

# The Soviet Economy – from Crisis to Catastrophe<sup>1</sup>

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The aim of this paper is to analyse the state of the Soviet economy in the period starting from the middle of 1990, when it sharply deteriorated. My main goal is to present as complete a picture of the economic situation as possible. Considerably less room will be dedicated to explaining the reasons for the deterioration of the state of the economy. I will predominantly deal with the immediate reasons, leaving aside the deeper reasons which are connected to the history of Soviet society and the course of perestroika.<sup>2</sup>

Because official Soviet estimates on the dynamics of macroeconomic indicators are unreliable, I have corrected them, taking into account how they differ from my own alternative estimates (see Khanin, 1991a). Moreover, serious new problems with the statistics have arisen, especially those on the most recent stage of Soviet economic development. Statistics on physical indicators became less reliable because the monitoring of truthfulness in statistics had become less rigid, while the incentives to distort them remained in effect (for example, for the sake of increasing the wage fund). The quantity of physical indicators published in monthly and quarterly reports decreased. Analysis of the budgetary situation has become more difficult because of the elimination of a unified USSR state budget (as a result of the establishment of sovereignty for the union republics). Also, complete data about the size and degree of fulfilment of the budgets of the union republics and the extra-budgetary allocations that had been formed anew in 1991 are lacking. For these reasons, my analysis will make use of fragmentary data published in the press.

In this paper I differentiate between two types of grave economic states: crisis and catastrophe. A crisis in an economy (as in medicine) is a temporary state of decline, which ends with recuperation. The prerequisites of recuperation are laid during the period of the crisis. In a catastrophe, by contrast, a self-destructive mechanism is operating, impeding the revival of the economy. Such a self-destructive socioeconomic mechanism became

rooted during the years of totalitarian regime in the USSR. In order to revive the economy, this self-destructive mechanism must be destroyed. A catastrophe is characterized by chaos in the economy, when it becomes impossible to provide for the most elementary needs of the population. Before this stage of economic decline has been reached, even in the presence of the self-destructive mechanism, the situation can still be considered an economic crisis.

### **Economic crisis**

An economic crisis in the USSR began in the third quarter of 1988 when the national income fell by 1 per cent compared to the same period in 1988 (Khanin, 1990). By now it has been going on for three years, thus nearing the length of the deepest and longest-lasting crises in a market economy. At the end of 1988, the crisis was on the scale of the Soviet crisis at the beginning of the 1980s (a 2 per cent fall in national income per year in 1981-82). Meanwhile, the old state and economic structures and methods of governing were gradually losing their grip, while fundamentally new and competent people did not appear on the scene. In a more normal political situation the crisis would have become protracted and deep, but would only have turned into an economic catastrophe after the passing of many years. Therefore, I would argue that the sharp political struggle of the perestroika period gave the crisis its catastrophic nature.

The crisis began to turn into an economic catastrophe in the second half of 1990. According to data from Goskomstat (the USSR State Committee on Statistics) the national income fell by 3.5 per cent in the third quarter of 1990 compared to the same period in 1989. Considering that the real change in the national income had been overestimated by 5-6 per cent for many years by Goskomstat, the decline in the national income was 8.5-9.5 per cent. In the fourth quarter of 1990, Goskomstat's figures showed that the national income had fallen by 8.5 per cent. If we correct this for hidden inflation, this gives a decline by 13.5-14.5 per cent for the year.<sup>3</sup>

Data on the dynamics of the production of electrical power and railroad transportation, which I have used as an indicator of the quarterly change in production in past years, indicate a significantly smaller drop (3-5 per cent). Several possible explanations for this can be found in the particularities of economic development during the second half of 1990 and the first quarter of 1991. Particularly noticeable was the drop of production in construction, which uses a small share of electricity (and in the first quarter of 1991 a drop was also noticeable in agriculture, which also represents a small share of electricity use). Second, railroad transport not only carries the output of the given period, but also the stocks of output, which implies a time-lag between the fall in production and a fall of transports. Third, an important factor in the fall in national income for this period has been the drop in foreign trade turnover, which is linked in part to the production of electricity and railroad transport. On the other

hand, it is quite likely that precisely in this period, when the monitoring of truthfulness in book-keeping was abandoned, that over-reporting of the production of energy and railroad transportation began to rise sharply.

### **Foreign currency crisis**

In addition to the general reasons, the onset of economic catastrophe was hastened by four separate and more concrete reasons: the foreign-currency crisis, the fall in the production of raw materials, a fall in the supply of labour and a deterioration of fixed capital. The foreign-currency crisis turned out to be exceptionally perceptible for the Soviet economy because over the 1970s and 1980s the USSR's dependence on foreign economic ties had grown dramatically. In the speeches of Soviet state officials this 'condition' had received the apt name of 'the imports plague' (*importnaya chuma*). Evidence of industry's tremendous dependence, for example, on imports from East European countries can be seen in how deliveries from this region were needed in the enterprises of the Ministry for Machine Tools to produce almost 45 per cent of output, the Ministry of Agricultural Machinery 38 per cent, and the Ministry of Metallurgy 30 per cent (Otdel, 1991, p. 73).

