Macalester International

Volume 7 *Globalization and Economic Space* Article 20

Spring 5-31-1999

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Recommended Citation
Popov, Vladimir (1999) "Internationalization of the Russian Economy," *Macalester International*: Vol. 7, Article 20.
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INTERNATIONALIZATION OF THE RUSSIAN ECONOMY: What Went Wrong?

Vladimir Popov

The opening up of the previously closed centrally planned economies (CPEs) is one of the most remarkable developments of the 1990s because it means that the last large group of countries previously isolated from the world economy is now part of the globalization process. With the exception of China and Vietnam, however, market reforms and internationalization in former communist countries have been accompanied by mounting economic hardship; output and real incomes fell markedly, and mortality and crime rates increased. In Russia and other former Soviet Union (FSU) states, the costs of transition have been especially high, much higher than in East European countries (Tables 1 and 1A in the Appendix).

To what extent were the costs of transition in general and in Russia in particular associated with the opening up of the previously closed economies? Could these costs have been avoided if reformers were pursuing a different strategy of internationalization?

One popular observation is that the disruption of the Comecon trade in 1991 and of the inter-republican trade within the FSU in 1992–95 contributed a great deal to the poor performance of East European (EE) and FSU countries. The other view, however, is that the collapse of these trade flows was more or less inevitable, since they were based on prices that were so different from the world market prices; these trade flows were inefficient and were supposed to be reshaped and restructured in any case, whereas the real problem was the lack of a consistent policy of liberalization.

These two approaches correspond to two schools of thought in a more general debate between "shock therapists" and "gradualists."

Table 1 Russia: General Economic and Social Indicators, 1989–98

Indicator/Year	1990	1991	1992	1993	1994	1995	1996	1997	1998*
GDP, 1989=100%	96	91	78	72	62	60	57	57	53
Gross fixed investment, 1989=100%	100	85	51	45	34	30	25	23	21
— as a % of GDP	29	24	25	21	22	21	21	20	19
Employment, 1989=100%	100	98	95	94	91	88	87	85	84
Unemployment rate, year-end, %	—	—	4.8	5.6	7.4	8.2	9.3	11.3	12.5
Government revenues, % of GDP	41.0**	—	44.2	36.1	34.6	32.2	30.4	27.9	24
Inflation (CPI, annual average, %)	6	93	1526	875	307	198	48	17	50
Share of resource industries*** in total industrial output (current prices), %	24.2	23.7	43.9	43.8	46.5	48.1	51.1	—	—
Export, billion US dollars	140.1	108.5	80.7	63.6	67.5	81.1	89.1	87.0	75
— to non-CIS countries	63.2	50.9	42.4	44.3	50.5	60.8	62.3	68.2	60
Real personal disposable incomes, 1990=100%	100	116	63	74	83	72	72	75	65
Gini coefficient (income), %	—	26	28.9	39.8	40.9	38.1	37.5	—	—
Average pension as a % of average wage	33	33	26	34	34	38	38	34	—
Average pension as a % of average income	47	40	38	44	37	34	39	36	—
Share of wages and salaries in GDP, %	48.8	43.7	35.5	38.5	38.2	30.0	26.5	29	—

* Estimate. ** 1989. *** Fuel and energy, steel and non-ferrous metals.
Source: EBRD (1995), (1996), (1997); ECE (1997); Goskomstat; PlanEcon.

The question why the FSU had to pay a greater price for economic transition is answered differently by those who advocate shock therapy and those who support gradual, piecemeal reforms. Shock therapists argue that much of the cost of the FSU reforms should be attributed to inconsistencies in the policies followed — namely, to the slow pace of reforms and to the inability of the governments and central banks to fight inflation in 1992–95. The supporters of gradual transition, however, blame the attempt to introduce the conventional shock-therapy package for all the disasters and misfortunes.

In order to answer the question about the costs of transition and the costs of internationalization in particular, we should discuss the issue

in the framework of the general model, which allows us to place the internationalization factors in perspective and to evaluate their roles. The framework I propose in this essay is based on the assumption that the speed of reform per se (shock versus gradual transition) did not matter a great deal. The unique magnitude of the recession was caused primarily by two groups of factors: first, by greater distortions in the industrial structure and external trade patterns on the eve of the transition and, second, by the collapse of state and non-state institutions, which occurred in the late 1980s to early 1990s and resulted in chaotic transformation through crisis management instead of organized and manageable transition. This strong institutional framework should be held responsible for the success of gradual reforms in China and shock therapy in Vietnam, where strong authoritarian regimes were preserved and CPE institutions were not dismantled before new market institutions were created, as well as for the relative success of radical reforms in East European (especially in Central European) countries, where strong democratic regimes and new market institutions emerged quickly. The collapse of the strong state and institutions that started in the USSR in the late 1980s and continued in the successor states in the 1990s explains the extreme length, if not the extreme depth, of the FSU transformational recession.

To put it differently, the Gorbachev reforms of 1985 – 91 failed not because they were gradual but because of the weakening of the state institutional capacity leading to the inability of the government to control the flow of events. Similarly, the Yeltsin reforms in Russia, as well as economic reforms in most other FSU states, were so costly not because of the shock therapy or the lack of it, but because the institutions needed to enforce law and order and carry out manageable transition collapsed.

It is argued in the essay that the greater magnitude of the Russian recession was caused mostly not by the slow speed of liberalization but, rather, by worse initial conditions (larger distortions in industrial sector and trade patterns inherited from the era of central planning) and by the collapse of institutions that occurred during transition. Opening up of the Russian economy (deregulation of foreign trade and introduction of the convertibility of the ruble) resulted in a sharp decline of exports and imports and thus contributed greatly to the general reduction of output. To a large extent, this was inevitable, since the trade flows and industrial structures of former socialist countries were perverted and could not have been sustained without sacrificing eco-

nomic efficiency. However, the harsh impact of internationalization on the Russian economy was strengthened by the inappropriate policies. It is argued that the Russian government mishandled the internationalization process in at least three major ways: (1) by sustaining, in 1995–98, the overvalued exchange rate of the ruble and provoking the currency crisis, (2) by sticking to import substitution industrial strategy and failing to stimulate export-oriented growth, and (3) by not using the potential for attracting foreign direct investment.

II. Evaluating the Impact of Internationalization: Framework for Analysis

Initial conditions for market-type reforms in Russia were not so favorable as in EE countries or in China and Vietnam. Indeed, if transformational recession is viewed as a supply-side phenomenon, as a structural adjustment process resulting from the need to overcome disproportions inherited from the centrally planned economy (CPE), then high militarization, overindustrialization, underdevelopment of the service sector, "under-openness" of the economy, and the perverse structure of trade among former Soviet republics and among socialist countries obviously put the pre-transition Russian (and Soviet) economy at a disadvantage.

To begin with, a much higher share of GDP was absorbed by defense expenditure—about 15 percent in the USSR in the 1980s compared with 1–5 percent in major Western countries and 5–10 percent in most other socialist countries.[1]

All CPEs were overindustrialized at the expense of the service sector, especially at the expense of trade and financial services, which were relatively underdeveloped. The Soviet economy, however, was more defense- and investment-oriented than other CPEs, and the Russian industrial structure was "heavier" than that of other Soviet republics. While the share of industry in GDP in Russia before the transition was not that different from other countries, the share of least efficient engineering (machine production) in total industrial output was markedly higher. In 1990, engineering accounted for 46 percent of employment and 31 percent of output of the industrial sector—more than even in the most industrialized country of the Eastern bloc, Czechoslovakia (40 and 30 percent, respectively), and much more than in Poland (32 and 28 percent, respectively).[2]

By contrast, in other republics the share of machinery and equipment industries in total industrial employment in 1990 was only 38 percent (less than 30 percent, if Ukraine and Belarus are excluded). Russia's position versus all other republics except for Ukraine and Belarus was that of a net exporter of resources and machinery and a net importer of food and light-industry products.

Another disproportion created by central planning—the productivity gap between resource-based industries and secondary manufacturing—is unique to the former Soviet republics and virtually nonexistent in other CPEs. Due to obvious natural environment factors, the Soviet, and especially the Russian, economy was more resource-oriented than other CPEs, and resource industries developed into the most efficient part of the Soviet industrial potential. Their productivity (as compared to the world level) was several times higher than that in secondary manufacturing. While the productivity gap between industry and agriculture is common for many countries (not only for the CPEs, but also for most emerging market economies), only countries with an abundance of natural resources may develop a highly efficient and competitive resource sector. Changes in price structure during transition — bringing domestic prices in line with world prices — caused much greater adjustment problems in the former Soviet Union than in East European countries where domestic resource prices were kept roughly at the world level.

Also, the collapse of the inter-republican trade (which should be attributed not to the breakdown of the Union itself but to changes in relative prices that made it impossible for the fuel-importing republics to finance their trade deficits with Russia) contributed considerably to the depth of the recession in the former Soviet republics.

As the data in Table 2 show, when trade flows among former Soviet republics are recalculated in world prices, Russia had a surplus of about 6 percent of GNP, whereas ten out of the remaining fourteen former Soviet republics ran absolutely unsustainable trade deficits in the range of 9 – 30 percent of GDP. Not surprisingly, changes in relative prices resulted in a tremendous reduction of Russian exports, from 13 percent of GNP in 1988 to only about 4 percent in 1995. While resource exports to republics were partly reoriented to other countries, the sharp reduction of finished-goods exports (mostly machinery and equipment) led to the decrease in output.

To summarize, the legacy of central planning in former Soviet republics proved to be much worse than in East European countries:

Table 2 Trade Flows and Trade Balances for the Republics, 1988, as a % of GNP

Republics	Trade flows[a]		Trade balance			
	Domestic	Foreign	Domestic[b]	Foreign	Total, in domestic prices	Total in world prices
USSR	21.11	8.27	−0.01(−0.14)	−5.76	−5.78	0.21
Russia	12.92	9.37	0.05 (0.02)	−6.28	−6.23	5.76
Ukraine	26.90	7.14	2.55 (−0.3)	−4.61	−2.05	−2.04
Belarus	44.56	7.39	11.14 (−1.6)	−5.42	−5.72	−5.78
Lithuania	47.26	7.21	−6.56 (4.0)	−5.83	−12.39	−29.97
Latvia	46.85	7.21	−1.03 (5.2)	−6.18	−7.21	−13.39
Estonia	50.11	8.79	−5.27 (5.3)	−7.03	−12.31	−22.86
Moldova	45.88	6.37	−1.87 (5.6)	−7.86	−9.74	−24.34
Armenia	47.85	5.84	−4.23 (-2.5)	−9.70	−13.92	−17.40
Georgia	37.88	5.90	1.98 (−4.9)	−6.15	−4.17	−13.43
Azerbaijan	35.38	5.95	13.89 (−2.6)	−6.61	−7.28	−3.31
Kazakhstan	29.48	4.69	−14.47(−1.3)	−5.09	−19.56	−17.69
Uzbekistan	34.10	5.62	−5.78 (−1.4)	−0.59	−6.37	−8.71
Turkmenistan	37.58	4.60	−1.53 (−3.0)	−3.07	−4.60	0.00
Kirghizia	39.65	5.98	−7.21 (0.4)	−10.24	−17.45	−15.86
Tadjikistan	37.70	6.01	−15.32 (3.0)	−2.10	−17.42	−16.52

[a] (Exports+Imports):(2xGNP), at domestic prices, assuming the same GNP/NMP ratios for the republics as for the USSR as a whole. Domestic trade is trade with the rest of the Union. Foreign trade is trade with the rest of the world.

[b] Estimates of the balance of tourist trade are shown in brackets.

Source: *Stabilization, Liberalization and Devolution: Assessment of the Economic Situation and Reform Process in the Soviet Union.* A report prepared by Commission of the European Communities, December 1990, p. 173. Data are derived from official Soviet statistics; *Narodnoye Khozyaistvo SSSR v 1989 godu* (National Economy of the USSR in 1989), Moscow, 1990, p. 638.

because restructuring and adjustment were supposed to proceed on a much greater scale, they were associated with the larger reduction of output.

Distortions in industrial sector (militarization, overindustrialization, etc.) and distortions at the micro level (the size and specialization of enterprises) are more difficult to overcome if they are embodied in fixed assets and if these fixed assets are sizeable compared to GDP. It may be argued that, in poor agricultural economies, distortions were not "cast in stone" since the relatively primitive fixed capital stock was less susceptible to distortions and, even if distorted, was not so large compared with GDP and investment as it was in more advanced industrialized transition economies.

