

The economic transformation of the Soviet Union, 1913–1945



# The economic transformation of the Soviet Union, 1913–1945

Edited by

R. W. Davies Mark Harrison S. G. Wheatcroft





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### Contents

List of figures 1		
Lis	t of maps	xi
Lis	xii xv	
No		
Pre	eface	xvii
Aci	knowledgements	xxiii
	yor events in Russian and Soviet economic development	xxiv
1	Changing economic systems: an overview	1
	R. W. Davies	
	(A) The Tsarist economy	1
	(B) War Communism	5
	(C) The New Economic Policy	8
	(D) The Stalinist administrative economy	13
2	The crooked mirror of Soviet economic statistics S. G. Wheatcroft and R. W. Davies	24
	(A) A brief history of Russian and Soviet statistics	25
	(B) Distortions	30
	(C) Re-evaluations	33
3	National income  Mark Harrison	38
	(A) The growth of total output	41
	(B) The level of development	45
	(C) Investment and consumption	48
	(D) The development model: a summary	53
4	Population	57
	S. G. Wheatcroft and R. W. Davies	
	(A) The eve of the First World War	58
	(B) World war and civil war, 1914-1922	60
	(C) The mid-1920s	64
	(D) Years of tumult and disaster, 1929-1939	67
	(E) The Second World War, 1939-1945	77

vii



viii	Contents	
5	Employment and industrial labour	81
_	J. D. Barber and R. W. Davies	
	I Employment	82
	(A) Eve of war	82
	(B) From Tsarism to NEP	83
	(C) The impact of industrialisation	85
	II Industrial labour	92
	(A) Eve of war	92
	(B) In transition, 1914–1927	94
	(C) 1928–1941	95
6	Agriculture	106
	S. G. Wheatcroft and R. W. Davies	
	(A) Before the First World War	107
	(B) War and reconstruction, 1914-1927	110
	(C) The transformation of agriculture, 1928-1941: production	113
	(D) Factors influencing production, 1928-1941	117
	(E) Labour productivity, 1928-1941	129
7	Industry	131
	R. W. Davies	
	(A) The eve of the First World War	132
	(B) From Tsarism to NEP	135
	(C) During NEP, 1921–1928	135
	(D) Industry under central planning, 1929–1941	136
8	Transport	158
	7. N. Westwood	
	(A) The government and the railways	159
	(B) Railway traffic	161
	(C) Railway investment	168
	(D) Labour	173
	(E) Rivers	177
	(F) Roads	179
	(G) In retrospect	181
9	Technology and the transformation of the Soviet economy	182
	Robert Lewis	
	(A) Under Tsarism	182
	(B) Technological change, 1917-1928	183
	(C) Technology and the industrialisation debate	184
	(D) Technical change, 1928-1940	188
	(E) Closing the technological gap?	190
	(F) Technology and Soviet economic growth	192
10	Foreign economic relations	198
	Robert Lewis	
	(A) Under Tsarism	198
	(B) War, revolution and civil war	200
	(C) The NEP years	202



	Contents	ix
	(D) The plan era, 1929–1941	206
	(E) The foreign sector in Soviet development	214
11	The First World War and War Communism, 1914-1920	216
	Peter Gatrell	
	(A) The work force	216
	(B) Investment	221
	(C) Agricultural production and food supply	226
	(D) Industrial production	232
12	The Second World War	238
	Mark Harrison	
	(A) Production	239
	(B) Foreign economic relations	250
	(C) Capital	252
	(D) Labour	256
	(E) Food	261
	(F) Two world wars in economic comparison	265
	Tables	268
	Glossary	324
	Notes	330
	Bibliography	358
	Index	374