When imports were cut back sharply, cuts should have been made in production for the branches of the economy dependent on imports, as well as in the volume of retail trade turnover and investment. After the sharp drop in world fuel prices in the mid-1980s, the Soviet Union succeeded in maintaining (and even somewhat increasing) its volume of imports by expanding fuel exports and sharply increasing its foreign debt, but only temporarily. It would have been impossible to maintain such a high volume of fuel production and, consequently, of fuel exports. On the other hand, credit payments should have increased and confidence in the USSR as a borrower should have decreased.

The fall in the production and exports of oil, oil products and coal began in 1989 and took on huge proportions in the first quarter of 1991. If the absolute drop in oil exports we saw in the first quarter is repeated in each remaining quarter, then oil exports for 1991 will fall to 60 m. tons compared to 144 m. tons in 1988, oil products to 20 m. tons from 61 m. tons, and coal to 20 m. tons from 39 m. tons (*Narodnoe khozyaistvo*, 1989; 'Ekonomika SSSR', 1991). Exports of several other types of raw materials are dwindling, such as timber (to 8 from 20 m. cubic metres) and cotton fibre (*ibid.*).

The decrease in exports is partly due to decreased fuel production. But this is not the whole explanation for the fall in fuel exports, especially of oil and oil products. With the decreased production, domestic consumption of oil and oil products should have been cut back, thus liberating them for much-needed export. Thus, when the national income had plummeted by 35 per cent between 1988 and 1991, and the use of oil and oil products per unit of national income could not have risen by more than 5 per cent per year, its domestic consumption should have been decreased

by at least 20 per cent or by 80 m. tons (in 1988, domestic consumption was 402 m. tons). Since production had decreased for this period by 90 m. tons, oil and oil products exports should have been cut back by a maximum of 10 m. tons, instead of the actual 125 m. tons.

What is more surprising is that despite this obvious abundance of oil within the country, there is still not enough to go round. Another explanation may be that actual production was less than the production figures show, because of the widespread and growing practice of over-reporting (*prifiski*). A third, partial explanation may be the growing losses in transportation and storage.

Because of reduced fuel exports, the growing expense of servicing the foreign debt, and the limited amount of gold in the currency reserve, by the end of 1989 a number of foreign trade organizations had begun to cease making payments on their loan obligations. This came as a complete surprise to the majority of Western economists and bankers, who had believed in the CIA estimates suggesting large Soviet currency reserves in gold. The Soviet failure to meet its payments exposed the scale of the CIA underestimation. Analysis of the methods used to assess the size of Soviet reserves and production of gold shows that these methods suffer from very serious shortcomings. (One of them, for example, assumes that the productivity of analogous Soviet and American machinery and equipment is the same, which is absurd.)

My own estimate of annual gold production in recent years is a volume of no more than 180-200 tons, instead of the 270-350 tons one commonly sees in Western literature.<sup>4</sup> My estimate is based on different kinds of sources, including fragmentary data (employment figures in the state gold-mining enterprises, the ratio of the number employed in state v. *artel'* (miners' coop) goldmining, and the ratio of labour productivity in state v. *artel'* goldmining).<sup>5</sup>

An even smaller amount of annual gold production (125-175 tons) was estimated in the summer of 1990 by the Shearman and Lehman company (Commission of the European Communities, 1990, p. 163). But this seems too low to me; at this level, the Soviet gold reserves would have already been exhausted and the sales of gold on the world market would have sharply decreased, neither of which has happened. Calculating that the CIA has exaggerated the quantity of gold mined over the past ten years by at least 100 tons a year, the current gold reserves of the USSR can be estimated at a maximum of 500 tons instead of the figure of more than 2,000 tons calculated by the CIA.<sup>6</sup> Such limited gold reserves can well explain why Soviet organizations on a massive scale did not make their foreign payments in 1990. A related, but very important confirmation of the exceptionally small size of the Soviet gold reserves came in the autumn of 1990 when the USSR refused to supply information (beyond the minimal requirements) about the scale of production and reserves to the commission of the four international economic organizations which was studying the condition of the Soviet economy in connection with proposals to extend economic aid (IMF et al., 1991, pp. 278-9).

As a result of the apparent inability of the USSR to meet its payments,

in 1990 Western banks stopped offering credits to the USSR without government guarantees, that is, under the normal conditions. Credits were promised to the USSR in the order of 15 billion dollars (Commission of the European Communities, 1990, p. 25) by a number of different Western countries in the autumn of 1990, but by the end of 1990 even they abruptly stopped granting credits.

