fishing in the numerous small lakes, hunting and lumbering are the main occupations of the local population.

(*c*) The southern part round Leningrad and the River Neva, which links, by the reconstructed system of canals, Archangel and Murmansk with Astrakhan and Baku, on the Caspian Sea.

The most important centres of the oblast are as follows :

LENINGRAD (St. Petersburg or Petrograd), founded by Peter the Great, was the capital of Russia up to 1918. The population of Leningrad is 3,191,000. It actually absorbs one-quarter of the total population of the oblast, and 70 per cent of its urban population. Since the proclamation of independence of the Baltic States, after the Revolution of 1917, Leningrad became the sole Russian port on the Baltic Sea. It is the northern fortress of the U.S.S.R., and very powerful, owing to its connexions by rail, air, and water with its hinterland and with Moscow.

The main industrial concerns in Leningrad are machine building, electricity, polygraphic, chemical, timber, rubber, and textile industries. But its main significance lies in its trading activities as an exporting port for timber, flax, hemp, and grain, and as the importer of manufactured goods and machinery from abroad.

Owing to the climatic conditions, agriculture occupies second place in this district, but, during the last two decades, marked progress has been made by introducing a more intensive system of cultivating the soil, in dairy farming, and the cultivation of industrial crops. Timber and fishing industries are naturally the main characteristic features of the oblast.

Leningrad, like Moscow, is an important centre of Russian Scientific Institutions and cultural activities.

KRONSTADT is situated on the island of Kotlin in the Finnish Gulf, 32 miles from Leningrad. It is a famous fortress, was known as ' Red Kronstadt ' on the eve of the Revolution of 1905, and was as famous during the last war as Sevastopol and Stalingrad.

PSKOV is an old historic city, situated on the River Velikaya. It has a population of 59,898, and is famous for its flax, timber, and leather industries.

NOVGOROD is another well-known historical city on the River Volkhov, famous for the same industries as Pskov.

PETROZAVODSK lies on the western bank of the Oneg Lake. It is the capital of the Karelian Autonomous Republic, and has a population of 69,728.

MURMANSK is an ice-free port on the North Polar Sea. It is famous for its services, during the First and Second World War, to the Allied Cause. It is the terminus of the Northern Murmansk Railway connecting the north with the rest of the U.S.S.R. The population of Murmansk is 117,000.

BOROVICHI is a small industrial centre in the North.

The Northern Kray

The most important centres of the Northern Kray are the following:

ARCHANGEL is situated at the mouth of the northern Dvina, and is connected by railway line with Leningrad, Moscow, and Perm. Butter-making is its old-established industry. Archangel is well known as the sole point of communication by sea with the U.S.S.R. in time of war, and is perhaps even more important than Murmansk. Nowadays it is really an ice-free port, as the Russian ice-breakers are able to keep open a regular sea-route throughout the whole year.

VELIKIY USTUG is also situated on the northern Dvina, at the point where the Rivers Sukhoma and Ug join it. In olden times Velikiy Ustug was an important port for communication with the Urals and Siberia. Fur dressing is the old-established industry of the town.

SYKTYVKAR (Ust-Sysolsk) is the centre of the Autonomous Oblast of Komi. It lies at the junction of the Rivers Vychegda and Sysola. It occupies a very favourable position for water communication with the Pechora Basin and with the basins of the Vyatka and Kama. The fur industry is the main occupation of the local population.

KOTLAS is an important river port on the northern Dvina and Vychegda. It is the terminus of the Vyatka-Kotlas railway line, and is a loading centre for grain coming in by rail and water.

3. THE WESTERN REGION

This region comprises the whole of the White Russian Soviet Republic and the western part of the R.S.F.S.R., including Smolensk and Bryansk.

The population of White Russia is 5,567,976, of which over 4 millions are engaged in agriculture.

Flax, hemp, and potatoes are the main crops of the Republic, and livestock, especially pig-rearing, flourishes owing to the mild even climate and the good pasture land. Timber is also one of the key industries of the region.

The whole region has always been well known for its flax and linen industries, for its wine distilleries (including vodka which is made here not from rye but from potatoes), and for the making of bristles.

MINSK is the capital of the Republic. Its population, which is 238,772, has almost doubled since the Census of 1926, when it stood at 132,000. The majority of the inhabitants are Jews, and there is only a small percentage of White Russians. The latter are engaged mainly on the land, leaving the trading activities to the Jews. Minsk is an important railway centre from the strategical and economic point of view. Leather and boot-making, and wine industries are the main characteristics of the town.

GOMEL has a population of 144,000. It is a big trading and industrial centre and is also a port on the River Sozha. During the last decade or two a timber industry and the building of agricultural machinery have been developed here. In the past Gomel was well known as the centre of Jewish pogroms (massacres).

VITEBSK, the population of which has increased since 1926 by 70,000, and now reaches 167,000, is situated on the western Dvina. It has big linen factories in addition to the industries familiar to the White Russian towns.

In the western part of the R.S.F.S.R., which is included in this region, the most important towns are as follows:

SMOLENSK, an old historic city on the Dnieper, linked Kiev Russia with the Free Republic of Great Novgorod in their trading activities. It is well known to English readers from Tolstoy's famous novel *War and Peace*, and it will also enter into the annals of the Second World War as the fortress which played such an important part in the invasion of the U.S.S.R. by the Germans. The population of Smolensk is 156,677. Its economic activities consist of trade in grain, flax, hemp, and timber, and its industries are the same as those in other cities of the western Region.

BRYANSK is an important railway junction and a port on

the River Dyesna. It is a centre of machine-building and metal industries, as well as of glass, cement, and timber industries. The population of Bryansk, which has almost trebled since the Census of 1926, is 87,473.

4. THE VOLGA REGION

The Volga Region embraces nearly the whole area of the Volga Basin. It consists of the Gorky (formerly Nizhni-Novgorod) Kray in the north; the Middle and Lower Volga district, with its centre at Kuibyshev (formerly Samara) in the centre; and the Tartar Republic.

All these three oblasts are linked together by the Volga, which is 3,694 kilometres long. They represent one big block of the Russian plain stretching from north to south, with forests in the Gorky Kray, forest steppe along the Middle Volga and steppe in the south, with famous Stalingrad (formerly Tsaritsyn) in the background.

It is not an industrial region, but neither is it an agricultural region. There are no rich deposits of minerals, and no fertile Black Earth land here. Pastures, meadows, forests, and the river are the characteristic features of the region. The peasantry is occupied mainly in home industries and in breeding livestock.

Nearly one-third of the whole population of the U.S.S.R. lives in this region, and more than twenty-five different nationalities and dialects can be found here. There are Bashkirs, Chuvash, Kazakhs (or Cossacks), Tartars, Kalmyks, and many other nomadic peoples who are now organized into autonomous oblasts and republics and enjoy the cultural freedom of which they were deprived in the old days.

The last war, and the invasion of the U.S.S.R. by the German hordes, has shown the importance of this region. For it served as a link between the Moscow Industrial Region and the Urals, and was a kind of granary, munitions depot, and training camp for the Russian warriors and their reserves.

During the time of the Civil War of 1918–20, and of the war against the White Armies (which were supported at the beginning by foreign powers and by the neighbouring States which had formerly been Russian), the population of this region round Mother Volga saved Russia from disintegration

In fact, if Moscow and Leningrad are the heart and brain of Russia, the Volga Region is, to the Russians, the lungs of

their country. The 'Song of the Volga', which is known to many Englishmen, is immortal, and reflects the love of the Russians for their Fatherland—their healthy, broad-minded nationalism and patriotism.

The Gorky Kray

This district begins where the Northern Kray ends, and it occupies the area between the Moscow Industrial Oblast and the Ural Oblast. In the south-east it links with the Tartar Republic, and in the south with the steppes of the Middle and Lower Volga.

The main centres of this region are GORKY, MUROM, PAVLOVO, VYATKA, IZHEVSK, YOSHKAR-OLA (KRASNOKOKSHAYSK), KOTELNICH, OMUTNINSK.

GORKY, the birthplace of Alexey Peshkov (*nom de plume:* Maxim Gorky), was formerly known as Nizhni-Novgorod. It is an historic city, founded in the thirteenth century, and was famous for its fairs, where foreign merchants exchanged their goods for the products of Siberia, Asia, and the Russian home (kustar) industries. It is situated on the River Volga, at the point where it is joined by the River Oka, and it is now a big railway junction connecting Gorky with Moscow, Kazan, and Vyatka. Gorky has preserved its centuries' old significance as a trading centre for the Republics situated in the European part of the U.S.S.R. with those in Siberia and the Asiatic part of the Soviet Union.

Adjoining Gorky is SORMOVO with its well-known locomotive and ship-building works. This town was once famous as a centre of revolutionary activities. BALAKHA, KANAVINO, and DZHERZHINSK (formerly RASTYAPINO), where metal, automobile, chemical, and polygraphic industries are flourishing, are also near. These places together form Greater Gorky. The population of Gorky, which has trebled since the Census of 1926, is 644,116.

MUROM is another old historic city. It is situated on the River Oka, and the Moscow-Kazan railway passes through it. Murom is now the centre of the local mining industry.

PAVLOVO, on the right bank of the Oka, is connected with Gorky by railway line. It is a big centre of a long established metal (kustar) industry. The life of the kustars here was vividly described by V. G. Korolenko.

VYATKA is a port on the river of the same name, and a

railway junction connecting Vyatka with Leningrad and Perm. It is a growing industrial centre with leather, matches, and timber industries.

IZHEVSK is an industrial centre (metal and leather works), connected by railway with the main line from Kazan to Sarapul and Sverdlovsk.

YOSHKAR OLA (KRASNOKOKSHAYSK) is a centre of the Mari Autonomous Oblast.

KOTELNICH is a railway junction.

OMUTNINSK is a centre of the Vyatka mining district with a number of old-established small industries.

The Middle Volga Oblast

This oblast occupies both banks of the Volga from Syzran up to Kuibyshev (formerly Samara), and stretches eastwards to Orenburg (now Chkalov), excluding the Volga bend which forms part of the Lower Volga Oblast. In the east it stretches up to the Tartar Republic and Bashkirya.

The right bank of the Volga here differs greatly from the left bank. For the river is a kind of demarcation line between the thickly populated forest zone on the right, and the steppe, where hardly a tree exists, and which is thinly populated by so-called nomadic tribes, on the left.

Agriculture is the main occupation in this area. On the right bank grain cultivation is carried on, while on the left bank pastures and livestock are the main characteristics.

The Middle Volga area has always been considered a poor god-forsaken place, where drought, famine, and a lack of culture in the inhabitants were the natural features. Neglected entirely by the old bureaucratic Imperial régime, devastated by the Civil War of 1918–20, and exhausted by the famine of 1921, this area did not begin to recover until after the good harvest of 1926. Since then it has developed very quickly, chiefly by using the potential strength of the great waterway for grain and petroleum from the south and for timber from the north.

Now, with the growing significance of the Urals and Siberia as the main economic bases of the U.S.S.R., the Middle Volga Oblast has become the gateway to the inexhausted natural treasures of the Russian State.

The main centres of the Oblast are the following:

KUIBYSHEV (SAMARA) is situated on the left bank of the

Volga at the mouth of the River Samarka. It is now the centre of the Kuibyshev Oblast. The population at the time of the Census of 1926 was only 176,000, but since then it has more than doubled and stands at 390,267. The town is connected by railway with Moscow (1,058 kilometres), Leningrad, the Urals and Siberia, and Middle Asia. Big flour mills with large grain elevators, breweries, butter-making, macaroni, and yeast-making are the most important industries of the town. Two new ports were built on the River Samarka for the floating of timber and grain.

The right bank of the Volga here is the most picturesque part of the river. The famous forest (Zhiguli) stretches for miles along it. It takes from 3 to 4 hours for a steamer to pass the Zhiguli, and many fascinating stories are told about the free cossacks, Ermak, Stenka-Razin, and Ivan Koltso, who used to hide there.

ULYANOVSK (SIMBIRSK) is an important port on the Volga, and a big railway junction connecting Moscow and Ufa. It is also an important industrial centre with timber, leather, boot, clothing, and woollen industries. Its population is 102,106.

Simbirsk was renamed Ulyanovsk because Vladimir Ilych Ulyanov (*nom de plume*: Ilyin and Lenin) was born there on 22 April 1870. The house where Lenin was born, his school, and other buildings connected with his boyhood are places of pilgrimage.

SYZRAN is situated 6 kilometres from the River Volga and is on the main line connecting Ufa, Samara, Pensa, and Tula. The same industries as in Ulyanovsk are carried on here. Grain from the Lower Volga is reloaded here for transportation in the western direction. The population of Syzran is 77,679.

PENSA lies on the River Sura, half-way between Tula and Kuibyshev, and is connected with them by the main railway line. Its population is 157,145. Sawmills, paper and match industries are carried on here.

CHKALOV (ORENBURG) is on the right bank of the River Ural, which flows into the Caspian Sea. It is an important trading centre connecting Kazakhstan and Middle Asia with the European part of the U.S.S.R. The main railway line connecting Kuibyshev with Tashkent passes through it. It is a typical, large city of the Steppe, with well-developed industries such as flour mills, leather factories, and railway repair works. The population is 172,925.

ORSK lies on the other side of the Ural Mountains. It is a junction connecting Orenburg (Chkalov), Troitsk, and Aktubinsk. Apart from being an agricultural centre, it is very rich in deposits of iron and nickel, and big metallurgical works have been built here.

The Lower Volga Kray

This province embraces the territory lying along the lower part of the Volga, and includes such centres as Saratov, Stalingrad, Astrakhan, the German Volga Colony, and the Kalmyk territory on the Caspian Sea.

The climate here is typically of the steppe; forests hardly exist at all. The main occupations of the local population are agriculture, fishing, and salt-making.

This part of 'Povolzhye' (for such is the name derived from the word 'Volga', which is given to all the country along the Volga) was once a most backward area, owing to poor climatic conditions, the absence of well-developed means of communcation, and the low density of population, which settled in villages, ribbon-like, along the banks of the Volga and its tributaries, and hardly penetrated into the hinterland at all.

The primitive, extensive system of agriculture, and the neglect of the area and of its peoples by the old Imperial government and aristocracy made the Lower Volga Kray very poor, and it was not until about 1926, after the disastrous effects of the famine of 1921 had worn off, that the region began to recover.

New high roads and railway lines, the growth of the Volga fleet, irrigation schemes, the spread of education, the development of new industries and the improvement and enlargement of the old ones—all this has greatly changed the appearance of the Kray and its centres.

STALINGRAD (Tsaritsyn), the fame of which will never die, has developed with great speed since 1926. The population of the town then was 151,490, and in 1939 it had already reached 445,476.

Stalingrad became famous as a fortress before the last war. In the time of the Civil War, 1918–20, K. E. Voroshilov held the town against Krassnov's White Army throughout the whole summer of 1919. At the end of October of the same year Tsaritsyn was finally and completely liberated by the Red Army organized on the spot by J. V. Stalin, who had been sent

to the Lower Volga Kray by Lenin as a Commissar for food supply and for the organization of a Regular Revolutionary Army.

Stalingrad is favourably situated on the right bank of the Volga, on its extreme western band, within easy reach of the Don and the Volga-Don Canal, the construction of which was interrupted by the outbreak of the present war.

During the First Five Year Plan (1927–33) new power electro-stations, huge motor-tractor works, mechanized saw-mills, grain elevators, and petroleum refineries were built in Stalingrad. A new petroleum town grew up nearby where the Baku oil and kerosene are poured into tanks and cisterns for their further distribution throughout the country.

Stalingrad is connected by railway line with Moscow, Rostov-on-Don, Novorossiysk, and Ordzhonikidze. The railways in this region carry fish from the Lower Volga to the Donbas and the Central region ; timber from the Upper Volga to the Donbas and the northern Caucąsus ; coal from the Donbas mines and oil from the Baku fields.

SARATOV is situated on the right bank of the Volga. It is an historic city, founded in 1590 on the left bank of the Volga, at the mouth of the River Saratovka, but transferred in 1772 to the right bank of the river.

The right bank of the Volga is very picturesque here, with mountains of 150 to 278 metres above river-level. Some of them have a fascinating mythological and archæological history, such as the mountain Uvek or Kalancha, which takes its origin from the town Uvek, destroyed by Tamerlan in 1395.

Saratov is a big industrial centre with a population of 375,860. Food and metal industries, together with the reloading and distribution of grain, fish, and oil make Saratov one of the important trading centres.

It is also an important cultural centre with its University, Polytechnic, and Museums of the local flora and fauna.

Opposite Saratov, on the left bank of the Volga, is the German Republic of the Volga, with its capital Engels (Pokrovsk).

ENGELS is an important motor-building centre and the railway terminus of the Engels-Uralsk, and Astrakhan-Engels lines. At the outbreak of the last war this Republic was more or less dismembered, as the German settlers were offered the choice of leaving the country or going to remote places of Siberia.

ASTRAKHAN is situated at the mouth of the Volga. It is already a proper seaport on the Caspian, the centre of the Russian fishing industry, and a shipbuilding and trading centre on which the Kalmyk and Kazakh Republics depend. The population of Astrakhan is 253,655.

The Tartar Autonomous Republic

A description of the Pavolzhye would be incomplete if we did not include an account of the Tartar Republic.

The Tartar Autonomous Republic is situated in the area between the Volga and the River Kama, where the latter joins the Volga, and it stretches over the whole basin of the River Sviyaga and the lower part of the River Vyatka. Round the Tartar Republic are the Chuvash, Mari, Votyak and Bashkir Republics.

The population of the Tartar Republic consists of 49 per cent Tartars, 43 per cent Russians, and the remaining 8 per cent are made up of chuvash, mordva, mari, and bashkirs.

The climate on the Volga banks here is much milder than on the banks of the rivers Kama and Vyatka. Black Earth land, deciduous forests and good pastures make this region quite suitable for agriculture and livestock breeding. The local industries bear an agricultural character, for fat, soap, candles, leather, and felt boots are mainly produced here. Home (kustar) industries are spread all over the territory. Since the application of planned economy to this region the chemical industry has begun to develop very quickly.

The main centres of the Republic are Kazan, Chistopol, Elabuga, and Bugul'ma.

KAZAN, on the River Kazanka, is not only the capital of the Republic, but also an important centre for the whole Povolzhye. It is now a highly industrialized city with industries such as synthetic rubber, machine building and agricultural machinery. The population of Kazan is 401,665. As an old historic city Kazan has preserved many features of its former days. It has, like Moscow, its own Kreml and Spasskiya Vorota (gates). The University of Kazan, built in 1804, is one of the oldest in Russia. V. I. Lenin was an undergraduate there, and the house where he spent his student days is visited by holiday-makers and foreign visitors.

5. THE UKRAINE AND CRIMEA

The Ukraine or Malorossiya (Little Russia) is the second most powerful republic of the U.S.S.R. It occupies 450,000 square kilometres and is inhabited by 30,960,221 people, of whom two-thirds belong to the rural population. Eighty per cent of the population are Ukrainians, 9·2 per cent Russians, 5·4 per cent Jewish, and the remaining 5·4 per cent consists of White Russians, Poles, and other nationalities. The density of the population here is ten times greater than that of the whole Soviet Union, for nearly 20 per cent of the total population of the U.S.S.R. are living in this area, the size of which is equal to only 2 per cent of the total area of the Union.

The abundant fertility of the Ukraine, its richness and beauty, are due to the climatic conditions, fertile ' Black Earth Land ', and mineral resources. Its potential richness was exploited, under the Soviet system of planned economy, to last square mile, until it was invaded by the Germans, and ' scorched ' by the Ukrainian patriots and the retreating enemy armies.

Ever since the time when the Russian State first originated on the banks of the Dnieper (Dnyepr), the place whence Christianity spread all over the country, the Ukraine has stood as a rock against foreign invasion, domination, and attempts to tear apart the three inseparable and indivisible units of the Mother Country; namely, Great Russia, White Russia, and Little Russia (Veliko-Rossya, Belorussiya, and Malorossiya).

The whole area of the Ukraine can be divided into two quite distinct parts: the south-western agricultural oblast, and the southern mining oblast and Crimea.

The South-western Oblast

This oblast links with White Russia, Poland, and Bessarabia. In the east the demarcation line passes through Chernigov, Kiev, Poltava, Kremenchug, and Odessa.

This is a highly developed agricultural area, the granary of the whole Union, and a region where potatoes and sugar-beet are also cultivated on a large scale. The local industries bear an agricultural character, and consist of wine distilleries, sugar refineries, and flour mills.

The collectivization of the farms in this district proceeded less painfully and more quickly owing to the more highly

developed system of agriculture and the absence of feudalism. The greater density of population, and the existence of a good railway system were also a great advantage.

KIEV is picturesquely situated on the high right bank of the Dnieper. In olden times it was the capital of Kiev Russia and now it is the capital of the Ukrainian Soviet Socialist Republic, although Kharkov held that position for a short time at the beginning of the Revolution. Kiev is the outpost of both the old and new Russian and Ukrainian culture, and is an important centre of learning with a University, Polytechnics, Museums, &c. At present Kiev, with its population of 846,293, is not only an important trading centre and big railway junction, but also a large industrial centre with sugar, leather, boot, tobacco, timber, polygraphic, and machine-building industries.

POLTAVA is another important city of the South-eastern Ukrainian Oblast with a population of 130,305. It is situated on the River Vorskla, and is a quiet peaceful city with a rich historical past. It is now an industrial town, an important railway junction, and one of the largest grain stores in the Ukraine. Leather, boot, hosiery, and tobacco industries are flourishing here.

KREMENCHUG, with a population of 89,554, is situated on the Dnieper, and has similar industries to Poltava.

ZHITOMIR is the centre of the area, called POLESSYE, and it is famous for its furniture, boot, and clothing industries. The population of Zhitomir is 95,090.

CHERNIGOV is situated on the River Dyesna, and is a good local river port and a growing trading centre with new railway lines connecting it with Gomel and Kiev, via Bakhmach.

BERDICHEV, BYELAYA TSERKOV (White Church) and VINNITSA must be mentioned as centres of agricultural industries in the south-west of Kiev.

ODESSA is the biggest port on the Black Sea. An account of its development and present activities is given in the section dealing with the Black Sea ports.

The Southern (Mining) Oblast

This oblast occupies the south-eastern half of the Ukraine, including Kharkov, the Steppe, and the Crimea.

It is an area very rich in agricultural produce and, with the South-western Oblast, forms the granary of the Soviet

Union. But the most important significance of this region is its mining industry, with the Donbass as its natural well.

Coal in the Donbass, iron-ore in Krivoy Rog and Kerch, giant metallurgical works and machine-building industries in Dnyepropetrovsk, Kherson, and Nikolaev are the important sources of the industrial power of this rich area.

Donbass, or the Don Basin is the name of an area of 20,000 square kilometres situated along the right bank of the northern Donetz, beginning from Artyemovsk down to the junction of the Donetz with the Don. The deposits of coal here equal more than 60 million tons, two-thirds of which is anthracite.

The production of coal in the Donbass began to develop in 1869 when the first railway line, running from Kursk through Kharkov to Azov, was laid. In the 'nineties of the last century there was a great boom, and foreign capital poured into the south of Russia. Sometimes the entire factory equipment was brought from the U.S.A. and installed on the primitive landscape of the Steppe.

After the Revolution of 1917, and the electrification of the whole coal-mining area, the output of coal, during the restoration period of the New Economic Policy and the first two Five Year Plans (1928–38), made striking progress.

The Ukrainian deposits of iron ore are situated in Krivoy Rog and Kerch. The quality of the ore is much higher at the former place than at the latter. Manganese ore is extracted on the right bank of the Dnieper, near Nikolaev. Deposits of salt, large enough to satisfy half of the requirements of the U.S.S.R., are found near Artyemovsk, Slavyano-Serbsk, and in the region of Perekop, at the entrance to the Crimea. Salt is used here for industrial purposes. Mercury is extracted at Nikolayevka, near Artyemovsk.

The main centres of the southern mining area are the following:

KHARKOV, which was the capital of the Ukrainian Republic during the first years after the Revolution of 1917, now has a population of 833,432, and is a junction of five different railway lines. The machine-building industry has been greatly developed here since the Revolution. Other branches of industry, such as sawmills, boots, clothing, and sweets are also flourishing here.

DNYEPROPETROVSK (formerly EKATERINOSLAV) is the biggest industrial city of the oblast, inhabited mainly by workmen.

The population has more than doubled since the Census of 1926 and is now 500,662. In former times, before the First World War, the population of Ekaterinoslav equalled 220,446, that is, nearly the same as it was in 1926.

ZAPOROZHYE (formerly ALEXANDROVSK) is also situated on the Dnieper. It is in the area included in the ambitious Dnyeprostroy scheme which was to revolutionize the whole economic structure of the Ukraine. The Upper Dnieper was to be connected not only with the Black Sea but also with Leningrad and Moscow. The famous Dnieper Dam (which cover the rapids of the Dnieper with water over a distance of 97 kilometres and helped to make this part of the river navigable), was destroyed at the approach of the German invaders.

The population of Zaporozhye is 289,188, whereas in 1926 it was only 55,774. It is an important railway junction with highly developed agricultural machinery industry.

ARTYEMOVSK (formerly BAKHMUT) has grown since 1912 from a town with a population of 26,000 to 38,000 in 1926, and now 55,165. The rapid growth of this town is quite natural owing to its position in the centre of the coal-mining area and to the deposits of mercury and salt nearby. Glass and ceramic industries are also developing very quickly here.

LUGANSK and STALIN (formerly YUZOVKA), being in the centre of the Donbass, are developing, like Artyemovsk, very rapidly. They are mainly industrial and workmen's centres.

In the south of the Ukraine, at the gates of the Crimea, are situated the Ukrainian sea ports: NIKOLAEV at the mouth of the southern Bug, KHERSON at the mouth of the Dnieper, and MARIUPOL on the Azov Sea. An account of these is given in the section on ports.

CRIMEA, in its northern part, differs very little from the Steppe along the coasts of the Black and Azov Seas. The climate along the coast here is of the same type as that in the European part of the Mediterranean Sea. Prior to the Revolution of 1917 it was a predominantly agricultural area where wheat, tobacco, and grapes were cultivated, and the industrial activities in the region of Kerch have only been developed since the Revolution. The city of Kerch is now not only an important port and railway junction, but a town with large metallurgical works, which have come into existence owing to the nearness of the deposits of iron ore, oil, and the presence of natural gas on the peninsula.

The population of Crimea consists mainly of Russians (42 per cent), and Crimean Tartars (25 per cent). The majority of Tartars, as is known from the history of Russian expansion and the annexation of Crimea by the Russian Empire in 1784, emigrated to Turkey. The remaining population consists of Ukrainians (10·8 per cent), Germans, who were expelled at the beginning of the War, Jews, and a small proportion of Greeks, Bulgarians, Armenians, &c.

The most important centres of the Crimean peninsula are SIMFEROPOL, SEVASTOPOL, THEODOSIA, KERCH, and YALTA. These have been already described in the section dealing with the Black Sea ports.

6. THE CAUCASUS

The Caucasus, or Kavkaz, as it is called in Russian, occupies 2 per cent of the total territory of the U.S.S.R. (530,000 square kilometres), and is inhabited by more than 16 million people of different nationalities. The northern part of the Caucasus is mainly a rich agricultural area, the mountains make ideal pastures, and Transcaucasia is suitable for the cultivation of sub-tropical plants.

We can divide the Caucasus, from the economic point of view, into two distinct provinces: the northern Caucasus Kray, with the Dagestan Autonomous Republic, which form part of the R.S.F.S.R., and Transcaucasia, consisting of the three Union Republics of Georgia, Azerbaydzhan and Armenia.

The Northern Caucasus Kray

The area of the northern Caucasus Kray stretches from the ridge of the Caucasian Mountains to the basin of the River Manych, and to the southern part of the Don Basin and the eastern part of the Donbass. Many of its centres, such as Rostov, Novorossiysk, Krasnodar, Grozny, Maykop, &c. are well known to English readers.

The climate and vegetation of the Kray are similar to that of the southern Steppe; the climate is, on the whole, very moderate, although dry 'Russian winters' are not unknown there.

The waterways, the local steppe rivers, are not very deep, and the River Manych dries up in certain places during the hot, dry summers. The mountain rivers, the Kuban and Terek,

and their tributaries are hardly navigable. The work of deepening the rivers, building sluices and canals was interrupted by the last war.

The population of the northern Caucasus Kray consists mainly of Russians (45·8 per cent) and Ukrainians (37·2 per cent). The original population of Highlanders and other Steppe and Caucasian nationalities is represented by only 11·5 per cent.

The main occupation of the local population is agriculture. Agriculture in this district, even before the Revolution of 1917, was of an 'American type', involving the use of agricultural machinery and tractors on the large estates which belonged not so much to individual rich landowners as to the rich peasantry and Cossacks. This explains why the development of Sovkhozes (State farms) proceeded here more smoothly and successfully than in other places. Wheat, maize, sunflowers, and tobacco are the main crops of the Kray. The agricultural industries consist correspondingly of flour-milling, butter-making, potash-syrup making, as well as tobacco and leather industries, with their trading centres at Rostov and Krasnodar.

Other important industries are oil, with its centres at Grosny and Maykop; coal and anthracite in the region of Shakhty; metal at Sulin and Taganrog; non-ferrous metals near Vladikavkaz (now Ordzhonikidze), and cement at Novorossiysk.

ROSTOV-ON-DON with NAKHICHEVAN, which latter used to be inhabited mainly by Jews, has a population of 510,253.[1] It is an important port and a large trading centre in grain and coal. Metal industries, the making of agricultural machinery, tobacco, flour, and butter-making is carried on here, not only for the satisfaction of the needs of the local population, but of the whole of the Black Sea markets and indeed of the whole Soviet Union.

NOVOROSSIYSK is another large port used chiefly for exporting the Kuban wheat. It has also large cement works. Its population is 95,280.

KRASNODAR is the centre of the whole Kuban agricultural area. It is situated on the River Kuban and is an important railway junction. The same kind of industries are carried on here as in Rostov. The population of this town has grown between the two censuses of 1926 and 1939 from 161,843 to 203,946.

VOROSHILOVSK (formerly STAVROPOL) now has a population of

[1] It is now the A.S.S.R. (page 203)

85,100 which is engaged mainly in agricultural industries such as grain, livestock, and wool.

ARMAVIR is situated on the north Caucasian railway line and is an important junction connected with Maykop, Tuapse, and Voroshilovsk. It has grain and sunflower elevators and similar industries to those in Rostov and Krasnodar. Its population is 83,677.

ORDZHONIKIDZE (formerly VLADIKAVKAZ) is connected by railway with the main north Caucasian line. From here begins the famous military high road to Tbilisi (formerly Tiflis). Ordzhonikidze is an important trading centre for the whole of Transcaucasia. It has a growing non-ferrous metal industry which has arisen because deposits of lead and zinc were found nearby in the Alagir district. Its population has increased from 78,346 in 1926 to 127,172 in 1939. In former times this town was the centre of the whole Terek Oblast, and the population in 1913 stood as high as 79,343.

GROSNY is the second most important oil centre after Baku, and has grown enormously since pre-revolutionary times. Its population in 1913 was 34,067; in 1926 it had grown to over 97,000, and now, owing to the development of the oilfields, it reaches 172,468.

MAYKOP is situated on the River Byelaya, and has always been the centre of the tobacco industry and the local oil industry, but it did not begin to develop until the inauguration of planned economy. The population of Maykop in 1926 was 53,033, a little higher than in 1913, when it was 52,599. At present it has risen to 67,302. Maykop, apart from its economic and strategical significance, for which it has paid dearly during the last devastating war with Germany, is also of great interest to geographers and tourists as it is the starting point of various routes to the Caucasian mountains.

PYATIGORSK is a Caucasian spa, and, with other such places, like ZHELEZNOVODSK, KISLOVODSK, and ESSENTUKI, is now used mainly as a resort for the sick and invalids. In pre-revolutionary times only people with good incomes could afford to take benefit from these places, but nowadays they are accessible to a large number of trade-union members and are frequented by numerous excursions of working people, students, and pupils of the schools. Pyatigorsk is connected with the name of the Russian poet, Lermontov, who was exiled to the town and met his death there in a duel at the age of twenty-seven.

TUAPSE is a port on the Black Sea connected by oil pipe-line with Maykop and Grozny.

SOCHI is another port on the Black Sea, but it is better known as a health resort.

The Dagestan Autonomous Republic

This territory is situated between the Caspian coast and the River Kuma, down to the borders of Azerbaydzhan and the ridge of the Caucasian Mountains. With the exception of the strip along the coast, through which runs the main railway line, this is a very wild, rocky part of the Kray, inhabited by numerous Caucasian natives who are mainly Highlanders. The Revolution of 1917 brought many changes into the mode of life of the local population. They are now more willing to descend into the valley where an irrigation system is now installed, and where they are given every facility for developing agricultural activities, such as growing grain and cotton, improving pastures and rearing livestock.

The mountain population is engaged in industrial activities, such as preparing fish, fruit, and new vegetables for canning. Amongst purely industrial enterprises must be mentioned the glass factory, ' Dagestan Fires ', which is of importance to the whole Soviet Union.

MAKHACH-KALA, PETROVSK, and DERBENT are the main centres of the Republic. The population of Makhach-Kala has increased from 33,552 in 1926 to 86,847 in 1939, that is two and a half times in thirteen years.

Transcaucasia

Transcaucasia is situated on the southern slopes of the Main Caucasian Ridge, and it links in the south with Turkey and Persia. The branches of the Caucasian Ridge divide this area into two quite distinct parts : one, in the basin of the River Rion, faces the Black Sea, and the other, in the basin of the River Kura, is opposite the Caspian Sea.

The western region has a mild sub-tropical climate with very warm winters and hot summers, and a profuse vegetation. The eastern region has a very dry, continental climate, with hot summers and very little rainfall. The western region has always been greatly influenced by Western civilization, whereas the eastern part has always been under the influence of Asiatic culture,

Grain production in Transcaucasia has not developed much owing to the relief of the country, and grain is produced here mainly for the satisfaction of local needs. The breeding of livestock, however, is practised on a much larger scale owing to the presence of good pastures. But the main agricultural activities, and, correspondingly, the agricultural industries, are concerned with grapes (especially in Georgia), tea, tobacco, cotton, rice, and silk.

Orchards and vineyards occupy 18 per cent of the total sowing area in Transcaucasia, pastures occupy 32 per cent, forests 21 per cent. One-third of the total area is unsuitable for agricultural purposes.

Most of the industrial population of Transcaucasia is absorbed in the oil-fields at Baku, at Chiatury, where manganese ore is extracted, and in the copper ore-fields in Armenia and Azerbaydzhan.

The Revolution of 1917 brought great changes to the Caucasian Highlanders, and influenced their culture, mode of life, and work. The population of the three main Republics of this area grew much more quickly between the two censuses of 1926 and 1939 than the population of the whole Soviet Union. In 1926 the total population of Azerbaydzhan, Georgia, and Armenia was a little over 5½ millions, and in 1939 it had increased to over 8 millions. The majority of the population in all three Republics is still agricultural, although the urban population is increasing rapidly.

In GEORGIA the main centres are Tbilisi (formerly Tiflis), Batumi, Sukhumi.

TBILISI is picturesquely situated on both banks of the River Kura, at the foot of the Mountain David. Not far from the city is the old Georgian capital Mtskhet. The present population of Tbilisi is 519,175 as compared with 294,044 in 1926. In pre-revolutionary times (1913), the population of Tiflis was 307,300. Tbilisi is not only the capital of Georgia but an important economic and cultural centre for the whole of Transcaucasia. It has highly developed trading and industrial activities, of which locomotive and repair works and a tobacco industry, are the most important. Silk and woollen industries are also developing here very rapidly.

One hundred and fifty kilometres from Tbilisi is the well-known health resort of KIROVAKAN (formerly KARAKLIS), which is now an important industrial centre famous for its chemical

industries. Forty-seven kilometres farther on is DILIZHAN, famous as a sanatorium for tuberculosis, beautifully situated near a lake and surrounded by thick forests and mountains.

One hundred and ten kilometres south from Dilizhan is YERIVAN, the capital of Armenia, an old historical city founded in the seventh century. Many of the ancient buildings of the sixteenth century, such as the fortress and mosque, are still in existence. This town is now completely industrialized. Food and furniture industries, leather, chemical, cotton, and silk industries, and the distilling of cognac are all carried on here. Eighteen kilometres away is the famous old monastery of Echmiadzin, which has survived since the fourth century, having been rebuilt in the twelfth and seventeenth centuries. Tourists are advised to visit this remarkable monument of ancient history, as well as the collective farm, ' Godless ', which has been opened in the same village.

BATUMI (formerly BATUM) is the main port on the Black Sea and the capital of the autonomous Adzhar Republic. It is also the terminus of the main Transcaucasian railway, and an important place of export for oil. Nearby are situated the only Russian tea plantations. In pre-revolutionary times (1913) these covered an area of about 1,000 hectares, but now this area has increased to over 36,000 hectares. These plantations do not, of course, satisfy the entire demand for tea in the Soviet Union, where mainly China tea is drunk. A description of Batumi as a port is given in the section of the Black Sea ports. The population of Batumi, which has increased greatly since the Census of 1926, when it stood at 48,474, is now 70,807. In pre-revolutionary times (1913) the population of Batum was 44,900. One-fifth of the population are Russians.

SUKHUMI (formerly SUKHUM) is the capital of the Abkhas Autonomous Republic, and a port on the Black Sea, surrounded by a species of precious sub-tropical wood. It is rich in coal, and it is the centre of a tobacco industry. Sukhumi is the terminus of the Sukhum military road, built in 1895. It runs through Ezhovo, Cherkassk (formerly Batalpashinsk), Mikoyan, Shakhar, Teberda, Klukhor, Sky Pass, Azhary to Sukhumi. The total length of the road is 306 kilometres.

The main centres of the Azerbaydzhan Republic are BAKU and KIROVOBAD (formerly GAHDZHA).

BAKU is the capital of the Azerbaydzhan Republic, the centre of the oil industry, and an important port on the Caspian Sea.

Baku is connected by oil pipe-line with Batumi. Since the Revolution of 1917 the town has grown enormously and has become a big industrial centre with machine and metal industries, chemical and timber industries, cotton mills, and mechanized flour mills. The population of Baku in 1913 was 232,200. By 1926 it had risen to 453,333, and it now stands at 809,347.

Baku has always been a centre of the Russian Labour Movement in the south of Russia. In 1899 a local Social Democratic organization was established, and workmen's strikes became politically organized.

The Soviet Union has every reason to be proud of Baku, the city of ' black gold '. Town planning was achieved here on a large scale, and Baku became hardly recognizable with all its modern buildings and new cultural centres.

KIROVOBAD (formerly GAHDZHA or ELIZABETHPOL) is situated in the centre of Azerbaydzhan, 360 kilometres from Baku. It is the second largest centre of the Republic, and is famous for its cotton plantations, woollen industry and aluminium production. In pre-revolutionary times it was the centre of vineyards. The population of Kirovobad increased from 57,393 in 1926 to 98,743 in 1939.

LENKORAN on the border of IRAN is famous for its subtropical flora.

In Armenia the main centres are YERIVAN, LENINAKAN (formerly ALEXANDROPOL), and LAKE SEVAN.

YERIVAN, which has already been described, is the capital of Armenia. It is connected by railway line with the main Transcaucasian railway, and situated near the cotton plantations along the River Araks. The present population of Yerivan, which in 1913 was only 33,700, has risen to 200,031, as compared with 64,613 in 1926.

LENINAKAN (formerly ALEXANDROPOL is an industrial centre of Armenia, newly rebuilt after the earthquake of 1926. There are textile (cotton) industries, sugar beet refineries, and, not far from the town, stone works, producing a coloured stone called ' Arktiktuf ', used extensively for facing the Government buildings in Moscow. The population of Leninakan is 67,707.

LAKE SEVAN (GOKCHA) is situated 1,920 metres above sea level, and has a water surface of 1,413 square kilometres. It is called in Armenia ' the pearl of Armenia '. In olden times the villages round the Lake were inhabited by ' Molokans ',

who were banished to this district because of their religious faith. Nowadays this area has developed into a centre for dairy farming (carried on in collective farms) and fishing.

7. THE URALS AND BASHKIRIYA

The Ural Mountains

The Ural Region comprises the Ural Mountains and their slopes. It includes the old provinces of Perm, Ekaterinburg (now Sverdlovsk) and Chelyabinsk.

The Ural Mountain ridge stretches from north to south for 1,800 kilometres, and divides, both geographically and economically, European from Asiatic Russia. The Ural Region extends over an area of 756,300 square kilometres, and is equal to the total area of Germany, France, England, Ireland, and Italy.

The height of the Ural Mountains does not exceed, on an average, 500 metres above sea level, and their highest points do not rise more than about 2,000 metres above sea level. The highest mountains are The People's Mountain—1,870 metres; Karpinskaya—1,780 metres, and Didkovskaya—1,740 metres.

The climate and vegetation of this huge region are, naturally, very varied, and range from the conditions of the cold, northern tundra and coniferous forests to those of the hot, dry steppe. Ninety per cent of the territory in the northern part of the Urals is covered by forests, whereas only 20 per cent of the total area in the southern part is wooded. We find the same variations in the amount of rainfall and frosts. The Urals are very rich in waterfalls and mountain rivers, and from this region rise the Pechora, Kama with its tributaries, the Byelaya and Chussovaya, the Ural, Tobol, Tagil, Sos'va, Miass, and other rivers.

The whole Ural area is predominantly agricultural, but it now has highly developed industries also. The latter not only have an All-Union significance, but have proved to be of Inter-Allied importance during the last war. Seven-eighths of the total industrial output of the Urals goes to satisfy the needs of the whole Union, whereas nearly all the agricultural output is consumed locally by the greatly increased population of this area.

The Ural Mountains have always been known as a region rich in mineral deposits. Iron, lead, copper, silver, aluminium, gold, platinum, coal, oil, potassium (at Salikamsk), and precious stones—all these treasures are found in abundance in the Urals.

These deposits were very badly investigated during pre-revolutionary times and their exploitation was either the privilege of the Government or a very profitable source of enrichment for individual persons and private concerns, among which were many foreign ones. But since the Revolution of 1917, and especially since 1930, the Urals have become the ' second base ' for the coal and metallurgical industries of the whole Soviet Union.

The main centres of industrial activity in the Urals are Sverdlovsk, Perm, Chelyabinsk, Troitsk, Nizhni-Tagilsk, and Magnitagorsk.

SVERDLOVSK (formerly EKATERINBURG) is situated on the River Isset, and is now an important railway junction and the home of over 60 industrial concerns. Its population has risen from 140,300 in 1926 to 425,544 in 1939. In pre-revolutionary times (1910) the population was only 70,000.

In addition to the famous old steel works of Verkhny-Issetsk, a new giant concern called ' Uralmash ', in memory of Ordzhonikidze, has been built. In the Sverdlovsk region, along the River Chussovaya, we find many old metal works which were reconstructed during the period of planned economy, as well as many new ones which were created during that time. The well-known Utkinsky works with 5,000 workmen were closed down in 1934, and the village itself is now converted into an industrial livestock kolkhoz (collective farm).

One can travel along the river Chussovaya from Sverdlovsk to Perm and see many old, historical places such as the village of Kamenka, founded by the Strogonovs in the sixteenth century ; and the River Serebryanka, along which Ermak, the ' Conqueror of Siberia ', marched with Strogonov' militia towards Siberia in the sixteenth century ; and remnants of the Shaytansky metal works in Nizhni-Tagil, where the riot of workmen in the year of the Decembrist rising (1825) was cruelly suppressed by military force. The old village of Ust-Utra, where the first metal works were founded by the Demidovs in the eighteenth century, and many other places of interest can also be seen.

PERM is situated on the River Kama, near the point where the River Chussovaya flows into it. It is an important river port for reloading the Siberian grain and metals from the Urals from the railway for shipment down the Kama, and for loading the oil and manufactured goods which come down the Kama on to the railway. The shipping of timber, the timber industry,

flour mills, and leather works are the most important functions of this city, and the metal works nearby, at Motovilikha, are also now a big industrial concern. The population of Perm is 255,196. Prior to the First World War, in 1913, the population was 63,020.

CHELYABINSK is situated on the River Miass, and is now the main ' coal base ' for the whole of the southern Urals. It has giant electro-stations, metal works and mines. The old-established agricultural industries such as flour mills, leather, and butter-making are now greatly improved. The large agricultural machinery works, which used to produce the ' Stalinets ' tractor, famous in the Soviet Union, is now surprising the peoples in the Allied countries by the production of Russian tanks, vastly superior to the German. The population of Chelyabinsk in 1910 was 70,472. By 1926 it had decreased to 59,307, but it rose again until it stood at 273,127 in 1939.

MAGNITOGORSK, 421 kilometres from Chelyabinsk, is another large centre of the Russian metal industry. It is a new industrial centre, built at the foot of the Magnetic Mountain (Magnitnaya Gora), which rises 2,017 feet above sea level. Deposits of iron ore were discovered here long ago, and the ore was extracted as early as 1747. But the work was carried on on a very small scale, and the output of ore in pre-revolutionary times did not exceed 50,000 tons a year. Now it is the largest ore-mining concern in the whole world, with a yearly output of 6½ million tons, or nearly 20 per cent of the total output of iron ore mined in the U.S.S.R. The population of Magnitogorsk is 145,870.

TROITSK is an important centre for trade between the Urals and Central Asia. It is connected by rail with Orsk and Magnitogorsk. Grain elevators, flour mills, and slaughter houses for the livestock from Kazakhstan are the main features of this city.

Among other centres of the southern Urals must be mentioned the following:

ZLATOUST, known as a centre of ironworks since 1751. It is now the ' Soviet Sweden ', producing high-grade steel instruments and spare parts.

MIASS is also known as a centre for the manufacture of fine dental instruments. Twenty kilometres from Miass is Lake Turgoyak, which attracts many excursions and holiday-makers.

NADEZHDINSK and NIZHNY TAGILSK are old mining centres

to which, under the Imperial régime, many criminals and political offenders were exiled. They are now large industrial centres. The population of Nizhny-Tagilsk decreased since 1910 from 45,179 to 38,820 in 1926, but by 1939 it had risen to 159,864.

Nizhny-Tagilsk is the birth-place of the well-known Russian writer, *D. N. Mamin-Sibiryak* (1852–1912), who is hardly known in this country. He wrote many picturesque novels on peasants' life in the Urals.

Bashkiriya

The Bashkir Republic is situated along the River Byelaya, between the Tartar and Kazakh Republics. In the north it links up with the Urals, and in the west with the Middle Volga Region. Its territory is equal to 140,500 square kilometres. The population of the Republic is 3,144,713, of which 2,613,617 is rural population. Only half of the total population are Bashkirs and Turks (46·3 per cent), and the rest (44·4 per cent) are Great Russians and Ukrainians.

The eastern part of Bashkiriya is thickly wooded, whereas in the western part the climate and vegetation are similar to that of the Middle Volga Region. One-third of the total area of the Republic is covered by forests. Agriculture is the predominant occupation of the population.

Industries are not highly developed here, and those which are most flourishing are combines and trusts organized either by the whole Union or by the R.S.F.S.R., such as the big South Ural Trust in the Byeloretsk Mining Okrug, and the Gosbank (State Bank) dealing with grain elevators, &c. Local industries deal mainly with the production of glass, paper, gold, wool, and beer. They represent about one-third of the total industrial activities of the Republic.

UFA is the capital of Bashkiriya. It is situated on the right bank of the River Byelaya, not far from the point where it is joined by the River Ufimka. This town is the main centre of all the trading activities of the Republic. It lies on the main railway line, connecting Ufa with Kuibyshev and Chelyabinsk. In pre-revolutionary times the population of Ufa was 99,900 and in 1926 it stood at almost the same level—98,537. This absence of increase was due to the First World War, the Civil War of 1918–20, and the famine of 1921. The population of Ufa, including the new city, which is in process of construction, is 245,863.

8. SIBERIA

Siberia, geographically speaking, occupies the northern part of Asia, from the Urals to the Pacific Ocean, and from the Arctic Ocean to Chinese Turkestan, Mongoliya, and Manchuriya.

The total area of Siberia covers over 5 million square miles; it stretches from west to east for more than 5,000 miles, and from north to south for more than 2,300 miles. It is much larger than the whole of Europe and nearly twice as large as the U.S.A.

