



## **The Real Sector of the Russian Economy: Estimation and Analysis**

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### *Basic macroeconomic indicators in Russia, 1990-1996*

It is reasonable to begin an empirical analysis of the situation during economic reforms with mention of problems in Russian economic data. The analysis is dependent on the old Russian Federation Goskomstat<sup>1</sup> estimates and new Goskomstat estimates created jointly with the World Bank.<sup>2</sup> These data are problematic, though perhaps not as distorted as earlier data on the Soviet Union.

Distortion was characteristic of Soviet data especially since 1928. The Soviet political authorities sought by all possible means to demonstrate the superiority of the Soviet economic system over that of the West. The TsSU of the USSR (predecessor of the RF Goskomstat), subservient to the political leadership, used faulty methodologies to exaggerate the economic success of the USSR.<sup>3</sup> In the command economy, moreover, participants at every level had strong incentives to portray their activities in the most favourable light.

Restructuring and economic reforms have changed the situation in Russia. Under the pressure of severe domestic and international criticism, the USSR and RSFSR TsSU admitted past falsifications. In the late 1980s the statistical bodies were granted more autonomy. The pressures to falsify the real results of economic activity have decreased, and in their daily practice the statistical bodies have begun to adopt methods which are generally accepted in world statistical practice.

In the new situation, the behaviour of economic units has radically changed. Most of them have obtained juridical or factual autonomy. The incentives to falsify the results of their activity have been greatly diminished, particularly with regard to the output of goods and services. Moreover, an opposite trend has begun to acquire momentum: economic managers, whether to dodge taxation or for personal enrichment, are understating their successes.

In this context, the RF Goskomstat is in a very difficult position; it has had to shift to commonly used statistical methods at a time when the government has given up its former control and when the shadow economy has acquired tremendous momentum. At the same time the government has maintained a certain degree of pressure on statistical bodies to induce them to overstate the real achievements of reform. The results have been, therefore, very modest. Goskomstat's well intentioned attempts to

estimate the size of the shadow economy must be described as not fully valid and in any case cover only the period after 1991.

To measure Russian economic effort in the transition period, we have made alternative estimates of the key indicators of growth and efficiency. The underlying principles were the same as those used earlier by Khanin in his alternative estimates of the command economy.<sup>4</sup> Here, we can only give a short description of the methods we used and a table of our final results. These methods are supplemented with procedures balancing the production and consumption sides of GDP, which is new with respect to previous estimations. We believe this increases the reliability of the results obtained.

To estimate the key indicators, we first selected the data that were the least doubtful (power production and consumption and rail freight transport). Second, we sought to find associations between these data and macroeconomic indicators. We used comparisons with the economies of foreign countries going through similar periods. In calculating alternative estimates, we used several methods, attempting to make the estimates obtained more reliable. Changes in the value added of goods and services were estimated separately. The summary estimate was calculated as weighted estimates by each sphere of their respective shares of 1990 GDP.

In the calculation of GDP in the goods production sector three alternative methods were used. The results were very close to one another. The first method was based on the assumption that the labour productivity in the whole economy must be close to labour productivity in power production. The second method was based on the relationship between the behaviour of the rail freight transport indicator in the USA in the period of the Depression of 1929–32, which is comparable in scale with the present Russian crisis in terms of GDP growth in the goods production sector. This relationship was taken as the benchmark in estimated GDP in goods production in the Russian economy. The third method, similar to the second, is based on power consumption indicators. To obtain the summary estimate of economic performance the calculations were averaged.

In estimating the value added in the services sector, we wanted to avoid the cost-maximisation principle and relied on actual services supplied. Thus, GDP in the service areas of finance, credit and insurance was estimated on the basis of credits contributed to the economy by commercial banks; GDP in trade, on the estimated household consumption of consumer goods. In some cases, we had to use the number employed or the deflated expenditure of the respective sphere.

We also evaluated the main elements of the national wealth of Russia. The decline of fixed capital was evaluated by continuous inventory taking, which demonstrated the rates of fixed capital depletion and the extent of capital renewal. The inventories and stocks were calculated by deflating their value in current prices by use of the GDP deflator. On the basis of the data obtained, the resource intensity of goods production, as well as labour and capital productivity, were estimated.

Consider briefly the difference between our results and those of Goskomstat RF and other alternative estimates that have appeared in the literature. The comparisons are given in Table 1. The results shown in Table 1 are preliminary. They do not represent absolute accuracy. Further effort is needed to clarify them. One more caution: the data obtained cannot be used to measure social welfare. They omit such important

TABLE 1

COMPARISON OF DIFFERENT ESTIMATES OF RUSSIAN ECONOMIC GROWTH, 1990–1996 (PREVIOUS YEAR = 1)

	1991	1992	1993	1994	1995	1996	1990– 1994	1990– 1995	1990– 1996
1. GDP in the sphere of goods									
RF Goskomstat									
—old	0.88	0.84	0.86	0.79	–	–	0.50		
—new	0.94	0.82	0.88	0.82	0.95	0.92	0.55	0.52	0.48
Khanin-Suslov	0.95	0.86	0.87	0.81	0.97	0.92	0.58	0.56	0.51
2. GDP in the sphere of services									
RF Goskomstat									
—old	0.91	0.75	0.91	0.90	–	–	0.56		
—new	0.98	0.93	0.97	0.97	0.96	0.97	0.86	0.83	0.81
Khanin-Suslov	0.95	0.83	0.88	0.89	0.92	0.96	0.62	0.57	0.55
3. GDP produced									
RF Goskomstat									
—old	0.87	0.81	0.88	0.85	–	–	0.53		
—new	0.95	0.85	0.91	0.87	0.96	0.94	0.64	0.62	0.58
Khanin-Suslov	0.95	0.85	0.87	0.84	0.95	0.93	0.59	0.56	0.52
4. Fixed capital in production sphere									
RF Goskomstat	1.03	1.02	1.01	1.00	0.99	–	1.06	1.05	–
Khanin-Suslov	0.98	0.98	0.97	0.96	0.96	0.96	0.89	0.86	0.82
5. Inventories and stocks									
Goskomstat							unavailable		
Khanin-Suslov	0.69	0.34	1.67	0.66	0.54	–	0.26	0.14	–
6. Fixed capital productivity in production sphere									
RF Goskomstat									
—old	0.85	0.82	0.86	0.79	–	–	0.47	–	–
—new	0.91	0.80	0.87	0.82	0.96	–	0.52	0.50	–
Khanin-Suslov	0.97	0.88	0.90	0.84	1.01	0.96	0.65	0.65	0.63
7. Employment									
RF Goskomstat	0.98	0.99	0.98	0.97	0.98	0.98	0.92	0.90	0.89
8. Labour productivity (by GDP produced)									
RF Goskomstat									
—old	0.89	0.82	0.90	0.88	–	–	0.58		
—new	0.97	0.86	0.93	0.90	0.98	0.96	0.70	0.68	0.66
Khanin-Suslov	0.97	0.86	0.89	0.87	0.97	0.95	0.65	0.63	0.60

Sources: *Rossiiskii Statisticheskii Ezhegodnik: statisticheskii sbornik* (Moscow, Goskomstat Rossii, 1995–97); Russian Federation: Report on the National Accounts, October 1995, Alternative estimates.

characteristics as bare shelves and long queues, diversity of consumer goods, and better quality of many products. If these factors were taken into consideration, the overall estimation of the economic situation and living standards of the population would look better than what follows from the data given.

