

University – Higher School of Economics

**Russian Manufacturing Revisited:
Two Rounds of Surveying Russian Enterprises
in 2005-2009**

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Foreword

Manufacturing is the backbone of Russia's economy, like of almost any other major economy in modern world, including countries in transition from the industrial to the post-industrial stage. The importance of this sector comes not so much from its size as from its role in producing both consumer goods and basic inputs for other sectors' reproduction. Manufacturing is a high-technology sector, generating and absorbing most technological innovations, as it shapes the present-day and the future of the economy. Ultimately it is a nation's capacity to produce and globally sell deeply processed manufactured goods that defines its global competitiveness.

However, Russia's manufacturing sector is among the most vulnerable Russian economy sectors in a globalized environment. Most manufacturing industries in Russia are much behind the global leaders as regards their technological level, input utilization efficiency and quality of manufactured goods. This sector has a high proportion of uncompetitive industries. Their development problems reflect like a mirror all the weaknesses of the overall Russian economy, including obsolete capacities, inadequate skills, inefficient allocation of production, lack of modern infrastructure, imperfect market institutions, etc.

To emphasize the need for profound research of Russia's manufacturing, two important aspects should be discussed.

First, it may be noteworthy that throughout the past decade, economy diversification has been at the centre of the economic policy discourse. The primary assumption behind the diversification debate was Russia's heavy dependence on hydrocarbons production and exports. Another assumption was that manufacturing should be the primary sector to crowd out resource sectors. Conceivably, discussants also had in mind the service sector that was expanding rapidly, as well as its GDP share. However, the case is that the service sector produces predominately non-tradables. Moreover, its growth is highly dependent on growing export revenues – ultimately, on the resource sector. Meanwhile, there are concerns that the tradable part of the service sector, for example, transport, financial, trade and hospitality business, is also stigmatized by low competitiveness. The other consideration is that the high share of manufacturing, as well as overall industry in the structure of the Russian economy by the end of its Soviet period, was largely driven by its closed nature with secluded markets, mostly in the area of USSR military and political influence. The general global trend for a shrinking share of manufacturing in advanced economies driven by globalization and productivity growth has basically left the Russian economy unaffected. In the 1990s, this

trend strengthened as the new giants – India, China, Brazil and other developing countries burst into global markets. These countries had indisputable competitive advantages, first of all, due to their cheap labor.

In this context, Russia was facing a fundamentally new and daunting challenge. It had to find its identity in the new global economy, where it was lagging in competitiveness, especially on high quality and deeply processed goods and on innovation. That means that any investments in sectors other than oil, gas, ferrous and non-ferrous metals and chemicals – that are still produced using the old Soviet capacities with minimum investments – would be unprofitable. Admittedly, this is a strong statement, exaggerating the situation. However, we need to emphasize this point to facilitate understanding of a simple message: manufacturing is a difficult diversification target, because in most cases implementation of big-scale and long-term investment projects in this sector is less profitable than in the sectors cursed with resources. However, to build pockets of competitiveness in manufacturing, large and long-term projects are needed. Large not in terms of headcount, but in terms of financial resources and sophisticated high risk organization. Success will critically depend on highly competent, energetic, inventive, communicable, responsible and credible human resources. People endowed with such qualities are in deficit everywhere, especially in Russia, given its long history of persecution of such people, discouraging any creativity. Even in our time, unfortunately, similar practices may often prevail. This is why a 12 month engagement of a foreign professional may be about 2 times as expensive as in his/her native country. One impact of the great power of socialism was to undermine for many years ahead the natural motivation of entrepreneurship and labor, and to corrode work ethics. We lack the necessary data for comparative studies here in Russia, but such data are available in Germany. Even now, 20 years after the reunification, labor productivity in Eastern Germany is still 20 percent lower than in the Western part of the country.

Therefore, efforts to increase competitiveness in Russia's manufacturing are likely to face very big obstacles. The first solution that comes to mind would be to leverage government support. Apparently it is a reasonable idea. However, there are many arguments against it, including risks that public funds will be squandered and embezzled, and public officials do not have the necessary skills for efficient asset management. Institutional change may provide a solution. To ensure progress, it appears absolutely necessary to revise the rules and practices in the economy and business.. The current business climate and government-business relations should be drastically overhauled.

But perhaps there are some bright spots in the picture? Looking back, low competitiveness of manufacturing is a long-standing problem, with roots striking deep even beyond the Soviet past. Before the revolution, in terms of export goods, manufacturing produced only some fabrics exported to Central Asia and China, metals for railway and other construction, cars and engines for railways and armaments for the army and the navy. Domestic machine-building covered 38.6 percent of domestic demand, while textile industry equipment was 80 percent imported.¹ Industrialization resulted in proud progress in armaments, outer space exploration and nuclear energy. This list of qualified achievements also includes power machines and electric engineering that fully equipped the electricity sector, heavy engineering and machine tool engineering. Otherwise, as regards civilian products, the Soviet industry was much behind. As a result of its closed self-sufficient economic framework and central planning it produced most items of the global product mix. Import was procured only to supplement any shortfalls.

The slowdown in growth that started in the 1970s to become only too apparent in the 80s (*inter alia* as a result of lower revenues from energy exports) severely constrained investment in civilian sectors. Moreover, as central planning and command economy had no competition, obsolete technologies and dated product items were perpetuated. As a result, one sector could have enterprises from diverse technological formations and with strong variation in efficiency.

In the 90s, the downturn caused by transformation and transition to the market economy hit hard the manufacturing industries, both civilian and defense. For a decade industrial enterprises had no financial capacity to invest in fixed assets renovation or in new products, while at the same time they had to face more severe competition from imports following liberalization of trade. Further adverse factors during that period included the understandable incompetence of industrial firms to compete in a market environment and imperfect nature of the environment. However, market institutions gradually evolved and strengthened, while most enterprises were rapidly learning to operate in a market environment. However, there were some that refused to learn, contributing to the perpetuation of the non-market sector in manufacturing. These enterprises, while producing negative added value, still carry on. All the above implies that to enhance competitiveness – which is supposed to be an essential prerequisite of success in domestic and international markets, - the manufacturing structure had to be overhauled. It was necessary to identify new lines of

¹ Development of the Soviet economy. USSR Academy of Sciences, Institute of Economy. M.1940, page 10

business and new market niches where Russian companies would have any chances to get a strong competitive position..

The transformation crisis modified considerably the economic and industrial structure in Russia. It was a passive restructuring driven by the tight fiscal and monetary policies seeking macroeconomic stabilization. It was also pushed ahead by the opening of the economy and the ensuing imports flooding in. Apparently, the restructuring during that period was largely deconstructive. Manufacturing as a share of GDP contracted from 38 percent in 1990 to 27.5 percent in 2002, bringing us closer to the structure of advanced economies, albeit without any attributes of advancement. Similar changes were observed in the transition economies of Eastern Europe.²

During the peak of the crisis in 1998 output collapsed to 43.6 percent compared to 1989. Then a downright output contraction followed. Interestingly, it was more severe in manufacturing than in resource sectors. The decline in fuel and energy sectors resulted in output contraction to 63.9 percent of the level of 1992. In manufacturing, more resource-related sectors were the least affected (metals – 51.7 percent, chemicals and petrochemicals – 39 percent), while the consumer goods industry saw a collapse in output down to 11.1 percent, and the construction materials – down to 27.1 percent.³

By 2008, during the boom years following the crisis, manufacturing output reached 84.4 percent of the level of 1992. Some sectors overshot their 1992 performance (139.3 percent in electrical equipment and electronics, 127.9 percent in pulp and paper, and 124.3 percent in rubber and plastic), while others failed to restore it (textiles – 26 percent of 1991, leather goods – 27.1 percent, machines and equipment – 61 percent).⁴ Some structural shifts are there, but do they help to increase efficiency? In effect, while growth in 1999-2008 was quite strong, it was essentially a recovery fueled by higher utilization of existing capacities and labor, bringing the economy back to the pre-crisis level adjusted for demand and the changed proportions in the market economy, Growth was mostly driven by import substitution, as it was accompanied by structural changes in manufacturing: integration, redistribution of property, management enhancement, and efficiency growth. At the same time, the non-market sector share was shrinking. However, by the middle of this period it became evident that sources of extensive growth were close to depletion, and to sustain further growth significant competitiveness improvements were needed.

² Ye.G.Yasin, Russian economy structure and structural policy. Paper for the IXth HSE International Academic Conference, M., 2008. Pp. 35-40.