The general impression of Siberia has always been that it is a cold country, covered with snow and thick forests, unsuitable for agriculture and human habitation. This is true as far as the northern tundra and the southern, desert-like steppe is concerned. But, taken as a whole, Siberia, with its predominantly continental climate, offers great opportunities for agricultural activities in its western part, and also for ore-extracting, timber, fish, and fur industries in its eastern and south-eastern parts.

Siberia has always been sparsely populated. Even at the time of the Census of 1926 only 17 per cent of the total Russian population inhabited Siberia, whereas its territory represents nearly 75 per cent of the total area of the Soviet Union.

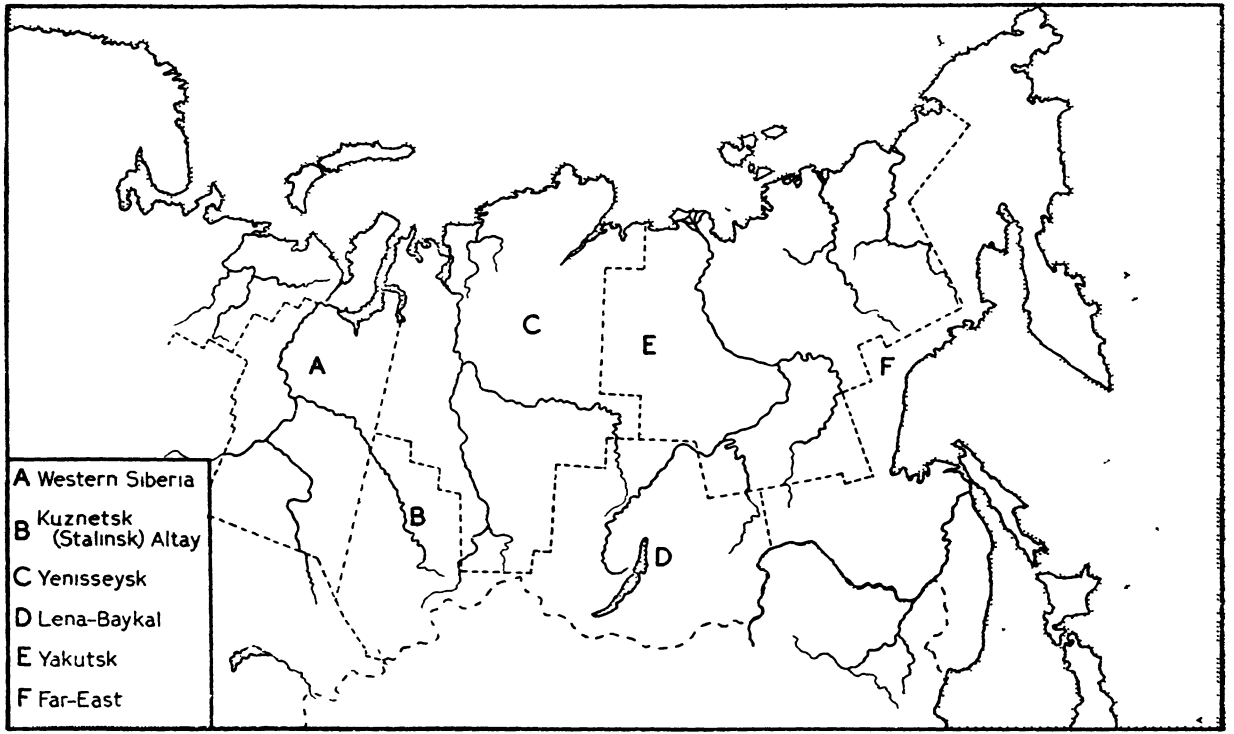
The great majority of the Siberian population (about 80 per cent) are Russian colonists, and the so-called nomadic, aboriginal tribes represent a small minority (about one-fifth of the total population). These tribes consist of the Chukchee, Karyaks, Ostyaks (Manzi), Vaguls, Ukagirs, Kamchadals, and Samoyeds, who live in the north, and whose main occupations are hunting, fishing, and reindeer breeding; the Tungus, who inhabit the eastern part of Siberia; the Buryats, living round Lake Baykal, and the Yakuts in the basin of the Lena.

Siberia consists of the following provinces:

A. The Western Siberia.
B. Kuznetsk (Stalinsk)–Altay.
C. Yenisseysk.
D. Lena-Baykal.
E. Yakutsk.
F. The Far-East.

(A) *The Western Siberia*

The Western Siberia stretches from the north down to Kazakhstan, and from the Ural Mountains in the west to the



MAP 8.—THE SIBERIAN PROVINCES

Kuznetsk-Altay province in the east. Its territory is equal to 1,566,200 square kilometres, and it is inhabited by about 4 million people.

The major part of this province consists of a plain, slowly rising towards the south, with the basins of the Ob and Yenissey as its main water supply. The southern part of this great plain is quite suitable for agriculture and stock-raising. The main crops, cultivated chiefly in the Tobolsk and Omsk provinces, are spring wheat, oats, rye, and barley. The waterways and the area near the Trans-Siberian Railway are naturally the most thickly populated and most industrious parts of this region.

OMSK is the most important centre of the whole of western Siberia. It is situated on the River Irtysh, at the point where the River Omi joins it, and is an important railway junction of the Trans-Siberian line, connected with Tyumen and Chelyabinsk. Omsk is also an important trading centre with highly developed industries, mainly of an agricultural character, such as flour mills, leather-making, and the production of agricultural machinery.

In pre-revolutionary times Omsk was inhabited by 137,245 people (1913). In thirteen years (1926) the population had only risen to 161,684, but now it has reached 280,716.

Other important centres of western Siberia are the following :

TYUMEN lies on the River Tura, a tributary of the Tobol. It is an important river port, and the terminus of the waterways connecting the whole of western Siberia and Kazakhstan with the mining regions of the Urals and the whole Soviet Union.

The industrial activities of the Tyumen population consist of flour-milling, timber, and saw-milling, repairing the river fleet, and leather- and rope-making. The latter is very much developed in Siberia owing to the growth there of ' Kendyr ', a plant, cultivated chiefly in the Akmolinsk and Semipalatinsk Oblasts, which gives strong, and at the same time very light fibre.

The population of Tyumen has increased as follows : 33,791 in 1908 ; 50,340 in 1926 ; 75,537 in 1939.

KURGAN, being situated on the Tobol River where it is crossed by the main Siberian line, is an additional centre to Tyumen, from which it does not differ much in its trading and industrial activities.

The tempo of the increase in the population of Kurgan proceeded at a slower rate than that of Tyumen. In 1910 there were 24,566 people, in 1926 27,996, and in 1939 53,224.

TOBOLSK is situated at the point where the River Tobol flows into the Irtysh. In pre-revolutionary times it was the capital of the Tobolsk province, and now it is the administrative centre of the Tobolsk Oblast. The main industrial activities of this centre are furs, game, and fish.

On the whole western Siberia is not only a self-supporting area as far as agricultural produce is concerned, but she even exports, beyond her own boundaries and abroad, a great deal of grain, wool, leather, meat, butter, timber, and furs. But she depends on manufactured goods from the Central Industrial Region, on iron, iron-ware, and salt from the Urals, on sugar from the south of the Soviet Union, on oil from the Caucasus and coal from the Kuznetsk Altay Region.

(B) *Kuznetsk (Stalinsk)-Altay*

This area, embracing the upper regions of the Rivers Ob and Yenissey, and stretching for 1,200 kilometres from the Narym taiga-marshes in the north down to the Mongolian borders in the south, is the most thickly populated and highly industrialized region in the whole of Siberia.

The Kuznetsk-Altay Province, occupying about one-twelfth of the total territory of Siberia, absorbs one-half of its total population, the highest density being in the Novosibirsk and Kuznetsk districts.

The climate here, as compared with western Siberia, is not so even and favourable for agriculture. There is no Black Earth land or steppe here, and the relief of the country, especially in the south, is very mountainous.

The Russian colonists, it is true, increased the agricultural activities of the region, prior to the First and Second Russian Revolutions, but they did not establish an intensive system of farming, neither did they bother to cultivate flax, grass, potatoes or sugar beetroot. The latter only began to develop after the recovery of this province from the effects of the famine of 1921 and earlier devastation during the Civil War.

In the districts round Tomsk, Minussinsk, and Biysk the agricultural activities of the local population has increased greatly, judging by the growth of agricultural industries in these districts.

But the significance and importance of the Kuznetsk-Altay Province lies not in her agricultural development but in her rapid industrialization. This province is the pride of the Soviet

Government, which has achieved here bold and far-reaching schemes, and has converted the Kuznetsk region into a powerful coal and metallurgical base for the whole Soviet Union.

Kuznetsk was famous long before the Revolution of 1917, and the Kuznetsk Coal Mining Co., having received a concession in 1913, anticipated great possibilities for the profitable exploitation of the Telbes iron deposits, forty miles south of Kuznetsk.

The presence of pig-iron containing manganese, rich deposits of iron ore in the Minussinsk district, where the ore is very near the surface and worked by open cuts, millions of tons of magnetite, brown iron ores, and copper—all this naturally attracted foreign prospectors.

The Soviet Government destroyed all these possibilities for foreign investment and exploited the deposits themselves. They have now solved the problem of the Urals-Kusbas base—' the boldest and most stupendous project ', in the opinion of one American professor. The Kuznetsk combine receives iron ore from Magnitogorsk and supplies the latter with coal mined in Kusbas (Kuznetsk Basin), which contains not more than 0·05 per cent of sulphur, has a high heating capacity and an insignificant ash residue. The output of coal in the Kuznetsk Basin proceeded with great speed, and in 1934 had already reached more than 11 million tons a year.

The following are the most important and interesting centres of the Kuznetsk-Altay Province.

NOVOSIBIRSK is situated on the River Ob where it is crossed by the Trans-Siberian Railway. It is a modern city, and was already connected by rail with Barnaul and Semipalatinsk before the Revolution of 1911. Since the inauguration of the Five Year Plans it has grown very rapidly. The population in 1926 was 120,128, and now it has grown to 405,589. The main industrial features are flour mills, saw mills, slaughter houses, leather- and boot-making and railway repair works.

TOMSK is an old Siberian city situated on the River Tomi. With its University, built in 1888, it used to be the centre of Siberian cultural life. Prior to the Revolution, in 1913, the population of Tomsk was 114,666. Since the Revolution, and the planned industrialization of Siberia, Tomsk, being outside the main Trans Siberian Railway, lost its significance, and its population decreased to 92,274 in 1926. But in 1939 it had risen again to 141,215.

BARNAUL is a large river port and an important trading centre. It has been connected with the Trans-Siberian Railway since 1916, and is now the administrative centre of the Altay Kray. Large elevators, flour mills, butteries, as well as leather and fur industries and the manufacture of Russian, or rather Siberian, felt boots (pimy) and overcoats are the main features of this typically Siberian city. The population of Barnaul has increased from 61,330 in 1911 to 73,858 in 1926, and 148,129 in 1939.

KUZNETSK (now STALINSK) is situated on the River Tomi. It was once a small provincial town, inhabited by about 4,000 people. Even in 1926 its population was only 3,894, but now it has reached the figure of 169,538. Nowadays it is a big industrial centre with the huge Ural-Kuznetsk metallurgical combine. Before the Revolution hardly a million tons of coal had been extracted from these deposits, but the present output is probably about 20 million tons a year.

MINUSSINSK is situated on the River Yenissey. It is an important centre for agricultural produce and cattle. From here begins the horse-track (now a motor track) to Tannu-Tuva Republic, whence come furs, wool, and leather. The Minussinsk district is rich in copper, magnetite, ochres, ochre clay, and brown iron.

BIYSK is situated on both banks of the River Biya, 19 kilometres from its junction with the River Katun, which is a tributary of the Ob. It is a big agricultural centre and important for its trade with Mongolia via the Chuysk Tract. Cattle, leather, wool, and furs are exported from Biysk in exchange for manufactured goods, sugar, tea, and iron ware. There is also a large textile factory employing over 1,000 workmen in Biysk, as well as a metal works, sugar refinery, macaroni factory, and a big meat-refrigerating combine.

This part of the Altay Highlands attracts many visitors. The three favourite excursions are: to the Teletsk Lake (via Biysk, Oyrat-Tura, Askat, and Artybash) or to the Mountain Byelukha (via Biysk, Inya, Rakhmanov's Wells), and to Semipalatinsk.

Other centres of the Kuznetsk-Altay Region are Leninsk-Kuznetsk, Anzhersk, Scheglovsk, Kemmerovo, Stalinsk, and Prokopyevsk, all of which either were established as, or developed into, large workmen's settlements in the second decade since the Revolution.

The Kuznetsk-Altay Province, like western Siberia, is to a certain extent self-supporting in agricultural produce and also in coal and coke, which are even exported to other Union Republics and abroad. But it has to depend on other Union Republics for manufactured goods, iron, iron ware, salt, oil, and fish.

(C) *The Yenisseysk or Krasnoyarsk Kray*

The Yenisseysk Province consists of the area of the Yenissey Basin, which divides western Siberia from eastern Siberia and forms the present administrative unit of Krasnoyarsk Kray.

It is a large territory, stretching for more than 2 million square kilometres from the Peninsula of Tamyr on the Polar Sea to the Minussinsk district and the Tannu-Tuva Republic in the south.

It is very sparsely populated and agriculture, owing to the climate, general relief of the area and the endless taiga, is not developed much, except in the former Kansky Okrug near Krasnoyarsk. The province, as a whole, depends on imports of grain from the Minussinsk and Lena-Baykal Oblasts.

Actually this province is identical with the Turukhansk Kray, with its endless, hardly penetrable forests (taiga), populated by Tungus and Samoyeds, whose occupations consist of hunting, fishing and reindeer breeding. The Turukhansk Kray, like the Narym Okrug in the north of the Kuznetsk (Stalinsk) Province, was once the favourite place of banishment for political offenders against the old Russian Imperial régime.

The main occupations in the Krasnoyarsk Kray are forestry, cattle breeding and the extraction of gold, copper, coal, and graphite.

GOLD is found in the Yenisseysk district between the tributaries of the River Yenissey, known as the Upper Tunguska, and the Podkamennaya Tunguska (Middle Tunguska). In the middle of the last century the yearly output of gold here was over 16,000 kilograms.

GRAPHITE deposits are situated mainly along the Lower Tunguska and the eastern tributaries of the Yenissey: the Bakhta and Kureyka. The graphite here is of the amorphous type and very pure. It can be mined by open cuts.

COPPER is found in the southern part of the province near the Achinsk and Minussinsk districts and on the borders of Mongolia.

COAL deposits occupy a large area all along the Lower Tunguska and at the mouth of the Yenissey.

The main centres of this vast area, sparsely populated and rich in forests and mineral resources, are Krasnoyarsk, Kansk, Yenisseysk, Turukhansk and Dudinskoe (Dudinka).

KRASNOYARSK was the old administrative centre of the Yenisseysk Province (Guberniya) and, in 1913, had a population of 81,000. Now it is the administrative centre of the Krasnoyarsk Kray. Its population, as compared with pre-revolutionary times, decreased to 72,261 in 1926, but has risen again since then to 189,999, so that it has increased two and a half times in 13 years.

Krasnoyarsk is situated on the left bank of the Yenissey, where it is crossed by the Trans-Siberian Railway. It is the main trading centre for the whole Kray, with highly developed agricultural industries, locomotive repair works, river fleet, and gold-melting laboratories.

KANSK is the next station to Krasnoyarsk on the Trans-Siberian Railway, where it crosses the River Kana. It serves Krasnoyarsk as a convenient auxiliary centre for the transport of grain, as it is situated on the border of the Lena-Baykal Province.

YENISSEYSK is also situated on the Yenissey at the mouth of the Upper Tunguska. In pre-revolutionary times it had a population of 12,000, engaged mainly in the gold industry. At the time of the Census of 1926 the population had shrunk to half its former size, but since then it has not increased so rapidly as the population of the new centres.

TURUKHANSK and DUDINSKOE (or DUDINKA), both on the Yenissey, are important river ports connecting the south of the province with the north. Dudinskoe is at the mouth of the Yenissey and therefore will play an important part as one of the calling ports along the Great Northern Sea Route.

(D) *The Lena-Baykal Province*

The Lena-Baykal Province or the eastern Siberian Oblast, where the greatest Siberian rivers rise—the Angara, Lena, and Amur—differs very much in climate and topography from western Siberia.

It is a very mountainous area, the main ridges being the eastern Sayan and the Khamar-Daban, the highest peaks of which reach 3,000 metres above sea-level.

In the north this province, comprising 1½ million square kilometres, links with the Yakutsk Oblast along the 60th parallel, and in the south it stretches down to the Mongolian borders, having on its south-western border the Tannu-Tuva Republic, and on its south-eastern side Manchuria.

The Lena-Baykal Oblast is also very sparsely populated. According to the Census of 1926 this territory had a population of only 1,325,000, that is, an average density of 1·2 persons per square kilometre. The great majority of the population are Russian colonists, who penetrated here in the first half of the seventeenth century along the Angara and Lena, driving the native population into the mountains and taiga. The native population consists mainly of Buryats, Tungus, Soyots, and Karagas, and represents 18 per cent of the total population of the province.

Agricultural activities are very much limited here. Only 12–15 per cent of the land is inhabited, and of this only 2 per cent is under crops and hay. They are mainly situated in the Tulun and Verkhne-Udinsk districts. Livestock breeding is much more flourishing owing to the good pastures in the mountainous steppe region.

The mining industry is the main asset of this province. It is not generally realized that the deposits of coal and minerals here are twice as large as those in the Donbass and five times bigger than those of Dnyeprostroy.

GOLD deposits are found in the River Bodaybo and the Olekma-Vitim districts as well as in the Barguzin Taiga. The Vitim district used to produce about 40 per cent of all the gold mined in the Lena-Baykal Province, and this was extracted entirely by the Lena Gold-Fields Co. (Lensoto), formed in 1896 and financed since 1908 from London.[1]

COAL is extracted mainly in the Cheremkhovo district, near Irkutsk and in Chita. The output of coal in the Irkutsk Basin was equal to a half a million tons in 1913, but in 1934 it had increased more than four times (2,283,000 tons).

SALT is produced from bore-holes in Ussoliye on the Upper Lena, and between Irkutsk and Cheremkhovo.

Eastern Siberia is also very rich in lead-silver ores (mined at Nerchinsk), tin (mined at the Olovyannaya station in Transbaykaliya), copper, manganese, and such rare metals as wolfram

[1] See S. P. Turin, *From Peter the Great to Lenin*, Chap. IX, on the Miners' Strike and their Claims in the Lena coalfields.

(tungsten), molybdenum, bismuth, iridium, osmium, strontium, lithium, radioactive substances, &c.

Great efforts were, of course, made to overcome the difficult natural features and the backwardness of eastern Siberia in order to include it in the general plan of industrialization and to develop its potential capacities. Such centres as Irkutsk, Chita and Cheremkhovo have grown very rapidly, and their population has increased as follows:

	1913	1926	1939
Irkutsk	93,400	108,129	243,380
Chita	77,800	61,526	102,555
Cheremkhovo	—	14,485	65,907

Other centres such as Bodaybo, Verkhne-Udinsk, Bargusin, Tulun and others have developed greatly in their industrial and trading activities, but their populations have not yet increased at the same tempo as in the three centres named above.

IRKUTSK is the administrative centre of the whole province, and soon it will occupy an even more important position than Stalinsk (formerly Kuznetsk). Irkutsk is situated on the right bank of the River Angara where it is joined by the Irkut. The Trans-Siberian Railway passes through it, and the Lake of Baykal is only 65 kilometres away. From here begins the route to Mongoliya along the valley of the Irkut. Irkutsk is the main centre of distribution and trade for Yakutiya and the gold-mining regions of Bodaybo and Vitim.

The main items of export from eastern Siberia to other Republics of the Union and abroad are gold, furs, salt, and timber.

The province is dependent on imports of manufactured goods from the Central Industrial Oblast, on iron ore and iron ware from the Urals, on grain from the Stalinsk (Kuznetsk)-Altay and Yenisseysk Oblasts, and cattle from Mongoliya. It also imports sugar from the South-western Oblast, oil from the Caucasus (and probably from the 'Second Baku' in Bashkiriya in the near future), and fish from the Far Eastern Kray.

(E) *Yakutiya*

The Yakut Oblast, which is identical with the Yakut Republic, has an area of over 8 million square kilometres. It stretches from the Peninsula of Taymyr in the Yenisseysk Oblast and from the North Polar Sea almost to the Okhotsk

Sea, being separated from the latter only by the comparatively narrow coastal strip of the Primorsk Kray.

Yakutiya, even to the Russians themselves, is 'Siberia within Siberia'. It has a most severe climate and frosts, scarcely any inhabitants, and is hardly penetrable owing to its wilderness, endless taiga, and the absence of any means of communication except by rivers and hunters' tracks.

This remote province was the third favourite place of banishment for political opponents of the old Russian Imperial Government. Many a writer and revolutionary has been banished here, as, for instance, N. G. Chernyshevsky, V. G. Korolenko, N. S. Tutchev, E. Yaroslavsky, and Sergo Ordzhonikidze.

The total population of this 3 million square kilometres of territory is only 400,544 people, living in just over 400 village communities (434 selo-soviets), and about half a dozen cities along the Rivers Lena, Viluy, and Olekma.

Agricultural activities are very limited here, and the sowing area does not reach 50,000 hectares. The whole province depends on imported grain from Irkutsk, but in the Far North and in the Kalyma Kray bread is hardly known, for the people live exclusively on fish and meat.

Livestock breeding is developed here much more than agriculture but, as with agriculture, it only satisfies local needs and consumption.

The chief means of livelihood of the Yakutiyan population is the fur industry. Furs are exported abroad and with them the Yakuts can pay for imported grain and manufactured goods. The most important fur-bearing animals are the squirrel, sable, hare, ermine, bear, marten, and fox. The best bear and marmot skins come from this region.

The second treasure of the Yakut Oblast is the deposits of minerals, which have not been sufficiently exploited owing to the low density of population and the absence of transport facilities. The chief mineral resources of Yakutiya are gold (Aldan River), platinum (Viluy Kray), mercury, copper, lead, silver, zinc, tin, serum, rock salt, coal, oil (Kamchatka), and iron. There are also rare metals such as strontium (Viluy) and others.

The only towns in Yakutiya are Yakutsk, Viluysk, Olekminsk, Verkhoyansk, Tommot, Middle Kalymsk, and Lower Kalymsk.

YAKUTSK is the administrative, industrial, trading, and cultural centre of the whole of Yakutiya; the others are mainly administrative and trading centres. New settlements are, however, appearing near the mining areas, such as Zolotoy, with about 3,000 inhabitants, and Nezametnoye, with over 2,000 inhabitants, in the Aldan district.

Yakutsk is situated on the left bank of the River Lena. It is chiefly a trading centre, but industries such as leather, bricks, saw-milling, and fish are growing rapidly in the town. The majority of the inhabitants (56 per cent) are Russians, and the Yakuts represent 31 per cent. The population of Yakutsk at the time of the Census of 1926 was 10,558, and in three years' time (1929) it had increased to 18,600. At present it probably equals about 50,000.

(F) *The Far Eastern Kray*

The Far Eastern Kray consists of the former Trans-Baykalian, Primorsk, Amur-Kamchatka Provinces, and of the northern part of Sakhalin. In the south it links with Manchuria and China.

The total area of this Kray is over two and a half million square kilometres. The climatic conditions here differ greatly both from the dry, cold climate of Yakutiya, owing to the influence of the Pacific Ocean, and from the climate of Japan, which is under the influence of the warm Kuro-Siva currents.

The climatic contrasts within the Kray itself are so great that in the north we find tundra and the northern reindeer, and in the south, tigers and lotus flowers. The same applies to vegetation. In the north there is typical Siberian taiga, and in the south rich Manchurian and Mongolian flora and fauna.

Forests in the Far Eastern Kray occupy nearly 70 per cent of the total area, and agriculture is therefore only possible in a few open spaces along the river valleys. The main crops are wheat and rye, but they are often spoiled by frosts and water.

The population of the Far Eastern Kray consists mainly of Russian settlers who migrated there after the secession of the major part of the Kray to Russia by China in 1860. At first the colonization of the Kray proceeded according to the instructions of the Government, and often it was forced. It is only since the opening of the Trans-Siberian Railway through Manchuria to Vladivostok that the imigration has increased

and become more normal and voluntary. The total population of the whole Kray, according to the enumeration made in 1929, was 2,099,700. Of this total, Russians represented 62·4 per cent, Ukrainians 16·7 per cent, Karyaks 8·9 per cent, Chinese 8·8 per cent, and the native population 3·4 per cent. The remaining 4·8 per cent consisted of White Russians and Jews, living in newly created Jewish Republics like Birobidzhan and others.

The population of the Far Eastern Kray derives its chief means of livelihood not from agriculture or industry, neither of which very highly developed, but from the exploitation of its vast resources of timber, fish, furs, and gold.

Exports of timber abroad have increased greatly since the pre-revolutionary period. It is mainly the concessions to Japan and the activities of the Soviet timber combines that have made the Far Eastern Kray so important to the whole Soviet Union, both as a centre for the supply of timber and as a source of national revenue.

The Far Eastern Kray is the second most important fishing area after the Caspian Sea. The long-standing and bitter competition against Japan over the fisheries have caused the Soviet Government to build up fishing industries of its own on a large scale. The main centres are along the western coast of Kamchatka, in the Gulf of Peter the Great, and the mouth of the Amur river. In 1934 over 3 million fish and crabs were caught in the Far Eastern Kray alone.

The Far Eastern Kray plays an important part as one of the leading centres of the world's supply of furs. Great efforts have been, and are being made, to control this valuable branch of industry and enforce hunting laws. Several animal sanctuaries, where hunting is entirely prohibited, are now established in the Kray.

The Far Eastern Kray is also rich in deposits of gold, lead, silver, tin, iron, and also copper, tungsten (wolfram), molybdenum, and oil.

GOLD is extracted mainly in the basin of the Zeya. The deposits of gold here are estimated as high as four and a half million kilograms.

COAL is found in Sakhalin, near Suchan, and on the Amur river, west of Blagoveschensk. The deposits in Sakhalin, according to the estimates of Prof. Ramzin, are over 2,000 million tons. There is also oil in Sakhalin.

The most important centres of the Far Eastern Kray are Khabarovsk, Vladivostok, Blagoveschensk, Nicholaevsk, Nicholsk-Ussuriyskiy, Alexandrovsk, and Petropavlovsk.

KHABAROVSK is favourably situated at the point where the River Ussur flows into the Amur. Being on the main Amur railway, it is connected by rail with Suchan and Vladivostok, thus forming, with them, a sort of combined seaport. The population of Khabarovsk is predominantly Russian (over 82 per cent). Prior to the First World War (1913) it had 46,600 inhabitants; in 1926 the number had increased to 52,600, and now it reaches 199,364.

VLADIVOSTOK is the largest and most important Soviet port on the Pacific. It is now reconstructed, improved, and enlarged beyond recognition, as are all seaports of the Soviet Union. It has a stone mole over 5,000 feet long with a depth of water to about 30 feet, and can accommodate more than twelve large ships. Warehouses, elevators, dry docks, oil stores, and other equipment cause Vladivostok to rank with the modern seaports of the U.S.A. and Great Britain.

Exports, especially of timber, abroad and to other Union Republics, transport of Manchurian beans, and regular trading contact with Kamchatka are the main functions of the port.

The population has, of course, increased greatly and rapidly. In 1911 it was 91,464, in 1926 it had risen to 107,980, and now it equals 206,432.

BLAGOVESCHENSK is situated at the junction of the navigable River Zeya and the Amur, and is connected by rail with the Amur railway. It is an important centre for the Amur goldmining area, and a trading centre for the Zeya-Bureysk agricultural region. It has large flour mills and it deals with imports from Manchuria and exports from the Soviet Union. Before the First World War, when the status of Manchuria was quite different from what it is now, Blagoveschensk was an even bigger centre than at present. In 1913 its population was 69,053, but now it is only 58,761.

NICHOLAEVSK, ALEXANDROVSK, and PETROPAVLOVSK are three important ports. The first is at the mouth of the Amur, the second in Sakhalin and the third in Kamchatka. All of them, owing to their economic and strategic position, and in view of the intensive colonization and industrialization of the Far Eastern Kray, play an important part in the whole national economy of the Soviet Union.

The Far Eastern Kray, taken as a whole, is an important exporting region. Apart from exports to other Union Republics it sends its timber to China and Japan, its fish to Japan and its furs to the U.S.A. But it depends on imported grain, cattle, manufactured goods, sugar, iron ware and, last but not least, salt, of which it has none at all, and which it badly requires, to the amount of one million centners a year, for its fisheries.

9. CENTRAL ASIA

A. Kazakhstan

This is the last huge region in the Asiatic part of the Soviet Union. It has an area of nearly 3 million square kilometres (2,744,500 square kilometres), and a population of 6,145,301. The majority of the population, that is, about 4½ million, is rural. The native population, which consisted mainly of Kirghiz, was long ago driven from the more fertile parts of the region to the deserts of Kazakhstan by colonists of the Russian Imperial régime (cossacks and peasant emigrants). This, of course, greatly affected the Kirghiz' main occupation as nomadic cattle-breeders.

The climate of Kazakhstan is purely continental and very dry. The temperature in the north-east sometimes falls as low as — 40° C. or even — 50° C., whereas in the south it rises in summer to 50° C. and in the desert areas to 70° C.

Nearly half of the total territory of Kazakhstan is occupied by the Kizyl-Kum desert. The rivers are not very beneficial to Kazakhstan, with the exception, perhaps, of the Irtysh and its tributaries, the Ishim and Tobol. Such rivers as the Syr-Darya and the Ural are hardly navigable, and the other small rivers form part of the basin of Lake Balkash or the Sea of Aral, and have little influence on the vegetation of the region as a whole.

Cattle-breeding by the nomadic peoples, and primitive agriculture were the only occupations of the population during pre-revolutionary times. But since the Revolution these occupations have developed and improved very rapidly owing to the application to them of the methods of planned economy, the artificial irrigation of the desert places from the Aral Sea, and more rational livestock breeding in the State Farms (sovkhoses). But even now the crops sometimes suffer from drought, and the cattle from epidemics (Siberian anthrax) or from frost in the pastures.

The famine of 1921 greatly affected this region, especially its western part. The agriculture and cattle-breeding did not begin to recover again until after the inauguration of five-year plans, but in 1936 the sowing area had already reached 6 million hectares as compared with 4 million hectares in pre-revolutionary times. The number of large horned cattle increased to 8 million head, and sheep and goats to 5 million head.

In pre-revolutionary times Kazakhstan had very poor means of communication, and was served only by the Orenburg–Tashkent and Novosibirsk–Semipalatinsk railways. The opening of the Turksib in 1930, connecting by railway Tashkent with Alma-Ata and Semipalatinsk, was a great event in the life of the Republic.

This new Turksib railway, from Lake Balkash to Karaganda (504 kilometres) and farther on to Akmolinsk and Petropavlovsk, as well as the new line from Guryev (Chapayev) on the Caspian Sea to Kandagach on the Chkalov–Tashkent railway have broken the ice for the development of the rich natural resources of the region.

The centres of mineral deposits in Kazakhstan are: the basin of the River Emba for *oil*; the southern ridges of the Ural Mountains, the Orsk district, and the Ust-Kamenogorsk and Zayssan districts in the east for *gold*; the Mugodzhar Mountains, Karaganda, Ekibas-Tuz, and Kara-Tau in the south for *coal*. *Copper*, *silver*, *zinc*, and *lead* are found at Atbassar, on the Lake of Balkash, in the famous Ridder district, and at Chimkent. *Salt* is extracted near Pavlodar from the Koryakov Lake.

The largest and most important towns in Kazakhstan are Alma-Ata (formerly Verny), Semipalatinsk, Petropavlovsk, Chimkent, Uralsk, and Chapaev (formerly Guryev).

The growth of the population of these cities is the best evidence of the systematic colonization and industrialization of the region.

TABLE 18

Growth of Population in the Largest Cities of Kazakhstan

Town	1913	1926	1939
Alma-Ata (Verny)	41,506	45,395	230,528
Semipalatinsk	34,300	56,871	109,779
Petropavlovsk	42,340	47,361	91,678
Chimkent (1910)	15,756	21,018	74,185
Uralsk	46,380	36,352	66,201
Guryev (Chapayev)	10,992	13,529	57,995

The most striking increase of population, according to the table, was at Alma-Ata, the present capital of Kazakhstan.

ALMA-ATA is favourably situated in a fertile valley on the mountainous River Almatinka. Apples from her orchards are known all over Russia. They used to be called Verny apples, but now they are known as oporto. It was the Turksib which converted this city into a large industrial and trading centre, not only of Union significance, but of international importance owing to its nearness to the frontiers of China, Afghanistan, Iran, and India.

SEMIPALATINSK is situated on the River Irtysh. It is the first port on the Irtysh, and is inhabited mainly by Cossacks, Russians, and Tartars. It is now a big industrial city with several thousands of workmen, and also an important trading and exporting centre. Its industries are mainly connected with the produce of agriculture and livestock farms.

Semipalatinsk is connected by railway with Alma-Ata, Novosibirsk and the town of Turkestan, and has several routes connecting it with Orsk and Ust-Kamenogorsk, which is not far from the Ridder works. The latter are now connected by railway with the main Alma-Ata–Novosibirsk line.

Semipalatinsk exports grain, skins, wool, and meat, and has a large trade with Mongolia and the Chinese province of Sintszyan.

PETROPAVLOVSK stands on the River Ishim. It is the only city of Kazakhstan which is on the main Trans-Siberian railway, and it is also connected by rail with Akmolinsk, Karaganda, and the Lake of Balkash.

Grain, livestock, flour mills, slaughterhouses, leather and boot industries, and canned meat are the main features of the economic activities of this city.

CHIMKENT, ARYSS, and TASHKENT are situated in the valley between the River Syr-Darya and the ridge of Kara-Tau, and are now connected by rail with Tashkent and Alma-Ata. This district has a fertile soil, and is also important now for trade and industry.

The Russians, both before the Revolution and since, have always been very proud that Chimkent and Turkestan hold the world monopoly of the well-known medical preparation, Santonin, which is only produced here.

URALSK is situated on the River Ural, and is now connected by railway with Iletsk-Chkalov (formerly Orenburg) and Orsk

in the north-eastern direction, and with Tashkent in the south-eastern direction. It is also the terminus of the old Saratov–Uralsk line (Engels–Uralsk). Agricultural industries and the canning industry make this town an important trading centre. Uralsk is an old historic city. Many a legend is connected with its name, beginning in the seventeenth century, when, in 1667, its inhabitants went over to Razin. Uralsk has also been the headquarters of Pugachev.

GURYEV (now CHAPAYEV) is also an old historic city which was founded in the seventeenth century. It was often raided by the Uralsk (Yaitsk) cossacks, who objected to the inhabitants of Guryev fishing in their waters at the mouth of the River Ural. Now it is a large fishing centre and a port on the Caspian Sea, connected, via Kandagach, with the Chkalov–Tashkent railway. The Board of the Ural-Emba Oil Company sits here.

Other centres of Kazakhstan are:

KZYL-ORDA, on the River Syr-Darya, a trading centre with the steppe. Many Kirghiz-Cossacks spend the winter here, before moving north for the summer.

PAVLODAR, a river port on the right bank of the Irtysh. It is situated near coal mines and near the Lake of Koryakov, which is rich in salt.

KUSTANAY, on the upper waters of the Tobol, a centre for agricultural industries. It has a meat combine, flour mills, a pig sovkhos, a starch industry, &c.

AKTUBINSK is the last agricultural centre, for to the east and south-east of it begin dry steppes. The fairs at Aktubinsk for cattle and manufactured goods were very famous in olden times.

The main products which Kazakhstan exports to other Union Republics and abroad are cattle, meat, wool, butter, leather, fish, salt, grain, copper, and also Santonin. It depends, as do other Siberian regions, on imports of manufactured goods, timber, iron ware, and sugar from other Union Republics.

B. Turkestan

(Turkmeniya, Uzbek, Kirghiziya and Tadzhik)

The present area of Turkestan consists of the four Soviet Republics of Turkmen, Uzbek, Kirghiz, and Tadzhik. It

stretches from the Caspian Sea to the borders of China, linking in the north with Kazakhstan, and in the south with Persia Afghanistan, and India.

The climate of Turkestan is very continental, and the contrasts in temperature and relief in the country are great. In the south the climate is very hot, but in the north the temperature often falls as low as — 20° C. In some places near the Caspian Sea the land is below sea-level, whereas in the east the mountains of Pamir and Tyan-Shan are higher than the Caucasian Mountains. In fact, the highest peaks of Tyan-Shan, which rise more than 7,000 metres above sea-level, and the Lenin and Stalin peaks in the Pamirs, are among the highest points on Soviet territory.

The majority of the rivers of Turkestan are mountain streams which dry up as soon as they reach the hot sands of the steppe or desert. The River Amu-Darya, flowing into the Aral Sea, is hardly navigable. Only the upper waters of the River Syr-Darya, flowing into the same sea, are included in the Turkestan Oblast, and similarly the River Atrek, flowing into the Caspian Sea, hardly touches the territory of Turkestan, but flows for most of its length along the borders of Persia. In spite of this, the rivers of Turkestan are very useful and beneficial, serving as natural irrigation systems for the oases of the country and making the land suitable for agriculture.

Turkestan is a land of mountains and oases, a land where cattle-breeding and agriculture have always been, and still are, the main occupations of the native population. Although it is mainly an agricultural country the predominant crops are not grain and cereals but cotton. The whole primitive national economy of former Turkestan was based on cotton, and this crop is the chief treasure of modern Turkestan, and the asset on which the future of the country depends. There are, of course, other crops grown in Turkestan. Wheat, barley, and millet are cultivated in Tadzhikistan, rice, maize, beans, and sugar beetroot in Uzbekistan, and cotton and grapes in Turkmeniya.

The population of Turkestan consists of Iranians and Turks, including Tadzhiks, Turkmen, Kirghiz, Cossacks, and Uzbeks.

The following tables show the present area and population of the whole region.

TABLE 19

Territory of Turkestan

Republics	Capital	Territory in square kilometres
Turkmen	Ashkhabad	443,600
Uzbek	Tashkent	378,300
Kirghiz	Dzhalal-Abad	196,700
Tadzhik	Stalinobad	143,900
	Total	1,162,500

TABLE 20

Population of Turkestan

(Census 1939)

Republics	Total Population	Rural Population	Urban Population
Turkmen	1,253,985	837,609	416,376
Uzbek	6,282,446	4,837,382	1,445,064
Kirghiz	1,459,301	1,188,714	270,587
Tadzhik	1,485,091	1,233,209	251,882
Total	10,480,823	8,096,914	2,383,909

The growth of the population since the Census of 1926 has proceeded at a greater speed in the last two small Republics, Kirghiz and Tadzhik, than in Turkmen and Uzbek. The population has increased by nearly half a million in each of them.

It is hardly possible to speak of the average density of population, as the climatic conditions and the relief of the country affects the settlement of the population in such a way that in the mountains and desert there are hardly any inhabitants at all, whereas in the oases there is often over-population. But it is a fact that in a territory of over a million square kilometres there are living under 10½ million people.

The Soviet Government have fully realized this fact and have paid much attention to the improvement of means of communication and the necessity of planned colonization of the region. And we often see a striking growth and development of the old cities and the appearance of many new industrial settlements.

In Turkmeniya the main economic and administrative centres are: Ashkhabad, Mary, Krasnovodsk, Leninsk, and the fortress of Kushka on the Afghanistan border.

ASHKHABAD is the administrative centre of the Turkmen S.S.R. It is situated in the oasis of the River Ashkhabadka, and is one of the centres of the cotton plantations, connected by rail with Mary, another centre of the cotton industry. In pre-revolutionary times Ashkhabad was a small station called Poltoratsk. Now it is a city with 126,580 inhabitants, as compared with 51,593 in 1926.

MARY (formerly MERV) is situated in the oasis of the River Murgab. It is an important cotton centre, connected by rail with Krasnovodsk, Bukhara, and the fortress of Kushka, and is a strategic post and an airport as well. Mary has grain elevators, wool and leather industries, and also a trade in carpets. The town began to develop very quickly in the second decade after the Revolution of 1917. Prior to that time its population was almost stationary, decreasing from 19,696 before the First World War to 19,100 in 1926. But in 1937 it had already risen to 31,000.

KRASNOVODSK is the only port on the eastern shore of the Caspian Sea. It stands just opposite the Apsheron Peninsula on which Baku is situated. As a port it is now, like all other Soviet ports, greatly enlarged and equipped with all modern devices. From here begins the Central Asiatic Railway which carries the oil of Baku to all the Asiatic parts of the Soviet Union. Grain and timber are also loaded here, and large fish refrigerators, as well as factories for curing smoked fish, have been built in this town. The well-known alabaster works are now greatly improved and enlarged.

Krasnovodsk, with all its might and capacity as a seaport, greatly suffers on land from lack of vegetation and scarcity of water, which has to be supplied to the growing population by artificial means, In pre-revolutionary times (1910) Krasnovodsk was inhabited by 7,775 people. In 1936 the population had increased to 24,000.

LENINSK (formerly CHARDZHUY then CHARDZHOW) is an important town on the Central Asiatic Railway and on the River Amu-Darya. It is a big loading and reloading station. The next station is Kagan (New Bokhara), which is also growing rapidly. In 1926 Leninsk was inhabited by 13,950 people, and now its population is 54,739.

In the Uzbek S.S.R. the most important centres, which, in the past, were well known all over the world and especially in this country, are Tashkent, Samarkand, Bokhara, Khiva, and Andizhan.

TASHKENT is situated in the oasis of the River Chirchik, a tributary of the Syr-Darya. It is an ancient historical city, well known since the seventh century. It was conquered by Russia in 1865 and became the capital of the Syr-Darya Oblast. Now it is the administrative centre of the Uzbek S.S.R. with highly developed industries and trade and with a regular transport and passenger air service with Moscow.

Agricultural industries, such as flour-milling, cotton refining, tobacco and leather making, and the slaughtering of cattle, are flourishing here, metal and metallurgical industries, power-station and locomotive repair works, &c. Home industries, in the form of industrial co-operation (incops), are well represented here, as well as vineyards and orchards.

The population of Tashkent on the eve of the First World War (1913) was 271,900. In 1926 it had increased to 323,613, and now it reaches more than half a million (585,005).

SAMARKAND is situated in the valley of the River Zaravshan, near the Fergan Oblast. It was once on the old Asiatic route to China, Persia, and India, and now it stands on the Central Asiatic Railway, half-way between Tashkent and Bokhara. It plays an important part as a trading and industrial centre with cotton- and silk-spinning factories, home industries (incops), and vineyards. Samarkand is also an ancient city with many historical relics, indicating that it was conquered in the fourth century B.C., and that in the fifteenth and sixteenth centuries it became the capital of the Tamerlan (Tamur) Emperor. One feels the influence of Moslem culture in this town.

The population of Samarkand consists of Uzbeks, Tadzhiks, and Russians. It has not increased as rapidly as that of Tashkent. In pre-revolutionary times (1910), Samarkand had a population of 94,650. Ten years after the Revolution, in 1926, it had risen to 105,206, and at present it equals 134,346.

BOKHARA is situated on an oasis formed by the irrigational canals from the River Zaravshan. It used to be the capital of the Bokhara Khan, and became Russian at the end of 1860. The Emir of Bokhara was deposed in 1920 and after that Bokhara became the Oblast of the Uzbek S.S.R. It is still the centre of Moslem culture. Home industries, handicrafts,

painted china, carpets, silk, bazaars and fairs, where *karakul* and other skins are sold, are the main features of this city. Bokhara has not grown much, since it is outside the Central Asiatic Railway, although connected with it by a branch line. It has given over its priority in trade and industry to New Bokhara, now known as Kagan.

KHIVA is situated on the left bank of the Amu-Darya on the irrigational canal Palvan-Ata, 6 kilometres from the Kara-Kum Desert. The population consists mainly of Uzbeks, occupied in home industries and cotton plantations.

The other important centres of Uzbekiya are Andizhan, Namangan, Kokand, Sharikhan, Kyzyl-Kiya, Uch-Kurgan, and Tentyaksay. They form a kind of Pleiad of cotton plantations and cotton industries, interconnected by railways, and with a constantly increasing population and capacity for production.

In Kirghiziya the main administrative centres are: Frunze, Dzhalal-Abad, Karakol, Osh, and Naryn.

FRUNZE (formerly PISHPEK) was the capital of the Kirghiz S.S.R. It is situated in a fertile valley, irrigated by small streams flowing into the River Chou. Frunze is connected now with Alma-Ata and Tashkent via Lugovaya station on the Central Asiatic Railway. It has grown tremendously between the two censuses. In 1926 it had a population of 36,610, and in 1939 it had risen to 92,659.

In Tadzhik S.S.R. we find the following main administrative centres: Stalinobad, Garm, Kulyale, Leninabad, and Khorog.

STALINOBAD (formerly DUSHAMBE) is situated in a fertile valley not far from the borders of Afghanistan. It is now connected with Termez by rail and with Leninabad by high road. It has also a regular air route with Tashkent. Stalinobad exports cotton, silk, fruit, lead, and arsenic. The growth of its population shows the importance attached to this city. In 1929 it had 5,607 inhabitants, and now it has a population of 82,540.

All four Union Republics in Central Asia, which we have analysed as an economic unit under the name of the Turkestan region, have a certain economic interdependence with the other Soviet Republics. They are not entirely self-sufficient. They export cotton, silk, wool, leather, fruit, carpets, and *karakul*; but they have to import grain, timber, fish, cattle, manufactured goods, sugar, and iron ware.

PART III

Economic Survey

CHAPTER V

AGRICULTURE

CEREALS

RUSSIA has been an agricultural country for centuries. Prior to the First World War three-quarters of its population were engaged in agriculture, and on the eve of the Second World War half of its people were still working on the land (Census 1939).

Many changes have occurred in agriculture in Russia since the Revolution of 1917, and it would be futile to make any comparison of present-day agricultural activities in the Soviet Union with those of pre-revolutionary times. We can therefore look upon pre-revolutionary times only as a criterion of the rate of changes in the output of agricultural products.

Certain features of the former Russian system of agriculture have survived up to the present day. One of them is the division of Russia into two areas; the grain consuming area, and the grain producing area.

The consuming area, which lies in the north of Russia, used to satisfy only one-sixth of its demand by its own production of foodstuffs, and, therefore, five-sixths had to be produced by the producing areas, the largest of which is the Black Earth Land.[1]

Another interesting fact is that the direct consumption of foodstuffs is very high in Russia, and there is not a large percentage of marketable goods. If we take, for instance, the net yield as a hundred, we find that the Crimea puts on the market only 46 per cent, Caucasus 40 per cent, Volga Region 27 per cent, Ukraine 25 per cent, Siberia 24 per cent, Urals 20 per cent, and so on. So that, on the whole, 70 per cent of all foodstuffs are consumed by the local population and only 30 per cent are marketable goods.

[1] The sown area in eastern regions, owing to the collectivization of farms, increased greatly (by more than 10 million hectares), but the difference in fertility of soils and in climatic conditions still remains.

A third feature of Russian agriculture is that the proportional distribution of the different branches of farming has preserved a certain stability throughout all the stormy times since the Revolution, even after individual farming had been finally converted into a collective, co-operative system.

