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The Russian Economy is Facing a Competitiveness and Efficiency Challenge[1]

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Abstract

The paper analyses the components of the competitiveness of Russian manufactured goods. This competitiveness started to decline after 1999, following the 1998 crisis and the strong devaluation of the Ruble. The decline in competitiveness has been clearly due to appreciation of the ruble and increasing labour costs. Nevertheless, the rate of real Ruble appreciation is currently not the major factor affecting changes in competitiveness of Russian goods. The key issues are whether factors of production and management are used efficiently, how good is the quality of the products and how new they are, and to what extent they meet modern international requirements. The pressure to be competitive is measured by competition intensity. Regression analysis shows it is mainly dependant on the number of the firms on a market. Apparent productivity growth did not improved competitiveness because it relies mainly on labour cuts. However at the end, it relies also on higher rate of use of production factors. Productivity gains benefited mainly to wages. This provides a blurred image of demand-pulled productivity increases instead of supply pushed productivity gains thanks to modernization. Analyzing the models of industrial policy or competitiveness and productivity enhancement policy, the authors argue that the modernizing the economy and the public sector as well as sustainable fast growth cannot be met with existing institutions and policies pursued. Liberalization of the economy should be complemented by active industrial policy aimed at development of competitive medium and high-tech production facilities.

KEYWORDS: Transition economies; competitiveness; efficiency

JEL classification: O47, L52, P27

Introduction

In the years of recovery following the financial crisis and default, the Russian economy has shown not only high rates of growth but a dramatic increase in efficiency and competitiveness. Industrial output has grown by 34% over three years (1999 - 2002), and productivity - by 35%. At the same time, the generally low level of competitiveness inevitably causes concern of the Russian authorities and business, especially in the face of Russia's forthcoming accession to the WTO and further integration of Russia into the world economy. According to the estimate of the International Management Institute, Russia has moved from 47th (2000) to 43rd (2002) place in the rankings of

national competitiveness, which is only a return to the level of 1998, 1.5-2 times lower than the rankings of such countries as Hungary and Estonia. With further real appreciation of the ruble and dwindling of price advantages secured by the 1998 devaluation, the issue of competitiveness of the Russian economy acquires new importance. Advanced increase of import is strengthening acuteness of the problem and affects the reduction of the economy growth rates.

It can be asserted that the Russian economy is at a crossroads. One road leads to sustaining competitiveness by lowering the real exchange rate of the ruble again and maintaining low labour costs and energy prices on the domestic market. The other takes to improvement of non-price competitiveness and production efficiency, modernization of production facilities and creation of incentives to innovations. Real life suggests a combination of both, since on the one hand, the Russian economy still has considerable idle capacities, but, on the other hand, the need for modernization is already coming to the forefront and substantial growth of national competitiveness is impossible without it.

What is happening to the competitiveness of Russian goods, to what extent is ruble appreciation responsible for its decline?

It is general knowledge that there is no absolute criterion of competitiveness of products and firms themselves, and a variety of individual indicators (market share, price-quality ratio, etc) reflect only individual aspects market rivalry. To use a popular adage, competitiveness is like health, "no one knows what it is but everyone feels it when it is lost". In order to appraise change in competitiveness of Russian goods and intensity of market competition, we shall use the data of surveys of enterprise managers. Subjective as managers' appraisals are by themselves, the overall picture that emerges from them is not fragmentary but consistent and quite realistic.

First of all, all the surveys show fairly high intensity of competition on the main markets (3.6 points on the scale from 1 to 5 points, the data of the Russian Economic Barometer, REB), with competition being strongest among Russian producers on Russian markets.[4] The 1998 crisis resulted in an increase in the competitiveness of Russian goods both in general and in foreign (non-CIS) markets by 17%-19%, with intensity of competition dropping by 7%-10%. Data of the surveys suggest that after a peak of 1999 competitiveness of Russian goods started to decline both on domestic and foreign markets, while intensity of competition started to rise. According to estimates of Russian industrial

[4] *For details of appraisal of competition using business surveys, see papers by S. Tsukhlo (IET) and S. Aukutsionek (Russian Economic Barometer, REB).*

producers, the competitive edge shrank to 10% over the pre-crisis level**,** while the "price umbrella" based on the rate of real appreciation of the ruble is larger - about 25% - 44% (Table 1).

In relation to consumer prices, the real exchange rate was under the pre-crisis level (July 1998) by the year 2002 and had declined by 25 % (by mid-2003 the break was equal to 14%), while relative to producer prices it had dropped by 44% (31% by mid-2003).[5]

Thus, the real exchange rate for consumers, indicating price competitiveness of Russian goods on the consumer market, shows twice as low competitive advantage as that offered by the real exchange rate for producers. At the same time, as regards price competition with imports, domestic producers have an even smaller competitive edge of about 20%-40%, which was caused by a decline in import prices in the previous years (this trend has been reversed only recently).