# **Figures**

1.	Gross National Product per head, 1913-1940	page 46
2.	Gross Domestic Product per head in international	49
	comparison, 1913-1940	
3.	The census of population, 1926, 1937 and 1939	71
4.	Gainfully occupied population, by branch, 1926 and 1939	85
5.	Young workers in large-scale industry, 1930–1933	99
6.	Women workers in large-scale industry, 1929-1939	100
7.	Gross agricultural production, 1909–13 to 1939	114
8.	Growth of industrial production, 1926-1940: official figures	s 139
9.	Civilian and defence industry, gross output, 1930-1940	144
10.	Products of defence industry in physical units, 1930–1940	146
11.	Products of civilian industry in physical units, 1913–1940	151
12.	Growth of industrial production: Warren Nutter's estimate	, 155
	1929–1940	
13.	Railway routes and freight traffic, 1928-1939	164
14.	Railway output and workforce, 1928-1940	174
15.	Accounting for GNP growth, 1928–1940	194
16.	The structure of exports, 1913 and 1938	199
١7.	The structure of imports, 1913 and 1938	199
18.	Grain exports, 1913–1938	204
19.	Soviet international terms of trade, 1924/25-1938	207
20.	Large-scale industry, 1913-1921	223
21.	Gross output of industry in real terms, 1914-1921/22	233
22.	GDP and defence outlays, 1940-1944	249
23.	Net output per worker, 1940–1944	260



# Maps

1.	Republics, major cities and towns of the USSR at the end	xxvi
	of the 1930s	
2.	USSR agricultural regions	xxix
3.	USSR industrial regions	xxx



## **Tables**

1.	Russian and Soviet GNP and population, 1913–1940 pag	e 269
2.		
3.	Gross investment and capital projects in progress,	271
	1928–1940	
4.	National income by sector of origin, 1913-1940	272
5.	National income by end use, 1913-1940	272
6.	Population recorded by censuses, 1926, 1937 and 1939	273
7.	Annual population increase, 1927–1939: alternative estimates	274
8.	Births and deaths in the period 1927–1936	276
9.	Birth rates and death rates, 1913-1950	276
10.	·	
11.	Gainfully-occupied population, 1926 and 1939	278
12.	Non-agricultural employment by sector of the economy, 1928–1940	280
13.	Employment in industry, 1928–1940	282
14.	Length of employment of workers in large-scale industry, 1929	283
15.	Young workers in large-scale industry, 1930-1933	283
16.	Women workers in large-scale industry, 1929-1939	284
17.	Social origins of workers in large-scale industry, 1929	284
18.	Gross agricultural production by branch of production, in value terms, 1909–13–1939	285
19.	Agricultural production in physical terms, 1913-1940	286
	(a) Grain, potatoes and vegetables	
	(b) Other food crops	
	(c) Industrial crops	
20.	Number of animals, 1914-1940	289
21.	Number of animals by social sector, 1 January 1938	
22.	Grain collections, 1927/28–1939/40 29	

xii



	List of tables	xiii
23.	Effect of weather on deviation of grain yield from trend, 1904–1940	291
24.	Soviet and Western indexes of industrial production, 1928–1940	292
25.	Gross production of large-scale and small-scale industry, 1913–1940: Soviet official data	294
26.	Employment in large-scale industry by size of plant and branch of industry, 1927 and 1936	295
27.	Industrial production in physical terms, 1913–1940, 1987	296
28.	Production of armaments in physical terms, 1929/30–1940	298
29.	Production of defence industry in value terms, 1913–1940	299
	(a) Gross production at 1926/27 prices	299
	(b) Gross defence production compared with net production of all industry	300
30.	Gross production of large-scale industry by regions, 1912–1939	301
31.	Annual rate of growth of industry, 1926–1940	302
32.	Freight by mode of transport, 1913–1945	304
33.	Railway traffic, 1913–1945	305
34.	Railway freight tonnage and average length of haul, 1913–1945	306
35.	Railway route mileage and traffic density, 1913-1945	307
36.	Railway electrification: plans and achievement, 1930s	308
37.	Railway labour force and labour productivity, 1913–1945	308
38.	Waterways traffic, 1913–1945	309
39.	Highway traffic, 1913–1945	309
40.	Public highway mileage, 1913–1945	309
41.	Total factor productivity growth in the period 1928–1940	310
42.	Total factor productivity growth in the period 1928–1937	311
43.	Balance of payments, 1909–1913 and 1913	311
44.	Foreign trade, 1913–1940	312
45.	Foreign debt and export of precious metals, 1924–1936	313
46.	Exports and imports by type of product, 1913	314
20.	(a) Exports	311
	(b) Imports	
47.	Soviet exports and imports by type of product, 1938	315
	(a) Exports	313
10	(b) Imports	216
48.	Grain exports, 1922/23–1938	316
<b>49</b> .	Balance of trade, 1913–1940	317
50.	Soviet international terms of trade, 1913–1938	318
51.	Soviet exports and imports, 1913–1938	318



