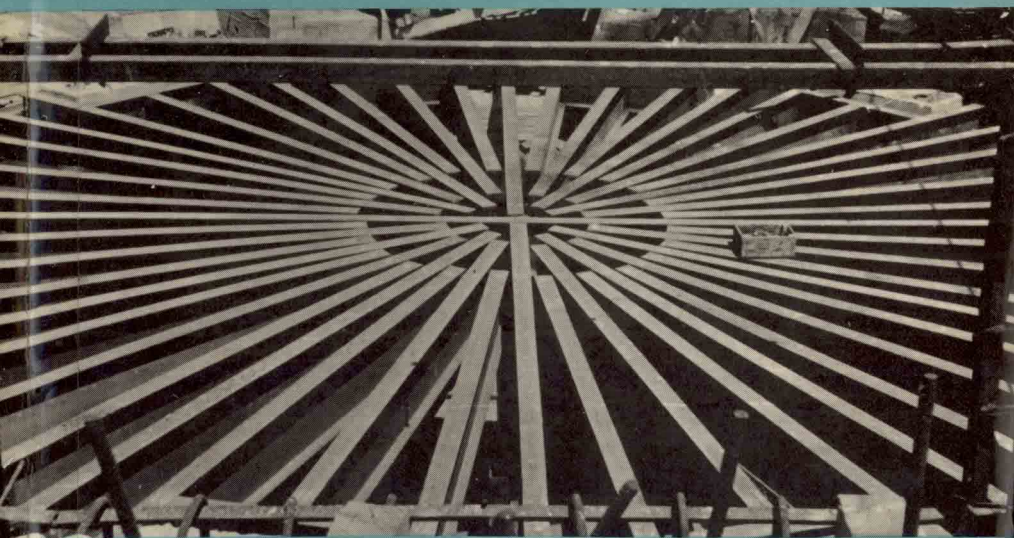


SOVIET ECONOMIC DEVELOPMENT

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PREFACE

The aim of this book is to give an account within a brief compass of the circumstances, sequence of events, origins and characteristic features of Soviet economic development. It is *not* a balanced economic history of the Soviet Union: for example, agriculture receives only summary mention because it shared less in development than other sectors of the economy. Economic thought is almost entirely ignored.

One can hardly doubt the importance of the subject. The U.S.S.R. is the world's best-endowed country in mineral wealth. Its population is one-fourteenth of the world's, it has much the largest industrial labour force, its territory is more than twice as large as that of Canada—the next largest country. Soviet industrial growth has been rapid, and in volume of industrial output the U.S.S.R. now stands second only to the United States.

This economy is also important as a type which has had a good deal of influence on others, and still has although to a waning degree. Long-term economic plans, which are one of its characteristics, are now quite common. State planning has become respectable, while almost every country now makes a feature, and many make a fetish, of achieving a high growth rate of the national income or of industrial output. Other aspects of Soviet economic development such as forced collectivization and forced labour have gained notoriety, rather than fame.

The Soviet economy faces now substantial problems, and the nature of its response to these problems is important not only for the U.S.S.R. itself but for other countries.

One problem in writing about Soviet economic development is that much the largest growth has taken place since 1945, but many of the most dramatic events occurred, and policy decisions were taken, before 1932. For this reason, and also because one naturally writes first the history of the earlier period while to some extent the documentary sources are more abundant then and the controversies more interesting, the first 15 years since the Revolution have been written about at much greater length than the next 37 years. This problem has not been overcome here, but a compromise has been attempted: while Part II concentrates on the earlier period, Parts III, IV and V concentrate on the later one.

Although the book may be suitable as an undergraduate text, it does not claim to present a consensus of current opinion about the subject. My interpretation is, I believe, new in a number of respects. For this reason a rather full array of sources is provided.

The book grew out of lectures delivered between 1961 and 1967 at the University of Maryland, the University of Southern California and the Australian National University, to students most of whom were also pursuing more general economic history courses. Comparisons are accordingly made where possible with more familiar economies such as the United States, Britain (where the book was completed) or Australia. It was found to be desirable to include surveys (which are inevitably brief and impressionistic) of general Russian history or geography, and to minimize the use of Russian words. I want to take this opportunity of paying tribute to the students, whose probing questions prompted many changes and additions to my lecture notes.

