



# Country Overview Paper No. 3 Development Strategy, Welfare Regime and Poverty Reduction in the Former Soviet Union

Alastair McAuley

Department of Economics
University of Essex

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UNRISD, Palais des Nations 1211 Geneva 10, Switzerland

Tel: +41 (0)22 9173020 Fax: +41 (0)22 9170650 info@unrisd.org www.unrisd.org

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## 1. Introduction

The former Soviet Union was one of the largest countries in the world—accounting for between a sixth and a fifth of the landmass of the world. For much of the twentieth century its economy and society were governed by principles that differed radically from those found in most other industrialized economies and in many, if not most, developing countries. This paper sets out to describe the institutions, through which the economy was administered, the strategy that the leaders adopted to secure industrialization and their success in securing increases in living standards and a reduction in poverty.

The Soviet Union came into existence as a result of the *bolsheviks*' successful overthrow of the tsarist regime in 1917 (and their defeat of the allies and the so-called White Russian forces in the subsequent civil war). War and revolution left the country exhausted, however, and for much of the 1920s no attempt was made to launch a coherent industrialization drive. It was not until 1928 that the first five year plan was adopted under Stalin and it was really only after 1932, or even 1935, that the planned economy assumed its definitive form.

Some progress was made in developing heavy industry in the 1930s and the Soviets succeeded in defeating Hitler's attempt to overrun the country between 1941 and 1945. But the country remained at best semi-developed. The real achievement of the Soviet industrialization model—and its weaknesses—are to be seen in developments that occurred after 1945, or even after the death of Stalin in 1953.

The remainder of this paper is divided into five sections. In Section 2, I describe the Soviet model of industrial transformation—based on state ownership of the bulk of the means of production and central planning. Section 3 contains an account of the effectiveness of this model in mobilizing resources. Section 4 is devoted to a description of the institutional framework of what I call the Soviet Welfare State, while Section 5 analyzes the extent of poverty and the impact of poverty reduction policies under Soviet socialism. Finally, in Section 6, I provide an account of the reasons why I think that the Soviet system collapsed at the end of the 1980s.

## 2. The Soviet Model of Industrial Transformation

Between 1928 and 1953 the Soviet authorities carried out an enormous programme of modernization: in a quarter of a century, a backward agrarian state was transformed into an industrial economy with the capacity to produce the full range of modern machines and weaponry. This was achieved by the mobilization of human and material resources and their concentration on a limited number of high-priority projects and sectors. The institutional arrangements through which this was achieved constitute the Soviet planning system.

The best-known feature of economic administration under Stalin is the sequence of five-year plans that were adopted. But there are widespread misconceptions about their nature and role. Five-year plans should be seen as statements of government objectives, primarily in the area of capacity expansion (five years being chosen as the likely gestation period for major investment projects).

The core of early five-year plans is to be found in the specific major development projects that they contain—although some attempt was made to spell out implications for remaining sectors of the economy and for macro-economic aggregates. For the most part, capacity expansion was achieved by the construction of a limited number of large plants on green field sites. These plants usually adopted—or imitated—imported best-practice US or German technology, at least in their basic processes (although in other areas they were designed to make use of abundant unskilled labour).

The plans had the effect of establishing the government's priorities, of providing guidance to lower-level institutions about which objects and projects should take precedence. Because they were ambitious (taut) they encouraged managers to "seek out reserves" (i.e. encouraged mobilization). But because they were inadequately articulated they often led to bottlenecks and under-fulfilment. Thus, the five-year plans constituted a "blueprint for development". The task of ensuring that the blueprint was realized, of ensuring that resources were in fact concentrated on the plan projects fell to other components of the Stalin model.