³ Ibid. P. 41

⁴ Russia in figures. 2009 M., Rosstat, 2009. P.204-205

Increased competitiveness could be secured both by market incentives and mobilizing firm resources for increased efficiency gains, on the one hand, and by the government's proactive economic policies to foster an investment and innovation-friendly business climate, conducive for Russian manufacturing modernization. As most crucial change happens largely at the firm level or inside firms, it is often impossible to assess implications for competitiveness, proceeding only from macroeconomic statistics. This consideration has prompted a series of projects based on large-scale industry surveys. One of such long-term studies is competitiveness monitoring in manufacturing. The first round of the monitoring, commissioned by the Ministry for Economic Development and Trade, was launched in 2005 with technical and financial support from the World Bank. It yielded many interesting results as regards segmentation of the Russian enterprises, and differences in their environment and behavior. However, a single survey could basically provide a only static snapshot of the situation, rather than an assessment of the intensity and dynamics of the developments under way. For that reason, in the spring of 2009 a second round of the survey was conducted, commissioned and supported by the Ministry for Economic Development (about 50 percent of firms were the same as in the first round). This Report presents some of the findings of our analysis of the data obtained from the two rounds of the survey. In our view, they offer a better insight into what was happening with Russian industrial enterprises in the years before the crisis.

Conclusions are left to the reader. However, the most general conclusion of the authors is as follows: firms during that period were going through very important and largely healthy processes of positive natural selection, evolving toward a more market behavior, amid continuing spontaneous development of market institutions. Regrettably, these developments were happening rather in spite of than thanks to government economic policies. Arguably, this may be the reason why we have not seen any dramatic improvements in manufacturing competitiveness despite the efficiency growth.

Introduction

This report is based on the findings of a major project by the Higher School of Economics Institute for Industrial and Market Studies (IIMS) to monitor competitiveness of manufacturing enterprises. The project was commissioned and supported by the Ministry for Economic Development of the Russian Federation. The study focused on the drivers and dynamics of business competitiveness, including changes in firms' behavior during the period before the crisis (2005-2008). Our primary interest was to find out what firms and to what extent succeeded in capitalizing on the strong economic growth before the crisis to catch up

with their competitors and gain a sustainable competitive position in the market. What was driving output increases and enhanced production efficiency? What were the impediments to this process? It should be emphasized that the study was primarily looking into the fundamental processes evolving in the “fat years” before the crisis, while a detailed assessment of the economic crisis impact on businesses was not among our main objectives. However, the survey underlying the report was conducted in the spring and summer of 2009, when the crisis was in full swing in Russia⁵. Hence, one dimension of the study was to assess firms’ behavioral responses to a changed business environment.

The advantage of the study was an opportunity to compare the results of two surveys – in the years of 2005 and 2009 – rather than just taking a snapshot of the current situation. The findings of the 2005 survey about the trends and issues in manufacturing as the economy grew in the first half of the 2000s were widely presented both by the authors of this report and by the experts of the World Bank, which partnered with the Higher School of Economics in the first round of the monitoring.⁶ This is why we would not give a detailed account of them here, but only note one key finding of that study. The study revealed extreme heterogeneity and segmentation of the manufacturing sector, where firms with varying efficiency coexist, while the average efficiency is low compared to other countries.

The key message of the earlier study was that the most important sources for extensive development originating from the crisis of 1998 were largely depleted by mid 2000s. Enterprises had to look for a different – intensive - development strategy, involving new market entry, technological upgrade and product innovation. . There were also certain expectations about exit of inefficient enterprises from the market.

Indeed, it should be admitted today that we were somewhat hasty in our expectations. In fact, in 2005-2008, an exceptionally favorable external environment and terms of trade, rapid expansion of domestic demand and improved access to borrowings helped most industrial enterprises to maintain their market power and, moreover, to increase output without any significant changes in their technologies, innovation risks or entering new, first of all, international markets. It is safe to say that no revolutionary breakthrough happened.

⁵ Key parameters from sample surveys of 2005 and 2009 and comparative tables for selected indicators are presented in the Appendix to the Report.

⁶ See: Russian manufacturing at a crossroads: why can’t our firms be competitive?//Voprosy Ekonomiki, 2007, №3 [Российская промышленность на перепутье: Что мешает нашим фирмам стать конкурентоспособными // Вопросы экономики, 2007, №3]; Can Russia Compete? Enhancing Productivity and Innovation in a Globalizing World. Raj M. Desai and Itzhak Goldberg, eds., Brookings Institution Press 2008. Russian manufacturing during the stage of growth: firm competitiveness drivers//ed. K.Gonchar and V.Kuznetsov. М., Verzhina, 2008 [Российская промышленность на этапе роста: факторы конкурентоспособности фирм /под ред. К.Гончар и Б.Кузнецова. М: Изд. «Вершина», 2008].

Generally, the previous development model remained unchanged. Diversification was not achieved, and the share of manufacturing sectors in the national GDP was not increased significantly. Any efficiency gains in manufacturing industries continued to imply declining jobs.

This would not mean, however, that nothing good was happening in manufacturing. As discussed below, the overall smooth evolution was masking over a robust restructuring under way in individual industries, while many enterprises were changing their behaviors, as we see it, for more market-oriented, despite the underlying institutional arrangements that remained far from “ideal”. In the years leading up to the crisis enterprises also stepped up their investments to renovate fixed assets, though not all the firms managed to finalize their upgrading programs before the crisis struck.

Therefore, it would be wrong to see the time of 2004-2008 only as a time of “wasted opportunity”. In terms of effectiveness and competitiveness, industrial enterprises were much better prepared for the crisis of 2008 than for its predecessor in 1998. However, the question remains if the rates of evolutionary transformations in manufacturing were adequate to close the competitiveness gap between Russian businesses and their rivals. For these rivals were also moving ahead, and if we look at Russia’s BRIC counterparts, their progress has been really impressive. Moreover, the crisis hit Russia much harder than other countries.

This report is not attempting to give an exhaustive answer to this question. However, it may answer some other questions. Were the pre-crisis years a time of efficient growth? To what extent the development model encouraged enhanced competitiveness, promoted or obstructed positive selection, with leaders getting more entrenched and outsiders exiting? What were the success factors? To what extent was the economic policy during the years of growth conducive for the strategies pursued by most industry leaders? These questions seem no less important both for an assessment of the current situation and for designing economic and industrial policies to recover from the crisis.

Manufacturing industries in 2005-2008: macroeconomic and institutional environment

There were several considerations behind the selection of manufacturing industries as the subject for this study. First, manufacturing is a key sector in any economy during the industrial development stage. And indeed, it is still too early, in our view, to say that Russia has passed through this stage and entered the postindustrial economy. In the absence of its own strong and efficient manufacturing sector, Russia's economy can hardly be expected to modernize the other sectors and diversify. Second, while the share of manufacturing in the Russian economy has been gradually shrinking throughout the whole transition period, this sector still remains one of the largest. Measured by its share in GDP (18 percent in 2007 – the last year before the crisis) and by employment numbers (16.8 percent in the same year), it would have only one superior – wholesale and retail trade. Both economic and social stability in the country depend on manufacturing competitiveness. Third, manufacturing industries are of special interest to researchers, because this sector is highly diverse in terms of size, location, histories and behaviors of firms. Hence, it shows more graphically a variety of problems of the Russian economy, including those inherited from the USSR, and, on the other hand, new trends in the development of market institutions, policy impacts, key contributors and impediments to higher competitiveness of firms and, ultimately, of the overall national economy. In other words, the diversity and heterogeneity of manufacturing firms is a reflection of the same features of the overall Russian economy. Therefore, manufacturing may be a good pilot sector or testing ground to research and understand what is happening in terms of building an efficient market economy in Russia.

The Fat Years

Right up to mid 2008, the manufacturing industries were developing in an exceedingly favorable economic environment. Domestic demand, both consumer and investment, was expanding dramatically. External financing was getting more and more available as real interest rates on bank loans were decreasing to become even negative at times (Fig. 1). Prices for key Russian exports were growing much faster than for imports (Fig. 2), maintaining, despite the latter's expansion, the trade and BOP surpluses and pushing up Russia's investment ratings. Foreign investment in Russia's economy was also building up, including FDI in manufacturing (Fig. 3). Tax legislation stabilized. A reform of the Unified Social Tax scale (UST) in 2005, as the basic rate was cut down from 35.6 percent to 26 percent and the regression scale was adjusted, resulted in a gradual decline in the effective rate amid rapid nominal wage increases.

On the negative side during that period, manufacturing was adversely affected by persistently high inflation (albeit moderate compared to the previous period), REER appreciation and accelerated growth of labor costs. However, these influences were not significant in manufacturing. Indeed, traditional exporters, including metals, chemical, wood and timber sectors compensated their losses via REER appreciation by their gains from global commodity price growth, while for other sectors with smaller export components the appreciation was rather positive as it created additional space for modernization due to relative cheapening of imported equipment. Growing labor costs was more painful. However, it should be seen in the context of a low base, besides, salary growth was partly offset by enhanced productivity and downsizing.