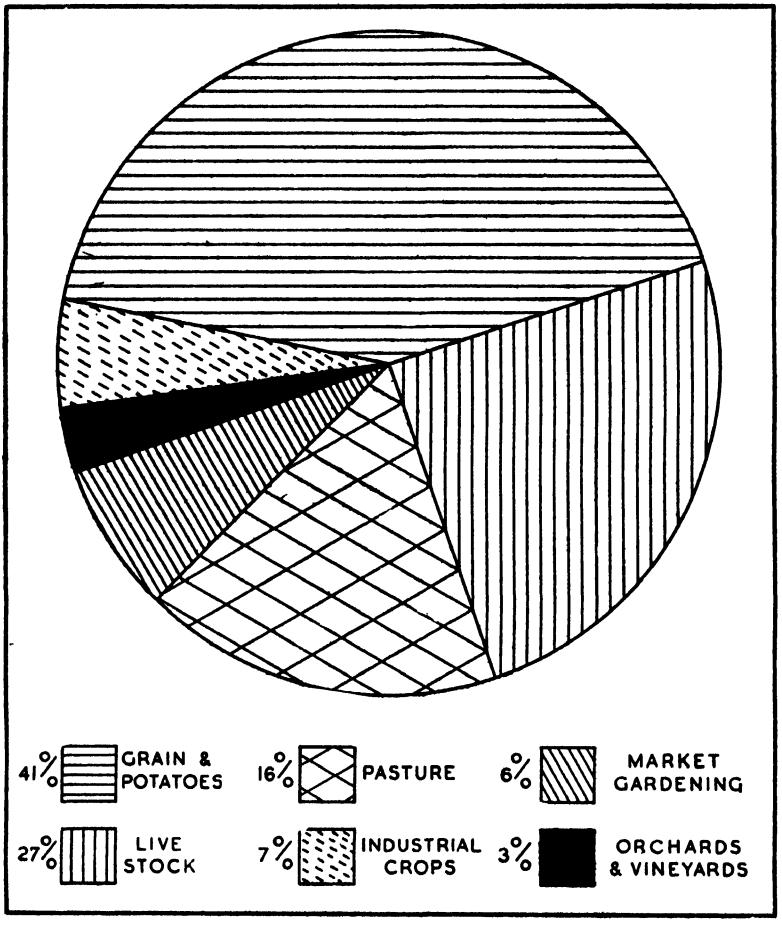


DIAGRAM X.—RUSSIAN FARMING IN 1925–6

The above diagram shows the importance of different branches of Russian farming and the total value of the yield of each cereal.

According to the diagram grain and potatoes constitute two-fifths of the total value of the whole yield of agricultural

products. Next comes livestock product, 27 per cent. The remaining 32 per cent is distributed among grass and meadow land, industrial plants, vegetable gardens, &c. For more detailed information see pp. 219–224.

Since the Revolution of 1917 Russian agriculture has experienced the most dramatic and kaleidoscopic changes. Requisitioning, not only of surplus grain, but of grain which the peasants required for food; heavy grain quotas and taxes; compulsion to join collective farms; the crusade against individual farming; —all these factors explain the comparatively slow, although gradual, increase in the total volume of agricultural products during the two decades which have passed since the Revolution of 1917.

Stalin, following Lenin, took heed of the latter's warning as to the dangers of over-estimating the human capacity to re-shape the natural economic forces of the country and antagonising the peasants by the application of unmodified totalitarian principles.

The Soviet Government have admitted that the policy of forced collectivization was mistaken. It was found that coercion to join collective farms had diminished the sowing area, reduced the yield, and destroyed livestock to an alarming extent, and that in certain crops pre-revolutionary figures had not been reached.

As a result of this, in 1935 the *Model Rules of the Agricultural Artel* were made into law. Upon this rests at the present day the whole structure of the peasants' co-operative (*artel*) work on common land. In its essence and nature it differs vastly from the original conception of a collective farm, although the name of collective farm is still used.[1]

The main agricultural products in the U.S.S.R. are at present the same as before the Revolution: wheat, rye, barley, oats, maize, and rice.

The gradual increase in their output during the first two five-year plans as compared with the output in pre-revolutionary times can be seen from the table on next page.

The increase in the output from the point of view of the growth of the population and the higher consumption of bread per head of population must be considered a moderate one, and the surplus available for export has become, naturally, very limited. This explains why Germany could not get much grain

[1] The text of the Model Rules of the Agricultural Artel. See p. 175.

TABLE 21. *Gross Production of Grain in the U.S.S.R.*

(In million centners; 1 centner = 1·97 cwt.)

	Wheat	Rye	Barley	Oats	Maize	Rice
1913	262·0	213·3	107·9	154·1	11·8	3·4
First Five Year Plan						
1928	219·7	193·1	56·7	164·8	32·9	*a*
1929	188·8	203·6	72·1	157·4	30·2	*a*
1930	269·2	236·0	67·7	166·2	26·7	*a*
1931	205·0	219·9	51·8	109·6	47·5	*a*
1932	202·5	220·2	50·3	112·4	34·9	*a*
Second Five Year Plan *b*						
1933	277·3	241·9	78·5	154·1	48·0	*a*
1934	304·1	201·3	68·4	189·0	38·4	*a*
1935	308·1	211·2	77·8	182·7	29·8	*a*
1936	*a*	*a*	*a*	180·5	*a*	*a*
1937	442·4	277·4	101·1	207·3	37·0	3·8

a—Not given in the Russian source. *b*—As per new method of estimating the yield which raises the total about 5 per cent higher. It is planned in 1950 to increase the total farm produce by 27 per cent.

from Russia according to the Russo-German pact concluded prior to the last War.[1]

WHEAT. The wheat area in the U.S.S.R. is rather large and includes such places as Kiev, Kharkov, Saratov, Samara, Ufa, Krasnoyarsk, Irbit, Uralsk, Tabolsk, Tomsk, River Amur, and former Maritime Province. Wheat grows also in the Ukraine, Crimea, Caucasus, and Central Asia. In the last four areas it is possible to grow winter wheat. Summer wheat may be grown in South Russia, along the Volga from Saratov to Samara, and in Siberia along the Siberian Railway.

On the whole, wheat occupied, prior to the Revolution, 20 per cent of the total arable area. The average gross yield of wheat was approximately 21 million tons as compared with a world output of 110 million tons. Therefore Russia produced 20 per cent of all wheat. The richest wheat producing area was Bessarabia, which was formerly part of Russia.

[1] During the Second Five Year Plan exports of grain shrank considerably and equalled 1,276,000 tons in 1938, while the average yearly production was 30 million tons (see p. 206, Table 59). At a conference concerning the new agreement between the U.S.S.R. and Germany on 10 January 1941, it was stated, according to the German sources, that in 1940 only one million tons of Russian grain were delivered to Germany.

Soon after the Revolution, and during the Civil War, the output of wheat decreased very greatly. It was only after the New Economic Policy was introduced by Lenin in 1921 that the output began to rise again, but it was still below the pre-revolutionary level.

Even during the First Five Year Plan, as can be seen from the above table, the output did not regain the pre-revolutionary figure, with the exception of one year, 1930, when there was an exceptionally good harvest in the U.S.S.R.

The output of wheat has only begun to increase gradually since 1933. This is due to a more intensive system of work, the mechanization of agriculture, the enlargement of the sowing area for wheat, and to more healthy conditions of work on collective farms, especially after 1935, when peasantry began to be more interested in the progress of work on common land and on their private allotments granted to them by the Model Rules of Artel.

RYE. The area for the cultivation of rye is the Central Zone from the 60th parallel, and then in the south, along the line of Chernigov, Kursk, Saratov, Samara, and Ufa. In East Siberia rye grows on the plain of the River Amur. The cultivation of rye occupies 30 per cent of the arable land in that area. Rye likes a weak fertility of soil, and a cold climate and heavy rainfall are very important factors for its growth. Ninety-nine per cent of rye grown in European Russia is sown as a winter crop, and 60 per cent of that grown in Siberia is winter rye. Russia produces approximately 50 per cent of the world output of rye.

The U.S.S.R. has not been as successful with the production of rye as with that of wheat. The production of rye has remained almost stationary and almost at pre-war level throughout both Five Year Plans. The population of Russia is very likely feeling the shortage of brown bread and finding it difficult to adapt itself to the use of white bread alone.

MAIZE. The Soviet Government has succeeded in raising the output of maize from 12 million centners in 1913 to 37 million centners in 1937, but the cultivation of this cereal, which is more important than it was in pre-revolutionary times since it is now tinned and used for industrial purposes, and in the preparation of fodder and starch, is still very unsatisfactory.

'There is a systematic decrease in the sowing area and the yield of maize is very unstable . . . Mechanization in the

harvesting of maize is hardly used, and the type of machine (Pickart) which works so well abroad, produces very poor results with us.' [1]

BARLEY. The areas for barley are the Ukraine, Steppe Region, south slopes of the Caucasus, as well as Siberia. The average yield of barley in Russia used to be 5 million tons, as compared with the world yield of 31 million tons, which meant that Russia produced about 16 per cent of all barley. In Poland and the former ' Border States ' barley was cultivated mainly for making beer.

OATS. The area for oats is the same as that for rye. Mainly spring oats are cultivated, which used to occupy 12 per cent of the total arable area. The gross yield was 13 million tons, as compared with the world output of 65 million tons. Russia, therefore, produced about 20 per cent of the world's output of oats.

The production of barley has decreased in comparison with pre-revolutionary times, and the increase in oats throughout the Five Year Plans was not very significant, and had risen by 34 per cent in 1937 only. The production of rice remained at almost the same level as before the Revolution, whereas its consumption has greatly increased. In order to increase the sowing area of rice, the development of the canal system in Uzbekistan and other areas is greatly encouraged.

OTHER CEREALS. Other cereals and starch foods, such as buck-wheat (a favourite Russian porridge), millet, spelt, peas, and lentils are of secondary importance as far as the volume of production is concerned. It is interesting to compare here the participation of Russia in the production of the world supplies of foodstuffs during the pre-revolutionary period and after.

TABLE 22

Percentage of World's Cereals produced by Russia

Cereal	Before Revolution	After Revolution
Rye	51%	50%
Wheat	22%	20%
Barley	33%	16%
Oats	25%	20%

YIELD.[2] One more feature of Russian agriculture must be mentioned here, and that is the yield.

[1] *Planned Economy.* Moscow, 1940. N2.

[2] On yield in Russia see—Timoshenko, *Agricultural Russia*, New York, and latest statistical year books published in Moscow. 1 centner = 1 quintal = 220·5 lbs. = 1·97 cwt. 1 hectare = 2·5 acres.

The yield per acre of wheat in Russia in former times was only 13·5 bushels, whereas in England the yield per acre was 32 bushels. If we compare Denmark and Germany with Russia, we find that in Denmark there was, on the average, 3 tons per hectare, in Germany 2 tons, and in Russia only 0·7 tons.

After the Revolution of 1917, during the Five Year Plans, the yield for winter wheat was registered as from 11·0 to 14·7 bushels per acre, and from 5·9 to 13·2 bushels for spring wheat. In 1937 the yield was increased to 19·0 bushels for winter wheat, and 14·7 bushels for spring wheat.

The yield for rye was as follows: average yield per acre for the period 1901–13 was from 12 to 15 bushels; in 1929 it was 13 bushels, and in 1935 14·1 bushels per acre. In 1937 the yield was 19·7 bushels per acre for winter rye.

The yield per acre of barley was, in pre-revolutionary times, 17·8 bushels. After the Revolution, during the first two Five Year Plans, it was almost the same. In 1937 the yield of spring barley was registered as 21·1 bushels per acre.

The average yield per acre of oats in 1912 was 23·23 bushels, in 1913—25·69 bushels, in 1937—34·4 bushels per acre.

Taking together the gross production of the four most important cereals—wheat, rye, barley, and oats—we find that their total production increased from 737,300,000 centners in 1913 to 1,028,200,000 centners in 1937, that is, an increase of 39 per cent. Considering the fact that the population increased during this period by 15–20 per cent, and that the general level of consumption of these cereals in the Soviet Union is now higher, we must admit that the supply of cereals to the population at the end of the second decade since the Revolution was still inadequate.

The U.S.S.R. has achieved, no doubt, a gigantic work in reconstructing Russian agriculture, has saved the country from famines for ever, and has increased the consumption of food per head of population. But it has not reached, owing to prolonged internal and external difficulties, a stage of self-sufficiency and plenty in this sphere of productive activity.

TECHNICAL CROPS

The most important technical crops of Russian farming are flax, hemp, cotton, potatoes, sugar, and also sunflowers and tobacco.

FLAX. This plant is produced mainly for making oil out of the seeds and for preparing the fibre for spinning. Flax is much finer than hemp. Before the War, Russia supplied 80 per cent of world requirements of flax. It is interesting to note that in this country, Scottish spinners were interested chiefly in Russian flax, and it was even the favourite fibre among British manufacturers. Russia exported over £3,000,000 worth of flax to England alone. After the Revolution, Russia lost first place in the world market for flax. The most important flax producing areas were then Poland, Latvia, and Estonia. As far as the U.S.S.R. is concerned the north of the Ukraine supplies chiefly the fibre, and the south the seeds. The most important flax producing centres are Smolensk, Tver, Pskov, Vyatka, Perm, Kostroma, and Tomsk in Siberia.

For centuries this industry was carried on by peasants in their homes. Attempts were made, after the Revolution, to develop it and to regain its former position in export trade.

At present the U.S.S.R. supplies half of the total world requirement of flax, and the volume of production equals two-thirds of that in pre-revolutionary times.

HEMP. Hemp grows in the same areas as flax, and there are, approximately, 600,000 hectares under cultivation ; that is four times less than that under the cultivation of flax. The chief consumers, before the War, were Germany, which absorbed 60 per cent, and the United Kingdom, which imported 30 per cent. Hemp is used for making oil which is much more coarse and inferior than flax oil. In olden days this plant was very useful for making rope, but this has been superseded by steel hawsers, wire and manilla fibre.

COTTON. Cotton is the most important plant of the Russian staple industries. Before the Revolution the yield of cotton fibre was equal to 170,000 tons, whereas the requirements were 350,000 tons. The most important producing areas are Turkestan—87 per cent, and Transcaucasia—13 per cent. There were, on the average, 2 million acres under cotton cultivation before the Revolution, but the production of cotton fibre decreased greatly after the Revolution, and it is only since the inauguration of the Five Year Plans that this industry began to recover. At present the U.S.S.R. is able not only to meet all home requirements but even to export cotton fibre.

In N. Mikhaylov's book on Soviet Geography we find an

almost poetic description of the development of the cotton industry:

'Uninhabitable steppes. A pitiless sun. In the spring the rustle of brightly coloured flowers. In the summer the murmur of brown wormwood. Now the steppe has been tilled. The furrows disappear behind the horizon. Cotton, cotton everywhere . . .'

The progress of the development of the cotton industry as compared with pre-revolutionary times has been really tremendous. The average gross production of cotton during the Second Five Year Plan was as high as 18,400,000 quintals; in other words it was three times greater than in pre-revolutionary times.[1]

Soviet Russia is naturally very proud of such progress as regards cotton, for, instead of being an importing country she has become an exporting one. But a close analysis of Russian cotton exports shows that they vary in volume from year to year. The explanation lies in the instability of the crops, and in the growth of demand for cotton by Russian textile industries. In spite of this, the U.S.S.R., instead of limiting her own exports of cotton, imported some cotton again in 1940.

POTATOES. Potatoes in Russia are used as a substitute for grain and as an industrial plant for the making of wine (Russian vodka), starch and treacle (glucose). The nourishment contained in potatoes is only one-fifth of that in grain, but the yield per acre is ten times more than that of rye. Potatoes require a summer climate and grow on the same area as rye—actually, they can grow anywhere. Prior to the Revolution the systematic cultivation of potatoes was carried on only in Poland and the 'Border States' and along the River Vistula where they were mainly used as an industrial plant. On the whole one-twentieth of all cultivated land in the U.S.S.R. is under potatoes, and the Soviet Union now occupies first place among the world producers of potatoes. This place used to be occupied by Germany. In the U.S.S.R. the area under the cultivation of potatoes is more than twice as large as it was formerly.[2] The yield of potatoes per hectare is also much

[1] *Cotton in the U.S.S.R.*

	1913	1937
Sowing area in 000 hectares	688·0	2,124·4
Gross output in 000 centners	7,440·0	25,815·7

[2] Sown area under potatoes in 1913—3,063,600 hectares; in 1935—7,375,600 hectares.

higher than previously, reaching at present the figure of 95·6 centners per hectare. Before the First World War Russia produced 27 million tons of potatoes per annum; at present the U.S.S.R. produces 700 million centners or 70 million tons.

SUGAR. In former times Russian sugar refineries reminded one of the plantations run by natives in tropical countries. Russia used to export sugar mainly to Great Britain (about 150,000 tons), and also to Persia and Turkey (about 50,000 tons each). Owing to a protective tariff Russia exported sugar to England very cheaply, and this was done at the expense of the consumers' demand for sugar, so that complaints were often heard in pre-war times that 'in England, Russian sugar is consumed by pigs, yet in our village it is considered a luxury'. The consumption of sugar in Russia before the Revolution was insignificant in comparison with that in England. A family of five persons in Russia consumed four or five times less sugar than a family of the same size in England.

Since the Revolution great efforts have been made to repair the neglect of the former Russian Government in the provision of a necessity like sugar, to the population, and especially children. The enlargement of the sowing area under sugar beet, the abolition of abnormal conditions of work in the refineries, investments of capital in the industry, and great improvements in the methods of work—all these served their purpose, and the sowing area, and consequently the output of sugar, has increased two-fold since the Revolution. The total output of sugar in 1938 already equalled nearly 3 million tons (2,700,000 tons).[1]

SUNFLOWERS. The area for the cultivation of sunflowers is the south of Russia, the Black Sea and Kuban region, devastated at present by Hitler's hordes. Sunflowers are grown principally for the extraction of vegetable oil, and the stalks are used for the production of potash. At present the area under cultivation is four times larger than in pre-revolutionary Russia, and occupies nearly 4 million hectares.

In 'the good old times' sunflowers were used as a kind of national sweet, and in Russian villages on Sundays whole families could often be seen sitting outside their houses peeling seeds in their mouths and eating them.

TOBACCO. Tobacco grows mainly in the south of Russia.

[1] The main areas under sugar beet are Ukraine, Veronezh, Tambov, and Tula. There are new areas in Transcaucasia, Kazakh and Kirghiz Republics, and in the Far East.

It is not of very good quality and cannot be compared with Indian, U.S.A., or Chinese tobaccos. Russian tobacco has a yellow leaf, is very coarse, and is used for making a coarse national tobacco called Makhorka. The sowing area has increased since the First World War nearly fourfold, and now equals about 250,000 hectares (for all kinds of tobacco grown). The output of tobacco has increased sixfold since the pre-revolutionary period and has now reached 60,000 tons per annum.

PASTURE AND MEADOWLAND

Pasture and meadows are very important as a basis of grain production and the rearing of cattle, and in Russia, owing to the absence of fertilizers and sufficient agricultural machinery, they were indispensable in agricultural life. But for centuries Russian pastures and meadows remained in their natural state, presenting a view of very untidy fields, quite unlike the English countryside, which looks like one big garden.

Hardly any reliable comparative figures can be found for this kind of farming and field culture in former Russia, and we will, therefore, try to compare them here with the potato crop. This may give us the comparative importance of pastures and meadows in the past.

In the consuming area, for instance, we find that there were 1 million acres of annual meadows and 2 million acres of perennial, whereas potatoes in this area occupied 3 million acres. If we take producing area we find that there were only half a million acres of perennial meadows and none of annual, and the potato crop occupied 4 million acres in this area. In the Ukraine we find that there were 1 million acres of annual meadows and only 100,000 of perennial, while potatoes occupied 3½ million acres. If we consider meadows in proportion to all arable land we find that they occupied 8 per cent in the consuming area, and only 1 per cent in the producing area.

As to the productivity of meadows, we find that, on the whole, the Russian people relied mainly on Nature and rain, and their yield was poor. Hay, for instance, was of a very poor quality, and there was always insufficient food for cattle. Only recently have the intensive system of cultivation and better grass seed raised the productivity of Russian meadows. There are now over 4 million hectares of sowing area for annual meadows, and about 3 million hectares for perennial meadows.

MARKET GARDENS—ORCHARDS—VINEYARDS

Before the Revolution Russia hardly knew any market gardening. People usually kept gardens of small size, in which vegetables and fruit were chiefly grown for home consumption. The most popular vegetables were cabbage, beetroot, onions, carrots, and cucumbers. It was, and still is, the usual practice to salt cabbage in barrels in the autumn and use it during the winter; the same is done with cucumbers. In the south watermelons are very popular, and are also used in a salted condition like cucumbers. Since the abolition of rationing, in 1935, and the opening of local markets for the peasants' produce from their allotments, market gardening has begun to develop very quickly in the U.S.S.R.

In the north the climate allows to grow only apples, pears, and berries of all kinds. In the south it is possible to grow peaches, apricots, apples, oranges, lemons, figs, and grapes. The areas for the latter are the Caucasus, Crimea, Don, and Astrakhan regions; Bessarabia, where Russia had one-third of the total area under grapes, and the Middle Asiatic Republics, which cultivate grapes for the making of currants. The best grapes are grown in the Baku district.

The area of orchards in the south was about 2 million acres. The principal centres for fruit markets were the Crimea, Caucasus, and Turkestan. In olden times the export of fruit to the north of Russia was not much developed owing to the absence of a good system of refrigeration and cold storage and of a fast railway service. At present the whole industry of dried fruit has grown considerably, and the Russian soldiers at the front appreciate it very much.

TEA. Tea must be specially mentioned here, as there is still a belief in this country that Russian people are great tea drinkers, and that there is a special kind of Russian tea. In the first place, Russia grows very little tea, and only in the Batum district, and even there 80 per cent of the area is planted with China tea and the remainining 20 per cent with Japanese tea. The total Russian production of tea is very insignificant, amounting only to about several thousand pounds, whereas the annual consumption is equal to about 3 million pounds. So when we speak of Russian tea it means only the method of preparation of weak Chinese tea, which is consumed with or without lemon, or sometimes with milk. It is a fact that Russian people drink this weak tea several times a day

(tea, for the Russians, is primarily a drink not a meal), but the quantity of tea consumed per head is naturally much less than in this country, as they use China and not Indian tea.

VINEYARDS. Russia has always been very famous for the making of wines. The following is a very interesting extract concerning the wine industry in Russia, evidently written by a connoisseur: 'Excellent wine is produced in the Trans-Caucasus, that of North Caucasus being fair; Turkestan wine is light in flavour; champagnes of Turkestan and Trans-Caucasus are good in quality but are not allowed to mature sufficiently. Bessarabia (which is now a possession of Rumania) grows the best quality of French grapes. Spanish wines, which are handsomely flavoured wines, consumed chiefly in Moscow and Petrograd, are made in the Crimea.' We think they are as good now as formerly.

The total area of vineyards before the First World War was equal to about 700,000 acres, and the yield of grapes was about 500,000 tons, to the value of 3 million pounds sterling.

The principal national drink in Russia is, of course, vodka, a strong spirit drink made of bread or potatoes, 40 per cent in strength. It is somewhat like good gin, and has the same warming effect as brandy. Russia has never known prohibition. Before the First World War vodka was the Tsar's monopoly and now it is the State monopoly, yielding a good revenue. As far as the consumption of alcohol is concerned, the Russian citizen used to consume and consumes now about the same amount of it as an Englishman, and spends about 5 per cent of his income on tobacco and drink.

LIVE STOCK

HORSES. The horse has always been, and will always be, an important factor in the life of Russian peasants. In the time of Peter the Great human beings were valued according to whether they possessed horses or not. The wages of a man with a horse were twice as much as those of a man who did not own a horse. In pre-revolutionary Russia horses were very important, and all railway trucks were marked in white—'40 persons or 8 horses'. After the Revolution of 1917 the horse was considered so important that an elaborate investigation was made into the causes of the death-rate amongst horses. The sources for such an investigation were a census of all horses

and insurance policies for horses. Here are some interesting figures taken from this census of horses:

The average age of horses in Russia is 9·6 years, the percentage of colts being 6 per cent, and that of old horses 25 per cent; in the north 50 per cent of the horses are old. The death-rate of horses between 8 years and 9 years is 8 per cent, and the main causes of death are ordinary illnesses—64 per cent, infectious diseases—11 per cent, accidents—10 per cent, and other reasons—15 per cent.

Two per cent only of the total number of horses were used in the cities, the remaining 98 per cent being used in the fields and villages. The density of horses in Russia was 25 horses for every hundred of village population.

The general type of horse in Russia is the ordinary peasant horse, but there are also special types like the steppe horse, forest horse, and mountain horse. The breeding of horses before the Revolution was practised mainly in the Don and Kuban regions by the State and private owners. In 1916 there were 3,000 private breeding stables and the total number of horses was well over 35 millions. The decrease in the number of horses after the Civil War and famine of 1921 was very great. The Caucasus lost 50 per cent of its horses, the Black Earth Region 64 per cent, and the Crimea 40 per cent.

During the period of the New Economic Policy (N.E.P.), introduced in 1921, the number of horses in Russia increased, and on the eve of forced collectivization—in 1929—it stood as high as 34 million head, that is, almost at the pre-revolutionary level.

The policy of wholesale collectivization, when peasants were forced to join collective farms, caused unprecedented slaughter of horses. This was due partly to a kind of sabotage, and partly to the consideration of getting something for the skin and flesh of one's own horse when it ceases to belong to the individual in the collective farm.

The effect of this slaughter was felt for several years, and in 1933 the U.S.S.R. had only 16½ million horses, or less than half of the number it possessed in 1929.

The decrease in the number of horses, owing to slaughter and over-mechanization, continued up to 1935 and 1936, when there were left in the U.S.S.R. only 15·5 million head of horses, or less than half of the pre-revolutionary level. (See Diagram XI.)

This branch of Russian live stock began slowly to improve

again after the inauguration of the Model Rules of Agricultural Artels in 1935, and after the first signs and anticipations of approaching war. (See Table 23.)

According to the Model Rules each household in the nomad districts of Kazakhstan, the Nagaisk district, and Buryat Mongolia was allowed to have up to 10 horses at its disposal.[1]

BIG HORNED CATTLE. Cattle in Russia are used chiefly for consumption, dairy produce, manure, and transport. In 1916 there were 59 million head of large horned cattle, but in 1933, owing to the slaughter of cattle which followed the forced collectivization of farms, the number had decreased to 38·6 million head. It had recovered by 1935 to 49 million head, of which 20 million were cows, and in 1938 it had reached 63 millions. It is interesting to note that the milk supply in Russia was always for local consumption: it could not be sent to distant places owing to lack of adequate transport and suitable containers. In 1938 the milk supplied to markets was 5½ million tons; in former Russia it was only just over a million tons. The same applied to meat.

Butter-making stations were mainly developed in western Siberia, and a considerable amount of butter used to be sent to England via Denmark (and was marked 'Danish Butter'). The total production of marketable butter in 1937 equalled 185,000 tons. The pre-revolutionary production of marketable butter was 120,000 tons. The annual production of cheese before the present War amounted to over 30,000 tons.

Meat for export was provided mainly by Siberia. Before the Revolution 83,000 tons of meat were exported annually, but after the Revolution the figure dropped to one-third and even less. The U.S.S.R. has followed the example of the U.S.A. in developing the meat packing industry, in which more than 40,000 workmen are engaged.

SHEEP. The breeding of sheep in Russia was practised mainly in the Black Sea area, Ukraine, and North Kholmogory. Here a fine merino type were bred, but those reared for internal markets were usually only the ordinary type, and these had different names according to the district or locality.

In 1916 there were 115 million head of sheep and goats in Russia. In 1929 the number had increased to 147 million head, and then, owing to the slaughter which followed forced collectivization, it decreased considerably, until in 1933 we find in

[1] See the text of the Model Rules, p. 177.

the U.S.S.R. only 50·6 million head of sheep and goats, or only one-third of the number prior to forced collectivization. The number has increased again since then, and in 1935 we find that there were 61 million head, while in 1938 the figure had risen to over 100 million.

The future of the cultivation of this branch of live stock lies, of course, with the Middle Asiatic Republics, with their natural pastures which can be used throughout the year. The bulk of the stock of sheep and goats is situated in this region, and the general conditions for rearing them are as favourable there as in Australia.

The Model Rules now allow each household of the collective farm to have at its disposal up to 10 sheep and goats, and in districts where stock-raising is well developed they are allowed 20 to 25 sheep and goats. This concession will no doubt give a great impetus to the quick recovery and progress of this important branch of Russian live stock.[1]

PIGS. There were not many pigs in Russia, and fine specimens were rare. Russian pigs are by nature coarser than European pigs, and are very famous for their bristles, only Chinese pigs being able to compete with them. The export of bristles through Nizhni-Novgorod (now Gorky) fair was a very important branch of foreign trade. Since the Revolution, and after the slaughter, the pig-breeding industry has developed again, and there are even Jewish pig farms which are only too glad to co-operate in developing the industry. There are good prospects for the further development of the Russian bacon industry. In former times there were only a few farms, which ran the bacon industry on English capital.

The trend of the development of this branch of Russian live stock was the same as that of horses, cattle, and sheep. The 20 million head of pigs in 1916 decreased, owing to the slaughter, to 12 million head in 1933. But in 1935 the number of pigs in the U.S.S.R. not only reached the pre-revolutionary level, but increased to 22·6 million head, and in 1938 had risen to 30 millions.

By the Model Rules of Agricultural Artels each household in the collective farm is now allowed to have at its own disposal one or two sows with their litters.

[1] See Model Rules, p. 177.

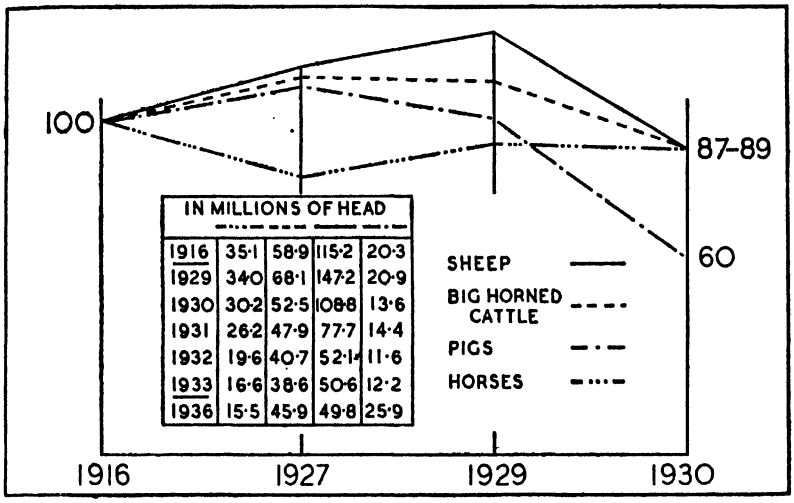


DIAGRAM XI.—LIVE STOCK IN THE U.S.S.R.

TABLE 28

Live Stock in the U.S.S.R. [1]

(In millions of head)

Live stock	1916	1929	1933	1938
Horses	35·1	34·0	16·6	17·0
Large horned Cattle	58·9	68·1	38·6	63·0
Sheep and Goats	115·2	147·2	50·6	102·0
Pigs	20·3	20·9	12·2	30·0

CHAPTER VI

INDUSTRY

THE capitalist system did not begin to develop in Russia until the middle of the nineteenth century, after the Emancipation Reform of 1861, when free labour appeared in the market.

The growth and development of capitalism proceeded at a great speed—its progress was marked in decades, not centuries—and at the beginning of the twentieth century the system was

[1] On the distribution of Live Stock amongst the State Farms, Collective Farms and individual farmers, see p. 223.

as highly organized in Russia as in other European countries.

Up to the Revolution of 1917 Russia remained predominantly an agricultural country in which large-scale industry was concentrated mainly in large cities and in a few industrial centres near the deposits of natural resources.

In order to grasp the trend of the rapid industrialization of the country and the quick progress of certain branches of industry in our time, we must not overlook the main features of Russian industry in the past, for these have greatly influenced the planned economy of the U.S.S.R.

In spite of what seemed to be the complete destruction of the whole industrial system of former Russia at the beginning of the Revolution and during the Civil War, Russian industry survived and was restored, during the period of the New Economic Policy, to its pre-revolutionary state. Moreover, it preserved the same features and the same key industries as before.

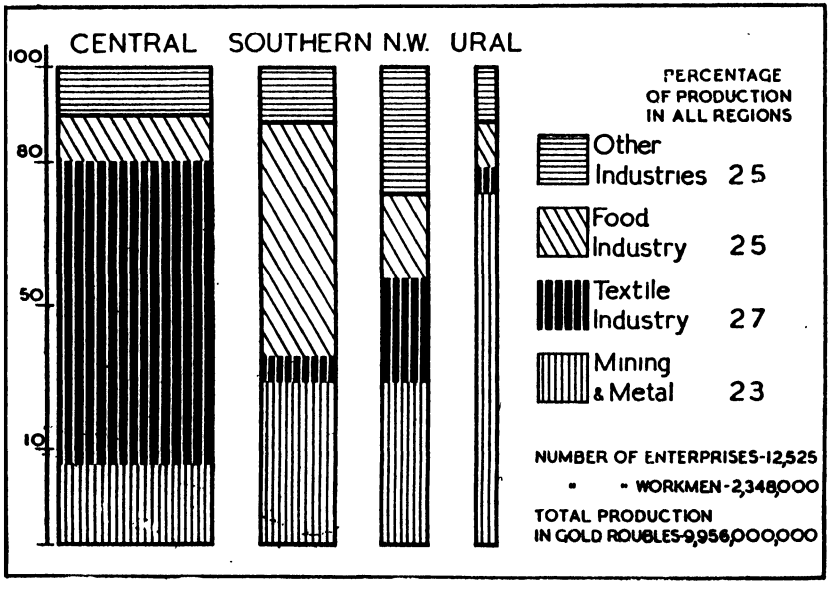


DIAGRAM XII.—KEY INDUSTRIES OF THE U.S.S.R., 1925–6

In the Central Industrial Region, according to the diagram, first place is occupied by the textile industry, which produces two-thirds of the total output of all industry in this region.

The development of the textile industry in this district was due mainly to the geographical and political situation. Owing to the climatic conditions, the population of this region could not support itself by agriculture alone, and therefore there was always a good supply of labour as an incentive to establishing industry there on a large scale. The demand for manufactured goods by the comparatively dense population was great and constant, and the facilities for sending manufactured goods by rail and water to all parts of the country were very good.

In the south (Ukraine) the activities of the population were concentrated mainly on food industries, such as sugar plantations, wine distilleries, flour mills, &c., because raw materials for these industries could be found in the locality.

In the north-western region metal industries developed, owing to the nearness of the European centres from which raw materials and machinery were received. Metals formed the key industry of the Ural district because of the richness of the mineral deposits in this region.

One of the characteristic features of pre-revolutionary industry was, as has already been mentioned, that it was concentrated in a few centres. An old-established mining industry, with archaic methods of work, flourished in the Urals; textile and metal works, run on more modern lines, were situated in the Moscow-Leningrad regions; coal-mining and metallurgical industries—on the Don.

This concentration of industry and labour in a few centres, unlike England, greatly facilitated the development of the Russian liberation and revolutionary movements.

Since the Revolution of 1917 Russian industry has experienced dramatic changes. During the Civil War, as we have noted, it collapsed, and then gradually recovered, under the influence of the New Economic Policy, until it reached its pre-revolutionary level. Since then Russian industry has been run on a systematic planned economy based on Five Year Plans.

The following diagram hardly requires any explanation. One thing only must be mentioned here: Russian industry disintegrated after the Revolution at greater speed than agriculture, and former industrial workers became pensioners of the peasantry, but it recovered much more quickly than agriculture and made striking progress during the Five Year Plans.

The first two Five Year Plans (1928–33 and 1933–8) were devoted entirely to the construction of capital goods and war material and equipment. Power-producing minerals and the

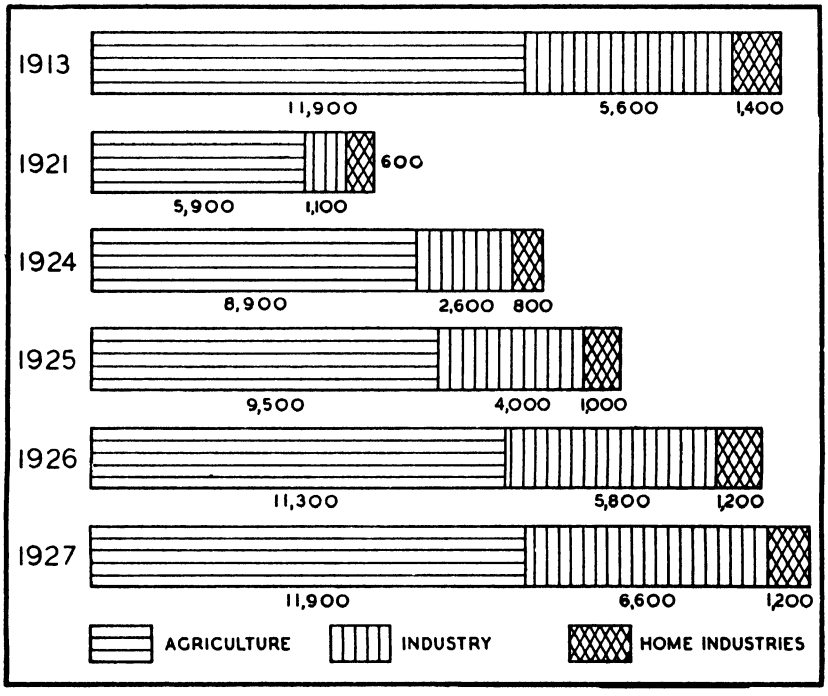


DIAGRAM XIII.—RUSSIAN OUTPUT—AGRICULTURE, INDUSTRY AND HOME INDUSTRIES (*In Millions of Roubles*)

utmost exploitation of them were the Alpha and Omega of everything during the decade of 1928 to 1938.

This has created present-day Russia, and we must, therefore, describe here the production of the most important of them, leaving the general analysis of economic trends for Chapter XII.

POWER-PRODUCING MINERALS AND METAL AND METALLURGICAL INDUSTRIES

The most important power-producing minerals in the U.S.S.R. are Oil, Manganese Ore, Iron and Steel, Coal and Anthracite, and Alloy Metals.

OIL. The main oil-producing regions in the Soviet Union are the Northern Caucasus (Grozny and Maikop regions), Azer-

baidzhan (Baku on the Apsheron Peninsula), and Georgia (Batum, Poti and Chiatury). Since the Revolution of 1917 and during the Five Year Plans new petroleum districts have been discovered in Siberia, in eastern districts, and in the Moscow and Leningrad regions. But the output of these is much smaller than that of the old areas. Since the Revolution the production of oil has increased threefold. The yearly output now reaches 30 million tons, whereas in pre-revolutionary times the output was only 9 million tons.

TABLE 24

Oil Production including Gas in the U.S.S.R. (in tons)

First Five Year Plan		Second Five Year Plan	
1928	11,749,000	1933	22,458,000
1929	13,810,000	1934	25,612,000
1930	18,923,000	1935	26,763,000 [1]
1931	23,162,000	1936	29,293,000
1932	22,319,000	1937	30,600,000
	1939	29,530,000 [2]	
	1950	35,400,000	

But the consumption of oil, owing to the increase in population, gigantic investment in the production of capital goods, and the requirements of a huge mechanized army, have also increased about threefold since the Revolution. The consumption of petroleum products in 1935 was 17,497,500 tons, whereas in 1913 it was 5,913,000 tons. This means that the consumption of oil, in relation to production, is about the same as it was in pre-revolutionary times.

At present the growth of the demand for oil in the U.S.S.R. is very great. In 1938, out of the 27 million tons of crude oil which was refined, Soviet Russia consumed over 21 million tons at home. This left a surplus of 5 million tons, of which three-quarters went into the war reserve.[3] This explains the decrease in exports of Russian oil. They decreased from 6 million tons in 1932 to one million tons in 1938, and 500,000 tons in 1939.

[1] The output of Petroleum refinery products consists chiefly of fuel oil (8·4 million tons), kerosene (4·8 million tons), motor spirit (2·3 million tons), lubricating oil (1·3 million tons), and also gas oil asphalt, pitch, and paraffin wax.

[2] The output of Crude Petroleum in the U.S.S.R. was, according to the League of Nations and Petroleum Press Service, in 1935—25,240,000 metric tons; 1936—27,385,000 metric tons; 1937—27,821,000 metric tons; 1938—28,859,000 metric tons (see D. T. Jack, *Studies in Economic Warfare*. London, 1940).

[3] Bryce C. Hopper, *Foreign Affairs*. New York, January, 1940.

Any considerable increase in exports of oil from the U.S.S.R. at present or in the near future can therefore take place only at the expense of home consumption.[1]

MANGANESE ORE. The Soviet Union is the largest producer of rich manganese ores in the world, containing 30 per cent and more of metal. They are used chiefly for the manufacture of iron and steel. They are situated in Georgia, at Chiatury, and in the Ukrainian Republic (Nikopol). At present the average annual production of manganese ore in Soviet Russia is 3 million tons. The production in pre-revolutionary times was over 1 million tons.

TABLE 25

Production of Manganese Ore in the U.S.S.R.

(In tons)

1913 1,245,300

First Five Year Plan		Second Five Year Plan	
1928	702,400	1933	1,021,300
1929	1,409,200	1934	1,821,000
1930	1,384,600	1935	2,384,000
1931	883,500	1936	2,752,000
1932	832,100	1937	2,752,000 (?)

Home consumption of manganese ore in Soviet Russia is as with petroleum, very high, and only about a quarter of the total output was exported during each year of the Second Five Year Plan.[2] This fact suggests that the countries interested in imports of manganese ore from Russia can hardly expect any increase in the amounts received by them in the near future. The occupation of Poland, the war with Finland, and the last war have greatly increased home consumption, and for many years to come Russia cannot be counted upon for supplies of manganese ore to world markets.

IRON AND STEEL. It was well known even in pre-revolutionary days that there were vast deposits of iron ore in Russia, but the amount of deposits which it had been possible to investigate was small. At the present time the U.S.S.R. claims that the estimated reserves of iron ore amount to 10,900 million tons—five times more than in pre-revolutionary Russia.

[1] It may be interesting to note that German imports of minerals from all sources during the years 1935–7 were equal to about 3 million tons. From the U.S.S.R. Germany imported 491,891 tons in 1935; 347,977 tons in 1936; 301,000 tons in 1937, and only 78,000 tons in 1938.

[2] Exports of Manganese Ore to Germany in 1938 were 61,000 tons.

Production of iron ore increased greatly during the Second Five Year Plan and is at present equal to 80 million tons a year. Pre-revolutionary Russia produced three times less.

The main sources of supply of iron and steel are still the same old areas—the south of Russia (Krivoy Rog) and the Urals (Magnitnaya Gora). There is now, however, a difference in the distribution of output between the two areas. In pre-revolutionary times the south of Russia supplied 75 per cent of iron ore; the remaining 25 per cent was produced in the Urals. Now, owing mainly to military and strategical considerations and the growth of new industries, the Urals, with the famous Magnitnaya Gora (now known as Magnitogorsk), is the more important centre of production, and yields over 60 per cent of the total output of iron ore in Soviet Russia.

Up to 1934 the U.S.S.R. imported iron and steel. Since then, however, Russia has begun to export iron, steel, and rolled metal. But exports have not been very large, and in the near future the Soviet Government, owing to its own heavy requirements of iron and steel, will hardly be able to produce any large surplus for export.

TABLE 26

Production of Iron Ore in the U.S.S.R. (in tons)

1913	9,213,500		
First Five Year Plan		Second Five Year Plan	
1928	6,133,000	1933	14,555,000
1929	7,988,000	1934	21,509,000
1930	10,633,400	1935	27,078,000
1931	10,591,300	1936	27,900,000
1932	12,076,000	1937	27,743,000
1950	40,000,000		

COAL AND ANTHRACITE. The most important coal-producing regions in pre-revolutionary Russia were the Donets Basin and the Dombrovsk Basin in Poland. The coalfields in the Ural district were not developed very much. At present the chief coal-producing areas are the same Donets Basin and the Kuznetsk Basin on the River Tomi. The deposits of the latter exceed those of the Donets Basin and of the Karagandinsk Basin in Kazakhstan.

Coal deposits in pre-revolutionary Russia were estimated at 230,000 million tons. The computations presented to the International Geological Conference in 1937 claimed that Soviet Russia possessed known coal deposits seven times as great as those of

former Russia. Most of the Donets coal and anthracite exports are shipped from the port of Mariupol on the Sea of Azov, and in winter months from the ports of Nikolayev and Theodosia on the Black Sea. In pre-revolutionary times coal was exported mainly from the Dombrov Basin in Poland, which was, after the invasion of Poland, within easy reach of Germany.

The yearly production of coal and anthracite has increased since the Revolution up to 127 million tons, or four times as much as in pre-revolutionary times.

TABLE 27

Production of Coal and Anthracite in the U.S.S.R.

(In tons)

1913 29,117,000

First Five Year Plan		Second Five Year Plan	
1928	35,500,000	1933	76,200,000
1929	40,000,000	1934	93,900,000
1930	47,800,000	1935	108,900,000
1931	56,800,000	1936	126,400,000
1932	64,700,000	1937	127,100,000

The home requirements for coal and anthracite in Soviet Russia are at present so high that exports represent only a small proportion of the total production.

TABLE 28

Exports of Coal and Anthracite from the U.S.S.R.

(In tons)

First Five Year Plan			Second Five Year Plan		
Year	Coal	Anthracite	Year	Coal	Anthracite
1928	389,000	114,000	1933	1,011,000	806,000
1929	727,000	611,000	1934	1,169,000	997,000
1930	1,043,000	814,000	1935	1,093,000	1,090,000
1931	1,000,000	674,000	1936	799,000	1,004,000
1932	920,000	876,000	1937	470,000	804,000

ALLOY METALS. In pre-revolutionary times Russia imported most of the metals in this group, especially non-ferrous metals like copper, nickel, aluminium, lead, zinc, and tin, and in spite of her own rich reserves of these materials, continued to do so for nearly two decades after the Revolution of 1917.

COPPER. Deposits of copper are found mainly in the Kirghiz Republic, the Yenissey Province and the Altay region. New discoveries have been made in Kazakhstan and in the Lake Balkhash region. The largest deposits are in the Akmolinsk district (Uspensky mines), where the ores have a copper content of 16 per cent. In some places, such as the Kirghiz Steppes, copper is very abundant and it crops out on the surface.

Pre-revolutionary Russia produced over 13,000 tons of copper a year. During the First Five Year Plan production was raised to 40,000 tons a year, and during the Second Plan to 60,000 tons a year.

In spite of this Soviet Russia continued to import copper yearly at the rate of 20,000 tons during the First Five Year Plan, and 30,000 tons during the Second Plan. These imports consisted mainly of ingots, sheets, wire, and sulphate, so necessary for her gigantic, industrial enterprises as well as for military requirements.

ZINC. Rich deposits of zinc-lead-silver in the Altay and Nerchinsk regions were hardly utilized in pre-revolutionary Russia, in spite of the fact that almost all districts rich in minerals were the property of the Russian Crown.

Silver and copper only were produced. Zinc and lead were considered as by-products which required highly skilled labour and expensive metallurgical processes for their production, and were, therefore, neglected.

It is no wonder, therefore, that imports of zinc in pre-revolutionary Russia stood very high and reached 30,000 tons a year. Soviet Russia continued to import zinc at the same rate. The highest figure for zinc imports was registered in 1930, when 40,000 tons were imported. It was only during the Second Five Year Plan that imports of zinc began to decrease. This was due partly to the fact that the primary needs in zinc were more or less satisfied, and partly to the fact that production increased to 60,000 tons a year (1935–7). Even exports of zinc were attempted at this time, but they were insignificant and consisted mainly of lithopone.

ALUMINIUM. Large deposits of bauxite, which is used in the production of aluminium, were discovered after the Revolution of 1917 in the Omsk region (Akmolinsk). They are estimated at no less than 30 million tons, but only about one-third of them has been investigated. In addition to bauxite there are in the U.S.S.R. other alloys with a large aluminium content.

Production of aluminium is concentrated on the Kola Peninsula (Kondalashsky aluminium factory). In 1937 it was planned to produce 80,000 tons of aluminium, but the actual output was only equal to 37,700 tons.

Imports of aluminium stood very high during the First Five Year Plan, especially in the latter years (1930–2) when imports were registered as high as 20,000 tons, in 1931, and 13,000 tons, in 1932.

LEAD. Deposits of lead are situated mainly in the Altay region. Its production, in spite of all efforts, is not very large, and the yearly output equals, on the average, from 36,000 to 50,000 tons. Russian exports of lead are very insignificant and do not exceed one hundred tons a year.

In pre-revolutionary times Russia used to import a considerable quantity of lead, and in 1913 imports reached 60,000 tons. During the First Five Year Plan, also, imports of lead to the U.S.S.R. were very large and amounted, on the average, to 38,000 tons a year. Even during the Second Five Year Plan they did not diminish much. Lead was imported mainly in the form of pig-lead, red-lead, and scrap.