I have drawn upon certain material which was included in my Ph.D. thesis 'Studies in Soviet Industrial Development' (University of London, 1958), in respect of which I would like to thank my supervisors at that time, Professor (now Lord) Robbins and Dr. G. H. Bolsover. I am also grateful to Basil Blackwell and Mott Limited and to the University of Glasgow for permission to reproduce material previously published in *Soviet Studies*, the Australian Institute of International Affairs for permission to reproduce part of an article published in *Australian Outlook*, and to the University of Western Australia for permission to draw on the text of a lecture given at their 1968 Summer School and published by them under the title *50 Years of Russian Socialism*, and to the Association for the Study of Soviet-type Economies for permission to draw on my article published in the Fall, 1962, issue of *The ASTE Bulletin*.

I have owed a great deal over the years to advice and help from academic and professional colleagues. I would especially like to mention in this connection the stimulating series of seminars at the London School of Economics 'Economic Problems of the Communist World'. Naturally, only myself can justly be blamed for the book's deficiencies.

I am grateful to the Royal Institute of International Affairs (Chatham House) for allowing me to complete the book while in their employment although this was not part of my regular programme of work.

Many thanks to several family members, including my sister Alice and daughter Theresa, for reading through various parts of the text. My greatest debt is, of course, to my wife Karen, who over a long period consistently encouraged me and effectively commented on many passages in the book; and who typed preliminary drafts and the whole of the final manuscript.

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PART I

THE SETTING

1

GEOGRAPHY AND NATURAL RESOURCES

A. Geography

The subject of this book is Soviet economic development; and it is supposed that the reader already has some acquaintance with economics and economic history generally. It might seem possible to leave it at that, and to dryly pigeonhole Soviet experience among other categories in economic history. So one might, for whoever already knows like the back of his hand Russia's history, geography, and all her other characteristics. However, as it is possible that the reader does not belong to such a well-informed group, it will perhaps be desirable to make some preliminary traverses by space and time across the broad background to the subject.

The geographic aspect of Soviet economic development is extremely important. The subject must be seen in a geographic as well as in a historical context, and it is convenient to present the physical setting first.

Russians call their country 'the land you cannot go round', and scarcely exaggerate: its perimeter is in fact over 36,000 miles. With an area of 22.4 million square kilometres (over 8.6 million square miles) this is the world's largest country: it is 2.4 times as large as the whole United States, for instance, or 91 times as large as the United Kingdom. Its widest east to west span is about 5,000 miles, and from north to south about half as much. In the extreme east the day dawns eleven hours earlier than in the extreme west, so for almost half the year the sun never sets on the U.S.S.R. Soviet sovereignty is claimed to reach to the North Pole. Per head of population, the Soviet Union boasts about twice as much land as the United States, although by comparison with Australia—which stands at a lucky extreme in this matter—only one-seventh as much.

Everyone knows that this territorial giant sprawls mainly across rather high northerly latitudes; but it is perhaps not so generally realized that Volgograd (formerly Stalingrad, formerly Tsaritsyn), although in the southern half of European Russia, nevertheless is virtually on the 49th parallel; or if translated to the corresponding southerly latitude, would be to the south of New Zealand. Most of the Soviet Union is in fact situated in the latitude of Canada. Moscow, in latitude 56°N. , is about level with Copenhagen or Edinburgh.

Three-quarters of the land area of the U.S.S.R. is in Asia, one-quarter in Europe. But nearly three-quarters of the population live in Europe, so the average density of population is nearly nine times greater in the European part of the U.S.S.R. than in the rest. Not that the Asian/European border has any other relevance: it is not marked in recent Soviet atlases, perhaps deliberately to efface its significance.

Most of Soviet territory necessarily lies at great distances from the sea, and so from the moderating effects of the ocean on temperatures. This is a continental type of climate: its continentality is intensified as one moves from west to east.

In winter the isotherms curve round north to south and then west to east: there is no very great difference between winter temperatures in north and south European Russia, but eastwards the temperature declines. In summer the isotherms run more nearly west to east. Naturally, it is warmest in the south, but Moscow and even Leningrad can be uncomfortably warm in summer. Murmansk, within the Arctic Circle, has recorded temperatures of 100°F. , though this is exceptional. In Ukraine, Transcaucasia and Central Asia the summers are hot; the heat is much drier than in Western Europe or in eastern regions of the United States. It is considered to be a relatively healthy climate.