xiv	List of tables	
52.	Sources of Soviet imports, 1913–1940	319
53.	Labour productivity in large-scale industry, 1913–1921	319
54.	Capital stock in large-scale industry, 1914–1923	320
55.	Grain production and procurement, 1909–13 to 1921	320
56.	Gross industrial production, 1913-1921/22	321
57.	Real GDP by sector of origin, 1937-1944	321
58.	Real burden of defence outlays, 1940-1944	322
59.	Employment, 1940–1945	322
60.	Recruitment into public sector employment, by sector of economy, 1942	323
61.	Estimated net output per worker in material production, 1940–1944	323



#### Notes on contributors

J. D. BARBER is a Lecturer in Soviet Politics and Fellow of King's College at Cambridge. He is the author of Soviet Historians in Crisis, and of many articles on Soviet working-class history, and (with Mark Harrison) of The Soviet Home Front, 1941–1945. He is preparing a collection of previously unpublished Russian archival material on the defence of Moscow in 1941.

R. W. DAVIES is Emeritus Professor of Soviet Economic Studies at the Centre for Russian and East European Studies of the University of Birmingham and was Director of the Centre from 1963–78. He is the author of The Development of the Soviet Budgetary System, Foundations of a Planned Economy 1926–1929, vol.1 (with E. H. Carr), and a multi-volume history of Soviet industrialisation. The third volume of this history, The Soviet Economy in Turmoil, 1929–1930, was published in 1989.

PETER GATRELL is Senior Lecturer in Economic History, Department of History, University of Manchester. His PhD thesis at the University of Cambridge concerned Russian industry in the First World War, and he is now completing a book on the same subject. He is the author of *The Tsarist Economy*, 1850–1917, and of many articles on Russian pre-revolutionary economic history. His book on government, rearmament and industry in Russia on the eve of World War I is now in press.

MARK HARRISON is Reader in Economic History, University of Warwick. He is the author of a number of articles on World War II, Soviet Planning in Peace and War, 1938–1945, and (with John Barber) The Soviet Home Front, 1941–1945. His current research interests include long-run Russian and Soviet economic development, the Soviet defence sector, and the Second World War.

ROBERT LEWIS is Senior Lecturer in Economic History, University of Exeter. He obtained his PhD at CREES, University of Birmingham in 1975. He is the author of Science and Industrialisation in the USSR: Industrial Research and Development, 1917–1940, and of articles on Soviet economic history and the organisation of Soviet science and technology.

χv



#### xvi Notes on contributors

- J. N. WESTWOOD is an Honorary Research Fellow at CREES, University of Birmingham, and previously held posts at Florida State University and the University of Sydney, and as an economist in a large North American Railway company. He is the author of many books on the Russian railways, including Soviet Locomotive Technology during Industrialization, 1928–1952, and of several general histories of Russia.
- S. G. WHEATCROFT is Director of the Centre for Soviet and East European Studies and Associate Professor in the Department of History, University of Melbourne. He is also Honorary Research Fellow of CREES, University of Birmingham, where he was variously Research Associate and Research Fellow from 1973 to 1985. He is the author of many articles on Soviet agricultural and demographic history, and on the history of Soviet statistics. He is collaborating with Professor Davies on a study of Soviet agriculture, *The Years of Hunger*, 1931–1933.



#### **Preface**

This volume examines the main quantitative features of the economic development of the Russian Empire and the Soviet Union from the eve of the First World War in 1913 to the end of the Second World War in 1945.

It is primarily intended as a textbook for students taking courses in comparative economic history, economic and social history of the Great Powers, and Russian or Soviet history. We hope that it will also prove to be a useful handbook for graduate students and for teachers of economic history, Russian and Soviet history and Communist affairs; the book is accordingly equipped with full references to text and tables, and with an extensive bibliography.