It became necessary to cut imports radically because of a combination of factors: in 1990, reserves of gold were markedly reduced; foreign currency reserves fell sharply from 14.7 to 5.1 billion dollars over the same year (IMF et al., 1990); the payments due on the foreign debt peaked in 1991 and exportable goods sharply decreased. Even the transition to a system of settling accounts with the CMEA countries in world prices and convertible currency, which was very advantageous to the USSR, could not alleviate the situation. Imports to the USSR started ebbing in the second half of 1990, and in the first quarter of 1991 they were reduced by 45.1 per cent compared to the same period in 1990 ('Ekonomika SSSR', 1991). To illustrate this, I can say that if the cut-backs in imports are to remain at the level of the first quarter of 1991, it will mean that imports of rolled ferrous metals will practically cease and imports of tea will be nearly cut in half compared to 1989 (*ibid*).

### Diminishing raw materials and supplies

For the first time during times of peace, the production of raw materials and supplies shrank significantly in the USSR. Beside fuels, we are talking about ferrous and non-ferrous metals, timber, raw materials for the chemical industry, agricultural raw materials and so on. Reductions were highly noticeable in the second half of 1990, and in the first quarter of 1991 they took on huge proportions. For example, production fell by 13-15 per cent in animal husbandry output, commercial timber, a number of non-ferrous metals, chemical fibres and threads, and potash. On top of dwindling domestic production of raw materials, an even greater reduction in imports took place. Though due to reduced exports, domestic consumption of some supplies (such as fuel) shrank less than production. However, cases like this were the exception, and, moreover, even domestic consumption was significantly lowered. Considering the high (and growing) material-intensity of the Soviet economy, the decrease in raw materials and supplies (after former stockpiles had been drained) should have quickly led to the reduced production of final output. Reports in the Soviet press told of increasingly frequent cut-backs and even of stoppages in production due to shortages of raw materials, supplies and semi-finished products.

### Decreasing employment

Limited labour resources are becoming a problem. In the material-produc-

tion branches (except for construction) an absolute reduction in the number employed began as early as 1987. In 1990 alone, the number employed in state industrial enterprises shrank by 2 per cent ('Soobshchenie Goskomstata', 1991a). Employment in agriculture is decreasing rapidly. From 1989 to 1991 the number of people working on collective farms (*kolkhozy*) and state farms (*sovkhozy*) has dropped by 15 per cent (*Sovetskaya Rossiya*, 19 June 1991, p. 2).

Disaggregated employment figures illustrate the situation even more dramatically. Employment is falling much more in areas with a more highly-qualified work force (the RSFSR and the Baltic republics) and among the working ages in the countryside where in many regions of the country the work force is already mainly made up of old people and inveterate drunkards. Thus in the RSFSR the number of men aged between 16 and 29 in the countryside shrank from 4.8 million in 1979 to 3.8 million in 1989, or by 20 per cent. Out of these, the number between the ages of 15-19 dropped from 2 million to 1.2 million, or by 40 per cent (*Molodezh SSSR*, 1990, p. 7). The availability of labour in the countryside in many regions has become so poor that now nearly all major agricultural undertakings (such as sowing or harvest) require the help of people from the cities. With perestroika came a diminished respect for authority and this was enough to seriously threaten the 1990 harvest. In a number of areas, they had to declare a state of emergency for the harvest time (which had little result, since few people took any notice of it).

### Deteriorating fixed capital

Over the past two years, a qualitative deterioration has taken place in the economy's supply of fixed productive capital. Aged and worn fixed capital began to be a problem by the middle of the 1960s, taking on threatening proportions by the end of the 1980s. Thus, according to official reports, the percentage of fixed capital in industrial production that is obsolete grew from 36 per cent in 1980 to 48 per cent in 1989 (*Narodnoe khozyaistvo*, 1990, p. 353). The actual degree of depreciation is significantly greater, since the replacement value of the most out-dated and worn capital, by my estimates, has been seriously underestimated and thus its share of the overall value of the productive capital is too low.

However, the state of fixed capital assets as a whole deteriorated less than other production factors, because of the over-accumulation which went on for many decades. As S. M. Nikitin (a department head at IMEMO, the Academy of Science's Institute for the World Economy and International Relations) once put it: 'It's not machines we lack, it's wisdom.'<sup>7</sup>

But priorities have changed over the last two years. The Soviet leadership has sought to improve the population's sinking standard of living and to cut the budget deficit while refusing to make any serious cuts in military spending. Instead, efforts have been at the cost of sharp reductions of investment in fixed productive capital starting in 1990. In addition, even

the lowered plan targets in investment were significantly under-fulfilled because of deplorable work by builders and the shortage of material resources. As a result, the amount of production capacity put into operation has shrunk drastically. Now this amount appears to be much lower than the amount of productive capital which should be taken out of service. For instance, over the past 30 years, 10-11 m. kilowatts of electrical power generating capacity were put into operation every year. In 1989 this was 3.3 m. kW, and in 1990, 5.1 m. kW (*Narodnoe khozyaistvo*, 1990, p. 545). Thus the volume of production capacity and of fixed capital is undergoing a noticeable absolute decrease.