In general, the ratio of the exchange rate to the purchasing power parity (PPP) and price efficiency of exports are so far fairly favorable for Russian goods, exceeding the pre-crisis (1997) figures by 1.5 - 1.2 times (Table 1). At the same time, in the last two years the decline in competitiveness has been clearly due to appreciation of the ruble and increasing unit costs of production (especially labour costs) (Figure 2). Nevertheless, we think that important as they are, the ratio of import prices to prices of domestic goods and the rate of real ruble appreciation, are currently not the major factors affecting changes in competitiveness of Russian goods, let alone intensity of competition on domestic markets. A new real depreciation of the ruble would not address problems central to competitiveness of Russian goods, for they are not related to prices. The key issues are whether factors of production and management are used efficiently, how good is the quality of the products and how new they are, and to what extent they meet modern international requirements.

[5] *The cost stock in relation to the real exchange rate (regarding to euro, YPI , YPI to dollar deflated by producer price index) was equal to 24% by the end of 2002 and reached 20% by mid-2003.*

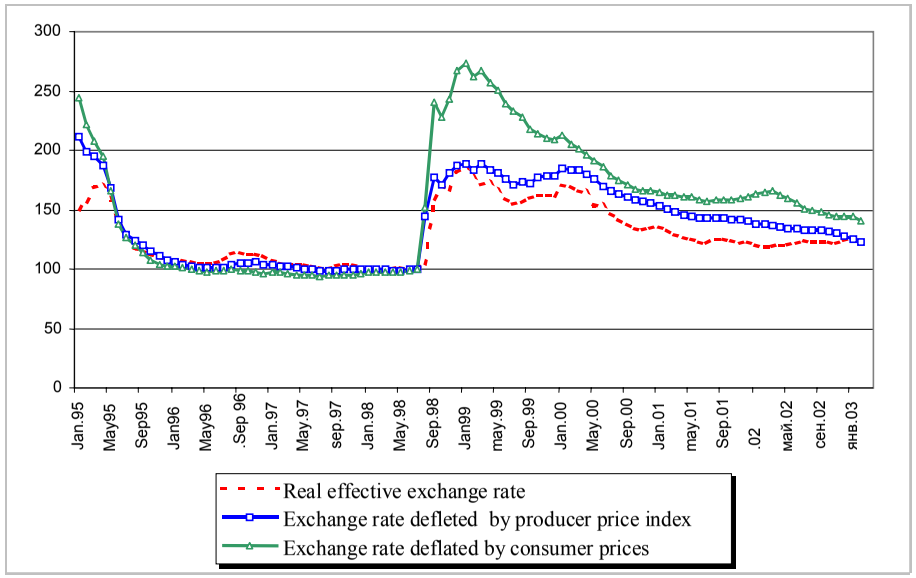
Table 1. Dynamics of competitiveness

	1995	1996	1997	1998	1999	2000	2001	2002
Competition								
Intensity of competition (REB)	3.1	3.45	3.4	3.6	3.35	3.5	3.6	3.6
With foreign producers	2.4	2.65	2.85	2.95	2.65	2.7	2.7	2.6
Competitiveness	2.92		2.87	3.07	3.29	3.35	3.28	3.16
On foreign markets	2.22		2.27	2.41	2.68	2.70	2.63	2.49
Exchange rate								
RER, $/R, deflated by producer price index (93=100)*	41.1	37.7	38.4	58.3	84.8	72.7	65.4	62.7
Ex. Rate/PPP (final demand deflator**)	290.5	231.0	226.5	319.5	468.5	423.7	366.0	337.2
Export efficiency	228.2	103.9	98.8	138.7	264.5	280.2	199.9	194.3
RER Elasticity of Productivity	0.03	0.43	-4.85	0.04	-0.42	0.53	0.36	1.41
Competition, %								
Intensity of competition (REB)	91	101	100	106	99	103	106	106
With foreign producers	84	93	100	104	93	95	95	91
Competitiveness	102		100	107	115	117	114	110
On foreign markets	98		100	106	118	119	116	109

Exchange rate, %								
$/R deflated by producer price index*	107	98	100	152	221	189	170	163
Ex. Rate/PPP (final demand deflator)**	128	102	100	141	207	187	162	149
Export efficiency	231	105	100	140	268	283	202	197