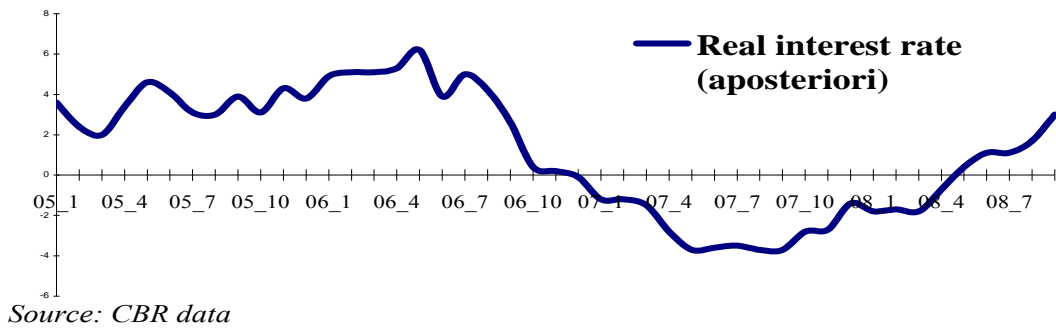


Figure 1. Real interest rate behavior

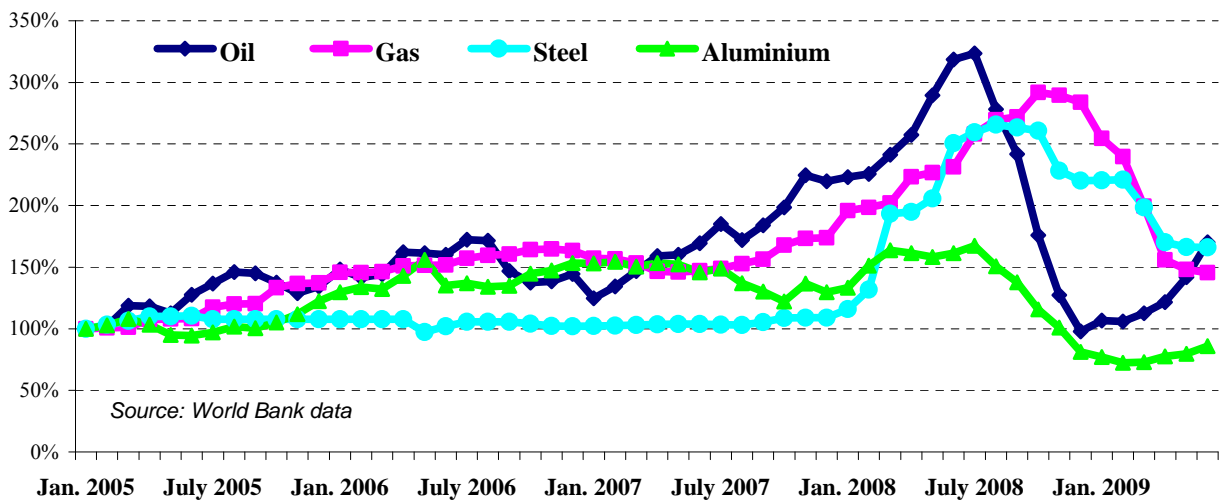
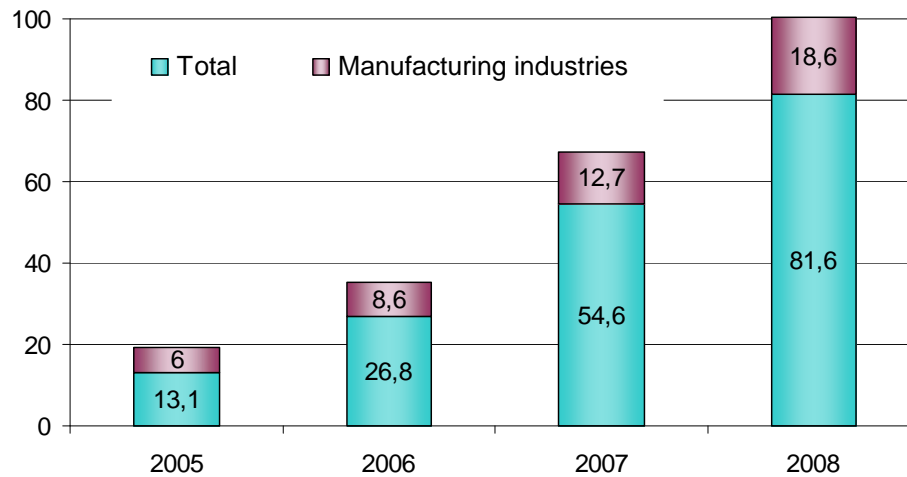


Figure 2. Key export commodities: global price indices (January 2005 =100%)



Source: Rosstat data

Figure 3. Foreign Direct Investment (accrued to date, US\$bn)

In this context, manufacturing successes look, on the one hand, unquestionable, but on the other, quite modest. Labor productivity in manufacturing increased by 50 percent from 2005 through 2008. Unlike during 2000-2004, this sector managed to maintain its share in the GDP, with the added value growth in the sector keeping head to head with the overall GDP growth⁷ (in 2000-2004 the former was somewhat slower). The profitability in manufacturing sectors grew marginally (from about 16 percent in 2005 to 18 percent in 2009). However, with due regard to the high inflation, this level can hardly be called impressive, especially given that profitability growth was mostly observed in export sectors, including chemicals and metals, while in other manufacturing industries it was visibly lower.

At best, the manufacturing sector was holding ground taken by mid 2000, but it definitely did not achieve any breakthrough in competitiveness. In output growth, labor productivity improvements and investment attractiveness, manufacturing sectors were outpaced by other sectors – construction, retail trade and services. The years before the crisis saw accelerated growth of industrial imports, both consumer and investment. This also indicates that domestic producers often failed to respond to growing domestic demand with appropriately priced products of sound quality, and therefore they lost their markets to imports. Nor was there any considerable expansion of manufacturing exports during the period. Resource and close to resource industries remained the key exporters, including metals, chemicals, and wood&timber industries. Higher capacity utilization was not accompanied by new capacity construction, constraining output growth even in the presence of demand.

⁷ A certain reduction of the manufacturing share in the economy was observed in 2008 as an impact of the crisis setting on.

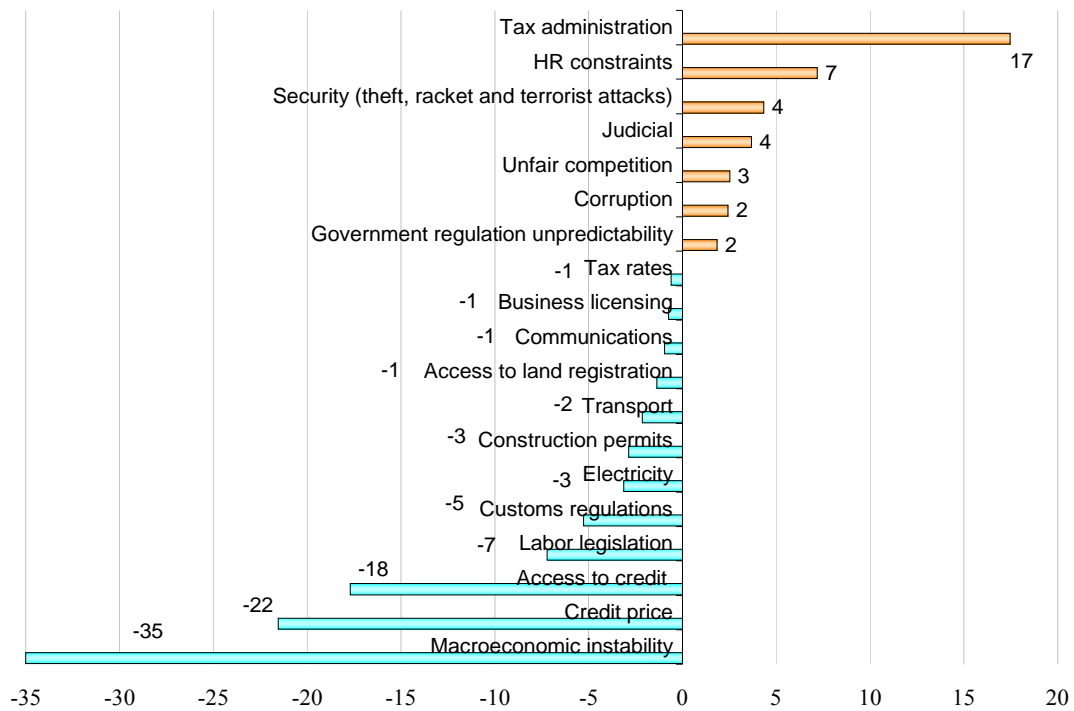
Institutional environment for business

An important obstacle to higher manufacturing competitiveness during the boom period was a lack of meaningful progress in the institutional environment. During 2005-2009, respondents' assessments of business barriers remained largely unchanged. Fig.4 shows how respondents' perceptions of elements of the business environment as obstacles changed from 2005 to 2009. It should be noted that this comparison is not quite accurate because the 2009 survey was conducted at the peak of the economic crisis, when growth outlook was uncertain. This may be behind the drastically deteriorated perceptions of macroeconomic stability, access to bank credit, and labor regulation.

Considerable improvements are observed only for tax administration (40 percent of respondents indicated this issue as a major obstacle in 2005, while only 20 percent in 2009) and for skilled labor availability. The latter is also a result of the crisis, which has reduced demand for labor. Some improvement may be seen in assessments of courts and security of doing business. There was no better access to infrastructure, while institutional factors are still a more important constraint for business than the state of infrastructure. Interestingly, corruption, so frequently mentioned in mass media publications and expert discussions, ranks only eight in the overall ranking of business obstacles (mentioned by 21 percent of respondents in 2009).