### From crisis to catastrophe

Any one of these reasons would have been sufficient to put the economy in serious difficulties. But together they have made the situation critical. The economic crisis turned into a virtual catastrophe in the first quarter of 1991, when the national income of the USSR shrank by 10 per cent according to Goskomstat ('*Ekonomika SSSR*', 1991). Correcting for hidden inflation of 5-6 per cent, the real fall was probably 15-16 per cent. This fall was especially dramatic in agriculture (13 per cent officially) and in construction, where the situation is worst of all (even the high-priority construction of housing went down by 27 per cent officially) (*ibid*).

Everything indicates that the situation will continue to decline in the remaining months of 1991. So far, industry is still functioning, though at lower volumes, using the material resources left over from previous years. But even these are running out. Unemployment and stoppages in many enterprises are likely to increase.<sup>8</sup> According to the CPSU Central Committee's department for socioeconomic policy: 'In light industry alone, over 400, or one-third of factories could stop production, and around one million people would be out of work' (Otdel, 1991, p. 74). It is possible that the giants of Soviet industry such as the ZIL and *Rostsel'mash* enterprises, with tens of thousands of employees, might have to stop production (*ibid*). *Gosnab* (the USSR State Committee for Material and Technical Supply) estimates that in the chemical and timber complex alone, output would shrink to less than half (*ibid*, p. 73). It is possible that these estimates are somewhat exaggerated, but they accurately express the trend.

Agriculture - traditionally the weakest sector of the Soviet economy - is now facing grave difficulties. Already it is clear that agriculture will work under very difficult conditions in 1991. Because of the decrease in the autumn ploughing and in the sowing of the winter crops in 1990, the volume of springtime field work in the country as a whole should rise by 25 per cent, and in certain regions it should double or triple (*Izvestiya*, 18 March 1991). Incidentally, on the eve of the sowing campaign in 1990, it turned out that there was a severe shortage of mineral fertilizers, pesticides, fuel, seeds, spare parts, agricultural equipment, and auto and agricultural machine drivers. Because of this, a significant reduction of the

area sown is expected (ibid). Nor can we expect a repetition of last year's huge, but only partially reaped, harvest although the weather forecasters do predict an unprecedented harvest.

The combination of reduced area under crops and lowered yield will surely bring a significantly lower harvest. Considering the large losses in the harvesting process and over-reporting (for grains academician Vladimir Tikhonov estimated last year's actual yield at 165 m. tons instead of the official figure of 218 m. tons)<sup>9</sup> (*Moskovskie novosti*, 1990, No. 34, p. 10), the actual yield could be much lower. This could lead to a state of semi-famine in the cities and in many agricultural regions in the immediate future. Government sources estimate the 1991 grain harvest at 185-195 m. tons, or 23-33 m. tons less than in 1990 (*Izvestiya*, 11 June 1991, p. 3). This harvest is within the range of the average annual grain crop in the twelfth five-year plan (191.1 m. tons for the first four years of the twelfth five-year plan) (*Narodnoe khozyaistvo*, 1989, p. 420). Despite this, it will be more difficult to supply the population and non-private livestock husbandry with grain compared to past years because the *kolhozy* and *sovkhozy* have become less willing to surrender their grain to the state at prices far below market value, and because there is not enough foreign currency to purchase grain abroad. Feed preparation in 1991 has been lagging far behind 1990 levels (*Izvestiya*, 8 July 1991, p. 1).

The strikes, especially the miners' strike, that took place in March and April 1991 inflicted serious harm on the economy. The production of coal in March dropped by 18 per cent, and, of this, coking coal dropped by 33 per cent ('*Ekonomika SSSR*', 1991).

All this allows us to assert that the second, third and fourth quarters of 1991 will give worse results than the first. For the year as a whole, the drop in the national income can hardly be less than 20 per cent.<sup>10</sup> Taking into account the drop in national income by about 15 per cent over the previous two years<sup>11</sup> (Khanin, 1991b), this gives a fall in the national income by 32 per cent: that is, about in the range of the American depression of 1929-32 (*Statistical Abstracts*, 1960, p. 304). Moreover, a serious lack of food is possible by the end of 1991, something the USA did not experience, (nor did they live in such a general state of shortage).

### Deepening budget crisis

The breakdown of the system of finance and credit began as a consequence of misguided economic policy, and has become even more acute because of the economic crisis. The peak of this breakdown came in 1991. The union budget is in a critical condition. Because many union republics refused to meet their obligations and because of the general economic crisis, the union budget deficit - 26.7 billion roubles in the first quarter, or 106 billion roubles, if we extrapolate for the year - was as much as 56 per cent of expenditures (!) ('*Ekonomika SSSR*', 1991).

