

**SOVIET
ECONOMIC
STRUCTURE
AND
PERFORMANCE
THIRD EDITION**



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Robert C. Stuart**

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PREFACE

The first and second editions of this book were written to describe and evaluate the Soviet economy. Their primary focus was on Soviet organizational arrangements for allocating scarce resources and on how well such arrangements have worked over the years. We found, as have most writers on the Soviet economy, that Soviet organizational arrangements have been remarkably resilient to significant change. The founders of the Soviet planning system in the late 1920s and early 1930s would feel quite at home with the contemporary Soviet economic system. This third edition continues to focus on how and how well the Soviet economic system allocates resources among competing ends.

The most intriguing questions addressed by this new edition are: Can (and will) the Soviet leadership finally embark on a path of significant reform of Soviet planning and management institutions? In 1995, will the system's founders find it as easy to recognize the Soviet economic system as in 1985? Will the Soviet leadership opt for significant reform in the near future? Indeed, can the Soviet leadership afford *not* to alter the status quo?

The growth rate of Soviet GNP and productivity, which has not been healthy since the 1960s, appears to be on a long-term downward trend, while the capitalist economies (after ironing out the effects of the business cycle) have experienced rather stable long-term growth. The American economy enters the second half of the 1980s with rapid growth and falling inflation. Conversely, the Soviet satellites in Eastern Europe, with few exceptions, have shared in declining Soviet economic fortunes. The majority of the Eastern European countries have experienced episodes of negative growth in the late 1970s and early 1980s. The Reagan years have seen a marked buildup in real U.S. defense spending, which has placed added strain on the already burdened Soviet economy. There are few signs that the Soviet Union is overcoming its technological backwardness vis-à-vis the Western world; the Soviet Union remains dependent on the capitalist West for innovations and new technology. Soviet agriculture continues to suffer from weather and organizational problems, and Soviet dependence on massive grain purchases in the world market is now taken for granted. Moreover, the Soviets' military and ideological rivals to the East, the Chinese, have experienced rapid economic growth since their own liberalizing reforms of the post-Mao era. Growing Chinese economic power is not a welcome sign to Soviet leaders trying to deal with their own lagging economy. Falling relative oil prices and gold prices in international markets have taken away the significant windfalls that exogenously boosted Soviet economic performance in the 1970s.

Since the death of Brezhnev, the Soviet leadership has changed hands three times. The Andropov and Chernenko interregnums were years of marking time and waiting for sickly, incapacitated leaders to pass from the scene. The appointment of a young and vigorous leader, Mikhail Gorbachev, appears on the surface to present the Soviet Union with an opportunity to address its long-term problems. The problems are apparent; the solutions are obscure. On the one hand, the

Soviets have the liberalizing example of the Hungarians, who are trying to combine their market and their plan without sacrificing party control. On the other hand, the Soviets have the example of the Chinese, who appear to be reintroducing private ownership back into agriculture. Working against significant reforms are the vested interests of the status quo, and it must be recalled that it was the party bureaucracy that elevated Gorbachev to power. Their interests will be hard to ignore.

The second edition of this book, written in the midst of the Brezhnev years, chose to downplay economic reform. It was clear at the time that the cautious reform attempts of the 1960s had been reversed and that there was little prospect for further reform as long as Brezhnev remained in power. At the present time, it is much too early to predict whether there will be meaningful reform of the Soviet economy over the next five to ten years, but it is nevertheless important to set the stage for any reform that might come. It is our own guess that the Soviet leadership, when all is said and done, will settle for the familiar “muddling through” approach of the past, but experience may prove us wrong. Moreover, significant change may come, but on a piecemeal basis rather than as a formal reform program. In any case, the next several years will definitely be an interesting time to study the Soviet economy.