The greatest difference between our estimates and the official ones is found in respect of fixed capital. Whereas the official data show stagnation in fixed capital, our estimates show a steep fall. Together with the data showing a vast reduction of

inventories and stocks, they indicate a very great deterioration in the availability of basic production assets.

Our data on GDP created in goods production are actually slightly higher than the recent Goskomstat estimates. The GDP produced seems to be somewhere between the old and new Goskomstat estimates; the difference must be attributed exclusively to the data from the service sector. The revised Goskomstat data introduced many unjustified corrections, which have led to overestimation of the real growth in this sphere. The most important of them was an unjustified increase in the retail turnover index. The evaluation of the financial sector is wrong. Unjustified corrections were also introduced into the methodology of estimating the trends in other services sectors.

In recent years some other authors have also undertaken revision of the old Goskomstat RF estimates of GDP. The best known is Gavrilentov and Koen's attempt.<sup>5</sup> They see the main deficiency of the old estimates published by Goskomstat RF as overestimation of the fall in living standards. Using the new Goskomstat estimates of retail turnover, there is a much smaller decrease. Gavrilentov and Koen introduce a correction in the value of the GDP consumed and, not surprisingly, get a lower fall in this indicator. They did not, however, explain why the new estimate of retail turnover was more reliable than the old. According to our estimates, based on the statistics of consumption and balances of income and expenditure of the population, they greatly overestimate the real level of retail turnover. Seeking to prove the existence of a vast hidden economy, Gavrilentov and Koen referred to the share of 'other sectors of the economy'. In our view, however, this phenomenon must be given a quite different explanation from theirs: it is interbank credits, accounts of non-commercial organisations and off-budget state funds in commercial banks.

The Japanese economist Masaki Kuboniwa<sup>6</sup> drew attention to a marked difference between old RF Goskomstat data on GDP decline and a much lower fall in power production, which is very closely connected with production of goods and services. However, when trying to estimate the rate of growth of GDP on the basis of electricity production and consumption, Kuboniwa proceeded from constant rates of power consumption per unit of output and from the same rates of growth of industrial output and total output. But neither assumption is right. Specifically, in the period considered, power intensity in manufacturing has risen sharply; the structure of manufacturing output has also changed greatly. Using the experience of other nations in periods of similarly severe crises (e.g. the USA in 1929–32), we can state that the rise in power-intensive production and the structural shifts taking place in Russia are not unprecedented. Though Gavrilentov and Koen and Kuboniwa use different methods and come to about the same result as the new RF Goskomstat estimate of GDP decline, this does not make their estimates any more reliable.

#### *The rate of final demand for goods and services*

Our present and subsequent analyses are based both on those official data which seem to be more reliable and on the results of our own estimates in Table 1.

The use of gross domestic product in constant prices involves perceptible distortion

in favour of final consumption. While in 1990–91 the consumable part of GDP made up about 70% of the total, by 1994 it had risen to 80%, staying at 75–78% in the next two years, and the saved part of GDP decreased correspondingly. The share of household consumption in GDP rose markedly—from 48% to 54%. The only exception was the year 1992—the year liberal economic reforms began in Russia, when the command structure was abruptly dismantled. Economic units were given the right to choose for themselves their own policies on output, sales and marketing, pricing, labour cost and investment. The rapid liberalisation of foreign trade led to a jump in the export of resources from Russia. According to official statistics, net exports in 1992 rose more than eight times.<sup>7</sup> A possible hidden export of capital in the form of hidden currency receipts should also be taken into consideration. By our estimate, shadow capital exports were equal to about 42% of GDP in 1992. National saving increased to 40% of GDP, and consumption diminished accordingly. In subsequent years, economic units were inclined to increase the share of consumable resources against savable resources, which is characteristic of firms controlled by insiders. Beginning in 1993, the share of final consumption in GDP was quickly increasing and the share of saving correspondingly falling; in 1994–96 the share of saving in GDP was half its 1992 level and about two-thirds of its 1990 level (see Table 5).

Household consumption is very closely related to real household incomes. Real money incomes declined over the six years 1990–96 by almost 40%. The change within the period was not uniform, however. In 1991 they rose by 16%, though this did not lead to more purchases of goods and services but to very sharply increased household saving, whose share of disposable money income reached 34.3%. This fact did not indicate an increased propensity to save, but only the acute shortages in the consumer market. Therefore, the saving in 1991 was mostly involuntary. The structure of income sources was changing very perceptibly. While in 1990 income from property and business activity made up only 13%, in 1994 its share in total money incomes had increased, according to official data, to over 36%, and in 1995 reached 44%. As a result, the share of wages in GDP in Russia is only 24% (for comparison, in the USA it is about 50%), and the share of undistributed profits and mixed incomes about 40%.<sup>8</sup> These figures unambiguously point to a high rate of economic participation by the population. One should bear in mind, however, that the main part of incomes from ownership and entrepreneurship seem to have been gained by a relatively small group of the population which acquired privileges in the period of privatisation and high inflation.

In 1992 household real money incomes fell by almost half and made up only 60% of their 1990 level. The cause is quite clear: with an 8.5-fold rise in nominal incomes, the index of consumer prices increased nearly twice as much. The cause was export of resources from the country, which proceeded at the expense of a decline in household incomes. Purchases of consumer goods and services dropped still more steeply than incomes, and made up about 57% of the 1990 level. Household saving fell compared with the previous year and was at about the same level as at the beginning of the period. In the subsequent two years both household incomes and purchases of goods and services slightly increased, but in 1995 this trend was once again reversed.

Household consumption as a whole generally mirrors the trend in purchases of

TABLE 2

GROWTH RATES OF GDP AND ITS ELEMENTS USED FOR FINAL CONSUMPTION AND SAVING (% OF THE PREVIOUS YEAR)

	1991	1992	1993	1994	1995	1996	1996/ 1990
Final consumption including:	94.3	73.5	102.2	95.1	89.3	96.3	57.9
households	96.0	66.9	106.8	95.3	94.3	96.3	59.4
state	88.7	88.2	93.6	97.1	79.7	96.0	54.4
non-governmental organisations	134.5	99.0	100.2	64.1	69.5	106.3	63.2
Aggregate saving including:	96.7	110.3	65.4	57.5	117.7	84.1	39.8
Accumulation of which:	54.5	-36.5	-15.6	-2.3	-27537	73.9	14.7
fixed capital	84.5	58.5	74.2	74.0	92.6	82.0	20.6
Net export	5947.6	296.0	52.8	60.2	68.5	91.5	3518.0
official	217.4	817.7	123.2	87.0	103.2	110.0	2698.3
Total GDP	95.0	85.0	87.3	83.7	95.2	93.2	52.4

Note: Calculations are based on data from *Natsional'nye scheta Rossii v 1989-1995 gg.: Statisticheskii sbornik* (Moscow, Goskomstat Rossii, 1997), p. 42. The growth of household consumption was adjusted by use of data on domestic budgets and statistics of expenditure on purchases of goods and services (*Russian Economic Trends*, 4, 1, 1995, p. 145). The 1996 estimate is made on the basis of data on incomes, consumption, investment and statistics of GDP used in *Rossiiskaya ekonomika v 1996: Tendentsii i pespektivy*, Vyp. 16 (Moscow, IPPP, 1996), pp. 77-78. Minus signs denote negative accumulation.

goods and services. At the same time, in 1992-93 there was a slightly smaller fall in total consumption than in purchases of consumer goods and services. Higher production of food from private plots in these years mitigated the fall in consumption.