Customs regulation seems the most disturbing component, as this issue has moved up from the 15th rank in 2005 to the 10th in 2009, which can hardly be explained by the economic crisis. Survey data suggest that increasing difficulties in dealing with the customs authorities are most frequently faced by export-oriented enterprises.

Institutional constraints are most acute for firms involved in major investment projects, which therefore have to deal with the state and regulators more frequently. Thus, businesses making large investments in 2005-2008 indicated customs barriers as major business obstacles almost twice as frequently as businesses who did not invest during that period (42 percent versus 22 percent). A similar variance is observed in perceptions of availability of construction permits, and access to land is more frequently mentioned as a problem by active investors (35 percent of active investors vs 24 percent of investment-free firms).



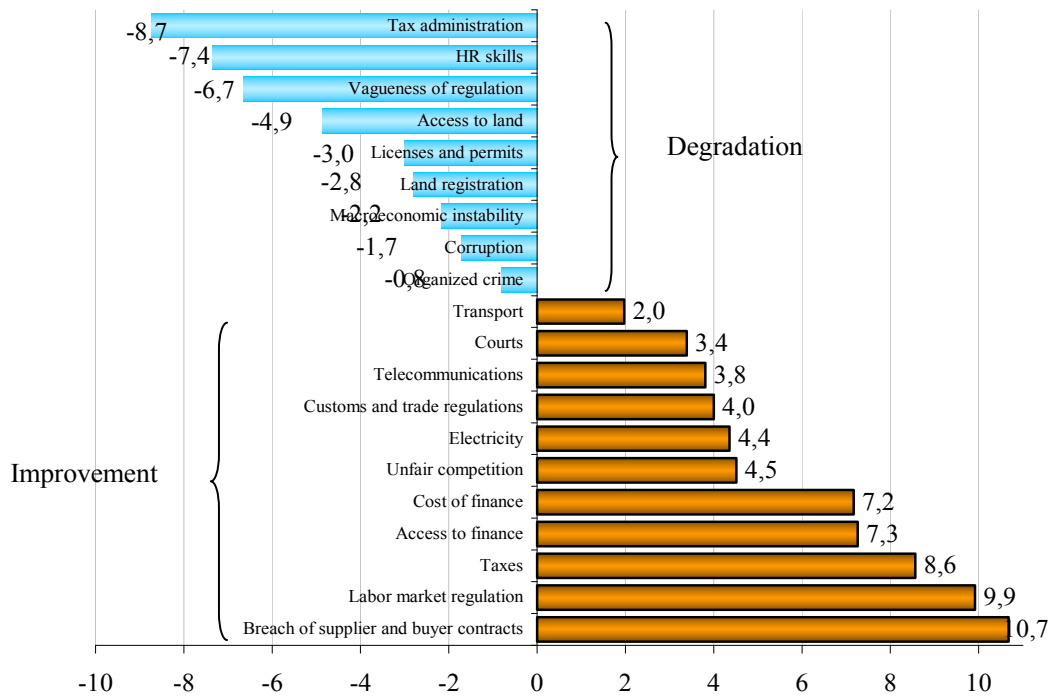
Source: HSE surveys of 2005 and 2009.

Note: minus indicates a downgraded assessment, + an improved one.

Figure 4. Variation in assessment of business barriers, 2005 and 2009 (percentage points)

It is noteworthy that the absence of significant improvements in Russia's business climate against the backdrop of major positive developments in the institutional environment in other transition economies weakens competitiveness of Russian enterprises vis-à-vis their peers in these economies. According to BEEPS⁸, Russia in 2002 looked better on average than the other 26 surveyed transition economies on three fourths of business climate parameters. In 2005, Russia was ahead only on half of the surveyed parameters, while in 2009 it was behind the average on 16 of the 18 parameters for the other 28 surveyed countries. (compare fig. 5 and 6).

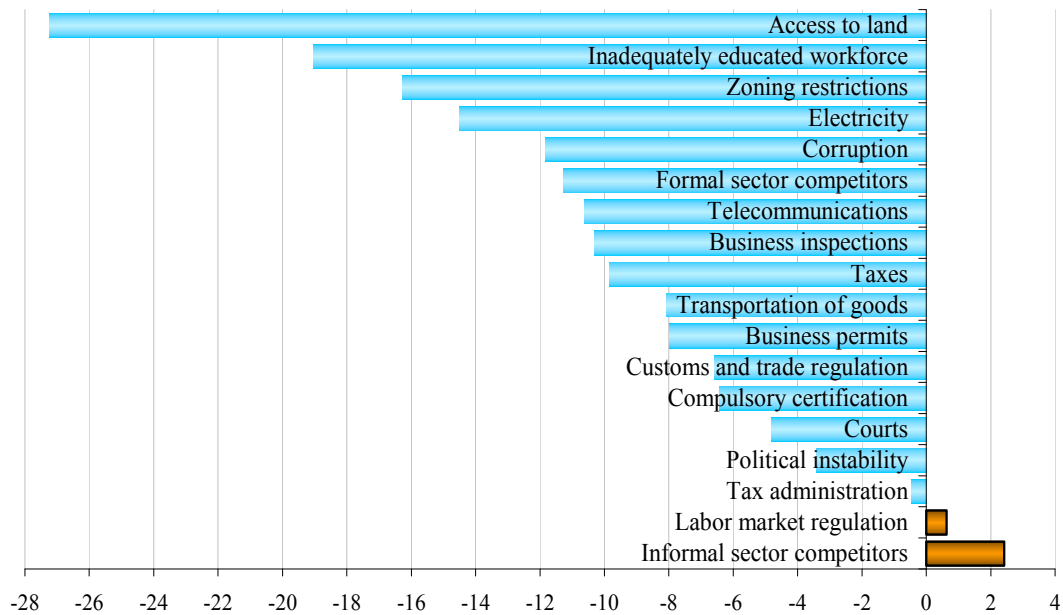
⁸ Business Environment and Enterprise Performance Survey is a joint initiative of the EBRD and the World Bank, started in 2002. The most recent round of the survey in 2008-2009 covered 11,800 companies in 29 countries. – The survey universe was defined as industrial, commercial or service business establishments with at least five full-time employees. The survey used comparable questionnaires. The Russian sample of 2009 included 1004 enterprises, including 603 industrial companies. The Russian sample of 2005 covered 601 enterprise. See: The. «The Business Environment and Enterprise Performance Survey (BEEPS) 2008-2009 A Report on methodology and observations. October 2009



Source: BEEPS, 2005

Note: The length of the bars reflects the difference between responses in Russia and in the rest of the survey, p.p.

Figure 5. Evaluation of institutions in Russia compared to the other 26 transition economies, 2005



Source: BEEPS, 2009

Note: The length of the bars reflects the difference between responses in Russia and in the rest of the survey, p.p.

Figure 6. Evaluation of institutions in Russia compared to the other 29 transition economies in 2009

Summing up, an assessment of the overarching conditions and development outcomes of manufacturing industries before the crisis suggests that despite a favorable macroeconomic environment and stable institutional business conditions the window of opportunity to overhaul the economy's structure and diversify into manufacturing was missed.

The “missed opportunity” point is not new.⁹ However, we are not planning here to support statistically observable trends with the survey's data. We feel it may be more interesting and useful to look at individual performances rather than at the team effort. It was back in our previous study that we saw high differentiation among firms belonging to the same sector. These differences were observable both in their efficiency and competitiveness, and in their organization and behavior. It is the changes in business performance and behavior of individual groups of enterprises that would be in the focus of the study.

This kind of analysis should provide answers to some questions that remain unanswered by statistical methods. Specifically, which firms – more or less efficient – were driving growth during that period? In what way have the external environment changed for enterprises of different competitiveness? What groups of enterprises have managed to make a better use of the opportunities arising during the period of growth, and how specifically? Which development strategies were selected by various types of enterprises during this period? Who put a stake on innovations? Who opted for increased output of conventional products? What are the features and characteristics of the firms, which have managed to break into new markets? Did less efficient enterprises find it more difficult to operate or, on the opposite, the favorable environment prevented crowding out outsiders? Looking ahead, it should be noted that macroeconomic data analysis offers a hopeful note as it suggests that it may be too early to give up on the Russian manufacturing sector notwithstanding the overall manufacturing performance. Overall industry competitiveness is a sum total of competitiveness of its constituent enterprises. It is at the micro-level, at the level of firms and specific product markets that fundamental, competitiveness-defining processes of innovation, technology modernization, management enhancement and behavior strategizing take shape. Below are some most important results of analyzing data from the two rounds of the Russian manufacturing competitiveness monitoring survey.

⁹ Interesting results on productivity and efficiency in selected sectors of the Russian economy were presented in a report by McKinsey «Lean Russia. Sustaining economic growth through improved productivity». McKinsey Global Institute. April 2009. However, this report focused on non-industrial sectors, while manufacturing was represented only by the steel sector.