TIN and NICKEL. The production of both these metals began only in 1934. Deposits of nickel are found in the Urals, in Orsk, Aktybinsk, and on the Kola Peninsula. Deposits of tin are situated in the East of Siberia, Kazakhstan, and in the Yakutsk region.

The output of both metals in 1937 (6,000 tons of nickel and 12,000 tons of tin), was not sufficient for the requirements of home industry, and Soviet Russia depends continually on imports of both metals.

The average figures for imports during the Second Five Year Plan were 6,000 tons of nickel a year and 8,000 tons of tin a year. The chief sources of supply of both metals were the Netherlands, the United Kingdom, and Belgium.

FERRO-ALLOYS. The regions richest in ferro-alloys in the U.S.S.R. are the Urals, Transcaucasia, Bashkiriya, the Middle Volga district, and Kazakhstan.

The most important of the ferro-alloys are ferro-chrome, ferro-manganese, and ferro-silicon.

Imports of ferro-alloys were very high before the Revolution (21,900 tons in 1913), and higher still during the First Five Year Plan (31,000 tons in 1931 and 33,300 tons in 1933). It was not until towards the end of the Second Five Year Plan,

when home production increased, that they began to diminish. These imports consisted mainly of ferro-chrome, molybdenum, titanium, tungsten (wolfram), vanadium, and other alloys.

Exports of ferro-alloys from the U.S.S.R. were insignificant and consisted only of ferro-manganese and ferro-silicon.

TABLE 29

Production of Chrome Ore and Chromium in the U.S.S.R.

(In tons)

	1933	1934	1935	1936
Chrome Ore	109,400	127,400	177,900	220,000
Chromium	3,000	3,700	6,500	—
Ferro-Silicon	40,400	87,400	135,600	117,100
Ferro-Manganese	70,800	105,600	138,700	143,000

APATITE. This mineral was only discovered in the U.S.S.R. in 1930. The deposits of apatite, according to the estimates of Russian geologists, are very rich, and in January 1937 it was claimed that there existed 1,994 million tons of ore containing 21·4 per cent of P_2O_5. The estimated deposits of metal were equal to 477 million tons.

Two kinds of apatite are produced: crude and concentrated. The first kind comes from the Khibini mines, and the second from the Kola Peninsula. Crude apatite is used chiefly for metallurgical purposes, and concentrated is used in the production of super-phosphates, phospherin acid, thermophosphates and other fertilizers and chemicals.

TABLE 30

Production of Apatite in the U.S.S.R.

(In tons)

Year	Crude	Concentrated
1930	265,700	—
1931	573,200	26,900
1932	380,200	156,500
1933	686,800	213,400
1934	1,136,200	382,800
1935	1,555,300	767,900

Exports of apatite from the U.S.S.R. were as follows:

TABLE 31

Exports of Apatite from the U.S.S.R.

(In tons)

Year	Crude	Concentrated
1932	73,761	26,362
1933	193,099	100,737
1934	198,977	226,280
1935	152,854	238,095

The largest consumers of Russian apatite in its crude form were Germany (111,471 tons in 1934 and 97,046 tons in 1935) and Belgium (54,072 tons in 1934 and 30,792 tons in 1935). Concentrated apatite the U.S.S.R. exported to Belgium, Italy, France, and Germany (65,307 tons in 1934 and 38,703 tons in 1935).

RUBBER. The production of synthetic rubber was begun in Soviet Russia in 1931, although natural rubber plant was not cultivated until 1937.

TABLE 32

Production of Synthetic Rubber in the U.S.S.R.

Year	Amount of Rubber
1933	2,204 tons
1934	11,139 ,,
1935	25,589 ,,
1950	56,000 ,,

In spite of a great increase in the production of synthetic rubber, the U.S.S.R. will have to import natural rubber until the cultivation of rubber-bearing plants is firmly established and the new factories are able to meet the growing demand for rubber.[1]

In pre-revolutionary Russia imports of rubber were equal to about 13,000 tons a year (1,276 long tons in 1913). During the Five Year Plans they were as follows:

TABLE 33

Imports of Rubber to the U.S.S.R.

First Five Year Plan		Second Five Year Plan	
1927/28	14,700 tons	1933	31,270 tons
1929	12,827 ,,	1934	48,109 ,,
1930	16,408 ,,	1935	38,272 ,,
1931	28,200 ,,	1936	31,500 ,,
1932	30,738 ,,	1937	31,000 ,,

[1] Rubber-bearing plants are cultivated in Transcaucasia, northern Caucasus, Crimea, Ukraine, Central Asia, and even near Moscow.

CHAPTER VII

THE TEXTILE INDUSTRY

THE textile industry is the oldest industry of Russia. For a long time it existed as a home industry, and was worked not so much for the open market as for the satisfaction of the personal needs of the peasants.

The oldest branch is the flax industry, which has preserved its character as a home industry up to the present time, being now organized into artisan industrial co-operatives.

The manufacture of flax fabrics is concentrated mainly in the areas where flax grows; that is to say in the Vladimir, Ivanovo-Vosnessensk, Kostroma, and Yaroslavl districts.

The woollen industry flourished mainly round Moscow and Leningrad.

The cotton industry hardly existed in olden days, and it was not until the advent of the capitalist system to Russia that it began to develop very quickly into an important key industry.

The main centres of the Russian textile industry have remained the same for many centuries. They are the Moscow and Ivanovo-Vosnessensk regions and the Leningrad region. A third centre which was established in the Polish Provinces, with Lodz as the ' Russian Manchester ', was lost, as we know already, after the Revolution of 1917.

At the end of the New Economic Policy and on the Eve of the First Five Year Plan the textile industry, according to the diagram on page 120, represented one-quarter of the total value of the whole output of Russian Industry. During the First Five Year Plan (1928–33) it did not develop much, and its output, like that of agriculture, food industry, and transport, remained almost stationary. During this period, as we know, everything was sacrificed for the sake of the capital goods, military equipment, and munitions which have made possible the Russian victories over Hitler's armies, and turned Leningrad, Moscow, and Stalingrad into unconquerable fortresses. This is the reason why textile goods were scarce, rationed, and sometimes quite unobtainable at this time.

During the Second Five Year Plan (1933–8) the textile industry made better progress, as can be seen from the following table.

TABLE 34

The Output of the Russian Textile Industry

Product	1932	1937	1950
Cotton fibre (in thousand tons)	390	717	—
yarn (in thousand tons)	355	533	—
fabrics (in million metres)	2,694	3,448	4,686
thread (in million reels)	540	892	—
Flax fibre (in thousand tons)	59	134	—
fabrics (in million metres)	134	285	—
Woollen fabrics (in million metres)	89	108	159·4
Silk fabrics (in million metres)	22	59	—
Socks and Stockings (per million pairs)	208	409	580

The volume of production of the majority of textile goods increased, according to the table, more than two-fold during the period under review. This was due to planned economy, large investments in the 'light' industry, introduction of automatic machinery, and higher productivity of labour. But the tempo of the increase, as compared with that of capital goods, was much slower, and the demand of the population for textiles, due to the general improvement in the standard of living, grew too fast for production to cope with it.

The War is over and the U.S.S.R. faces now the problem of satisfying the needs of the population in cotton and other fabrics. It is a fact that Soviet Russia, in spite of a very great increase of cotton plantations and efforts to treble the output of manufactured goods, is still far behind the big industrial countries like U.S.A., France, and Great Britain in the production of cotton fabrics per head of population.

TABLE 35

Production of Cotton Fabrics per head of Population in U.S.S.R., France, U.S.A., Great Britain in 1937

Country	Square metres per head of population
U.S.S.R.	16
France	31
U.S.A.	58
Great Britain	60

One more feature of the Russian textile industry must be mentioned here, and that is the character of the export trade. It has remained almost the same as in pre-revolutionary times. Even the total volume of exports has not changed much, and the main importers of Russian textiles are still the same. But nowadays they are able to receive a greater variety of textiles from the U.S.S.R. than in pre-revolutionary times.

In 1913 the total volume of exported manufactured cotton goods equalled 17,200 tons; in 1936 it was 17,400 tons. The main importers of Russian textiles in 1913 and 1936 correspondently were as follows:

TABLE 36

Exports of Textiles from Russia in 1913 and 1936
(In thousand tons)

	1913	*1936*
Afghanistan	1,749	2,892
Iran	3,862	6,281
China	4,294	3,279
Mongolia	590	2,306
Turkey	393	2,218

CHAPTER VIII

THE FOOD INDUSTRY

THE food industry in the U.S.S.R. is at present organized quite differently from that of pre-revolutionary Russia. Apart from the nationalization of the industry by the State and local authorities, it is now highly mechanized and is run largely on the lines of the American system of food production.

The poor conditions of food supply in former Russia, when the population was often either starving or under-nourished, and the hardships endured during the first fifteen years after the Revolution, when rationing became second nature to the Russians, have taught the present Soviet leaders how to make bold decisions and how to use their dictatorial powers to establish a complete technical reconstruction of the old-fashioned system of food supply.

At present nearly 75 per cent of all bread produced in the U.S.S.R. is baked in mechanized bread factories, and the flour and other ingredients are constantly analysed in laboratories. Automatic bread-making is spreading very rapidly. New methods and new devices are being applied all the time in order to mechanize the whole process, from mixing the flour to delivering the finished loaf to the consumer. In their daily output of bread the Soviet bakeries compete with the biggest

American bakeries, such as the Ward Baking Company. Some of the bakeries in the U.S.S.R. reach a daily capacity of 280 tons.

During the Second Five Year Plan the production of bread increased from 8 million tons in 1933 to 19 million tons in 1937. The most important bread-baking concern is the All-Union Co-operative Association, which alone produced 10½ million tons of bread a year (1937).

The *flour* industry also is organized on a new basis. Apart from efforts to improve the quality of all flour produced, great attention is being given to the problem of increasing the proportion of high-grade flour in order to satisfy the needs of confectioners and of the macaroni industry.

The majority of existing flour mills (132,000) are windmills situated in rural districts under the control of local soviets. There is a very healthy tendency to decentralize the management of mills and attach each of them to a definite collective farm. Old-fashioned roller mills still exist and produce a quarter of the total output of flour, but great efforts are being made to replace them by building new mills.

The *canning* industry is the third important branch of food supply, and great attention is paid to its organization. American methods and technique have been largely utilized, and in certain processes the Russians are even more advanced than the Americans. The volume and variety of the output of the canning industry are at present very great and reaches nearly one thousand million cans a year.

The *meat* industry in the U.S.S.R. has been boldly reorganized on a new basis, and the demand for meat of Russia's vast population is now satisfied by more humane and hygienic methods. The primitive slaughterhouses of former times have been replaced nearly everywhere by modern meat-packing plants, and mechanized processes have been introduced for dressing meat and making meat products.

The *fish* industry also is now run on a large-scale production basis, and the place of salt herring, on which generations of Russians were brought up, has been taken by fresh, frozen, and smoked fish. This became possible (not only in the case of fish but with all perishable goods) owing to the intensive application of electricity and refrigeration, the use of which was negligible in pre-revolutionary Russia.

In order that the reader may have some idea of the volume of food production under planned economy in the U.S.S.R.,

and the progress achieved during the second quinquennial period (1933–8), we give below some figures concerning the output of the most important items of food in the U.S.S.R.

TABLE 37

Food Industry in the U.S.S.R.

Items of Food (In thousand tons)	1932	1937 *	1950
Bread and Rolls	8,065·1	19,131·0	—
Meat	483·2	812·1	1,300·0
Sausages	75·3	368·6	—
Fish (catch)	1,333·0	1,608·9	2,200·0
Butter (animal)	71·6	185·2	275·0
Butter (vegetable)	409·7	495·3	880·0
Sugar (granulated)	828·2	2,421·1	2,400·0
Sugar (refined)	437·8	1,032·2	
Canned goods (million conventional cans)	906·1	1,371·9	—
Alcohol (thousand gallons)	3,648·0	7,625·1	100,800·0 *
Beer (thousand gallons)	4,206·0	8,804·1	—
Flour (thousand tons)	—	—	19,000

* Dekalitres.

CHAPTER IX

THE GOLD INDUSTRY

GOLD was discovered in Russia in 1724, but the actual extraction of gold did not begin until towards the end of the eighteenth century (1752), and for a long time was the privilege of the Government.

The main regions of the Russian gold industry were, and still are, eastern Siberia, the Urals, and western Siberia. In western Siberia the most important districts are Altay and Tomsk; in eastern Siberia, the province of the River Yenissey, the basins of the Rivers Middle-Tunguska and Angora, and the Bolshoy Pit. The largest gold-fields in Siberia are the Olekma-Vitim mines in the Irkutsk and Yakutsk provinces and the Nerchinsk district. The production of gold in the Vitim fields (which used to produce half of the eastern Siberian total output of coal) has been carried on since 1913 exclusively by the Lena Goldmining Co. (Lensoto).

In the Far East the most important goldfields are located in the basins of the Rivers Zeya and Amur, and also on the coast of the Okhotsk Sea.

The oldest region of gold production is the Urals. The

output of gold here was equal to 25 per cent of the total Russian output.

The gold industry in Russia developed very slowly, owing to the Government monopoly of production of gold, and also to the lack of communication, absence of skilled labour, machinery, tools, and foodstuffs. The influx of capital was also very insignificant, and for a long time placer gold only was produced.

The average output of gold in Russia was as follows :

TABLE 38

The Output of Gold

1814	16·09	poods
1815–20	13·18	,,
1821–30	209·43	,,
1831–40	429·25	,,
1841–50	1347·92	,,
1851–60	1569·65	,,
1861–70	1656·24	,,
1871–80	2181·23	,,
1881–91	2200·00	,,
1913	3396·6	,, [1]

Up to 1890 Russia was a gold-exporting country, but since then her imports of gold have greatly exceeded her exports, in spite of the increase in production of gold. This was due to the rapid development of the capitalist system in Russia, and to the monetary reform, which introduced the gold standard.

On the eve of the First World War there were 30 share companies in Siberia with a total paid-up capital of over 40 million dollars. The total capital in the industry was accounted as high as 100 million dollars. The net profit of the companies was equal, on an average, to 10–12 per cent.

Up to the war with Napoleon (1812) no private persons were allowed to extract gold in Russia. After that time private entrepreneurs were allowed to do so, but only on their own lands. In 1826 Count Kankrin succeeded in obtaining permission for private persons to extract gold on Government lands, and, since then, private enterprises have developed. In 1838 there were already 200 private persons extracting gold in Siberia, apart from the Altay and Baykal districts, which the Government kept to themselves.

[1] The average production of gold in Siberia during 1910 to 1914 was calculated by some experts as 1,500,000 troy ounces annually.

In 1870 a general law, regulating gold industry, was passed. It abolished many restrictions and put the gold industry on the same level as other industries. The drawback of the new law was that it required that all extracted gold be delivered to the Government at the entrepreneur's expense, and the coinage to be paid for.

Owing to the strict regulation of the private gold industry, and to the Government monopoly of gold, a ' gold rush ' such as is familiar to other gold-producing countries, did not take place in Russia.

The actual producers of gold in Russia were either members of the local Asiatic population or Russian colonists and exiles to Siberia. The work in the mines was usually performed by tributors, who paid the owner of the mine a stipulated part of the gold mined by them. It is true that some private entrepreneurs who came over to Siberia made considerable fortunes, not, however, by the prospecting and discovery of new fields, but by the exploitation of labour.

The Russian exiles and workmen engaged in Government and private mines were allowed by law to extract gold in their spare time, and most of them did so in order to get an additional income. They were called ' *Starateli* ' (from the Russian verb ' *Staratsya* ', meaning ' to work more intensely '). Some of the employers objected to their workmen becoming *starateli*, and there were many strikes of workmen who insisted on their legal right to do so.

After the Revolution of 1917 the gold industry was completely disorganized, but it began to recover again after 1921, when two trusts were formed : *Lensoto* and *Uralplatina*. (Prior to the Revolution, Russia was actually the only world producer of platinum, which was dredged in the Urals. British Columbia, comparatively speaking, produced a very small quantity.)

Soon afterwards were formed several other trusts, such as Uralzoloto, Yenisseyzoloto and Zolotoruda, and for several years the entire gold industry was run by these separate concerns. Then, in 1927, the gold industry was declared to be of All-Union significance, and one big company, under the name of Soyuszoloto, was formed.

It is hardly necessary to describe here the bitterness and mutual distrust in the relations of the English concession, the Lena Goldfields Co., and the Soviet Government, as this was fully reported and discussed in the English press.

The Soviet Gold industry, under the guidance of the Soyuszoloto and all the trusts incorporated in it, began to develop rapidly, after the investment in it of large capital, wide research work, and the investigation and discovery of new gold-bearing areas.

Unfortunately, but perhaps very wisely, the Soviet Government became very discreet about publishing the detailed figures of the output of gold in the Soviet Union. According to information published in this country, 'The actual production of gold in Russia in 1935 amounted to 5,650,000 ounces, worth (at £7 to the ounce) about £40,000,000, which is more than half the output of South Africa and about four times Russia's pre-war output' (J. M. Keynes, 'The Supply of Gold', the *Economist*, September, 1936). According to the estimates made by the Gold Union Corporation, the output of gold in the U.S.S.R. was 5,831,000 fine ounces in 1935 and 7,350,000 ounces in 1936. The National gold reserve in 1936 was estimated at 33,000,000 fine ounces.

At present about 50 per cent of the output of gold in the Soviet Union is produced in mechanized mines. The old type of starateli and individual prospectors have not disappeared entirely, and a good deal of the output is delivered by them. But now they are organized into either trade unions, or artels of starateli similar to the agricultural artels.

The Russian gold industry, owing to its peculiarities,—the fact that the product is found in small quantities in many different localities, the long established traditions of the local population, and the very low density of population—has to be run, for the time being, on decentralized lines. The extraction of gold by starateli, private prospectors and private enterprises, although strictly controlled by the Government, will be practised until such times as the Government masters the mechanization of the whole industry, intensifies the local means of communication and greatly increases the density of the Siberian and Ural population.

CHAPTER X

THE TIMBER INDUSTRY

THE U.S.S.R. is richer in forests than any other country in the world. Her forest area is twice as large as that of Canada. It occupies 30 per cent of the total world forest area and is equal to approximately 1,400 million acres. The greatest area of forest land is situated in Siberia (900 million acres).[1]

Russian timber comes from two forest zones.

The first zone, as we already know, stretches between the 60th and 66·5th parallels, and is wooded mainly with coniferous trees such as pines and firs. The second is situated between the 53rd and 60th parallels, and here the woods are deciduous.

Negligence in supervising the forests, absence of laws for their protection and of planning their utilization were well-known features of Russian forest economy in pre-revolutionary times and in the first years after the Revolution of 1917.

The devastation of the forests during the Civil War (1917–19) was appalling. Even trees which had been planted for the protection of rivers and railway lines were cut down and used for fuel. During that time the Russian timber industry experienced a great decline, and exports of timber on the eve of the First Five Year Plan decreased to one half of the volume of pre-revolutionary times.

After the introduction of planning in the Soviet Union great efforts were made to organize extensive studies of forestry and afforestation, to introduce mechanization and rationalization into the timber industry, and to develop the paper and wood-pulping industry.

The First Five Year Plan passed, and the leaders of reconstruction in the timber industry of the U.S.S.R. reported great improvements, but they themselves were dissatisfied with the slow tempo of progress in this branch of industry.

The timber industry, according to the report of Mr. Lobov at the Seventeenth Conference of the Communist Party, progressed more slowly than any other branch of industry in

[1] According to the *Great Soviet Encyclopaedia* (1938 Vol. XXXVI, p. 632) the total forest area amounts to 956 million hectares or 43 per cent of the total area of the U.S.S.R. Twenty-seven per cent of the forests is to be found in the European part of the U.S.S.R. and 73 per cent in the Asiatic part.

the Soviet Union. The absence of proper machinery, the poor assortment of hand tools, and the unsatisfactory organization of labour in the industry were the chief causes of its backwardness. The mistake of invading the industry with conscript labour, recruited from non-proletarian elements, has been realized by the management of the industry itself. Russian timber, according to Lobov, was inferior in quality, and 35 per cent of it was exported in a raw state. In addition to this, Soviet Russia, which possesses one-third of the world's area of forests, was short of paper at that time.

The progress achieved by the timber industry at the end of the Second Five Year Plan, according to the Soviet official information, was as follows :

TABLE 39

Production of Timber in the U.S.S.R.

Product	Unit	1913	1937	1950
Timber cut	Million cubic metres	30	201	280
Sawn lumber and timber	Million cubic metres	11·5	33·8	39
Plywood and veneer	1,000 cubic metres	165	672	—
Paper	1,000 metric tons	205	832	—
Capacity of saw-frames	Million cubic metres	15	74	—

The greatest increase, as can be seen from this table, is in cut timber. The volume of all other products increased only three- or fourfold during a quarter of a century. The increase of the capacity of saw-frames was inadequate, and this, perhaps, explains the slow tempo of the development of the timber industry.

The State Planning Commission (Gosplan) considers that the present causes of the lagging of the Russian timber industry behind the general progress of the national economy are connected with the transport of timber in Soviet Russia.

The natural supply of timber and the means of its exploitation are situated hundreds or thousands of miles apart from each other. The result is that there is tremendous waste owing to the transport of timber from Siberia to the European part of Russia, and vice versa. The same circumstances arise in the transport of timber from the Urals to the south-western part of

the Ukraine, and in the reverse direction from the north-western regions to the Caucasus and the Volga districts.

The average distance of railway transport for timber in the U.S.S.R. is very high and is increasing all the time at the expense of water transport. In 1933 it was 688 kilometres, and had risen to 1,055 kilometres in 1937. Over 77 per cent of timber is sent by rail and only 23 per cent by water transport.

Exports of timber from the U.S.S.R. during the first two Five Year Plans were as follows:

TABLE 40

Exports of Timber from the U.S.S.R.[1]

(In cubic metres)

1913 10,358,000

First Five Year Plan		Second Five Year Plan	
1928	5,486,000	1933	10,582,893
1929	8,840,000	1934	10,845,958
1930	12,198,000	1935	11,867,227
1931	10,493,000	1936	10,572,364
1932	10,300,500	1937	8,596,262

1938 5,320,919

Before the last war Great Britain was the biggest importer of Russian timber; she took over 40 per cent of the total Russian exports. Germany, which absorbed 20 per cent, came second.

Great hopes were placed in the Timber Convention of 1936, which was concluded by the following States: Finland, Sweden, U.S.S.R., Poland, Austria, Czechoslovakia, Rumania, Yugoslavia, and Latvia. This was intended to stabilize the timber market. The last war has destroyed this step forward, and it is very difficult to predict what future developments will occur in the timber trade.

[1] *International Review of Agriculture*, Rome, 1939, N.10. In Russian statistics (see Appendix) the exports of timber are given in tons. There was a great decrease of timber exports in 1938 (3,345 thousand tons as compared with 5,103 thousand tons in 1937).

CHAPTER XI

EXPORTS AND IMPORTS

SINCE the Revolution of 1917 many changes have taken place in the volume, character, and policy of the foreign trade of the U.S.S.R. But the basic principle of its organization, proclaimed as early as 22 April 1918 in a decree signed by Lenin, has remained the same : nationalization of the whole of Russian foreign trade.

This principle was endorsed later by the decrees of 9 August 1921, 13 March 1922, 16 October 1922 and 12 April 1923, which established the Government monopoly of foreign trade as a basic law of the U.S.S.R.

During the first two or three years after the Revolution the exchange of Russian goods in the foreign market was practically at a standstill. It was only after 1920, when a delegation of the Central Union of Co-operative Societies, headed by L. B. Krassin, arrived in this country, that the trading relations of the Soviet Union with the outside world began to develop again. It is true that at that time they were confined mainly to imports, mostly of capital goods and machinery, into the U.S.S.R. Hardly any significant cargoes were shipped out of the Soviet Union.

The New Economic Policy (1921–4), the restoration period after that, and the first two Five Year Plans have brought about a more lively economic intercourse with other countries. Attempts, which to a certain extent were successful, were made to change the character of Russian exports to other countries by exporting not only grain and raw materials (as had been done in pre-revolutionary times), but also semi-manufactured and even wholly-manufactured goods.

The evolution of the Russian export trade under Soviet Government control has borne quite a revolutionary character. Its volume, character, and clientèle have changed beyond recognition. The value of exports during pre-revolutionary times has been compared with that of the restoration period, of the first half of the First Five Year Plan and the middle of the Second one, when the monopoly of foreign trade was already firmly established, and the following results were obtained.

In 1913 agricultural produce, animal and foodstuffs, com-

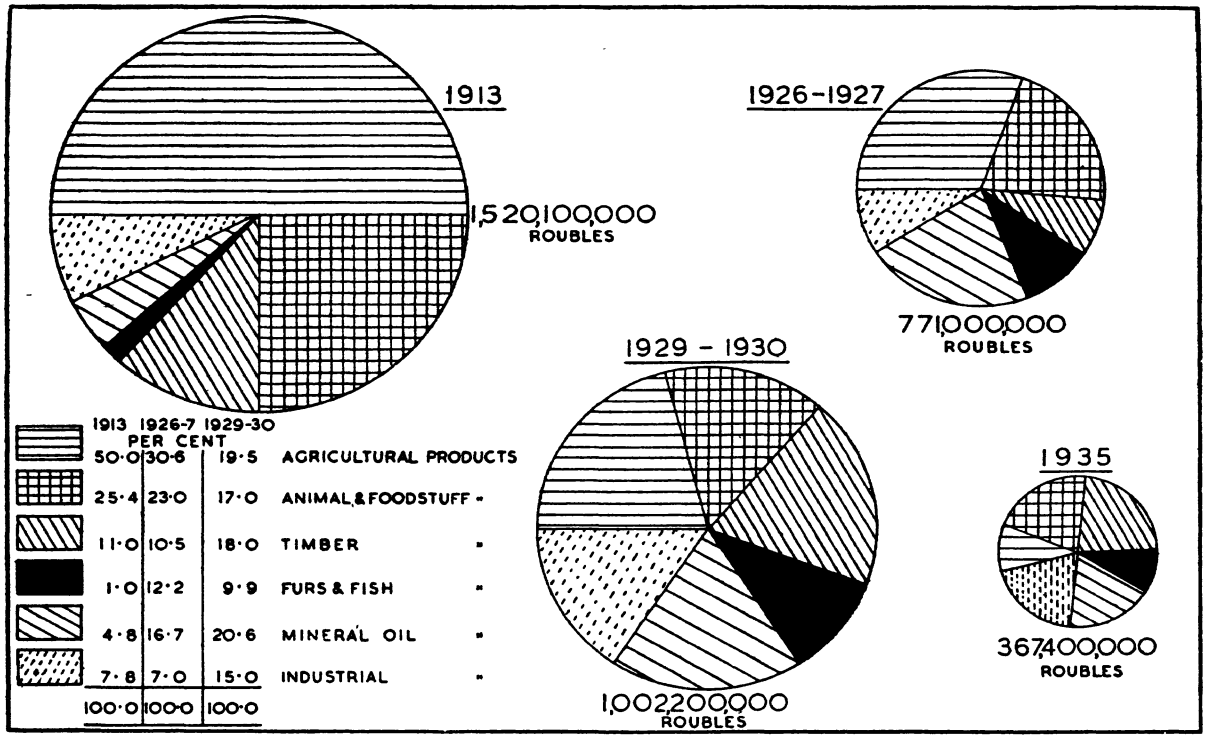


DIAGRAM XIV.—COMPARISON OF RUSSIAN EXPORTS, 1913–35

prised, according to the diagram, 75 per cent of the total value of exports. The remaining 25 per cent consisted of timber, furs, fish, minerals, and a small fraction of industrial products. During the restoration period and the first half of the First Five Year Plan exports of timber, minerals, furs, and manufactured goods were increasing at the expense of grain and animal and foodstuffs.

We find the same equalizing tendency throughout the latter half of the First Five Year Plan and during the Second Plan. Moreover, during the Second Five Year Plan the value of each of the six main items of export was almost the same.

Naturally the comparison of values, especially when we consider the change in the value of the rouble, does not indicate accurately the tendency of contraction of exports. But the tables given below illustrate very clearly the same general contraction of both exports and imports not only in terms of value but in terms of weight also.

This contraction of Soviet exports was due not to the economic crises or any other currency difficulties of the capitalist market (from which Soviet goods and prices were almost immune), but to the general character of the whole Soviet National Economy, the rational utilization of natural resources,

TABLE 41

Exports of the U.S.S.R. 1913–37

Year	Exports	
	Thousand tons	Million roubles
1913 [1]	24,112·8	1,520·1
1921–2 [2]	726·7	63·4
1922–3 [2]	2,160·8	133·9
1923–4 [2]	6,736·9	373·2
1924–5	6,169·0	577·8
1925–6	7,855·8	703·3
1926–7	9,573·0	806·8
1927–8	8,873·7	791·6
1929	14,145·0	923·7
1930	21,486·4	1,086·4
1931	21,778·9	811·2
1932	17,967·9	574·9
1933	17,916·3	494·9
1934	17,340·2	418·3
1935	17,190·5	367·4
1936	14,204·0	*a*
1937	12,969·4	*a*

a—Not given in the Russian source.

[1] Data refer to pre-revolutionary territory of Russia.
[2] At 1913 prices.

the rapid industrialization of the country, and the planning of exports and imports.

TABLE 42

Imports of the U.S.S.R. 1913–37

Year	Imports	
	Thousand tons	Million roubles
1913 [1]	15,342·8	1,875·0
1921–2 [2]	1,989·1	271·1
1922–3 [2]	907·5	148·6
1923–4 [1]	979·2	233·5
1924–5	1,863·7	723·4
1925–6	1,547·3	756·3
1926–7	1,846·5	713·6
1927–8	2,014·3	945·6
1929	1,936·7	880·6
1930	2,855·9	1,058·8
1931	3,564·4	1,105·0
1932	2,322·0	704·0
1933	1,236·0	348·2
1934	1,025·0	232·4
1935	1,259·1	241·7
1936	1,155·3	*a*
1937	1,285·8	*a*

a—Not given in the Russian source.

The State Monopoly of Foreign Trade was met, of course, with a great deal of criticism and scepticism from the capitalist elements in all countries. But the search for markets and the success of the monopoly, and the scrupulous payment of every penny by the Soviet Government for orders placed abroad, have overcome this scepticism, and now, with a few exceptions, all the countries of the world have established trade relations with the U.S.S.R. and have found means and methods of approach to the Russian market through the channels of the monopoly of Trade.

These channels, that is, the internal organization of the Monopoly of Foreign Trade, represent many innovations, peculiarities, and interesting features.

The whole of the foreign trade of the Soviet Union, according to the decree of the Council of People's Commissars (Sovnarkom), of July 1935, is entrusted to the Exporting Corporations under the guidance and control of the People's Commissariat of Foreign Trade.

The following are the main Exporting Corporations:

'EXPORTKHLEB' which exports not only grain, but also

[1] Data refer to the pre-revolutionary territory of Russia.
[2] At 1913 prices.

butter, poultry, bacon, fish products, canned goods, beans, sugar, oil-cake, and fruit.

'RASNOEXPORT' deals mainly with animal products as well as with matches and carpets.

'EXPORTLES' deals with timber.

'SOYUSPUSHNINA' exports furs.

'SOYUSNEFTEEXPORT' deals with petroleum oils and their by-products.

'SOYUSUGLEEXPORT' deals with coal and anthracite.

'SOYUSPROMEXPORT' deals with exports of industrial products including fat products, chemicals, fertilizers, asbestos, manganese ore, and magnesite.

'EXPORTLEN' deals with flax, tow, and flax yarn.

'PROMSYRYOEXPORT' exports cotton.

'AVTOMOTOEXPORT' deals with automobiles.

'TEKHNOEXPORT' exports machinery, tools, electrical equipment, and pig-iron.

'LEKHTEKHSYRYO' exports medicinal herbs, drugs, and tobacco.

There are also other exporting corporations, such as 'INTORGKINO', dealing with cinema films, and 'MEZHDUNARODNAYA KNIGA' which deals with books, music, works of art, and antiques.

Special trading corporations have been established to deal with Western China, Afghanistan, Mongolia, and the Tuva Republic.

In foreign countries the corporations are represented by trading delegations. In some countries special or limited companies are formed, such as '*Arcos Ltd.*' in Great Britain, and '*Amtorg*' in the United States. There is also '*Rop*', or Russian Oil Products, in Great Britain, which deals exclusively with oil products, and the White Russian Timber Trust, which deals only with timber.

In order to foster close economic relations with foreign countries a public organization has been established called the All-Union Chamber of Commerce, which collaborates with similar institutions abroad. There is also a Foreign Trade Arbitration Commission for settling disputes.

Great attention is now paid to the standardization of export goods, to specialization in their production and control over their quality. A special 'Committee of Standards' has been established at the People's Commissariat of Foreign Trade,

and the Government sees that the articles for export correspond strictly to the standards required by this committee.

The guiding principle of Soviet exporting policy is to sell to those countries which offer the most favourable commercial and financial terms. At the same time, the People's Commissariat of Foreign Affairs (*Vneshtorg*), not wishing to be dependent on any one particular foreign market or country, spread Soviet orders over several markets or countries.

There have been, as we have already seen, great changes in the character and volume of Russian exports and imports under the system of planned economy. But besides the character and volume of the goods, the clientèle itself, the geographical distribution of Russian exports and imports, have undergone considerable alteration.

If we analyse this distribution in relation to the main commodities with which we are dealing in this book [1] we arrive at the following conclusions.

EXPORTS

In *agricultural* exports the following interesting changes have taken place since the First World War.

WHEAT. In 1913 Russia exported 3,329,000 tons of wheat. The main importers of Russian wheat were:

Italy	966,197 tons
Holland	781,947 ,,
France	501,863 ,,
Great Britain	313,546 ,,
Germany	193,100 ,,
Belgium	129,557 ,,
Spain	117,315 ,,
Greece	80,936 ,,

Sweden, Turkey, and Gibraltar each took about 50,000 tons of wheat. Towards the end of the Second Five Year Plan we witness quite a different picture. The total exports of wheat shrank to 57,900 tons, or sixty times less than in 1913. The main importers at that time were:

Greece	29,815 tons
Spain	10,162 ,,
Belgium	9,045 ,,
Norway	5,497 ,,
Estonia	1,198 ,,
Finland	1,016 ,,

[1] For detailed information on Russian imports and exports see Tables 58, 59, 60, pp. 205–208.

RYE. In 1913 647,000 tons of rye were exported from Russia. The main importers of rye were:

Holland	329,038 tons
Germany	98,772 ,,
Norway	44,876 ,,
Rumania	35,802 ,,
Denmark	35,481 ,,
Finland	34,148 ,,
Great Britain	27,084 ,,

Towards the end of the Second Five Year Plan (1936) the total exports of rye were 106,000 tons, or six times less than before the First World War. The main importers at that time were:

Norway	57,445 tons
Belgium	26,527 ,,
Denmark	7,900 ,,
Holland	3,860 ,,
Estonia	3,663 ,,

BARLEY. In pre-revolutionary times Russia was a great exporter of barley. In 1913 she exported 3,926,000 tons of barley. The main importers were the following:

Germany	2,383,862 tons
Holland	727,340 ,,
Great Britain	358,402 ,,
Gibraltar	64,378 ,,
Belgium	52,798 ,,
Norway	48,276 ,,
France	43,922 ,,

Exports of barley during the Second Five Year Plan, and especially during the latter half of the Plan, shrank very much. Towards the end of the Second Plan they decreased to 105,000 tons. One-half of this quantity went to Great Britain and one-third to Belgium. Italy, Denmark, Austria, and Turkey became at that time good consumers of Russian barley.

In *minerals* we find the following interesting trend in Russian exports.

COAL and ANTHRACITE. Exports of coal and anthracite in pre-revolutionary Russia were not very high, and in 1913 only reached 98,000 tons. The bulk of it went to Austria (64,935 tons) Turkey, and Rumania, and some went to Germany, Finland, and China.

Towards the end of the Second Five Year Plan (1936)

exports of coal and anthracite increased to 1,803,000 tons. The main importers were :

Italy	461,915 tons
U.S.A.	375,894 ,,
Greece	251,869 ,,
Japan	249,328 ,,
France	149,504 ,,

Germany did not import coal from the U.S.S.R. after 1933, in which year she took only 14,991 tons.

OIL PRODUCTS. Soviet Union has considerably increased its exports of oil products as compared with pre-revolutionary times. In 1913 only 947,000 tons of oil products were exported, and they went to :

Great Britain	178,132 tons
Turkey	148,946 ,,
Germany	129,159 ,,
Egypt	123,260 ,,
France	112,320 ,,
Belgium	83,033 ,,

Towards the end of the Second Five Year Plan (1936) exports of oil products were equal to 2,666,000 tons. The main importers at that time were :

France	367,153 tons
Germany	347,977 ,,
Great Britain	273,517 ,,
Japan	219,898 ,,
Italy	130,295 ,,
Sweden	128,323 ,,
Spain	112,793 ,,

MANGANESE ORE. Exports of manganese ore, contrary to those of oil products, decreased by a half compared with pre-revolutionary times. In 1913 they were equal to 1,194,000 tons, and they went mainly to :

Holland	387,074 tons
Great Britain	276,811 ,,
Belgium	202,652 ,,
U.S.A.	135,307 ,,

Towards the end of the Second Five Year Plan exports of

manganese ore were equal to 606,000 tons and the main importers at that time were :

U.S.A.	242,996 tons
France	153,003 ,,
Belgium	60,228 ,,
Poland	41,205 ,,
Italy	30,460 ,,
Czechoslovakia	26,430 ,,

In 1936 Germany imported only 2,232 tons of manganese ore from Soviet Russia, although in 1935 she had imported as much as 235,880 tons.

TIMBER. The character of the timber trade has not changed much during the period under review. Exports decreased by one million tons towards the end of the Second Five Year Plan, as compared with pre-revolutionary times.

In 1913 exports of timber (except of sawn timber and veneer), were equal to 4,043,000 tons, and they went mainly to :

Germany	1,912,174 tons
Great Britain	828,190 ,,
Holland	765,492 ,,
France	133,251 ,,
Austria	126,347 ,,

Exports in 1936, amounting to 3,093,000 tons, went mainly to :

Great Britain	947,805 tons
Germany	731,769 ,,
Belgium	393,388 ,,
Holland	233,942 ,,
Lithuania	231,352 ,,
France	195,693 ,,

The importers of timber, as can be seen, remained almost the same.

FURS. Exports of furs have not changed either. In 1913 2,700 tons were exported, and in 1936 2,600 tons. In pre-revolutionary times Germany was almost the sole importer of Russian furs, but in 1936 many tons went to Great Britain, U.S.A., France, and Germany.

FERTILIZERS. This branch of export trade has grown considerably since the Revolution of 1917. Exports of fertilizers in 1913 were equal to only 38,200 tons, and they went mainly to Germany and Finland. Towards the end of the Second

Five Year Plan (1936) they reached 606,000 tons. The main importers were :

Belgium	159,383 tons
Italy	82,411 ,,
Poland	77,067 ,,
France	60,712 ,,
Germany	52,555 ,,
Holland	36,217 ,,

SUGAR. Exports of sugar have increased, although only slightly, since the Revolution of 1917. In 1913 Russia exported 147,000 tons, and in 1936, 163,000 tons. Iran and Finland were the main importers of Russian sugar in pre-revolutionary times.

Under the Soviet régime Iran remained one of the chief importers, but Great Britain, Belgium, Holland, Turkey, Afghanistan, and the Mongolian Republic also became interested in exports of Russian sugar.

In 1938 exports of wheat, rye, barley and fertilizers increased, but exports of all other products decreased (see Table 60).

IMPORTS

Considerable changes have also occurred in the import trade of the Soviet Union, as compared with pre-revolutionary times. The main causes of these changes were the industrialization of the country and the necessity of adjusting the balance of trade so that it would be possible for the Soviet Government to pay for their foreign orders.

In certain commodities imports shrank greatly, as can be seen from the following instances :

RICE. Pre-revolutionary Russia used to import rice up to 134,000 tons a year (1913), mainly from Iran and Great Britain.

Towards the end of the Second Five Year Plan (1936) imports of rice decreased to 52,600 tons.[1]

LIVESTOCK. 143,000 tons of livestock were imported into Russia, mainly from Iran, China, and Mongolia, in 1913. In 1936 imports of livestock decreased to 103,000 tons.[2]

The main suppliers remained the same, although more livestock was imported from Turkey and the Baltic States

[1] During the first half of 1937, 30,906 metric tons of rice were imported, and for the same period of 1938 38,293 metric tons.

[2] During the first half of 1937, 6,928 metric tons, and during the same period of 1938, 17,317 metric tons, of livestock were imported into Soviet Russia.

CHEMICALS, WOOL, and COTTON. In chemicals, wool, and cotton a great decrease of imports was registered, as can be seen from the following table :

TABLE 43

Imports of Chemicals, Wool and Cotton

(In tons)

	1913	1936	January–June 1937	January–June 1938
Chemicals	161,000	8,500	4,681	5,660
Wool	55,500	25,900	14,982	15,318
Cotton	197,000	16,700	14,996	16,128

METALS and ELECTRICAL APPLIANCES. Soviet imports of metals and electrical appliances increased greatly, and were still very considerable in non-ferrous metals.

TABLE 44

Imports of Metals, Electrical Appliances and Non-ferrous Metals

(In tons)

	1913	1936
Rolled Metal	151,000	236,794
Electrical Appliances	13,000	18,500
Non-ferrous metals	108,000	94,900

If we consider all Russian imports from the point of view of tonnage, we find that they had decreased greatly, with the exception of Belgian and Japanese. The U.S.A. imports remained nearly stationary.

TABLE 45

Imports into the U.S.S.R.

(In tons)

Supplier	1913	1936
Belgium	55,900	68,600
U.S.A.	165,000	164,000 [1]
Japan	120,000	188,000

Imports from countries other than those mentioned above decreased considerably as compared with pre-revolutionary

[1] The highest imports from the U.S.A. were registered in 1924–5—570,000 tons; 1927–8—259,000 tons; 1930—311,000 tons.

times. The following table shows the main suppliers of the Soviet Union, whose tonnage shrank to a great extent.

TABLE 46

Imports into the U.S.S.R.

(In tons)

Supplier	1913	1936
Great Britain	4,818,000	139,000
Germany	5,940,000	57,000
Italy	76,300	1,800
France	169,000	42,100
Turkey	126,000	21,100
Iran	226,000	110,000
Mongolia	79,500	42,600
Holland	277,000	32,400
Denmark	84,500	5,800
Sweden	274,000	7,700

The foregoing brief outline giving the changes that have taken place in the foreign trade of the Soviet Union shows that, since the Revolution of 1917, Russia has ceased to be ' the granary of Europe ', and has lost her attraction as a big European market.

The outbreak of the Second World War and the entry into it of the U.S.S.R., followed by the heroic resistance of the whole Russian nation to invasion, and the might of the Red Army and its partisans—all this proved that the reconstruction of Russia on socialist lines during two decades and its policy of monopoly of foreign trade, rigid at the beginning, and elastic at the latter stage, have not been achieved in vain, and that this country, as well as the U.S.A., will build real *rapprochement* and collaboration with the Soviet Union, in spite of the highly centralized form of Soviet foreign trade.

Ten years ago the author of this book was advocating the idea of increasing the volume of British exports to Russia, not only of producers' goods, but of consumers' goods as well, at prices which Russian citizens can afford to pay. And he still believes that by the organization of large-scale production of goods, necessary for millions of Russian population, and by the co-ordination of activities and efforts the Russian market may become of great importance for this country and the U.S.A.

CHAPTER XII

TRENDS IN ECONOMIC DEVELOPMENT

EVENTS in Russia, since the Revolution of 1917, have proceeded with such speed and such kaleidoscopic changes that even for a historian or an economist it has been difficult to grasp the real trends of the movement.

The political aspects of events have overshadowed entirely, especially in all publications abroad, the social-economic phenomena of the Revolution, and it would therefore be difficult, without some knowledge of the gradual development of social-economic conditions in the Soviet Union, to understand her present economic and military strength.

The Revolution in Russia broke out in February, 1917, and at the beginning it was headed by three outstanding personalities: *Prince Lvov*, *Kerensky*, and *Lenin*. Each of them represented a definite political movement and had a definite policy. The Provisional Government of Prince Lvov, and afterwards of Kerensky, tried to quieten the stormy seas by their elaborate economic policy. But their economic policy, in spite of all the endeavours and high motives which animated the Russian democracy, failed.

The economic policy of the Provisional Government failed because those who formulated it did not want to solve the land question and postponed its solution until the meeting of the Constituent Assembly, which was dispersed by Lenin on the first day of its meeting; neither did they want to nationalize industry. Meanwhile the revolts of peasants, the strikes of workers and the disorganization of transport were growing and paralysed the whole national economy of the country.

Lenin, more than any one else, realized that an appeal to the unorganized masses of the population over the heads of competing political groups and parties, which had no deep roots in the population, would be the most effective move. The Soviets seemed to him the only organizations which would appeal equally to the workmen and peasants. He knew that since 1905 they had always considered the Soviets as their *own* organization, which would stand not only for their professional

interests, but would be also on constant guard over their rights as citizens.[1]

'All power to the Soviets!' This slogan, raised by Lenin, completely destroyed all hope of a Constituent Assembly, and, in October 1917, brought to power the left wing of the Social-Democratic Party (Bolsheviks).

Russia entered into the second stage of the Revolution. This period, which lasted from 1918 to 1920, is better known as *War Communism* than as *Civil War*. Both terms are equally correct. They merely represent two aspects of events during this period. It was War Communism because during this period the experiments on the lines of pure communism were carried out on a large scale under war conditions; it was, at the same time, Civil War, which had broken out immediately after the advent to power of the Bolsheviks in October 1917.

The Civil War, according to the interpretation of Lenin, prolonged the experiments in Communism and made them necessary: 'Militant Communism was thrust upon us by extreme poverty, disorganization and war;'

> We took from the peasants at that time all the surplus grain, and sometimes not only the surplus grain even, but part of the grain required by them for food, in order to meet the requirements of the army and feed the workmen. In the majority of cases we took grain from peasants on loan, for paper money.[2]

Lenin, as we know, did not believe in the possibility of the immediate transformation of Russia into a socialist or communist State: 'We must not forget that we alone cannot achieve a socialist revolution in one country only, even if it were a less backward country than Russia.'[3]—'Capitalism is evil as compared with socialism. Capitalism is good as compared with the Middle Ages, with the epoch of small producers. . . . Capitalism is inevitable as long as we are unable to pass directly from home industries to socialism.'

> It is necessary to help to restore our domestic industry, which does not require machines, State reserves, or large stocks of raw materials, fuel and food. . . . It would be madness to prohibit entirely private exchange (i.e. private trade or capitalism), in the country where there are millions of small producers.[4]

---

[1] V. I. Lenin, *Works*, Vol. XXVI, Partizdat, Moscow, 1932, p. 332.
[2] *Ibid.*
[3] S. P. Turin, *From Peter the Great to Lenin*, London, P. S. King & Son, 1935, p. 142.
[4] V. I. Lenin, *Works*, Vol. XXVI, pp. 333 and 339.

'State Capitalism would be a step forward in our Soviet Republic,' wrote Lenin in 1918, and in 1920 he repeated it again by saying that 'we ought to introduce Capitalism, converting it into State Capitalism as an intermediate stage between small producers and Socialism'.[1]

In advocating the New Economic Policy Lenin suggested the following measures: the replacement of quotas and requisitions of grain by a food tax, concessions given to foreign capitalists, the denationalization of some of the industrial concerns, and freedom of peasants to trade in their surplus agricultural products.

The New Economic Policy (N.E.P.) was inaugurated in 1921 and lasted until 1924. It consisted mainly of the re-introduction of private trade; replacement of the grain quotas by the grain tax; recognition of the principle of remuneration for the work and services rendered to the State and public institutions. Rates and taxes reappeared, more freedom was given to the co-operative consumers' and producers' societies. Some of the industrial concerns were de-nationalized. Money and the banking system again began to function, and private initiative was encouraged.

The effect of these changes soon became very noticeable. Industry, agriculture, and trade increased their output. The accumulation of capital—the very thing that Russia was lacking during the period of War Communism—made it possible to think of constructive work on a large scale, and of the restoration of the national economy to the pre-war level.

Russia enjoyed this individual economic freedom for about three or four years, and this made many people, especially those outside Russia, think that the restoration of the old capitalist system was in sight. Even among the Bolsheviks themselves there were many people who expressed the fear of the return of Capitalism and who insisted on drastic measures against such a possibility.