The trend in saving after 1992 was the same as that in incomes. It made up a higher share in disposable income, at a level of over 24% in 1993-94 and 19.2% in 1995. One explanation for this is that high rates of inflation forced people

TABLE 3

HOUSEHOLD REAL MONEY INCOMES AND EXPENDITURE (% OF THE PREVIOUS YEAR)

	1991	1992	1993	1994	1995	1996	1996/1990
Money incomes, total	115.9	51.8	110.5	106.6	88.4	96.0	60.6
Money incomes, disposable	121.2	51.8	110.8	107.1	88.6	96.7	63.9
Money expenditure on:							
purchases of goods and services	92.9	61.0	108.2	107.6	94.4	97.6	60.8
saving <sup>a</sup>	290.6	34.2	119.7	105.8	70.5	92.9	82.5
Rate of saving in disposable income <sup>b</sup>	34.3	22.6	24.5	25.2	19.2	18.5	

Notes: <sup>a</sup> Household saving adjusted by the value of purchases of foreign currency for unorganised trade (purchases made by the so-called shuttle traders).

<sup>b</sup> Not the change but the share of saving in real disposable income; in 1990 this figure was 14.3%.

TABLE 4

CAPITAL INVESTMENT AND INPUTS OF FIXED ASSETS (% OF THE PREVIOUS YEAR, WITH ROUNDING)

	1991	1992	1993	1994	1995	1996	1996/ 1990
Capital investment							
total	85	60	88	76	90	82	25
including:							
productive	85	56	81	67	89	82	19
non-productive	85	70	101	89	91	82	40
Inputs of fixed capital	75	47	79	71	90	82	15

Source: Rossiiskii Statisticheskii Ezhegodnik. Statisticheskii sbornik (Moscow, Goskomstat Rossii, 1996–1997).

to seek reliable depositories for part of their incomes in order to retain liquidity. One result of the reduced inflation in 1995–96 was a lower share of saving in household incomes. Under conditions of undeveloped corporate securities, currency purchase remains the most important form of money saving.

Capital investment has shown a very quick decline. In 1991 it was already down 15% over the previous year. In 1992 it went down another 40%. This trend persisted: rates of curtailment of investment activity were outstripping the rates of GDP decline. Especially hard hit was capital investment in production. Investment in fixed capital declined over the 6 years under consideration to only one-quarter of the initial level, and in fixed production capital to less than one-fifth. The share of equipment purchases in investment decreased from 38% in 1990 to 20% in 1995.

The fall in the volume of capital investment was accompanied by even worse utilisation. The input of fixed assets was lagging behind an already low rate of investment activity and, as early as 1992, had fallen to only slightly over one-third; in 1996 it was about 15% of its 1990 level. The volume of investment and input of assets were below the needs of simple reproduction. Even according to the official data, since 1994, the index of fixed capital depletion exceeded the coefficient of renewal. In fact, the drop in the total amount of fixed assets over the 6 years was 11–13% for all accumulated fixed capital and about 18% for productive assets. The decline in the active part of assets was higher still, at about 30%.

One of the main causes of such a striking drop in investment activity is clearly the decline of financial capacity within the country, testified by the fall in the volume of saving in 1996 to less than 40% of the 1990 level. Yet given the available volume of saving, capital investment could have been higher, particularly in 1992–93. The most important cause of continued investment decline is the persistently unfavourable investment climate in Russia. The taxation of investment remains very high, which is promoted by inclusion in the tax base of credit interest rates, excise taxes, depreciation deductions and customs duties. Total tax deductions from profits in Russia exceed two-thirds. Legislation regulating the property rights of investors has not been developed. The general political and economic instability makes investment too risky.

The structure of aggregate saving changed sharply in 1991. The share of accumulation of fixed capital and increase of material assets and stock fell from 99% in the previous year to 55%. This was caused both by a certain reduction of investment

TABLE 5  
STRUCTURE OF NATIONAL SAVING (GDP USED = 100)

	1990	1991	1992	1993	1994	1995	1996
Saving, total,	30.6	31.1	40.4	30.3	20.8	25.7	23.2
of which:							
Accumulation, total,	30.3	17.4	-7.5	1.3	0.0	10.7	8.5
including:							
Fixed capital	28.9	25.7	17.7	15.0	13.3	12.9	11.4
Material current assets							
and stocks	1.4	-8.3	-25.2	-13.7	-13.3	-2.2	-2.9
Net exports, total,	0.2	13.7	47.9	28.9	20.8	15.0	14.7
including:							
Official data	0.2	0.6	6.0	8.5	8.8	9.6	11.3
Estimate of shadow							
capital export <sup>a</sup>	0.0	13.1	41.8	20.4	12.0	5.4	3.4

Notes: <sup>a</sup> Obtained as the difference between the total GDP and the sum of all items of expenditure.

and by the beginning of the process of inventory and material stock exhaustion, a considerable part of which was exported. A still sharper change occurred in 1992 when accumulation became negative, staying near zero during the next two years: reduction of inventories and stock was higher than or just equal to gross capital investment. During the subsequent period the share of accumulation in the total volume of saving reached 40–45%. This, however, was caused not by an increase in investment but by a decline in the rate of inventory reduction as its level came to a minimum.

Shares of net exports, taking into account both the officially reported and those carried out through shadow channels, were changing inversely to accumulation shares. The volumes of shadow net exports were calculated in 1990 prices as differences between amounts of real GDP and all other items of expenditure for each year. For this reason they probably include accumulated statistical error and can be considered less reliable than other indices. However, the general level and trend of these values completely correspond to qualitative analysis. Thus, the volume of shadow exports reached its maximum of 41.8% of GDP in 1992. During the subsequent period these indices were declining, as liquid exportable resources were being exhausted and the domestic price level was coming closer to the level prevailing on external markets. By our estimation, during the period 1991–96 about \$750 billion were exported using shadow channels only.

Since calculations by other authors published in Russian and Western economic literature provide much lower volumes, our estimation of shadow capital outflow from Russia may be regarded as doubtful. According to the RF Ministry of the Economy, total export of capital from Russia during 1992–95 came to \$235–245 billion, including legal exports of \$110–115 billion. Therefore unofficial exports in that period were about \$120–130 billion.<sup>9</sup> According to the data provided by Bulatov, during 1992–95 outflow of capital from Russia to non-CIS countries amounted to \$117–131 billion.<sup>10</sup> Another expert, Vladimir Tikhomirov, published the result of a calculation, which he himself considered an underestimate, suggesting that illegal outflow of capital from Russia came to \$62.5 billion.<sup>11</sup> One could find also higher



estimations, e.g. \$400 billion by Alexander Lebed when he was Secretary of the RF Security Council, \$700–1000 billion suggested by the Russian economist Leonid Makarevich and some others. However, these estimates were not substantiated by published calculations.

Our calculations have the following differences from the ones discussed above. In the first place, we proceed from the National Accounts System statistics, while the authors cited based their calculations on direct or indirect data on foreign trade and balance of payments. Not only information sources but also the whole of the analytical framework used are at issue. We refer to the real losses of the Russian economy caused by the flight of capital. For this reason we used an estimate made as an average of the PPP (purchasing power parity) volume and that measured in US dollars at current exchange rates. Of course, the use of the PPP in our calculation increased the estimate, especially for 1992–93, because in that period the PPP was initially 10 and later about five times higher than the dollar exchange rate of the ruble.