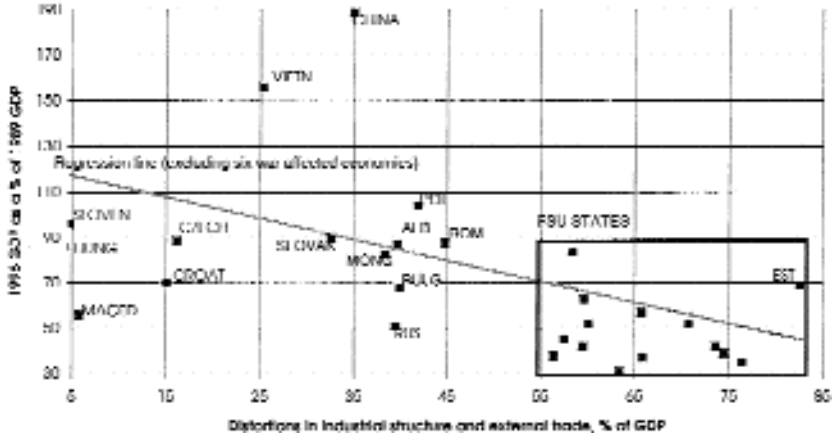
Ceteris paribus, the low level of economic development (in particular, the lower capital/output ratio) is an asset rather than a liability—that is, there are some "advantages of backwardness."[3] The conventional understanding of this term, introduced by Gerschenkron, implies that countries with lower levels of economic development (lower GDP per capita) can benefit from the technological achievements and the experience of richer countries through international exchanges; as a result, they may enjoy higher rates of growth that allow them to "catch up" (converge) with the richer countries. This general argument has an additional dimension for transition economies. Because of distortions in infrastructure and other fixed capital stock created by decades of central planning, the need for restructuring was greater in the socialist economies with higher capital/output ratios (i.e., a higher level of economic development).

China generally managed to escape the restructuring problem due to "advantages of backwardness" resulting from the low level of economic development. Its economy was based mostly on agriculture[4] and the capital/labor ratio was low, so the centrally planned economy did not create disproportions in the stock of fixed capital (simply because there was not much of it). Chinese reformers usually were not overburdened by the legacy of the CPE in the sense that they were not constrained by distorted infrastructure in industry and especially in agriculture. Chinese agricultural communes with very little fixed capital stock (except land) proved to be much more reformable than Soviet and East European collective and state farms, with their huge supercentralized infrastructures poorly suited for family farms. Township and village enterprises (TVEs), which became the major growth sector of the Chinese economy, emerged pretty much from scratch.[5]

The Chinese economy probably would have done no worse than it actually did if shock therapy (immediate deregulation of prices and withdrawal of subsidies) instead of gradual reforms had been introduced in the late 1970s. This argument is supported by the example of Vietnam, which followed a different reform path (overnight deregulation of most prices and unification of multiple and black market exchange rates in March 1989), but also managed to avoid transformational recession.[6]

To what extent did pre-transition structural distortions contribute to the extreme magnitude of the Russian recession and to what extent was it exacerbated by poor economic policies? Attempts to separate non-policy from policy factors by running multiple regressions pro-

Figure 1 Aggregate distortions in industrial structure and external trade before transition and GDP during transition



Source: Statistical Appendix

duce some statistically satisfactory and economically meaningful results.[7] These results suggest that the usual argument linking the better performance of EE, especially the Central European countries (as compared to the FSU, especially the CIS countries), to better economic policies (greater liberalization and lower inflation) does not necessarily hold.[8] Indeed, it may be shown that the identification and decomposition of the "FSU effect" may be carried out more effectively by bringing into the equation such non-policy factors as initial conditions (the pre-transition level of development and relative magnitude of the distortions in trade and industrial structure) and the impact of wars (Table 4A in the Appendix). Once these variables characterizing initial conditions are factored in, the liberalization index becomes insignificant.

There is a fairly strong correlation between aggregate distortions in industrial and trade structure before transition and the subsequent performance during transition, as measured by the GDP change (fig. 1). Among countries with minor aggregate distortions (less than 30 percent of GDP) are three former Yugoslav republics (Slovenia, Croatia, Macedonia), the Czech and Slovak republics, Hungary, China, and Vietnam. All these countries, with the exception of war-affected Macedonia, are doing better than most other transition economies. On the other hand, among countries with the most distorted economies (aggregate distortions of more than 50 percent of GDP) are all the for-

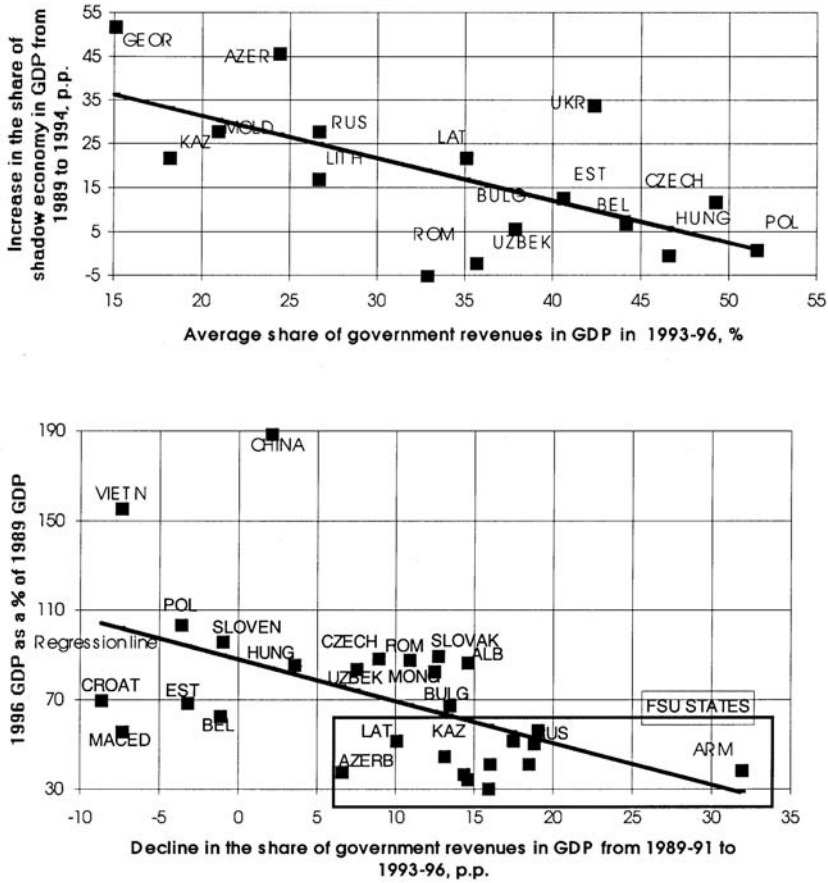
mer Soviet republics, except Russia. In fact, aggregate distortions alone may explain 32 percent of output variations during transition and about 50 percent of variations if the economies affected by war are excluded. Taking into account the other two non-policy factors characterizing the initial conditions, we obtain statistically sound and robust results: more than 60 percent of the variations in performance may be explained by (1) the advantages of backwardness (i.e., level of GDP per capita), (2) aggregate distortions, and (3) the war dummy variable (Table 4A).

In Russia, aggregate distortions amounted to "only" 39 percent of GDP because of the relatively high openness of the economy as measured by export/GDP ratio. In fact, aggregate distortions for Russia (see Table 2A in the Appendix) consist of overmilitarization of the magnitude of 9 percent of GDP, overindustrialization equal to 15 percent of GDP, "under-openness" of 3 percent of GDP, trade with FSU republics of 11 percent of GDP, and trade with former socialist countries of 4 percent of GDP (12%*0.33=4%).

In a sense, FSU countries, Russia included, were doomed to undergo a deeper recession than other states. This is not to say that government policy in general does not affect performance, but to acknowledge that conventional understanding of the policy factors (progress in liberalization and macroeconomic stabilization) is not enough to account for all of them. Despite popular belief, it may well be that most important policy factors affecting performance are not associated with the speed of liberalization. Rather, these are the policy measures that preserve or create strong and efficient institutions, facilitating the functioning of the market economy.

It is not easy to measure the efficiency of state and non-state institutions. In most FSU and Balkan countries, the collapse of the institutions is observable in: the dramatic increase of the share of the shadow economy; the decline of government revenues as a proportion of GDP; the inability of the state to deliver basic public goods and an appropriate regulatory framework; the accumulation of tax, trade, wage, and bank arrears; the demonetization, "dollarization," and "barterization" of the economy, as measured by high and growing money velocity; the decline of bank financing as a proportion of GDP; poor enforcement of property rights, bankruptcies, contracts, and law and order in general; increased crime rates; and so on. Most of these phenomena may be defined quantitatively to produce a remarkable result: China and Vietnam are closer in this respect to EE countries than to CIS.[9] However,

Figure 2 Government revenues and shadow economy as a % of GDP and GDP change, 1989-96



Source: Statistical Appendix

the construction of the aggregate index of the efficiency of institutions is problematic because the rationale for choosing weights is not clear.

One possible general measure is the trust of businesses and individuals in various institutions. By this gauge, FSU states rank much lower than East European countries in all available surveys. In the global survey of firms in sixty-nine countries on the credibility of the state institutions, CIS had the lowest credibility, below that of sub-Saharan Africa.[10] Especially striking was the gap between EE and CIS countries: differences in the credibility index between South and Southeast Asia

and EE were less pronounced than differences between sub-Saharan Africa and CIS.

Another good proxy for measuring the institutional capacity of the state is the financial strength of the government — the share of state revenues in GDP. Although much has been said about "big government" and excessively high taxes in former socialist countries, it is now rather obvious that the downsizing of the government that occurred in most CIS states during transition was too radical.

Normally, there is a positive correlation in market economies between the level of taxation, the share of government revenues in GDP, and the size of the shadow economy. If taxes are excessive, economic agents tend to avoid taxation through underground activity, including non-reported barter operations.[11] In transition economies, the opposite is true: lower state revenues result in a larger shadow economy (fig. 2). In fact, there was nearly a one-to-one crowding-out effect: for every one percentage point that the share of state revenues in GDP was reduced, the share of the shadow economy increased by one percentage point. To put it differently, the dynamics of the share of government revenues in GDP in transition economies quite accurately measures the ability of the state to enforce rules and regulations. And it is quite meaningful that the magnitude of the decline in government revenues is strongly correlated with the decline in output: the larger the decline in government revenues, the greater the chances for poor performance (fig. 2).

After adding the decline-in-government-revenues variable to those that characterize initial conditions (level of development and distortions) and the external environment (war dummy variable), the explanatory power of the regression increases to 75 percent with the excellent T-statistics (28 observations). Interestingly, the inclusion of liberalization variables at this point does not improve regression statistics. Factoring in inflation allows the explanatory power to improve to 84 percent. The correlation coefficient rises further, to 90 percent, if other indicators of the institutional capacities, such as the share of shadow economy, are added, though the number of observations in this case is only seventeen because of the lack of data (Table 4A).

The regression equations suggest, for instance, that the predicted 47 percent decline in GDP in 1989 – 96 in Russia (in reality, 43%) could have been limited to only 35 percent if the share of government revenues in GDP remained unchanged; in reality, it fell by nineteen percentage points. Furthermore, if inflation had remained in 1990 – 95 at

the level of, say, Hungary (about 20% a year) instead of the actual rate of more than 500 percent, 1996 GDP would be no more than 10 percent lower than in 1989.

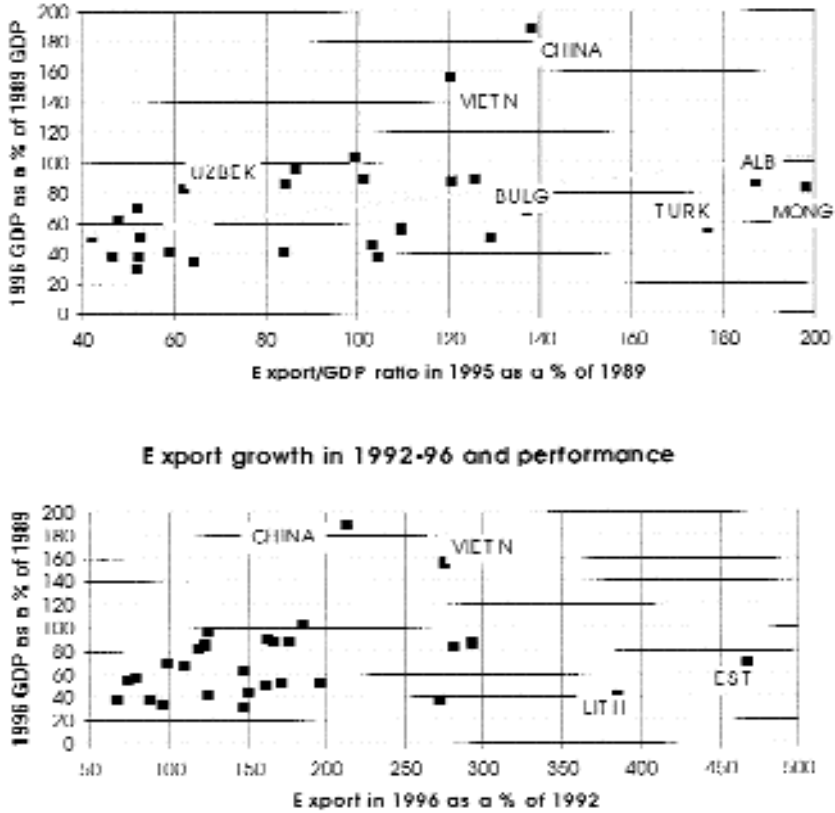
To sum up, there is ample evidence that differing performances during transition, after factoring in initial conditions and external environment, depend mostly on the strength of institutions and not much on the progress of liberalization per se.