STRUCTURE OF THE THIRD EDITION

The basic organization of this book remains as originally conceived. Part I deals with the economic history of the Soviet Union. This section has been expanded to cover Soviet economic history after World War II. By carrying events up to the present, we provide the reader with a better perspective of the long sweep of Soviet economic history. The presentation of economic history in a self-contained unit allows us to concentrate on how the contemporary Soviet economy works without need for historical digressions in subsequent chapters. The themes of our discussion of Soviet economic history are: the economic base inherited from the tsarist past; the experiments and debates that led to the choice in the early 1930s of the contemporary system of centralized planning and resource allocation; the Soviet development model, with special emphasis on collectivization of agriculture; and economic performance during the various subperiods of Soviet economic history.

Part II describes the workings of the contemporary Soviet economic system. It focuses on planning arrangements, the allocation of materials, the managerial system, the allocation of capital and labor, and the various informal mechanisms used for allocating resources. The major change from the second edition is the deletion of historical discussion and the resulting exclusive emphasis on current institutional arrangements. In dealing with the Soviet economic system, we attempt (largely through the use of Soviet emigré writings and interviews) to present an account of the actual (as opposed to the textbook) workings of Soviet planning and resource allocation.

Part III analyzes Soviet economic performance up to the mid-1980s. It takes a long-run perspective and examines Soviet growth since 1928, but it does

deal with growth performance since 1970 as a setting for the reform discussion. We examine Soviet economic performance both in terms of conventional indicators such as GNP growth, productivity growth, changes in living standards, and income distribution, and in less conventional terms such as assessing Soviet military, scientific, and technological performances.

Part IV focuses on economic reform and prospects for the future. It deals with various reforms and experiments that have been attempted in the past, and it looks at ongoing reform discussions and alternatives. The economic reform discussion in this edition is broader than that in past editions because it considers scientific and educational reform in the overall context of economic reform and change.

Our data and information sources remain primarily the writings of Western and Soviet scholars on the Soviet economic system. U.S. government analysts of the Soviet economy continue to supply valuable statistical series on Soviet economic performance. Recent emigrés from the Soviet Union have supplied valuable insights into the actual workings of the Soviet economic system through their own writings and through interviews with American specialists. The results of three major interview projects with former Soviet citizens that are now beginning to be published shed additional light on the routine workings of the Soviet economy.

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chapter 1

The Setting of the Soviet Economy

BACKGROUND

This book is about the Soviet economy, how it is organized, how it functions, and with what results. Western interest in the Soviet economy is long-standing and arises for a number of reasons. Economists are interested in the Soviet economy as representative of centrally planned socialism. Comparisons of Soviet-planned socialism to the market capitalist system with which we are more familiar are of both theoretical and practical interest.

The Soviet Union has, over a relatively short span of years, become a major world power. Thus, on pragmatic grounds, we are interested in the strength of the Soviet economy and its ability to finance a major defense establishment, to expand consumer well-being, to engage in foreign trade, and to modify its system of planning and management of industry and agriculture as it pursues modernization. As a major world power and a political adversary, the Soviet Union as a country and as a political and economic system commands our attention.

Russia became a socialist nation (the USSR, or Union of Soviet Socialist Republics) in 1917 after the Bolshevik revolution led by Vladimir Ilich Lenin.¹ However, the Soviet economic system as we know it today dates from the years 1928–1929, when Joseph Stalin moved forcefully to abolish market allocation and to introduce command planning as a means to coordinate economic activity. Stalin also vigorously pursued collectivization of agriculture, a traumatic transformation of the countryside in which private agriculture was replaced by the collective and state farm systems. By the mid-1930s, the “second Soviet revolution” was essentially complete.

These changes introduced by the Soviet leadership were, in part, a response to the events prior to 1928. Earlier Soviet experimentation with combined market and command allocation and private and public ownership convinced the Soviet leadership by the late 1920s that command planning and the collectivization of agriculture offered the best future for the Soviet system. As we examine the enduring economic system introduced at the end of the 1920s, we will be concerned with three broad issues. First, in light of the experiences of the 1920s, why did the Soviet leadership decide to pursue such dramatic change so suddenly? Second, was such dramatic change necessary, or were there less dramatic alternatives available that would have yielded similar or superior results? Third, what has been the outcome of the Soviet resource allocation arrangements put in place some 60 years ago? How well have command planning and socialized agriculture served the Soviet Union in the long run?