The years from 1913 to 1945 were a crucial period in Russian industrialisation. Between 1913 and 1939 the urban population increased from 26 to 56 million people, rising from 17.5 per cent to nearly 34 per cent of the total population. By 1914, the foundations had already been laid of modern iron and steel, fuel and cotton textile industries; some important branches of engineering had also been established. But these were islands in a sea of peasant agriculture and urban and rural handicrafts; Russia was industrially by far the most backward of the Great Powers. By the time of the German invasion in 1941, these industrial foundations had been greatly enlarged. Major new industries had also been established; these produced tractors, combine harvesters and motor vehicles, most kinds of capital equipment (including machine tools) and a wide range of sophisticated armaments. On the eve of the Second World War, the Soviet Union was already a major industrial power.

Economic developments in the thirty-four years dealt with in this volume were overshadowed by war and revolution. Between 1914 and 1920, world war, revolution and civil war resulted in a catastrophic fall in production from which the economy took some years to recover. By 1927 industrial production was only slightly higher than in 1913; the Soviet period of industrialisation began only in that year. In 1941, the Soviet Union was subjected to the devastating German invasion, during which most of the major industrial areas were occupied by the enemy; and industrial

xvii



#### xviii Preface

production did not exceed the pre-war level until about 1949. The first phase of Soviet industrialisation was thus concentrated in the fourteen years from mid-1927 to mid-1941. These peace-time years will receive particularly close attention in this volume; but it should be borne in mind that even in these 'peace-time' years fear of war strongly influenced the pattern of economic development.

The role played by the state in Soviet industrialisation in the 1930s and after was without precedent. In Imperial Germany industrial development was facilitated by import tariffs imposed by the state and by the national banks under the influence of the state, but industrial development was carried out by private capitalists working for the market. In the Tsarist Empire, the state strongly influenced and encouraged industrial development. As a consumer, the state purchased a substantial part of industrial production, mainly for the state railways and the Ministry of War. And import tariffs imposed by the state protected Russian industry. But the Tsarist economy was primarily a market economy, in which individual peasant households and private capitalist firms were responsible for the bulk of agricultural and industrial production. In contrast, in the 1930s the Soviet state owned nearly the whole of industry and trade, and assumed ownership of agriculture, or control over it, by compelling peasants to join collective and state farms, and subjecting these farms to its will. The state endeavoured to plan all production and investment through administrative orders. While markets continued to play a certain role, all economic activity was subordinated to the relentless industrialisation drive organised by the state.

There were some resemblances between the processes of industrialisation in pre-revolutionary and post-revolutionary Russia. In both eras, the state encouraged industrialisation with the political objective of strengthening Russia as a great power. In both eras, industrial production increased more rapidly than agricultural production, and within industry the production of capital goods increased more rapidly than the production of consumer goods. But the pattern of industrialisation differed considerably under the two regimes. Before 1914, agricultural production in the Russian Empire as a whole increased somewhat more rapidly than the size of the population, and food available per head of population increased. In contrast, in the 1930s and 1940s, while the production of capital goods rose much more rapidly than in the Tsarist era, agriculture suffered the twin disasters of forced collectivisation and German invasion. Even by the time of Stalin's death in 1953, agricultural production per head of population, particularly of foodstuffs, was lower than on the eve of the First World War.

With the dissolution of the Soviet Union at the end of 1991, the Soviet process of industrialisation has proved to be a unique event in world



Preface xix

economic history. The developments analysed in this book were only the first crucial phase of Soviet industrialisation. In the years after the Second World War, Soviet industry greatly expanded. For a period of over forty years after 1945 the Soviet Union was one of the two military super-powers. When Gorbachev assumed office in 1985, 65 per cent of the population, 180 million people, lived in the towns - three times as many as on the eve of the Second World War. But neither Gorbachev nor his predecessors were able to reform the Soviet system. The Soviet economic system discussed in this volume was able, at great human cost, to cope with the first stages of industrialisation in a developing country. But it was unable to cope with the problems of economic growth and technical change in a more advanced industrial society. This was a major factor - perhaps the most important one - in the collapse in 1991 of the Soviet experiment in state socialism launched in 1917, which had been seen by the Soviet leaders as a blueprint or starting point for the establishment of a planned socialist economic order throughout the world.