The Reaction against N.E.P. (1925–7). The reaction had been growing rapidly since 1925 and restriction after restriction made the existence of private enterprise and the freedom of private initiative very hard.

But the fear of the restoration of Capitalism was not the only cause of the reaction against N.E.P. There were other

[1] V. I. Lenin, *Works*, Vol. XXVI, pp. 321, 339.

causes, and perhaps more important ones, which were hidden in the working of the system itself and which undermined it.

The New Economic Policy was bound to collapse because there was hardly any co-ordination of the different branches of the national economy with each other. In agriculture the grain tax produced only 50 per cent of the estimated amount of grain to be collected. This was due to the tax itself, which operated under a monstrously complicated system. This system consisted of 77 different schedules, designed according to the different yields on different sowing areas. This alone offered wide possibilities and great temptation, not only of avoiding the tax, but also of hiding the output and even the sowing area itself.

Industry, instead of building up a regular and sound plan of exchange between village and town, supplied the peasantry not only with inferior industrial products, but with an assortment of goods which the peasants did not require at all. The industrial concerns themselves did not care much for the preservation and development of their plant, and some of them were only able to carry on by 'eating' their own working capital.

The idea of the lease of industrial concerns to private individuals could not be realized on a large scale. The entrepreneurs were not quite sure that what they had built up would remain their own, and, naturally, lacking this assurance, did not want to take risks. Besides, the government policy in this sphere was indefinite, and the press openly professed that, as soon as the capitalist produced the necessary capital, the State would find means of controlling the concern and utilizing it in the interests of the State.

In trade we find the same absence of sound economic planning. Everybody had been trading during N.E.P., and every one had been encouraged to do so. The Government missed a very good chance of creating a trading apparatus based on a knowledge of salesmanship. Currency was not stabilized, and prices were going up. Taxation and rates did not add much to the revenue, as the majority of taxpayers were employed by the State itself. Concessions in such an atmosphere, with a limited labour force, absence of freedom, and strict control of the individual's activities and profits, naturally could not flourish.

But, in spite of all the defects in its structure and working,

the New Economic Policy saved Russia from further destruction and disorganization in her economic life, and succeeded on the whole in raising the output of industry and agriculture to almost pre-war level.

This fact encouraged the Government to take the leadership in the sphere of economic life entirely into their own hands, and to extend the dictatorial power to all aspects of social-economic life. The famous era of Five Year Plans was inaugurated with great pomp. The First Five Year Plan began in 1928, the Second in 1933, and the Third in 1938.

At that time the State Planning Commission (Gosplan), which had been created as early as 1921, was finally established and became the mainspring of the whole national economy of the U.S.S.R.

Its present status may be summarized as follows: It is a permanent commission, consisting of 11 members elected from among the leading industrial workers, scientists, and specialists. The task of the Gosplan Commission is to prepare quarterly, yearly, or five year plans and present them for approval to the Council of People's Commissars (Sovnarkom); to supervise the fulfilment of the plan; to work out solutions to the practical and methodological problems involved in economic planning.

The main task of the Commission lies in the co-ordination of the different schemes and branches of the whole national economy of the Union. It has the right to control and to present suggestions to the Sovnarkom concerning the fulfilment of the plan.

According to the Soviet Constitution of 1935, ' The economic life of the U.S.S.R. is determined and directed by a State Plan of national economy with the aim of increasing the public wealth, of steadily raising the material and cultural standard of the working people, and of strengthening the independence of the U.S.S.R. and its capacity for defence.'

The Chairman of the State Planning Commission of the U.S.S.R. is a member of the Council of People's Commissars of the U.S.S.R. (Art. 70).[1]

The First Five Year Plan (1928–33) was called—and there are good reasons for the name—a period of *Machine Rush*, similar to the ' Gold Rush '.

Considering the First Five Year Plan from the point of view of the experiments carried out in agriculture, we would call

[1] For the structure of the Gosplan see Part IV, p. 189.

this period the period of *wholesale collectivization*, when the *Agrarian Revolution* was actually organized from above.

The First Five Year Plan succeeded in creating capital goods, armaments, and munitions, and raised greatly the production of oil, coal, and steel. But it did not create adequate transport facilities, and the output of agriculture, and the food and textile industries remained at the same low level throughout the whole period of the plan.

The authorities responsible for the execution of the plan did not hide its defects and drawbacks, and sharply criticized themselves at the 17th Conference of the Communist Party.

The inadequate development of transport was considered by the Conference to be one of the chief defects of the First Five Year Plan. As a remedy to this, Molotov suggests the laying down of 25 to 30,000 kilometres of railway track and a yearly output of 400,000 motor cars during the second quinquennium. But there are some other problems which must be solved before that is done. 'We are doing some quite incomprehensible things,' says Orzhonikidze; 'we carry coal all the way to Vladivostok, but half of it is consumed on the way by the engines that carry it; yet there are very good mines near Vladivostok which produce perfect coal, and this ought to be utilized for local needs.'

Another obstacle to the success of the Five Year Plan lies, according to a resolution taken by the Conference, in the low productivity of labour and the high cost of production. This was caused, in the first place, by the wage system, the so-called *uravnilovka*—equal pay for nominally equal work—which has now been banned in Russia as representing a bourgeois principle; in the second place by the shortage and even absence of experienced technicians; and, thirdly, by the lack of system and planning in the internal management of factories and workshops.

The final note of the Conference was struck by Kuibyshev, who said that, 'The Five Year Plan has transformed Russia from an agricultural into an agricultural-industrial country: 57·5 per cent of the national income of the U.S.S.R. has been derived from industry, transport and the building industry, and only 22·9 per cent of it comes from agriculture.'—'We shall begin the Second Five Year Plan equipped with highly organized industries, built up on modern lines. We shall rebuild our country with our own hands and with the help of our own

machines. This will prove to the whole world the advantage of Socialist methods and the soundness of a planned economy.'

The Second Plan (1933–8) differed greatly from the First one. Consumers' goods ! Higher standard of living ! Extermination of the '*kulaks*', that is, well-to-do peasants and private profit makers ! Such were the slogans of the Plan.

Analysing the Second Plan more closely, we can divide it into two periods : from 1933 to 1935, and from 1935 to 1938. The former may be called '*Country under Ration Book*'. Ration cards, introduced all over the country, overshadowed everything and were considered more valuable than any paper money.

The evils of rationing, such as were evident during the *War Communism* period, reached their culminating point in 1935, and the system of rationing was dropped.

The latter period of the Second Plan may be characterized as the period of *skilled labour* and of the *co-operative artel* in agriculture. The *Stakhanov Movement* and the *Model Rules of the Agricultural Artels* were the quintessence of this period.

It is hardly necessary to describe the achievements of the Second Five Year Plan in agriculture and industry here, as they have already been dealt with in detail in the preceding chapters. The technical reconstruction of the whole national economy was carried out according to the Plan, and with great success.

During the Second Five Year Plan, according to V. M. Molotov's Report, the technical apparatus of production in industry and agriculture was radically renewed. In 1937 more than 80 per cent of the entire industrial output was yielded by new establishments built or completely reconstructed during the years of the First and Second Five Year Plans. About 90 per cent of the tractors and harvester combines in use in agriculture are of Soviet manufacture, and were produced during the years of the Second Five Year Plan. Instead of the somewhat over twofold increase in the output of the machine-building and metal-working industries contemplated under the Second Five Year Plan, the increase was almost threefold. More than 50 per cent of the total number of machine tools, as on 1 January 1938, were produced during the Second Five Year Plan period. The electric power available per worker in industry as a whole rose from 2,100 kwh. to 4,370 kwh. The task of mechanizing such laborious and difficult industrial

processes as coal cutting and oil and peat extraction, as well as the mechanization of fishing, etc., has been accomplished in the main.

We scored our greatest successes in heavy industry, in the production of means of production. Here output increased almost two and half times (by 140 per cent) and the plan was considerably exceeded: this line of production recorded a 122 per cent fulfilment of the Second Five Year Plan. Still, in several important branches of heavy industry, such as the production of pig-iron, coal and oil, there was a considerable deficiency in plan fulfilment.

In the manufacture of articles of consumption, though output was doubled (an even 100 per cent increase), the plan was not quite fulfilled. Because of the unsatisfactory work of light industry, plan fulfilment was only 85 per cent for consumers' goods, while the food industry under the People's Commissariat of the Food Industry of the U.S.S.R. fulfilled its plan 113 per cent, which was considerably in excess of specifications.

Great successes have been achieved in the mechanization of agriculture. The supply of tractors and harvester combines planned for agriculture has been exceeded. In technical level and large-scale production capacity, our agriculture is now ahead of any other country in the world. Cotton, flax, and Indian corn picking is, however, still behind with regard to mechanization.

The prosperity of the collective farmers grew considerably during the Second Five Year Plan period. This is apparent from the rising incomes of the collective farms and their members. Thus cash incomes of collective farms during the years of the Second Five Year Plan rose from 4,600,000,000 rubles to 14,200,000,000 rubles, that is, more than trebled. The average amount of money paid out per collective farm household increased during this period three and a half times. Cash incomes distributed among collective farmers according to work-day units showed a 330 per cent increase, the rise having been particularly great in industrial crop districts.

Considerable successes have also been achieved in the sphere of public health. Suffice it to say that the number of hospital beds was increased one and a half times during the years of the Second Five Year Plan.

Having eliminated the remnants of the exploiting classes,

we have established a society of two mutually friendly classes, the working class and the peasantry. This society has given rise to an intelligentsia of its own, which is no longer bourgeois or bourgeois-democratic, but is, in the main, a socialist intelligentsia. This intelligentsia, linked with ties of blood to the working people and to socialism, plays a great part in the work of directing the development and consolidation of the new society and state.

Does this mean that *all* workers and *all* peasants have become advanced members of our society? No, it does not mean this yet.

Even among the workers, some are advanced, while others are backward, not to speak of degenerates. It is the same thing among the peasants: some are advanced and others are backward. Some, of course, are worse than simply backward. The advanced people of our day are the active and devoted builders of communism, the best champions in the struggle for the consolidation of our state. These advanced people of our society are already consciously followed by the overwhelming majority of the workers and peasants. But even among workers, not to mention employees, petty-bourgeois habits are still very much alive. There are still quite a few left who are ready to grab from the state as much as they can without caring a rap for the consequences. It is therefore necessary to fight for the interests of the state and for the strengthening of the labour discipline in our offices and factories, to fight against loafers, good-for-nothings, and those who flit from job to job. There are also quite a few among the peasantry who take no interest in the weal of the state or even of their own collective farm, who think only of stuffing their own pockets with money and goods at the expense of the state and the collective farm. Here, too, energetic steps must be taken to improve discipline and educational work. If such steps are not taken, and intensive work is not carried on to bring up the working people in the spirit of consolidating socialist property and the state, it will be impossible to change backward people into conscious and active builders of communism.

The prosperity of the collective farmers since 1935, when the Model Rules of the Agricultural Artel replaced the coercive measures and regulations of the past, has increased greatly. 'The average amount of money', to quote V. Molotov's report to the Eighteenth Congress of the Communist Party, held on

14 March 1939, 'paid out per collective farm household has increased during this period three and a half times.' [1]

The growth of skilled labour, thanks to the Stakhanov Movement, was one of the most remarkable achievements of the Second Five Year Plan.

> From the ranks of the working class [said V. Molotov] have come people who, by dint of mastering the technique of production, rapidly occupied foremost and leading positions in their respective industries. By their high labour productivity, based on improved organization, these Stakhanovites have prepared the road to new successes in industry.

In 1938 the Soviet Union entered its third decade equipped with all the necessary apparatus for great constructive work framed by nationalized industry, collectivized agriculture, and a State-controlled system of banking, currency, and trade. It had a fresh labour force and fresh, young scientists and specialists. On their intelligence, qualifications, wide initiative, and freedom of sound judgment would depend the success of the constructive work along the lines of the Third Five Year Plan (1938–42). There was no reason to doubt that it would have been carried out with even greater success than the first two Five Year Plans. But the outbreak of the Second World War and the entry of the U.S.S.R. into it have disturbed the peaceful constructive work of the Russian people. Once again they have beaten a ploughshare into a sword.

[1] Text of the Model Rules of Agricultural Artels is given in Part IV, p. 175.

CHAPTER XIII

IN PLACE OF A CONCLUSION

WE have seen that the potential capacity of the U.S.S.R. is enormous, and that the system of planning has been extended to all spheres of her economic life. Strictly speaking, normal constructive work did not begin in the Soviet Union until just before the outbreak of the present war. For, during the first two decades after the Revolution, what took place was actually a series of hasty, bold experiments in planning, based on the method of trial and error.

If the war had not broken out, the U.S.S.R. would have had, in our opinion, every chance for the development of her national economy on a more systematic and scientific basis in order to raise her national income and to increase the production per head of her population. She will have these chances again now the invader has been driven from her soil.

Production per head of population is the most vital problem of national economy in the Soviet Union. The leaders of the constructive work in the U.S.S.R., while missing no opportunity of informing the public, in the Press and over the Radio, of the great rate of progress achieved in the economic development of the country, themselves admit that, as regards production per head of population, the U.S.S.R. still lags far behind the main European countries.

In this connexion the following quotation from Lenin, made by V. Molotov in his Report to the 18th Conference of the Communist Party in March 1939, is of some interest to us:

> Russia [said Lenin in *Pravda* in 1913] is still an incredibly backward country, backward to an unheard-of degree, poor and semi-barbarian, which, in equipment of modern instruments of production, is four times worse off than England, five times worse off than Germany, and ten times worse off than America.

Stalin also stated, in 1930, that Soviet Russia was still 'outrageously *behind* the foremost capitalist countries in her level of industrial development'.

The Soviet statisticians have compiled the following interesting comparative table concerning production per head of population in the U.S.S.R. and other countries, to which, incidentally, V. Molotov also referred in his address to the Conference.

TABLE 47

Production per Head of Population in 1937 [1]

	U.S.S.R.	U.S.A.	Germany	England	France
Electric power (kilowatt h.)	215	1,160	735	608	490
Pig Iron (kilograms)	86·0	292·0	234·0	183·0	189
Steel ,,	105·0	397·0	291·0	279·0	188
Coal ,,	757·0	3,429·0	3,313·0	5,165·0	1,065
Cement ,,	32·0	156·0	173·0	154·0	86
Cotton Fabric (square metres)	16·0	58·0	a	60·0	31
Woollen Fabric (metres)	0·6	2·8	a	7·4	a
Leather footwear (pairs)	1·0	2·6	1·1	2·2	a
Sugar (kilograms)	14·0	12·0	29·0	8·0	21
Soap ,,	3·0	12·0	7·0	11·0	10

a = no data.

This table shows that in the U.S.S.R. production per head of population of pig iron is less than half the production in this country, and nearly three times less than in Germany; that of steel is two and a half times less than in this country or in Germany. This country produces seven times more coal per head of population than the Soviet Union, and the German production of coal is four times higher. As regards cotton fabrics, England produces four times as much, and twelve times as much woollens. This country produces two pairs of leather boots per person, whereas in the U.S.S.R. only one pair is produced. In the production of electric power the U.S.S.R. was well behind the other countries.

Analysing more closely the causes of this backwardness of the Soviet Union in production per head of population, we find that, in addition to quite natural and comprehensive general causes connected with the revolutionary period, they were due also to the purely internal policy employed in work on land and in the factories.

Apart from other causes, the slow progress of production in *agriculture* was due, not so much to the method of work on the land (which is based now on the sound principle of the ' artel '), but to the restrictions imposed on collective farmers and to the very high quota of labour and sacrifice expected from them on common land as a contribution to the common interests of the State. It was found that as soon as the collective farmers

[1] *Planned Economy*, Moscow, 1939. No. 8. (U.S.S.R.—1937, other countries—latest figures published.) See footnote on p. 167.

were at last allowed to run their private allotments they began to devote more attention and energy to them at the expense of their work on common land.

V. Molotov was, naturally, very much alarmed by this fact, and said, at the Conference of the Communist Party, that ' we must put an end to breaches of the Rules of the Agricultural Artels, and bring the size of subsidiary plots and the number of cattle owned individually by the collective farmers within the range allowed '.

The tendency to work harder on individual allotments than on common land became so widespread that the Government was forced to issue a special decree, fixing a minimum of labour days which each collective farmer must spend on common land.

In *industry* it was the same. It is not the principle of planned production which should be blamed for the low quality of goods and their much shorter durability and service, but the misinterpretation by some authorities of the idea of management as such.

Too many functions which are alien to the very principle of management were sometimes imposed on the director of the factory and the corresponding trade-union organization.

The low quality of goods was also due to attempts to rush production and a passion for ' overfulfilment ' of the Plan, and to the insufficient training in their trades causing a shortage of highly qualified workmen.

The question of skilled labour was very acute in the Soviet Union up to the outbreak of the last war. The number of pupils in the factory schools (F.Z.U.) decreased from 975,000 in 1932 to 300,000 in 1940, that is, more than three times. The same thing happened in the technical and railway schools.

This forced the Government, especially in view of the war, to issue, on 2 October 1940, a decree on ' State Labour Reserves of the U.S.S.R.'. This decree introduced a kind of obligatory attendance at technical and railway schools. Local city Soviets and Kolkhoses have to recruit pupils, between the ages of 14 and 17, at the rate of two pupils for every 100 inhabitants. But the majority of young persons preferred to volunteer instead of being recruited.[1]

Discipline, which can be better maintained in an atmosphere of reasonable individual freedom for sound judgment and greater

[1] *Planovoye Khozyaistvo*, Moscow, 1940. No. 11. *Bolshevik*, Moscow, 1940. No. 23.

initiative, was sometimes insufficient, and therefore caused many defects in industry.

V. Molotov, at the same Congress of the Party, said that 'we must increase the responsibility of the executives . . . to raise the productivity of labour, to tighten labour discipline . . . to reduce the cost of industrial production and improve in every way the quality of production in all branches of industry'.

Similarly with *transport*, it was not nationalization and planned economy which were responsible for the backwardness of this service, but the same policy, which often occurred, of imposition on the railway administration of functions which had no direct connexion with the railway economy.

As to *water transport*, V. Molotov himself exclaimed: 'Putting an end to the lag of water transport, and making it play a bigger part in the service of our national economy, especially in the haulage of bulk freights, such as timber, grain, coal, and oil, is a problem that brooks no delay.'

The neglect of highways construction, insufficient development of regular motor-transport services on the roads, and the unpardonably archaic utilization of waterways were sharply criticized in the Soviet Union in the time of Lenin, and they were still criticized up to the outbreak of the last war.

Self-criticism is, no doubt, a good thing, if it is followed by the corresponding positive *action*. And this positive action ought to be based, as we have already mentioned, on much more of reasonable individual freedom for sound judgment and greater initiative than before.

The last War was, in this respect and many others, a good lesson for all, and now a better life and brighter horizons are open again for the Russian people, as long as they preserve and enjoy their freedom, liberty, and their new mode of social and economic life.

*** Footnote to the table on p. 165 : It is planned to produce in 1950—240,000,000 pairs of leather footwear and that of rubber—88,600,000. The production of electric power it is planned to raise by 1950 to 82,000,000,000 kWL.**

PART IV

Supplements

1

SCIENTIFIC AND TECHNICAL RESEARCH AND LIBRARIES IN THE U.S.S.R.

THE readers of this book will find ample information on the development of science in the U.S.S.R. in Mr. and Mrs. Sidney Webb's book on Soviet Communism. Our task here is only to give additional information and some details of the work of the Russian Universities and Research Institutes, as well as of the growth of Russian Libraries.

There are 804 Research Institutes in the U.S.S.R., with an army of 32,617 scientists attached to them. Each Department of State has its own set of Research Institutes. The People's Commissariat for Health has 262 Institutes, the Commissariat for Education, 104, the Commissariat for Heavy Industry, 108, the Commissariat for Agriculture and Collective Farms, 84. The remaining Institutes belong to the Sovnarkom (Council of People's Commissars), the Tsik (the Central Executive Committee), and the Commissariats for Food and Transport. The Trade Unions have twenty Research Institutes of their own. Each one of these institutions is naturally engaged mainly in work for its own organization and enterprises.

Parallel with the Departmental Research Institutes of the Commissariats and of the Gosplan (State Planning Commission), which deal mainly with the technical problems of reconstruction and quinquennial programmes, there is another layer of research work in Russia which is proceeding on more scientific, theoretical, and academic lines—as far as this can be done in a country which is undergoing complete reorganization of its whole social, economic, and political life. This is the work of the Russian Universities. University education in Russia has undergone the same kaleidoscopic changes as all other branches of social, economic, and political life during the last two decades. The

Russian Universities began, strictly speaking, only in the 'thirties to take the shape which would enable us to compare them with the old Russian Universities and with the Universities of this country. Apart from the Universities of Russia proper (R.S.F.S.R.), there are also Universities in other constituent Republics (especially in the Ukraine and in the Caucasus), but these are mainly engaged in developing their national cultures, and their teaching and research are conducted in their own national languages.

There are also the innumerable technical colleges and polytechnics; these should be studied together with the work of the Research Institutes connected with the Commissariats, as their task is to train *cadres* of practical workers rather than scientists. Specialists and people interested in the development of higher education in Soviet Russia will find an enormous amount of material and information here, for since the First World War the number of educational establishments and students in Russia has increased more than fourfold (525,000 students in 1935–6 as against 125,000 in 1913–14).

There are, in Russia proper (R.S.F.S.R.), thirteen Universities with 17,000 students, 380 professors, and 1,305 lecturers. The character of study and teaching has undergone great changes since the Revolution. Nearly every University has the following faculties: physics, mathematics and mechanics, chemistry, biology, geology, and geography. Philosophy, literature, and history are taught mainly in special Institutes, although Chairs in History remain at the Universities of Moscow and Leningrad. Every University has a net of Research Institutes (and this is quite a new departure: in the author's time there were only seminars and laboratories). The Research Institutes must naturally give a great deal of their time to the problems of reconstruction, and they are sometimes burdened with practical work at the expense of pure scientific and academic research.

The following is a list of Research Institutes at the various Russian Universities, together with a list of State Institutes in Leningrad and Moscow which have close links with the Universities.

I. *Scientific Research Institutes at the Russian Universities in the R.S.F.S.R.*

Names of the Universities	Year of Foundation	Number of Students	The most Important Research Institutes and Laboratories
Moscow	1755	3,942	Mechanics, Mathematics, Physics, Chemistry, Zoology, Geography, Microbiology, Anthropology, Astronomy, Investigation of the quality of Soil.
Leningrad	1819	3,948	Mechanics, Mathematics, Physics, Chemistry, Biology, Physiology, Economic Geography.
Kazan	1804	1,406	Chemistry, Observatory.
Saratov	1909	1,161	Irrigation.
Tomsk	1884	1,526	Physics, Mechanics, Biology, Chemistry.
Voronezh	1918	1,038	Laboratories in Physics, Chemistry, Mathematics, Zoology, Biology, Geology, Geography.
Perm	1917	788	Biology, Chemistry, Geology, Physics.
Sverdlov	1931	549	Natural Resources of Ural Mountains.
Gorky	1931 (1918)	537	Physics, Mechanics, Biology, Chemistry, Zoology, Genetics.
Rostov-Don	1915	664	Laboratories in Mineralogy, Chemistry, Geology, Biology.
Irkutsk	1931	490	Biology, Geography, Natural Resources.
Vladivostok	1923	608	Study of the East and Linguistics.
Alma-Ata	1934	355	Biology, Physics, Chemistry.
	Total	17,012	

II. *The Scientific Institutes of Moscow and Leningrad*

Leningrad

1. The State Institute of Astronomy.
2. ,, ,, ,, ,, Radiology.
3. ,, ,, ,, ,, Röntgenology, Radiology, and Cancer.
4. ,, ,, ,, ,, Biology (P. S. Leshaft).
5. ,, ,, ,, for the Study of the Brain.
6. The State Academy of the History of Material Culture (N.Y. Marr).
7. The Leningrad Institute of History, Philosophy and Linguistics.
8. The Leningrad Institute of Languages.

Moscow

9. The Institute of Psychology (G. I. Chelpanov).
10. ,, ,, ,, Genetics.
11. ,, ,, ,, Physiology.
12. ,, ,, ,, History, Philosophy and Literature.

A mere glance at the list of Research Institutes at the old and new Russian Universities shows that research is carried on

mainly in physics, mathematics, mechanics, astronomy, biology, chemistry, geography, and investigation into the quality of soils. It will be impossible to give here more than a few instances of the work that is being done in them.

Let us take only three—the oldest Russian Universities, those at Moscow, Leningrad, and Kazan, and give a short outline of the work of some of their Research Institutes.

The University of Moscow can boast the services of the best-known professors and academicians: among them are L. T. Mandelstamm, M. A. Mensbir, I. A. Kablukov, P. S. Alexandrov, Zelinsky, Rakovsky, Lukin, Frumkin, Tamm, Lansberg, A. N. Kolmogorov, Kulagin, Zavadovsky, Serebrovsky, Matveev, and others.

The Moscow Institute of Mathematics and Mechanics, under the guidance of P. Alexandrov, N. Luzin, A. Kolmolgorov and others, has made good progress in furthering the study of the theory of variations and has produced monographs for the German *Ergebnisse der Mathematik*. The problem of bringing pure mathematics into close contact with mechanics and the natural sciences occupies the minds of young scientists, although they do not deny the necessity of developing the history and philosophy of mathematics. Marx naturally finds his place here as well, and Mme S. A. Yanovskaya has prepared for publication the mathematical MSS. of Marx.

L. I. Mandelstamm and G. S. Lansberg, of the Institute of Physics, are working on the 'Raman-effect' in optics, which, it is said, they discovered at the same time as Mr. Raman in Calcutta.

The school of O. Y. Schmidt, famous Polar explorer and mathematician, may present us with their new discoveries in algebra.

L. V. Sorokin, of the Institute of Astronomy, invented an apparatus for measuring the force of gravity on the Black Sea.

In Leningrad University we meet another pleiad of well-known scientists: A. E. Favorsky, A. A. Ukhtomsky, I. I. Zhukov, V. E. Tischenko, V. I. Smirnov, F. J. Levinson-Lessing, J. Shokalsky, and others, who take a keen interest in the work of Research Institutes.

The Biology Institute of the University of Leningrad, situated near Peterhof, in the former palace of the Herzog Leihtenberg, has developed its research work on a very wide scale and has established eight laboratories: two for zoology,

one for hydro-biology, and also genetics, histology, physiology of plants and their classification, and herbaria.

In the old University of Kazan, which was the alma mater of Lenin, we find such well-known names as those of N. G. Chebotarev, A. E. Arbusov, and N. N. Parfentiev. Research work has been developed mainly in chemistry and astronomy. The Kazan Observatory claims that it holds the monopoly of observations of the moon, and is preparing a new map of the moon. All who have the chance of visiting this old historical city will admire the work done in the sphere of science and research.

The Academy of the History of Material Culture, which began as an archæological society, has now become the centre of the study of pre-capitalistic society. The research work here is carried out by four Institutes, according to the period they study: primitive society, antique serfdom, feudalism, and history of technology. Lectures are delivered by such men as V. V. Struve, B. D. Grekov, E. D. Grimm, A. Yakubovsky, and other specialists.

The Academy publishes the *News of the Academy* and a monthly journal, *Problems of the History of Pre-Capitalist Society.* It has also published over sixty monographs which have great theoretical interest, and has organized about 100 different expeditions.

The Leningrad Institute of History, Philosophy, Literature, and Linguistics, which has existed since 1930 as a separate Institute, inherited from Leningrad University very good scientific equipment, laboratories, and first-rate specialists. It has 263 members, among whom we find eight academicians and sixty-eight professors. The following are amongst them: V. Struve, E. Tarle, B. Grekov, N. Piksanov, A. Aizenberg, and others. Four faculties of the Institute prepare *cadres* of scientific workers and teachers, equipping them with good solid knowledge and training. The Faculty of Literature possesses a library of 20,000 volumes.

The Moscow Institute of History, Philosophy, and Literature has in its three faculties 947 students and 158 postgraduate research students; the course for undergraduates is five years, for postgraduates three years.

The following professors are among the teaching staff: in history—V. Nickolsky, Berg, Kossminsky, S. A. Piontkovsky, P. G. Lubomirov, S. V. Bakhrushin, N. P. Gratsiansky, V. M.

Lavrovsky, Y. V. Gotie, Ch. G. Lurie, F. A. Kogan-Bernstein, Erusalimsky, and others: in philosophy—G. F. Dmitriev, Milonov, Z. E. Beletsky, M. N. Korneev, and M. I. Suslin. The Faculty of Literature, which was opened only in 1934, has three departments—literature, arts, and linguistics.

The Institute possesses a library of 80,000 volumes, has done many valuable translations, and has published many original investigations and text-books. It has also translated into Russian J. Jusserand's *English Wayfaring Life in the Middle Ages.*

The Leshaft Institute made its name by issuing seventeen volumes of *News from the Laboratory* and eighteen volumes of *News of the Scientific Institute.* The library of the Institute, consisting of 16,000 volumes, is one of the select libraries. At present the Institute has the following departments or faculties, headed by experienced professors: Physiology (L. A. Orbeli), Physiological Chemistry (N. V. Vesselkin), Micro-biology (G. L. Seliber), Morphology of Man (S. P. Lebedkin), Histology (A. A. Zavarzin), Comparative Morphology (K. M. Derugin), Chemistry and Physics (I. I. Zhukov), Spectral Analysis (G. A. Tikhov), Applied Astronomy (N. A. Morozov), Physiology of Plants (V. N. Lubimenko).

The old Institute of Experimental Psychology, established by Prof. Chelpanov in Moscow in 1912, was also very famous in former times. It has undergone fundamental reorganization since the Revolution, and it now works under the guidance of Marxian professors. We have no space to describe here the Institutes of Radiology, Röntgenology, and the Institute for the Study of the Brain. Reference to them will be found in Chapter XI of the Webbs' book on *Soviet Communism.* Neither is there time to devote to a description of the Institutes dealing with Astronomy, Geography, and Geology, the surveys of which may be envied by geographers and geologists in this country, in so far as they have almost unlimited possibilities of obtaining funds and government assistance. The Seventeenth International Geological Congress, which held its session in Moscow in July 1937, attracted many foreign specialists and geologists.

This brief enumeration of the names of the well-known scientists and the progress made by young scientists who carry on the work of the old schools shows that there has not really been any break in the continuity of pursuit of knowledge. If anything there is a new eagerness and new methods. The

Russian Universities and Research Institutions have the advantage of not being hampered by lack of funds. They can afford to experiment and learn without regard to cost. They can feel their way to discoveries which have no immediate practical value. Moreover, the ordinary people take the keenest personal interest in reports of these discoveries, and in the daily reports of the weather at the North Pole. Every one in Russia is interested in these discoveries, and in such items of news as whether it is raining or snowing at the North Pole.

The Russian Libraries are a second centre for the promotion of science and the spreading of knowledge. There were in Soviet Russia, according to the Census of Libraries in 1934, 67,286 libraries with 270,869,660 books and 55,198 Library workers. In 1936 the number of Libraries had risen to 70,000, with 300 million books and 30 million registered readers. In the Census of 1934 all Russian Libraries were classified as shown by the following Table:

TABLE 48

Libraries in the U.S.S.R.

	Libraries	Number of Libraries	Number of Books
A.	Libraries for the 'masses of population'	50,569	92,573,163
B.	Independent Libraries for Children	301	2,320,639
C.	Libraries at the Technical and Secondary Schools	4,730	44,528,035
D.	Science and Special Libraries Consisting of:	11,686	131,447,823
	(*a*) State and Public	173	28,246,253
	(*b*) Research Institutes	2,235	35,839,085
	(*c*) Universities and Polytechnics	1,139	48,360,960
	(*d*) Government Departments	512	3,003,577
	(*e*) Party and Comsomol	484	2,088,134
	(*f*) Trade Unions, Co-operatives, &c.	163	1,206,986
	(*g*) Agricultural	482	289,420
	(*h*) Reference Libraries	4,554	7,414,373

Group D, Science and Special Libraries, is the largest as regards the number of books and the average size of each Library; Universities and Research Institutes have at their disposal 84 million books.

The third source of knowledge and information in Russia is publications. Every University and every Research Institute publishes the results of its work in the shape of quarterly journals, memoranda, or separate monographs. The majority

of these publications hardly ever reach this country, although they are the most important source of information.

The number of scientific, technical, and general periodicals is enormous:

The Academy of Science publishes	15	periodicals
On Geography, Ethnology, and Regional Studies there are	10	,,
On Natural Science, Physics, Chemistry, and Mathematics there are	34	,,
On Mechanics, Industry, Transport, and Communications there are	184	,,
On Agriculture, Livestock, and Veterinary Science and Medicine there are	54	,,
On Medicine and Biology there are	50	,,
On Social, Economic and Political Problems, Literature, and Education there are	253	,,

The total is exactly 600 periodicals! It shows how necessary it is for this country to establish special apparatus to deal with them in order not to become lost in the thick forest of Soviet publications.

2

MODEL RULES OF THE AGRICULTURAL ARTEL

Adopted by the Second All-Union Congress of Collective Farm Shock Workers and approved by the Council of People's Commissars of the U.S.S.R. and the Central Committee of the C.P.S.U., 17 February 1935.

I. *Objects and Tasks*

1. The toiling peasants of . . . village (stanitsa, hamlet, farm settlement, kishlak, aul) in . . . district voluntarily unite into an agricultural artel, in order, through using the means of production and their organized labour in common, to build a collective, that is, a social, economy, to secure complete victory over the kulak, over all the exploiters and enemies of the toilers, to win complete victory over destitution and ignorance, over the backwardness of petty, individual farming, to give rise to a high productivity of labour, and thus to secure a better life for the collective farmers.

The collective farm path, the path of socialism, is the only correct path for the toiling peasants. The members of the artel undertake to strengthen their artel, to work honestly, to divide the income of the collective farm according to the work per-

formed, to protect public property, to guard collective farm property, to take care of the tractors and machines, to look after the horses properly, to fulfil the tasks set by their Workers' and Peasants' State and in this way to make their collective farm a Bolshevik one, and all the collective farmers well-to-do.

II. *On Land*

2. All boundaries that formerly separated the plots of land belonging to the members of the artel shall be abolished and all the fields shall be converted into a single expanse of land which shall be used collectively by the artel.

The land occupied by the artel (as all other land in the U.S.S.R.) is the State property of all the people. According to the laws of the Workers' and Peasants' State, it is ensured to the artel in perpetual tenure, that is, for ever, and may neither be bought and sold, nor rented out by the artel.

Each artel shall receive from the District Executive Committee of Soviets a State certificate of perpetual tenure of land, which shall record the area and precise boundaries of the land used by the artel. No reduction in the amount of land shall be permitted ; it may only be increased, either from the unused land of the State reserve or from surplus land occupied by individual peasants, and in such a way as not to permit any interspersement of land.

From the socialized land, each household in the collective farm shall be allotted a small plot, consisting of land adjoining the dwelling place (truck garden or orchard), for its personal use.

The area of the household land for the private use of a collective farmer (exclusive of the land occupied by the dwelling) may range between one-quarter of a hectare and half a hectare, and, in certain districts, one hectare, depending on the conditions prevailing in the given region or district, as shall be determined by the People's Commissariat of Agriculture of the Union republics in accordance with the instructions of the People's Commissariat of Agriculture of the U.S.S.R.

3. The single expanse of land of the artel may in no case be reduced. It is forbidden to give land occupied by the artel to those members who leave the artel. Those who withdraw from the artel may receive land only from the free land of the State reserve.

The land of the artel shall be divided into fields in accordance with the approved system of crop rotation. In the crop rotation

fields a section shall be permanently assigned to each brigade for the entire period of crop rotation.

In collective farms with large stock-raising farms, definite tracts of land may, when necessary and when there is sufficient land, be attached to the farm and used for the cultivation of crops to serve as fodder for the livestock of the farm.

III. *On the Means of Production*

4. All draft cattle, agricultural implements (plough, sower, harrow, thresher, mowing machine), seed reserves, fodder to the amount necessary for maintaining the socialized livestock, building required for the work of the artel, and all enterprises for the working up of agricultural products shall be socialized.

The dwelling-house of the collective farm family, its private livestock and poultry and the buildings necessary for maintaining the livestock which is personally used by the collective farm family are not socialized and shall remain at the personal disposal of the collective farm household.

With the socialization of agricultural implements, the small agricultural implements required for work on the household land of artel members shall not be socialized.

In case of need the management of the artel shall set aside several horses from the number of socialized draft animals for the private use of members of the artel, for payment.

The artel shall organize mixed stock-raising farms, or, where there is a large number of livestock. several specialized stock-raising farms.

5. Each household in collective farms in *grain, cotton, sugar beet, flax, hemp, potato and vegetable, tea and tobacco growing districts* may have at its own disposal 1 cow, 1 or 2 calves, 1 sow with its litter, or, when the management of the collective farm deems it necessary, 2 sows with their litters, a total of up to 10 sheep and goats, an unlimited number of poultry and rabbits, and up to 20 beehives.

Each household in collective farms in *agricultural districts with developed stock-raising* may have at its own disposal 2 or 3 cows in addition to calves, 2 or 3 sows with their litters, a total of 20 to 25 sheep and goats, an unlimited number of poultry and rabbits, and up to 20 beehives. These districts include, for example, the agricultural districts of Kazakhstan which do not border on the nomad districts, the Polessiye districts of White Russia, the Chernigov and Kiev Regions of

the Ukraine, the districts of the Barabinsk Steppe and the Cis-Altai districts of the West Siberian Territory, the Ishim and Tobolsk groups of districts of the Omsk Region, the highlands of Bashkiria, the eastern part of East Siberia, the agricultural districts of the Far Eastern Territory, and the Vologda and Kholmogory groups of districts of the Northern Territory.

In districts where settled or semi-nomadic stock-raising prevails, where agriculture is of small account and stock-raising is the predominant enterprise, each household in the collective farm may have at its own disposal 4 or 5 cows in addition to calves, a total of 30 to 40 sheep and goats, 2 or 3 sows with their litters, an unlimited number of poultry and rabbits, up to 20 beehives, and also 1 horse or kumyss mare, or 2 camels, or 2 asses, or 2 mules. These districts include, for example, the stock-raising districts of Kazakhstan adjacent to the nomad districts of Kazakhstan, the stock-raising districts of Turkmenistan, Tadzhikistan, Kara-Kalpakia, Kirghizia, Oyrotia, Khakassia, Western Buryat-Mongolia, the Kalmuk Autonomous Region, the highlands of Daghestan A.S.S.R., the Checheno-Ingushian, Kabardino-Balkarian, the Karachayev and Ossetian Autonomous Regions of the Northern Caucasus, and also the highlands of the Azerbaydzhan, Armenian, and Georgian Socialist Soviet Republics.

Each household in the collective farms in *districts where nomadic stock-raising prevails, where agriculture is almost insignificant, and stock-raising is the universal form of husbandry,* may have at its own disposal from 8 to 10 cows in addition to calves, a total of 100 to 150 sheep and goats, an unlimited number of poultry, up to 10 horses and from 5 to 8 camels. These districts include, for example, the nomad districts of Kazakhstan, the Nagaysk District, and the nomad district of Buryat-Mongolia.

IV. *Activity of the Artel and its Administration*

6. The artel shall be obliged to manage its collective farm in accordance with a plan, strictly observing the plans of agricultural production fixed by the organs of the Workers' and Peasants' State and the artel's obligations to the State.

The artel shall undertake fully to complete the plans for sowing, summer ploughing, cultivation between rows, harvesting, threshing, and fall ploughing, drawn up with a view to the conditions and special features of the collective farms, as

well as to complete the State plan for the development of stock-raising.

The management and all members of the artel shall be obliged :

(*a*) to raise the yield of the collective farm lands by introducing and observing proper crop rotation, deep ploughing and weeding, extending and properly treating fallow and ploughed land, by the timely and careful cultivation of industrial crops, the timely hilling of cotton, the fertilization of the land with manure from both the livestock sections of the farm and the kolkhoz household cattle, fertilization with mineral fertilizers, combating farm pests, timely and careful harvesting without losses, protection and cleaning of irrigation works, protection of woods, planting of protective forests, the strictest observation of the agro-technical rules fixed by the local land departments ;

(*b*) to select the best seeds for sowing, to clean them carefully, to safeguard them against plunder and spoilage, to keep them in clean, ventilated premises, to extend the area under selected seeds ;

(*c*) to extend the cultivated area by utilizing the entire land at the disposal of the artel, by improving and cultivating neglected land and virgin soil and by scientifically laying out the fields within the kolkhoz ;

(*d*) to fully utilize on a collective basis all draft animals, all property, agricultural implements, seeds, and other means of production belonging to the artel, as well as all tractors, motors, threshing machines, combine harvesters, and other machines provided by the Workers' and Peasants' State, through the machine and tractor stations, to assist the collective farms, to organize proper care of the socialized livestock and implements, with a view to keeping the cattle and implements belonging to the collective farm in good condition ;

(*e*) to organize stock-raising farms and where possible stud farms, to increase the number of cattle in the stock-raising farms, to render aid to members who work honestly in the artel in acquiring a cow and small cattle, to use the thoroughbreds not only for breeding cattle belonging to the stock-raising farms but also for cattle at the private disposal of the members of the artel, to observe the fixed zootechnical and veterinary rules ;

(*f*) to increase the production of fodder, to improve the meadows and pasture lands, to render assistance to those

members of the artel who work honestly in the social enterprise, by allowing them, where possible, the use of the collective farm pastures, and also, when possible, by giving them fodder for the cattle personally owned by them, in payment of their work days;

(*g*) to develop all other branches of agricultural production in accordance with the natural local conditions and to develop the handicrafts existing in the various districts, to take care of and clean the existing ponds, make new ones and develop fisheries;

(*h*) to organize the construction of farm and public buildings on a collective basis;

(*i*) to improve the vocational skill of the members of the artel and to assist the collective farmers to train themselves to be brigadiers, tractor drivers, combine operators, automobile drivers, veterinary assistants, stablemen, pig breeders, cattle breeders, sheep herders, and farm laboratory workers;

(*j*) to raise the cultural level of the members of the artel, to introduce newspapers, books, radio, and cinemas; to establish clubs, libraries, and reading-rooms, to install bath-houses and barber shops, to equip light and clean field-camps, to put the village streets in good condition and line them with various kinds of trees, particularly fruit trees, and to assist the collective farmers in improving and beautifying their houses;

(*k*) to draw the women into collective farm production and the social life of the artel, promoting the capable and experienced collective farm women to leading positions, relieving them as much as possible of domestic duties by the establishment of nurseries, playgrounds and so on.

V. *On Membership*

7. New members shall be accepted into the artel at a general meeting of the artel which shall confirm the list of new members proposed by the administration.

All toilers who have reached the age of 16, women as well as men, may be admitted to artel membership.

Kulaks and all persons deprived of the franchise shall not be admitted into the artel.

N.B.—Exceptions to this rule are permitted in the case of:

(*a*) children of disfranchised persons who over the course of a number of years have been engaged in socially useful labour and are working conscientiously;

(*b*) former kulaks and members of their families who, having been deported for anti-Soviet and anti-collective farm activities, in their new places of residence have shown over a period of three years by honest work and by supporting the measures of the Soviet Government that they have reformed.

Individual peasants who have sold their horses within a period of two years prior to joining the artel, and who possess no seed, shall be admitted into the artel provided they undertake to contribute, out of their earnings over a period of up to six years, the cost of the horse and seed in kind.

8. Expulsion from an artel may be effected only on the decision of a general meeting of the members of the artel attended by not less than two-thirds of the total number of members in the artel. The minutes of the general meeting of the artel members must categorically record the number of collective farmers present at the meeting and the number of votes cast in favour of expulsion. In case of appeal by a member of the artel to the District Executive Committee of Soviets against the decision expelling him, the question shall be finally decided by the presidium of the District Executive Committee of Soviets in the presence of the chairman of the administration of the artel and the appellant.

VI. *The Funds of the Artel*

9. Those who join the artel must pay an entrance fee of from 20 to 40 roubles per household, depending on the size of their holdings. The entrance fees shall be included in the indivisible fund of the artel.

10. Of the value of the socialized property of the members of the artel (draft animals, agricultural implements, farm buildings, and so on) from one-quarter to one-half shall be included in the indivisible fund of the artel, the larger percentage to be included in the indivisible capital in the case of the larger holdings. The remaining part of the property shall be included in the member's share payment to the artel.

The administration shall make a final account with members who leave the artel, returning their share payment in cash, it being understood that those who leave the artel may be given land only beyond the boundaries of the artel land. The account shall be settled, as a rule, at the end of the fiscal year.

11. From the harvest yield and the livestock produce which it receives, the artel shall :

(*a*) fulfil its obligations to the State with respect to grain deliveries and seed loans, pay the machine and tractor station in kind according to the signed agreement which has the force of law, and fulfil its contracts for advance purchases.

(*b*) set aside seed for sowing and fodder for the livestock for one year in advance, and also create inviolable, renewable, annual seed and fodder funds to the amount of 10 to 15 per cent of the annual requirements, as a measure of insurance against poor harvest yields and any insufficiency of fodder;

(*c*) set up, by decision of the general meeting, a fund to aid disabled members, the aged, those who are temporarily disabled, families of Red Army men in need of assistance, and for the maintenance of nurseries and Children's Houses —all of which shall not exceed 2 per cent of the gross output;

(*d*) set aside a part of the produce, as determined by a general meeting of the members of the artel, for sale to the State or on the open market;

(*e*) the remainder of the artel's harvest yield and produce from livestock shall be divided among the members of the artel according to the respective number of work-days.

12. From the monetary revenue of the artel, it shall:

(*a*) pay taxes to the State to the amount determined by law, and make insurance payments;

(*b*) make the necessary expenditures on current production requirements, such as current repairs of agricultural implements, veterinary service, combating weeds and pests, and so on;

(*c*) cover the administrative and business expenses of the artel, setting aside for this purpose a sum no greater than 2 per cent of the monetary revenue;

(*d*) set aside funds for cultural purposes, such as training brigadiers and other *cadres*, organizing nurseries, installing radio, and so on;

(*e*) supplement the indivisible fund of the artel for the purchase of agricultural implements and livestock, payment for building materials, payment of wages to workers engaged from the outside for building work, and current payments to the Agricultural Bank on long-term credits. The assignments to the indivisible fund shall be not less than 10 and no more than 20 per cent of the monetary revenue of the artel;

(*f*) the entire remaining monetary revenue of the artel shall

be divided among the members of the artel according to their work-days.

All income must be entered in the books of the artel no later than the day of receipt.

For both income and expenditure the administration of the artel shall draw up annual estimates, which shall come into force only after being approved by a general meeting of the members of the artel.

The administration may make expenditures only on those items which are provided for in the estimate—the administration is forbidden to transfer funds from one item of the annual estimate to another, and to transfer funds from one item to another, in such cases the administration is obliged to ask the permission of the general meeting.

The artel shall keep its available funds in its current account in a bank or savings bank. Sums may be written off from the current account only by order of the administration of the artel, which is valid if it has the signature of the chairman and the book-keeper of the artel.

VII. *Organization, Payment, and Labour Discipline*

13. All work in the artel shall be performed by the personal labour of its members in accordance with the internal rules and regulations adopted by the general meeting. The hiring of agricultural labour from outside shall be permitted only in the case of persons possessing special knowledge and training (agronomists, engineers, technicians, and the like).

The hiring of temporary workers shall be permitted only in exceptional cases, when urgent work cannot be carried out within the allotted period of time with the forces of the members of the artel while working at full capacity, and also for construction work.

14. The administration shall set up production brigades from among the members of the artel.

Field brigades shall be set up for a period of not less than one crop rotation.

Field brigades shall be assigned sections in the crop rotation field for the period of crop rotation.

The administration of the collective farm shall assign to each field brigade, by special deed, all the necessary implements, draft animals, and farm buildings.

Stock-raising brigades shall be set up for a period of not less than three years.

The administration of the artel shall assign to each stock-raising brigade breeding animals, implements, and draft animals and machinery necessary for work, and the required buildings for the livestock.

Work shall be distributed among the members of the artel directly by the brigadier, who shall be obliged to utilize each member of his brigade to the best possible advantage, not permitting any nepotism or personal favouritism, taking into strict account the skill, experience, and physical strength of each worker and, with regard to pregnant women and nursing mothers, the necessity of easing their work, freeing women members of the collective farm from work one month before and one month after childbirth, paying them for these two months at the rate of half the average work-day earned by them.