Quality of growth

Our primary interest lied in identifying the quality of growth: was growth driven by more or by less competitive firms? We grouped firms by their competitiveness level on the basis of our own classification making use of both objective and subjective evaluations (see Box: Methodological comments on grouping enterprises by competitiveness).

An analysis of growth rates in various groups reveals that the bulk of revenue growth falls on more competitive firms. Firms included in the leaders group by the survey of 2005¹⁰, were increasing output by 23 percent per annum on average (in nominal terms) during 2005-2007. Another group – with midrange competitiveness – was growing at a rate of 17 percent, while the 2005 outsider group was averaging below 10 percent a year. Therefore, the key contributors to output growth before the crisis were more competitive businesses with higher profitability.

Box 1. Methodological comments on grouping firms by competitiveness.

Firm competitiveness is a multidimensional concept that defies being described by one single indicator. And still, it may be necessary for the purposes of analysis to measure at least roughly the competitiveness of an enterprise so that its sources and determinants can be identified. This report makes frequent use of competitiveness-based groupings of firms, which needs comment. The overall approach to measuring firm competitiveness used in this paper is described in the above mentioned final report or the first round of the monitoring Russian Industry During the Growth Stage. To group enterprises by their competitiveness level we have been using a composite indicator including, on the one hand, firm labor productivity assessment relative to the industry (sector) average, and, on the other, the management's self-assessment of their firm's competitiveness relative to its key domestic and foreign competitors. If a firm claims that it is a competitive leader, while its labor productivity is above the average sector level (by the economic activities in compliance with the All-Russian Classification of Economic Activities), we would classify it to the group of leaders. If a firm assesses its competitiveness lower than that of the leaders, while the gap is not closing or is widening, and labor productivity is below the average for this type of economic activity, it would be classified to the group of outsiders. All the rest would fall within the "midrange" group in terms of competitiveness. As we realize the arbitrary and limited character of this grouping, we still think it is quite instrumental for drawing a clear line between leaders and outsiders. According to the selected criteria, the group of leaders would then include about a quarter of surveyed enterprises, the "midrange" group would get about 55 percent, while the group of outsiders – about 20 percent of the sample.

It should be emphasized that leadership is relative rather than absolute in this assessment, as we compare firm labor productivity with average industry values, while the respondent also self-assesses its competitiveness in relation to competitors. Thus, an enterprise in the consumer goods industry can be an industry leader, while in terms of competitiveness it may be behind enterprises grouped as outsiders, e.g. in chemicals.

¹⁰ We do not include here the data of 2008, when many industries were severely impacted by the crisis.

Output increases in the group of the most competitive firms were accompanied by labor productivity advances at similar rates. In other words, these enterprises were increasing output basically without any increases in employment, albeit without any significant shedding of jobs. The midrange group was improving productivity at higher rates, however, by means of labor downsizing. The highest rates of productivity growth were observed in the low competitiveness group. A possible explanation for this can be found in two reasons: the low base effect and the survival to be included in the 2009 sample of only those outsiders who managed to strengthen their resilience, including by efficiency improvements.

Higher labor productivity growth in less competitive firms set forth an important positive trend: narrowing gaps within individual sectors as underperformers manage some catching up with the leaders. The variance in labor productivity between the top and the bottom quintiles within one economic activity decreased across all sectors over the three years, except for chemicals and metals, which may be related in most probability to the favorable global environment and exporters' breaking away ahead from domestically-oriented producers.

Still another interesting feature of competitiveness dynamics deserves mentioning. Earlier research indicates that in the Russian context larger enterprises *ceteris paribus* often prove more competitive. There are numerous explanations for this fact, which we leave outside this report. This fact is also confirmed by the 2009 survey findings. However, a comparison of the data from the two rounds of the monitoring shows that lower competitiveness was registered not for the smallest firms¹¹, but rather for medium-size enterprises employing 250 - 500 people. Their share in the top competitive group shrank from 34 percent to 26 percent.

Quality changes in the nature of competition

Low competition in Russian manufacturing was traditionally seen as a most important institutional limitation, because in the absence of competitive pressures firms have no incentives to improve their efficiency. At first sight, the situation did not change during the period between the two rounds of the survey. About every fifth enterprise does not face any significant competition either from its domestic peers or from any foreign producers. Around 30 percent of firms compete exclusively with their domestic rivals, while less than 40 percent of companies are exposed to strong competition both from domestic and foreign producers (Fig. 7).

However, a more detailed analysis reveals considerable changes in the pattern of competition from foreigners. There has been a sizeable increase in the share of enterprises

¹¹ It should be noted that our survey does not include small businesses.

reporting considerable competition not from imports but from locally-based foreign producers. While in 2005 this type of competition was typical only for two sectors – chemicals and textiles&clothing, in 2009 it was faced by increased numbers of domestic metals and machine producers (Fig. 8.). The only sector to see decreased competition during this period from producers with foreign ownership at the domestic market was the timber industry. To a certain degree, this competition from “Russian foreigners” was probably replacing direct competition from imports.

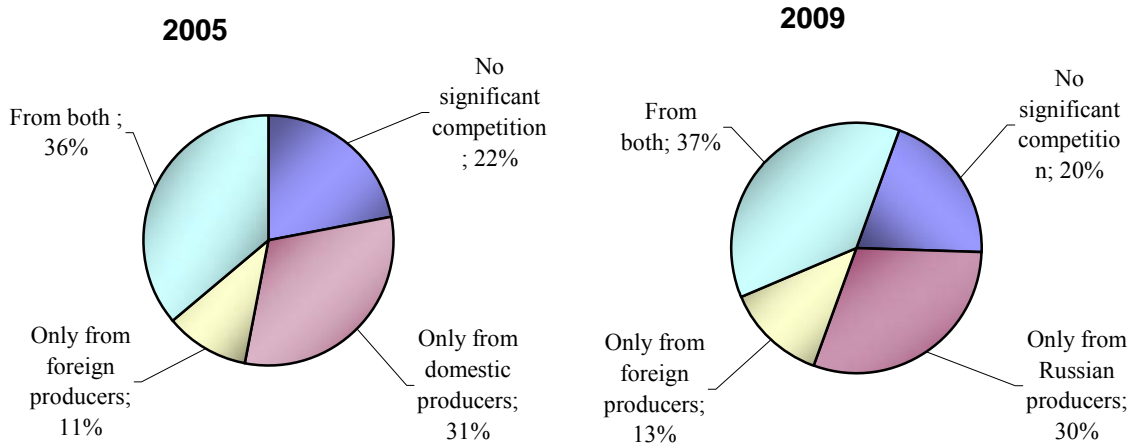


Figure 7. Distribution of industries by competition from various types of rivals - 2005 and 2009 (%)

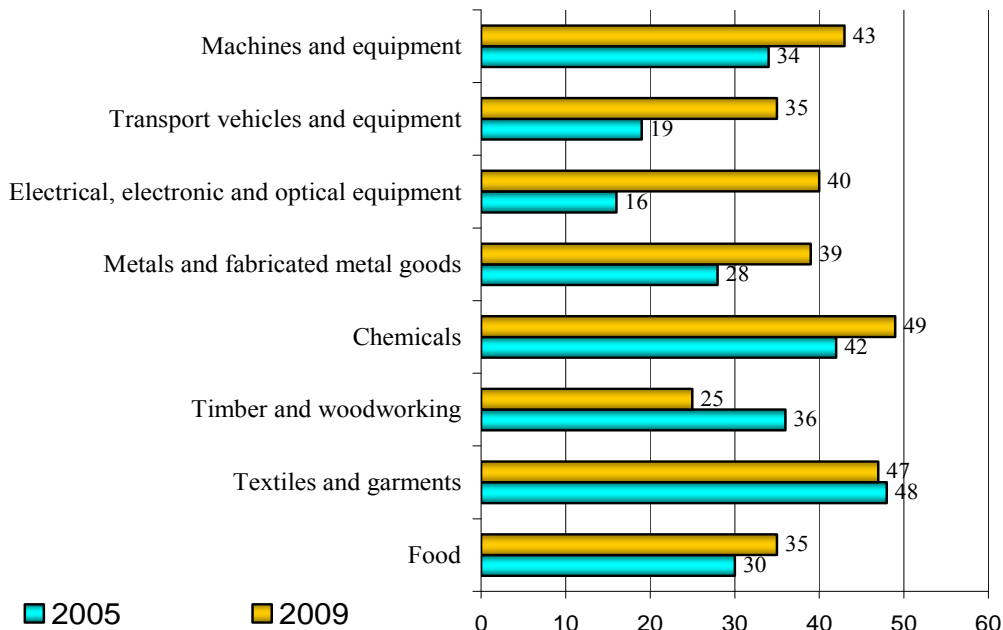


Figure 8. Share of firms facing significant competition from Russia-based foreign producers in 2005 and 2009 (%)

Changes in the market structure

As shown in the report on the first round of the monitoring, low competition often results from the fact that enterprises operate on local markets or niche product markets with high barriers to entry, while the markets themselves are not very attractive (in terms of size or returns) for stronger potential competitors. For example, in 2004, enterprises operating on a regional market (such firms accounted for about 90 percent), would on average have about a third of their sales inside the region. One could expect that during the boom (before the crisis struck in 2008) firms would try to enter new markets and expand into other regions of Russia. However, the 2009 survey suggests that the situation has changed only marginally. The overall sample data show that the aggregate share of direct supplies to enterprises and retail sales in the same regions edged down from 32 percent to 28 percent of total sales.