Secondly, most authors made their calculations using only data for non-CIS countries. However in 1991–93 a large capital flow from Russia to CIS countries took place owing to price distortions. Namely, goods exported from Russia, e.g. fuels, raw materials, were seriously underpriced and, on the contrary, prices for products of manufacturing industry imported by Russia from other former Soviet republics were relatively high. According to calculations made by the USSR TsSU for 1989, the total direct loss to the Russian economy caused by non-equivalent trade with other Soviet republics amounted \$32 billion.<sup>12</sup> After the collapse of the USSR, as a consequence of outstanding financial relationships between CIS countries during 1992–93 Russia subsidised other countries heavily. According to calculations provided by the IMF, the total subsidies Russia gave to other CIS countries came to 22.5% of Russian GDP in 1992 and about 3% during the first 9 months of the next year.<sup>13</sup> Thirdly, our calculations refer to 1991–96, while most other published estimates are for the period 1992–95.

#### *GDP in the services sector*

In the 1990–96 period the structure of GDP produced, as measured in current prices, shifted drastically towards the services sector. While in 1990 this sector had accounted for less than one-third, by 1996 it reached 53.7%. Such a notable increase was mainly due to two industries: trade and financial credit. In 1996 they accounted for over 18% of GDP, or about 2.6 times their share at the beginning of the period. Production of goods had greatly weakened in the economy. Overall, these shifts could be assessed as positive since one major failure of the administrative-command system had been its neglect of services. Setting up financial market services, such as credit, financing, insurance and other market-promoting commercial activity was, and remains, essential. Some of these sectors were created in the years of the transition period: new services have appeared and employment in trade and in 'new' services increased by 12% and 2.1 times respectively. We can also note the high quality of their office equipment; this is not surprising because new creation, in contrast to updating, is generally done at an advanced technological level. At the same time, if these data are considered in constant rather than current prices, it becomes clear that

TABLE 6  
SERVICES SHARE IN GDP (% , TOTAL REVENUE = 100)

	1990	1991	1992	1993	1994	1995	1996
1. Share in GDP							
(a) sphere of services							
—in current prices	34.9	37.3	51.6	49.1	51.3	50.4	53.7
—in 1990 prices	34.9	35.1	35.3	35.0	36.5	35.9	36.3
including:							
(b) trade							
—in current prices	6.0	12.3	28.9	18.7	18.1	17.7	15.7
—in 1990 prices	6.0	5.6	5.0	4.5	4.1	4.2	4.1
(c) financial-credit sphere <sup>a</sup>							
—in current prices	1.1	3.7	5.0	6.8	5.7	3.7	2.7
—in 1990 prices	1.1	1.2	1.1	0.7	0.6	0.3	0.3
2. Share in net profit and net mixed incomes							
(a) services	36.7	32.9	64.3	54.6	59.9	60.4	
including:							
(b) trade	3.6	20.4	53.1	38.9	45.8	49.0	
(c) financial-credit sphere <sup>a</sup>	1.3	6.4	8.2	13.8	11.8	8.2	
(d) total intermediary sphere	4.9	26.8	61.3	52.7	57.3	57.2	
3. Share of net profits and net mixed incomes of intermediary sphere in the total value added of Russia	1.1	11.9	30.8	19.3	15.4	13.1	

Note: <sup>a</sup> Includes finance, credit, insurance, stock market and other market services promoting commercial activity.

the restructuring was mostly illusory. Resources were redistributed in favour of services not because they increased output as a proportion of real national product, but only as the result of higher prices on trade and financial intermediary services due to their past shortage and their fairly monopolistic character.

This redistribution of resources in favour of services was not accompanied by their effective use. The efficiency of these sectors was impaired. In the credit sphere several thousands of small banks, according to world standards, have been created. With an increase in the number of banks by hundreds of times, the total bank reserves and loans granted fell almost to one-sixth their former level, which means a drop in labour productivity in this sphere to less than one-twelfth. The trade sector was growing primarily in the shape of small wholesale and small retail trade, with a very low efficiency in the use of resources. At the same time prices for intermediary services rose drastically faster than prices for most goods. Of course, before the transition period they were substantially underpriced (as was argued by Podkaminer in a famous series of articles and has been discussed for recent years in this journal for some other transition economies).<sup>14</sup> So, a certain relative increase in prices for services was economically justified and necessary to raise the attractiveness of this sector. At the same time one should take into account another detail, showing that this increase was too high to be explained purely by market forces. As Table 7 shows, since 1991 the share of net profits in total revenue in the services sectors was on average double that in the sectors producing goods. That means that firms and individuals operating in the service sphere have been constantly obtaining additional

TABLE 7

SHARE OF NET PROFITS AND NET MIXED INCOMES IN REVENUE OF SOME ECONOMIC SECTORS

	1990	1991	1992	1993	1994	1995
Economy as a whole	11.4	23.4	24.9	16.8	12.2	11.5
Sphere of goods	10.0	22.1	14.3	14.6	10.7	8.7
—industry	8.0	19.5	15.1	14.9	11.6	7.1
Sphere of services	14.9	26.7	42.4	24.5	19.0	16.7
—trade	7.7	60.3	68.0	53.0	44.4	42.1
—financial sector	25.0	67.4	80.0	63.0	45.6	35.6
—intermediary sector						
as a whole	11.0	61.6	69.0	55.3	44.7	41.0

Sources: *Natsional'nye scheta Rossii v 1989–1995 gg. Statisticheskii sbornik* (Moscow, Goskomstat Rossii, 1997); *Rossiiskii statisticheskii ezhegodnik. Statisticheskii sbornik* (Moscow, Goskomstat Rossii, 1998), pp. 55–66.

profits compared with other sectors of the economy. In two sectors of the intermediation sphere—trade and financial intermediaries—these shares remained even higher, at three to six times as great as in industry. This fact can probably be explained by some sort of monopolistic position of intermediaries which they hold despite the huge increase in their number. Commercial banks mainly operated as Central Bank 'agents', allocating its favourable credits, and therefore were able to capture a part of the inflation tax generated by the rapid monetary expansion. Trade firms, especially newly created firms, were and to a great extent remain controlled by criminal groups. This is at least partly caused by the still complex procedures for creating new trade enterprises and the high degree of trade regulation by corrupt local authorities.<sup>15</sup>

So the rapid increase in service prices, together with high profit rates in the services sector, brought about a visible increase in its share in the total volume of net profit and net mixed incomes: while in 1990 it made up a moderate 4.7% of the national total, in 1991 this share increased almost sixfold (see Table 6). In 1992 these two spheres of services were already responsible for more than 60% of all net mixed incomes. Subsequently this figure decreased, though it still remained very high.

Attention should be paid to the fact that since 1991 changes in profits made in the intermediary sector of the economy were parallel with changes in shadow exports from Russia. The GDP shares of total profit of this sector were 11.9% in 1991, 30.8% in 1992; 19.3% in 1993; 15.4% in 1994 and 13% in 1995, which are very close to the shares of net exports (including estimated shadow capital exports) of Table 5. This permits us to conclude that these sectors have served as channels for the outflow of financial and mineral resources from Russia and that the profits made in them have been the major direct source of the shadow export of capital.