In political science terms, it is appropriate to distinguish between strong authoritarian regimes (China, Vietnam, Uzbekistan), strong democratic regimes (Central European countries), and weak democratic regimes (most FSU and Balkan states). The first two groups are liberal or liberalizing in that they protect individual rights, including those of property and contracts, while the latter regimes, though democratic, are less liberal since they lack strong institutions and the ability to enforce law and order.[12]

How do the internationalization factors fit into this framework? The natural way to account for these factors is to add foreign trade and investment variables to the regression equation to see whether they improve the results. All over the world, economic growth seems to be strongly linked to export performance, but the argument in favor of export-oriented growth for transition economies has additional justifications. In a sense, if export expansion for all countries is highly desirable for improving performance, for transition economies it is a must. The CPE economies were closed—isolated from the world market and from world price ratios. Economic growth that occurred in the CPEs during this isolation led to the emergence of the perverted industrial structure. A large portion of the created industrial potential was either stillborn or doomed to collapse once it was allowed to compete freely with the foreign producers. Since the crucial part of the transition is, by definition, the opening up of previously closed economies, it literally means that export-led growth under the circumstances is the only possible type of growth (fig. 3). The dilemma, in fact, is not between export-led growth or import substitution, but between export-led growth and no growth at all. Introduction of the convertibility of national currencies and withdrawal of protection of domestic industries make it impossible to achieve growth by relying on the import-substitution model that created artificial conditions for the growth of noncompetitive industries in the past.

It is certainly no accident that, so far, in all rapidly developing or recovering transition economies, the export sector has been the most

Figure 3 Export/GDP ratios and performance



Source: Statistical Appendix

important engine of growth (fig. 3). Countries with industrial policy designed to promote export and favoring export-oriented industries (China, Vietnam) were more successful than those that did not exercise any explicit industrial policy (EE and Baltic countries) and far more successful than those that retained subsidies to inefficient and non-competitive industries (CIS). The evidence to support this statement is in Table 4A, which suggests that after allowing for unequal conditions, wars, and different institutional capacities of the state in transition economies, the export variable is still quite significant in explaining variations in performance and even improves the fit.

If Russian exports would have increased in 1992–96 by a fraction of four, as they did in Estonia and Lithuania, instead of the actual increase of 60 percent, the decline in output could have been limited to

40 percent instead of the predicted 47 percent — a quite noticeable, if not dramatic, impact. And there are reasons to believe that the contribution of export factors to general performance is bound to increase, once the bottom of the recession is reached and output collapse gives way to economic growth.

The inclusion of the current account variable also improves the regression results: the better the current account was in 1993–95 as a percentage of GDP, the better was the performance in 1989–96 (Table 4A). To put it differently, the growth of export contributed to better performance, especially when it was not matched by the fast growth of import, and led to the improvement of current account balance.

On the other hand, the addition of the foreign direct investment (FDI) variable does not improve the results: the variable is statistically insignificant and has the wrong sign (the higher the FDI, the lower the GDP). As I will propose later, this probably means that, in most countries, FDI has not yet become a noticeable factor of economic growth. Indeed, in China the inflow of FDI became significant only in the 1990s (not in the first seven years of reforms considered here), whereas in most other countries, cumulative inflow of FDI in 1989–96 was less than 5 percent of 1996 GDP.

Was there a chance to ensure faster growth of export, better current account, and larger inflow of FDI in Russia in the transition period? Was the government able to adopt an external economic policy more conducive to growth? In the next sections, I contend that the answer to the question is positive and that the overvaluation of the ruble in 1995–98, the import substitution strategy, and the indecisive and passive attitude toward foreign investment into resource projects resulted in slower restructuring and deeper recession in 1992–95 and deprived the national economy of the ability to start recovery in 1996–98.

III. Exchange Rate of the Ruble and the 1998 Currency Crisis

Perhaps the most impressive of all currency crises that affected transition economies was the one that broke out in Russia in August 1998. In a matter of days, the exchange rate, which had retained stability during the preceding three years, lost more than 60 percent of its value; prices increased by 50 percent in only two months after the crisis, compared with less than 1 percent monthly inflation before the crisis (fig. 4); and real output fell by about 6 percent in 1998 after registering a

Figure 4 Annual and monthly inflation rates in Russia

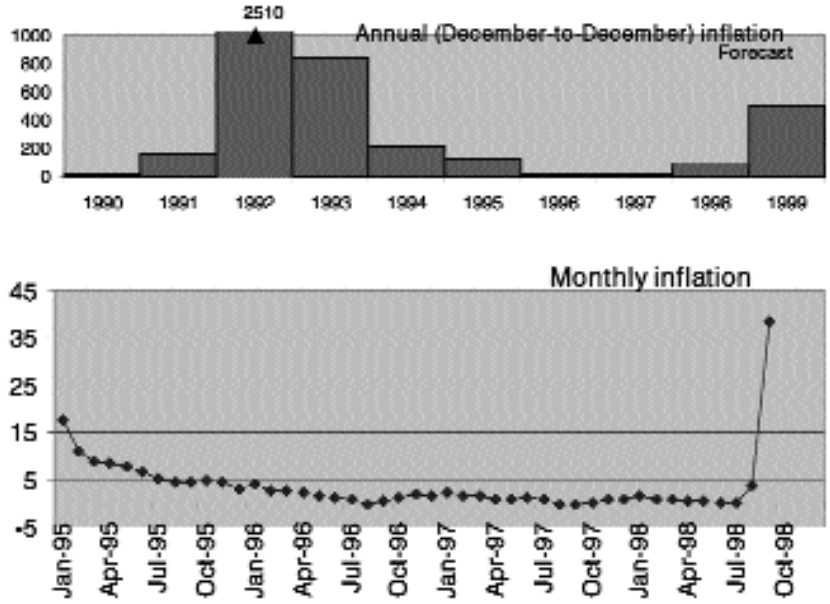
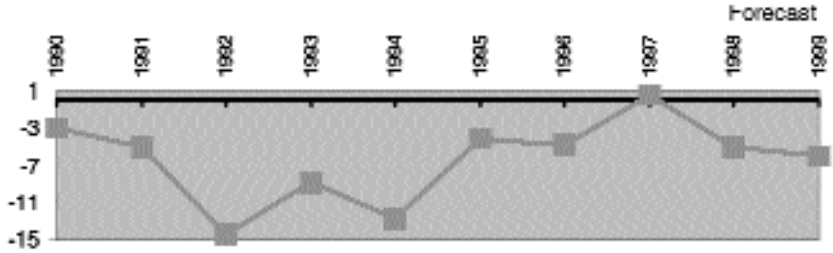


Figure 5 Russia's GDP growth rates, %



small increase of 0.6 percent in 1997 for the first time since 1989 but is expected to fall by a similar amount in 1999 (fig. 5).

What is worse, the financial collapse in Russia marked the failure of the government's program of macroeconomic stabilization, which had been pursued for over three years with a fair degree of success. After experiencing high inflation of several hundred and more percent a year during the period immediately following the deregulation of prices on 2 January 1992, Russia finally opted for the program of the exchange-rate-based stabilization. In mid-1995, the Central Bank of Russia (CBR), after accumulating foreign exchange reserves and managing to maintain the stable rate of the ruble for the first half of 1995,

Figure 6 Consumer prices, exchange rate of the dollar (Dec. 1994 = 100%) and the ratio of Russian to US prices (%, bars)

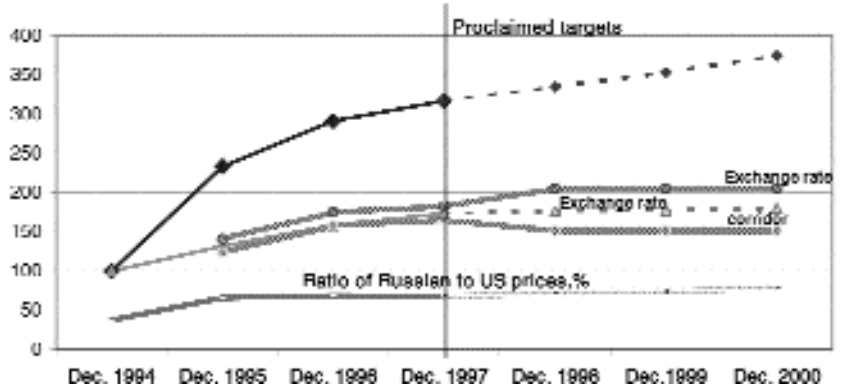
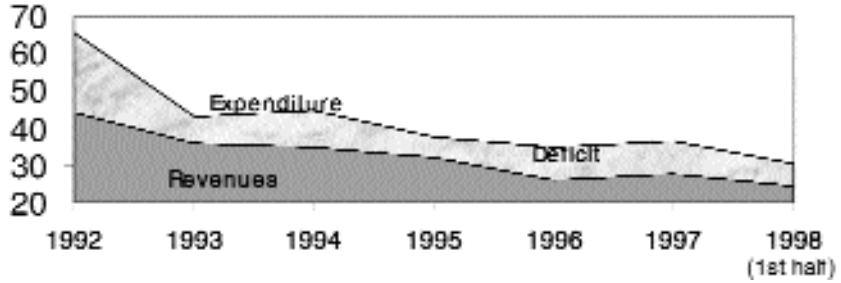


Figure 7 Consolidated government revenues and expenditure, % of GDP



introduced a system of the crawling peg — an exchange-rate corridor with initially pretty narrow boundaries (fig. 6).

The program was based on the decision of the government and CBR to lower the rates of growth of the money supply and thus to curb inflation. The goal of the program was to contain, within reasonable limits, the government budget deficit and to find noninflationary ways of its financing. On both fronts, the government kept its promises for three long years (1995 – 98). It managed not to increase the budget deficit, even though this required drastic expenditure cuts since the budget revenues, despite all efforts to improve tax collection, continued to fall (fig.7). It also managed to finance the deficit mostly through borrowings — partly by selling short-term ruble-denominated treasury bills (which were also purchased by foreign investors) and partly by borrowing abroad in hard currency from international financial institutions, Western governments and banks, and at the Eurobond market.

Under such conditions, the CBR had the opportunity to reduce the rates of growth of the money supply and to retard inflation (fig. 4).

Thus, macroeconomic stabilization became a reality. Immediately before the crisis, inflation was running at only 6 percent a year (July 1997 – July 1998). The rates of the reduction of output slowed down, and the country was looking forward to economic growth. Unfortunately, however, the macroeconomic stabilization was based on a weak foundation of the overvalued exchange rate of the ruble and on the policy of the CBR to keep the real exchange rate intact — that is, to proceed with the devaluation of the nominal rate in line with the ongoing inflation. As a result, Russia contracted the "Dutch disease" in 1995, when the exchange rate of the ruble approached some 70 percent of the purchasing power parity (PPP) and stayed at this level until the crisis (fig. 6). The previously high export growth rates slowed down substantially (from 20% in 1995 to 8% in 1996 for total exports and from 25% to 9%, respectively, for exports to non-CIS states). In 1997, total exports fell for the first time since 1992. Needless to say, Russia's already weak export of manufactured goods was most affected by the appreciation of the real exchange rate. In 1996, among economies in transition, Russia, together with Slovenia (by far the richest country experiencing recovery from 1993), had the smallest gap between domestic and international prices (Table 3).[13]

The decrease in the oil prices in the world market in 1997–98 added insult to injury. The reduction of export accelerated in the first half of 1998; this, together with still rising import, virtually wiped out the trade surplus, which in 1996 had amounted to $20 billion (fig. 8). The current account turned negative in the first half of 1998 (fig. 9). Given the need to service the debt and the continuation of the capital flight (which is partly captured in the "errors and omissions" in the balance of payments statistics in fig. 9), the negative current account guaranteed disaster.

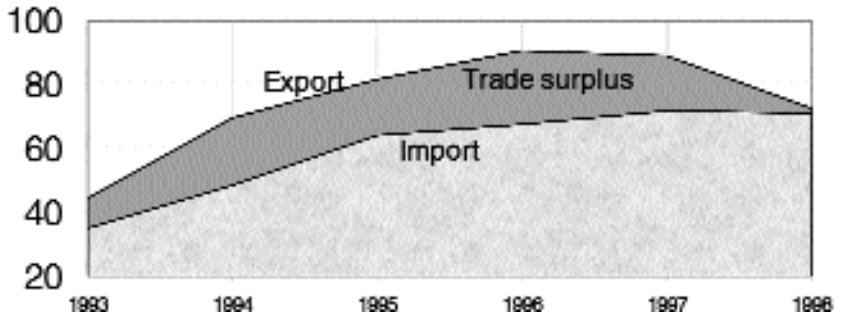
Thus, the overvaluation of the ruble by itself paved the way for the currency crisis and caused the outflow of capital from Russia. In fact, the exchange rate became hardly sustainable in 1998, when the ruble became vulnerable with respect to short-term capital flows. Foreign investment into ruble-denominated government treasury bills, which was allowed by authorities beginning in 1995, quickly increased to nearly one-third of the $50 billion market for government treasury bills in 1997 (including investment in the GKO through "gray schemes" — that is, through resident intermediaries). From February 1998, the total

Table 3 Ratio of the Actual Exchange Rate to the PPP Rate of the Dollar for Selected Economies in Transition (Range of Monthly Averages)

Country /Year	1990	1991	1992	1993	1994	1995	1996
Slovenia	0.9–1.4	1.0–1.7	1.4–1.6	1.4–1.6	1.3–1.6	1.1–1.3	1.3–1.3
Hungary	1.9–2.4	1.9–2.0	1.7–1.8	1.6–1.8	1.6–1.8	1.5–1.6	1.7–1.8
Poland	2.1–3.9	1.6–1.9	1.8–2.0	1.8–2.0	2.1–2.3	1.8–2.0	1.8–1.8
Czech Republic	2.5–3.8	3.5–3.1	2.7–3.1	2.5–2.6	2.2–2.5	2.0–2.2	1.9–2.0
Slovak Republic	2.9–3.9	3.0–3.6	2.9–3.0	2.6–2.8	2.4–2.7	2.1–2.3	2.1–2.2
Lithuania	—	—	—	—	2.4–3.2	1.8–2.3	1.7–1.8
Romania	1.8–2.6	1.6–5.0	2.8–4.2	2.2–3.1	2.1–2.6	2.1–2.5	2.4–2.6
Bulgaria	3.3–5.1	2.9–10.9	3.0–4.7	2.3–2.8	2.3–3.1	1.8–2.2	1.9–2.8
Ukraine	—	—	—	—	—	1.8–2.5	1.3–1.7
RUSSIA	—	33.0–131.0	10.2–45.7	2.5–8.0	2.4–2.8	1.4–2.4	1.4–1.5

Source: PlanEcon (Data for the second half of 1998 are forecasts for Slovenia, Czech Republic, Romania, Bulgaria, and Russia. For Slovakia, all 1998 data are forecasts; for Poland, data for March–December 1998 are forecasts; for Ukraine, data for the fall of 1997 are forecasts; for Lithuania, all 1997 data are forecasts. For Hungary, data are for January–March 1998 only.)