Regarding the budgets of the union republics, I can mention the situation in the RSFSR. For the first quarter, the RSFSR budget deficit reached

some 30 billion roubles, or 120 billion, extrapolating for the whole year (*Izvestiya*, 19 April 1991). I believe the situation in the remaining republics may be even worse. I have sought to determine the approximate deficit for all the union republic budgets together using the shares of the RSFSR in the outlays of the other union republic budgets for 1989 (54 per cent) (*Gosudarstvennyi byudzhet SSSR*, 1990, p. 22). Based on this share, the total deficit for the budgets of the union republics (excluding the RSFSR), appears to be 222 billion roubles. Thus, the total budget deficit should be 328 billion roubles.<sup>12</sup>

Changes made in 1990 in the USSR's financial system meant that a whole range of outlays that were formerly budget expenditures are now paid from different allocations such as the pension fund, the stabilization fund and several others. Thus it is important to check what is included in the state budget when making comparisons with past budgets and budget deficits. Since there is no evidence that pensions are being withheld this year, it is obvious that the established amounts are being disbursed from the pension fund. The stabilization fund (earmarked for financing centralized-capital investment, subsidies to unprofitable enterprises and so on) received only 359 m. roubles for the first quarter, while the amount set for the year was 114 billion roubles (*Izvestiya*, 12 April 1990).<sup>13</sup> There were no projected outlays from this fund. I can only assume that the situation of other funds is similar to the stabilization funds: less incoming money than projected, while outlays are similarly smaller too. Thus the set size of the deficit should remain the same, even after taking these new allocations into account.

To determine how large the deficit is in relation to the gross national product, we would have to know its size in current prices for the first quarter. Since this has not been published, we must make our own rough estimate. The GNP was approximately 1,001 billion roubles in 1990 prices (Zoteev, 1991, p. 53). Prices on investment goods grew in the first quarter of 1991 by 44 per cent compared to 1990.<sup>14</sup> The official rise in retail prices of goods and services was 26 per cent ('*Ekonomika SSSR*', 1991). Taking into account the relationship between the volumes of retail-trade turnover and the sales of paid services on the one hand, and of state capital investments on the other (148 and 39.6 billion roubles respectively in the first quarter of 1991) we get a general rise in prices in the economy of 1.3 times (for the lack of other data, determined only by these two elements).

The final results of the 2 April price rises in retail prices on goods and services are still unknown. Official sources estimate a rise of 1.7 times the old level but this is clearly on the low side, since it underestimates the rise in 'regulated' and free prices. I would say that the level of retail prices is about twice the old price level.<sup>15</sup> If at the same time the retail trade turnover for goods and services is to decline by 15 per cent, then in the next three quarters of the year the GNP will grow by 377.4 billion roubles (=148 x 3 x 0.85). This would mean the GNP would be 1,577 billion roubles for the year (taking into account the 10 per cent decrease in the national income in the first quarter of 1991), while the deficit of the consolidated

USSR budget would be 20.4 per cent.<sup>16</sup> Obviously the quarters to come will affect the size of the deficit. On the one hand, the retail price rises made on 2 April were aimed to reduce the deficit. Sergei Aleksashenko (1991) estimates a reduction of 50 billion roubles for the year, and a reduction of 38 billion for the remaining three quarters of this year. On the other hand, due to the accelerating decline in the national income, receipts to the consolidated budget will decrease even more, and this will bring larger gains from the rise of prices.<sup>17</sup> This colossal budget deficit has arisen despite the fact that planned outlays have decreased sharply and the population is experiencing a tremendous deterioration in their standard of living.<sup>18</sup> As Yegor Gaidar (1991, p. 11) has aptly noted, at similar levels of deficit as a part of GNP – 23.6 per cent and 14.4 per cent – *coups d'état* took place in Argentina and Chile.

There were several reasons for the seven to eightfold increase in the planned budget deficit of 25–30 billion roubles. There was an absurd proposal about achieving 'some growth' in the gross national product (and consequently in the ordinary receipts to the state budget from domestic production and turnover). Imports of consumer goods dropped dramatically (imports which had been facilitating the huge budget income). The amount of incoming money from the new sales tax was seriously overestimated (instead of the 80–100 billion roubles that were planned, 13 billion roubles will be received). Tax discipline had softened, a usual occurrence when a state's administration is in turmoil.

A dangerous new manifestation of the crisis of the financial and credit system is the rapid increase in defaulted loans on short-term bank loans and mutual accounts between enterprises and economic organizations. On 1 March 1991 these totalled 46 billion roubles, an increase of 61 per cent over the year – while the growth of the gross national product in current prices was slightly more than 20 per cent ('*Ekonomika SSSR*', 1991, p. 17). The system of commercial banks that was created in all haste is now in dire straits because of the poor economic standing of its borrowers, under-qualified personnel, poor monitoring and numerous abuses. Many of these banks could go bankrupt at any time, thus putting their founders and depositors in a bad position (*Wall Street Journal*, 6 June 1991, p. 1).