The outflow of money and other resources can explain another paradox of the transition period in Russia, namely the simultaneous growth of the share of profits and the reduction of fixed capital. The share of profits in GDP greatly increased in 1992—up to 48%, and then began to decrease. This was partly associated with changes in the level of inflation, overestimating real profitability: in 1992 it was the highest, and then began to decrease. However, the most important factor accounting

TABLE 8

FIXED CAPITAL CONSUMPTION, PROFITS AND PROFITABILITY IN THE RUSSIAN ECONOMY (CURRENT PRICES, TRILLIONS OF RUBLES)

	1990	1991	1992	1993	1994	1995	1996
1. Consumption of fixed capital							
(a) total							
—reported	0.12	0.14	2.40	25.8	123.6	413.7	555
—calculated <sup>a</sup>	0.12	0.13	3.07	85.0	325.7	810.1	823.8
(b) sphere of goods							
—reported	0.09	0.08	1.50	13.9	70.8	214.4	
—calculated <sup>a</sup>	0.09	0.10	2.58	71.81	247	637.6	
(c) sphere of services							
—reported	0.03	0.06	0.90	11.9	52.8	193.3	
—calculated <sup>a</sup>	0.03	0.03	0.49	13.2	70	218.6	
2. Gross profits and gross mixed incomes							
(a) total	0.26	0.76	12.20	82.8	275.1	784.6	1145.5
(b) sphere of goods	0.17	0.49	5.00	44.7	160.5	432.0	
(c) sphere of services	0.09	0.27	7.20	38.1	114.6	352.6	
3. Net profits and net mixed incomes							
(a) total							
—reported	0.14	0.62	9.80	57.0	151.5	370.9	590.6
—calculated <sup>a</sup>	0.14	0.63	9.13	-2.2	-50.6	-25.8	321.7
(b) sphere of goods							
—reported	0.08	0.41	3.50	30.8	89.7	197.6	
—calculated <sup>a</sup>	0.08	0.39	2.42	-27.2	-86.3	-174.1	
(c) sphere of services							
—reported	0.06	0.21	6.30	26.2	61.8	173.4	
—calculated <sup>a</sup>	0.06	0.24	6.71	24.9	35.7	148.3	
4. Profitability of fixed capital (%)							
(a) total							
—reported	7.25	30.10	22.69	4.79	2.92	2.84	4.46
—calculated <sup>a</sup>	7.25	30.63	21.14	-0.18	-0.98	-0.20	2.43
(b) sphere of goods							
—reported	8.42	39.81	12.87	4.07	3.44	3.09	
—calculated <sup>a</sup>	8.42	38.10	8.91	-3.57	-3.31	-2.72	
(c) sphere of services							
—reported	6.12	20.39	39.38	6.06	2.40	2.60	
—calculated <sup>a</sup>	6.12	23.15	41.94	5.75	1.39	2.22	

Note: <sup>a</sup> Based on the 1990 depreciation rates.

for such a sharp increase in profitability was the decrease in real wages paid to workers in 1991–92.

It is however necessary to understand why under such a growth in the share of profits in GDP so vast a reduction of fixed capital occurred. One of the reasons certainly was that a great part of profits was realised in trade and intermediation rather than production. This, on the one hand, was draining resources from production, which had to surrender an enormous part of its income to the trade and intermediation sphere, and, on the other, made it easier for the 'new Russians' to export capital from Russia and to consume extravagantly. In the sphere of goods production, the apparent growth of profits was disguising capital under-replacement. The real depreciation of assets was continually being undervalued. Inclusion of its real volume in producers' expenditure would have led to lower profits. The depreciation rates during the period

TABLE 9  
GROSS OUTPUT OF THE RUSSIAN MATERIAL SPHERE (ROUNDED % OF THE PREVIOUS YEAR)

	1991	1992	1993	1994	1995	1996	1996/ 1990
Industry	92	82	86	79	97	95	47
Agriculture	95	91	96	88	92	94	63
Construction <sup>a</sup>	98	64	92	76	91	83	33
Other sectors <sup>b</sup>	94	85	88	79	94	94 <sup>c</sup>	50 <sup>c</sup>
Total <sup>d</sup>	93	81	89	81	95	93	48

Source: *Rossiya v tsifrakh: kratkii statisticheskii spravochnik* (Moscow, Goskomstat Rossii, 1996), pp. 12, 237, 281, 317; *Natsional'nye scheta Rossii v 1989-1995 gg: Statisticheskii sbornik* (Moscow, Goskomstat Rossii, 1997), p. 29; *Natsional'nye scheta Rossii v 1989-1994 gg: Statisticheskii sbornik* (Moscow, Goskomstat Rossii, 1995), p. 22.

Notes: <sup>a</sup> By volume of contract work.

<sup>b</sup> By value added.

<sup>c</sup> 1996 estimated.

<sup>d</sup> Weighted by the 1990 structure.

under study were steadily and rather perceptibly being decreased—from 0.9% on average in goods production in 1990 down to 0.3% in 1994. The revaluation of depreciation totals on the basis of the 1990 rates shows that as early as 1992 over 40% of the real capital depreciation in the production sector of the economy was not being replaced. After 1993 the under-depreciation in this sphere was equal to about 70% of the amount required for fixed capital reproduction.

Even official data show a sharp fall in profitability of production after 1992 caused by the general drop in the efficiency of the Russian economy and very great under-utilisation of production capacities. If under-depreciation of the fixed capital is taken into account, we can say that, at least beginning from 1993, the goods production sphere proved unable to maintain the process of fixed capital reproduction from its own resources (see Table 8).

TABLE 10  
CHANGES IN INDUSTRIAL OUTPUT IN RUSSIA (1990-100)

	1991	1992	1993	1994	1995	1996	1996/ 1990
Industry, total	92.0	82.0	85.9	79.1	96.7	94.5	46.8
including:							
Fuels	94.0	93.0	88.4	89.8	99.2	97.3	67.0
Electric power	100.3	95.3	95.3	91.2	96.8	98.4	79.1
Ferrous metals	92.6	83.6	83.4	82.7	109.6	95.5	55.9
Non-ferrous metals	91.3	74.6	85.9	91.1	102.8	94.6	51.8
Chemical and petro-chemical industry	93.7	71.3	78.5	75.5	107.6	89.0	41.6
Forestry and wood-processing industry	91.0	85.4	81.3	69.5	99.3	77.7	33.9
Construction industry	97.6	79.6	84.0	72.7	92.0	74.7	32.6
Engineering	90.0	85.1	84.4	69.2	90.9	88.9	36.1
Light industry	91.0	70.0	77.0	54.0	69.8	72.4	13.4
Food industry	90.5	83.6	91.0	82.5	91.8	90.8	47.3

Source: Official data provided by Goskomstat RF.

TABLE 11  
STRUCTURE OF INDUSTRIAL PRODUCTION IN 1990 PRICES (%)

	1990	1991	1992	1993	1994	1995	1996
Industry, total including:	100	100	100	100	100	100	100
Fuels	7.3	7.5	8.5	8.8	9.9	10.2	10.5
Electric power	3.9	4.2	4.9	5.5	6.2	6.2	6.5
Ferrous metals	5.3	5.3	5.4	5.3	5.5	6.2	6.3
Non-ferrous metals	5.7	5.7	5.1	5.1	5.9	6.3	6.3
Chemical and petrochemical industry	7.5	7.6	7.2	6.6	6.3	7.0	6.6
Forestry and wood-processing industry	5.6	5.5	5.7	5.4	4.8	4.9	4.0
Construction materials	3.6	3.9	3.7	3.7	3.4	3.2	2.5
Engineering	30.2	29.6	30.7	29.9	26.4	24.8	23.3
Light industry	11.8	11.7	10.0	8.9	6.1	4.4	3.4
Food industry	15.1	14.8	15.1	16.0	16.7	15.8	15.2

Source: Calculated from *Promyshlennost' Rossii: Statisticheskii sbornik* (Moscow, Goskomstat Rossii, 1996).