In European parts of the Soviet Union the winters are not extremely cold by Russian standards, which are not those of Western Europe (and by no means those of Australia): the thermometer rarely falls below -30°C. , i.e. 54° of frost F. However, the winter is very prolonged. Snow lies on the ground in Moscow between approximately end-November and mid-April. In Siberia the winter is longer still, and much colder: at Verkhoyansk (north-east Siberia) colder even than at the North Pole. Where the winter is so long and cold the short summer cannot unfreeze the subsoil.

About two-fifths (42 per cent)¹ of the area of the Soviet Union consequently experiences permafrost: frozen hard in winter (in north-east Siberia the depth of permanently frozen ground reaches 400 metres), the terrain is nearly impassable in summer owing to the many lakes and swamps, which become breeding-grounds for myriads of mosquitoes.

Permafrost presents difficult obstacles to any kind of economic activity. The ground will only with difficulty support a railway or highway. Ground installations may be deformed because the snow cannot drain away when it melts. A large fraction of the land area of the Soviet Union is consequently land only by courtesy. It may be of strategic importance; at least it obstructs movement. Against this, ice of a sufficient thickness can be crossed by people or even vehicles. In 1941, when Leningrad was under siege, both railway tracks and roads were laid across Lake Ladoga.

Even moderate degrees of cold cause inconvenience and raise costs. At temperatures below about -25°C . many kinds of mechanisms work more sluggishly or not at all. Try to start your car when the outside temperature is -30°C .! Effective home heating and complete warm clothing become really necessary at these times of year. When the temperature gets down to -40°C . all outside work must legally cease. The contrast of 100°F . or more between winter and summer temperatures powerfully influences the economy.

As one would expect, such a large country contains both high- and low-lying areas. The mountainous areas are chiefly (in terms of expanse) in east Siberia, i.e. farthest from the main centres of population in European Russia which on the whole is low-lying, although mountain-rimmed to the south-east and south-west. The Caucasus are genuine high mountains, and there are real mountains on the south coast of the Crimea, and on the western borders of the Soviet Union fronting onto Czechoslovakia (the Carpathians). The Urals, on the other hand, offer no barrier to transport. A map of European Russia shows ranges of hills, which are readily crossed. Russia-in-Europe is mainly flat. Unlike Western Europe, the Russian landscape changes little, sometimes not at all, over hundreds of miles.²

¹ V. Soldatenkov, *Gudok*, 9 February 1968, p. 3.

² The great plains of Eastern Europe resemble topographically those of the United States (*U.S.A.: Its Geography and Growth*, Third Edition, 1960, p. 12).

Because of the extent of the land mass, the distance between mountain ranges, and the generally low elevation, there are rivers of great length. The Soviet Union has the world's greatest river system. Though not equal individually to the Mississippi-Missouri, the Nile or certain others, the Ob', Yenisey, Lena, Amur and Volga are among the world's greatest rivers. Especially the Siberian rivers are distinguished by their volumes of water and have a gigantic hydro-electric potential. One which has recently been harnessed, the Angara, is the only river flowing *out* of the extremely deep Lake Baykal, which receives the water of 300 rivers. When the snow melts, floods reach extraordinary dimensions. But even the normal widths of the rivers are large: for instance the Dnieper at Dnepropetrovsk, 200 miles from its mouth, is about one mile wide. Such water volumes confer important irrigation possibilities, some of which have been exploited.

Most rivers, including the longest ones, flow roughly north or south, especially north, which makes them less useful for transportation as their terminus is the usually icebound Arctic. The largest *European* rivers flow into the Black and Caspian Seas and are consequently more useful. These rivers historically have been highways through which foreign trade penetrated into Russia. The southern regions need water which the north has in excess, a discrepancy which has suggested schemes of diverting one or more of the Siberian rivers into the Caspian Sea whose level has been falling. Such a project may be carried out within the next 10-20 years. The Siberian rivers carry heat northwards; the European rivers cool *their* banks, though to a smaller extent.

The extent and distribution of precipitation are more complicated to describe than the temperature. Broadly speaking, European Russia has a fairly good precipitation (16-24 or more inches a year) which diminishes as one travels north, east or south from White Russia. There is a subsidiary centre of high precipitation on the Black Sea coast. Most of Siberia has less precipitation than Europe. The driest areas are Kazakhstan and adjacent areas, and extreme north-east Siberia. In the southern part of Ukraine the precipitation is small. 'Shelter belts' have not yet appreciably modified the climate of the Volga regions (as we shall see, Stalin's 'Plan for the Transformation of Nature' failed in this respect), though long-term plans will undoubtedly aim at so doing.