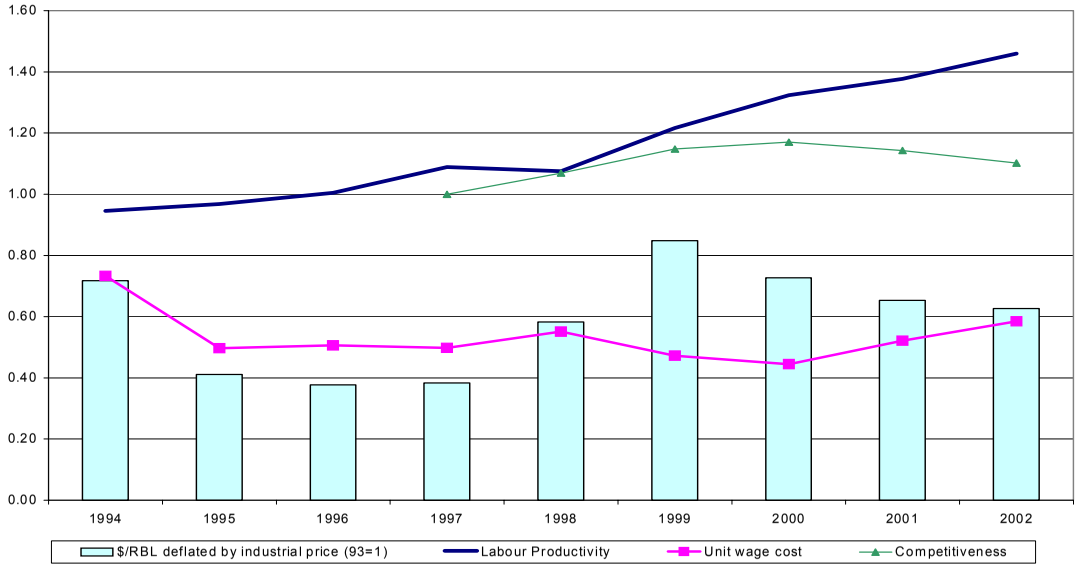
* Average annual real exchange rate deflated by the PPI; the sharpest depreciation occurred in 1999 due to the effect of the average annual figure;** The ratio of the exchange rate to the purchasing power parity, with extrapolation of PPP by investment and household expenditures; *** first half of the year.
Sources: Development Center, Goskomstat

Figure 1. Movements of the real exchange rate



Sources: Development Center, Central Bank of Russia

Figure 2. Factors affecting competitiveness



Source: Development Center

What immediately catches the eye is that is that labour productivity growth falls behind the rate of real ruble appreciation and the pace of increase in unit labour costs, which undoubtedly lowers the competitiveness of Russian goods. The increase in labour productivity in 1999-2000 compensated for 36%-50% of the rise in the real exchange rate of the ruble (deflated by the producer price index) and only in the current year productivity outran the pace of ruble appreciation, which, nevertheless, failed to prevent further loss of competitiveness by Russian goods.

We believe that competitiveness should not be viewed in isolation from the action of competitive forces, freedom of competition, and influence of competition on production efficiency. For some time competitive goods can be produced in an economy in the absence of competition, but effective action of competitive forces is vital to sustainable development of production and achievement of a high level of national competitiveness in general.

It can be assumed that competition intensity is inversely proportional to the rate of economic growth and directly proportional to the number of firms. In the period of market contraction as part of crisis, competition intensity increases and may turn into a fight for survival, whereas growth reduces toughness of competition, allowing each business more space to operate. "The larger the table, the less people eating at it interfere with each other". If an increase in the number of competitors intensifies competition, then a rise in production concentration is likely to reduce competition intensity, although it may also cause such competition to turn into a fight to the death. Real appreciation of the ruble promotes imports and lowers competitiveness of Russian goods, but its influence on competition intensity is not so obvious. Decline of the exchange rate in real terms, reducing prices, may ease pressure exerted by competitors, but it may also lower buyers' income and cause the market to collapse, which should intensify competition (as was the case in 1998, Table 1). Au contraire, appreciation of the national currency may to a certain degree occur in parallel with an increase in competitiveness as long as it is compensated by growth of production efficiency, which is what happened in 2000.

$$Competition = Output^{-}, Number^{+}, Concentration^{-}, Real\ Exchange\ Rate^{-}$$

Testing of the above hypotheses using survey data shows that the most significant factor here is the number of enterprises, which intensifies competition. The rate of output growth (which may also be viewed as an indicator of market expansion) is of low significance, although its effect is

negative, as would be expected. (Equation 1). Both the real exchange rate and the level of production concentration are insignificant. At the same time, the level of competition with foreign companies is the stronger, the higher the share of exports in production and the lower the real exchange rate of the ruble (Equation 2). It seems real depreciation of the ruble helps Russian companies to get rid of competition from foreign producers, or crowds out foreigners from the Russian market, thus improving competitiveness of Russian goods (Equation 3).

1) CI = 3.16 –1.42 Q + 0.01 N, R2 = .77, F=5.7
(3.46) (-1.4) (3.25)
2) CFI = -1.4 +18.7 EX/Q - 0.76 RER, R2 = .90, F=14.4
(-1.1) (4.47) (-4.7)
3) CF = 2.02 + 0.49 EX + 0.73 RER – 1.02 WR/Productivity, R2 = .96, F=15.3
(6.1) (2.1) (3.75) (-1.87),

where

CI is competition intensity based on REB data,
CFI is intensity of competition with foreign producers;
CF is the level of competitiveness on foreign (non-CIS) markets (Center for Economic Analysis, (CEA));
Q is the rate of industrial output growth (Goskomstat);
N is the number of industrial enterprises (Goskomstat);
EX is growth of exports in physical terms;
EX/Q is the share of exports in industrial output at comparable prices;
RER is the ruble exchange rate deflated by producer prices (R/$, 1993=1); *WR/Productivity* is change in unit wage cost in real terms.
Estimation period – 1995-2002.