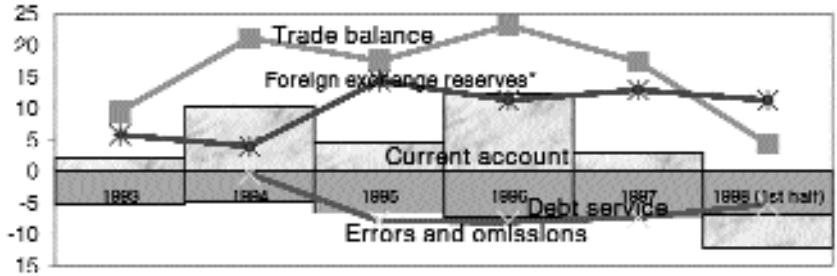
Figure 8 Russia's foreign trade, billion dollars



amount of T-bills held by nonresidents started to exceed the value of the country's foreign exchange reserves.[14]

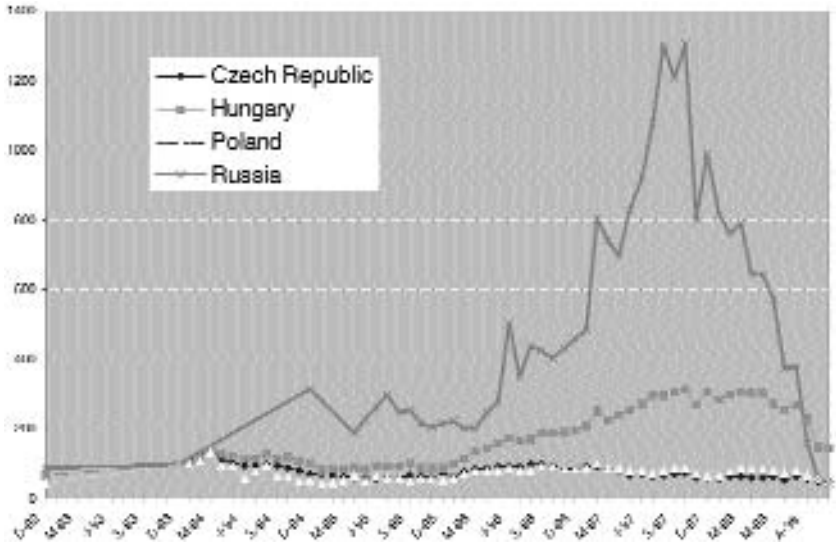
Foreign investors, who were estimated to control no less than 10 percent of the shares in the booming Russian stock market (whose capitalization surpassed $100 billion in the fall of 1997), began to withdraw from the market. Since that time until mid-1998—in just about nine months—stock prices in dollar terms fell by about 90 percent—to the lowest level since 1994 (fig. 10). The decision of the CBR to expand slightly the width of the exchange-rate band from the beginning of 1998 (fig. 6) was a cosmetic measure that has not produced much room for maneuver. The Central Bank had to increase the refinancing rate to 150 percent in May 1998 to prevent capital from fleeing at a rate of

Figure 9 Russia's balance of payments and foreign exchange reserves*, billion dollars



*Year-ends, excluding gold

Figure 10 Dollar stock prices indices, Dec. 1993 = 100%



about $1.5 billion a week at a time when foreign-exchange reserves were at a level of only about $15 billion. Later, the refinancing rate was lowered, but yields on government securities remained at a level of nearly 50 percent in real terms and then increased again to more than 100 percent in August.

The central bank and the government, however, maintained the policy of a strong ruble up to the very last moment, resulting in scandalously high interest rates that eliminated all prospects for economic recovery, and negotiated a standby package with the IMF. In a sense, this policy was designed to maintain consumption and imports, to

avoid export-oriented restructuring, and to enable Russians to continue to live beyond their means. The IMF finally provided the first installment ($4 billion) of the $20 billion package that went directly to the CBR to replenish vanishing foreign-exchange reserves, but even this did not calm the investors. Public officials' statements about the stability of the ruble — including Yeltsin's, made three days before devaluation—actually had the opposite effect.

In retrospect, it seems quite obvious that the crisis was caused by the unrealistic and counterproductive attempts of the Russian government and CBR, as well as of the IMF, to defend the unsustainably high exchange rate of the ruble. This is not exactly an argument against the fixed exchange rate but, rather, against the peg at an unrealistically high level. There is a difference between stable and strong currency: the former is highly desirable for all countries, but the latter may be an unaffordable luxury for economies in transition, like Russia, that are trying to overcome the transformational recession. It may well be, therefore, that the CBR and the government were right to establish a sort of a crawling peg for the ruble, but they were wrong to peg the ruble at such a high level. Had they pegged it at a lower rate and continued to build up foreign-exchange reserves, the CBR could have killed more than two birds with one stone. Russian exports and trade surplus would increase, domestic interest rates would fall, and the "de-dollarization" of the Russian economy and the inflow of foreign direct investment would be stimulated. In other words, a weaker ruble may have allowed the maintenance of higher savings rates without high interest rates, creating additional stimulus for production, investment, and exports, while limiting consumption and imports. Keeping the ruble at a lower level not only might have avoided the currency crisis, but also could have facilitated an export-oriented strategy that encouraged restructuring and growth.

Most developing and transition countries typically undervalue domestic currency because they usually need to earn a trade surplus to finance debt-service payments and capital flight.[15] In most poor countries, the exchange rate of national currencies is low compared with PPP (Table 4). For resource-rich countries, however, there is a danger of "Dutch disease," which arises because resource export is so profitable that it allows a trade surplus even under the overpriced exchange rate. Thus, Middle East countries (mostly oil exporters) are the only major group of states in the developing world with the exchange rate close to PPP (Table 4).

Table 4 Ratio of Actual Exchange Rate of National Currencies in $US to PPP for Selected Countries in 1993, % (Figures in Brackets—for 1996)

Countries/regions	Ratio, %	Countries/regions	Ratio, %
OECD*	116	Transition economies*	81
— Germany	126 (133)	— Central Europe*	54
— Japan	165 (158)	— Bulgaria	30 (25)
— U.S.	100 (100)	— Croatia	65 (94)
— Portugal	73 (77)	— Czech Republic	36 (48)
Developing countries*	44	— Hungary	62 (63)
— Asia*	36	— Poland	48 (59)
— India	24 (23)	— Romania	31 (34)
— Indonesia	30 (33)	— Slovak Republic	37 (47)
— Korea	72 (81)	— Slovenia	69 (78)
— Malaysia	(44)	— USSR*	91
— Philippines	35 (34)	— Armenia	(20)
— Thailand	43 (45)	— Azerbaijan	(32)
— Turkey	54 (48)	— Belarus	8 (30)
— Latin America*	46	— Estonia	29 (64)
— Argentina	(90)	— Georgia	(29)**
— Brazil	(70)	— Kazakhstan	(39)
— Chile	(43)	— Kyrgyz Republic	(19)
— Mexico	58 (45)	— Latvia	27 (50)
— Peru	(56)	— Lithuania	19 (47)
— Venezuela	(36)	— Moldova	14 (28)
— Middle East*	83	— RUSSIA	26 (70)
— Kuwait	(67)	— Tajikistan	(3)
— Saudi Arabia	(68)	— Turkmenistan	(45)
— United Arab Emirates	(100)	— Ukraine	19 (39)
— Africa*	37	— Uzbekistan	(22)
— Ethiopia	(20)	China	22 (20)
— Mozambique	(17)	Mongolia	(21)
— Nigeria	36 (90)	Vietnam	(20)

*1990. ** 1995.

Source: UN International Comparison Program (Russian Statistical Yearbook 1997. Moscow, Goskomstat, 1997, p. 698; *Finansoviye Izvestiya*, November 10, 1995); World Bank, 1998; Transition Report, 1997.

On the other hand, many other developing countries (including those rich in resources) pursue the conscious policy of low exchange rates as part of the general export-orientation strategy. They create a downward pressure on their currencies by building up foreign-exchange reserves, and thus are able to limit consumption and imports and to stimulate exports, investment, and growth.

This was the strategy of Japan, Korea, Taiwan, and Singapore, back when those countries were still poor and were catching up with high-income states. And it currently is the strategy of many new, emerging market economies, especially of China, which continues to keep the exchange rate at an extremely low level (five times lower than the PPP rate) by accumulating foreign-exchange reserves at a record pace. It is no accident that all fast-growing economies are notable for their high and rapidly growing international reserves. China (including Hong Kong), Taiwan, Singapore, Malaysia, and Thailand account for a good 20 percent of total world reserves, whereas the reserves to GDP ratio for those countries is normally above 20 percent compared with only 8 percent for the world as a whole.[16]

There are generally two major reasons for relatively low exchange rates. First, the non-policy factor: the generally lower level of development imposes a burden on the balance of payments in the form of the capital flight and debt-service payments. And second, the policy factor: the government and central banks consciously underprice the exchange rate in order to use it as an instrument of export-oriented growth.

There is no evidence to support the view that transition economies were just the innocent victims of the movements of capital in the global economy and were affected by the Asian contagion. First, Bulgaria and Romania experienced the crisis back in 1996, before the Asian crisis broke out in July 1997 with the devaluation of the Thailand *bath*. Second, any room for the real appreciation of the national currencies in transition economies was limited, and the crises were supposed to occur sooner or later anyway.

The specifics of the exchange-rate policy in transition economies are determined by, among other factors, the challenge of macroeconomic stabilization, which policy-makers faced in most post-communist countries after the deregulation of prices. Economists and policy-makers tend to disagree on what kind of exchange-rate policy is best for economies in transition. Some stress the importance of maintaining the stable nominal exchange rate by fixing it and using exchange-rate-based stabilization as a nominal anchor to fight inflation.[17] Others claim that real exchange rates are supposed to be kept stable (which implies constant devaluations, if inflation is higher than elsewhere) so the actual rate remains substantially below PPP rate in order to stimulate export and growth.

Each approach has its own advantages. Although the first one may prove useful for fighting high inflation quickly (wherever possible) at the initial stages of macroeconomic stabilization, the second one may be better suited for overcoming transformational recession and promoting economic recovery by facilitating the transfer of resources from domestic demand to exports, which is the pressing need in all economies in transition.

The conventional shock-therapy approach to macroeconomic stabilization recommends using the pegged exchange rate as a nominal anchor while pursuing an anti-inflationary policy.[18] The rational of this argument is that a high exchange rate helps hold down inflation by increasing import competition. In fact, this was the case in many EE and FSU countries, including Russia in 1995–98.

Some countries in the region introduced currency boards (Estonia, Lithuania, Bulgaria, Bosnia, and Herzegovina) and initially succeeded in fighting inflation and promoting growth. Other post-communist states (Czech Republic, Hungary, Poland, Slovakia) exercised fixed-exchange-rate regimes with a fair degree of success as well.

However, virtually all transition economies have experienced an appreciation of real exchange rates since transition started. This undermined the competitiveness of exporters, worsened the current account, and forced high interest rates (to slow down the capital flight and attract new foreign financing) at a time when exactly the opposite was needed. It now appears that even in those countries that avoided the currency crisis, the real appreciation of the exchange rate becomes a major policy concern.

In countries that have exercised the currency board arrangements longer than others (Estonia since June 1992 and Lithuania since October 1994), domestic prices continue to grow despite the stability of the nominal exchange rate. Due to real appreciation of their currencies, the current account deficit in 1998 increased to more than 10 percent of GDP, and its financing totally depends on the inflow of foreign capital. Until now, both countries managed to withstand the Asian crisis and the Russian crisis, but their growth rates in 1998 fell significantly, and the prospects for 1999 are not encouraging.