15. Agricultural work in the artel shall be carried out on the basis of piecework.

The administration of the artel shall draw up, and the general meeting of collective farmers shall endorse, the standards of output and the rates of pay in work-days for all agricultural work.

A standard output, such as can be produced by any collective farmer who works conscientiously, shall be fixed for each type of work, with due consideration to the condition of the draft animals, machines, and soil. Each type of work, for instance: the ploughing of one hectare, the sowing of one hectare, the hilling of one hectare of cotton, the threshing of one ton of grain, the digging of one centner of beets, the scutching of one hectare of flax, the watering of one hectare of flax, the milking of one litre of milk, and so on—shall be valued in work-days in accordance with the skill demanded of the worker, and with the intricacy, difficulty, and importance of the work for the artel.

For each member of the artel, not less often than once a week, the brigadier shall reckon up the entire amount of work performed by the collective farmer, and, in accordance with the fixed rates, shall enter the number of work-days earned by the collective farmer into his labour record.

Every month the administration of the artel shall post a list of the members of the artel, indicating the number of work-days earned by them during the preceding month.

The total annual work and income of each collective farmer must be verified by the brigadier and the chairman of the artel, besides the book-keeper. The list of the number of work-days earned by each member of the artel shall be posted up for general information not later than two weeks before the general meeting, which shall confirm the distribution of the income of the artel.

If as a result of good work the field brigade reaps a harvest exceeding the average collective farm harvest from the sections attached to it, or if as a result of better work the stock-raising brigade procures a greater milk yield from the cows, fatter cattle, and does not lose any of its young cattle, then the administration of the artel shall credit to all members of such a brigade additional income to an amount up to 10 per cent of the entire number of work-days earned by them, to outstanding udarniks in the brigade an amount up to 15 per cent, and to the brigadier and manager of the stock-raising farm—up to 20 per cent.

If as the result of bad work the field brigade reaps a harvest below the average collective farm harvest from the sections attached to it, or if the livestock brigade, as the result of bad work, procures less than the average milk yield and fatness of cattle and loses more than the average number of young cattle, then the administration of the artel shall deduct from the income of all members of such a brigade an amount up to 10 per cent of the entire number of work-days earned by them.

The incomes of the artel shall be distributed among the artel members only on the basis of the number of work-days earned by each member.

16. A cash advance may be granted to a member of the artel during the course of the year to an amount not exceeding 50 per cent of the sum due him for work.

Beginning with the grain-threshing season, advances in kind may be granted by the administration to artel members from 10 to 15 per cent of threshed grain set aside for the internal needs of the collective farm.

In artels engaged in sowing industrial crops, income shall be paid to the members of the artel in money, without waiting for the completion of the State deliveries in cotton, flax, hemp, beet, tea, tobacco, and the like, and shall be paid according to the size of the delivery, not less often than once a week and

to the amount of 60 per cent of the money received by the artel for the produce delivered.

17. All members of the artel shall bind themselves to take strict care of their collective farm property and State machines working on collective farm land, to work honestly, to submit to the requirements of the rules, to resolutions of general meetings and of the administration, to observe the internal rules and regulations of the artel, to perform to the letter the work assigned them by the administration and the brigadier, to fulfil their social duties, strictly to observe labour discipline.

In case of negligent and careless treatment of public property, absence from work without good cause, poor work, or other violations of labour discipline and of the rules, the administration shall impose penalties on the delinquents in accordance with the internal rules and regulations, to wit: they may be obliged to re-do work which has been badly done without being credited with work-days; they may be admonished, reprimanded, or censured at a general meeting; their names may be posted on the blackboard; they may be fined up to five work-days, they may be demoted to a lower category of work; they may be temporarily removed from work.

In those cases in which all educational measures and penalties resorted to by the artel prove ineffectual, and the offending members of the artel prove to be incorrigible, the administration shall submit to the general meeting the question of their expulsion from the artel, such expulsion to take place in accordance with Clause 8 of the Model Rules of the Agricultural Artel.

18. All cases of pillage of public, collective farm, or State property, or criminal negligence towards the property and live-stock of the artel and machinery of the machine and tractor stations, shall be regarded by the artel as treason towards the common cause of the collective farm and as support of the enemies of the people.

Persons guilty of such criminal undermining of the foundations of the collective farm system shall be handed over by the artel to the courts for punishment in accordance with the full rigour of the laws of the Workers' and Peasants' State.

VIII. *General Management of the Artel*

19. The general management of the artel shall be vested in the general meeting of the artel members, and, in the intervals

between meetings, in an administration elected by the general meeting.

20. The general meeting is the supreme organ of administration of the artel.

The general meeting shall:

(*a*) elect the chairman of the artel and the administration of the artel, as well as the auditing commission; the auditing commission shall be endorsed by the District Executive Committee of the Soviets;

(*b*) admit new members into the artel and expel members from the artel;

(*c*) ratify the annual production plan, estimates of income and expenditure, the building construction plan, standards of output and rates of pay in work-days.

(*d*) ratify contracts with machine and tractor stations;

(*e*) ratify the annual report of the administration, which must include the findings of the auditing commission, as well as the reports of the administration on the most important agricultural campaigns.

(*f*) ratify the size of the various funds and the amount of products and money to be paid out per work-day;

(*g*) ratify the internal rules and regulations of the artel.

On all questions enumerated in the present clause, the decisions of the administration of the artel shall be invalid without the endorsement of the general meeting of the artel.

One-half of the total number of members shall constitute a quorum at general meetings for the decision of all questions except elections of the administration and the chairman of the artel, expulsion from membership of the artel, and the size of the various funds, for the decision of which questions the presence of not less than two-thirds of the total membership at the general meeting is required.

The decision of the general meeting shall be adopted by a majority vote, with open voting.

21. For the general management of the artel the general meeting of the artel shall elect an administration consisting of from five to nine persons, depending on the size of the artel, for a period of two years.

The administration of the artel is its executive organ and is responsible to the general meeting of the artel members for the work of the artel and for the fulfilment of its obligations to the State.

22. For purposes of day-to-day guidance of the work of the artel and of its brigades, as well as for the daily supervision of the fulfilment of the decisions of the administration, the general meeting of the artel shall elect a chairman of the artel, who shall at the same time be the chairman of the administration.

The chairman shall be obliged to call together the administration at least twice a month for the consideration of current affairs and for the adoption of necessary decisions.

The administration shall elect a vice-chairman to assist the chairman, from among the members of the administration, upon the recommendation of the chairman.

The vice-chairman shall submit to the decisions of the chairman in all his work.

23. Brigadiers and managers of stock-raising farms shall be appointed by the administration of the artel for a period of not less than two years.

24. For the purposes of accounting and keeping stock of the property, the administration shall appoint one of the members of the artel or shall hire a paid book-keeper. The book-keeper shall keep his books according to established forms and shall be fully subordinate to the administration of the artel and its chairman.

The book-keeper shall have no right to dispose of the funds of the artel, to make advance payments, or to disburse funds in kind in his own name. These rights are reserved for the administration and the chairman of the artel. All documents for the expenditure of artel money shall be signed by the book-keeper and by the chairman or the vice-chairman of the artel.

25. The auditing commission shall verify all the economic and financial activity of the administration, shall verify whether all monetary revenue and income in kind have been entered in the established form as income of the artel, whether provisions of the rules for the expenditure of funds are being observed, whether the property of the artel is being kept in good condition, whether there is any stealing or embezzlement of the property and monetary funds of the artel, how the artel is fulfilling its obligations to the State, how it is paying its debts and how it is collecting debts from the debtors to the artel.

In addition to this the auditing commission shall carefully verify all the accounts of the artel with its members, shall expose any case of fraud, incorrect calculation of work-days,

untimely payments for work-days and other cases of infringing on the interests of the artel and its members.

The auditing commission shall make four audits a year. When the administration makes its annual report to the general meeting, the auditing commission shall give its findings, which the general meeting shall hear immediately after the report of the administration. The audit shall be confirmed by the general meeting.

In its activity the auditing commission shall be subordinate to the general meeting of the members of the artel.

3

THE STRUCTURE OF THE STATE PLANNING COMMISSION (GOSPLAN) AT THE COUNCIL OF PEOPLE'S COMMISSARS (SOVNARKOM) OF THE U.S.S.R.

The Decree of the 31 *December* 1940

1. Chairman, Vice-chairman, and Members of the Gosplan
2. Department for integral National Economy Plan
   - Sector of production and capital repairs
   - „ „ cost of production and turnover expenses.
   - „ „ verification of the fulfilment of the plan
   - „ „ the balance of National Economy [1]
   - „ „ integral plan of transportation
   - „ „ integral plan
3. Department of Capital Construction
   - Sector of building industry
   - „ „ integral plan of capital works
   - „ „ water ways
   - „ „ special constructions
4. Department of Finance
   - Sector of the Financial Plan (Finplan)
   - „ „ Budget
   - „ „ Credit and Cash Plan
5. Department of Labour
   - Sector of labour and wages
   - „ „ recruitment and distribution of labour force (cadres)
   - „ „ colonization
6. Department of Regions (Rayons): Far East and E. Siberia
7. „ „ „ Urals and W. Siberia
8. „ „ „ Central Asia and Kazakhstan
9. „ „ „ Transcaucasia
10. „ „ „ South
11. „ „ „ Centre
12. „ „ „ South-East
13. „ „ „ North and North-West
14. „ „ „ West

[1] The word ' balance ' is often used in the Russian text of the Decree, and it means the co-ordination of different schemes and branches of the National Economy.

15. Department of integral regional planning and location of industry
16. Department of Fuel
    - Sector of the balance of fuel
    - „ „ coal and slate industry
    - „ „ oil and gas industry
    - Group of turf industry
17. Department of the balance of raw materials
    - Sector of the balance of metals
    - „ „ „ „ „ non-ferrous metals (including manufacture of cables)
    - „ „ „ „ „ timber materials
    - „ „ supply of building materials
    - „ „ qualitative steels
18. Department of the balance of equipment
    - Sector of the balance of electric power
    - „ „ „ „ „ lathes and instruments
    - „ „ „ „ „ technological equipment
    - „ „ „ „ „ building and transport equipment
19. Department of Electrification
    - Sector of production and distribution of electric power
    - „ „ erection of power stations
20. Department of Machine Industry
    - Sector of heavy industry
    - „ „ medium industry
    - „ „ general industry
    - „ „ electro-machine industry
    - „ „ co-ordination and co-operation
    - Group of integral plan
21. Department of Food Industry
    - Sector of fish industry
    - „ „ food industry
    - „ „ meat and milk industry
22. Department of Light Industry
    - Sector of Textile Industry
    - „ „ Light Industry
    - „ „ balance of raw materials and semi-manufactured goods
23. Department of Agriculture
    - Sector of Agriculture
    - „ „ Livestock
    - „ „ Industrial Plants
    - „ „ M.T.C. (Motor Tractor Service)
    - „ „ Sovkhozes (State Farms)
    - „ „ Irrigation and Melioration
24. Department of Trade
    - Sector of the distribution of goods
    - „ „ the balance of goods' funds
    - „ „ turnover of goods
    - Group of Public Feeding
    - „ „ organization of trade and turnover expenses
25. Department of Culture
    - Sector of Schools and vuzes (Universities and Higher Education)
    - „ „ Arts

26. Department of Natural Resources
27. Department of Metallurgy
    - Sector of production and distribution
    - „ „ capital works and equipment
    - Group of qualitative steel and ferro-alloys
28. Department of Non-ferrous Metals
    - Sector of production and distribution
    - „ „ capital works and equipment
29. Department of Chemical Industry
    - Sector of production and distribution
    - „ „ capital works and equipment
    - Group of Special Chemistry
30. Department of Aviotransport and Motor Transport
    - Sector of Motor Transport
    - Group of Aviotransport
    - „ „ High Roads Economy
31. Department of Timber Industry
    - Sector of Timber Industry
    - „ „ Celluloid-paper industry
    - Group of Timber Economy
    - „ „ Hydro-Industry
32. Department of Railway Transport
    - Sector of Traffic and Exploitation
    - „ „ Capital Works
33. Department of Water Transport
    - Sector of River Transport
    - „ „ Sea Transport (including North Sea Route)
34. Department of Stores of Goods
    - Sector of stores and balance of agricultural products
    - „ „ mechanized flour mills
35. Bureau of Prices
36. Department of local Industry and of Industrial Co-operative Societies (Promco-operation)
    - Sector of local and Fuel Industry
    - „ „ Promco-operation
37. Department of Building Materials' Industry
38. Department of Housing and Communal Economy
    - Sector of Communal Economy
    - „ „ Housing
39. Department of Foreign Trade
40. Department of Health Protection
    - Sector of Health Institutions
    - „ „ Children's Centres
41. Department of Communications
42. Bureau of Inventions
43. Bureau of Economy and Substitutes
44. Mobotdyel. (Mobilization Department)
45. Department of Cadres
46. Secretariat of the Chairman of Gosplan and the Department of Control
47. Office of the Gosplan. Secret Section
48. The ' Planned Economy ' Journal
49. ' Gosplanizdat ' (State Planning Publishers)
50. The Institute of Economic and Technical Information
51. Central Statistical Board of the National Economy and its local branches

52. Representatives of the Gosplan of the U.S.S.R.
53. Council of Scientific and Technical Valuation
54. Council at the Gosplan of the U.S.S.R.
55. Molotov's All-Union Economic Academy.

4

DIAGRAM OF THE ADMINISTRATIVE STRUCTURE OF THE U.S.S.R. (ON 1 MARCH 1939)[1]

TABLE 49

Administrative Structure

Eleven Union Republics; 22 Autonomous Republics; 9 Autonomous Oblasts; 6 Krays; 66 Oblasts.

Seven Oblasts of the former Far-Eastern Krays, and 29 Okrugs, are not indicated in the diagram.

	Union Republics	Capital
I.	The R.S.F.S.R.	Moscow
II.	The Uzbek S.S.R.	Tashkent
III.	The Kazakh S.S.R.	Alm-Ata
IV.	The S.S.R. of Georgia	Tbilisi
V.	The S.S.R. of Azerbaydzhan	Baku
VI.	The Turkmen S.S.R.	Ashkhabad
VII.	The Kirghiz S.S.R.	Dzhalal-Abad
VIII.	The Tadzhik S.S.R.	Stalinobad
IX.	The Ukrainian S.S.R.	Kiev
X.	The S.S.R. of Armenia	Yerivan
XI.	The White Russian S.S.R.	Minsk

	Autonomous Republics	Capital
1.	Tartar	Kazan
2.	Bashkir	Ufa
3.	Dagestan	Makhach-Kala
4.	Buryat-Mongol	Ulan-Ude
5.	Kabardino-Balkarsk	Nalchik
6.	Kalmyk	Elista
7.	Karelian	Petrosavodsk
8.	Komi	Syktyvkar
9.	Crimean	Simferopol
10.	Mari	Yoshkar-Ola
11.	Mordva	Saransk
12.	Volga (German)	Engels
13.	North Ossetian	Ordzhonikidze
14.	Udmurtsk	Izhevsk
15.	Chechen-Ingush	Grozny
16.	Chuvash	Cheboksary
17.	Yakutsk	Yakutsk
18.	Nakhichevan	Nakhichevan
19.	Abkhaz	Sukhum
20.	Adzhar	Batumi
21.	Kara-Kalpak	Nukus
22.	Moldavian	Tiraspol

[1] Compare our diagram in *Soviet Communism: A New Civilization* by Sidney and Beatrice Webb, Vol. I, pp. 456–7.

	Autonomous Oblasts	Capital
(*a*)	Nagorno-Karabakh	Stepanakert
(*b*)	South Ossetian	Stalinir
(*c*)	Gorno-Badakhshansk	Khorog
(*d*)	Oyrot	Oyrot-Tura
(*e*)	Adygeysk	Maikop
(*f*)	Khakass	Abakan
(*g*)	Karachaev	Mikoyan-Shakhar
(*h*)	Cherkess	Ezhovo-Cherkessk
(*i*)	Jewish	Birobidzhan

	Krais	Capital
A.	Altay	Barnaul
B.	Krasnodar	Krasnodar
C.	Krasnoyarsk	Krasnoyarsk
D.	Ordzhonikidze	Voroshilovsk
E.	Primorsky	Vladivostok
F.	Khabarovsk	Khabarovsk

	Oblasts
In the R.S.F.S.R.	Archangel; Vologda; Voronezh; Gorky; Ivanovo; Irkutsk; Kalinin; Kirov; Kuibyshev; Kursk; Leningrad; Moscow; Murmansk; Novo-Sibirsk; Omsk; Orel; Penza; Perm; Rostov; Ryasan; Saratov; Sverdlovsk; Smolensk; Stalingrad; Tambov; Tula; Chelyabinsk; Chita; Chkalov; Yaroslavl
In the Ukrainian S.S.R.	Vinnitsa; Voroshilovgrad; Dnyepropetrovsk; Zhitomir; Zaporozhye; Kamenets-Podolsk; Kiev; Kirovograd; Nickolaev; Odessa; Poltava; Stalino; Sumy; Kharkov; Chernigov
In the White Russian S.S.R.	Vitebsk; Gomel; Minsk; Mogilev; Polessie
In the Uzbek S.S.R.	Bukhara; Samarkand; Tashkent; Fergana; Khoresem
In the Kazakh S.S.R.	Aktubinsk; Alma-Ata; East Kazakhstan; Gurziev; West Kazakhstan; Karaganda; Kzyl-Orda; Kustanay; Pavlodar; North Kazakhstan; South Kazakhstan

5

DIAGRAM OF THE POLITICAL STRUCTURE OF THE U.S.S.R. (According to the Constitution of 1937 [1])

TABLE 50

I. Supreme Council of the U.S.S.R.
II. Presidium of the Supreme Council
III. Council of the People's Commissars (Sovnarkom)
A. Council of the Union (Union of Soviets)

[1] Compare our diagram in *Soviet Communism: A New Civilization*, by Beatrice and Sidney Webb, Vol. I, pp. 460–1.

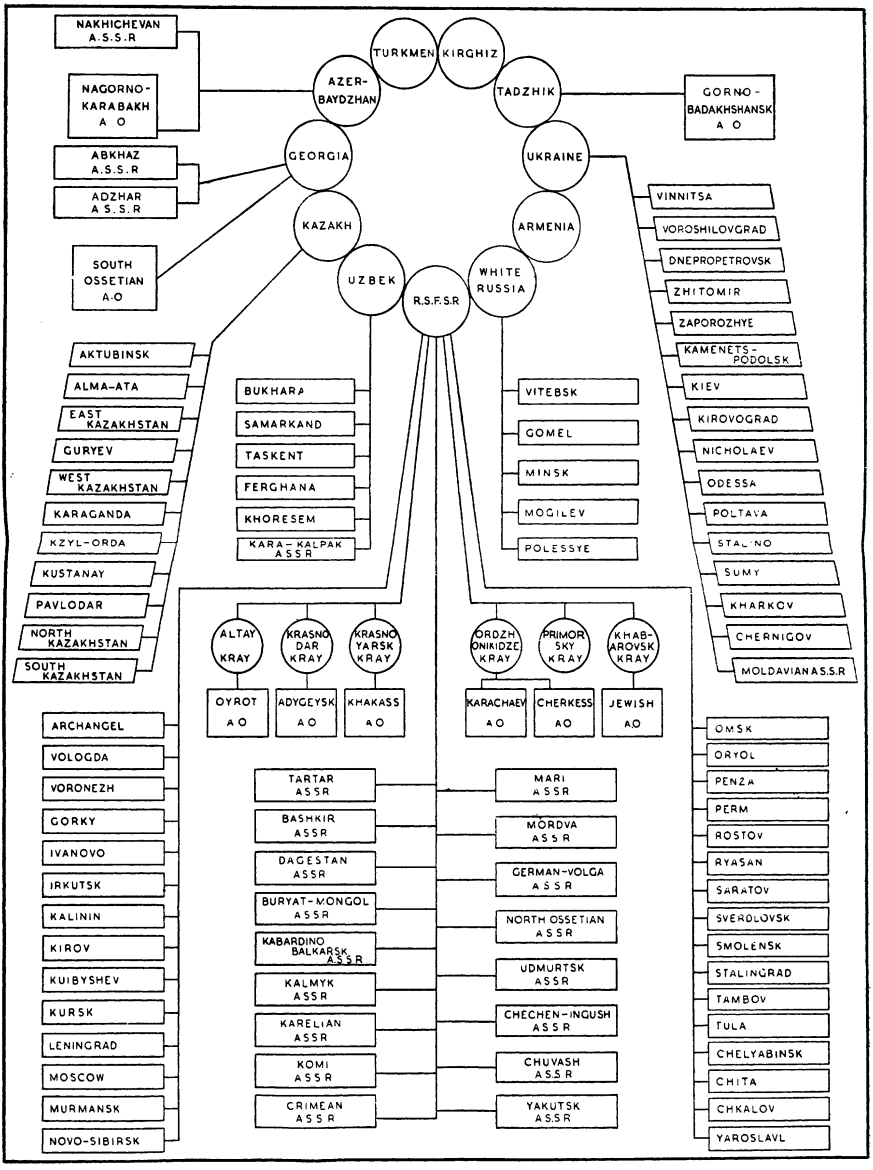


Diagram XV. Administrative Structure of the U.S.S.R.

B. Council of Nationalities (Soviet of Nationalities)

1.	Legislation Commissions	1*a*
2.	Budget Commissions	2*a*
3.	Foreign Affairs Commissions	3*a*
4.	Supreme Court (Verkhsud) Procurator	4*a*
5.	State Planning Commission	
6.	Soviet Control Commission	
7.	Economic Council	
8.	Arts Committee	
9.	Higher Education Committee	
10.	Board of the State Bank	

All-Union People's Commissariats (*Narkomats*)

(*a*) Defence
(*b*) Foreign Affairs
(*c*) Foreign Trade
(*d*) Means of Communication
(*e*) Post and Telegraph
(*f*) Sea Fleet
(*g*) River Fleet
(*h*) Fuel Industry
(*i*) Power stations and Electric Industry
(*j*) Metal Industry
(*k*) Non-ferrous Metal Industry
(*l*) Chemical Industry
(*m*) Aviation Industry
(*n*) Shipbuilding Industry
(*o*) War Supplies
(*p*) Armaments
(*q*) Heavy Machine Industry
(*r*) Medium Machine Industry
(*s*) General Machine Industry
(*t*) Military Sea Fleet
(*u*) Supplies

Unified Narkomats

(*a*) Fish Industry
(*b*) Meat and Milk Production
(*c*) Food Industry
(*d*) Light Industry
(*e*) Textile Industry
(*f*) Timber Industry
(*g*) Agriculture
(*h*) Grain and Livestock of Sovkhoses (State Farms)
(*i*) Finance
(*j*) Trade
(*k*) Internal Affairs
(*l*) Justice
(*m*) Health Protection
(*n*) Building Materials' Industry

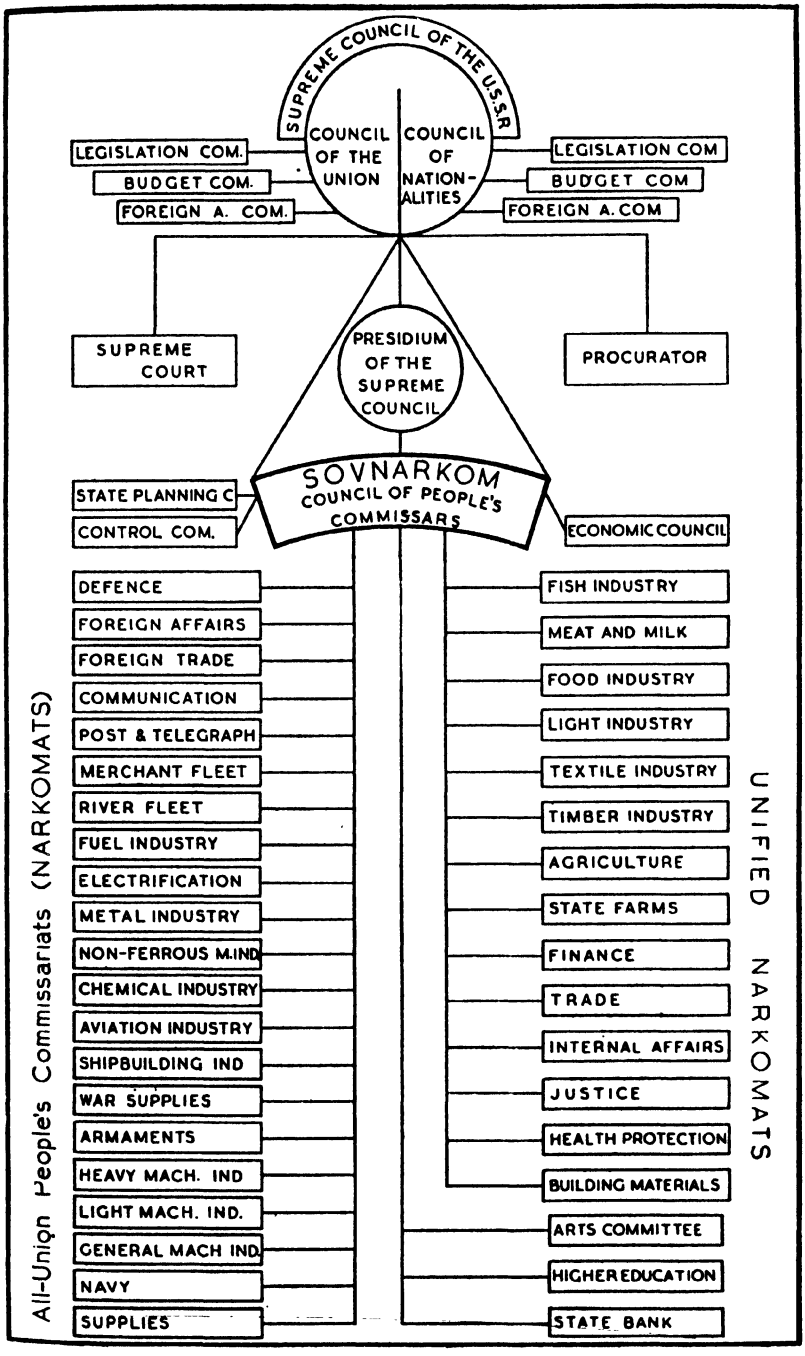


DIAGRAM XVI.—THE POLITICAL STRUCTURE OF THE U.S.S.R.

6

THE POPULATION OF THE U.S.S.R. AT THE CENSUS OF 17 JANUARY 1939

TABLE 51.

NATIONAL COMPOSITION OF THE U.S.S.R.
(In Millions)

Union Republics	Urban Pop.	Rural Pop.	Total
Russian S.F.S.R.	36·66	72·62	109·28
Ukrainian S.S.R.	11·20	19·76	30·96
White Russian S.S.R.	1·37	4·20	5·57
Uzbek ,,	1·45	4·84	6·29
Kazakh ,,	1·71	4·44	6·15
Azerbaydzhan ,,	1·16	2·05	3·21
Georgian ,,	1·07	2·48	3·55
Armenian ,,	0·37	0·92	1·29
Tadzhik ,,	0·25	1·23	1·48
Kirghiz ,,	0·27	1·19	1·46
Turkmen ,,	0·42	0·84	1·26
Total	55·93	114·57	170·50

TABLE 52

POPULATION (WITH FAMILIES) ACCORDING TO SOCIAL GROUPS

(Excluding Western Ukraine and Western White Russia)

Social Group	Number of Persons in Millions	Per cent
Workmen (town and village)	54·6	32·19
Employees	29·7	17·54
Collective farmers (Kolkhozniks)	75·6	44·61
Co-operative artisans	3·9	2·29
Non-co-operative artisans	1·4	0·82
Individual farmers (peasants)	3·0	1·78
Non-labour Group [1]	0·6	0·04
Various [2]	1·2	0·73
Total	170·0	100·00

[1] In this group are included middlemen, clergy, criminals, &c.
[2] Those who have not indicated their occupation.

TABLE 53

THE SOVIET INTELLIGENTSIA

Profession	Number of People
Engineers, architects, &c.	305,000
Technical staff	836,000
Agronoms	90,000
Agro-technical staff	114,000
Scientists (including lecturers)	93,000
Teachers	1,201,000
Social workers (including journalists, librarians)	495,000
Arts	174,000
Physicians	155,000
Middle medical staff	607,000
Accountants, cashiers, bookkeepers	1,769,000
Total	5,839,000

P.S.—According to Gosplan there were in the U.S.S.R. 9½ million of intellectuals in 1937. With the members of the family it makes 13 per cent of the whole Russian population.

TABLE 54

THE AGE COMPOSITION OF THE U.S.S.R.

(Excluding Western Ukraine, Western White Russia and the Far North)

Age	Number in Millions	Per cent
Up to 7 years	31·4	18·6
8–11 ,,	16·4	9·7
12–14 ,,	13·3	7·9
15–19 ,,	15·1	8·9
20–29 ,,	30·6	18·0
30–39 ,,	25·3	14·9
40–49 ,,	15·2	9·0
50–59 ,,	10·9	6·4
60 and over	11·1	6·6
Total	169·5	100·0

TABLE 55

LITERACY IN THE U.S.S.R. CENSUSES 1926 AND 1939

(Percentage of Literate People age of 9 and over)

	17 December 1926			17 January 1939		
	Men	Women	Men and Women	Men	Women	Men and Women
Urban population	85·3	67·6	76·3	95·7	84·0	89·5
Rural population	61·9	30·0	45·2	88·2	66·6	76·3
Total	66·5	37·1	51·1	90·8	72·6	81·2

TABLE 56

POPULATION OF CITIES WITH OVER 50,000 INHABITANTS

There were, on 17 January 1939, excluding Moscow and Leningrad:

9	cities	with	a	population	between	850,000	and 500,000
28	,,	,,		,,	,,	500,000	,, 200,000
43	,,	,,		,,	,,	200,000	,, 100,000
92	,,	,,		,,	,,	100,000	,, 50,000

List of Cities with their Corresponding Population

City	Number of Persons	City	Number of Persons
Alma-Ata	230,528	Izhevsk	175,740
Andizhan	83,691	Kalinin	216,007
Anzhero-Suzhensk	71,079	Kaluga	89,484
Archangel	281,091	Kamensk-Uralsky	50,897
Armavir	83,677	Karaganda	165,937
Artemovsk	55,165	Kazan	401,665
Ashkhabad	126,580	Kemerovo	132,978
Astrakhan	253,655	Kerch	104,471
Baku	809,347	Khabarovsk	199,364
Barnaul	148,129	Kharkov	833,432
Batumi	70,807	Kherson	97,186
Berdichev	66,306	Kiev	846,293
Bereznik	63,575	Kineshma	75,378
Biysk	80,190	Kislovodsk	51,289
Blagoveschensk	58,761	Kirov	143,181
Bobruysk	84,107	Kirovabad	98,743
Bokhara	50,382	Kirovgrad (Ukrainian)	100,331
Borisoglebsk	52,055	Kolomna	75,139
Bryansk	87,473	Kokand	84,665
Chapayevsk	57,995	Komsomolsk	70,746
Charzhow	54,739	Konstantinovka	95,087
Chelyabinsk	273,127	Kostroma	121,205
Cheremkhovo	65,907	Kovrov	67,163
Cherkassy	51,693	Krasnodar	203,946
Chernigov	67,356	Krasnoyarsk	189,999
Chimkent	74,185	Krasny Luch	50,829
Chita	102,555	Krematorsk	93,350
Chkalov	172,925	Kremenchug	89,554
Dnyeprodzherzhinsk	147,829	Krivoy Rog	197,621
Dnyepropetrovsk	500,662	Kuibyshev	390,267
Dzhambul	62,723	Kuntsevo	60,963
Dzherzhinsk	103,415	Kurgan	53,224
Engels	73,279	Kursk	119,972
Frunze	92,659	Kutaisi	81,479
Gomel	144,169	Leninakan	67,707
Gorlovka	108,693	Leningrad	3,191,304
Gorky	644,116	Leninsk-Kuznetsky	81,980
Grozny	172,468	Lipetsk	66,625
Irkutsk	248,380	Lossino-Ostrovsk	70,480
Ivanovo	285,069	Lysva	51,192

City	Number of Persons
Lyublino	64,332
Magnitogorsk	145,870
Makeyevka	240,145
Makhach-Kala	86,847
Mariupol	222,427
Maykop	67,302
Melitopol	75,735
Michurinsk	70,202
Minsk	238,772
Mogilev	99,440
Moscow	4,137,018
Murmansk	117,054
Mytishchi	60,111
Namangan	77,351
Nikolayev	167,108
Nikopol	57,841
Nizhny Tagilsk	159,864
Noginsk	81,024
Novocherkassk	81,286
Novorossiysk	95,280
Novosibirsk	405,589
Odessa	604,223
Omsk	280,716
Ordzhonikidze (North Ossetian)	127,172
Ordzhonikidze (Ukrainian)	88,246
Ordzhonikidzegrad	82,331
Orekhovo-Zuyevo	99,329
Orsk	65,799
Oryol	110,567
Ossipenko	51,664
Penza	157,145
Perm	255,196
Perovo	77,727
Petropavlovsk	91,678
Petrozavodsk	69,728
Podolsk	72,422
Poltava	130,305
Prokopyevsk	107,227
Pskov	59,898
Pyatigorsk	62,875
Rostov-on-Don	510,253
Ryazan	95,358
Rybinsk	139,011
Rzhev	54,081
Samarkand	134,346
Saratov	375,860
Semipalatinsk	109,779
Sergo	68,360
Serov	64,719
Serpukhov	90,766
Sevastopol	111,946
Shakhty	155,081
Shuya	57,950
Simferopol	142,678
Slavyansk	75,542
Smolensk	156,677
Stalinobad	82,540
Stalingrad	445,476
Stalino	462,395
Stalinogorsk	76,207
Stalinsk	169,538
Sumy	63,883
Sverdlovsk	425,544
Syzran	77,679
Taganrog	188,808
Tambov	121,285
Tashkent	585,005
Tbilisi	519,175
Tomsk	141,215
Tula	272,403
Tyumen	75,537
Ufa	245,863
Ulan-Ude	129,417
Ulyanovsk	102,106
Uralsk	66,201
Vinnitsa	92,868
Vitebsk	167,424
Vladimir	66,761
Vladivostok	206,432
Vologda	95,194
Volsk	55,053
Voronezh	326,836
Voroshilov	70,628
Voroshilovgrad	213,007
Voroshilovsk (Ukrainian)	57,794
Voroshilovsk (Ordzhonikidze Ter.)	85,100
Vyshniy-Volochek	63,642
Yaroslavl	298,065
Yegoryevsk	56,340
Yelets	50,888
Yerevan	200,031
Zaporozhie	289,188
Zhitomir	95,090
Zlatoust	99,272

7

LIST OF RENAMED CITIES MENTIONED IN THIS BOOK

Present Name	Previous Name
Alma-Ata	Vernyi
Artemovsk	Bakhmut
Ashkhabad	Poltoratsk
Batumi	Batum
Bokhara	Staraya Bukhara
Chapayevsk	Ivaschenkovo
Chkalov	Orenburg
Dnyepropetrovsk	Ekaterinoslav
Dzhambul	Aulie-Ata
Dzerzhinsk	Kaydanovo
Dzerzhinsk	Rastyapino
Engels	Pokrovsk
Fergana (Fergang)	Skobelev
Frunze	Pishpek
Gandzra	Elisavetpol
Gorky	Nizhni-Novgorod
Ivanovo	Ivanovo-Voznessensk
Kagan	Novaya Bukhara
Kalinin	Tver
Kemerovo	Shcheglovsk
Kingisepp	Yamburg
Kirov	Vyatka
Kirov railway	Murmansk railway
Kirovo	Elisavetgrad
Kirovobad	Gandzha (Elizavet)
Kirovograd	Kalata
Komsomolsk (village)	Permskoye
Krasnodar	Ekaterinodar
Krasnogvardeysk	Gatchina
Kpopotkin	Romanovsky Khutoi
Kuibyshev	Samara
Kutaisi	Kutais
Kyakhta	Troitskosivsk
Leninakan	Alexandropol
Leninsk	Novyi Chardzhou
Leninsk-Kuznetsky	Kolchugino
Makhach-Kala	Petrovsk (port)
Michurinsk	Kozlov
Noginsk	Bogorodsk
Novo-Sibirsk	Novo-Nikolaevsk
Ordzhonikidzegrad	Byezhitsa
Ordzhonikidze	Vladikavkaz
Ordzhonikidze	Yenakievo
Partisanskoe	Perovo
Pugachev	Nikolaevsk
Pushkin	Detskoye (Tsarskoye) Selo
Shakhty	Alexandrovsk-Grushevsky
Stalinobad	Dushambe
Stalingrad	Tsaritsyn
Stalino	Uzovka

Present Name	Previous Name
Stalinogorsk	Bobriki
Stepanakert	Khankendy
Sverdlovsk	Ekaterinburg
Syktyvkar	Ust-Sysolsk
Tbilisi	Tiflis
Voroshilovgrad	Lugansk
Voroshilov-Nikolsk	Ussuriysky
Voroshilovsk	Alchevsk
Voroshilovsk	Stavropol
Ulan-Ude	Verkhneudinsk
Ulyanovsk	Simbirsk
Yoshkar Ola	Krasnokokshayisk
Zaporozhye	Alexandrovsk
Zinovievsk	Elisavetgrad

8

THE ADMINISTRATIVE AND TERRITORIAL STRUCTURE OF THE U.S.S.R. ON 1 OCTOBER 1938

TABLE 57

On 1 October 1938 there were in the U.S.S.R.: 22 Autonomous Republics; 9 Autonomous Oblasts; 5 Krays; 62 Oblasts and 7 Oblasts included in the Krays; 30 Okrugs; 3,464 'rayons'; 808 towns; 704 workmen's hamlets; 238 town-hamlets and 62,699 village soviets.

Republics, Krays, Oblasts, and Okrugs	Administrative Centre	Territory (thousand square kilometres)	Number of Administrative Units	
			Village-Soviets (Sel'-soviets)	Towns and Town-hamlets
U.S.S.R.	*Moscow*	21,175·2	62,699	808
I. R.S.F.S.R.	*Moscow*	16,510·5	41,948	554
1. ALTAY KRAY *	Barnaul	294·0	1,060	6
Oyrot Autonomous Oblast	Oyrot-Tura	93·1	115	1
2. FAR-EASTERN KRAY	Khabarovsk	2,778·6	1,317	15
(*a*) Amur Oblast	Blagoveshchensk	213·8	346	3
(*b*) Kamchatka Oblast	Petropavlosk-K.	1,153·8	170	1
Koryak Nat. Okrug	Palana	310·8	54	—
Chukotsk Nat. Okrug	Anadyr	660·6	67	—
(*c*) Nizhne-Amur Oblast	Nikolaevsk ON/A	549·6	106	1
(*d*) Primorskaya Oblast	Vladivostok	96·7	143	2
(*e*) Sakhalin Oblast	Alexandrovsk/S	40·7	31	1
(*f*) Ussuriysk Oblast	Voroshilov	53·1	224	3
(*g*) Khabarovsk Oblast	Khabarovsk	227·7	222	2
(*h*) Jewish Auton. Oblast	Birobidzhan	36·8	50	1
8. KRASNODAR KRAY	Krasnodar	81·5	610	13
Adygey Auton. Oblast	Maykop	3·9	53	1

* The Far Eastern Kray was divided, by the Decree of the Presidium of the Supreme Council of the U.S.S.R., on 20 October 1938, into the Primorsky and Khabarovsky Krays.

Republics, Krays, Oblasts, and Okrugs	Administrative Centre	Territory (thousand square kilometres)	Number of Administrative Units	
			Village-Soviets (Sel'-soviets)	Towns and Town-hamlets
4. KRASNOYARSK KRAY	Krasnoyarsk	2,143·8	997	9
Taymyr Nat. Okrug	Dudinka	742·6	19	—
Evenky Nat. Okrug	Turinsk cultbase	541·6	17	—
Khakass Aut. Oblast	Abakan	49·9	104	2
5. ORDZHONIKIDZE KRAY	Voroshilovsk	101·5	488	12
Kizlyar Okrug	Kizlyar	23·3	70	1
Karachaev Aut. Oblast	Mikoyan-Shakhar	9·9	49	1
Cherkess Aut. Oblast	Ezhovo-Cherkessk	8·3	41	1
6. ARCHANGEL OBLAST	Archangel	652·0	520	10
Nenetsk Nat. Okrug	Nar'yan-Mar	214·5	17	1
7. VOLOGDA OBLAST	Vologda	150·0	789	13
8. VORONEZH OBLAST	Voronezh	76·7	1,161	12
9. GORKY OBLAST	Gorky	89·2	1,055	17
10. IVANOVO OBLAST	Ivanovo	63·4	912	28
11. IRKUTSK OBLAST	Irkutsk	922·4	454	10
Ust-Ordyn Buryat-Mongol Nat. Okrug	Ust-Orda	28·3	48	—
12. KALININ OBLAST	Kalinin	106·4	1,726	27
Opochika Okrug	Opochka	11·4	155	4
Karelia Nat. Okrug	Likhoslavl	5·8	128	1
13. KIROV OBLAST	Kirov	105·5	1,084	10
14. KUIBYSHEV OBLAST	Kuibyshev	96·2	1,273	6
15. KURSK OBLAST	Kursk	55·7	1,220	16
16. LENINGRAD OBLAST	Leningrad	143·7	1,381	31
Kingisepp Okrug	Kingisepp	6·8	88	1
Pskov Okrug	Pskov	16·4	217	3
17. MOSCOW OBLAST	Moscow	49·4	2,075	42
18. MURMANSK OBLAST	Murmansk	138·9	48	4
19. NOVOSIBIRSK OBLAST	Novosibirsk	611·0	1,259	15
Narym Okrug	Kolpashev	305·7	95	—
20. OMSK OBLAST	Omsk	1,440·5	1,212	7
Ostyako-Vogul'sk Nat. Okrug	Ostyako-Vogul'sk	760·0	51	—
Yamalo-Nenetsk Nat. Okrug	Salekhard	466·0	19	—
Tara Okrug	Tara	76·0	166	1
Tobolsk Okrug	Tobol'sk	98·0	126	1
21. ORENBURG OBLAST	Orenburg	123·8	766	5
22. OREL OBLAST	Orel	64·4	1,258	22
23. PERM OBLAST	Perm	190·2	797	12
Komi-Permyak Nat. Okrug	Kudymkar	23·1	86	1
24. ROSTOV OBLAST	Rostov	100·7	604	9
25. RYAZAN OBLAST	Ryazan	49·4	1,635	11
26. SARATOV OBLAST	Saratov	89·6	1,036	11
27. SVERDLOVSK OBLAST	Sverdlovsk	189·9	640	17
28. SMOLENSK OBLAST	Smolensk	72·2	1,228	23
29. STALINGRAD OBLAST	Stalingrad	135·4	1,020	7
Astrakhan Okrug	Astrakhan'	32·3	165	1
30. TAMBOV OBLAST	Tambov	49·9	869	10
31. TULA OBLAST	Tula	31·9	1,177	11
32. CHELYABINSK OBLAST	Chelyabinsk	163·5	1,120	14
33. CHITA OBLAST	Chita	720·0	596	7
Aginsk Buryat-Mongol Nat. Okrug	Aginskoe	27·8	24	—

Republics, Krays, Oblasts, and Okrugs	Administrative Centre	Territory (thousand square kilometres)	Number of Administrative Units	
			Village-Soviets (Sel'-soviets)	Towns and Town-hamlets
34. YAROSLAVL OBLAST	Yaroslavl	63·1	902	16
35. BASHKIR A.S.S.R.	Ufa	140·5	1,211	5
36. BURYAT-MONGOL A.S.S.R.	Ulan-Ude	331·4	180	2
37. DAGESTAN A.S.S.R.	Makhnach-Kala	34·0	586	4
38. KABARDINO-BALKARSK A.S.S.R.	Nalchik	12·3	110	2
39. KALMYK A.S.S.R.	Elista	74·2	109	1
40. KARELIAN A.S.S.R.	Petrozavodsk	136·4	212	5
41. KOMI A.S.S.R.	Syktyvkar	374·9	143	1
Pechora Okrug	Ust'-Ussa	179·2	38	—
42. CRIMEAN A.S.S.R.	Simferopol	26·0	438	13
43. MARIYSK A.S.S.R.	Yoshkar-Ola	23·3	257	2
44. MORDVA A.S.S.R.	Saransk	25·5	608	5
45. GERMANS ON THE VOLGA A.S.S.R.	Engel's	28·2	275	3
46. NORTH OSSETIN A.S.S.R.	Ordzhonikidze	6·2	79	2
47. TARTAR A.S.S.R.	Kazan	67·1	1,713	12
48. UDMURT A.S.S.R.	Izhevsk	38·9	452	5
49. CHECHEN-INGUSH A.S.S.R.	Grozny	15·7	222	1
50. CHUVASH A.S.S.R.	Cheboksary	17·9	630	7
51. YAKUT A.S.S.R.	Yakutsk	3,030·9	434	6
II. UKRAINIAN S.S.R.	*Kiev*	445·3	11,050	95
1. VINNITSA OBLAST	Vinnitsa	27·0	1,196	5
2. VOROSHILOVGRAD OBLAST	Voroshilovgrad	27·0	401	7
3. DNYEPROPETROVSK OBLAST	Dnyepropetrovsk	62·8	955	11
4. ZHITOMIR OBLAST	Zhitomir	29·4	1,012	6
5. KAMENETS-PODOL'SK OBLAST	Kamenets-Podolsk	20·5	1,018	6
6. KIEV OBLAST	Kiev	43·5	1,496	7
7. NICHOLAEV OBLAST	Nicholaev	46·8	654	4
8. ODESSA OBLAST	Odessa	32·9	667	2
9. POLTAVA OBLAST	Poltava	37·1	982	11
10. STALINO OBLAST	Stalino	25·4	388	10
11. KHARKOV OBLAST	Kharkov	44·5	959	12
12. CHERNIGOV OBLAST	Chernigov	43·4	1,095	11
13. MOLDAVIAN A.S.S.R.	Tiraspol	8·4	227	3
III. WHITE RUSSIAN S.S.R.	*Minsk*	126·8	1,420	32
1. VITEBSK OBLAST	Vitebsk	27·7	317	7
2. GOMEL OBLAST	Gomel	16·3	240	6
3. MINSK OBLAST	Minsk	27·6	285	5
4. MOGILEV OBLAST	Mogilev	28·6	363	11
5. POLESSIE OBLAST	Mozyr	25·6	215	3
IV. AZERBAYDZHAN S.S.R.	*Baku*	86·0	1,110	19
1. NAKHICHEVAN A.S.S.R.	Nakhichevan'	5·9	58	2
2. NAGORNO KARABAKH AUT. OBLAST	Stepanakert	4·3	129	2
V. GEORGIAN S.S.R.	*Tbilisi*	69·6	1,079	27
1. ABKHAZ A.S.S.R.	Sukhumi	8·7	108	5
2. ADZHAR A.S.S.R.	Batumi	2·8	48	1
South Ossetin Aut. Oblast	Staliniri	3·7	41	1
VI. ARMENIAN S.S.R.	*Yerivan*	30·0	607	3
VII. TURKMEN S.S.R.	*Ashkhabad*	443·6	469	9
Kerki Okrug	Kerki	19·6	47	1
Tashauz Okrug	Tashauz	40·7	85	1

Republics, Krays, Oblasts, and Okrugs	Administrative Centre	Territory (thousand square kilometres)	Number of Administrative Units	
			Village-Soviets (Sel'-soviets)	Towns and Town-hamlets
VIII. UZBEK S.S.R.	*Tashkent*	378·3	1,386	26
1. BUKHARA OBLAST	Bukhara	97·5	325	6
Surkhan-Darya Okrug	Termez	20·3	89	1
2. SAMARKAND OBLAST	Samarkand	27·7	230	4
3. TASHKENT OBLAST	Tashkent	14·9	162	3
4. FERGANA OBLAST	Fergana	16·9	402	7
5. KHOREZMA OBLAST	Urgench	4·6	144	2
6. KARA-KALPAK OBLAST	Turtkul (temporary)	206·3	123	4
IX. TADZHIK S.S.R.	*Stalinabad*	143·9	456	7
Garm Okrug	Garm	18·8	66	—
Kulyab Okrug	Kulyab	7·4	78	1
Leninabad Okrug	Leninabad	19·7	109	3
Gorno-Badakhshan Aut. Oblast	Khorog	66·8	44	1
X. KAZAKH S.S.R.	*Alma-Ata*	2,744·5	2,666	28
1. AKTUBINSK OBLAST	Aktubinsk	308·0	222	3
2. ALMA-ATA	Alma-Ata	358·8	359	2
3. EAST KAZAKHSTAN OBLAST	Semipalatinsk	202·9	334	4
4. GURIEV OBLAST	Guriev	247·6	106	2
5. WEST KAZAKHSTAN OBLAST	Uralsk	150·7	221	1
6. KARAGANDA OBLAST	Karaganda	472·7	181	4
7. KZYL-ORDA OBLAST	Kzyl-Orda	178·6	108	3
8. KUSTANAY OBLAST	Kustanay	178·1	221	1
9. PAVLODAR OBLAST	Pavlodar	139·7	159	1
10. NORTH KAZAKHSTAN OBLAST	Petropavlovsk	192·8	423	4
11. SOUTH KAZAKHSTAN OBLAST	Chimkent	277·3	332	3
XI. KIRGHIZ S.S.R.	Dzhalal-Abad	196·7	508	8
Dzhalal-Abad Okrug	Dzhalal-Abad	30·4	82	1
Issyk-Kul' Okrug	Karakol	32·6	78	1
Osh Okrug	Osh	44·5	131	3
Tyn'skan Okrug	Naryn	55·1	57	1

DATA ON SOVIET EXPORTS AND IMPORTS *

TABLE 58

EXPORTS OF THE U.S.S.R. (FIRST FIVE YEAR PLAN)

(Principal Articles. In Thousand Tons and Thousand Roubles)

Articles Exported	1927–8		1929		1930		1931		1932	
	Tons	Roubles	Tons	Roubles	Tons	Roubles	Tons	Roubles	Tons	Roubles
Wheat	111·0	50,282	0	0·4	2,531·0	570,793	2,499·0	337,751	551·0	84,131
Rye	115·0	44,321	1·1	464·0	646·0	92,019	1,109·0	140,072	421·0	58,109
Barley	4·9	1,726	159·0	38,435·0	1,181·0	160,807	964·0	117,669	422·0	52,376
Oats	36·7	12,027	7·9	1,713·0	353·0	49,244	387·0	52,836	17·2	2,799
Maize	20·6	5,948	10·6	2,610·0	53 6	8,742	97 0	9,452	311·0	29,162
Flour	28 8	22,062	12·8	13,819·0	16·3	13,902	31·4	23,429	31·9	20,157
Oil seeds	5·1	3,048	23·7	15,339·0	17·9	10,354	75·1	13,779	229·0	42,210
Peas, beans, lentils	54·9	28,457	82·0	55,092·0	77·2	21,199	122·0	28,063	85·7	23,021
Timber	2,987·0	411,313	5,544·0	667,989·0	7,422·0	743,461	6,033·0	497,542	5,689·0	352,700
Bacon	15·5	42,201	12·9	39,705·0	2·7	8,484	1·8	3,215	1·8	1,644
Butter	32·9	171,512	25·4	135,798·0	10·5	46,047	30·9	106,355	30·9	69,519
Eggs (thousand cases)	863·0	177,232	402·0	104,923·0	90·2	16,381	190·0	24,927	67·0	7,248
Sunflower oil	10·8	16,140	27·9	34,409·0	2·7	3,149	22·2	17,187	35·0	17,721
Tinned fish and crabs	8·4	25,071	10·8	33,827·0	40·4	117,095	26·9	66,326	17·4	33,481
Caviar	0·19	22,618	0·8	32,232·0	0·5	20,840	0·4	19,027	0·3	9,969
Sugar	133·0	149,656	127·0	150,479·0	102·0	118,286	320·0	143,178	76·1	56,055
Furs	3,422·0	522,635	3,683·0	467,009·0	3,155·0	336,559	2,964·0	246,152	3,107·0	185,278
Sheepskin (in pieces)	834·0	6,202	2,465·7	16,990·0	1,767·4	10,065	2,227·3	7,420	2,910·5	5,208
Coal	389·0	13,946	727·0	23,332·0	1,043·0	31,050	1,000·0	28,711	920·0	18,707
Anthracite	114·0	5,401	611·0	30,918·0	814·0	42,447	674·0	33,402	876·0	35,750
Oil products	2,783·0	468,752	3,858·0	604,186·0	4,712·0	687,888	5,224·0	506,604	6,106·0	469,781
Manganese ores	499·0	60·234	1,037·0	89,527·0	769·0	57,851	742·0	42,810	416·0	16,517
Iron ores	428·0	19,828	545·0	24,016·0	452·0	16,657	1,119·0	28,750	342·0	7,148
Asbestos	11·2	14,055	12·6	20,021·0	15·7	19,346	13·2	10,884	16·6	10,429
Cement	60·6	5,309	78·5	6,544·0	71·1	5,409	46·7	2,834	38·4	2,413
Chemicals	25·1	28,238	35·2	37,248·0	68·7	53,370	99·4	45,640	88·0	32,246
Fertilizers	11·7	2,848	12·8	2,142·0	25·1	2,243	8·9	407	49·3	2,383
Cotton	—	—	2·7	11,173·0	10·1	30,577	40·2	78,862	17·9	24,068
Cotton materials	12·5	227,953	13·2	192,514·0	13·4	204,305	15·9	203,096	18·8	218,396
Cast Iron Products	51·2	24,327	45·3	30,016·0	43·9	31,873	38·0	25,570	28·8	25,456
Machines and accessories	—	3,802	—	10,481·0	—	10,148	—	19,999	—	21,287

* Soviet statistics cannot always be said to be accurate, but the inaccuracies of the actual figures, if considered over a period of years, may be disregarded.