Empirical calculations are consistent with the results of business surveys conducted to find out factors intensifying competition. Demand is the most significant factor (demand growth reduces competition), the second most significant factor is emergence of new Russian competitors holding back price rises (Table 2). Note an increase in 2002 of the relative weight of such factors as competition from new (for this market) Russian enterprises increases and an increase in imports and its superior quality. In 2000 - 2002 the situation with competition is radically different from that in 1996 - 1998. First, the weight of the factor of the lack of demand has declined dramatically, which suggests movement from competition for survival to competition for development. Second, the effect of low import prices does not play such a role as earlier,

whereas the weight of the factor of superior quality is rising substantially. At the same time, the contribution of import growth has started increasing rapidly, although it has not returned to its pre-crisis peak yet. This is consistent with a decrease in import prices. The value of imports will come to 84% of the pre-crisis maximum (1997) in 2002, while in physical terms imports will exceed this maximum by more than a third. Third, competition among Russian companies for penetrating new markets increasingly plays the role of the main driving force of competition. The recent decline in competitiveness of Russian goods on foreign and domestic markets is probably due to a change in the very nature of competition - it is becoming more oriented to non-price factors and emergence of new players and markets. It may be assumed that that the post-crisis model of growth, based largely on the undervalued exchange rate and utilization of idle capacities, has run its course, as has the model of competition corresponding to it. Russian companies are to face a new toughening of competition due to deceleration of growth and an increase in initial production costs, as well as to rising technological and quality standards of foreign, and, more importantly, domestic competitors.

Table 2
Frequency of reference to factors intensifying competition on markets of Russian industrial enterprises, %*

	1996	1997	1998	1999	2000	2001	2002	02/01	02/97
Drop in domestic demand	40.5	41.1	37.4	37.9	27.1	29.1	25.6	-3.5	-15.5
Import growth	15.5	11.7	13.8	4.7	5.1	7.7	11.1	3.4	-0.6
Better quality of imports	3.5	4.6	5.4	4.1	7.9	5.5	8.7	3.2	4.1
Low prices for imports	8.5	7.1	8.9	3.0	5.1	6.6	5.8	-0.8	-1.3
Ability of enterprises to advertise their products	2.0	1.0	2.0	1.8	3.4	2.2	2.4	0.2	1.4
Price rises are held back by Russian competitors	7.0	7.6	7.4	11.8	13.0	12.6	12.6	-0.1	4.9
Penetration of your markets by Russian producers	9.0	12.7	12.3	15.4	19.2	19.8	21.3	1.5	8.6
Measures by Ministry for Anti-Monopoly Policy and the Government	4.0	4.6	2.0	3.6	1.7	2.7	2.9	0.2	-1.7
Agents' operations	4.5	6.6	7.9	14.2	12.4	9.9	7.2	-2.6	0.6
Other	5.5	3.0	3.0	3.6	5.1	3.8	2.4	-1.4	-0.6

* Total of all answers =100%
Source: S. Tsukhlo. Rossiiskii byulleten kon'yunkturnyk oprosov promyshlennosti, 124 opros - September 2002.

Despite dramatic deceleration of investment growth in industry caused by structural factors (over accumulation of capital in the exporting, primarily oil, sector), investment and innovation activity of Russian companies is beginning to rise, although at a slower pace than required by competition. Based on the survey of enterprise managers conducted by the Institute of Economic Forecasting of the Russian Academy of Sciences, while only about 19.6% of enterprises undertook modernization of their fixed assets in 1992 - 1997, this figure rose to 34.3% in 1999 - 2001. The share of enterprises carrying out innovation projects rose to 79% in 2002 from 59% in 1999).[65] Intensification of competition with foreign (non-CIS) producers, reported by 44.3% of respondents at the beginning of 2002, has become one of the incentives to modernization and innovations. In this context, it is important to note that, according to estimates of enterprise managers, the quality gap between foreign and Russian machinery has widened in favor of imported machines (43.2% of respondents versus 15.2% of those who indicated its narrowing in favor of Russian products). The loss of competition for quality and innovation cannot be remedied without increasing investment in human and fixed capital dramatically, without boosting investment in R&D and raising the level of management. Therefore, despite relatively high rate of economic growth in the current year, stagnation of investment (investment is expected to grow by 3%-3.5% over the whole of 2002, while industry might see a fall or stagnation of investment) suggests that there is something seriously wrong in Russian business. Against the background of growing exporting industries benefiting from high world prices, the machinery industry and industries producing consumer goods are experiencing stagnation, which cannot be explained by too rapid a pace of ruble appreciation, since it is has deeper structural causes.

Production efficiency - from the effect of demand to real increase in factor productivity

- Productivity growth began before the 1998 crisis, from 1996 it was based on faster pace of employment reduction than that of output decline. Productivity growth did not result in better competitiveness of Russian products, since this growth was largely not due to its modernization;
- A new type of productivity growth emerged in 1999 - 2002. It is based on output growth and an increase in the rate of capacity and labour utilization (Table 3).