The policy of keeping the *real* exchange rate stable, instead of pegging the *nominal* rate, appears to appeal more to policy-makers since the currency crises of 1996–98—especially because countries pursuing this kind of policy for quite some time are doing no worse than others. Zettermeyer and Citrin find that money-based stabilization was suc-

cessful in several countries (Albania, Slovenia, Croatia, FYR Macedonia), and nothing suggests that it is an inferior strategy to pegging the exchange rate for fighting inflation.[19] With an appropriate monetary policy (at least partial sterilization of increases in the money supply caused by the buildup of foreign-exchange reserves, the inflationary pressure may be dealt with, as proven by the example of many emerging market economies.

Unlike other measures to promote growth, a low exchange rate may be implemented relatively easily since it favors the interests of all powerful industrial groups by creating stimulus for the export-oriented sector; it also provides protection from import competition in industries dependent primarily on the domestic market. The costs of such a policy (limits on consumption) are paid by unorganized and politically noninfluential consumers. In addition, a low-exchange-rate policy is better than trade protectionism because it is not associated with corruption: it benefits all exporters without leaving space for bureaucratic discretion in selecting priority industries and enterprises. (Devaluation cannot be stolen, as they say in Russia.)

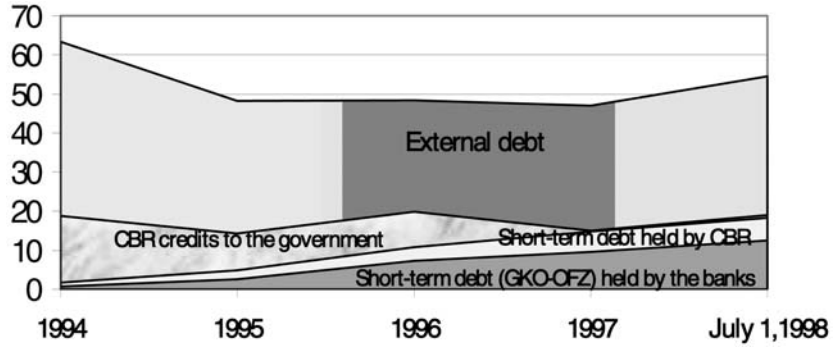
Like many other economists, I strongly believed before the crisis broke out that the ruble had been overvalued, arguing that if it was not devalued "from above" in advance, it probably would get devalued "from below," in the form of the currency crisis, with much greater costs.[20] In a sense, it was not so difficult to predict the crisis, which numerous scholars did several months before it occurred. Even Jeffrey Sachs, earlier a strong advocate of the exchange-rate-based stabilization, spoke out publicly in favor of devaluation in June 1998.[21]

But virtually nobody was able to predict how the Russian government would handle the devaluation—which was by declaring default on domestic debt and part of the international debt held by banks and companies. This was by no means necessary, since basically there was no debt crisis but only a currency crisis, which was supposed to be resolved by devaluing the ruble.

As figure 11 suggests, the indebtedness of the Russian government in recent years was growing, but not that significantly compared with GDP (since GDP in dollar terms was growing rapidly due to the real appreciation of the ruble). In absolute terms, the total government debt by mid-1998 had not even reached the threshold of 60 percent of GDP.

Investors' mistrust in the first half of 1998 was primarily associated with the low credibility of the government's plan to defend the ruble, whereas the ability of the government to service its debt was not really

Figure 11 Government debt, % of GDP



questioned. The difference between the rates at which the Russian government borrowed abroad in hard currency (returns on Eurobonds were around 15%) and the rates offered to the prime borrowers (7%) was much lower than the gap between returns on ruble denominated bonds (about 100% in real and dollar terms) and Eurobonds (15%). Because the first gap indicates the country risk (i.e., the risk associated with default by the government of this particular country) and the second reflects the currency risk (i.e., the risk associated with the devaluation), obviously the anticipation of the market at that time was that of devaluation, but not of default.

Unfortunately, the default was not the only example of mismanagement in handling the crisis. Shortly after the default, the CBR provoked a run on the banks and a banking crisis. Banks already were badly hurt by the devaluation (which was an inevitable cost they were supposed to take), but also by the default (because they held a considerable portion of their assets in short-term government securities, on which the government defaulted, and also because they lost opportunities for external financing after the government imposed a ninety-day moratorium on servicing their external debts). To make matters worse, the CBR introduced in early September a scheme to guarantee personal deposits in commercial banks, which implied losses for the depositors, especially for the holders of dollar accounts at private banks.[22] The run on the banks that naturally followed contributed to the developing paralysis of the banking system. By September 1999, banks were hardly processing any payments, and businesses were starting to ask for cash. Even by mid-1999, nearly a year after the crisis, the banking system was not yet restructured and businesses had problems getting their money out of the banks.

There are currently two prevailing (and not mutually exclusive) explanations for the August 1998 currency crisis in Russia. One stresses the unfortunate coincidence of events (Asian virus, a drop in oil prices, political instability, etc.). Yevgeny Yasin, the minister without portfolio in the former Kirienko government and a respected academic economist, says "the crisis is not just the result of the evil forces or incompetence, but is caused by the coincidence of circumstances, most of which were against us."[23] Sergey Kirienko himself even now believes that even in June 1998, Russia had a chance to go through the bumpy piece of the road avoiding the crisis, had the Duma only accepted tax increases suggested by the government.[24]

Another explanation is that the crisis was caused by the budgetary problems (persisting deficits resulting in mounting government debt) or the "GKO pyramid." No wonder the former high officials of the Central Bank of Russia (CBR) take this view. "No doubt, the current financial crisis is mostly of budgetary and debt origin," states Sergey Alexashenko, then deputy chairman of the CBR, in his recent book *The Battle for the Ruble*.[25] It is thus the government, not the CBR, to be blamed, since it was only so much and so long that the CBR was able to stick to the restrictive monetary policy without being supported by the government, which continued to pursue loose fiscal policy. The construction of the government debt pyramid was doomed to collapse and eventually did collapse. It is pointed out that the returns on the short-term government bonds (GKOs) were scandalously high, many times higher than in the real sector, and that such a policy was driving away resources from the real sector into purely financial speculations in the market for government debt and the stock market.[26] Financial prosperity, not based on the foundations of a healthy real economy, could not continue for long and finally came to an end in the form of the crisis.

Such a view may be appropriate with respect to currency crises in Latin America in the early 1980s (debt crisis) and, perhaps, even for the 1994 currency crisis in Mexico. However, in transition economies the over-appreciation of exchange rates should be held responsible for those crises. Unlike in Latin American countries, post-communist governments were not considerably indebted and, unlike in Southeast Asian countries, companies and banks in former centrally planned economies did not manage to accumulate sizeable debts.[27] Most communist governments were quite prudent in accumulating external debts; besides, for many countries external debts were written off on

the eve of transition (Russia assumed all debts of the FSU so that other newly created FSU states started their existence with no indebtedness at all, part of Poland's debt was written off, etc.). On the other hand, companies and banks in transition economies (which under CPE were not allowed to borrow abroad) do not have much of a credit history and are just starting to accumulate foreign debts.

Only in four transition economies (Bulgaria, Hungary, Mongolia, and Vietnam) were foreign debt to GDP ratios higher than 60 percent (in 1996). Even in these economies, however, debt service payments were quite low (because of debt restructuring) so that in no transition economy did debt service payments exceed 20 percent of the export of goods and services in 1996 (except Bulgaria at 20.5%). By way of comparison, debt service payments amounted to 30–40 percent of export revenues for major Latin American countries and to 20–30 percent for the largest Asian developing economies. Short-term debt in transition states was relatively low as compared to total foreign debt, whereas foreign exchange reserves, in most cases, exceeded substantially the outstanding short-term indebtedness.[28]

In three out of eight countries that experienced the currency crisis (Belarus, Bulgaria, and Russia) the reserves were barely enough to cover the short-term debt, which obviously created an additional crisis potential. However, in Romania, Ukraine, Kyrgyzstan, Georgia, and Kazakhstan all debt indicators were perfect, so their crises appear, by and large, as purely exchange rate crises. In Belarus, Bulgaria, and especially in Russia, the exchange rate overvaluation was no doubt the major reason for the crisis, as well.

True, government short term obligations, GKOs, ruble denominated but held by non-residents, since early 1998 (according to available estimates), exceeded total foreign exchange reserves, which was an obvious mismanagement and clearly contributed to the crisis. However, the absolute value of the outstanding short-term debt held by the foreigners was by no means substantial — only $15–20 billion. The problem, rather, was the negligible amount of reserves ($15 billion), but even under these circumstances it was possible to continue to service the debt after, say, 50 percent devaluation (which would immediately decrease debt service payments twice in dollar terms), not to speak about the IMF credits that should have been given after devaluation, not before. This was a sharp contrast to the Mexican situation in the second half of 1994. Like in Russia, the value of outstanding short-term government debt exceeded the amount of foreign exchange reserves.

But unlike Russian GKOs, Mexican Tesobonos were denominated in dollars, not in national currency, so devaluation of the peso could not and did not decrease the dollar value of the debt.

To put it succinctly, the debt pyramid that the government was building was supposed to collapse in some distant future (in three to five years, perhaps) if the budget deficits would not have been brought under control. However, the government still had some time and space for maneuver before that, since debt indicators were not at a critical level; besides, even if they were, there is no economic rationale for defaulting on domestic debt denominated in national currency, since this debt can always be deflated through inflation (via monetary emission). On the other hand, even if there would have been no budget deficits in 1995–98 and the government debt would have been steady, the crisis should occur anyway just because of the inability to sustain the balance of payments equilibrium with the overpriced exchange rate.

The Western explanations of the Russian crisis, at least those that appear outside the area studies field, are generally even less sophisticated. It seems like the majority agreed that everything is so rotten in Russia that it would be strange if the crisis did not happen. One variation of these views is that funds obtained by the state through domestic and external borrowing were mishandled, if not embezzled or stolen, and that overall the inefficient and corrupt system of the public administration cannot ensure any kind of macroeconomic stabilization, be it exchange rate based or money based. Oligarchs are not thinking long-term anyway and are unable to agree on measures to increase tax revenues to the state, slow down capital flight, or control the indebtedness. "There is no honor among thieves," writes Paul Krugman, suggesting that the IMF – World Bank funds were just wasted, if not stolen by the short-sighted and après-nous-le déluge-minded oligarchs.[29] The government is accused of playing in the interests of "oligarchs" — heads of large financial-industrial groups in the Russian economy — that have effectively "privatized" the state and care only about enriching themselves in the short run.

These explanations, however, to a large extent miss the point. There is hardly any doubt that Russian state institutions were degrading in recent years and that the weakening of the state institutions is the main *long-term* factor explaining the poor performance of the Russian (and CIS) economy as compared to China and Vietnam (with strong authoritarian institutions) on the one hand and Central European countries

(with strong democratic institutions) on the other. As a matter of fact, a recent research study comparing twenty-eight transition economies, including those of China and Vietnam, suggests that it is not the speed of liberalization which should be held responsible for differing performance but the institutional capacity of the state — a factor that was overlooked by both schools of transition thought (by shock therapists and by gradualists).[30]

Nevertheless, even though the institutional weakness is the single most important *long-term* factor that contributed to the extreme magnitude of the Russian recession, it is not linked directly with the collapse of the ruble and the failure of the macroeconomic stabilization program. As argued earlier, the debt levels of the Russian government and Russian companies were very modest by international standards: even if the borrowed funds were embezzled, this could not and did not lead to the debt and currency crises, since the critical point of really excessive indebtedness was yet to be reached for at least several years. No less important, there was no major change with respect to "cronyness," corruption, and institutional weakness in recent years (except, maybe, for some stabilization), so references to the criminal nature of Russian capitalism cannot explain much.

Finally, the goal of maintaining the appropriate (not overvalued) exchange rate is, perhaps, the least politicized issue of the government economic policy: by keeping the ruble low through carrying out timely and gradual devaluation, the government and the CBR were not risking any opposition (neither from industrial lobbies nor from oligarchs). While there are reasons to believe that macroeconomic stabilization in Russia did not materialize in 1992 – 94 because of the lack of consensus among powerful industrial lobbies on how to finance cuts in government expenditure,[31] there is no evidence whatsoever that a low ruble strategy in 1995–98 was not acceptable because of political considerations.

IV. Industrial Strategy—Import Substitution Instead of Export-Led Growth

While the low exchange rate of the ruble is an important device for promoting exports and a necessary component of export-oriented growth, there are other measures that could be introduced to create a favorable environment for exporters. Unfortunately, Russia's recent

policy in this field resembled more import substitution efforts, putting at a disadvantage exporting industries and enterprises.

In addition to some common patterns of structural change in the economies in transition (rapid growth of the service sector, especially of trade, banking, and financial services; reduction of the share of investment in GDP and greater emphasis on consumer goods; conversion of defense production, etc.), Russian restructuring is associated with the reallocation of resources from secondary manufacturing into raw materials industries. This approach is unique for the economies in transition, at least on the scale currently evident in Russia.

The need to reallocate resources results from the huge gap in efficiency and competitiveness between different sectors of the Russian economy. While the fuel and energy sector and steel and nonferrous metal industries are most efficient and competitive, agriculture, machinery and equipment (with some minor exceptions), and light industry are least efficient and competitive.[32] In 1995, the Russian resource sector (fuel and electric energy, steel and nonferrous metals) employed only three million workers but produced nearly as much output as machine-building, light industry, and agriculture together, which employed a total of seventeen million workers. Labor productivity in the resource sector was more than five times higher than in machinery and equipment and in agriculture; surprisingly, even capital productivity was slightly higher (Table 5). The actual productivity gap should be even greater than suggested by the data in current prices presented in Table 5 because domestic fuel and energy prices in 1995 were still only about 70 percent of world prices.