TABLE 59

EXPORTS OF THE U.S.S.R. (SECOND FIVE YEAR PLAN)

(Principal Articles. In Thousand Tons and Thousand Roubles)

Articles Exported	1933		1934		1935		1936		1937		1938	
	Tons	Roubles	Tons	Roubles	Tons	Roubles	Tons	Roubles	Tons	Roubles	Tons	Roubles
Wheat	748·0	90,027	212·0	25,982	719·0	91,288	57·9	9,472	846·0	186,043	1,275·9	187·8
Rye	157·0	16,110	99·8	7,477	42·6	4,130	106·0	10,210	204·0	35,451	356·5	50·6
Barley	567·0	48,960	182·0	20,621	588·0	45,802	105·0	8,691	221·0	35,206	406·1	48·4
Oats	83·6	8,445	141·0	14,958	156·0	18,825	52·4	7,210	6·2	648	2·8	0·3
Maize	124·0	10,858	126·0	10,122	10·2	823	—	—	—	—	37·9	3·9
Flour	31·5	17,209	56·8	25,154	30·4	4,919	56·4	9,152	57·6	9,369	52·2	8·5
Oil seeds	64·9	11,222	23·9	3,649	4·2	977	4·5	682	40·6	5,193	3·7	1·0
Peas, beans, lentils	79·8	23,827	80·6	22,163	78·3	15,431	70·6	8,062	26·2	5,909	131·4	22·9
Bacon	2·2	2,781	2·7	4,336	2·2	3,460	2·6	4,456	2·2	4,292	0·6	1·0
Timber	6,281·0	336,077	6,484·0	393,271	6,775·0	367,425	6,044·0	359,466	5,103·0	437,790	3,344·7	283·4
Butter	37·2	53,528	37·9	44,514	29·4	42,981	23·2	42,119	14·4	31,203	0·3	0·6
Eggs (thousand cases)	19·1	1,073	13·5	819	0·1	13	1·4	65	3·0	243	—	—
Sunflower oil	13·4	8,024	21·7	9,426	2·8	1,314	0·1	67	0·2	123	—	—
Tinned fish and crabs	22·0	23,998	11·4	12,553	1·8	3,609	6·5	13,254	6·9	13,584	—	—
Caviar	0·3	8,650	0·3	8,953	0·3	7,998	0·3	5,415	0·3	8,404	—	—
Sugar	38·4	24,283	48·7	20,012	76·5	23,897	163·0	33,140	134·0	35,139	114·5	35 8
Furs	3,500·0	168,889	3,278·0	141,369	2,811·0	132,013	2,599·0	155,133	1,778·0	153,643	1·7	131·9
Sheepskin (in pieces)	2,266·6	6,509	1,542·4	6,614	1,646·1	5,260	1,537·2	4,755	—	—	—	—
Coal	1,011·0	18,689	1,169·0	18,247	1,093·0	15,720	799·0	13,830	470·0	9,426	426·9	13·9
Anthracite	806·0	26,823	997·0	25,045	1,090·0	25,641	1,004·0	27,516	804·0	20,695		
Oil products	4,894·0	331,439	4,315·0	261,074	3,368·0	193,034	2,666·0	160,834	1,929·0	150,051	1,388·2	105·7
Manganese ores	655·0	19,764	737·0	21,212	645·0	21,988	606·0	21,143	1,001·0	50,857	446·2	30·7
Iron ores	509·0	10,267	342·0	4,678	158·0	2,755	25·9	267	351·0	9,255	7·2	0·1
Asbestos	21·5	11,611	33·7	14,226	25·1	9,960	26·1	9,118	27·3	9,143	14·4	5·0
Cement	87·5	8,318	66·3	3,451	133·0	6,399	90·5	5,818	75·7	4,865	—	—
Chemicals	129·0	36,380	108·0	33,183	44·9	17,765	30·3	15,759	27·1	15,252	20·9	8·6
Fertilizers	337·0	9,246	608·0	22,618	548·0	19,241	606·0	23,585	704·0	28,997	800·0	36·6
Cotton	0·6	797	11·0	11,861	6·4	4,494	6·8	3,332	45·3	55,766	34·3	71·3
Cotton materials	15·3	130,633	20·8	101,835	19·2	70,571	17·4	61,425	20·0	71,810	15·7	56·7
Cast Iron products	47·4	24,764	155·0	29,854	384·0	31,567	787·0	42,559	239·0	48,670	73·5	22·3
Machines and accessories	4,095·0	20,104	6,071·0	23,341	10,381·0	30,568	13,625·0	25,495	24,532·0	48,976	10·2	12·8

TABLE 60

EXPORTS AND IMPORTS OF THE U.S.S.R. TO AND FROM VARIOUS COUNTRIES

(In Thousand Roubles)

Countries	1933		1934		1935		1936		1937		1938	
	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.
Australia	4	482	92	4,612·0	39	19,592	52	24,969	29	32,362	7	50,855
Austria	3,837	5,606	1,778	6,785·0	5,269	3,040	1,150	3,332	6,919	5,733	2,236	4,556
Great Britain	380,936	133,934	303,017	202,641·0	377,797	190,013	361,688	204,263	566,145	191,992	375,124	240,309
Argentina	3,894	977	10,113	2,952·0	9,075	3,872	1,533	6,467	499	7,106	312	4,226
Afghanistan	30,949	24,629	13,591	12,058·0	15,194	17,231	16,277	22,034	17,017	16,995	14,763	13,716
Belgium	121,046	11,230	75,467	31,681·0	89,457	40,042	88,235	47,058	129,576	67,329	116,803	64,249
Brazil	—	70	18	1,042·0	—	2,102	—	5,107	—	7,961	—	4,198
Hungary	311	753	942	1,507·0	561	3,478	753	337	219	2,475	103	—
Germany	375,572	648,507	431,128	125,960·0	289,290	95,055	116,624	308,463	107,658	200,501	88,327	67,193
Holland	113,398	26,166	97,341	68,989·0	70,636	85,520	53,863	72,722	111,888	105,299	92,848	102,535
Greece	28,667	2,264	13,622	3,999·0	27,051	3,885	13,152	2,445	11,057	2,390	17,344	1,474
Denmark	40,953	7,556	33,183	6,290·0	28,177	915	19,839	8,680	16,879	103	27,432	5,143
Danzig	5,269	—	2,243	—	775	—	523	83	215	—	—	—
Egypt	17,713	—	13,609	—	19,938	—	14,029	—	12,395	—	12,074	279
India	14,984	12,855	12,128	2,755·0	13,254	—	13,349	—	8,711	—	3,626	—
Iran	52,595	3,661	51,618	6,274·0	68,595	90,613	63,393	91,106	91,730	84,780	57,984	63,772
Ireland	20,310	—	16,245	114·0	21,431	—	5,543	—	8,992	—	18	—
Spain	24,226	5,221	32,692	1,515·0	12,198	477	29,932	2,813	92,444	22,728	52,450	26,307
Italy	97,350	74,026	83,189	51,767·0	53,051	24,747	42,014	5,835	16,572	4,207	—	56
Canada	101	3,333	1,025	1,783·0	1,077	9,382	783	3,243	4,240	54,936	1,547	30,649
China—East	31,409	11,559	9,001	15,067·0	2,229	15,501	573	12,791	623	14,958	767	33,302
China—West	47,549	82,440	20,717	26,039·0	26,495	19,029	36,145	25,671	34,753	25,774	43,381	35,159
Latvia	10,490	1,472	2,825	3,298·0	3,482	4,507	3,380	5,813	6,374	6,619	8,797	8,440
Lithuania	11,949	2,391	5,243	5,957·0	7,358	11,905	13,021	13,105	15,831	10,624	11,646	12,695
Mongolia	168,902	75,638	196,250	90,057·0	50,953	34,650	50,433	32,120	65,822	33,694	69,838	38,510
New Zealand	753	2	675	—	2,212	—	2,699	—	42	—	7	—

EXPORTS AND IMPORTS OF THE U.S.S.R. TO AND FROM VARIOUS COUNTRIES—continued

Countries	1933		1934		1935		1936		1937		1938	
	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.
Norway	16,775	37,274	13,696	12,794·0	10,919	7,994	9,685	2,257	17,583	3,206	21,626	9,883
Poland	18,707	56,822	15,948	22,997·0	14,691	11,462	14,568	8,664	13,046	4,467	7,822	1,460
Portugal	13	92	48	280·0	223	1,283	6	2,220	5	5,338	—	5,034
Rumania	425	—	622	0·4	767	13	284	15	2,889	1,816	577	805
U.S.A.	61,167	72,620	62,533	78,293·0	116,263	129,140	130,091	209,025	134,412	244,305	96,749	405,858
Java	24,068	7,564	30,875	8,843·0	11,839	5,747	6,171	5,193	6,507	3,150	5,893	267
Turkey	16,635	20,398	23,818	12,571·0	38,863	18,343	19,575	18,059	33,809	28,630	22,746	22,740
Finland	23,766	12,649	20,599	12,667·0	15,501	6,040	7,624	3,637	9,357	3,833	10,815	3,441
France	100,271	22,938	95,830	50,966·0	79,020	77,180	102,957	42,117	87,255	28,311	59,745	39,396
Czechoslovakia	4,796	21,322	3,666	8,502·0	5,733	25,868	10,247	43,219	16,600	13,611	13,231	19,422
Switzerland	1,056	14,953	2,151	9,794·0	8,856	9,448	4,442	11,033	5,190	7,208	12,179	11,846
Sweden	25,930	20,109	24,677	21,440·0	19,097	14,029	21,105	17,985	19,420	17,408	13,453	27,390
Estonia	8,580	1,634	3,767	2,575·0	2,733	3,456	7,430	4,106	7,267	5,956	7,099	7,080
Yugoslavia	145	—	258	670·0	810	4	496	—	729	1,428	107	—
Japan	39,963	32,189	25,325	30,244·0	24,068	47,615	27,679	61,968	11,743	54,375	6,086	17,597

P.S.—All Russian Exports are f.o.b. U.S.S.R. All Russian Imports are c.i.f. U.S.S.R. The Value of Exports and Imports for the years 1913–24 are given in Russian statistics usually in prices of 1913, for the years 1925–37 in current prices. On 1 April 1936 a new rate of exchange was fixed. In order to compare values prior to 1936 with those after 1936, the former have to be multiplied by a coefficient 4·38.

TABLE 61

EXPORTS AND IMPORTS OF THE U.S.S.R.

(Principal Minerals)

(Long Tons)

	1935		1936		1937	
	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.
Aluminium Sulph.	69	—	153	—	a	—
Alumina	—	3,916	—	744	—	2,507
Crude	—	530	—	17	—	
Sheets, &c.	—	79	—	84	—	
Antimony	—	2,340	—	2,337	—	a
Asbestos: manufact.	19	33	8	29	78	64
unmanufact.	24,713	4	25,784	1	26,868	32
Chrome ore	11,299	—	—	—	a	—
Chrome alum	29	—	146	—	a	—
Chromates	2,638	—	3,079	—	a	—
Ferro-chrome	—	2,898	—	—	a	—
Anthracite	1,072,322	—	987,775	—	790,820	—
Other coal	1,075,599	35	785,961	1,960	462,275	11,856
Lignite, &c.	—	—	9,889	—	—	—
Briquettes	64,992	29	62,615	15	38,362	13
Tar and Pitch	73,258	—	87,714	—	118,240	—
Solvent Naphtha	835	—	240	—	—	—
Benzol, &c.	3,201	—	6,568	—	8,820	—
Carbolic acid	142	—	814	—	291	—
Naphthalene	4,971	—	4,881	—	3,753	—
Copper ingots	25	29,123	28	44,545	60	64,765
,, sheets, wire		2,587		906		
,, sulphate	—	45	—	—	—	a
Pig-iron	325,958	—	699,437	—	135,104	—
Ferro-manganese	—	—	294	—	208	—
Ferro-silicon	96	—	651	—	—	—
Ingots	952	454	4	—	—	—
Old and scrap	12,049	—	11,998	—	18	—
Ferro-chrome	—	2,898	—	—	—	216
,, molybdenum	—	1,030	—	1,387	—	
,, titanium	—	158	—	214	—	
,, tungsten	—	1,878	—	848	—	
,, vanadium	—	290	—	128	—	
Other ferro-alloys	—	5	—	—	—	—
Lead: pig-lead, sheets, &c.	97	30,679	18	29,194	49	41,753
Nickel	—	5,494	—	7,101	—	8,933
Crude petroleum	203,424	—	163,924	—	67,469	—
Motor spirit	647,860	42	412,583	46,208	370,000	107,925
Kerosene	409,630	39	376,798	24	237,000	
Fuel oil	1,115,775	645	811,941	38	641,000	
Gas oil	507,915	—	536,410	—	390,000	
Diesel oil	90,055	—	49,618	—	b	
Lubricating oil	303,041	156	249,172	270	225,000	
Petroleum jelly	20	21	32	20	a	
Asphalt	19,083	3	10,437	67	a	47
Paraffin wax	14,269	—	11,837	—	a	—
Ozokerite	227	47	197	108	138	146
Potash fertilizer salts	61,435	—	10,012	—	28,937	—
Tin	—	7,311	—	9,644	—	12,309
Tungsten ore	—	1,039	—	1,499	—	2,179
Zinc	44	1,451	—	86	a	2,893

Imperial Institute: The Mineral Industry, &c. London, 1938. (Based on Foreign Trade of the U.S.S.R. Moscow, and the Russian Statistical Year Book.)

a = Information not available. b = Included with fuel oil.

TABLE 62

EXPORTS OF THE U.S.S.R. TO GERMANY

(In Thousand Tons)

	1927–28	1929	1930	1931	1932	1933	1934	1935	1936	1937
Wheat	19·0	—	362·0	79·2	3·7	19·9	33·5	0·2	—	a
Rye	16·6	—	175·0	160·0	17·5	11·0	—	—	—	a
Barley	2·3	31·8	143·0	133·0	2·9	146·0	157·0	12·1	—	a
Beans, &c.	28·9	39·9	39·9	40·7	27·6	51·4	64·9	11·9	—	a
Seeds	4·0	7·0	7·8	13·4	106·0	10·9	35·6	20·8	0·3	a
Flax (tons)	891·0	3,178	5,162	3,502	16,152	23,343	42,244	16,082	1,500	a
Butter (tons)	10,135·0	7,328·0	1,610·0	9,117·0	12,791·0	8,116·0	9,996·0	2,981·0	—	a
Furs (tons)	1,310·0	1,833·0	1,699·0	1,571·0	1,337·0	1,642·0	1,194·0	631·0	108·0	a
Timber	290·0	800·0	863·0	702·0	593·0	854·0	1,353·0	1,741·0	1,090·0	a
Manganese ore	44·1	48·1	92·7	24·3	29·2	65·1	200·0	236·0	2·2	a
Iron ore	114·0	7·8	23·7	20·1	4·9	24·5	1·9	2·7	—	a
Oil products	341·0	449·0	449·0	399·0	540·0	506·0	459·0	492·0	348·0	a

a = Not given in the Russian source.

TABLE 63

IMPORTS OF THE U.S.S.R. FROM GERMANY

(In Thousand Tons)

	1927–28	1929	1930	1931	1932	1933	1934	1935	1936	1937
Chemicals	12·6	41·9	25·5	28·7	3·5	1·4	5·1	1·8	2·7	a
Dyes (tons)	2,926·0	1,817·0	1,827·0	1,142·0	1,360·0	1,231·0	136·0	119·0	331·0	a
Cast Iron	22·8	94·7	81·9	748·0	713·0	157·0	34·0	24·4	42·0	a
Ferrous Metals (tons)	25,629·0	12,158·0	11,855·0	25,254·0	16,859·0	4,755·0	676·0	1,796·0	1,950·0	a
Iron, Steel, Cast Iron manufactured	105·0	24·0	58·6	163·0	77·7	96·7	5·3	12·9	3·1	a
Machines Ac. (tons)	81·7	67·5	116·0	201·0	202·0	116·0	15·2	8·2	49·9	a
Electrical Machines (tons)	17,919·0	6,718·0	11,916·0	21,440·0	30,889·0	12,807·0	5,697·0	717·0	1,456·0	a
Automobiles, Motors, Bicycles (tons)	1,112·0	1,201·0	1,260·0	4,226·0	6,179·0	3,809·0	114·0	37·0	54·0	a
Paper (tons)	6,955·0	14,110·0	7,975·0	6,074·0	296·0	342·0	185·0	155·0	414·0	a
Wool (raw) (tons)	4,765·0	6,655·0	4,096·0	4,104·0	1,721·0	1,070·0	165·0	1,162·0	799·0	a
Wool (manufd.) (tons)	653·0	246·0	12·0	2·0	—	—	—	—	—	—

a = Not given in the Russian source.

SUPPLEMENT TO THE SECOND EDITION

10

THE NEW SOVIET BALTIC REPUBLICS

THE Baltic States—Estonia, Latvia and Lithuania—which ceased to belong to Russia after the Revolution of 1917 owing to the policy of the Allied Nations and the proclaimed principle of self-determination, were again incorporated into Russia in August 1940.

During their short period of independence each of these states had built up its own economic policy, reformed its agriculture, developed its local industries, and entered into international trade, and had tried at the same time to strengthen and safeguard its independence by the creation either of a narrow union of the three Baltic States, or of a larger one, including Poland and other neighbouring states.

The Baltic States knew perfectly well that small nations like themselves can hardly exist on their own resources, being dependent not only on imports from foreign countries, but—what is more important and vital—on investments of foreign capital.

Also it is quite evident that if they had been left alone they would have been occupied by Germany together with the rest of Western Europe.

In the latter case the liberation of them by the Allies, in which the U.S.S.R. would have taken the predominant part, would have presented them with the same dilemma : to federate with the U.S.S.R. or to await the moment when they would become members of this or that regional federation of Balto-Scandinavian States.

The *fait accompli* of the incorporation of the Baltic States into the U.S.S.R. has brought great changes and new features into the whole of the social-economic life of the former Baltic provinces of Russia, but we need at this point to acquaint ourselves with the developments and economic trends of these three Baltic States during the short period of their independent existence. For their experiments in building their own national life and their ties with the outside world have to be taken into account in the construction of their future existence. We have

no doubt that the Central Government of the U.S.S.R. will bear this in mind when finally outlining the status of autonomy of these three new sister republics, which entered the Soviet Union together with the two other maiden republics of Moldavia and Finno-Karelia.

The fact that the collectivization of agriculture was not introduced by decree after the incorporation is a good sign of far-sighted policy on the part of the Central Government of the U.S.S.R. If co-operative work on the land and collective farming is introduced into the Baltic States, it will be done on a voluntary basis by the peasants themselves when they realize all the disadvantages of small holdings.

Estonia

Prior to the incorporation Estonia had a population of 1,131,000, of which 68·0 per cent was rural. The majority of the population (87·6 per cent) were Estonians; Russians comprised 8·3 per cent, Germans 3·1 per cent, Swedes and Jews only 1 per cent. The territory of Estonia is 47,000 sq. km.[1]

The Land Reform of 1919 created small holdings all over the country, and 87·0 per cent of the peasants became small-holders.

Prior to the Land Reform the industrial activities of the Estonian people were dairy farming, the cultivation of flax and potatoes, fishing, and some metal industries. Dairy farming and cattle breeding, as well as the timber and textile industries, have increased since the Land Reform.

More than half of all Estonian export trade consisted of dairy and timber products and meat. One-half of Estonian imports was constituted by semi-manufactured goods, one-third by foodstuffs. Estonia imported various goods chiefly from Germany, U.S.A., Great Britain and the U.S.S.R. In local trade she dealt chiefly with Latvia, Sweden, Finland and Denmark.

Estonia depended greatly on foreign tonnage, as her own did not exceed 100,000 tons, as well as on foreign capital. Her budget, prior to the incorporation, was equal to 92 million kronen. (F.Kr. = 16 to £.)

[1] Tallinn, the capital city, with a pre-war population of 153,000, is located on the Gulf of Finland. It is a large port town and important manufacturing centre, the home of more than half of Estonia's industry. Metal, woodworking, and textiles are its main branches. Tallinn is also a centre of Estonian culture, as is Tartu with its famous university.

Latvia

The population of Latvia, prior to the incorporation, was 1,971,000, of which 64 per cent was rural population. The inhabitants were comprised of 73·4 per cent Latvians, 10·5 per cent Russians, 5·2 per cent Jews, 3·8 per cent Germans, 2·8 per cent Poles, 2·1 per cent White Russians and 2·2 per cent of various other nationalities.

In Latvia the Land Reform, which made 80 per cent of the peasants small-holders, was introduced in 1922.

The original occupations of the Latvian population were dairy farming, grain production, shipbuilding and metal and chemical industries.

During her period of independence Latvia, apart from increasing her dairy farming, cultivated large quantities of sugar beet, developed the stock-raising industry, and became a large exporter of canned food to the U.S.S.R., Palestine, South Africa, China and many other countries.

In the sphere of international trade Latvia was connected in former times chiefly with Great Britain, Germany, Belgium, Poland and France. But during the independence period the first place in her foreign trade was occupied by Germany, and then Great Britain, the U.S.S.R., Poland and Danzig, Czechoslovakia, Holland and the U.S.A.

Latvian exports consisted chiefly of dairy products, bacon and butter, and also of timber, seeds and flax. She depended on imports of foodstuffs, raw materials and semi-manufactured goods.

The geographical position of Latvia made her very useful to the U.S.S.R. and Poland for their transit trade. The transit of goods from the U.S.S.R. through Latvia equalled one million tons yearly.

Prior to the incorporation the Latvian budget was equal to 151 million lats (20 lats to the £), 70 per cent of which consisted of foreign investments.

Lithuania

The territory of Lithuania is 60,000 sq. km. Prior to the incorporation Lithuania had a population of 2,550,000, of which the majority (85 per cent) was rural population. Lithuanians represented 80·6 per cent of the population, Jews 7·1 per cent,

Germans 4·1 per cent, Poles 3·0 per cent, Russians 2·4 per cent, and other nationalities 2·8 per cent.[1]

Since the Land Reform of 1922 80 per cent of the peasants became small-holders.

Lithuania was always a purely agricultural country with dairy farming and the production of grain as her main industries. During her short period of independence she developed a large sugar-beet cultivation and a considerable pig-rearing industry.

Lithuania exported, chiefly to the U.S.S.R., dairy products, timber, flax and leather goods. She has developed trade relations with Great Britain, Germany (up to 1932), Czechoslovakia and Belgium as well. Up to 1932 she had trading relations with Poland and Latvia, but since then her exports have shifted to Sweden and Denmark.

Like her two sister countries, Lithuania depended on imports from foreign countries. Her budget, prior to the incorporation, was equal to 537 million lit (23 lit to the £).

The last war greatly affected the movement of population to and from the Baltic States.

In October 1939, under treaties concluded by Germany with Estonia and Latvia, 63,800 Baltic Germans were transferred to the Reich. In July 1940, after the incorporation of the Baltic States into the Soviet Union, 66,700 Baltic Germans (of whom 35,000 were not really Germans, but Lithuanians) were transferred to Greater Germany under an agreement between Germany and the U.S.S.R.

At the same time 21,000 Lithuanians and Russians were transferred to Lithuania from Memel. Soon after the incorporation 2,000 Lithuanians went to Germany.

In 1941 there was a mass migration (both voluntary and compulsory) from the Baltic States to the interior of the Soviet Union, which affected 65,000 Lithuanians (including 10,000 Jews), 60,000 Latvians (including 15,000 Jews), and 61,000 Estonians (including 5,000 Jews).

[1] Vilnius, the capital of Lithuania, which before the war had a population of 200,000, is situated in the midst of woods and hills at the confluence of the Vileika and the Vilia. It is the home of leather, woodworking, textile, and food enterprises. The city has many historical monuments. Its university is one of the oldest in Europe. Located here is the recently-founded Academy of Sciences of the Lithuanian S.S.R.

Other big cities of Lithuania are Kaunas and Klaipeda.

Fifty thousand refugees, of which 15,000 were Jews, came to the incorporated Baltic States from Poland, and 11,000 Germans from the Ciechanow district also resettled there.[1]

11

THE VEGETATION AND SOIL OF THE U.S.S.R.

1. *The Tundra*

The tundra begins at the 70th parallel and extends to the 64·5th parallel. In Siberia (the Ob and Tazov peninsula) it stretches down to the 64th, and in the Far East even to the 60th parallel. Above it is the Arctic Circle, which includes Novaya Zemlya, the Peninsula of Vaigach, and the most northern part of Lapland to about the 70th parallel. The tundra includes one-tenth of the territory of Russia in Europe and one-fifth of Russia in Asia. The ground never thaws in the tundra below a depth of a foot or so. The mean temperature in the tundra is almost everywhere below zero. Winter here lasts for about nine months, and the vegetation period from six to eight weeks only. Vegetation in the tundra consists of mosses, lichens and small berry-bearing plants and shrubs. White moss, known as ' Yagel ', grows nearly everywhere, and is the main food of the reindeer.

The only animals seen here in winter are polar bears, reindeer, polar partridges and arctic foxes. But in summer the tundra is full of life. Wolves, foxes, hares, ermines, and many other wild animals come up here from the taiga ; geese, ducks, swans, cargeese, famous eider-ducks arrive here from the South ; in the sea appear seals, morses, sea-bears, whales, and a tremendous number of herrings and other fish.

The main occupations of the local population are fishing, the boiling down of blubber, hunting and trading in furs, skins and tallows. The density of population is very rare. On the Eve of the Revolution of 1917 there was hardly one person per 3 sq. kms. in the European part of the tundra, and in the Western Siberian tundra only 0·02 person per sq. km.

2. *Marshes—Taiga (Northern Forests)*

In ancient times the taiga, with its numerous rivers, marshes and impenetrable forests, covered the northern half of Europe and Siberia from France to Kamchatka.

[1] Eugene M. Kulisher, *The Displacement of Population in Europe*, Montreal, 1943. Published by the I.L.O.

In Russia the taiga, or marsh zone, begins in the west beyond Leningrad, passes through Novgorod and Vologda and reaches the Gorky region in the east, where it stretches up to Ufa and Perm. In Siberia it widens to include the Tobolsk and Tomsk regions, and stretches throughout the whole of Siberia up to the Pre-Amursk Kray. It is an enormous area, 7,000 versts long and between 1,000 and 3,000 versts wide.[1]

Firs, cedars and pines are the predominant features of the taiga.

The climate is very severe, the mean temperature being from 0° to + 3° or + 4° C. The vegetation period lasts from 125 to 160 days.

In former times agricultural activities (mainly the cultivation of barley and oats) were possible in the taiga only up to the 60th parallel, but in present-day Russia the use of fertilizers and the mechanization of farming have extended the productive area beyond that limit. The raising of live stock in the taiga is very difficult owing to the poor quality of the pastures and the presence of all kinds of mosquitoes in the thick forests.

The assets of this region are the forests, the wild animals and birds, and the mineral resources.

The density of population, although much higher than in the tundra, is still very rare: 13·5 persons per sq. verst in the European part, and only 1·5 in Western Siberia.

3. *Mixed Forests* (*Polessye*)

On its southern edge the taiga gradually gives way to the zone of mixed forest land which covers White Russia, part of Lithuania, Poland, and the northern part of the Ukraine.

The mean temperature here reaches from + 4° to + 7°, and the difference between extreme temperatures is from + 20° to − 22·1° and less than − 30°. The warm summers (mean temperatures 18°–19°), good rainfall (500–600 mils.) and long vegetation period is favourable for farming. Rye, flax and hemp are cultivated, as well as spring wheat and potatoes.

The soil here is rich, and approaches in quality the soil of the Black Earth region. Marshes are numerous, but they are of a different type from those in the taiga and contain a good deal of turf.

[1] 1 verst = 1·07 kilometres.

4. *The Forest-Steppe Zone*

The forest-steppe zone covers a belt of 150 to 200 versts wide and 1,000 versts long. It narrows in Siberia to 100 versts, and widens again to 400 versts along the upper part of the River Ob.

The soil here is a mixture of sand, clay and black earth. Grass and pastures are rich and varied. The forests are composed of both coniferous and deciduous trees, and the same cereals are cultivated here as in the zone of mixed forests.

The temperature varies from west to east. In the west the mean temperature is 8°–9° and in the east 4°–5°. Rainfall also varies from 300–500 mils.

5. *The Northern Black Earth Steppe*

The forest-steppe zone gradually merges into the Black Earth steppe. This begins on the western borders of the U.S.S.R. forming a belt of about 150–200 versts wide. It widens towards the Volga near Stalingrad to 500 versts, and then narrows again as it passes along the southern ridges of the Ural Mountains towards the Altay.

The climate here is very variable. Mean temperature in the west ranges from + 7° to − 10° and in the east from + 4° to − 7°. Summers are warm, but the farther to the east, the greater is the difference between summer and winter temperatures. Rainfall is not very abundant, and varies also from west to east. The maximum rainfall is 400 mils., the minimum 100 mils. Eastern and south-eastern winds predominate, bringing dry weather, sand and snow storms, and blowing the snow from the fields into the ravines.

In the northern part the soil is pure ' chernozem ' (black earth), becoming a chestnut colour farther to the south. In the extreme south it is of a light chocolate colour.

The vegetation period in this zone is from 180 to 250 days, but in practice very hot summers with frosts in the mornings and absence of rainfall shorten the period of farming. Here it is possible to grow winter wheat, millet, sugar beet, tobacco and melons. Grass does not grow well, and there are hardly any trees. In the south this region looks almost a desert.

The fertile black earth region in Russia occupies one-

quarter of the total area of the European part of the country—i.e. about one million sq. kms. In pre-revolutionary times it produced about 70 per cent of the total grain output of Russia, which was on an average from 75 to 85 million tons per annum.

This zone together with the Forest-Steppe region had, before the First Revolution of 1905, a density of population from 28·8 to 59·4 persons per square verst. But the population in the Western Siberian parts of these zones was still only 7·4 persons per square verst on the eve of the Second Revolution.

6. *Southern Steppe (Desert)*

The Russian Desert is situated in the low-lying Ural-Caspian area, which begins at the mouth of the Volga and stretches eastwards and southwards to the central oblasts of Asia (the Kirghis steppe and Turkestan), and ends at the foot of the Altay and Tyan-Shan mountains.

The desert covers an area of 250 million desyatin.[1] The climate here is very dry, there being hardly any rainfall. The temperature is very high in summer, but there are frosts in winter. The mean temperature of the desert is + 7° to − 10°. In January it falls to − 18° and in July rises to + 24° C.

Climatic conditions here make farming difficult. In summer when the pastures are dried up by the heat even the native kirghis tribes take their live stock and travel northwards. But owing to the lavish investment by the Soviet Government in schemes of irrigation, the desert now produces enough cotton to make the U.S.S.R. self-sufficient in this commodity, and even capable of exporting it. Tobacco, rice, maize, grapes, and other fruit and vegetables are also grown.

7. *The Mountain-Forest Oblasts*

This zone includes the Crimea, Caucasus, and Kazan, and covers the southern and south-eastern borders of the U.S.S.R. All these areas, in spite of their different geographical and climatic conditions, have the same rich potentialities: rich pastures, valuable tropical and sub-tropical plants, and great facilities for the development of orchards.

[1] 1 desyatin = 1·09 hectares.

12

THE SOWN AREA AND VALUE OF YIELD IN THE U.S.S.R.[1]

THE total sown area in the U.S.S.R. before the last war was equal to about 130 million ha. of which more than half was situated in the Black Earth region, about one-quarter in the consuming grain area, and one-quarter in the Asiatic part of the U.S.S.R.

Considering the political structure of the U.S.S.R. and excluding the newly incorporated republics, the distribution of the total sown area will be approximately as follows:

R.S.F.S.R.	95	million	ha.
Ukraine	25	,,	,,
White Russia	4	,,	,,
Transcaucasia	3	,,	,,
Other Reps.	3	,,	,,
	130	,,	,,

The following table illustrates the area sown under cereals prior to the First World War and a quarter of a century later.

TABLE 64

GRAIN

Main Crops	Area sown in Million Hectares		
	1913	1935	1938
Rye	25·8	23·5	—
Wheat (winter)	7·3	12·5	41·5
Wheat (spring)	24·3	24·6	
Barley	11·5	8·7	—
Oats	16·9	18·3	—
Maize	1·4	3·2	—
Others (millet, buck-wheat)	7·2	12·6	—
Total	94·4	103·4	102·4

This table shows the stability of the area sown under grain throughout the whole period of a quarter of a century, with a marked increase in the area sown under winter wheat. The total increase of 8 or 9 per cent in the area sown under grain remained almost stationary up to the outbreak of the last war.

[1] Compare *The Russian Review*, No. 1, London, Penguin. We take this opportunity of thanking the editors of *The Russian Review* for allowing us to reproduce our tables and diagrams here.

TABLE 65

TECHNICAL CROPS AND GRASS

Crop	Area sown in Thousand Hectares		
	1913	1935	1938
Cotton	688·0	1,954·5	—
Flax	1,398·0	2,330·1	—
Sunflowers	968·7	3,309·4	—
Hemp	645·0	604·9	—
Sugar Beet	648·7	1,225·1	—
Tobacco	29·5	89·8	—
Coarse Tobacco	32·9	107·3	—
Potatoes	3,063·6	7,375·6	—
Grass : Annual	—	4,356·7	4,500
Perennial	2,050·0	2,862·9	8,200

Cotton, sunflowers and potatoes show, according to the table, the most striking increase : the area sown under cotton increased threefold, that under potatoes was more than doubled, and the sunflowers area more than trebled.

In the diagram on p. 104 is given the total value of the yield of each cereal in 1925–6, when Russian farming had recovered from the devastating years of the civil war, had almost reached the pre-revolutionary level of production, and had just entered the era of collectivization and the five year plans.

Ten years later, in 1935, we find little change in the proportional distribution of the total value of agricultural products. Grain, potatoes, cereals and industrial crops yielded about 75 per cent of the total value, and live stock products 25 per cent. Taken separately grain yielded 29·1 per cent of the total value, potatoes and vegetables 16·6 per cent, industrial crops 8·5 per cent, orchards 3·0 per cent, live stock products 24·3 per cent. The remaining 18·5 per cent was accounted for by grass and meadow land, and various other crops.[1]

The following two diagrams illustrate the distribution of different sown areas and the importance of each branch of farming from the point of view of the value of the yield of each cereal in 1935. (See next page.)

[1] **In the diagram X on p. 104 instead of *pasture* read : *grass and meadow land*, which include pastures.**

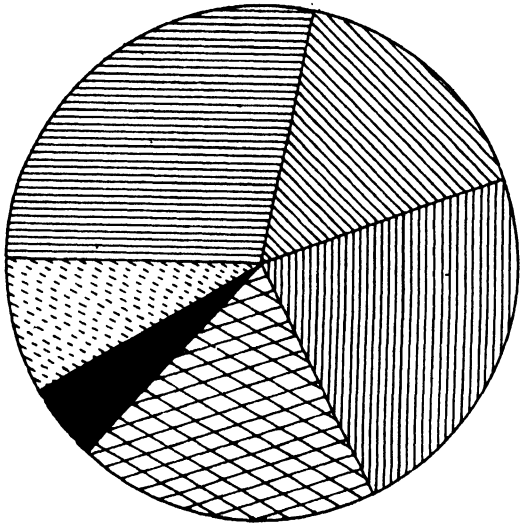


DIAGRAM XVII.—RUSSIAN FARMING IN 1935. (VALUE OF THE YIELD, IN PER CENT)

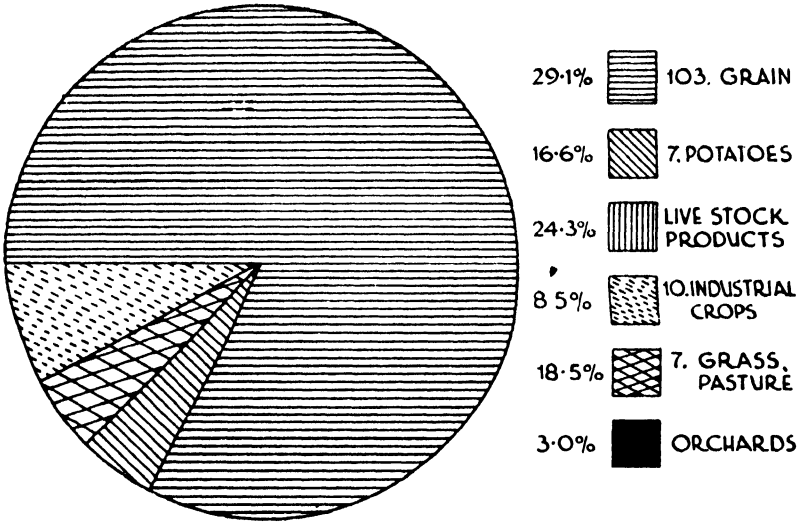


DIAGRAM XVIII.—AREA SOWN IN 1935 (IN MILLION HECTARES)

13

THE UTILIZATION OF AGRICULTURAL LAND AND DISTRIBUTION OF LIVE STOCK IN SOVIET RUSSIA

The State Farms (Sovkhozi), like the collective farms (Kolkhozi), have undergone great changes since their inauguration.

Prior to the widespread establishment of collective farms, the State Farms, equipped with tractors, and agricultural machinery, and staffed by agronomists and wage workers, were the government experimental stations, spreading agricultural knowledge and introducing the mechanization of agriculture on a large scale.

With the growth of collective farms it became evident that it was no longer necessary to run huge state farms. Besides, they were not very popular among the peasants, and they could not by themselves replace the old system of farming. It was decreed, therefore, that the surplus land of the state farms should be transferred to the neighbouring collective farms.

At the time of the inauguration of the Model Rules of Agricultural Artels the state farms were already greatly reduced in size and sowing area.

The table below gives a comparison of the utilization of

TABLE 66

AREA SOWN BY SOVKHOZI AND KOLKHOZI IN 1935–6

Republic	Area sown in Thousand Hectares		
	Total	Sovkhozi	Kolkhozi
R.S.F.S.R.	97·053	11·863	77·566
Ukrainian S.S.R.	25·712	3·584	20·180
White Russian S.S.R.	3·836	0·263	2·688
Uzbek S.S.R.	2·550	0·257	1·998
Kazakh S.S.R.	5·224	0·833	4·211
Kirghiz S.S.R.	0·996	0·107	0·710
Tadzhik S.S.R.	0·665	0·032	0·420
Turkmen S.S.R.	0·408	0·030	0·333
Transcaucasian S.S.R.	2·552	0·161	1·324
The U.S.S.R.	132·778	16·192	104·510

agricultural land by the sovkhozi and kolkhozi in each Union Republic, and the total sown area in each republic and for the whole Union. The latter shows that over 12 million hectares,

or 30 million acres, of sown area was in the possession of individual farmers at the time of the Model Rules, that is, more than a tenth of the area sown was farmed by individual peasants.

At that time the live stock was distributed amongst the main agricultural concerns and individual farmers and individual owners in the cities as follows:

TABLE 67

DISTRIBUTION OF LIVE STOCK IN SOVIET RUSSIA IN 1935

Owners	Live stock in Percentage			
	Horses	Big Horned Cattle	Sheep Goats	Pigs
Sovkhozi	12·2	10·1	16·3	21·6
Kolkhozi	72·2	25·3	30·0	20·9
Total	84·4	35·4	46·3	42·5
Kolkhozniks	3·1	46·7	39·5	40·7
Individual Farmers and Others	12·5	17·9	14·2	16·8
Total	15·6	64·6	53·7	57·5

According to the table more than half the cattle, sheep and pigs were in the private possession of collectivized and individual farmers. Horses were used chiefly by the collective farms (72·2 per cent) but the sovkhozi, owing to the use they made of mechanized power, had only 12·2 per cent of the horses at their disposal. The sovkhozi, however, were rearing as many pigs as the kolkhozi; probably for the growing Russian bacon industry.

14

THE MATERNITY AND CHILD WELFARE DECREE OF 8 JULY 1944

On 8 July 1944 the Presidium of the Supreme Soviet of the U.S.S.R. published a new decree on maternity and child welfare which introduces a number of amendments in the laws on marriage, the family and wardship. It lays down that only registered marriage entails the rights and duties of husband and wife as provided for in the corresponding legal codes.

The existing right of a mother to start court proceedings for ascertaining the paternity of a child and for collecting money for maintenance of a child born out of wedlock is abolished :—State allowances are instituted for single mothers for the maintenance and education of their children.

Divorce proceedings are to be made public through the court, with preliminary publication of a notice in the local newspaper.

The People's Court is bound to take measures to bring about reconciliation between husband and wife, and only after this has been attempted may the Higher Court, beginning with the City Court, consider dissolution of a marriage.

The Decree institutes the 'Motherhood Medal' for mothers who have borne and brought up five children (medal of the second class) and six children (medal of the first class); the Order 'Mother's Glory' for mothers who have borne and brought up seven children (Order of the third class), eight children (Order of the second class) and nine children (Order of the first class).

The title 'Heroine Mother' is to be conferred on mothers who have borne and brought up ten children. They will be presented with Orders and diplomas from the Presidium of the Supreme Soviet of the U.S.S.R.[1]

The last paragraph may sound naïve. But considering the tremendous losses of Russian manhood during the War, the necessity of greatly increasing the normal reproduction of the population can be appreciated, while the simplicity of mind of the Russian peasant, and a certain shyness of having large families which exists nowadays, makes clear the motives of the Soviet Government in presenting decorations to mothers.

15

THE MESSAGE OF ALEXEY, METROPOLITAN OF LENINGRAD AND NOVGOROD, TO PASTORS AND CONGREGATIONS OF THE RUSSIAN ORTHODOX CHURCH IN SOVIET RUSSIA IN JULY, 1944

'The Lord hath brought forth our righteousness: come, and let us declare in Zion the work of the Lord our God' (Jer. li. 10).

Three years ago the despoiling attack of the German tribe on our sacred borders opened a new epoch for the renown of

[1] Soviet War News, 10 July 1944.

our valiant troops and for the glory of our arms, victorious from olden times.

Throughout the grim days of hard, unceasing struggle against Fascist Germany, we saw plainly and felt how our might was gradually increasing and the forces of the enemy were being decimated. The unrighteous conflict forced upon us by bloody Fascism bore within itself the seeds of destruction and death; and the end of it is in sight and the enemy stands upon the brink of his own ultimate downfall.

These are not mere dreams that we indulge in, influenced by our desire for a speedy end to the war: they are facts plainly evident in all that is being done at the front, both by our forces and by those of our loyal Allies whose powerful blows are breaking down the forces and obstacles erected by our common foe.

Each day of these three years has shown us 'The word of the Lord', and been of blessed promise for our country's good. In these years we have made many sacrifices and endured much suffering for what is right. But we have also seen many comforting and gladdening signs of providence and heavenly aid.