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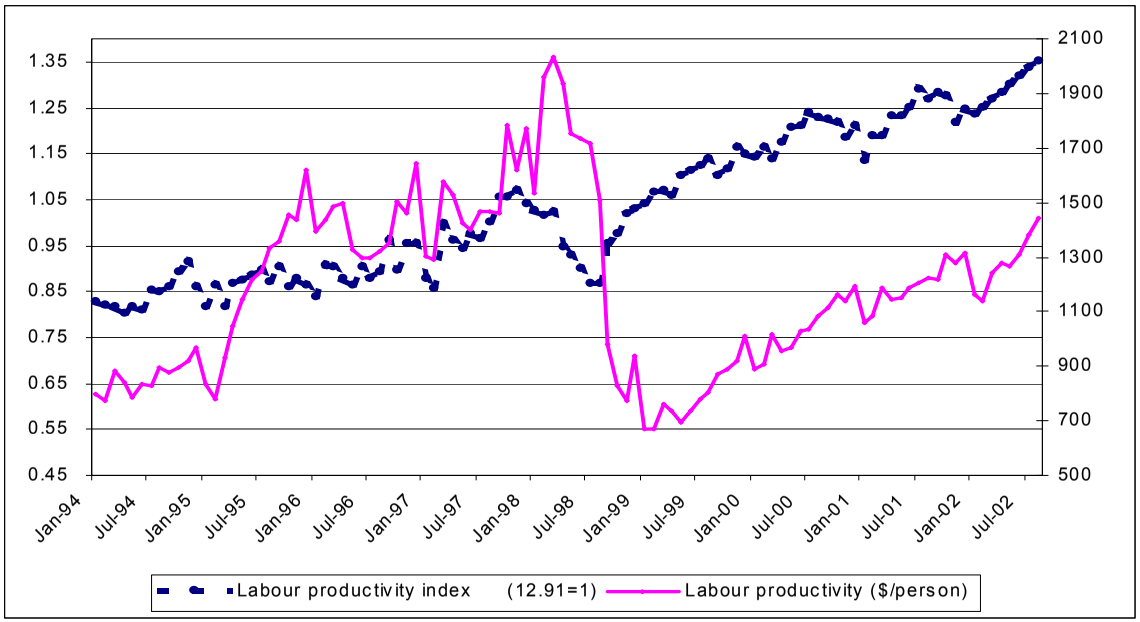
[6] *D. Kuvalin. Rossiiskiye predpriyatiya v nachale 2002 g.: problemy modernizatsii (Russian enterprises at the beginning of 2002: issues of modernization). INP RAN. 2002*

Figure 3. Productivity growth



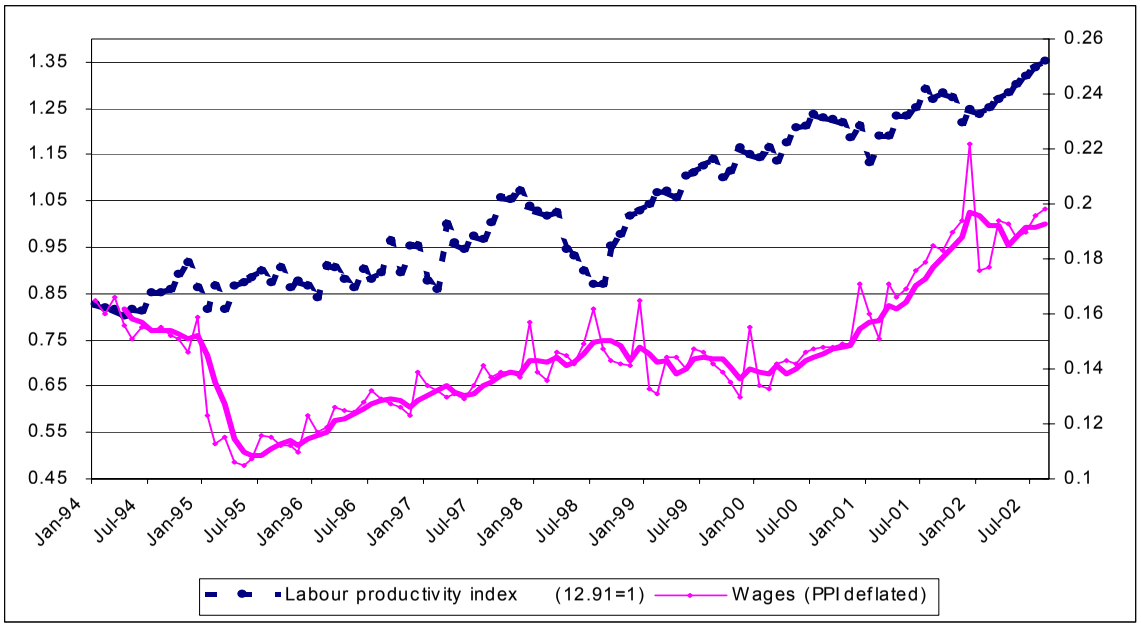
Source: Development Center

- Productivity growth (since 2000) has most of all benefited employees of enterprises, whose wages have also returned to the pre-crisis level (in real term). Now the potential for further productivity growth at a faster rate than other factors is petering out, which first of all applies to manufacturing industries facing especially tough foreign competition. The manufacturing sector showed the highest rate of wage growth, although from a very low initial level (Table 5).