### Sky-rocketing inflation

The budget deficit has grown – between three and four times compared to 1990, depending on how the 1990 deficit is estimated (at 60 billion roubles, in the official data, or at 80 billion, in the view of independent economists). The population's money incomes are increasing ever more rapidly (by 24 per cent in the first quarter of 1991 compared to 16.9 per cent in 1990). Meanwhile, the volume of production and the import of consumer goods is shrinking. All of this has reinforced inflation instead of curbing it, as the October 1990 government programme had set out to do. Even the official index of retail prices expresses this tendency, despite the fact that it underestimates the real scale of inflation. In the first quar-

ter of 1991, the price level rose by 25 per cent compared to the same period in 1990; while in 1990, the figure had been 5 per cent (calculated as an average of monthly data). As a result of the 2 April rises in retail prices and the transition to contractual and 'regulated' retail prices, the price level went up even further. It is already clear that it has risen by more than 100 per cent.

As in other countries with a weakened regime and an economy in shambles, an inflationary spiral is developing in the Soviet Union. Blue-collar and white-collar workers in many sectors of the economy are demanding wage rises twice or three times their current wage (the miners have already been promised this). From the second half of the year a new rise in agricultural purchasing prices is planned. Thus we are talking about a rise in prices this year by several hundred per cent, or a transition from inflation to hyperinflation. In an economy with a significant share of stable prices (before 2 April) inflation has expressed itself in the breakdown of the consumer market. Nearly all kinds of consumer goods have become shortage items, the gap between the prices in state trade and on the black market has grown sharply, and stocks in trade have fallen to critical levels.

Inflation has manifested itself most dramatically in the extraordinary drop over the last few months in the exchange rate of the rouble to the dollar at foreign currency auctions: from 21.6 roubles to the dollar on 14 December 1990 to 35.1 on 28 February 1991 (*Ekonomika i zhizn'*, various issues). The fall in the rate of the rouble on the currency market was particularly rapid after the 2 April price reform. In trading on 9 June 1991, a dollar cost as much as 49.6 roubles (*Izvestiya*, 11 July 1991, p. 1).

### Falling standard of living

While a small portion of the population has been able to profit from the liberalization of the economy and the increasing shortages, most people's standard of living grew even worse in 1991. This may be seen in the decreased production and imports (and thus less consumption) of basic consumer goods. Judging from the data published on production and imports expressed in physical units, we are talking about a reduction of about 10–15 per cent. After the price rises on 2 April, the standard of living of a major part of the population deteriorated further. We can see this in the reduction in sales of a number of foodstuffs such as meat and sausages. In May 1991 cooperative and state retail-trade turnover in fixed prices was officially 23 per cent lower than in May 1990 ('*Soobshchenie Goskomstat*', 1991b). Since Goskomstat is underestimating the real growth of retail prices (by about 5–6 per cent) the actual decrease in state and cooperative (in the old meaning) retail-trade turnover would have been nearly 30 per cent in May 1991.

Evidence of the fall in the standard of living can be found in the unprecedented fall in house building. Medical care has sharply deteriorated. Appropriations to medical care are increasing more slowly than costs. Take, for example, the situation in Moscow: the city's healthcare

budget in 1991 was supposed to be 2.4 billion roubles in order to supply all non-paid medical services. Instead, only 1.2 billion was allocated (Repin, 1991).

So far the growth of unemployment has been limited. Officially, it is not large: two million people at the beginning of 1991, or less than 2 per cent of overall employment. In fact, unemployment is higher than this, since a type of unemployment has turned up in the form of sending employees on long unpaid leaves. In the very near future unemployment will doubtless grow dramatically because of the shortage of raw materials, reduced capital construction, conversions, production cut-backs and bankruptcies.<sup>19</sup>

The deteriorating standard of living and the breakdown of the health-care system is already undermining the health of the population. In 1990, mortality grew noticeably (by 0.4 per thousand persons). A huge increase in the number of suicides speaks of the sorry state of affairs. In 1990, between seven and nine people took their own life every week in Moscow, but at the beginning of 1991, this figure was 19-21 people; that is, 2.5 times the 1990 level.<sup>20</sup> The situation in Leningrad is similar (Yunisov, 1991, p. 8). There is a similarity with the Great Depression of 1929-32, when suicides in the United States went from 14 per 100,000 population in 1929 to 17.4 in 1932 (*Statistical Abstracts*, 1934, p. 80).

### Dire prospects for the future

If current tendencies persist, a model for development of the Soviet Union in the near future could be based on the experience of countries with war economies. The Soviet economy has much in common with these countries in its share of military spending as a part of the national product, in the level of sacrifice of its population, in the economic system (command economy), and in the level of isolation from the outside world.