#### *Production of goods: chief trends*

Goods production has experienced major structural changes. All large material production industries were in severe crisis, but the extent of this crisis was greater in industry and construction than in agriculture. Whereas, over the years of reforms, output in industry fell by more than one-half, and in construction by two-thirds, in agriculture it decreased only by about 37% (Table 9). The difference in the trends is explained mainly by the specific nature of demand for the products of these industries. Industry and construction suffered from a vast reduction in military demand, and from declining investment. Agriculture, on the other hand, was declining to a lesser extent. Industry and agriculture were both greatly affected by imports of more competitive

TABLE 12  
COMPARISON OF CHANGES IN RELATIVE PRICES WITH INDICATORS OF  
RELATIVE INDUSTRIES' OUTPUT, 1995/1992 (%)

	Relative prices	Relative output
Industry, total including:	100	100
Fuel	74	120
Electric power	159	128
Ferrous metals	97	115
Non-ferrous metals	57	122
Petrochemical and chemical industry	100	97
Forestry and wood-processing industry	128	85
Construction materials	169	86
Engineering	111	81
Light industry	79	44
Food industry	98	105

goods. In 1992 the internal Russian consumer market was 77% supplied with domestic products; in 1995 this proportion dropped to only 46%. High foreign demand for a number of Russian export items (fuel, metals, timber and some chemical products) helped soften the decreases; otherwise the decline in industry might have been much deeper.

In industrial production, structural shifts from production of processed products towards extracting industries and industries making primary-processed intermediate products, i.e. fuel, electric power and metallurgy, continued. The most serious damage was suffered by light industry, engineering and production of construction materials (see Tables 10 and 11), which lost half their market share. Thus, the share of light industry in 1996 was 2.9 times lower than in 1990.

The output of engineering dropped over the six-year period by 64%. One of the underlying causes was lower demand for products due to curtailed industrial investment—this market fell almost to one quarter of the initial volume. A no less important reason was the multiple reduction in purchases of military products by the Ministry of Defence and other security departments, as well as in exports of military equipment. Military orders had accounted for 60% of total engineering output. At the same time, the process of conversion was also very slow. The production of the engineering industry reflected the replacement of domestic goods by higher-quality, cheaper, imported goods. A less serious reduction of investment in services and housing, by a 'mere' 60%, provides some explanation why the reduction in building materials was lower than that in engineering. Construction in services involves a relatively higher demand precisely for building materials and makes much lower use of machines and equipment. The total fall in the share of the construction complex was 1.31 times greater than in industrial production.

The reduction of domestic final demand for capital investment goods also explains the fall in production of the forestry, chemical and metals industries. But in the period under consideration these industries behaved in different ways according to their different competitive positions. In 1992 there was a significant drop in exports of goods from Russia. But from 1993 the receipts from officially registered exports began to grow rapidly, reaching US\$81.6 billion in 1995, which was 52% above their 1992 level. While metals, especially ferrous metals, industries sustained rapid and sharp increases in their exports, they suffered a reduction in their volume of domestic sales. The timber industry operated less successfully but also increased its international sales. In 1995 the ferrous and non-ferrous metals industries, as well as chemicals, showed increases in output of 10%, 3% and 8% respectively. The progress in these industries may be slowed by the lower profitability of exports, given the continued rise of domestic prices. In 1996 there was a fall in production in the forestry industries of 12.3%, while metals industries fell 5%<sup>16</sup>. Despite the fall in production, there was a net gain in the exports of the metals sector.

Energy production declined more slowly than production of non-energy products (see Table 10). The physical indices of industrial production calculated as weighted average rates of change of output fell 20.9% for electric power and 33% for the fuel industry. This led to growth in the share of the FEC (fuel and energy complex) in total industrial output—from 11.2% in 1990 up to 17% in 1996 (in 1990 prices).

There are several reasons why the FEC's share increased. The first reason was only typical of the fuel industry. As in mining, it was essential to promote fuels in international markets. While deliveries to the CIS countries fell over the whole period and in 1995 made up only one-third of their 1990 size, exports to other countries began to grow in 1993 and in 1995 exceeded their 1990 level by around 8%. At present, about 40% of total extracted oil, a third of gas and oil products, and over 10% of coal are exported. Energy projects have a special role in maintaining the whole social infrastructure. Energy consumption in the social sphere and housing depends little on the growth of production, but is much more dependent on the size of the population, total incomes and other indicators that characterise the social sphere. From 1992 households were charged reduced rates for electric power, which seems an important reason for growth in power consumption. A third reason for the slower rates of decline of energy than non-energy products was a rise in the proportion of consumption of energy resources by the production sector, which began before 1995. From 1991 energy consumption per unit produced increased. In 1994 the consumption rate, per ton of oil, increased by 20% against 1991, per ton of cast iron 2.2%, per ton of rolled ferrous metal by 18.5%. Electric power consumption per ton of oil extracted increased by 22.6%, and by 25% per ton of refined oil produced.<sup>17</sup> By our estimate, total energy consumption by production plants increased over the period considered by over 10%, and total electric power consumption by 24.4%. Structural shifts in production had an energy-intensive character: it is the power-intensive industries that were increasing their share in the total output of goods. The total power intensity of production in the goods sector increased by 35.5%, and the total increase of energy intensity in the production sphere between 1990 and 1995 was about 33.2%. Changes in power production and power intensity reflect general trends of decreased efficiency in the Russian economy. Thus, our estimate of the resource intensity indicator series is 29% higher in 1995 than in 1990.

The extent of the drop in industrial production is closely associated with inefficiency as well as with the disproportions that accumulated over the years of socialist development. The structural crisis of production was intensified by the break-up of the CMEA and the Soviet economic space. The failure of the attempt at conversion of military industries was significant. Additionally, inadequate monetary policy contributed to total losses. Thus, ruble overvaluation as a government policy led to gradual approximation of domestic prices to the level in world markets. The ratio of the dollar/ruble exchange rate to the ruble's purchasing power<sup>18</sup> was only 24.7% in 1993; in 1994 it was 43.1% and in 1995 58.3%. In 1992 this ratio had been at a level of 10–13%. Overvaluation decreased the competitive ability of the country's economy, evidenced by data published in 1996 that address export inefficiency of oil and gas. An economy with a low technological level and high energy costs per unit of product is unable to survive with the current high prices of industrial inputs, even though they are slightly below the level of world prices. We should also take into consideration that climatic conditions in Russia inevitably make power consumption higher than elsewhere.

Price statistics published currently by Goskomstat RF remain unreliable. Evidence for this is that they contradict the official record of industrial output in monetary and physical terms. Thus, according to wholesale statistics,<sup>19</sup> in 1994 industrial output in



current prices was twice as high as the officially published figures. So for the purposes of this analysis we made use of industrial deflators based on more reliable statistics. The price rise by industries was compared with the overall industrial deflator to reach an estimate of relative price indices (the first column of Table 12).