To understand Soviet economic growth and development, it is necessary to look both backward and forward. Looking backward from the late 1920s, the Soviet Union was, at the time of the Bolshevik revolution in 1917, a relatively primitive country by the standards of Western Europe and the United States. However, the years following the Emancipation Act of 1861, and especially after the 1880s, witnessed significant economic growth of both industry and agriculture. Moreover, the Russian economy was already moving in the typical directions associated with the early stages of economic development. An important, albeit relatively small, industrial base had already been put in place by the outbreak of World War I, not to mention a rail system that compared favorably with those of its more advanced neighbors. Prior to the Bolshevik revolution Russia was the major European exporter of grain. It is important that we understand these early developments if we are to assess the base upon which later socialist policies would build.

Following the Bolshevik revolution of 1917 and prior to the dramatic changes introduced in 1928, the Soviet Union operated under two very different economic regimes. Between 1917 and 1921, the system of War Communism included nationalization of the means of production; a lessening of monetary incentives as a means to motivate workers; and, possibly most important, forced requisitioning of grain from the peasants. This was a period of civil war and sharp retrogression in both industry and agriculture. Nevertheless, the civil war was won by the Red Army organized by Leon Trotsky, and the power of the new regime was consolidated.

The period of War Communism came to an end with the introduction of the NEP, or New Economic Policy, in 1921. Although the so-called "commanding heights" (major sectors) of industry, transportation, and banking remained nationalized, the market mechanism was reintroduced, money incentives returned, and a more or less orderly tax system and state purchases replaced the forced requisitioning of agricultural products. The 1920s was a period of economic relaxation and modernization so that by 1928 the economy had basically recovered from the losses of earlier years.

The NEP period was one of significant economic progress under a system more or less coordinated by the market mechanism. In light of the consolidation

of political power and with economic progress at hand, why did Stalin decide to disrupt the status quo in the late 1920s? The 1920s was a battleground of conflicting ideologies and development strategies advanced by different factions within the Communist Party. It was also a period of relatively open discussion and debate. However, despite the fact that the basic problems of economic development—for example, issues of capital formation, the rural sector, and the role of foreign trade—were all discussed in a lively debate, the participants did not foresee the major institutional changes that would be made by Stalin.

The introduction of a socialist planned economy in the late 1920s was the Soviet leadership's response to the perceived need for rapid industrialization. In addition to the creation of state and collective farms to guide economic activity in rural areas, the economic system put in place by Stalin was characterized by public ownership of the means of production (land and capital) and the allocation of resources by means of a national economic plan, not the market. Both of these features, along with manipulation of the income distribution and the centralization of decision-making would become hallmarks of the Soviet (and later other) socialist economic systems.

It is important to stress that the transformations of the 1930s were of major proportions. The largely consumer-oriented economy of the 1920s was transformed into an industry-oriented economy dominated by heavy industry in particular. Moreover, Stalin clearly viewed the peasants, through their production of grain, as holding the key to future Soviet industrialization. However history may judge this period, the Soviet leadership clearly envisioned the new arrangements in agriculture as providing the means to harness grain production to the needs of rapid industrialization.

In historical perspective, Stalin will be remembered for more than the dramatic events of the late 1920s and early 1930s. In particular, he will be remembered for the draconian measures used in the 1930s to achieve a decade of exceedingly rapid economic growth and structural change in the Soviet Union. These transformations were interrupted by the incredible Soviet human and economic losses of World War II. However, the recovery of the late 1940s restored the economy to prewar levels without the introduction of major new initiatives.

The death of Joseph Stalin in 1953 ushered in a new era. While the political and economic system in place since the late 1920s remained intact, Nikita Khrushchev and the post-Khrushchev leadership presided over a period of relative relaxation and reform. Although the post-Khrushchev years have seen less relaxation, nevertheless, incentives have replaced terror in a relative sense. Over the past 30 years, the Soviet Union has increasingly turned away from the Stalinist mode of economic isolation. Having transformed itself from a primarily agricultural country to an industrial and military world power, it is much more concerned with efficiency and modernization in the 1980s.