Agriculture is seriously weakened in terms of labour and material resources. Agricultural workers have decreasing incentives to increase production because of the deteriorating price relationships between the output of industry and construction and the output of agriculture.<sup>21</sup> We can realistically expect a decrease by 20 per cent in the area under grain crops and a decrease in yield by 30 per cent (in a period of unfavourable climatic conditions).<sup>22</sup> This should lead to a reduction in grain production by 44 per cent compared to 1990: that is, down to 92 million tons or 300 kilos per capita for the year. It was at this level of per capita grain production (or only slightly higher) that the Russian famines of 1921, 1932 and 1946 broke out. Perhaps there might not be enough grain on the world market just when it is needed to compensate this huge drop in production. Even at a slightly higher level of grain production, sections of the population might experience serious food shortages in the near future.

The unfavourable price relationships, the depreciation of the rouble, the breakdown of the consumer market, the growing proportions of barter trade and the simultaneous breakdown of command methods makes it

necessary for *kolkhozy* and *sovkhhozy* to cut sharply the proportion of their output available for outside distribution. These cuts had already become significant by 1990 when extraordinary measures had to be taken to keep state grain procurements from being disrupted. Despite this and despite the record harvest, procurement levels were much lower than in 1989. On 16 July 1991, after threshing the harvest from 25 m. hectares, *kolkhozy* and *sovkhhozy* surrendered only 3.7 m. tons to state procurements (*Pravda*, 18 July 1991, p. 1), while on 16 July 1990, when they had harvested from 20 m. hectares, they handed over 7.5 million tons, and, in 1989, 12.5 m. tons.<sup>23</sup> This sharp drop in grain procurements could bring the population to the brink of a famine in the cities of a number of regions (since some regional authorities will first send the procured grain to meet the needs of the inhabitants of the cities in their own regions), in Central Asia and in Transcaucasia. Such a deterioration of food supply will aggravate relations between the cities and the countryside, between population groups, between certain republics and between the republics and Moscow, and between the government and the population. Strikes would become more common, further diminishing production in industry, construction and transport, causing further devaluation of the rouble and further discouraging deliveries of agricultural output. Strike activity will inflict most severe damage to the mining sector, electrical energy and transport: these sectors have a relatively high concentration of labour and are more economically vulnerable because of fixed prices on their output.

The decrease in the production of raw materials and fuels, and disruptions in electricity supply and transport, will put the economy in further disarray. The reduction and often the temporary suspension of the production of electricity and heating (due to lack of fuel, strikes, accidents) in addition to the lack of food, will cause the city population to suffer from cold homes, electrical black-outs and from the disarray of municipal services and public transportation. The population of the cities will begin to flee to the countryside and to other countries.

As always in this type of situation, the spheres of culture, science and healthcare are very vulnerable. We can expect mass closure of the schools, vocational schools and scientific institutions, undermining the already modest cultural level of the country's population. The healthcare system will be short of many medicines, instruments and dressings. Patients will receive poorer quality food and experience colder hospitals. Deepening food shortages and insufficient heating will bring easy prey for epidemics; the hospitals and clinics will not be able to prevent them. The result of this will be a growing mortality rate. Meanwhile, because of economic troubles and social instability, fertility rates will fall: some regions have already plummeted to a third or fourth of their usual level.

Industry is in shambles and incapable of providing even minimal goods to the agricultural sector. Without petrol, lubricants, electricity and spare parts, it is impossible to do any agricultural work. As a result, the production and consumption of food will decrease even more and the crisis will deepen. Productive capital investments will be minimal because of the shortage of labour, materials and financial resources. This will further

reduce productive potential and competitiveness on the world market. Scientific and technical progress will freeze. The country will be hurled back several decades in its economic and social development. Is there anything that can save the Soviet Union from the impending catastrophe? Perhaps there is, but that is another subject.

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## Notes

- 1 Translated from Russian by Marion Cutting. I wish to express my thanks to

colleagues Albina Tretyakova, Anders Åslund and Igor Birman for fruitful discussions on the problems surrounding this paper.