- There should be more capital intensive growth of output and competitiveness with considerable capacity utilization reserves still in place. Utilization of these reserves is to be brought about by growth of demand and financing.

Under the conditions of considerable capacity underutilization and surplus labour, a straightforward use of production function would yield a distorted picture of factor productivity. Instead of showing real factor productivity, estimates indicate change in the level of utilization of factors of production reflecting change in demand. In the period of recovery, the rate of capacity and labour utilization has grown considerably: according to REB data, capacity utilization rate has risen by 26%, labour utilization rate - by 14%, but the problem remains acute. We estimate the potential reserve of unutilized resources at 15% - 20%, i.e. 4-5 years of almost 5% growth given sufficient demand and financing.

Figure 4. Productivity growth and wage gains



Source: Development Center

Table 3. Indicators of industrial efficiency

1993=1	1994	1995	1996	1997	1998	1999	2000	2001	2002	02/97
Output growth*	0.79	0.766	0.732	0.746	0.708	0.785	0.879	0.922	0.956	1.28
Employment*	0.836	0.791	0.728	0.685	0.658	0.645	0.664	0.669	0.644	0.94
Capital**	0.870	0.836	0.813	0.793	0.780	0.770	0.765	0.766	0.77	0.97
Adjust. for moral depreciation	0.622	0.613	0.651	0.664	0.618	0.608	0.639	0.642	0.675	1.02
Capacity Utilization Rate***	0.61	0.6	0.54	0.54	0.55	0.62	0.66	0.69	0.68	1.26
Labour Productivity	0.95	0.97	1.01	1.09	1.08	1.22	1.32	1.38	1.46	1.36
Wage cost , PPI deflated****	0.69	0.48	0.51	0.54	0.59	0.57	0.59	0.72	0.82	1.51
Unite wage cost****	0.73	0.50	0.51	0.50	0.55	0.47	0.44	0.52	0.55	1.11
Investment****	0.63	0.59	0.49	0.49	0.43	0.49	0.55	0.61	0.60	1.24

* Goskomstat data; ** estimations of the Development Center;*** REB data; **** Goskomstat and Development Center data

Models of industrial policy or competitiveness and productivity enhancement policy.

The challenge of modernizing the economy and the public sector as well as sustainable fast growth cannot be met with existing institutions and policies pursued. We share the view of experts and politicians who believe that liberalization of the economy (i.e. minimization of red tape, tax cuts, liberalization of foreign currency and capital flow controls), WTO accession, reform of the banking sector and the judicial system should be complemented by active industrial policy aimed at development of competitive medium and high-tech production facilities.

Different sectors of the Russian economy have different levels of competitiveness and different prospects for improvement. Due to the large technology gap and low non-price competitiveness the (civilian) machinery, building materials and light industries depend the most heavily on the low exchange rate. Judging by the surveys of enterprise managers, these industries are distinguished by the lowest competitiveness and sizable losses suffered in recent years due to real appreciation of the ruble (Table 4).

Competitiveness of the export-oriented fuel and metal industries exceeds the average level substantially, and changes in their competitiveness bear little relation to the pace of real appreciation of the ruble (although after the 1998 devaluation, exporters' competitiveness also surged). According to the data of the surveys, the food-processing industry shows the steadiest growth of competitiveness. This sector not only benefited from devaluation and expansion of the market but could also modernize equipment and management substantially, relying, among other things, on capital and expertise of foreign companies.

Table 4. Competitiveness of individual industries (CEA)

	1997	1998	1999	2000	2001	2002 (1st half)	2002/97	2002/00
Industry as a whole*	2.87	3.07	3.29	3.35	3.28	3.16	1.10	0.941
Fuel	2.85	3.35	3.53	3.72	3.84	3.45	1.21	0.927
Ferrous metals	3.51	3.67	3.72	3.82	3.73	3.70	1.06	0.970
Non-ferrous metals	3.89	3.86	4.44	4.64	4.09	4.06	1.04	0.875
Chemicals and petrochemicals	3.31	3.50	3.84	3.80	3.78	3.76	1.14	0.991
Machinery and metal-working	2.96	3.16	3.47	3.49	3.47	3.25	1.10	0.931
Timber, Wood & Paper	2.31	2.72	2.95	3.01	3.08	2.82	1.22	0.938
Building materials	2.25	2.30	2.30	2.38	2.23	2.20	0.98	0.924
Light industry	2.46	2.68	2.93	2.79	2.63	2.45	0.99	0.877
Food-processing industry	2.26	2.35	2.44	2.56	2.63	2.74	1.21	1.071

* Weighted average

Sources: Development Center, Goskomstat

Table 5. Changes in unit wage costs (Industry as a whole = 100)