An important share of precipitation is provided by the melting

of the winter snows (a depth of one metre of snow provides about 300 tons of water per hectare).³ The depth of snow-cover, which varies appreciably from year to year, also governs the protection afforded by the snow against sharp frosts.

B. Natural Resources

Although the huge size of the country suggests immense resources for agriculture, these seem smaller in relation to the population or to the total land area. A broad strip of proverbially rich black earth includes about half (the northern half) of the Ukraine and extends east-north-east into Siberia to the north of the 50th parallel. But over part of this area precipitation is inadequate, while the soil has been overworked for long periods, with consequent damage to its fertility and widespread erosion and formation of ravines—which run, for example, through the city of Odessa. In eastern regions of Ukraine and in Siberia and Kazakhstan the rainfall is uncertain, and so harvests vary immensely. An eastwards extension of the sown area since 1954 has enlarged the total grain crop but has also made it more vulnerable to weather caprices, as was demonstrated in 1963.

The only important tracts which are more valuable for agricultural purposes than the black earth are irrigated land (especially in Central Asia), which produces nearly all the cotton crop; 5.5 per cent of Soviet cultivated land is irrigated, which by an international measure is a low proportion.³ Some lands used for agricultural purposes are clearly sub-marginal by U.S. or Western European standards. Very much of the Soviet Union is too cold, too wet or too dry for productive agriculture. In general, the hotter regions are too dry for agriculture, the wetter regions too cold.⁴

The continental climate is a serious handicap. The severe winters restrict the growing of winter wheat (which is more productive than spring wheat) to the western part of European Russia. In Siberia and Kazakhstan the winters are particularly long, so that the growing season is very short. This sets problems in the timing of agricultural operations.

³ I. A. Sharov, *Polya utolyayut zhazhdu (V seriya Sel'skoye khozyaystvo 1963)*, pp. 3 and 5.

⁴ The more favourable combination for maize growing of rainfall and warmth in the United States than in the U.S.S.R. is depicted in H. Raupach, *System der Sowjetwirtschaft, Theorie und Praxis* (1968), p. 195.

Climate, precipitation and soils govern the vegetation and crops. Only about 24 per cent of the whole area of the Soviet Union is used for any agricultural purpose (including cultivation and live-stock-rearing). About 55 per cent is totally unfitted for agriculture owing to soil or climate. Cultivated land comprised about 7.1 per cent of the sown area in 1953, 8.75 per cent in 1959, 9.1 per cent in 1961, 9.25 per cent in 1967. Most cultivated land lies within a 'fertile triangle' which is bounded roughly by Leningrad, Odessa and Irkutsk (and particularly within the more southerly half of this triangle: towards the north for instance between Moscow and Leningrad, cultivation is only intermittent). Indeed, the triangle includes large tracts of little value. There is practically no cultivation to the north of Leningrad.

Mainly to the north of this triangle, a very large region is timber-covered. Forest extends over about a quarter of the total area of the U.S.S.R. (This equals three times the forested area of the United States.) The commonest trees are larch, pine and fir. The forest zone (*tayga* or coniferous forest) extends chiefly between latitudes 60° and 70°. Towards the east the southern limit of this zone trends southwards; in east Siberia roughly along the frontier with China.

In European Russia, therefore, the forest zone lies within the northern half. Moscow lies within this zone, but hereabouts is by no means continuous forest. Overflying from Kiev to Moscow, one sees at first little forest; this then becomes more and more connected. There are still extensive forests in Karelia, and further east around Archangel. However, owing to excessive cutting of timber, logging has largely migrated to the Asian side of the continental border. In fact, the distribution of timber reserves is now the direct opposite of that of population (this is, of course, no accident—the nearest trees were felled first) and most of European Russia is short of timber. The southern regions of Ukraine are treeless. Further south in sheltered spots on the Black Sea riviera one finds evergreens, palms and other sub-tropical vegetation.

Currently, timber consumption is much below natural growth, but consumption will rise. Afforestation has been carried out to break the force of the hot, dry winds from the desert regions of Kazakhstan and Turkmenia, to arrest the north-west march of the desert sands, and to trap precipitation.