The economic changes described in this book cannot in themselves explain the collapse of the system which was established in the inter-war period. Political and social factors, and their implications for the morality and the morale of Soviet society, appear only as essential background to the economic factors. And the story of the economy ceases in 1945; during the forty years of economic growth before the launching of *perestroika* in 1985 the weaknesses of the system became much more profound. But the reader will notice that economic problems characteristic of the mature – and dying – system of the 1970s and 1980s had already appeared in the 1930s. These included a tendency to over-investment, over-taut planning, the inability to innovate, and – perhaps most important of all – the failure of the grandiose efforts to modernise agriculture. The 'faulty foundations', diagnosed in the recent study by Hunter and Szyrmer (see Bibliography), were never repaired.

Although Soviet communism has come to an abrupt end, Soviet industrialisation has exerted a profound and lasting influence on world economic development. The inhumanities and social inequalities of the Stalinist version of socialism antagonised both the elites and the ordinary people in the Western democracies. But the great Soviet industrial advances took place in the 1930s – the years of the Great World Depression. The ability of the Soviet state to produce a dynamic economic system exercised a profound influence on Western economic thinking, and was undoubtedly a factor in the emergence of the mixture of state and private control and ownership that was characteristic of most Western industrial countries in the first thirty years or so after the Second World War.

Soviet industrialisation also exercised a major influence on the four-fifths of the world which was not yet industrialised. Soviet success convinced



#### xx Preface

many Third World countries that it was possible for a relatively backward country to leap into the twentieth century in a comparatively short time. Some Third World countries endeavoured to develop their economies by adopting a modified form of the Soviet model of state socialism. In spite of the failure of these endeavours, and the shift of the Third World towards capitalism, the pace and scope of Soviet industrialisation remained a yard-stick against which the economic success or failure of ex-colonial countries tended to be measured. Soviet industrialisation was a crucial stage in spreading the economic and social transformation which began in England in the middle of the eighteenth century to the thousands of millions of peasants who lived on the borders of starvation.

A careful assessment of the Soviet experience is therefore of great importance. Excellent general studies already exist of Soviet economic policy and the Soviet economic system, such as Alec Nove's Pelican An Economic History of the USSR. The present volume, while devoting some attention to policy and system, sets as its main task an assessment of Soviet economic successes and failures in quantitative terms, by evaluating the available economic and social statistics.

The difficulties in establishing the main quantitative features of economic growth are now familiar to all students of economic history through the painstaking work of Dean, Cole, Feinstein and others on British economic statistics, and of Mitchell on European historical statistics. Paul Gregory has initiated similar work on the national statistics of the tsarist period. (For these titles, see References.)

The statistics of the Soviet period present special difficulties. This is not because of any weakness in the Russian statistical tradition. As we show in chapter 2, pre-revolutionary national and regional statistics were relatively well-developed (they were certainly far fuller and more reliable than the statistics for Britain in the early nineteenth century!). The Russians were pioneers in the collection and analysis of national income statistics, peasant budgets, and even certain branches of industrial statistics. In the 1920s, several important statistical series were the subject of political contention; but detailed and reliable statistics continued to be published until the end of the decade.

The economic statistics of the 1930s, however, confront us with major problems. First, the speed of economic change, particularly in the capital goods industries, led to extremely severe index-number problems, which makes an 'objective' statement about the rate of industrial growth in the 1930s extremely problematic (see chapter 7). Secondly, from the end of the 1920s onwards, the quantity and range of published statistics greatly diminished, until by the end of the 1930s no more than a few isolated figures were available for many branches of the economy. These restrictions on



Preface xxi

publication were often designed to prevent knowledge of failures in the Soviet economy. Thirdly, the Soviet authorities in the 1930s deliberately distorted their published statistics in order to present a more favourable view of economic progress: the most famous examples here are the falsification of the grain harvest (see chapter 2), and the concealment and falsification of population data (see chapter 4).

In an endeavour to assess the true magnitude of the Soviet economic achievement, Western economists have struggled valiantly to remove the veil of mystery and falsification from Soviet statistics. In the first decade or so after the Second World War, major efforts were undertaken in the United States by Abram Bergson and his colleagues on national income and its components, by Warren Nutter on industrial production, and by individual scholars such as Naum Jasny. More recently a number of Western scholars, including the authors of the present volume, have undertaken more detailed work on several sectors of the economy, using previously unpublished Soviet data. The results of all this work have been published in numerous monographs, articles and mimeographed papers. In the present volume, we review the two generations of Western work and endeavour to draw conclusions from it.