	1994	1995	1996	1997	1998	1999	2000	2001	2002 (1 h)
Industry*	0.749	0.521	0.548	0.554	0.613	0.565	0.537	0.643	0.720
Export-oriented industries	96.8	92.3	95.9	95.7	93.7	83.8	81.5	87.3	88
Fuel	95.1	94.5	88.4	88.9	86.6	85.9	69.6	77.1	80
Ferrous metals	88.7	78.7	88.1	90.8	90.8	85.7	83.1	87.7	90
Non-ferrous metals	109.7	108.4	125.2	123.6	117.3	74.5	91.7	107.9	98
Chemicals and petrochemicals	95.2	88.6	92.7	91.5	95.0	86.7	82.9	74.5	75
Timber, Wood & Paper	98.6	91.9	97.0	88.9	78.0	65.5	66.7	63.3	63
Industries oriented to domestic market	103.0	107.1	102.9	103.1	105.1	113.6	116.6	107.4	106
Excluding power industry	109.1	111.0	105.4	103.4	98.8	92.2	92.7	86.8	88
Power industry	75.8	83.6	82.8	86.5	98.7	141.6	156.2	134.5	122
Machinery and metal-working	108.8	107.5	97.3	95.8	94.5	92.7	92.3	88.5	91
Building materials	91.5	111.1	99.7	93.5	86.2	95.3	94.0	83.4	86
Light industry	136.1	142.2	155.4	147.9	137.4	113.2	115.1	110.5	116
Food-processing industry	102.8	102.3	103.1	102.3	93.8	77.8	79.5	72.5	71

* Rate of growth for industry as a whole, 1993=1

Source: calculations by the authors based on Goskomstat data

After the crisis, the largest increase in comparative labour costs occurred in the power industry, reflecting both its ability to raise tariffs as a monopolist and stagnation of labour productivity in the industry. The food-processing industry, showing relatively stable competitiveness, also has stable unit wage costs, which are still 36% than in 1994 (with the average of 4% for industry as a whole. The food industry and the pulp-and-paper industry are the only industries where unit wage costs are still lower than before the crisis, whereas the machinery industry exceeded the pre-crisis level by 23% the exporting industries - by 19%. Industries suffering intensely from foreign competition (machinery, the light industry) have, thus, increased their labour costs almost as much as exporters, who experience much less severe competitiveness problems.

The effect of wage (or, rather, wage growth rate) equalization among industries showing different performance as regards competitiveness, have worsened relative positions of manufacturing industries in which the largest idle capacities, and, thus, the largest growth potential, are concentrated. In fact, high wages, and excessive costs in general, are not the main barrier to growth in these industries. The major factor hampering growth is still lack of demand and finance (including long-term finance). While in industry as a whole capacity utilization was estimated at 52% in the middle of the current year (according to CEA data), it was 43% in the machinery industry and 45%-48% in the light and food-processing industries. However, this potential is not easy to realize even if demand is sufficiently high. Manufacturing industries showing low capacity utilization rates also have the largest proportions of worn-out and obsolete capacities. This is evidenced by a large gap between the level of actual utilization (based on CEA estimates) and "economic" utilization rate, i.e. relative to what respondent regarded as "normal" (REB data): in the machinery industry this is 32% (economic utilization rate is 75%), whereas the average for industry as a whole is 21%). Based on economic capacity utilization, manufacturing industries do not have superior growth potential compared to extractive industries, while the problem of equipment modernization seems to be more vital to them.

Identification of potential "nuclei of growth" is impossible on the basis of only macro- and meso-economic data on productivity changes and ratios of production costs. There should be evaluation of the long-term growth potential associated with the ability to use the existing and potential innovations, not only current but also future demand. Industrial policy is impossible without outlining priorities on the level of industries, technologies, projects and firms.

From the perspective of dynamic, long-term rather than current, competitiveness we could identify:

First, groups of leading industries (sub-industries), such as

- industries with limited current competitiveness on the domestic market and a certain export potential, which are capable of producing a considerable macroeconomic effect (automotive industry, tractors and agricultural machinery, specialized shipbuilding);
- industries competitive worldwide and capable of acting as nuclei of the postindustrial economy (airspace industry, nuclear power and production of isotopes, instrument-making, software); at the same time large output and export volumes are unlikely to be achieved in these areas(with the exception of the aerospace industry and nuclear power) in the coming years;

Second, conventional industries (extractive industries, to a certain extent the food-processing industry), showing relatively high competitiveness and making important contribution to overall economic growth but lacking serious innovation potential. This does not imply their modernization needs, which are, on the contrary, vital. but means that they have a limited ability to absorb high technologies and to contribute to science-intensive growth of the Russian economy;

Third, industries related to infrastructure, with a very substantial monopolist element in them, whose restructuring implies considerable direct intervention by the government and the need for long-term capital-intensive projects;

fourth, industries in crisis, which require considerable restructuring, employment and capacity reduction, as well as reduction of their contribution to economic growth (the coal and light industries as well some sub-industries of the machinery industry);

Of course, industrial policy is not based on such aggregate identification of priorities, but we are not seeking to pose specific problems for the government to address, or to propose mechanisms for this. We mean to identify broader areas where the efforts of the government could secure the greatest economic effect in the long-term; hence the industry-specific level of industrial policy does matter.