After experimenting with a variety of different hierarchical systems of subordination, the ministerial system was introduced in 1932-1933 and, with the exception of the period 1957-65, was preserved until 1991—or even later. Formally, the ministerial system displayed the following features: in principle, all enterprises producing a particular product were subordinated to the same ministry; the ministry exercised certain planning and development functions in a centralized manner; it was responsible for relations with Gosplan (the central planning authority) and with other ministries that is, it restricted horizontal links between enterprises. Further, it had the power to redistribute inventories, accumulated profits, depreciation reserves and production tasks between its subordinates. On a political level, the adoption of the ministerial system increased the likelihood that individual projects would be completed by giving them the "clout" of the minister in charge of the industry/ministry. It also identified the institution or individual who could be held responsible for non-fulfilment. This was achieved at the expense of a considerable increase in the centralization of decision-making authority. At the same time, the creation of relatively self-contained production hierarchies created or at least increased—the need for co-ordination between them. That is, it greatly enhanced the role of Gosplan's short-run planning function.

The need to ensure that specific projects received the resources they required led to the emergence of a number of politically controlled, centralized production hierarchies. In consequence, the rest of the economy was organized on similar lines. Hierarchical subordination precluded horizontal (market) links between subordinates. Some other mechanism had, therefore, to be introduced to ensure co-ordination. This was achieved by Gosplan's planning of supply.

Analytically, one can identify two components to this: the system of material balances by means of which the authorities attempted to ensure that their plans were consistent. The *zayavka-naryad*<sup>1</sup> system by means of which the authorities attempted to ensure that specific production units obtained the resources they required to fulfil their plans.

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<sup>&</sup>lt;sup>1</sup> A *zayavka* is an indent (a request for a given amount of a rationed or funded input.) A *naryad* is an allocation certificate (a document specifying that a named enterprise was entitled to obtain a specified amount of a rationed input from a named supplier). It was through the issuing of *naryady* that Gosplan sought to ensure that priority was accorded to the fulfilment of planners' preferences.

The system of short-term planning described above operated largely in physical terms. Prices and monetary magnitudes were largely irrelevant. But it did not prove possible to do without a system of financial control. The central authorities required some synthetic indicator of overall ministerial performance. Ministries, equally, required some synthetic indicator of enterprise performance. Further, wages—and also prices—were used to obviate the need for the rationing of consumer goods and the direction of labour.

The objectives of financial control, as spelled out above, were best served by cost-based "constant" prices. And this was true of the Soviet price system. Prices were centrally set, changed at infrequent intervals and cannot be said to have corresponded to relative scarcities, marginal productivity or opportunity costs. As such they did not provide a basis for efficiency calculations.

The system of economic administration that I have described gives rise to a number of observations: because objectives were ambitious and the task of co-ordination enormous, plans were often inconsistent or infeasible. Because of the way in which Gosplan attempted to reconcile these inconsistencies, this appeared as shortages of inputs. Pervasive shortages led enterprises to over-bid for materials. This reduced the quality of information about production possibilities received by Gosplan—and hence its ability to produce realistic plans. It also induced both ministries and enterprises to set up their own production facilities for funded materials (those allocated most rigorously by the central authorities). Insofar as these were of other than optimal size, this raised costs/reduced efficiency. Insofar as it allowed ministries (and enterprises) a degree of autonomy from the constraints of the central *naryad* system, it reduced Gosplan's (and hence the central authorities') ability to control the system. The planned economy became partially unplanned!

The specification of targets in physical terms led to various distortions—for example the so-called nails in tons syndrome: These distortions tended to aggravate the problem of shortages and surpluses. The response was to increase the number—and range—of central controls; increases in the number of plan-indicators, however, increased the risk of inconsistencies between them. The difficulty of obtaining accurate and up-to-date information about enterprise production possibilities and the difficulty of analyzing the information that was collected, led to the implicit adoption of the so-called ratchet principle: this year's target equals last year's achievement plus x percent. This encouraged enterprises to conceal capacity. To make the system work, the authorities were obliged to tolerate a variety of semi-legal or illegal practices—blat and tolkachi² for example.