- 2 These reasons are surveyed in Khanin (1991b).
- 3 These data do not aspire to be exact. They need to be made more precise using more detailed data on production volume in the third and fourth quarters.
- 4 The CIA has estimated Soviet gold reserves in 1989 at 2,416 tons, and the annual production at 330 tons (Directorate of Intelligence, 1990, p. 6).
- 5 The total number employed in goldmining (according to *Glavalmazoloto*, the Central Board for Almaz gold mining) is 100-120 thousand people (*Pravda*, 5 February 1991, p. 4). The total number employed in the prospector articles subordinated to *Glavalmazoloto* (which clearly are not included in the first figure of those employed by them) is more than 50 thousand persons (*Izvestiya*, 17 December 1990, p. 3). The ratio of labour productivity in state v. prospector mining is 1:2 (Legler, 1990, p. 156). The yield by prospectors in one of the gold fields of the Chukotka region was 1.4 kilos (Demenin, 1990, p. 8).
- 6 After this paper was submitted, the USSR Gosbank's balance for 1 January 1991 was announced, in which the gold reserves of Gosbank were given at 374.5 tons (*Izvestiya*, 16 July 1991, p. 2), thus confirming my figures.
- 7 At a seminar at the USSR Academy of Science's Institute of the World Economy and International Relations (IMEMO) in the mid-1980s.
- 8 One alternative would be to reduce employees' pay and give additional subsidies to enterprises experiencing financial difficulties, but this method is fraught with problems.
- 9 Tikhonov himself puts it at 135 m. tons, but he includes in it the losses of the irrational feeding of grain directly to livestock, thus bypassing the concentrated feed industry.
- 10 In May 1991 the national income decreased by 15 per cent compared to the corresponding period of 1990, according to Goskomstat data ('Soobshchenie Goskomstat', 1991b). Taking hidden price decreases into account, the increase was by 20 per cent.
- 11 The fall of the national income in 1990 by 5 per cent, a calculation based initially on the totals of the first half of 1990, was defined more precisely to 9-10 per cent based on the totals of the second half of 1990.
- 12 A special problem is how to cancel such a huge deficit. This concerns the union budget as well, although its deficit is much higher than the size, claimed for USSR Gosbank, of its payment. A still more difficult problem is how to reduce the deficit of the local and republic-level budgets. Most probably it will be at the expense of credits of the republics' central banks and their local offices.
- 13 Cited in a speech by V. S. Pavlov at the plenum of the conference of USSR trade unions.
- 14 Calculated as follows: we know that in the first quarter of 1991, the volume of capital investment of state enterprises and organizations was 39.6 billion roubles (using 'estimate' costs in prices on 1 January 1991). This figure had decreased according to official data, in the same prices, by 16 per cent compared to the first quarter of 1990, and thus was 47.1 billion roubles (39.6 : 0.84) in the first quarter of 1990 (in 1 January 1991 prices). This same volume in 1984 'estimate' prices was 32.7 billion roubles. This gives a price index for investment goods of 144 per cent (47.1 : 32.7).
- 15 The newspaper *Kommersant* (No. 17, 1991, p. 6) gives figures on the rise of retail prices after 2 April of 2.7 times. However, these data are contradicted by data in the same issue of *Kommersant* (p. 7) on the rise in the cost of a



consumer basket after 2 April. For the most well-off section of the population it is estimated at 1.47 times, for the middle section 2.5 times, and for the poorest 1.88 times what it formerly cost. Even without knowing the exact figures on the distribution of the population into income groups, it is evident that the first estimate is too high; the general price rise is close enough to the amount I named. Clearly, the methods used by *Kommersant* for computing the general price index are faulty.

16 This is much larger than the deficit calculated by Aleksashenko (1991) which amounted to 200 billion roubles. The reason for the divergence of these estimates is because in his calculations, Aleksashenko did not reflect the course of the fulfilment of the state budget and he specified the RSFSR's share in the budgets of the union republics imprecisely.

17 Because of limited space, I shall not perform the corresponding calculations. 18 Moreover, the domestic debt of the USSR, if we can believe V. S. Pavlov, even decreased from 550 billion roubles at the end of 1990 to 540 billion roubles at the end of the first quarter of 1991 (*Izvestiya*, 23 April 1991). At whose expense was the deficit for the first quarter covered? Apparently, at the expense of the balance of the union budget accounts that have been set aside since 1990 when the domestic debt rose by 150 billion roubles with a budget deficit equal to 60-80 billion roubles. In 1990, the union government, in a far-sighted manner, 'took a loan' from Gosbank, counting on a deficit not only in 1990 but in 1991 as well.

19 See Susanne Oxenstierna's Chapter 3 in this volume.

20 It is possible that this rise is partly due to a seasonal variation in suicides.

21 Agricultural procurement prices for January-March 1991 (and this level was maintained up to the end of the first quarter of 1991) had risen by 61 per cent of the 1990 level for the same months. Meanwhile in January-May 1991, wholesale prices in industry had increased by 96 per cent and in construction, by 80 per cent from their levels for the same period in 1990, according to Goskomstat data (these understate the actual price level, since they do not take hidden price rises into account) ('Sobshchenie Goskomstata', 1991b). Retail prices for this period more than doubled.

22 In 1975, the grain yield was 70 per cent of the 1970 level (*Sel'skoe khozyaistvo SSSR*, 1988, p. 126).

23 Speech by N. I. Ryzhkov at a mutual session of the Presidential Council and the Council of the Federation (*Izvestiya*, 22 July 1990, p. 1). See also G. Evstif'ev, 'Mnogo khleba - eshche bol'she problem', *Izvestiya*, 25 July 1990, p. 1.