With the advent of glasnost', the story of the search for objective statistics has taken an unexpected turn. A number of Russian economists and journalists have attacked Soviet official statistics with far more radical criticisms than those of their American and British colleagues, and have made drastic further downward revisions of major statistical series. Much of this fresh criticism of Soviet statistics is made in rather general terms; and most of it is directed against the statistics of the Brezhnev years rather than of the period with which we are dealing on this volume. These recent Russian commentaries are also considered in this volume.

The debate is certainly not at an end. Since 1989, an increasing amount of statistical material has became available in the Soviet archives. The present volume uses this recently available material in several chapters, particularly those on population, employment, agriculture, the defence industries and the Second World War. These data do not substantially change our assessment but they considerably enrich it. More detailed data which are now available in the Soviet archives – for instance on industrial production, capital investment and internal and foreign trade – will require a great deal of work before new findings are available. To this extent the present volume should be regarded as an interim report.

Some of the conventions followed in this volume should be explained at the outset.

Boundary changes. The territory of the former Russian Empire underwent



#### xxii Preface

several major changes during the period covered by this volume. By 1920, at the end of the civil war, the Baltic republics, Poland, parts of Ukraine and Belorussia, and Bessarabia, had been lost; in 1939–40, the first year of the Second World War, most of this territory was regained. The inter-war boundary before 17 September 1939, and the boundary on the eve of the German invasion in 1941, are both shown in map 1.

Except where otherwise stated, all statistics in this volume refer to the boundaries during the inter-war period 1922–1939, including statistics for the pre-revolutionary period.

Calendar. Pre-revolutionary Russia used the Julian calendar, which in 1917 was thirteen days behind the Western calendar. Hence the two revolutions of 1917 are known variously as the February or March revolution and the October or November revolution.

Between 1 October 1922 and 30 September 1930, most statistics referred to the *economic year*; at the end of 1930, a 'special quarter', 1 October–31 December intervened; and from 1931 the calendar year and economic year coincided. Crop statistics, however, both before and after the revolution, and before and after 1930, were often presented in terms of the *agricultural year* 1 July–30 June.

The economic and agricultural year are both denoted by a diagonal line (e.g. 1926/27), a two-year period by a hyphen (e.g. 1926–7).

Weights and measures. Traditional Russian measures (puds, versts, etc.) have been converted into metric tonnes (written as 'tons') and kilometres (km) throughout.

Regions. The main agricultural and industrial regions are shown on maps 2 and 3. We have used S. G. Wheatcroft's agricultural regions (CPR, EPR, NCR, SCR, SPR). These are explained in the Glossary. The statistics have been regrouped accordingly.

To assist non-specialist readers, a list of major events precedes the text, and a Glossary of Russian and specialist terms and abbreviations follows the text, together with tables and notes. Chapter 2 provides a guide to the main English-language sources on Soviet statistics, and each chapter ends with a short list of books and articles in English for further reading. Except for the first background chapter, these are primarily concerned with quantitative aspects of economic and social development.

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RWD, MH, SGW



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xxiii



# Major events in Russian and Soviet economic development

1694–1725		Reign of Peter I ('the Great')
1861		Emancipation of the serf peasantry
1890s		First industrialisation drive
1899		Economic depression begins
1905		First Russian revolution
1906-11		Stolypin's agrarian reforms
1909-13		Industrial boom
1914	August	Outbreak of First World War
1917	February/March	Revolution overthrows Tsar
	October/November	Revolution establishes Bolshevik or
		Soviet government
1918-20		Civil war; 'War Communism'
1921-9		New Economic Policy (NEP)
1924	January	Death of Lenin
1926-8		Pre-1914 industrial and agricultural
		output restored
1927-8	Winter	Grain crisis
1928(Oct.)	⊢1932(Dec.)	First five-year plan
1929		Rationing of food and consumer goods in
		towns
1929	End of year	Mass collectivisation of agriculture and
		'dekulakisation' begin
1930	March	Collectivisation drive halted, resumed at
		end of year
1930	25 April	Completion of Turkestan-Siberian
		railway (Turksib)
1932	May	Collective-farm market (free market)
		legalised
1932	7 August	Death penalty for theft of kolkhoz grain
1932-3		Widespread famine
1933	January	Hitler appointed Chancellor of German
		Reich
xxiv		