Looking at the long span of Soviet economic history, one might well judge the post-Stalin era as a relatively long period of "normal" functioning of the socialist planned economy. Evaluations of Soviet economic performance should focus upon the postwar era for this very reason. Most experts, including the

Soviets themselves, would agree that the postwar era can be divided into two periods of different economic performance. The 1950s and 1960s were eras of generally impressive economic performance when judged by the common performance indicators of the growth of output and productivity. The 1970s and 1980s, however, have been characterized by deteriorating economic performance. Thus, the focus of the Soviet leadership is modernization in both industry and agriculture to stem, if not reverse, the recent record of declining performance.

To understand the strengths and weaknesses of the Soviet economy, we must understand the nature of its economic system. A major focus of this study, therefore, will be the theory and practice of planning as it is carried out in the Soviet Union. Since Soviet planning replaces, in substantial measure, the market as a device for resource allocation, we shall pay attention to how resources are allocated in the contemporary Soviet context. Specifically, we want to know how output is determined, not only in aggregate terms, but also for the major sectors of the economy. In addition, we must examine how major inputs are harnessed to achieve these desired results. Our examination of Soviet planning extends to the major sectors of the economy. Different sectors are subject to different problems and are seldom handled in identical fashion by Soviet planners. Thus, in addition to our examination of traditional sectors such as industry, agriculture, and foreign trade, we shall also examine labor markets and investment choice.

Clearly, a major focus of this study must be the long-term performance of the Soviet economy. But it is also important to consider to what degree and for what reasons Soviet economic performance may have varied from one period to another. Moreover, Soviet economic performance can only be judged relative to the performance of other economies. Therefore, our major question is: How well has the Soviet economy performed relative to the capitalist West?

THE SOVIET NATURAL SETTING

The Soviet economic system organizes the economic activity of a very large, wealthy, and diverse nation.² While the focus of this book is the economic system, it is important to realize that our analysis and assessment of the economic system cannot be readily isolated from its setting, influenced by national, human, political, ideological, cultural, and historical factors.

In terms of land area, the Soviet Union is almost three times the size of the United States (excluding Alaska and Hawaii), with a land area of approximately 8.6 million square miles. The Soviet Union has a population of over 270 million, 65 percent of whom live in urban areas. This compares to a United States population of over 230 million, 78 percent of whom live in urban areas.

The Soviet Union is a northerly country, with significant regional variations in resources, climate, topography, and population settlement. In the most general terms, the Soviet Union can be divided into three major regions. The bulk of the Soviet population and economic activity (see Fig. 1) is located in the first major