On the other hand, there were major changes in key product consumers, as the share of government suppliers increased by 50 percent – from about 25 percent in 2004 to about 40 percent in 2008 (this change was observed both for the overall sample and for the panel part of the sample). This signals a much higher role of the government in shaping demand for industrial products.

The share of suppliers to foreign firms operating in Russia increased markedly, from about 15 percent in 2004 to 25 percent in 2008, arguably on the back of the growing sector of foreign producers in Russia and in line with the above mentioned increasing competition from this type of competitors.

Indeed what is interesting is the trend in export operations, given that export growth *ceteris paribus* is the best proxy for increased competitiveness. The four years saw an increase in the number of exporters from about 46 percent in 2004 to 54 percent in 2008 – for the overall sample. The panel data suggest a somewhat lower, but still a noticeable growth in exporters – from 49 percent to 55 percent. However, the most dramatic changes are observed in the scale of exporting operations of those companies. In 2004, there were significant numbers of enterprises with a low share of exports in sales, indicating weakness and inconsistency of this component, based on one-off export supplies. The 2004 data show that 37 percent of exporting companies had exports accounting for less than 5 percent in their sales, while only 44 percent had exports exceeding 10 percent. In 2008, the picture changed dramatically, as the share of 5 percenters halved (down to 18 percent), while the proportion of companies with exports exceeding 10 percent in their sales soared to 62 percent of total exporters (see Figure 9).

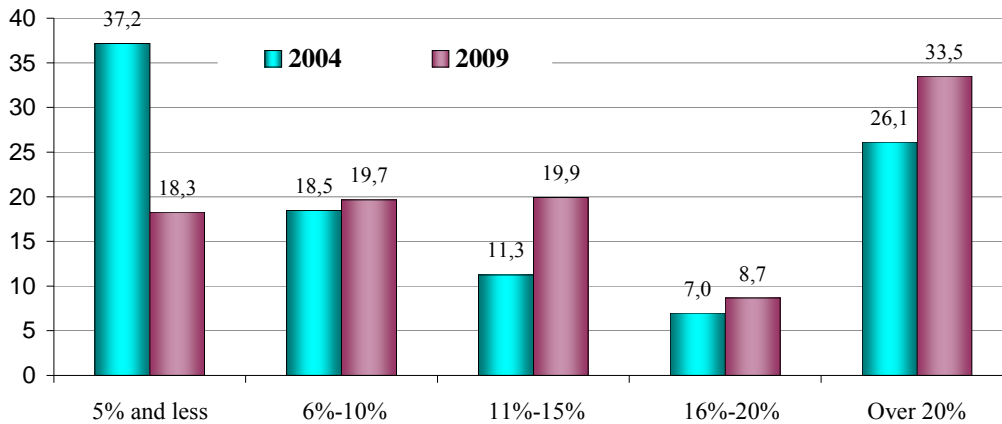


Figure 9. Exporters grouped by exports in total sales, 2004 and 2008 (panel data)

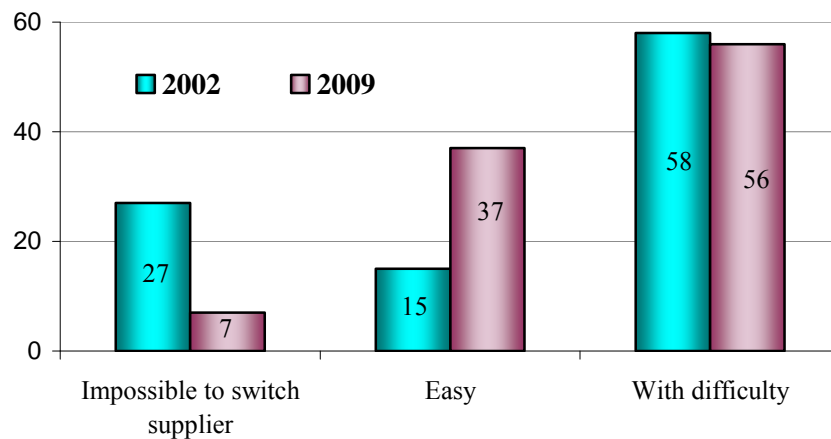
To sum up, proceeding from the World Bank criteria of exporters (over 10 percent of exports in total sales), the share of manufacturing exporters in the sample increased by almost 50 percent (from 20 to about 30 percent), implying an expansion of competitive companies in manufacturing sectors. Most sectors show an arguably important trend: while the non-exporters' group remains unchanged or may be marginally smaller, the exporters' group has seen internal redistribution of relative shares, with a contracting share of companies with a smaller role of exports in their sales and a growing share of those who increasingly see exports as an important source of revenue.

Evolution of intercompany relationships: emerging market model

A heavy dependence of Russian enterprises on suppliers and buyers, inherited from the Soviet-era organization of production, persisted throughout the transition period as an important feature of the Russian industry. Entrenched vertical integration gave rise to a specific kind of monopolism, when it was impossible to change one's supplier (or buyer) given the narrow specialization of each of them. This situation diminished incentives for competition and created impediments to effective business reorganization. Many enterprises were overburdened with non-core activities, making production management more complicated and reducing price competitiveness. However, in the absence of competition in the markets of similar products or services divestiture of non-core businesses could create further problems, making the enterprise dependent on still another supplier (its own ex non-core business established as a separate legal entity). The findings of our survey show that these impediments to competition and structural transformation are fading.

Weakening dependence of buyers on sellers

Over the last decade, producers have significantly increased their possibilities for supplier change (Fig.10). Now only a small fraction of enterprises considers a change of supplier impossible, while it regards itself the only possible supplier for its buyers. A sizeable share of enterprises (21 percent) assesses the costs involved in a change of supplier as relatively low. A somewhat smaller share (18 percent) believes that their buyers would easily switch away to a rival's product, while they themselves would find it difficult to find alternative suppliers. And almost the same share (16 percent) say that they can easily change their supplier, while their buyers would find it difficult.



Sources: data for 2002 were obtained in the course of a HSE study Structural Changes in the Russian Industry. See Structural change in Russia's manufacturing; ed. by Ye.G. Yasin, HSE, 2004 [Структурные изменения в российской промышленности; под ред. Е.Г. Ясина; ГУ – ВШЭ. М.: ГУ – ВШЭ, 2004]; data for 2009 come from the HSE IIMS survey of 2009.

Figure 10. Manufacturing enterprises: assessments of supplier substitution possibilities, % of total responses

For purposes of analysis, surveyed enterprises were divided into five groups by level and type of switching costs on the basis of their responses to questions regarding difficulties of supplier and buyer substitution. By switching costs we understand costs involved in search and change of counterparts along one's supply chain (See: Box. Enterprises grouped by level and type of switching costs).

Box 2. Enterprises grouped by level and type of switching costs.

Group 1 – enterprises incurring low switching costs both in product markets (relatively easy for the buyer to switch) and in input markets (relatively easy for the enterprise to change supplier).

Group 2 – enterprises incurring low switching costs for the buyer in product markets and high switching costs for enterprises in input markets.

Group 3 - enterprises incurring low switching costs for the buyer in input markets, and high switching costs for enterprises in product markets.

Group 4 – enterprises incurring high switching costs in one of the markets (input or product) and prohibitive costs in the other market.

Group 5 – enterprises with prohibitive switching costs in both markets.

To sum up, the first three groups include enterprises relatively flexible in product and/or input markets, while the last two groups cover enterprises with both input and product market rigidity.

An analysis of enterprises from different groups by switching costs shows that the level of switching costs is largely determined by the features of sector markets and by the market position of these enterprises. Higher switching costs are associated with larger enterprises and higher concentration of production in the sector. Another contributor to increased switching costs is apparently product specificity. Moreover, very high switching costs are involved in case of long-term (over 5 years) contracts with major sellers and buyers.

All the above intercompany relationships are not specifically limited to the Russian economy. Apparently, the specific Russian monopolism, created *inter alia* by the earlier decisions on locating enterprises, seems giving way to competition forces generic for any market economy. However, switching costs in Russia's manufacturing sector reflect the specifics of the sectoral structure and inter-industry linkages. The highest switching costs are observed for engineering enterprises, which compete in input markets with export supplies, while at the same time being dependent on scarce buyers.

The current economic crisis has confirmed the relevance of mutual dependence between suppliers and consumers for their behavior. It affects firms' competitiveness and informs selection of competition methods. Most vulnerable proved the businesses constrained on the one hand by their dependence on major suppliers and on the other by competition on the side of end product sales. However, it is this group of enterprises that offers the most buyer-friendly combination of trade credit and payments in shipments, while as exposed to demand shocks these enterprises tend to put more effort in looking for new buyers (entering new markets).