#### Major events in Russian and Soviet economic development

WWII
AAV

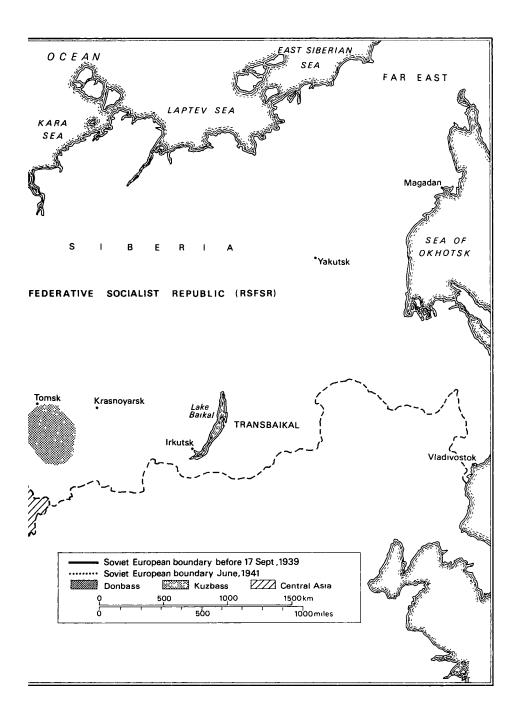
1933-7		Second five-year plan
1935	30-1 August	Stakhanov establishes coal-cutting record
1936-8		The 'Ezhovshchina' ('Great Purge')
1938		Third five-year plan begins
1941	22 June	Nazi Germany invades USSR
1941	October	Moscow under seige
1942	November	Soviet offensive in Stalingrad
1943	July	Soviet victory in Kursk tank battle
1945	8/9 May	Victory over Germany
1949		Pre-Second World War output of
		industry and agriculture restored
1953	March	Death of Stalin



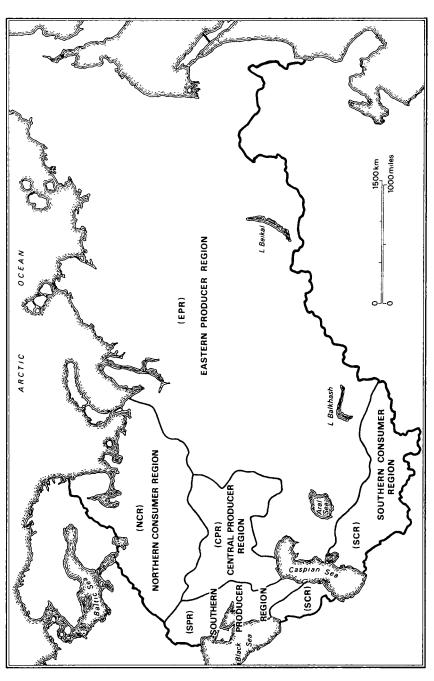


Map 1 Republics, major cities and towns of the USSR at the end of the 1930s



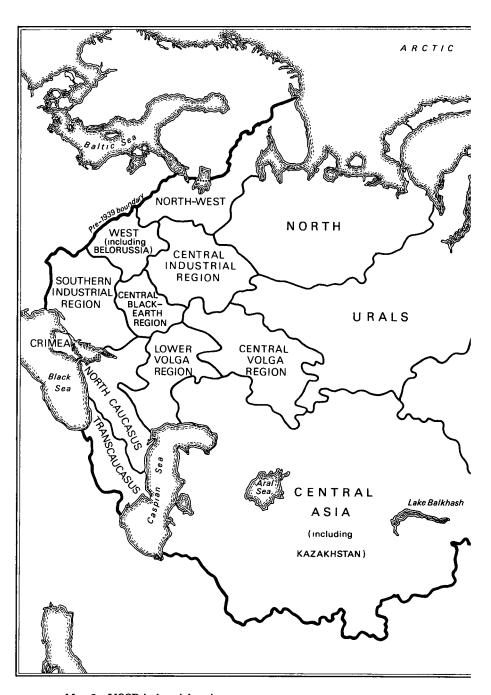






Map 2 USSR agricultural regions





Map 3 USSR industrial regions