Before the reforms, inefficient sectors of the Russian/Soviet economy were subsidized directly and indirectly (through perverse price structure). Because of the magnitude of the problem, it was unrealistic to suddenly eliminate subsidies. After all, agriculture, machine-building, and light industry employed more than twenty million workers, nearly 30 percent of the total. The more or less gradual removal of subsidies to inefficient industries was the best feasible option. However, the form in which those subsidies were provided (price subsidies, not direct subsidies to producers for restructuring) was anything but optimal.[33]

Now, as Russian domestic prices approached world price proportions, the first part of the restructuring, associated with the reduction of inefficient production, has already largely occurred. Due to changes in relative prices favoring resource industries, their output was falling

Table 5 Employment, Capital Stock, and Output in Major Industrial Sectors, 1996

INDUSTRIES	Employment, annual average, thousand	Fixed capital stock, year end, trillion rubles*	Gross output, trillion rubles	Labor productivity	Capital productivity
				% of national average	
RESOURCE (fuel, energy, metals)	2910	2054	585	331	97
MACHINERY & EQUIPMENT LIGHT INDUSTRY	6761	1019	267	65	90
AGRICULTURE	9800	2364	282	47	41
TOTAL ECONOMY	66000	13703	4009	100	100

* After revaluation of January 1, 1996.
Source: Goskomstat.

in recent years more slowly, and their exports increased in several cases. As a result of price and output shifts, the share of resource industries (fuel and energy, steel and nonferrous metals) in total industrial output increased from 24 percent in 1991 to 51 percent in 1996 at the expense of the reduction of the share of secondary manufacturing, mostly machinery and equipment and light industries (Table 6)

In fact, the resource sector has already become the backbone and most important staple of the Russian economy. It accounts for about 80 percent of total exports to far abroad (40% fuel and energy, 30% metals and diamonds, and 15% chemical and wood products) and for an even greater share of exports to near abroad. The share of the fuel and energy sector alone in total capital investment into goods-producing industries increased from 20 percent in 1991 to about 40 percent in 1995 – 96 (Table 7). Gas and oil industry workers enjoy the highest wages in the country — about $500 – $700 a month compared with about $300 in banking and insurance, $170 on average, $140 in machine-building, $90 in light industry, and below $80 in agriculture in 1997.

Of the twenty largest Russian companies, eighteen are resource-based and thirteen are energy-based (3 are steel mills, 1 is in nonferrous metals, 1 is producing petrochemicals, and 2 are auto producers).

Table 6 Reduction of Output by Industry and the Structure of Industrial Output in Current Prices

Industries	Volume of output (1990=100%)				Share of particular industries in total output, %				Price index in 1994 (1990=1)
	1992	1994	1995	1996	1990	1992	1995	1996	
Fuel	87	69	68	66	8.0	19.4	17.6	19.0	5434
Electric energy	96	83	81	79	4.2	6.8	13.4	16.7	6071
Steel	77	54	59	57		8.6	10.1	9.5	3292
Non-ferrous metals	68	54	55	52	12.0	9.1	7.0	5.9	2088
Construction materials	78	47	43	32	3.1	2.4	3.6	3.5	2032
Food	76	57	52	47	11.7	9.4	11.3	10.7	1975
Chemicals	73	44	48	43	7.6	8.8	8.2	7.2	2889
Petrochemicals									2344
Wood	78	44	41	32	5.3	4.4	4.9	3.6	1752
Machinery and equipment	77	45	40	37	30.8	20.4	17.7	15.8	2017
Light	64	26	18	13	12.1	7.1	2.4	1.8	875
Other	—	—	—	—	5.2	3.6	3.8	6.3	—
ALL INDUSTRY	75	51	48	46	100	100	100	100	2484
AGRICULTURE	86	73	67	62	—	—	—	—	365

Source: Goskomstat.

In 1996, their value added accounted altogether for over 10 percent of Russian GDP and their gross output for 43 percent of Russian industrial output, whereas their share in total employment was only 5 percent and in industrial employment less than 20 percent.[34]

Gazprom, the second largest Russian company, producing more than 500 billion cubic meters of gas (worth nearly $40 billion at world prices) and sharply criticized for not paying enough taxes, in fact provided 26 percent of all federal budget revenues in 1996, while taxes paid by the energy sector were 69 percent (compared with less than 20% in 1990).[35] All taxes paid by oil-producing companies in 1996 amounted to 53 percent of gross output (by oil refineries to 55–56%, by gas producers to 62%), whereas in developed countries the comparable figure is 35 – 40 percent.[36] Though Gazprom's arrears to other enterprises and the government were much lower than the arrears of its customers to Gazprom itself (i.e., the company was a net creditor), under strong government pressure, it paid all tax arrears and contributions to its pension fund in May–June 1997 ($2.5 billion) by borrowing in the international capital market, enabling the government to increase tax revenues and to pay all previously delayed pensions.

Table 7 Capital Investment by Industry, % of Total (Excluding Investment into Residential Construction and Social Sector)

Industrial complexes	1989	1991	1993	1994	1995	1996
	USSR	Russia				
Fuel & energy	22	20	38	32	38	39
Steel & non-ferrous metals	4	5	7	7	8	7
Machine-building	12	10	5	6	6	5
Chemical & wood industries	5	5	4	4	4	4
Construction and construction materials industry	9	9	6	8	5	6
Agro-industrial sector (agriculture, food & light industry)	29	32	19	18	8	10
Transportation & communication	13	14	14	21	26	27
Other	6	5	7	4	5	2

Source: Goskomstat.

The 1996–97 debate about the demonopolization of the gas industry (perhaps by breaking Gazprom into several companies) revealed that even Russian liberals oppose the plan. They pointed out that Gazprom is one of the few successful companies in the Russian economy; that it has to compete with the highly monopolized continental European gas market; that it is not clear how to divide the foreign property of Gazprom; and that the development of the Yamal gas fields requires investment that exceeds the capabilities of smaller, "post-Gazprom" companies, whereas the consortium of companies, though theoretically possible, has not yet been tried in practice.[37]

On the other hand, machinery and equipment and light industries are rapidly losing their share of domestic market to foreign competitors. The share of machinery and equipment in total Russian exports to far abroad decreased from 17.6 percent in 1990 to 4–6 percent in 1994–96. In 1994 alone, output in machine-building and light industry fell by nearly half, and now these manufacturers produce less than 40 percent and less than 15 percent respectively, of what they produced before the recession (Table 6). Whereas employment in resource industries increased by nearly half a million (15%), employment in machine-building and light industry declined by more than five million (nearly 2 times) in 1990–95.

Russia's restructuring is far from being complete. As its domestic fuel prices finally caught up with the world level, the previous industrial policy by default (together with the most odd fuel price subsidies)

came to an end. The agenda for a sound new industrial policy is twofold: (1) to redirect subsidies from inefficient to efficient industries and (2) to replace remaining price subsidies with direct income subsidies (or, in hopeless cases, by labor force and welfare programs).

The most heavily subsidized sector is agriculture. In 1995, it received about $2 billion from the federal budget and another $3 billion from regional budgets—the amount equivalent to monthly wages of agricultural employees (about $50 per employee a month, at the time). If tax concessions and the government and central bank's credits (which are never paid back and periodically are written off) are taken into account, the total amount of transfers to agriculture increases to more than $14 billion, or nearly one-quarter of gross revenues of the whole sector.[38] Because the bulk of all transfers went to former collective and state farms that, in 1995, produced just slightly more than half of total agricultural output (peasants' households accounted for another 43% of output, and independent farms for 2%), it turns out that value added in large agricultural enterprises is close to zero, if not negative.

At the other pole, few fairly competitive, or potentially competitive, secondary manufacturing industries (i.e., those that can quickly become competitive with reasonable investment) account for only a tiny part of government subsidies. The aerospace industry, especially the companies that produce defense aircraft, is perhaps the most notable example. In 1995 – 96, Russian exports of armaments, after plummeting to less than $2 billion in 1994, increased to over $3 billion a year, according to official Russian statistics ($4 billion according to the Stockholm International Peace Research Institute and $6 billion according to the U.S. Congressional Research Service): it is estimated that half of this export consists of aircraft and parts. Sukhoy, the leading Russian aircraft exporter, is expected to sell 444 fighters in 1997 – 2006 for some $17 billion, which is equivalent to 15 percent of the world market.[39] In 1995, Russia exported seventy out of seventy-six produced helicopters; production capacity is estimated at around 300.

Civil aircraft producers seem less competitive; export in 1994 amounted to only $200 million, and production here nearly ended after Russian air companies stopped buying planes because of the shortage of funds. Eighteen aeroplane plants that manufactured about 400 planes annually in the 1980s, produced only ten civil aircraft and about ten defense aircraft in 1996.[40] Hopes for a breakthrough are now linked to several joint projects with major Western aviation companies.

In the area of space technology, Russian producers so far managed to penetrate the market for commercial launchers of satellites (about 20 were launched in 1997) and to secure some financing from the United States and from Russian commercial banks for the joint Alfa project, which allows Russia to continue its development of the space lab.

Unfortunately, the Russian aerospace industry does not receive any sort of special treatment from the government. Programs to support conversion are coming to an end, and other budgetary sources to finance the restructuring are simply not available. Direct subsidies to both defense and non-defense aircraft producers seemed to be in the range of $100 million in 1995 and could not, therefore, make a substantial difference. Instead, the State Committee on Machine Building (Roskommash) was working hard to organize domestic production of goods that used to be imported from former Soviet republics and from far abroad. Production capacities for forty-six such items, including commuter trains, busses, mini-tractors, pulp and paper machinery, and magnetic tomographs have recently been created. And the import substitution program calls for establishing capacities for another fifty-seven items not yet produced in Russia.[41]

In the late 1920s, when the New Economic Policy (NEP), which allowed the existence of the market economy, was about to be rolled back, there were debates between two schools of planners — the genetic and the teleologist. The former suggested that planning should be indicative rather than directive; that it should be market-conforming, following trends identified by the market itself; and that industrialization should start from light industry and proceed gradually as savings (generated in a natural way) became available. The teleologists, on the other hand, argued that planners should not feel constrained by the objective laws and potentials of the economy. Nor should they rely on slow and obsolete markets. Instead, they should speed up development by mobilizing savings through price controls and directive planning in order to quickly create the nonexistent heavy industry that would allow the industrialization of the country.

This latter view became the official policy; as a result, the industrialization of the 1930s and beyond became a major isolationist import substitution experiment. From then on, the share of export in Soviet GDP did not increase until large-scale fuel sales abroad started in the 1970s. The huge perverted industrial structure created without regard to costs and prices of the world market proved to be stillborn and non-

viable in 1992, when it finally faced foreign competition after half a century of artificial isolation.

Today, Russia is choosing once again between export-oriented growth and protection autarchy. On the one hand there is the example of East Asian countries, which relied on export as a locomotive of economic growth: in China, for instance, the share of export in GDP increased from 5 percent in 1978 to 23 percent in 1994, while the GDP itself grew at an average rate of about 10 percent. On the other hand are North Korea, an unappealing example of isolationism; other socialist countries and developing countries of socialist orientation (which were creating their own heavy industries following the advice of, and using assistance from, the Soviet Union); India (where the share of export in GDP remained frozen at a level of 6% from the 1950s to the 1980s); and many Latin American countries.

The promotion of export-oriented growth would require massive and rapid industrial restructuring — mostly in favor of resource-based industries, but also in favor of some competitive high-tech sectors (aerospace) and, perhaps, particular capital and labor-intensive industries at the expense of agriculture and most secondary manufacturing industries. It is more efficient to make the needed cuts at once (and to support people through social and manpower programs instead of subsidizing noncompetitive companies) than to make them over time, thus forcing inefficient industries to die gradually. Rapid growth of the resource sector may provide rent (partly appropriated by the resource sector itself, partly by the government) for investments needed to restructure some few still promising secondary manufacturing industries and enterprises. (Gazprom and major oil companies are already trying to diversify by purchasing fuel-equipment-producing companies.) This radical option, however, may not be completely politically feasible since the inefficient sectors suffering from the competition of imported goods (agriculture and machine-building) account for a much larger share of total employment than efficient sectors and exercise considerable influence in the corridors of power.

The other option — continuing support to major noncompetitive industries — is a slower and more costly way of restructuring, implying the preservation of subsidies to and protection of weak producers. Paradoxically, this option, despite the intentions of its advocates claiming that it will stop the deindustrialization of the country, may lead to exactly the opposite. Poor performance of the resource sector will not generate enough revenue to support all noncompetitive industries.