How then can we not declare the work of the Lord our God, and how can we not confess to the whole world that 'The Lord hath brought forth our righteousness'.

Three years ago on the first day of the War, his Beatitude, the late Most Reverend Patriarch Sergius wrote in his message to the Pastors and their flocks: 'Our Orthodox Church has ever shared her people's destiny. With them she has borne their trials and rejoiced in their successes. She will not desert her people to-day. She blesses with a heaven-sent blessing the forthcoming exploit of the whole people.'

His Beatitude's inspired word has come true. At all holy services from the first day of the war our Church in ceaseless prayer has beseeched the Lord to send our troops victory and success.

'*Oh grant force unfailing, unconquerable and victorious! Grant strength and courage to our armies to overcome our enemies and adversaries and all their cunning and nefarious slanders.*'

The Church stretched out a hand to succour those who grieved and suffered for the dear ones they had lost in battle. She prayed unceasingly to God's throne for all whom the Lord had seen fit to take away on the battlefield.

The Church did not pray in vain, and blessings gave victorious force to the Russian arms. Though the enemy's attempts to defeat this might of the Russian Army were per-

sistent, our army's strength continued to grow, and the number of glorious victories were multiplied, victories without equal in the history of war. The enemy's sharp arrows could not pierce our shield because our shield was steadfast in our righteous cause.

Besides giving its blessing and praying, our Church took up collections for various defence needs. On the invitation and with the blessing of the Most Reverend Patriarch, she built a tank column named after Dmitri Donskoy, in memory of the blessing with which the Holy Sergius sent out two monks from his hermitage into the ranks of Prince Dmitri's armies, which blessing brought victory to the Russian armies on Kulikovo field.

Thus did our Church obey, and thus will she continue to obey the patriotic behest of our late Patriarch.

We shall stand fast to the end, fathers and brothers, and may no despondency or want of faith in the triumph of truth darken and belittle our exploit!

It matters not how heavy the sacrifices we shall have to make, nor the losses we have to endure for the sake of final victory, nor how prolonged the separation from those near and dear to us, nor how hard the uncertainty of their fate. We shall preserve our spirit and our faith in the righteousness and providence which ever crown the faithful with grace and bounties.

Hearken to the words of the prophet who declared: 'Thus saith the Lord: Refrain thy voice from weeping and thine eyes from tears, for thy work shall be rewarded, saith the Lord, and they shall come again from the land of the enemy . . . to their own border' (Jer. xxxiii. 16–17).

And once again will be heard 'The voice of joy and the voice of gladness, the voice of the bridegroom and the voice of the bride, the voice of them that shall say: "Praise the Lord of Hosts: for the Lord is good; for his mercy endureth for ever"' (Jer. xxxiii. 11).

We shall continue to pray as we have been doing for our armies' strength, and may the unrighteous who dared to encroach upon our country's liberty and honour be overthrown.

May our valiant and victorious leaders, and the soldiers who have freed our native land, be shielded in their victorious march westward to foil the enemy's nefarious plots, and to overcome him by this prayer and the Church's blessing: *The Lord endow thy people with strength, and at the appointed time bless thy people with victory and peace. Amen.*

(Soviet War News, 4 July 1944.)

SUPPLEMENT TO THE THIRD EDITION

17

THE RECONSTRUCTION OF THE DEVASTATED AREAS IN THE U.S.S.R. AND THE NEW FIVE YEAR PLAN (1946–50)*

THE U.S.S.R. started the reconstruction of devastated areas immediately after the invaders were driven away from these areas. Considerations of the necessary funds and labour did not arise: funds were supplied by the State and labour by the trade unions, collective farms and local soviets.

The invasion affected ten mainly agricultural regions (oblasts and krais), with a total area of about one million square kilometres.

Prior to the invasion the evacuation of livestock was carried out according to the emergency plans. The neighbouring reception provinces received the livestock according to their list, and they returned it back again. The total number of evacuated livestock was as follows:—

	Head
Big-horned cattle	197,166
Sheep and goats	341,421
Horses	52,839

In any other country, or in former Russia, such a scheme could hardly be carried out, and very probably the livestock would be lost, as it was during the First World War, and even in the last war, when rich agricultural countries like Rumania, Czechoslovakia, and Poland were occupied by the Germans.

The Soviet Government did not stop at the restoration of cattle to its former owners. Detailed measures were also suggested, and subsidies, credits, and exemptions from agricultural taxes were granted in order to raise the stock and to increase it. Great facilities were also provided for the raising of poultry and the production of eggs.

Very generous relaxations and exemptions from the delivery to the State of grain were given to all who suffered from the invasion, especially Red Army men, partisans, teachers, agriculturists, collective and individual farmers, &c.

The collective farms in the devastated areas have received

* We take this opportunity of thanking the editors of *The Russian Review* for allowing us to reproduce this article here.

on loan for the sowing campaign 50,000 tons of seed from the Government stores.

In order to assist the collective farms in the devastated areas to run their farming again on mechanized lines, it was ordered that not only should the evacuated tractors be sent back, but also that the production of tractors should be started on the spot, the farmers being supplied meanwhile with the machinery and tools from the Government stores.

Giving all travelling facilities and necessary food and accommodation to the agricultural workmen, the Government took the necessary steps by staffing the farms with young specialists who had completed their studies in 1943.

Necessary measures were also taken to supply oil to the M.T.S. and to restore railway communications. Ten million roubles were allocated in seven-year credits to railwaymen for their individual houses and allotments along the line (from ½ to ¾ hectare for each family).

Housing conditions naturally received a prominent place in the reconstruction schemes. It was emphatically stressed that the returning civil population had to be supplied with building materials. The Agricultural Bank was ordered to open credits to individual families up to 10,000 roubles each, repayable in seven years' time, for the construction of individual homes.

The provision of Army Schools and the care of orphans and invalids were also outlined in the Scheme. It was decided to open :

(1) Nine Suvorov Military Schools, providing for a total number of 4,500 pupils. These would be run on the lines of the old cadet schools, with a seven-year course for boys of ten years of age.

(2) Twenty-three Special Industrial Schools, providing for a total number of 9,200 pupils, with a four-year course for boys of twelve and girls of thirteen years of age. Boys in these special schools would be trained as specialists in metallurgy, and girls as radio experts, needlewomen, or specialists in the communication service.

(3) Children's Homes for 16,300 inmates between the ages of three and thirteen years ; and Nurseries for 1,750 children.

(4) Twenty-nine 'Distributing Centres' (orphanages) for 2,000 orphans.

One year only has passed since the cessation of hostilities, and the Russian people, in spite of tremendous devastation,

the barbaric destruction of everything in their path by the retreating German armies, and a huge loss of lives, have in that time surpassed all expectations.

In the Ukraine, for instance, according to the Report of N. S. Khrushchev, the Secretary of the Ukrainian Communist Party :

> The Don has already supplied the country with more than 40 million tons of coal. The iron and steel works of the Ukraine have already achieved the production level of 1926. Over 13,000 miles of railway line has been reconstructed and is now in operation. Considerable improvements have been achieved in the reconstruction of towns and villages—by October 1st, 1945, about 70 million square feet of living space in the towns had been reconstructed, and over 96,000 collective farmers' houses.
>
> A new step forward has been taken in the reconstruction of Ukrainian agriculture. The total sown area in 1945 had reached 74 per cent of the pre-war figure, and the area under cereals 82 per cent of pre-war. The number of cattle has almost doubled, and that of pigs, goats and sheep has increased by more than 25 per cent.

The new Fourth Five Year Plan is now almost ready, and the reconstruction embodied in it has started in full swing. It began, as we have already mentioned, immediately after the war, and judging by the reports in the Soviet daily Press, first consideration is being given to those branches of the national economy which lagged behind before the war, and which suffered most during the invasion.

The necessity of having sufficient man-power for the restoration of ruined areas dominated the minds of the Government and the military authorities, and demobilization in the U.S.S.R. has been carried out at a much quicker tempo than in the other Allied countries.

It may be interesting, perhaps, to examine, for the sake of comparison, the terms under which demobilization proceeded in the U.S.S.R.

Each demobilized man was given a lump sum in cash, calculated for every year of service in the Army during the war, on the following terms :

(*a*) To rank and file of all arms and services who received pay under the general army tariff : one year's pay for every year of service.

(*b*) To rank and file of special units and elements who received higher pay : half a year's pay for every year of service.

(*c*) To sergeants of all arms : half a year's pay in accordance with the rates of pay fixed for the positions they held, within

limits of not above 900 roubles and not less than 300 roubles for each year of service.

(*d*) To officers, on service during the last war, two months' pay for one year; three months' pay for two years; four months' pay for three years; five months' pay for four years.

All Government local authorities were instructed to provide employment for the demobilized men not later than one month after their arrival at their places of residence, taking into consideration the experience and specialities they had acquired in the Red Army, and placing them in positions not lower than those they held before they had joined the Army. Housing and fuel for them had also to be guaranteed.

In the areas which had suffered from German occupation the authorities were ordered to allocate, free of charge, plots for cutting building timber to those demobilized from the Red Army, and to those who need to rebuild or repair their dwellings, and to issue loans from 5,000 to 10,000 roubles, repayable within five to ten years, to those who need them for construction or restoration of their buildings.

Regarding transport, the aim was, according to the newly created Commissariat for the Transport Engineering Industry, headed by V. A. Malyshev, to double by 1950 the daily truck-loading and passenger traffic, to lay new tracks and to re-track 37,500 miles of rail, to increase electrification over the whole railway system, especially in the Urals and Siberia, and to construct powerful new locomotives, badly needed everywhere.

The other branches of transport were not neglected by the new plan. The construction of new motor roads will be launched on a great scale, and the reconstruction of the longest, the Moscow–Simferopol Road, has already begun, as well as the construction of a 700-kilometre motor highway between Moscow and Leningrad. The plans for roads at Dniepropetrovsk and Zaporozhye and one from Kharkov to Rostov are under consideration.

The electrification of the country and of industry occupy an important place in the Five Year Plan. It is hoped not only to restore the power industry in the devastated areas, from which the most valuable power-station equipment was removed to the East, but to construct new power-stations, and to include in the electrification scheme not only the industrial centres, but the whole countryside.

Light industries and the production of consumers' goods,

including small luxuries, have received much greater attention in this Fourth Five Year Plan than in any previous one.

Even the production of pocket- and wrist-watches, on which the Red Army men were very keen, is intended to be raised by 1950 to seven million pieces a year, and the production of hosiery is to be doubled. Amongst the articles of consumers' goods which will be produced in great quantities we find suspenders, ties, ladies' handbags, suitcases, brief-cases, belts, &c.

People who have visited the U.S.S.R. since the war and the few Russians who have visited England state that great enthusiasm and keenness to reconstruct the country are noticeable everywhere, and that the Russian troops who went abroad have profited greatly by their new contacts and experiences. They have brought home not only all kinds of objects of comfort which were extremely scarce in the U.S.S.R., but also knowledge of the everyday life of the people in foreign countries. This explains the desire to increase the production of the above-mentioned luxuries and comforts, and to make the life of everybody in Russia easier and more comfortable.

The success of the Fourth Five Year Plan will depend greatly on how far the Government is prepared and able to satisfy the people's demand for consumers' goods, which has grown tremendously after five years of privation and denial, and after the contact of the Red Army with other European countries.

Stalin, in his election speech on 9 February 1946, said:

> The main tasks of the new Five Year Plan are to restore the afflicted districts of the country, to restore industry and agriculture to their pre-war level and then to exceed this level to a more or less considerable degree.
>
> Not to mention the fact that the ration card system will be abolished in the near future, special attention will be given to the extension of production of consumer goods, to raising the standard of living of the working people by means of the steady reduction of the prices of all commodities and to extensive construction of scientific research institutes of all kinds which will enable science to deploy its forces.
>
> I do not doubt that if we render proper assistance to our scientists they will be able not only to come level with, but even to surpass, in the near future, the achievements of science beyond the boundaries of our country.
>
> As to plans for a longer period, our Party intends to organize a new powerful upsurge of the national economy which would enable us, for instance, to raise the level of our industry threefold as compared with the pre-war level. We must achieve a situation wherein our industry is able to produce annually up to 50,000,000 tons of pig iron, up to 60,000,000 tons of steel, up to 500,000,000 tons of coal, up to 60,000,000 tons of oil.
>
> Only under such conditions can we regard our country as guaranteed

against any accidents. This will require perhaps three new Five Year Plans, if not more. But this task can be accomplished, and we must accomplish it.

The post-war reconstruction schemes embrace not only the economic structure of the U.S.S.R., but its whole social life. It has already been mentioned at the beginning of this article that the Government's attention to education and the development of orphanages was the first step in preserving and bringing up successfully the young generation. The adoption of children who have lost both parents is encouraged everywhere. Large-scale plans for education have also been outlined. It is intended to graduate at the Universities and Polytechnics 100,000–150,000 students yearly. Already in 1945, 51,000 specialists graduated. Secondary and technical education is to be expanded to include one and a half million boys and girls by 1950, instead of the present 800,000. The qualifications of doctors are to be improved by prolonging their course of study from five to six years and by arranging refresher courses for those already practising. Even in the sphere of theological education it is intended to arrange courses and open colleges for priests, and to preserve the relaxations, granted at the beginning of the war, for the performance of religious rites. For instance, the Moslems, who suffered greatly under the old régime and during the first decade after the Revolution of 1917 for their religion, will be allowed to organize their pilgrimage to Mecca.

Great efforts are also being made to encourage the Arts and the Theatre. Productions of foreign plays, especially those of the English classical writers, are very popular amongst the Russian people, and have great success.

In the U.S.S.R. the war has created a universal and genuine desire for close contact and collaboration with the outside world, and the temporary frictions and uneasiness at the U.N.O. meetings do not minimize these aspirations of friendship on the part of the Russian people as a whole.

J. B. Priestley, who went to the U.S.S.R. as a guest of the Russian Society for Cultural Relations, was very much impressed by these aspirations of the Russian people:

Russians are friendly towards other peoples, and they always spoke of British folk with eager interest and even affection, acknowledging their great cultural debt to Britain. But they are still suspicious of foreign governments, in spite of the help they received during the war. In every public speech I pleaded for the building of bridges between

them and us, the opening of doors and windows . . . and my suggestions were most sympathetically welcomed.

If I were Stalin [added J. B. Priestley, referring to the restrictions imposed on foreign journalists in Moscow in their freedom of movement] I would throw the country wide open and take a chance. Soviet Russia has far more friends and fewer enemies than she imagines.

The author of this book agrees entirely with J. B. Priestley on this point, and believes that the time is not far distant when the dream of every Russian citizen to have freedom of movement not only in his own country, but all over the world, will become a reality.

18

LABOUR IN THE U.S.S.R.

AT the beginning of the first war with Germany, Russia had reached a level of industrial prosperity with a growing industry and an increasing industrial population. But the declaration of war in 1914 brought a sudden collapse of the whole of Russian industrial life. Mobilization caused a shortage of both skilled and unskilled labour, and the panic of the industrialists helped in the disorganization of economic activity throughout the country during the first months of the war.

This first blow was followed by a series of other catastrophes, such as the disorganization of transport and the shortage of food, which brought the Imperial Government—that Goliath with feet of clay—to the verge of collapse and incapacitated the country from withstanding the invading German armies.

The Imperial Government did collapse in 1917. New Russia was born, the Russia which, after a quarter of a century, became the powerful State which surprised the world by its strength and invincibility.

In contrast with the war of 1914–18, the second war with Germany found Russia fully equipped with a strong, disciplined army and with a labour force of 25,000,000 trade union men, half of whom were engaged full time in the heavy industries, making capital goods and war materials.

There was no exodus of workmen from the factories at the outbreak of hostilities. A considerable number of skilled men—foremen, ' brigadiers ', and other specialists—were released to organize further intensive production and to train new ' cadres '. The Government, anticipating the approach of the war, introduced in 1940 a decree concerning compulsory attendance at

technical and railway schools; the local City Soviets and the Executives of the Collective Farms were instructed to recruit the necessary number of pupils between the ages of fourteen and seventeen for these schools. Several decrees were issued during the course of the war introducing the universal conscription of labour all over the U.S.S.R., for men and women alike, from sixteen years of age up to fifty-five for men and forty-five for

Number of Workmen in the Big Industry of the U.S.S.R.
(In Millions)

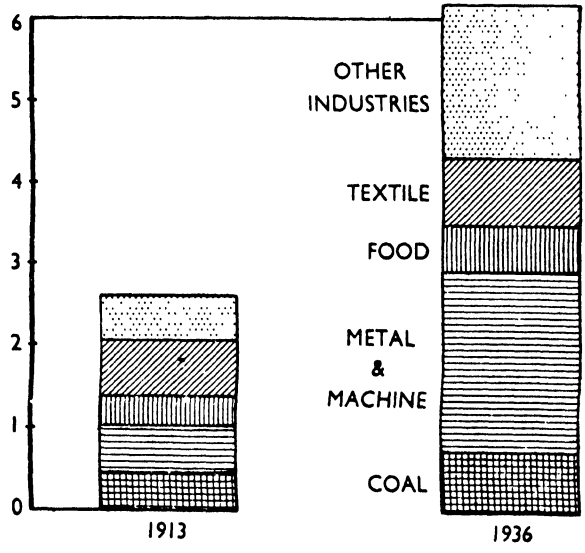


DIAGRAM XIX.—THE GROWTH OF THE LABOUR FORCE IN THE U.S.S.R.

women. Exemptions were given to mothers of young children, schoolboys, students, and teaching and training staffs.

The growth of the labour force in Russia since the Revolution of 1917 has proceeded very rapidly, owing to the industrialization of the country, and along the same lines as the development of the Russian key industries, which, as we have stated elsewhere, have preserved the same character throughout all the stormy times since the Revolution.

We see from the diagram that coal-mining, metallurgical, machine and metal industries absorbed half of the total number

of workmen in heavy industry. The other half was engaged in producing textiles, food, clothing, and other consumers' goods.

The number of workmen engaged in heavy industry has been more than doubled since 1913, and the total industrial population is now nearly ten times as large as it was in that year. With this increase in labour force, the U.S.S.R. has succeeded in raising the output of capital goods six times higher than in 1913, and the national income has more than trebled since the eve of the first war with Germany. No wonder, therefore, that Russia faced the German invasion and war of 1941 with increased confidence in her own power and resources.

This power was achieved by the hard and self-sacrificing work of the people themselves, and this explains the enthusiasm and readiness of the whole population to defend their country and their new mode of life, bought at such a high price.

In order to understand the labour position in present-day Russia and the role it has played in the whole life of the country, we must bear in mind that the Russian population now consists of only three main classes, or rather social groups : those working in the nationalized industry, those working on the land, collectively owned by the Collective Farms, and the professional people—engineers, doctors, accountants, teachers, and other groups of the new intelligentsia. Other classes of society similar to those existing in capitalist countries do not now exist in Russia.

We have already had the opportunity of briefly describing in the first number of *The Russian Review* the work of the Russian peasants, who represent 75,000,000 of the population. Here we will concentrate our attention on the second big social group : industrial workers and their families, representing 55,000,000 of the total 170,000,000 Russian people.

Thirty million of these are able-bodied workmen and employees engaged in industry, of whom 25,500,000 are united in trade unions. There are 180 trade unions in Russia, organized on an industrial and not a professional principle. The Metalworkers' Union, for instance, unites all engaged in this branch of industry, from managers down to ordinary clerks, accountants, and typists.

These workers' organizations are still called trade unions, although their functions are much wider than those of the trade unions in capitalist countries. They play a great part in the control of production, perform such functions as the inspection

of factories, and distribute social security benefits. In structure they are highly centralized institutions, along the general lines of sovietism, in which the lower organ of the organization may be superseded by a higher one.

It would be too naïve, of course, to identify the Russian trade unions with Russian government institutions simply because they perform many functions which in capitalist countries are performed by government departments but which, under the Soviet system, are delegated to the trade unions. The representative of the Russian trade unions at the International Labour Organization protested recently against such an identification which was made by one of the American delegates. But the whole controversy would not have even arisen if the Russian trade unions had been renamed ' Workers' ', or, what is perhaps much better, ' Producers' Associations '.

The sooner this is done the better for the sake of avoiding unnecessary arguments and misinterpretations of the functions of these institutions, which, although they are still called by the name, familiar in capitalist countries, of ' trade unions ', yet differ greatly in their very nature, duties, and rights from the trade unions of western Europe.

The conditions of work in Russian factories are under the constant supervision of the trade unions; work is performed according to the Collective Agreement concluded between the workmen and the management. The terms of the agreement, hours of work, rates of pay, &c., are previously discussed in the workshops.

All industrial disputes are settled by Arbitration Courts or by the Rates and Conflicts Commission, and strikes do not occur, as all disputes, individual as well as collective, are usually brought before the arbitration courts and settled by the trade union organization and the management.

A seven hours' working day is fixed by law in Russia, but owing to the general practice of payment on a piece-rate basis and overtime work, the average working day is about nine hours.

Since the war, strict regulations have been introduced to tighten discipline in the factories, to overcome the habit of wandering from one job to another, and to reduce absenteeism among workers.

Unemployment was abolished in Russia by a Decree of 1931, and people were ordered to take the jobs offered to them by the

Government without any consideration of their qualifications or previous occupation. This made things difficult for many people at the beginning. For instance, it was hard for a teacher to work in the forestry camps or sweep the snow, or for a boot-maker to bake cakes. But sooner or later the vocational principle triumphed, and people gradually settled down more or less according to their own profession.

Now there may be seasonal or temporary unemployment owing to change of work, but if, after six weeks, during which period they are supported by the Government, people cannot find jobs suitable to their qualifications, they are offered the opportunity of taking a course of three months or so, in order to learn a new trade, and they are given every facility to accomplish their new training.

Constitutional guarantees to provide a job for every citizen have a beneficial influence, and the fear of being left without a job (the most humiliating feeling in the world) no longer exists in Russia. Besides, the speed of reconstruction in the U.S.S.R. is so great that there are actually more jobs than workmen, and there is no need for anyone to hunt for work. In contrast to capitalist countries, where men are after jobs, in Russia jobs are after men.

Social insurance in the U.S.S.R. is universal, embracing the whole working population, and in many respects it is far ahead of the Beveridge Scheme. It is organized by the State, and is dealt with by the Ministry of Health and trade unions. No direct contributions are paid by the workers. The cost of insurance is deducted from the Wage Fund.

Trade unions are entrusted to pay out the maternity benefits, funeral grants, benefits during temporary incapacity to work, superannuation, pensions, and to provide facilities for rest homes, and assist workmen to go to sanatoria. The Commissariat for Health in each Republic deals with the provision of medical assistance, hospitals, &c. Health insurance and medical service for trade unionists is free in Russia. Medicine is very cheap, and often given free of charge.

The character and size of benefits in the U.S.S.R. are as follows:

(*a*) ***Maternity Benefits.***—During pregnancy and childbirth all trade union women are allowed leave of absence from thirty-five days before the birth to forty-two days after the birth, and their benefits are equal to their normal wages during this period. From the fourth month of pregnancy women may not be employed on war work or night work.

Supplementary foodstuffs are allowed to pregnant women, as well as allowances for the children's clothing and extra food for them. Mothers can leave their babies in factory crèches and feed them whenever necessary without loss of pay. Pregnant women, widows, or single women with children under one year old cannot be dismissed from employment except by agreement with the trade union. The Decree of July 1944 concerning Mothers and Children increased the material assistance to mothers with many children and unmarried mothers.[1]

(*b*) Sickness benefit is paid from the first day of sickness, and no waiting period is imposed. The amount of this benefit varies from 60 to 100 per cent of the normal wage, according to the length of service, and is paid out until complete recovery or transfer to the disablement pension.

(*c*) Temporary or permanent disability benefits are also paid out at the rate of 50 to 100 per cent of the normal wage, according to the length of service and nature of the disability.

(*d*) Funeral and death benefits are given in the form of money grants.

(*e*) The old age pension is given at sixty for men and fifty-five for women, and also varies from 50 to 100 per cent of the normal wage, according to the length of the qualifying period of service or work. (Full qualifying period is twenty-five years for men and twenty for women.) The receipt of a pension does not require actual retirement from employment. The pensioner can continue his work as before; this does not lower his pension, and people are encouraged to go on working if they themselves feel strong enough and able to do so.

There are many other benefits provided in kind: education facilities, rest homes for convalescents, sanatoria, physical recreation, camps, excursions, &c.

In pre-revolutionary times there were hardly any social security benefits in existence. In 1912 the Imperial Government of Russia promulgated an Insurance Act for sick and disabled workmen, but it applied only to a narrow circle of workmen. All those employed in home industry, in enterprises with fewer than twenty employees, all agricultural labourers, workmen in the building industry and in Siberia and Turkestan were excluded from the right to be insured. The Act met with great opposition from the workmen. Those delegates who were elected to the insurance offices were often arrested for their critical attitude towards the Act.

The whole Russian population, and trade unionists especially, are ardent supporters of the present Social Security Scheme, as it embraces the whole working population and is actually an addition of 15 to 25 per cent to the earned income of every citizen.

This alone gives a great stimulus to work. Everyone wishes

[1] See p. 224.

to improve his qualifications and to have a good qualifying period of work on his record. The feeling of security and the possibility of improving his standard of living make the Russian workman keen to raise his efficiency.

English readers are well acquainted with the Stakhanov movement in Russia, which at one time was the alpha and omega of industrial life, until nearly all the workers became stakhanovites.[1] The Stakhanov Movement aimed mainly at the increase of productivity of the rank-and-file workmen, stimulated by the energetic and qualified stakhanovites. This movement became widespread, and the mania to increase productivity per unit of time overshadowed the question of quality of goods, which were produced in a rather rushed manner.

The necessity not only to increase productivity, but also to raise efficiency became apparent. A new movement was initiated—a drive for efficiency—the aim being for each worker to run more looms than any other man or woman. The ' Multi-loom ' movement, which requires more efficient labour, was the last word on the eve and during the course of the war. The results of this movement proved to be very successful: more efficient workers came to the forefront, and the increase of productivity achieved by the efficient worker was accompanied by a better quality in the goods produced.

The war has also proved that the rank and file of Russian workmen are very good technicians, and it is hoped that in the near future, as a result of experience, intelligence, freedom of judgment, and wider initiative, there will be as many Russian engineers as there are now technicians.

It is hardly necessary to mention here that Russian workmen of the present day are much better off than those of the old Imperial régime. Since the Revolution of 1917 the Russian workman has been the master of the situation, whereas in pre-revolutionary times he was exploited by everyone who was not too lazy to exploit him. The aristocrats of labour, the printers and metal-workers only, had more or less bearable conditions; the rest worked under conditions of sweated labour.

Analyses and comparisons of workers' family budgets would probably have thrown light on conditions of work and life in Russia, but, unfortunately, the publication of them, which was conducted on the same statistical principles as in all other

[1] See *Soviet Communism* by Sidney and Beatrice Webb, and *Moscow in the Making* by E. D. Simon and others.

European countries, has been discontinued, and we have only been able to make analyses of them as far as 1927.[1]

However, a comparison of the proportional expenditure by a worker's family in Great Britain and in the U.S.S.R. may give an idea of how the earned income in both countries is spent.

Comparison of Workers' Family Budgets in Great Britain and in the U.S.S.R.
(Percentage Expenditure)

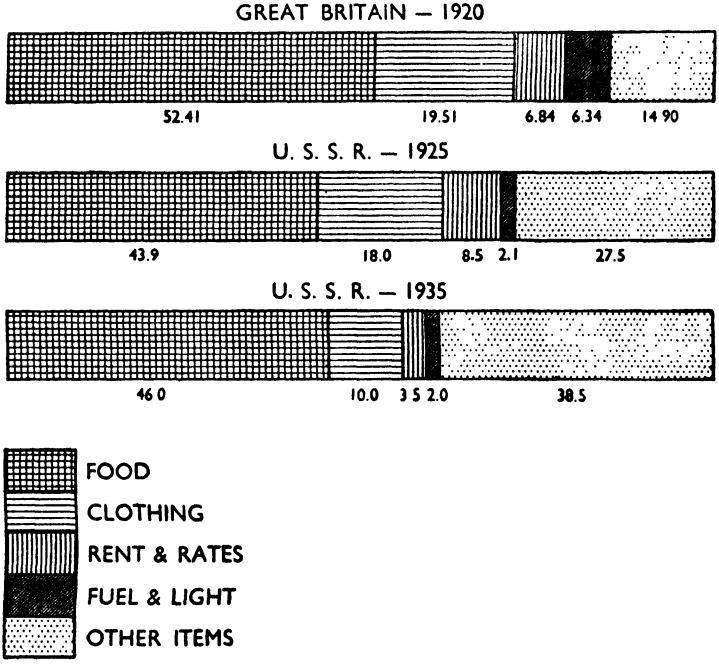


DIAGRAM XX

According to the diagram, the Russian workman spends *less* than half of his earned income on food; the British workman *more* than half. Food in Russia is cheaper and more vegetarian. The next big item of expenditure is clothing, on which the Russian workman, during the restoration period prior to the inauguration of the Five Year Plans (1928–9), spent as much as his fellow-workman in Great Britain. Ten years later, in

[1] *International Labour Review*, Vol. XX, No. 4, Geneva, 1929. Reprinted in the book: *From Peter the Great to Lenin*. P. S. King and Son, London, 1935, p. 151.

1935, his expenditure on clothing was much less than in this country, owing to the fact that more textiles were produced on a large scale. On rent and rates the Russian workmen spent in 1935 less than half what was spent by the British workman. Prior to the introduction of the Five Year Plans this expenditure, owing to the shortage of accommodation at the factories, was as high as, or even higher than, in this country. At present, rents, according to the *Soviet News*, are extremely low. They are calculated according to the type of housing, the lessee's salary and the number of his dependants. The maximum rent payable by factory and office workers is 1 rouble 32 kopeks per square metre per month. Serving soldiers are charged a special reduced rent of 80 kopeks per square metre per month. It was found that in a block of flats in Moscow the rent charged amounted to no more than 2 to 5 per cent of the tenants' total income.

Certain categories of tenants have the right to favoured treatment in respect of the minimum amount of floor space to be provided per person. For artists, scientists, writers, as well as for industrial and economic leaders, doctors, lawyers, &c., higher standards are established.

The same applies to the rationing of food.

> The people on the lowest rationing scale are [according to J. B. Priestley] undoubtedly still having a hard time, but Moscow citizens on the higher scales of rationing—officials, scientists, writers, actors, teachers, skilled workers—fare better than we do in London. A Moscow high-school teacher receives as much butter as a whole family—anybody's family—does in Britain. The Russian system of rationing is on a strictly utilitarian basis. The more valuable you are to the State, the more food you get. If your work is important, then you must be given enough food so that you can do that work properly. Privileges of this kind are the rewards of skill and responsibility. [*Sunday Express*, 18 November 1945.]

Private building of houses is now encouraged in the U.S.S.R. and persons wishing to build a house are granted credits by the State Bank and are guaranteed the necessary materials. Persons who obtain loans are under an obligation to invest not less than 30 per cent of the total cost in the building. This sum may be contributed partly by a man's own labour in building the house. Loans are given for five years at an interest of 2 per cent per annum. In spite of the cold climate, the Russian worker spends less on fuel and light than the worker in this country, because of the cheaper wood fuel, the special construction of the houses, and the electrification of the country.

The balance left for other items of expenditure in Russia is much higher, which shows that life in Russia is less standardized than in Great Britain. This larger balance is spent, most probably, on cultural needs and the improvement of the standard of living.

The general standard of living in Russia is much lower than in this country, but the above comparison shows that, owing to the part played by the State in the organization of work, and the control of distribution and social services, the Russian workman is less overburdened with getting his daily bread, and, leading a simple but healthy life, spends less of his income on the necessities of life.

But the above comparison also shows that, in spite of all his advantages in being master of the labour situation, the Russian workman has, up to the present, been working hard for his living, and spending the major part of his earned income on the bare necessities of life. And this will remain, until the Russian worker, with his energy, enthusiasm, and devotion to the common cause, has achieved a greater increase of production per head of the population in his struggle towards the creation of plenty.

TABLE 68

THE FOURTH FIVE YEAR PLAN FOR INCREASE OF PRODUCTION AND CAPITAL CONSTRUCTION IN THE U.S.S.R. (1946–50)

Total volume of production of the industry of the U.S.S.R. as a whole in 1950, i.e. the last year of the Five Year Plan for the restoration and development of the national economy of the U.S.S.R., is fixed at 205,000 million roubles (in 1926–7 prices) as compared with 138,500 million roubles in 1940, which represents an increase in industrial output of 48 per cent. as compared with the pre-war year of 1940.

The 1950 output level of the major branches of industry shall be as follows :

Iron and Steel	
Pig iron (tons)	19,500,000
Steel (tons)	25,400,000
Rolled metal (tons)	17,800,000
Fuel and Power	
Coal (tons)	250,000,000
Petroleum (tons)	35,400,000
Coal and shale gas (cubic metres)	1,900,000,000
Natural gas (cubic metres)	8,400,000,000
Electric Power (kWh.)	82,000,000,000

Rolling Stock	
Steam locomotives	2,200
Diesel locomotives	300
Electric locomotives	220
Freight cars (in terms of 2-axle cars)	146,000
Passenger coaches	2,600
Motor Vehicles	
Trucks	428,000
Passenger cars	65,600
Motor-buses	6,400
Industrial Equipment	
Equipment for iron and steel mills (tons)	102,900
Steam turbines (kW.)	2,906,000
Water turbines, large (kW.)	372,000
,, ,, medium (kW.)	150,000
,, ,, small (kW.)	500,000
Electric motors up to 100 kW.	624,000
,, ,, over 100 kW.	9,000
Metal-working machines	74,000
Spinning frames (spindles)	1,400,000
Looms	25,000
Agricultural Machinery	
Tractors	112,000
Tractor-drawn ploughs	110,000
Tractor-drawn cultivators	82,300
Tractor-drawn seed drills	83,300
Power-driven threshers	18,300
Chemicals and Mineral Fertilizers	
Caustic soda (tons)	390,000
Calcined soda (tons)	800,000
Mineral fertilizers—superphosphates, nitrates, and potash (tons)	5,100,000
Synthetic dyes (tons)	43,000
Timber and Building Materials	
Felled timber (cubic metres)	280,000,000
Lumber (cubic metres)	39,000,000
Cement (tons)	10,500,000
Slate (sheets)	410,000,000
Window glass (square metres)	80,000,000
Textiles and Light Industry Goods	
Cotton fabrics (metres)	4,686,000,000
Woollen fabrics (metres)	159,400,000
Leather footwear (pairs)	240,000,000
Rubber footwear (pairs)	88,600,000
Socks and stockings (pairs)	580,000,000

Foodstuffs

Meat (tons)	1,300,000
Butter (tons)	275,000
Vegetable oil (tons)	880,000
Fish (tons)	2,200,000
Sugar (tons)	2,400,000
Flour (tons)	19,000,000
Alcohol (decalitres)	100,800,000
Soap (tons)	870,000

TABLE 69

THE FOURTH FIVE YEAR PLAN FOR AGRICULTURE (*1946–50*)

The Area to be planted in 1950 (in hectares)

Republics	Area under Crops *	Crops Grown			
		Grain	Industrial Crops	Potatoes and other Vegetables	Fodder Crops
R.S.F.S.R.	99,400,000	68,000,000	6,200,000	7,400,000	17,800,000
Ukrainian	30,500,000	19,600,000	2,600,000	2,800,000	5,400,000
White Russian	5,800,000	3,200,000	344,000	1,060,000	690,000
Uzbek S.S.R.	3,313,000	1,371,000	1,131,000	112,000	685,600
Kazakh S.S.R.	7,286,000	5,336,000	340,000	280,000	1,330,000
Georgian S.S.R.	937,000	746,000	48,000	44,000	99,000
Azerbaijan S.S.R.	1,216,000	825,000	184,000	54,000	153,000
Kirghiz S.S.R.	1,102,000	704,000	108,000	36,000	254,000
Tajik S.S.R.	935,000	633,000	181,000	29,000	92,000
Armenian S.S.R.	512,000	332,000	40,000	41,500	98,000
Turkmenian S.S.R.	433,000	158,000	161,000	29,000	95,000
Estonian S.S.R.	981,000	585,000	25,000	109,000	262,000
Lithuanian S.S.R.	2,500,000	1,600,000	122,000	234,000	550,000
Latvian S.S.R.	1,966,000	1,105,000	66,000	155,000	640,000
Moldavian S.S.R.	2,020,000	1,535,000	273,000	82,000	130,000
Karelo-Finnish S.S.R.	134,000	62,500	—	20,900	50,900

* In addition to the crops indicated in the table, it was planned to cultivate in 1950: Sugar beet—830,000 hectares and sunflowers—801,000 in the Ukrainian S.S.R. Cotton—85,400 hectares in Kazakh S.S.R., 53,000 hectares in Kirghiz S.S.R., 107,000 hectares in Tajik S.S.R., and 15,000 hectares in Armenian S.S.R. Tea—57,500 hectares in Georgian S.S.R.

TABLE 70

THE FOURTH FIVE YEAR PLAN FOR LIVE STOCK (1946–50)

Head of Live Stock by the end of 1950

Republics	Horses	Big Horned Cattle	Sheep Goats	Pigs
R.S.F.S.R.	7,555,000	35,087,000	58,814,000	15,197,000
Ukrainian S.S.R.	2,629,000	12,230,000	6,780,000	9,600,000
White Russian S.S.R.	770,000	2,860,000	2,900,000	2,600,000
Uzbek S.S.R.	498,000	1,765,000	9,650,000	—
Kazakh S.S.R.	1,516,000	4,400,000	19,050,000	392,000
Georgian S.S.R.	120,000	1,744,000	2,900,000	711,000
Azerbaijan S.S.R.	131,000	1,370,000	4,140,000	88,000
Kirghiz S.S.R.	490,000	560,000	4,300,000	60,000
Tajik S.S.R.	177,000	710,000	3,630,000	—
Armenian S.S.R.	32,500	670,000	1,680,000	80,000
Turkmenian S.S.R.	64,000	305,000	4,330,000	—
Estonian S.S.R.	212,000	560,000	366,000	400,000
Lithuanian S.S.R.	490,000	1,055,000	630,000	1,100,000
Latvian S.S.R.	405,000	1,140,000	620,000	600,000
Moldavian S.S.R.	230,000	700,000	1,600,000	380,000
Karelo-Finnish S.S.R.	22,500	101,000	78,000	37,000

TABLE 71

PLAN FOR THE PRODUCTION OF THE BASIC ITEMS OF INDUSTRIAL OUTPUT IN 1950 FOR EACH OF THE UNION REPUBLICS

I. *Russian Soviet Federative Socialist Republic*

Pig iron (tons)	9,500,000
Steel (tons)	16,000,000
Coal (tons)	141,900,000
Petroleum (tons)	14,500,000
Electric power (kWh.)	57,200,000,000
Peat (tons)	34,200,000
Metal-working machine tools	28,500
Automobiles	457,000
Tractors	82,000
Iron and steel equipment (tons)	66,700
Steam turbines (kW.)	2,201,000
Steam boilers (square metres)	399,000
Cement (tons)	6,343,000
Window glass (square metres)	48,200,000

Timber haulage (cubic metres)	230,000,000
Paper (tons)	996,000
Cotton fabrics (metres)	4,185,500,000
Woollen fabrics (metres)	129,000,000
Leather footwear (pairs)	156,300,000
Vegetable oil (tons)	324,400
Sugar (tons)	463,000
Meat (tons)	731,000
Butter (tons)	158,000
Fish (tons)	1,884,500
Alcohol (decalitres)	60,300,000
Salt (tons)	2,200,000

II. *Ukrainian Soviet Socialist Republic*

Pig iron (tons)	9,700,000
Steel (tons)	8,800,000
Coal (tons)	86,100,000
Petroleum (tons)	325,000
Electric power (kWh.)	13,690,000,000
Coke (tons)	15,500,000
Cement (tons)	2,065,000
Metal-working machine tools	5,950
Motor vehicles	25,000
Locomotives	1,000
Freight cars (in terms of 2-axle cars)	55,500
Tractors	25,000
Equipment for iron and steel mills (tons)	35,000
Calcined soda (tons)	448,000
Superphosphates (tons)	860,000
Salt (tons)	1,930,000
Granulated sugar (tons)	1,637,000
Meat (tons)	245,000
Butter (tons)	40,000
Fish catch (tons)	80,000

III. *Belorussian (White Russian) Soviet Socialist Republic (Western Region)*

Electric power (kWh.)	650,000,000
Peat (tons)	4,162,000
Metal-working machine tools	4,325
Tractors	5,000
Cement (tons)	320,000
Window glass (square metres)	5,000,000
Felled timber (cubic metres)	11,100,000
Dressed lumber (cubic metres)	1,800,000
Matches (boxes)	1,550,000,000
Alcohol (decalitres)	7,600,000
Meat (tons)	46,000
Butter (tons)	10,000
Fish catch (tons)	5,200

IV. *Uzbek Soviet Socialist Republic (Turkestan)*

Steel (tons)	86,000
Coal (tons)	1,130,000
Petroleum (tons)	1,066,000
Electric Power (kWh.)	2,135,000,000
Superphosphates (tons)	300,000
Cement (tons)	270,000
Cotton fabrics (metres)	160,900,000
Silk fabrics (metres)	14,000,000
Footwear (pairs)	6,150,000
Vegetable oil (tons)	173,000
Granulated sugar (tons)	55,000
Raw alcohol (decalitres)	1,300,000
Meat (tons)	20,000
Butter (tons)	1,900
Fish catch (tons)	22,500

V. *Kazakh Soviet Socialist Republic (Central Asia)*

Steel (tons)	72,000
Coal (tons)	16,400,000
Petroleum (tons)	1,200,000
Electric power (kWh.)	1,810,000,000
Superphosphates (tons)	280,000
Cotton fabrics (metres)	19,100,000
Woollen fabrics (metres)	2,880,000
Footwear (pairs)	6,800,000
Hosiery (pairs)	14,400,000
Fish catch (tons)	97,500
Vegetable oil (tons)	21,500
Meat (tons)	100,000
Butter (tons)	19,000
Granulated sugar (tons)	71,000

VI. *Georgian Soviet Socialist Republic (Transcaucasia)*

Pig iron (tons)	330,000
Steel (tons)	185,000
Coal (tons)	2,400,000
Petroleum (tons)	110,000
Electric Power (kWh.)	1,300,000,000
Manganese ore (tons)	2,040,000
Coke (tons)	450,000
Motor vehicles	15,000
Metal-working machine tools	1,700
Cement (tons)	115,000
Woollen fabrics (metres)	3,795,000
Silk fabrics (metres)	6,830,000
Footwear (pairs)	9,500,000
Vegetable oil (tons)	3,500
Wine (decalitres)	1,550,000
Tea—primary treatment (tons)	17,900
Granulated sugar (tons)	13,500
Meat (tons)	14,000
Butter (tons)	1,000
Fish catch (tons)	5,500

VII. *Azerbaijan Soviet Socialist Republic (Transcaucasia)*

Steel (tons)	178,000
Petroleum (tons)	17,000,000
Electric power (kWh.)	2,590,000,000
Electric motors of over 100 kWh.	800
Cement (tons)	365,000
Cotton fabrics (metres)	57,250,000
Woollen fabrics (metres)	1,155,000
Silk fabrics (metres)	2,345,000
Hosiery (pairs)	26,250,000
Footwear (pairs)	5,150,000
Vegetable oil (tons)	11,000
Salt (tons)	132,000
Wine (decalitres)	1,400,000
Meat (tons)	16,000
Butter (tons)	1,500
Fish catch (tons)	23,900

VIII. *Kirghiz Soviet Socialist Republic (Turkestan)*

Coal (tons)	1,600,000
Petroleum (tons)	80,000
Electric power (kWh.)	180,000,000
Cotton fabrics (metres)	690,000
Silk fabrics (metres)	920,000
Woollen fabrics (metres)	500,000
Hosiery (pairs)	3,550,000
Footwear (pairs)	920,000
Sugar (tons)	75,000
Meat (tons)	17,000
Butter (tons)	1,400

IX. *Armenian Soviet Socialist Republic (Transcaucasia)*

Electric power (kWh.)	860,000,000
Automobile tyres	180,000
Superphosphates (tons)	15,000
Caustic soda (tons)	12,000
Metal-working machine tools	500
Cement (tons)	120,000
Window glass (square metres)	300,000
Cotton fabrics (metres)	44,800,000
Silk fabrics (metres)	2,600,000
Woollen fabrics (metres)	400,000
Hosiery (pairs)	15,400,000
Footwear (pairs)	2,550,000
Vegetable oil (tons)	6,000
Sugar (tons)	6,500
Wine (decalitres)	2,000,000
Meat (tons)	8,400
Butter (tons)	800

X. *Tajik Soviet Socialist Republic (Turkestan)*

Coal (tons)	440,000
Petroleum (tons)	60,000
Electric power (kWh.)	180,000,000
Cement (tons)	15,000
Cotton fabrics (metres)	17,800,000
Silk fabrics (metres)	5,100,000
Hosiery (pairs)	4,140,000
Footwear (pairs)	1,370,000
Vegetable oil (tons)	10,000
Meat (tons)	8,300

XI. *Turkmenian Soviet Socialist Republic (Turkestan)*

Coal (tons)	60,000
Petroleum (tons)	1,104,000
Electric power (kWh.)	150,000,000
Superphosphates (tons)	50,000
Cement (tons)	40,000
Window glass (square metres)	2,000,000
Cotton fabrics (metres)	22,000,000
Woollen fabrics (metres)	820,000
Silk fabrics (metres)	825,000
Hosiery (pairs)	3,100,000
Footwear (pairs)	1,470,000
Canned meat (standard cans)	4,000,000
Meat (tons)	7,000
Butter (tons)	400
Vegetable oil (tons)	20,000
Salt (tons)	160,000

XII. *Lithuanian Soviet Socialist Republic*

Electric power (kWh.)	190,000,000
Peat (tons)	822,000
Window glass (square metres)	700,000
Felled timber (cubic metres)	3,000,000
Paper (tons)	17,000
Butter (tons)	12,000
Meat (tons)	28,000
Granulated sugar (tons)	25,000
Alcohol (decalitres)	500,000
Fish catch (tons)	15,000

XIII. *Latvian Soviet Socialist Republic*

Electric power (kWh.)	275,000,000
Peat (tons)	564,000
Paper (tons)	34,000
Felled timber (cubic metres)	4,500,000
Window glass (square metres)	900,000
Cement (tons)	270,000
Cotton fabrics (metres)	25,000,000
Footwear (pairs)	1,660,000
Butter (tons)	18,000
Meat (tons)	28,000
Granulated sugar (tons)	34,000
Alcohol (decalitres)	1,700,000
Fish catch (tons)	20,000

XIV. *Estonian Soviet Socialist Republic*

Electric power (kWh.)	395,000,000
Shale (tons)	8,410,000
Peat (tons)	319,000
Paper (tons)	35,000
Felled timber (cubic metres)	2,050,000
Cement (tons)	160,000
Window glass (square metres)	1,400,000
Cotton fabrics (metres)	121,400,000
Butter (tons)	9,000
Meat (tons)	20,000
Alcohol (decalitres)	600,000
Fish catch (tons)	20,000

XV. *Moldavian Soviet Socialist Republic*

Electric power (kWh.)	60,000,000
Felled timber (cubic metres)	70,000
Footwear (pairs)	1,450,000
Hosiery (pairs)	7,830,000
Wine (decalitres)	3,000,000
Canned goods (standard cans)	65,000,000
Vegetable oil (tons)	25,000
Butter (tons)	1,100
Meat (tons)	10,500
Granulated sugar (tons)	14,000
Fish catch (tons)	1,500

XVI. *Karelian-Finnish Soviet Socialist Republic*

Electric power (kWh.)	320,000,000
Felled timber (cubic metres)	11,000,000
Dressed lumber (cubic metres)	880,000
Paper (tons)	142,000
Window glass (square metres)	275,000
Cement (tons)	10,000
Fish catch (tons)	15,000

INDEX OF PLACES

(*See also pp.* 198–204)

INDEX OF MINERAL, AGRICULTURAL PRODUCTS AND LIVE STOCK

(For Minerals see also p. 209)

INDEX OF SUBJECTS

Printed in Great Britain by
Butler & Tanner Ltd.,
Frome and London