In all of these ways, the Stalin system led to "undesirable" behaviour at the enterprise level. To prevent *ochkovtiraratel'stvo* (misreporting) and other practices from getting out of hand, ministries tended to move managers between plants at fairly frequent intervals. This militated against "learning by doing" and tended to encourage the adoption of very short enterprise-level planning horizons (i.e. it discouraged investment in long-term projects, but it did not eliminate managerial attempts to overbid for resources and to conceal capacity).<sup>3</sup>

<sup>3</sup> For a detailed analysis of the effects of the Soviet planning system on managerial behaviour, see Berliner (1957).

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<sup>&</sup>lt;sup>2</sup> Blat refers to informal (and corrupt) deals between enterprise managers—often intended to get around the constraints of the *zayavka-naryad* system. *Tolkachi* (pushers) were agents who sought to ensure that a given enterprise's orders were fulfilled—often ahead of those of other higher priority enterprises. They achieved this through the use of *blat* or other inducements.

It was not only enterprise behaviour that was affected by the planning system. That of ministries also responded to the compulsions of the so-called shortage economy. Since rewards at the ministerial level also depended to a large extent on economic performance, ministries favoured their own plants in the distribution of inputs over which they exercised control—in spite of the requirements of the inter-republican and inter-ministerial supply plan. To protect their organizations against the chronic uncertainty of supplies, ministries built up networks of "captive" suppliers—plants producing key intermediate inputs under their direct control. As I have already pointed out, these ministerial empires and the way that they were run in the long term reduced the control over resource allocation exercised by Gosplan—as exemplified by Khrushchev's railing against "metal-eaters".

Finally, at the macro-economic level, one can conclude that the system suffered from certain weaknesses. Emphasis on the rationing of physical inputs to a large extent was incompatible with cost-conscious calculation—and hence with static allocative efficiency. This implied that the opportunity cost of the government's investment programmes was often larger than it need have been. This accentuated the conflict between the goals of economic growth, military security and raising popular living standards. This conflict became increasingly acute in the 1960s, 1970s and 1980s.

Centralization and bureaucratic control tended to stifle managerial initiative and, hence, militated against innovation or the diffusion of new products and processes. Thus neither at the centre nor at the periphery was the system geared to the identification and utilization of new and more efficient ways of doing things. Rather, the emphasis was on the mobilization of identifiable resources and their priority commitment to specified projects. As long as the priorities were few and easily identifiable and as long as there were ample supplies of under-utilized resources to be mobilized, the system was effective. But its very success meant that it was bound to run into problems sooner or later.

As the economy grew in both scale and complexity it became more difficult to apply the priority principle. Resources are necessarily limited and the more effective is mobilization, the more difficult it proves to mobilize marginal units; by the 1950s, the limits had been reached in both these directions. The last thirty or forty years of Soviet planning were devoted to more and more desperate attempts to break out from the straitjacket imposed by the Stalin system. Furthermore, this model was inappropriate for the specific economic conditions of the countries of Eastern Europe and, as a result, almost all these countries experienced intermittent economic crises. Ultimately—in 1989-1991—it was abandoned by both the USSR and the socialist planned economies of Eastern Europe.

# 3. Resource Mobilization

The institutional framework described in the last section is known as the Stalin model. Supplemented by the collectivization of agriculture, it was used by the CPSU to achieve the initial industrialization of the Soviet Union. This took place in the thirteen years

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<sup>&</sup>lt;sup>4</sup> Whether the collectivization of agriculture contributed to Soviet industrial development or was an unmitigated policy disaster is an issue that has stimulated an enormous academic literature that I do not have the space to pursue here. For a brief summary and pointers to the literature, see Gregory and Stuart (1990, especially ch.4).

between the adoption of the First Five-Year Plan in 1928 and the Nazi invasion of the Soviet Union in 1941. As I pointed out above, the industrial capacity installed in this period was sufficient to allow the USSR to defeat Hitler's armies but the USSR remained at best semi-developed at Stalin's death in 1953. The Stalin model was effective in mobilizing under-utilized resources. As the availability of such resources diminished—after the death of Stalin, the model became less and less effective in achieving high rates of growth. The CPSU sought to modify the model—both in the 1960s and the 1980s; but, they were unable to break away from its essential characteristics.