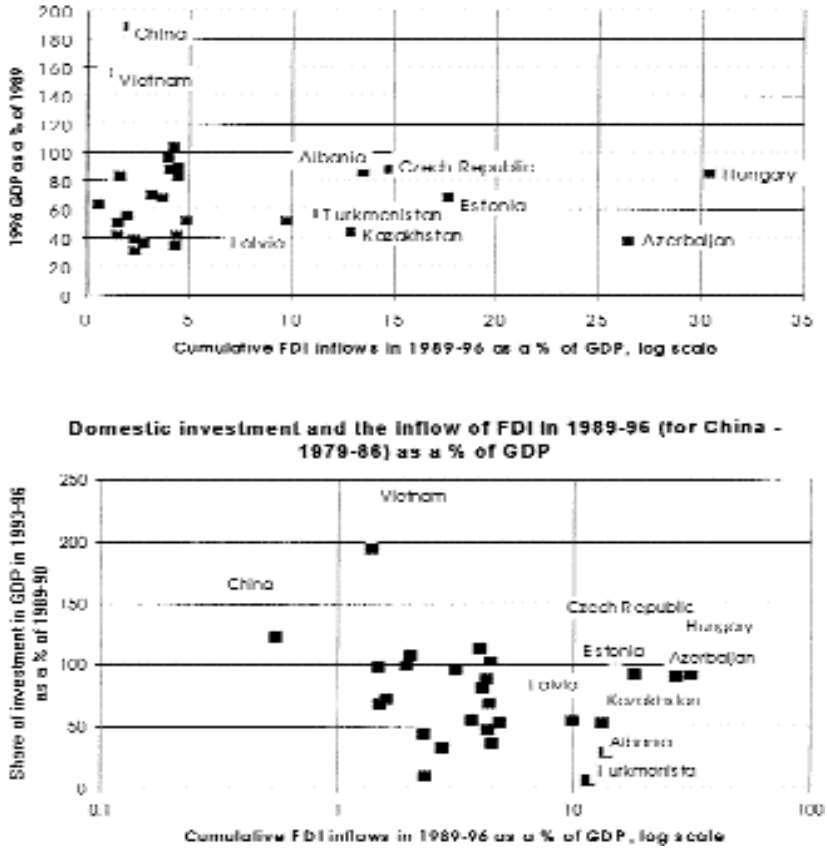
The result will be that even the few still-competitive or potentially competitive secondary manufacturing industries will fail to get necessary support and will slowly disintegrate.

V. Promoting Foreign Direct Investment

A major missed opportunity has been the failure to attract foreign direct investment into resource projects. In 1989–96, Russia received some $5 billion of foreign direct investment, which is equivalent to about 1 percent of its annual GDP, compared with 30 percent of GDP in Hungary and China and 5–15 percent in Albania, Azerbaijan, Czech Republic, Estonia, Kazakhstan, Latvia, and Turkmenistan.[42] The reasons for poor Russian performance in this area are well known: political instability, high inflation and unstable currency, incomplete and frequently modified legislation, poor infrastructure, and so on. Nevertheless, the fact is that Russia failed to use its "resource advantages" to bring in foreign capital: huge rent in resource industries provides compensation for political and economic risks, so foreign investors are less sensitive to economic, political, and legal uncertainty. Oil-rich Azerbaijan, for instance, in 1989–96 managed to attract $0.9 billion of foreign direct investment (equivalent to over 20% of GDP) even under conditions of the ongoing war, while resource-rich Kazakhstan and Turkmenistan attracted nearly $3 billion and $0.5 billion, or 13 percent and 11 percent, respectively.[43]

By contrast, Russia in recent years failed to prevent the reduction of investment and output even in competitive resource industries (oil and gas included), which should be viewed as a major failure of the government policy. Some major resource projects have been debated for nearly a decade with little practical progress, while the crucial law on the list of projects eligible for the production-sharing agreement was discussed for two years by the parliament, and only seven projects were approved in 1997. The major reason for minimal progress is probably the outmoded mentality that it is better not to use the resources at all than to sell them at a "low" price, in the belief that the policy-makers know better than the international market the "real" price of resource projects and joint ventures. There is also the unwillingness "to allow foreigners to get rich on Russian resources." However, investments were needed yesterday and are needed now. Every day of delay with major resource projects slows down Russian economic recovery.

Figure 12 GDP change and the inflow of FDI in 1989-96 (for China - 1979-86) as a % of GDP



Source: Statistical Appendix

The comparison of inflows of foreign direct investment in transition economies reveals that they are not correlated with domestic investment, especially for the group of countries in which cumulative FDI inflows for 1989–96 constitute less than 5 percent of GDP (fig. 11). The reason may be that domestic and foreign investments are influenced by different factors. Indeed, in some countries, high investment/GDP ratios were maintained without much FDI; Belarus may be one example, while China of the 1980s is the other. Only in the 1990s did China become the leader among transition economies in attracting foreign investment.

Similarly, the inflow of FDI does not seem to be really correlated with general economic performance — the GDP change (fig. 11). However, for eight countries (Albania, Azerbaijan, Czech Republic, Estonia, Hungary, Kazakhstan, Latvia, and Turkmenistan) in which the cumulative inflow of FDI in 1989 – 96 was higher than 5 percent of GDP, some correlation between FDI inflows and performance may be observed. If this is the case, there are even more reasons to argue that the failure to attract substantial FDI contributed to Russia's poor economic performance during transition.

VI. Concluding Remarks

The greater magnitude of the Russian recession should be attributed in part to worse pre-reform initial conditions. Distortions in industrial structure and trade patterns inherited from the era of central planning were larger in FSU countries than in EE countries and much larger than in China and Vietnam. In particular, the collapse of inter-republican trade within FSU states was largely inevitable and contributed greatly to the general reduction of output.

Policy factors responsible for the greater reduction of output in Russia are associated mostly with the rapid decline of the institutional capacity of the state. After factoring initial conditions into the regression equations, it turns out that differences in the degree of liberalization do not really matter, whereas the institutional capacity of the state (as measured by the decline in government revenues and the growth of the shadow economy), as well as the variations in the rates of inflation, explain a great deal.

External economic policy has an important impact on performance as well, insofar as it helps to increase exports and improve current account balance (these variables are significant even after factoring in initial conditions and institutional factors) and to attract FDI.

It is argued that the major drawback of external economic policy was the inability of the Russian government to stimulate exports through pursuing export-oriented industrial policy and maintaining the low exchange rate of the ruble. Instead of creating favorable conditions for competitive industries (resource-based and a few high-tech), the government used rent extracted from the fuel and energy sector to support the least efficient production in heavy engineering and agriculture. Russian industrial policy was largely a failure — partly because it took the most inefficient form of price subsidies (instead of

direct subsidies) and partly because it failed to support investment in competitive resource industries and to allocate funds to those few high-tech industries (aerospace) that had good prospects for becoming competitive.

Furthermore, in 1995, the macroeconomic stabilization was achieved by using the exchange rate of the ruble as a nominal anchor, which led to the apparent overvaluation of the national currency: Russian prices exceeded 70 percent of the American level (i.e., became higher than in virtually all transition economies and in most countries with a similar GDP per capita). As a result, Russian exports — one of the few indicators that was still growing in real terms — stopped expanding by 1997, the current account deteriorated sharply, the Russian ruble came under pressure from international investors, and the currency crisis broke out in August 1998. It was caused not by the Asian contagion but by the wrong macroeconomic policy — the attempts to maintain the exchange rate at an unsustainably high level. The way the Russian government handled the crisis — declaring default on short-term and, later, on long-term debt and manufacturing the banking crisis through clumsy moves to provide partial guarantees to depositors—added insult to injury.

Another major shortcoming in the external economic policy area was the inability to attract FDI. The experience of other resource-rich transition economies (Azerbaijan, Kazakhstan, Turkmenistan) suggests that Russia obviously failed to use its resource advantages in this respect.

Overall, while the most important reasons for the extreme costs of transition in Russia were associated with poor initial conditions and with the collapse of institutions, the mishandling of the internationalization process of the Russian economy in the 1990s definitely had a substantial impact. In fact, it may account for as much as one-fourth (10 percentage points) of the more than 40 percent decline in GDP during transition.

Future prospects for strong export growth and the inflow of FDI are not particularly encouraging. Quick progress in adopting an export-oriented growth strategy does not seem to be politically feasible, but some steps in this direction are more or less inevitable, especially in the longer term. There is, however, one certainty: rapid economic growth without major progress in export-oriented restructuring supported by the low exchange rate of the ruble is extremely unlikely. ◉

Notes

1. Shmelev and Popov 1989

2. Comparison is based on national statistics. The share of machinery and equipment industries in total value added in manufacturing in 1992 was higher than one-third only in Malaysia, Thailand, Singapore, and Japan (World Bank 1995): 72–73.

3. See Blaug 1985.

4. Sachs and Woo 1994

5. Capital/labor ratios in the TVE are only 25 percent of those in the state sector, while their labor productivity is about 80 percent of the level in state enterprises. See World Bank, World Development Report, *From Plan to Market* (New York: OUP, 1996): 51.

6. Montes 1997

7. More detailed description of the data and regressions is in Popov 1998a, c.

8. Åslund, Boone, Johnson 1996; De Melo, Denizer, Gelb 1996; Breton, Gros, Vandille 1997.

9. Naughton 1997.

10. World Bank 1997a, 5, 35.

11. Gardner 1988, 24.

12. Zakaria 1997; Holmes 1997.

13. See Popov 1996a, b and 1998b.

14. *Economist*, 23 May 1998.

15. Holscher (1997) is making a similar argument with respect to EE countries drawing on the West German experience with the undervalued mark in the 1950s.

16. World Bank 1997.

17. Bofinger, Flassbeck, and Hoffmann 1997.

18. Sachs 1994, 1995; Åslund 1994.

19. Zettermeyer and Citrin 1995.

20. Popov 1996a, b, 1997, 1998b, c. This argument was also developed in newspaper articles. See "Growth Strategy," *Segodnya*, 14 March 1996 (in Russian); "The Currency Crisis Is Possible in Russia," *Finansoviye Izvestiya*, 30 October 1997 (in Russian); "An Emerging Economy's Unaffordable Luxury," *Financial Times*, 11 December 1997; "What Exchange Rate of the Ruble Is Needed for Russia?" *Nezavisimaya Gazeta*, 21 May 1998 (in Russian); "Arithmetic of Devaluation: Why Do We Need a Rate of 12 Rubles per Dollar?," *Nezavisimaya Gazeta*, June 1998, Supplement (in Russian).

21. Jeffrey Sachs, *New York Times*, 4 June 1998.

22. In the state-owned Sherbank (Savings Bank), which accounted for 75 percent of all household deposits, savings were guaranteed by the state. CBR, while extending the guarantees to the personal deposits at commercial banks, asked depositors to move them to Sherbank, promising to pay them back in two months and only in part. Dollar deposits, for instance, were supposed to be converted into rubles at a September 1 ratio of 9.33 rubles per dollar, whereas the market rate of the dollar was already about two times higher.

23. Yasin 1999.

24. Expert, 18 January 1999.

25. Sergey Alexashenko, *The Battle for the Ruble.*

26. Nekipelov 1998.

27. See Montes and Popov (1999) on differences between currency crises in Southeast Asia and in transition economies.

28. World Bank 1998.

29. Paul Krugman's site, 10 September 1998.

30. Popov 1998d, e.

31. Popov 1996a, b.

32. These industries are just extreme examples. Differences in efficiency and competitiveness of other industries seem to follow this same general pattern: high in primary manufacturing and low in secondary manufacturing. For instance, with regard to chemicals, fertilizer production seems to be efficient and competitive, whereas pharmaceuticals does not. The only major exception is the relatively efficient aerospace industry.

33. After prices were deregulated in January 1992, fuel and energy prices were controlled directly and, later, indirectly (through export quotas and export taxes), but nevertheless were allowed to increase from 3–5 percent of the world price level in January 1992 to 30–40 percent of the world level in 1994 and to about 70 percent in late 1995. Export taxes on resource goods were gradually lowered and finally abolished on 1 April 1996 (export tariffs for oil were eliminated from 1 July 1996), whereas prices for fuel exports to near abroad increased to 75 percent of the world price for gas (40% for oil and coal) in 1994, and to about 70–80 percent in 1995.

34. Expert, 6 October 1997; Goskomstat.

35. *Segodnya*, 31 May 1997.

36. *Finansoviye Izvestiye*, 20 June 1996 and 6 May 1997; *Segodnya*, 31 August 1996 and 1 August 1997.

37. Pappe 1997.

38. *Segodnya*, 31 July 1996.

39. *Finansoviye Izvestiya*, 31 July 1997.

40. *Segodnya*, 27 June 1996 and 9 July 1997.

41. *Finansoviye Izvestiya*, 5 July 1996.