Enterprises facing low switching costs tend to be more prepared for price competition both via discounts and via straightforward price reduction, as well as (not surprisingly) to be

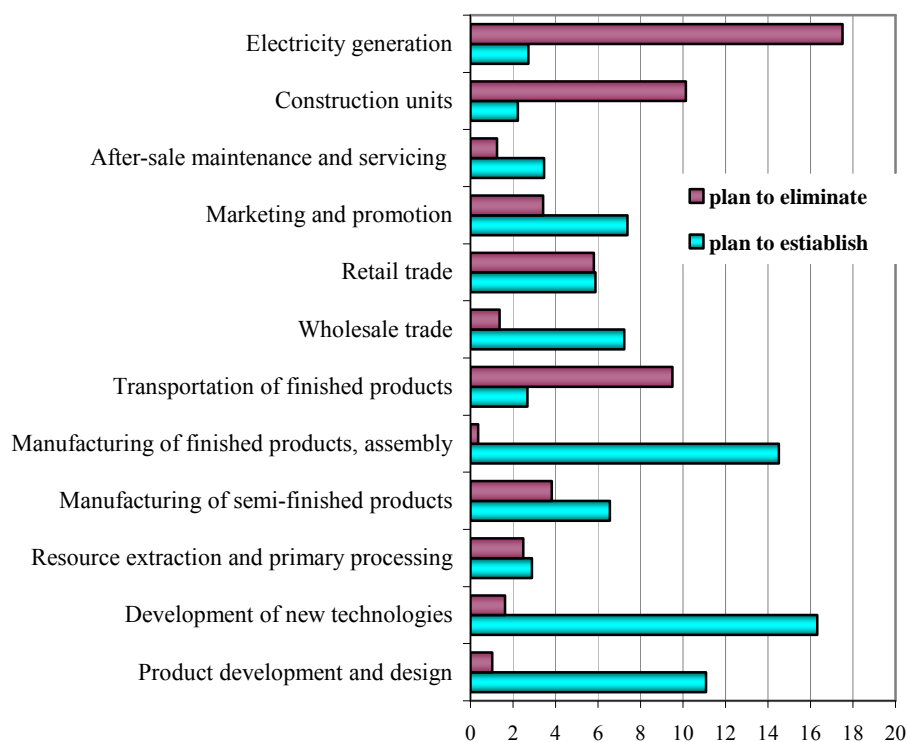
more aggressive in looking for new buyers. On the other hand, they are less willing to cooperate with their seller counterparts, as they prefer seller switching to seller cooperation. Enterprises facing high switching costs and highly dependent on single source suppliers (as evidenced *inter alia* by their readiness to implement substitution production), tend to be less inclined to give discounts and cut prices. However, they are willing to cooperate on product quality, including by providing technical assistance. A distinctive trade-off is observable in relations of businesses with buyers and sellers: increased switching costs lead to a higher role of cooperation and simultaneously to a more limited role of price competition.

Firm organizational transformation

As the new, more flexible and market-based pattern of relationships with business counterparts takes shape, it also gives rise to a gradual retrenchment of *subsistence economy* practices and organizational consolidation resulting in a reduced number of production and supply units within one enterprise. Compared with the 2005 data, vertical integration in the surveyed enterprises has scaled down, while their organization has streamlined. In 2005, an average enterprise had 6.4 out of the total units listed in the questionnaire (from resource extraction to retail trade), while in 2009 – only 5 out of the 12 units. Given that the organization of Russian enterprises is often replete with suboptimal links, its streamlining should enhance management efficiency and reduce costs.

Moreover, compared to the first round of the survey in the year of 2005 a relatively bigger number of top managers in manufacturing say that they plan to eliminate certain units. While the share of those who plan to establish a new unit has remained basically unchanged since 2005 (almost half the respondents have such plans), the proportion of managers willing to spin off at least one unit has increased from 17 to 25 percent. In other words, looking ahead, the streamlining trend is likely to continue

These plans as regards creating and eliminating constituent units may suggest to what extent firms' demand for various activities and operations may be met by contracting with other companies (outsourcing). (Fig. 11). The three activities that manufacturers prefer to outsource are electricity generation, construction and transportation. Outsourcing may be considered as a sign of relatively well developed market competition with the low probability of dependence from the suppliers.



Note. The shares have been calculated for the respondents who have (or have not) respective units in their enterprises as of the date of the survey.

Figure 11. Share of respondents planning to establish new units or eliminate certain production links in their enterprises

On the other hand, the three most popular envisaged new units include new technology development, new product design and production/assembly of finished products. The first two activities reflect the current demand for innovation in Russia's manufacturing sector. To implement innovation, a company needs at least to adapt the off-the-shelf innovative technologies and products to their in-house specifics, if it does not come up with its own developments. This is evidenced by a direct positive correlation between the magnitude of innovation in a company and the fact that it has an in-house R&D and innovation unit.¹²

The fact that so many resource or semi-manufacturers plan to establish units to produce finished products reflects advantages of switching to higher-added-value activities. Therefore, when enterprises do add further units and links to their organization, they do not have in mind any non-core activities. Indeed, this evidence supports the conclusion that the business model in the Russian manufacturing sector is gradually changing.

¹² See: K.R.Gonchar *Innovative behavior of manufacturing: develop vs adopt*/ K.R. Gonchar// *Voprosy Ekonomiki*. – 2009. № 12. – p. 125 – 141 [Гончар К.Р. Инновационное поведение промышленности: разрабатывать нельзя заимствовать / К.Р. Гончар // *Вопросы экономики*. – 2009. № 12. – с. 125 – 141].

Competitiveness and geography: problems of manufacturing in small and company towns

Room for streamlining organization and seller/buyer switching costs may be significantly limited by the geographical location of enterprises, specifically, by their location in a small town. Moreover, if it is a small community with underdeveloped infrastructure it would mean a small local market and/or high costs of delivery to end consumers. As shown in our previous studies, enterprise location was one of important external constraints to competitiveness. Estimates based on data from the two monitoring rounds indicate that average labor productivity per worker tends to decline as the size of the town gets smaller (Fig. 12). A comparison of the 2004 and 2007 data sets suggests that the overall productivity growth did not help to significantly close these gaps.

The importance of location is most apparent in textiles and metals. Estimates indicate that on average a doubling of the town's size contributes 5 percent to productivity growth.

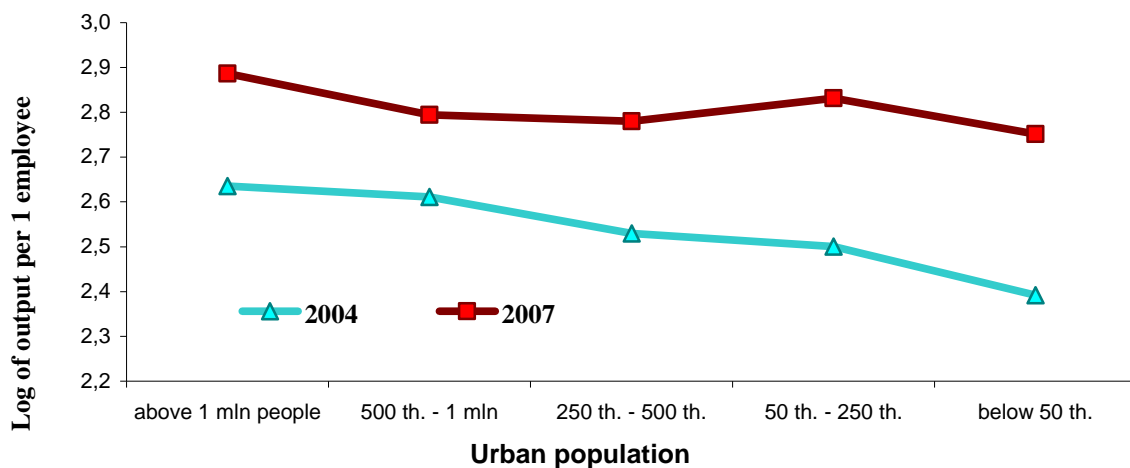
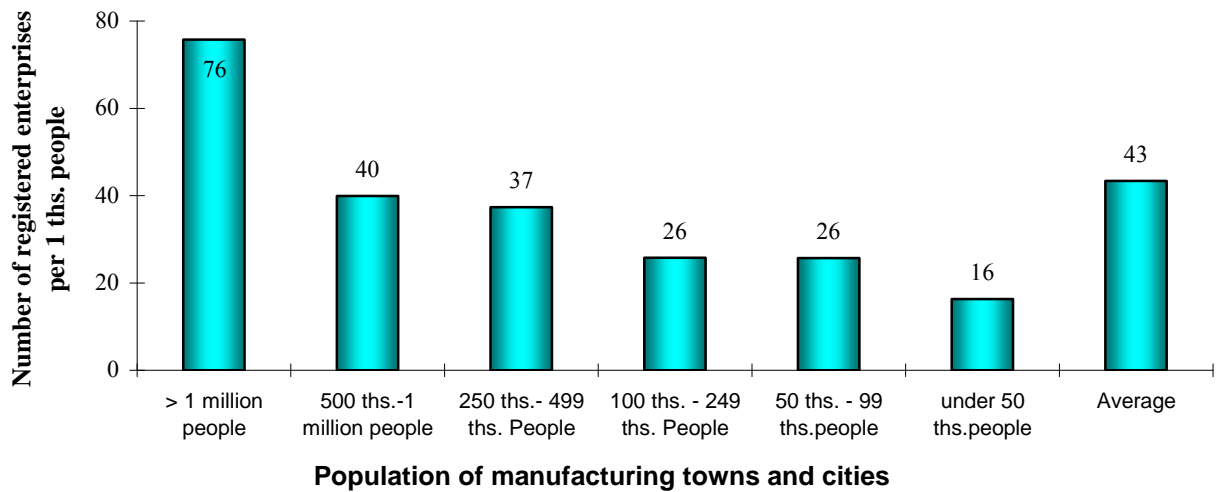