In Table 1 I show how the level of labour input and the structure of employment changed over the period 1928-1950. The table shows that the disruptions of collectivization and the purges led to a decline in labour force participation in the mid 1930s and that total labour input at the end of the period was little larger than it had been in 1928. Despite the losses incurred during the war, accretion of new territory, population growth and increased participation rates led to a more significant increase in the next decade. There was, however, a significant change in the structure of employment: employment in industry (which includes both manufacturing and mining) more than tripled between 1928 and 1940; by 1950 it had almost quadrupled. Similarly, employment in construction more than doubled between 1928 and 1940; and by 1950, it had also quadrupled. Further, although planners' priorities discriminated against the services sector (non-productive employment in Marxist conceptions) the "Other" sector in the table shows that employment in services almost doubled in the pre-war period and continued to increase—if only slowly—in the next decade. These increases were achieved at the expense of agriculture, where employment fell by a third before the war and declined slightly in the next decade.

Table 1: The Structure of Employment - USSR, 1928-1950 (Annual average employment, including kolkhozniki, millions)

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		1928	1937	1940	1950
Economically Population	Active	64.5	56.5	65.5	68.9
Of which:					
Industry		4.3	11.6	13.1	15.3
Construction		0.8	1.9	2.0	3.3
Agriculture		51.6	31.5	35.4	33.1
Other		7.7	11.3	15.1	17.2

Notes and Sources: calculated from Trud v SSSR (1988: 14 and 30).

Other includes Transport and Communications, Trade, Health, Education and Administration.

Changes in the structure of employment were mirrored in changes in the composition of output. As Table 2 shows, the share of agriculture in net national product declined from approximately a half to less than a third between 1928 and 1940. The share of industry, *per contra*, increased from little more than a quarter to almost a half. The share of services was virtually unchanged.

Table 2 also brings out the changes in end use that accompanied the big push towards industrialization in the Soviet Union. Household consumption plummeted—falling from more than four fifths of net national product in 1928 to less than a half in 1940. At the same time, net domestic investment doubled from 10 percent to 19 percent of NNP. The share absorbed by government (which includes both expenditure on such services as education and armaments) quadrupled. Table 2 also confirms the emergence of autarchy; Soviet foreign trade was not particularly significant in 1928. By the end of the next decade, it had virtually ceased altogether.

Finally, the table confirms that the changes brought about by central planning led to significant increases in output. Over the pre-war period, output grew at an annual rate in excess of 5 percent.

Table 2: Structural Change in the Soviet Economy: 1928-1940

	1928	1937	1940
Sectoral Shares of NNP (percent)			
Agriculture	49	31	29
Industry	28	45	45
Services	23	24	26
End Use Shares of NNP (percent)			
Household Consumption	82	55	49
Government	8	22	31
Net Domestic Investment	10	23	19
Foreign Trade			
(Exports+Imports)/NNP (percent)	6.2	1	na
Economic Growth (average annual;			
percent)			
Total product (1928-1940)		5.1	
Per capita Product (1928-1940)		3.9	
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Sources: Cols. 2-3 Gregory (1981: 39); Col. 4 Gregory and Stuart (1990; 95).

How was this resource mobilization and re-allocation achieved? I believe that the collectivization of agriculture played an important part in the process. Collectivization allowed the authorities to assume control over both what (and how much) to produce and over the disposal of the harvest. They used this control to reduce peasant consumption. This led to significant rural-urban migration—particularly of younger (and more educated) cohorts. This process was assisted by the offer of higher money wages—even for unskilled labour in urban areas. At the same time, however, urban consumption was contained—even reduced. This was achieved by inflation and taxation. Over the period, the consumer price index increased tenfold. The authorities also imposed a substantial (and regressive) turnover tax.

The Stalinist Legacy: When Stalin died, in 1953, the Soviet economy—and Soviet society—were seen to be militarily strong; in this respect, the USSR had caught up with the economies of Western Europe. But agriculture was backward; yields were often lower than they had been in 1913; the Soviet population was worse fed than it had been in 1927, or 1913. Civilian industry was backward; the Soviet economy had not come to

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