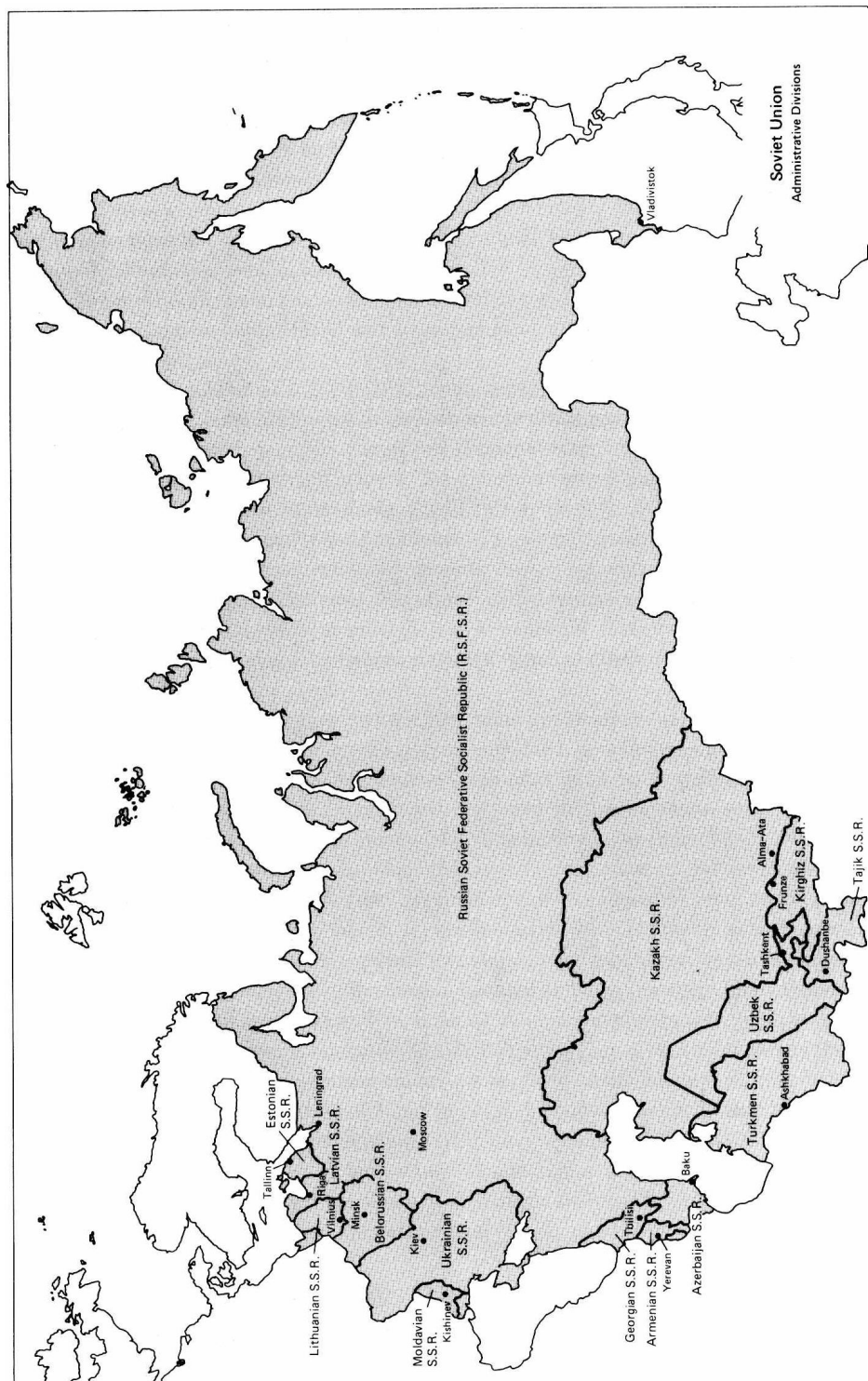


Figure 1 Administrative divisions of the Soviet Union.

region—the plains of the West and European Russia. In relative terms, this is the most densely populated region of the USSR. As one moves east, the Ural mountains, a major source of mineral wealth and hence economic activity, form a major barrier to the vast and sometimes inhospitable expanses of Siberia. Siberia is itself a vast region with substantial natural resources, in effect, the frontier area of Soviet economic development. The area east of the Urals is the most sparsely populated major region of the USSR.

As one moves south, a third major region, Central Asia, is a warm but mostly dry region. This part of the Soviet Union is less developed from an economic standpoint, and it is predominantly Moslem in ethnic composition. It has the most rapidly growing population of the USSR due to its relatively high birthrates.

In terms of natural resources broadly defined, the Soviet Union is a very wealthy nation. Although natural conditions (inadequate warmth, inappropriate moisture, permanently frozen subsoil) constrain Soviet agriculture, the country nevertheless has a substantial endowment of good agricultural land. Possibly the best known agricultural land is the black earth zone in West Central Russia. Although agricultural activity is spread over many areas of the Soviet Union, many parts of the country, while able to grow crops and raise animals, must nevertheless overcome natural disadvantages, thus making agricultural activity in those areas expensive. Whether it is irrigation in the south or drainage in the north, these natural limits are important in assessing Soviet agricultural performance.