In the same way indices of relative depression, showing lead or lag time of physical production cutbacks in comparison with average industrial reduction, were calculated. The findings for the 1992–95 period are shown in Table 11. They provide a basis that confirms an active role of prices in promotion of economic restructuring. This process seems to have started after 1992 when producers began to adjust to conditions of free prices. In that year a forced change of relative prices in favour of very cheap energy occurred. From the next year on, the higher the selling prices set by the industry for its products, the greater the fall in production it experienced. These behaviours imply differences in efficiency between leading and lagging industries. Where the production efficiency was high enough (i.e. in fuel-producing and metals industries), costs increased more slowly, allowing a more moderate price policy. This was also true of industries that managed to promote themselves in foreign markets. It is interesting to note that the food industry became one of the leaders. In our view, low-cost industrial inputs—subsidised agricultural products, relatively stable demand for food, as well as technological mobility—meant a short cost payback period here. Investment industries (i.e. engineering and building materials) sustained great damage due to high production costs. Attempts to compensate them by increased prices led to additional loss of markets. Forestry and wood processing were also found in this group. Petrochemicals and the chemical industry were somewhere between the leaders and the laggards.

In agriculture, the depression noted in crop farming was less deep than in livestock. The reasons for the different efficiency of these sectors were inherited from Soviet times and were connected with general economic policy and economic transformation. Owing to natural conditions, poor organisation in livestock and its fodder base, the overwhelming majority of large animal farms proved unprofitable and either stopped production or curtailed it drastically. On the other hand, animal breeding in household subsidiary farming rose, so prices of meat have remained fairly low. This was caused both by the higher efficiency of private subsidiary farming and by low living standards of rural people, whose total incomes fell further than among urban people during the transition. And, with only some exceptions, it turned out to be infeasible to create viable economic institutions in the rural areas. Privately run farms, lacking experience and devoid of government support, are still less efficient than state or collective farming. The financial problems of agriculture, intensified by seasonal production, have led to a virtual shutdown in the production of mineral fertilisers. The application of organic fertilisers also has sharply diminished. Soil fertility began to decline. At the same time, the fleet of agricultural machinery fell by a half, which had a negative effect, increasing the duration of operations, reducing sown acreage and causing poorer cultivation.

In construction it is possible to distinguish two sub-industries, housing construction and other construction. Housing construction was reduced to less than two-thirds its initial level, though 1995 saw some growth. Also, it is likely that not all housing construction is recorded. The relative strength of housing construction (compared, for

example, with the USA from 1929 to 1932) reflects the acute housing shortage. With only a thin layer of well-off people, the need for housing becomes effective demand. It should be remembered too that in 1996 housing construction fell considerably. This can be attributed to the high-income group having already satisfied its housing needs, leaving the rest of citizens still unable to afford new flats or houses.

*The Russian economy in the period of transition: what could not be predicted?*

When analysing Russian economic development in the transition period the main difficulty is to differentiate between past trends, unavoidable setbacks in restructuring, and poorly implemented reforms. The loss of control by the command economy became obvious in the last decades of the Soviet Union's existence. The system proved resistant to structural shifts and unable to adopt new technologies. This led to stagnation (especially in the non-military sector), increased material and capital intensity of production, and to a practical cessation in labour productivity growth. This would inevitably have caused a reduction of gross domestic product, and fixed capital stock, as early as the second half of the 1980s. The crisis was postponed by spending a large part of the country's gold and currency reserves and a huge increase in foreign debt, the deadlines on which were due to expire in 1990–91. A large reduction of GDP and fixed capital was, therefore, inescapable in Russia in the early 1990s.

The depth of economic depression in the transition period from command to market economy was the result of disproportions between various lines of production. In this sense, it may be presumed that the potential economic fall was deeper the higher the total accumulated capital, which perpetuates these disproportions. The former USSR hoarded large amounts of fixed capital and thus created the greatest potential for structural crisis. Other faults of the administrative-command system were severe shortages with simultaneous giant reserves of resources in demand, resistance to technological progress, especially in the civilian sector, low-quality products, and an exorbitant share of military-industrial and mineral-resource sectors in the economy.

We believe our estimates more accurately outline the Russian economic trends and factors of the 1990–96 period. In this period Russia experienced a drop in its gross domestic product unparalleled in the economic history of industrial nations, worse than the USA or Germany during the Great Depression of 1929–32. The scale of this production fall can be compared only with the economic consequences of World War II for the defeated countries. Especially striking was the reduction of accumulated resource potential. If the total sum of material inventories and stocks is included in fixed capital, then their total reduction over the period comes to about one-third. At the existing low rates of replacement, fixed capital may decrease by the year 2000 by 30% compared with the 1992 level, and the 'active' part by 50–60%. If the inventories of those firms which are estimated to have experienced a decrease from the 1990 level of about six-sevenths are not increased, it is hardly possible to hope for a business recovery. At present simply to stop the reduction of the accumulated fixed capital would require investment of \$100 billion annually (about 20% of GDP).

Apart from the reduction of fixed capital and investment, which is in itself

extremely negative, there are the implications for the collapse of highly advanced structures which could promote economic growth. A vast network of research and development institutes has actually been destroyed. Geological prospecting has been reduced to a minimum, and has already led to reduced reserves of many mineral resources. Staffing of research and development laboratories and industry-related research institutes fell to a fraction of the 1990 level. The system of higher technological education and vocational training is in very poor condition, and construction organisations have been destroyed.

Before the transition, the former USSR, including Russia, possessed opportunities which could have minimised the negative consequences of the transition process. Russia is rich in natural resources, even if its vast area leads to transport problems. On the basis of these natural resources a large, though technologically underdeveloped, mineral extraction and processing sector was created (for example, in ferrous and non-ferrous metals). It was the income from the fuel and energy sectors that allowed the USSR to maintain its manufacturing and living standards, inefficient and low as they were.

Reducing defence expenditure could have made certain savings. Even if the former USSR military expenditure is estimated at no more than 20% of GDP, reduction by four-fifths would have saved over 100 billion rubles or, in terms of purchasing power parity, over \$200 billion. One should remember that the most advanced scientific and engineering personnel were concentrated in the defence sector and that the reduction of military expenditure has had negative implications for industrial output. Loss of jobs in defence enterprises led to reduction of sales, which, in turn, led to reduction of tax receipts by the state. In this context, a stabilising factor would have been to take advantage of the reduction in military expenditure and convert the military industrial complex to civilian production. The failure of conversion was the bitterest disappointment of the reform. Certain savings could have been made by cutting down the aid to foreign states and former USSR republics, which accounted for billions of dollars. Reserves were excessive, estimated at several hundred billion dollars. All these sources could have been used with more wisdom for effective economic restructuring. The new government, having chosen shock economic liberalisation, was unable to gain control over the resources freed. The result was the 'privatisation' of those resources, mostly in a criminal way. Financial and other resources released as a result of reduced internal demand, excessive material stocks, transfers to other countries, as well as reduced investment, made up the basis for a huge export of capital. Though officially unrecorded, capital export from Russia was, by our estimate, about 40% GDP in 1992. There was a further sharp outflow in 1993-96 (in 1994 alone amounting to 12% of GDP). Capital was exported from a country which itself desperately needed it for improvement of living standards and renewal of the technological base of its economy. This was at a time when Russian industry had to beg foreign investors and international financial agencies to reschedule its old debts, while allowing new loans. Even half of the exported capital would have been enough to pay those debts on time and balance the state budget. The Russian state proved absolutely impotent to staunch capital export from the country. Russia chose a variant of transition known as shock therapy. This means rapid economic liberalisation and quick integration in the world economy as well as tight

macroeconomic policy. These policies were attractive because they could be implemented without first developing a programme of reforms, in the hope that these measures would immediately trigger off economic mechanisms of self-regulation. These policies were fraught with the risk of flagrant social costs paid in the initial stages of transition. This means that political stability and a high degree of social harmony become paramount for a country's successful progress along the path of reform. The absence of political and social harmony makes the reforms inconsistent, implemented in a 'step forward—step backward' way, as has been witnessed in Russia throughout the transition. This was caused by the high degree of state patronage inherited from the command system. In the socialist economy the state is a kind of a universal 'insurance company' whose main goal is to avoid enterprise closures and any other shocks. This paternalism, however, is selective: large enterprises with their strong political lobbies have more chances to get concessions through planning revisions, subsidies, state loans or other privileges. With the beginning of the economic reforms, the state maintained these functions. Under strong opposition to reforms, put up by lobbying groups, the Russian government behaved inconsistently. On the one hand it took measures directed at the fulfillment of its obligations to the IMF and the World Bank, while, on the other, giving support to enterprises which are characterised more by rent-seeking than profit-seeking.