42. EBRD 1997, 12; World Bank 1996, 64.

43. EBRD 1997.

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Statistical Appendix

Table 1A GDP per Capita, GDP Change, Liberalization Index, Inflation, Exports, Current Account and FDI in Transition Economies

COUNTRY	1987–88 PPP GDP per capita, % of the US level	1996 GDP as a % of 1989 GDP	Cumulative EBRD liberali-zation index	Share of export in GDP, 1989, %	Share of export in GDP, 1995, %	CA level, average for 1993–95; %	FDI inflow in 1989–96, % of 1995 GDP	Inflation, in 1990–95, geometric average, % a year
Albania	6.8	87	2.3	5	9.4	−2.8	13.5	76.4
Belarus	25.1	63	1.07	47.3	22.5	−1.6	0.5	878.8
Bulgaria	23.5	68	2.96	30.1	41.2	−2.6	3.6	81.2
China*	5.8	189	2	6.5	9.0	−1.7	2.0	4
Czech Republic	44.1	89	3.61	38.5	48.4	−0.4	14.8	18.3
Estonia	29.9	69	2.93	32.9	46.1	−2.9	17.6	151.4
Hungary	28.9	86	4.11	34.1	28.7	−8.9	30.3	22.3
Kazakhstan	24.2	45	1.31	23.5	24.3	−3.3	12.9	805.5
Kyrghyzstan	13.5	52	1.81	32.3	13.5	−7.6	4.8	337.3
Latvia	24.1	52	2.39	41.4	21.6	3.5	9.7	149.1
Lithuania	33.8	42	2.62	45.5	38.2	−3.8	4.3	241.4
Moldova	22.4	35	1.62	33	21.2	−2.3	4.3	355
Mongolia	5	83	2.27	19	37.6	5.4	4.4	126.7
Poland	21.4	104	4.14	19.6	19.5	−4.4	4.2	34.9
Romania	22.7	88	2.35	17.6	21.2	−3.3	4.0	158.4
Russia	30.6	51	1.92	18.3	23.6	2.1	1.5	517
Slovakia	33**	90	3.53	48.7	49.3	1.4	4.4	16
Slovenia	33.3	96	4.16	51.7	44.7	1.7	3.9	62.1
Turkmenistan	18.7	57	0.63	35.6	62.8	11.3	11.3	1167
Ukraine	20.4	42	0.8	29	17.0	−0.3	1.5	1040.5
Uzbekistan	12.5	84	1.11	28.5	17.6	−1.2	1.6	628.4
Vietnam	2**	156	3.72	20.5	24.7	−8.6	1.4	26.3
Armenia	26.5	39	1.44	28.4	13.2	−7.5	2.3	896.6
Azerbaijan	21.7	38	1.03	33.9	17.6	−5.8	26.4	747.6
Croatia	30**	70	4.02	49.5	25.6	−2.6	3.1	328
Georgia	26.5**	31	1.32	28.9	14.9	−6.9	2.3	2280.2
Macedonia FYR	25**	56	3.92	57.5	63.0		1.9	397.9
Tajikistan	12.1	37	0.95	35.9	37.5	−4.9	2.8	399.1

* For China—all indicators are for the period 10 years earlier.
** Estimate.
Source: World Bank, 1996a, b; 1997b; De Melo, Denizer and Gelb, 1996; EBRD, 1995, 1996, 1997; IMF, 1996; Asian Development Bank, 1997.

Table 2A Distortions in Industrial Structure and Trade Patterns* as a % of GDP in the late 1980s (for China—late 1970s)

COUNTRY	Distortions (as a % of GDP) in:					ALL TRADE DISTORTIONS	ALL DISTORTIONS IN INDUSTRIAL STRUCTURE AND TRADE PATTERNS
	Defense expenditure	Industrial structure (share of industry, agriculture, services)	Trade openness (share of external trade)	Trade within FSU	Trade between socialist countries		
	[1]	[2]	[3]	[4]	[5]	[6]=[3]+[4]+[5]x0.33	[7]=[1]+[2]+[6]
Albania	1.6	12.3	25	0	2.3	25.8	39.7
Belarus	9.4	28.3	−20.3	41	3.5	21.9	59.6
Bulgaria	10.4	27.3	−3.1	0	16.1	2.2	39.9
China**	1.8	24.5	8.5	0	0.6	8.7	35
Czech Republic	4.5	19.2	−15.5	0	24	−7.6	16.1
Estonia	9.4	21.3	21.1	30.2	1.5	51.8	82.5
Hungary	3.5	7.3	−11.1	0	13.7	−6.6	4.2
Kazakhstan	9.4	20.3	6.5	20.8	1.5	27.8	57.5
Kyrghyzstan	9.4	19.4	2.7	27.7	2.6	31.3	60.1
Latvia	9.4	21.3	2.6	36.7	2.1	40.0	70.7
Lithuania	9.4	23.9	−1.5	40.9	2.6	40.3	73.6
Moldova	9.4	26.3	11	28.9	2.3	40.7	76.4
Mongolia	5.3	16.3	11	0	17.3	16.7	38.3
Poland	4.4	22.3	12.4	0	8.4	15.2	41.9
Romania	0.8	30.3	12.4	0	3.7	13.6	44.7
Russia	9.4	14.9	2.7	11.1	4.0	15.1	39.4
Slovakia	4.5	19.2	−4.7	0	41	8.8	32.5
Slovenia	0	4.2	−7.7	0	25	0.6	4.8
Turkmenistan	9.4	23.4	−0.6	33	1.5	32.9	65.7
Ukraine	9.4	22.3	3	23.8	2.9	27.8	59.5
Uzbekistan	9.4	21.4	1.5	25.5	1.7	27.6	58.4
Vietnam	15.7	11.7	−5.5	0	10.2	−2.1	25.3
Armenia	9.4	23.3	15.6	25.6	1.6	41.7	74.4
Azerbaijan	9.4	23.3	−6.9	29.8	2.3	23.7	56.4
Croatia	0	12.3	−5.5	0	25	2.8	15.0
Georgia	9.4	22.3	6.1	24.8	2.3	31.7	63.4
Macedonia FYR	0	12.3	−13.5	0	21	−6.6	5.7
Tajikistan	9.4	25.4	−0.9	31	2.7	31.0	65.8

* Distortions in the **share of defense expenditure** are equal to the actual share of defense expenditure in GDP minus 3.7% (considered as the "normal" level). Distortions in **industrial structure** are computed as the sum of deviations of the share of each of three sectors (agriculture, industry, services) in GDP from the "normal" level—all deviations were taken with the positive sign and divided by two; "normal" level was defined as the average for the group of market economies with comparable PPP GDP per capita. Distortions in **trade openness** are equal to the "normal" share of external trade in GDP (defined in a similar way—as an average share for the group of market economies with comparable population and GDP per capita) minus the actual share divided by two. Distortions in **trade within FSU** are equal to exports plus imports from former Soviet republics as a share of GDP divided by two (for non-FSU countries these distortions are assumed to be equal to zero). Finally, distortions in **trade with socialist countries** are equal to the sum of export to and import from socialist countries (trade between Czech and Slovak Republics and among former Yugoslav republics is also included) as a share of GDP divided by two. These latter distortions are included into the computation of total trade and industrial structure distortions with a weight of 33%.

** For China—all indicators are for the period 10 years earlier.

Source: De Melo, Denizer, Gelb, 1995; EBRD, 1995, 1996; Goskomstat-USSR; Goskomstat-Russia; Statistical Handbook (World Bank, 1995); A Study of the Soviet Economy (IMF, 1991); PlanEcon; Impetus and Present Situation of Vietnamese Society, 1996; UNDP, 1997; World Bank, 1995b; World Bank, 1996a; World Bank, 1996b.

Table 3A Total Revenues of Consolidated Government Budgets (including off-budget funds) as a % of GDP in Economies in Transition

Year/Country	1989	1990	1991	1992	1993	1994	1995	1996*	Shadow economy, % of GDP	
									In 1994	Increase From 1989 To 1994, p.p.
Central European Countries* **	**51.2**	**51.6**	**47.4**	**49.1**	**49.0**	**49.4**	**48.0**	**45.5**		
—Czech Republic	61.7	60.2	52.2	49.5	51.4	51.2	49.6	44.5	18	12
—Slovak Republic					43.6	46.4	46.8	44.6		
—Hungary	59.1	53.9	52.1	56.1	55.4	53.9	49.6	47.0	29	1
—Poland	41.4	42.9	41.5	44.1	47.6	48.3	47.8–	46.8–	15	0
—Slovenia	42.4	49.3	43.7	46.5	47.1	47.1	46.2	44.4		
Baltic states* **	**47.2**	**41.8**	**38.3**	**31.4**	**35.2**	**33.5**	**33.4**	**—**		
—Estonia	39.5	35.7	36.4	34.6	39.6	41.2	40.7	–	25	13
—Latvia	52.0	46.0	37	27.4	35.8	34.2	34.9	–	34	22
—Lithuania	50.0	43.7	41.4	32.1	30.2	25.1	24.6	–	29	17
European CIS countries (excluding Russia)* **	**46.8**			**32.1**	**33.0**	**35.7**	**33.5**	**32.0**		
—Belarus		38.2	47.5	44.0	43.6	48.4	43.2	41.0	19	7
—Moldova	35.3	—	—	20.2	13.0	23.1	23.9	23	40	28
—Ukraine	58.2	—	—	—	42.3	—	—	—	46	34
—USSR(1988–90)/ RUSSIA (1992–95)**	43.5	47.2	–	28.0	29.0	28.2	26.1	23	40	28
South East Europe countries* **	**52.3**	**47.0**	**36.6**	**33.5**	**36.0**	**39.9**	**37.8**	**31.2**		
—Albania	47.8	47.1	30.9	25.6	34.6	33	24	17.8		
—Bulgaria	58.0	53.3	42.3	32.4	37.2	40.2	36.0	–	29	6
—Croatia	—	—	34	34	33.6	43.8	50.6*	—		
—FYR Macedonia	—	—	—	38.0	41.0	51.0	45	44.5		
—Romania	51.1	40.5	39.3	37.6	33.6	31.4	33.5	—	17	–5
Caucasian states* **	**28.6**		**32.9**	**31.4**	**33.4**	**18.9**	**10.8**	**—**		
—Azerbaijan	25.8	–	35.7	49.2	47	21.2	13	16	58	46
—Georgia	31.5	–	30.0	13.6	19.8	16.6	8.5	–	64	52
Central Asian countries* **	**35.2**	**38.8**	**35.6**	**24.9**	**25.9**	**28.9**	**21.6**	**20.0**		
—Kazakhstan	35.4	32.8	25.0	24.6	23.5	17.2	16.5	15.3	34	22
—Kyrgyzstan	38.0	38.6	35	17	23	20.8	15.6	—		
—Tajikistan	40.3	—	33.2	26.6	27.1	45.5	19.3	12.3		
—Turkmenistan	32.4	—	—	—	13.4	—	—	—		
—Uzbekistan	35.0	44.9	49.1	31.4	42.6	32.3	35.1	32.3	10	–2
Asian non-CIS countries* **	**27.2**				**24.1**					
—China****	19.3	19.1	16.9	14.7	13.8	12.4	—	—	20	0
—Mongolia	48.6	—	—	—	36.2	—	—	—		
—Vietnam	14.8	—	—	—	22.3	—	—	—		

* Estimate.
** Excluding revenues of the off-budget social insurance funds. If these revenues are included, total government revenues amounted to about 36% in 1993 and 1994.
*** Unweighted average.
**** Data do not include revenues of neither fiscal off-budget funds (which increased from 2.6% of GDP in 1978 to 4.2% of GDP in 1994), nor enterprise extra-budgetary funds, which amounted to over 10% of GDP in 1992 and which since 1993 are not included into extra-budgetary revenues by the Chinese official statistics. From 1979 to 1985 government revenues, including fiscal off-budget funds, decreased from 35% to 30% of GDP (see World Bank, 1995c, p.31–32).
Source: EBRD, 1995, 1996, 1997; Economic Systems, Vol.19, No.2, June 1995, p.103; Goskomstat; De Melo, Denizer, Gelb, 1995, table 8; World Bank, 1996b; China Statistical Yearbook 1995. State Statistical Bureau, 1995, p. 223; Warsaw School of Economics, 1997.Transition (World Bank), April 1977, p.6.

Table 4A Regression of Change in GDP on Non-policy and Policy-related Factors (all coefficients are significant at 6% level except those in brackets)
Dependent variable = log (1996 GDP as a % of 1989 GDP)
For China—all indicators are for the period of 1979–86 or similar

Equations, Number of observations / Variables	1, N=28	2, N=28	3, N=28	4, N=28	5, N=28	6, N=28	7, N=28	8, N=28	9, N=27	9, N=17	10, N=17
Constant	3.66	5.37	5.44	5.23	4.96	5.55	5.71	4.77	4.47	5.84	4.82
Distortions, % of GDP[a]			−.01	−.01	−.01	−.01	−.01	−.01	−.01	−.01	−.01
1987 PPP GDP per capita, % of the US level			−.01	−.01	−.01	−.01	−.01	−.01	−.01	−.01	−.01
War dummy[b]			−.24	−.63	−.58	−.40	−.40	−.39	−.27		
Decline in government revenues as a % of GDP from 1989–91 to 1993–96				−.01	−.01	−.01	−.01	−.01	−.01		
Liberalization index	.21	(.00)	(.03)		(.07)		(−0.4)				
Log (Inflation, % a year, 1990–95, Geometric average)		−.23	−.14			−.12	−.14	−.10	−.09	−.12	−.10
Log (1996 $ export as a % of 1992)								(.14)[c]	.21		.21
Current account balance, average for 1993–95, % of GDP									.02		
Shadow economy as a % of GDP in 1994										−.01	−.01
Adjusted R^2, %	28	65	78	75	75	84	84	86	89	90	93

[a]Cumulative measure of distortions as a % of GDP equal to the sum of defense expenditure (minus 3% regarded as the "normal" level), deviations in industrial structure and trade openness from the 'normal' level, the share of heavily distorted trade (among the FSU republics) and lightly distorted trade (with socialist countries) taken with a 33% weight (see table 2A in the Appendix and Popov 1998a, b for details).
[b]Equals 1 for Armenia, Azerbaijan, Croatia, Georgia, Macedonia, and Tajikistan and 0 for all other countries.
[c]Significant at 10% level.