Soviet timber reserves are vast, among the best in the world. It is difficult to name a mineral or fuel that the Soviet Union does not have in significant amounts, whether it be coal, iron ore, natural gas, or oil. This extensive natural resource base means that, in practice, the Soviet Union can be (and has been) largely self-sufficient in raw materials. However, as a recent major study of Soviet natural resources concludes, this is only part of the story. Whether judged in terms of domestic needs or, more broadly, with regard to participation in the international economy, the exploitation of Soviet natural resources presents a major challenge. Consider two important dimensions of this challenge. First, the bulk of Soviet natural wealth is located in areas of inhospitable natural conditions. The bulk of new raw materials is located in Siberia with inherent climate and transportation problems. The regional distribution of natural resources plays a major role. Soviet oil from Siberia is a much higher-cost oil than that delivered from the traditional but waning fields of the Caspian Sea. Second, as the Soviet Union increases its participation in international markets, its exports are dominated by raw materials, a pattern more typical of less developed nations and carrying the risks inherent in volatile world raw material markets. Undoubtedly, the Soviet Union would like to modernize its export sector to reduce its reliance on raw material exports.

Natural wealth is an obvious plus for the Soviet Union, and the management of this wealth under socialist planning is a distinct, important, and interesting issue. Has the Soviet planned economy exploited effectively the natural resource wealth of the Soviet Union?

SOVIET REGIONAL DIVERSITY

Our discussion of the Soviet Union of necessity has already touched upon regional differences.³ Regional differences are a continuous thread in this book. How can we coordinate our thinking about Soviet resource allocation such that the regional dimension is included?

Soviet regional diversity can be characterized in differing ways. Indeed, we have already simplified our overall picture of the Soviet Union by looking at a tripartite regional classification. Possibly the most important classification (especially from the point of view of data availability) is the administrative/political subdivision of the Soviet Union.

The Soviet Union is divided into 15 union republics. Below the level of these republics, the administrative/political units are called provinces (the *oblast'*), and finally, at the lowest level, the districts (*raion*) and/or city (*gorod*). In fact, the Soviet political/administrative apparatus is somewhat more complex than this simple description suggests. However, if we look briefly at Table 1, the importance of these administrative subdivisions for an understanding of Soviet regional differences is apparent.

Soviet republics vary significantly in many dimensions. An examination of

Table 1 THE SOVIET UNION: SELECTED REGIONAL INDICATORS

	Population			Per capita nominal income (1978: USSR = 100)	Per capita fixed capital (1975: USSR = 100)
	In millions, 1980	Percent urban	Percent Russian		
USSR	264.5	63	52.3	100.0	100
RSFSR	138.4	70	82.5	110.9	115
Ukraine	49.9	62	21.0	95.9	90
Belorussia	9.6	56	11.9	97.9	80
Moldavia	3.9	40	12.8	89.9	69
Kazakhstan	14.8	54	40.8	88.4	102
Transcaucasia					
Georgia	5.0	52	7.4	93.6	75
Azerbaidzhan	6.1	53	7.8	63.6	64
Armenia	3.0	66	2.3	86.7	73
Central Asia					
Uzbekistan	15.7	41	10.8	71.6	54
Kirgizstan	3.5	39	25.8	69.7	60
Tadzhikistan	3.9	35	10.3	59.9	51
Turkmenistan	2.8	48	12.6	75.1	73
Baltic					
Estonia	1.4	70	27.9	126.9	137
Latvia	2.5	69	32.8	113.7	117
Lithuania	3.4	62	8.9	115.1	101

Sources: Population data are from *Narodnoe Khoziaistvo SSSR v 1979 g.* [The national economy of the USSR in 1979] (Moscow: Statistika, 1980), p. 10; *Chislennost' i sostav naseleniia SSSR* [The number and composition of the population of the USSR] (Moscow: Finansy i statistika, 1984), Tables 13-35; per capita income data from G. E. Schroeder, "Regional Living Standards," in I. S. Koropec'kyi and G. E. Schroeder, eds., *Economics of Soviet Regions* (New York: Praeger, 1981), p. 120; capital stock data from J. W. Gillula, "The Growth and Structure of Fixed Capital," in I. S. Koropec'kyi and G. E. Schroeder, eds., *Economics of Soviet Regions*, p. 160.