*Russia before and after August 1998*

A certain deceleration of economic decline, combined with stabilisation of the real income of the population, consumer prices and the exchange rate of the ruble during 1996–97, gave many Russian and foreign economists the impression that the economic crisis was finishing and an upswing coming. This stabilisation was accompanied and to a certain extent explained by a rapid increase in internal and external state short-term debt bearing enormous real interest rates. The Russian government failed to balance the revenue and expenditure of the state budget. During 1998 the budget deficit stayed approximately at the levels of 1996–97 and over the first three quarters of the year equalled about 5% of GDP.

After a certain stabilisation in 1997, production decline resumed in the spring of 1998. An important reason for this was the overvalued exchange rate of the ruble with respect to Russian economic efficiency. With a price level higher than 70% of that of the USA<sup>20</sup> even oil and gas export from Russia becomes unprofitable for Russian companies. Production of other goods was also falling, including production of goods substituting for imports. Transport, trade and financial intermediary services were falling as well. The enormous profitability of short-term treasury bonds and the expected devaluation of the ruble were leading to further reduction of investment volumes.

In 1998 important internal sources of economic instability, including a bad grain harvest, were supplemented by some external factors. These were a reduction in world market prices for oil, fuels and raw materials, which constituted the main sources of hard currency revenue from Russian exports, and the Asian financial crisis, which stimulated distrust in emerging financial markets. In July 1998, just before the financial crisis, the fall in monthly production volume compared with the same period

of the previous year reached 10%. The unstable financial pyramid of the Russian economy collapsed in the autumn of 1998.

The direct consequences of the 1998 financial crisis were a sharp reduction in the real incomes of households (in December they were 30.8% lower than in the same period of the previous year), a visible decrease in retail trade volume, an approximately twofold reduction of imports and an even steeper fall in investment activity. At the same time, the fact that the fall in the ruble was greater than the increase in prices and, in particular, the increase in wholesale prices, stimulated exports of some goods and production of goods substituting for imports. For this reason, after the 15% shock reduction of production in industry in August–September, output began to grow from October. In December the gap with respect to the previous year was reduced to 6–7% and in February 1999, according to current RF Goskomstat data, to 3%.

At the same time the bad harvest in agriculture, decline in trade and transport, and further crisis in the bank system caused a strengthening of general economic recession at the end of the year. Thus GDP volume in the second half-year of 1998 was by our estimation 10% lower than in the same period of 1997.

Besides a certain increase in domestic industrial production, the financial crisis of 1998 also had some other positive consequences: a considerable reduction of the volume and profitability of the inflated intermediary sector, a reduction in the differentiation of real incomes, and increasing profit rates in the real sector of the Russian economy (or reduction of its losses). Some improvement in the financial state of enterprises allows one to expect an increase of both capital investment and inventories. Yet future improvement of the economic situation in Russia remains vulnerable to reduction of the fixed capital stock, loss of labour force skills and health and high expenditures associated with covering the state debt.

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<sup>1</sup> State Committee for Statistics of the Russian Federation

<sup>2</sup> Russian Federation, Report on the National Accounts, October 1995, alternative estimates.

<sup>3</sup> Mechanisms of distorting the data on economic development of the USSR and alternative estimates are discussed in G. Khanin, *Dinamika ekonomicheskogo razvitiya SSSR* (Novosibirsk, Nauka, 1991).

<sup>4</sup> Khanin, *Dinamika ekonomicheskogo razvitiya SSSR*.

<sup>5</sup> E. Gavrilenkov & V. Koen, *How Large Was Output Collapse in Russia?* (International Monetary Fund, Research Department, December 1994)

<sup>6</sup> M. Kuboniwa, 'Output Drop in Early Transition and Its Macro- and Microeconomic Implications', paper delivered at at ICCEES, V World Congress, Warsaw, 6–11 August 1995.

<sup>7</sup> *Natsional'nye scheta Rossii v 1989–1994 gg.: Statisticheskii sbornik* (Moscow, Goskomstat RF, 1995), p. 41.

<sup>8</sup> In the USA only 16%; see A. Anisimov, 'Ekonomicheskaya svoboda skoree rezul'tat, chem prichina bogatstva', *Ekspert*, 1995, 1, p. 32.

<sup>9</sup> Anton Surikov & Aleksandr Baranov, 'Za chetyre goda iz Rossii uteklo chetvert' trillion dollarov', *Pravda*, 24 September 1997.

<sup>10</sup> A. Bulatov, *Vyvoz kapitala iz Rossii i kontseptsiya ego regulirovaniya* (Moscow, 1997), p. 30.

<sup>11</sup> Vladimir Tikhomirov, 'Capital Flight from Post-Soviet Russia', *Europe-Asia Studies*, 49, 4, June 1997, pp. 591–616.

<sup>12</sup> *Narodnoe Khozyaistvo SSSR v 1990 g.* (Moscow, 1991), p. 636.

<sup>13</sup> A. Aslund, *Rossiya: Rozhdenie rynochnoi ekonomiki* (Moscow, 'Respublika', 1996), p. 160.

<sup>14</sup> Janice Bell & Jacek Rostowski, 'A Note on the Confirmation of Podkaminer's Hypothesis in Post-Liberalisation Poland', *Europe-Asia Studies*, 47, 3, May 1995, pp. 527-530; Keith Howe & Margarita Mihaylova, 'A Further Test of Podkaminer's Hypothesis: the Case of Post-Liberalisation Bulgaria', *Europe-Asia Studies*, 49, 4, June 1997, pp. 705-710.

<sup>15</sup> *Spetsial'nyi doklad 6. 'Gosudarstvennoe regulirovanie, reket i obespechenie obshchestvennymi tovarami'*, *Obzor ekonomiki Rossii: osnovnye tendentsii razvitiya. 1998, IV* (Moscow, 1999), pp. 170-174.

<sup>16</sup> *Sotsial'no-ekonomicheskoe polozhenie Rossii* (Moscow, Goskomstat RF, 1996), p. 12.

<sup>17</sup> *Promyshlennost' Rossii. Statisticheskii sbornik* (Moscow, Goskomstat RF, 1995), p. 42.

<sup>18</sup> *Rossiia v tsifrakh. Kratkii statisticheskii sbornik* (Moscow, Goskomstat RF, 1996), p. 376.

<sup>19</sup> *Tseny v Rossiiskoi Federatsii* (Moscow, Goskomstat RF, 1995), pp. 23-124.

<sup>20</sup> The ratio of the nominal ruble exchange rate to its PPP.