Different groups of industries probably require specific types of industrial policy, although the liberal model of government regulation does not accept identification of priorities and differentiation of terms an conditions of regulation. What would the institutional choice of the Russian business and authorities in the area of industrial policy be, if this path were to be taken? What kind of industrial policy model is capable of kick-starting modernization processes in the Russian economy and raising its competitiveness dramatically? The following models of industrial policy are usually considered:

- Voluntarism (pursued by France and Japan in the 50s - beginning of the 70s, in South Korea prior to the 1987 crisis), relying on active direct intervention by the state in shaping industrial development priorities; implementation of national strategic projects with government participation (for example, the program of development of the nuclear power industry and telecommunications in France, European aircraft programs), financing investment in priority industries and fundamental science as well as innovative R&D, fostering "national champions competitive on world markets.

- Oligarchic (chaebolization[6]) industrial policy is implemented by large corporations using in large part government funds or funds of government-controlled banks and financial institutions. This model is in effect another version of the above dirigiste model. Although the Russian business, which has started to diversify assets and move from the extractive to the manufacturing sector, is often labeled as chaebolized, this is hardly justified. Large Russian companies do not rely on significant government funding in their industrial strategy, the projects themselves do not go beyond the commercial strategy of diversification and have very little in common with strategic venture projects. It would be more appropriate to speak of the "transnational" version of industrial policy, where market penetration by multinational companies (as shown by Ford and GM) bring not only capital but also new technologies, new projects and new management culture. It is primarily large multinational companies and Russian companies forming alliances with them that are playing the main role in shaping and implementing industrial policy.

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[6] Robert Cottrell, Russia's Rising Tycoons, Johnson's Russia List, No. 6388, 8/6/2002. Around 85 percent of Russia's non-government companies are controlled by eight shareholder groups, classified by value. Cottrell interprets this as chaebolization, and believes it augurs well for re-industrialization.

- Market-oriented competitive industrial policy, which does not imply direct involvement of the government in determining and financing development priorities, seeking instead to establish institutions and rules encouraging innovations. Although the Russian government may be tempted to regard its policy as a version of the above market-oriented industrial policy, it looks more like the lack of any system of industrial policy combined with ad-hoc decisions to support individual projects and companies.

A consistently deregister industrial policy can hardly be pursued in Russia now. Not because it is not needed. Just the opposite, recovery of high-tech industries and facilities (for example, the civil aircraft industry) is now unlikely only on the basis of private capital, both independent and as part of financial-industrial groups. However, the Russian government, although discussing a string of programs for specific industries, seems so far incapable of taking real financial or managerial responsibility (at least partial) for development of these industries or implementation of some national civilian projects (for example a medium range commercial aircraft). The only exception is the federal program "Electronic Russia", but it is oriented more to an education and information breakthrough than to development of the telecommunications and information technologies (both hardware and software). However, private business lacking support from the government and an opportunity to share risks with domestic financial institutions is at best shifting them onto foreign partners. It seems that if development "takes its natural course", degradation of Russian high-tech and competitiveness potential in the manufacturing sector can be reversed not so much by a free play of competitive forces as Russian business involvement in the processes of cooperation with foreign capital or the "transnational" model of industrial policy. However, roles that Russians would play in the framework of such policy may vary. While in the projects currently implemented with Western partners (Boeing, Airbus, Ford and others), the Russian side acts as a supplier of parts and components and fragmentary engineering approaches, partnership with companies and government institutions of new industrial countries (India, Egypt, China, etc.) would secure a niche for jointly manufactured products on world markets.

Certainly, each industrial policy can be considered as doomed to collapse due to ineffective management and threat of corruption. Such challenge exists in every private corporation. If the private corporations have the right to follow the market or even to guide the process, implementing the strategic planning, then the State has the same rights. Such governmental activism is very

important due to the following reasons: necessity to liquidate "market collapses" and to support the private entrepreneurship in risky spheres of business and facilitation of coordination of the private interests with the interests of the society. It doesn't mean that Russia has to use Korean or any other governmental policy as the model to support the competitiveness. The new approaches to this problem have to be developed and it has to be an integral policy aimed at increasing of the national competitiveness and formation of the new development centers outside the oil and gas sector.

The issue of industrial policy is more difficult then the issues of tax policy oriented at reduction in taxes. The corruption and inefficient bureaucratic administration is not the bottom of the problem. Both of the facts could be considered as the realistic barriers for effective vital activity of the society and to our point of view, the main reason is the inability of the private business and the governmental institutions to secure the consolidation of the efforts to reach the decision not only in solving of the current and private challenges, but to resolve strategic and system-formatted interests of the Russian society. It inspires out pity that Russian capitalism in unable to modernize the economy according to the worlds' demands without the government support, but that is the realistic situation by the end of the 20 century and at the beginning of the 21 century. It is obvious, that the total governmental model of modernization from the top is untimely in the period of globalization. New Russian modernization is the inevitable process, and has to have the open character and be based on active participation of the foreign capital (the same situation was at the beginning of the 20ies century), but the partnership collaboration and influence of the Russian business will depend on the efficiency of the governmental support.

The progressive structural transformations and fundamental technological and management modernization and not just steady raising of the stabilization foundation are able to support the activities of the future generations of the Russian people to provide well-deserved positions of the Russian Federation according to the requirements of the 21 century. There is a little time left if any in the face of the United Europe, American leadership and rapidly developed Asian countries.

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