Figure 12. Labor productivity in towns with varying population numbers

One reason for these labor productivity gaps between towns of varying size is that enterprises in smaller towns are still in the process of restructuring. They preserve their traditional self-sustaining organization, and position themselves in low-profit links of value added chains and in low price segments of consumer goods. A sizeable contribution to higher costs at such enterprises comes from their heavier social burden compared to larger communities.

Smaller towns feature low density of economic activity. Thus, the number of registered businesses per 1000 people declines from 75.7 in cities with population over 1 million to 16.4 in towns with population below 50 thousand (Fig.13). This would inevitably undermine the capacity of such communities to absorb redundant labor, and also would limit their leeway to

streamline production and outsource non-core and support functions, perpetuating the “subsistence approach”.



Source: HSE IIMS survey and the SPARK data base

Figure 13. Economic density by size groups of towns and cities, where the surveyed enterprises are located: number of registered enterprises per 1000 people

However, a small town location may generate not only costs for an uncompetitive enterprise but also certain benefits. In fact, inefficient enterprises in small towns tend to die much more rarely and slowly than their peers in bigger communities. In smaller towns, additionally protected against competition by distance, poor roads and poverty, inefficient enterprises may struggle along for years propped up by social or other considerations, as well by lack of any alternative.

The survey has revealed that while in towns with population above 50 thousand only a fifth of enterprises do not face any competition, in small towns with population under 50 thousand this proportion is as big as 30 percent.

A similar picture is observed when an enterprise is located in a single industry town or city, dominated by one plant. Enterprises in such locations are significantly less productive than their peers in diversified towns and cities (Fig. 14). However, the picture is very different across sectors: this factor is not material for chemical industries, while it is quite relevant for textiles, electrical and optical engineering.

However, our study shows that businesses in small and company towns can be competitive given that economic density in the area is more or less adequate, with many small businesses well developed.

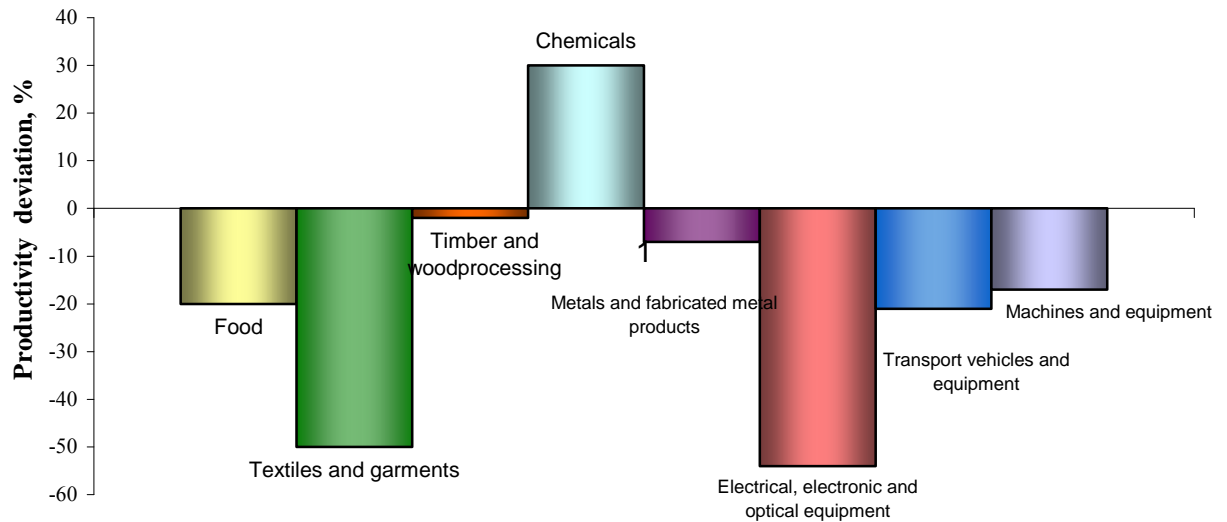


Figure 14. Deviation of firm productivity in company towns from industry average in the rest of the sample (the sectors are classified according to the All Russian Classification of Economic Activities).

Technology upgrading and innovations

Growing demand, access to easy and cheap credit, and sufficient profitability before the crisis basically made it possible for most enterprises to embrace the investment-based model of economic growth, involving renovation of their fixed assets and technologies. Some enterprises made good use of this window of opportunity. Almost 40 percent of enterprises were very active in capital investments in the years just before the crisis. However, many of them had to face their investment cycles disrupted by the crisis. As a result, Russian enterprises continue to lag behind their rivals in technological standards.. Self-assessments of the technological level of production indicate (Fig. 15) that on average only a fourth of the surveyed respondents believe that their technological level is in line with that of their foreign competitors. Another 30 percent of companies think that their technologies meet the highest domestic standards.

Assuming that the “sound technology performance” watershed lies roughly at the level of the Russian best practice, the chemical industry would come out as the top performer. The timber and metals sectors have also performed better than the sample average. However, the timber industry has also shown a coexistence of firms meeting the most stringent international standards and those hopelessly behind, both in high proportion. This may be an evidence of extremely high heterogeneity of this sector. The poorest performance has been reported for the transport vehicles and machines and equipment engineering.

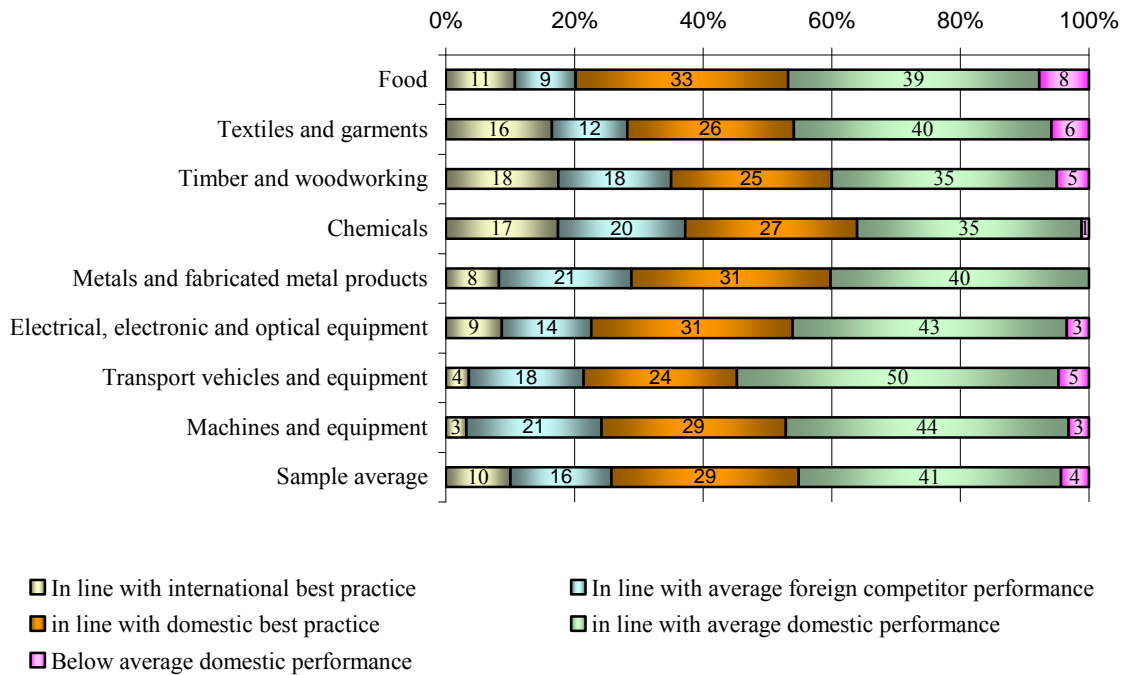


Figure 15. Technology performance of key products, % of total responses, 2009

A comparison of the 2005 and 2009 findings shows that the sectors have not come closer together in their technology absorption performance. On the opposite, the leaders have rather become stronger, while the lagging companies have slipped further behind. In other words, most manufacturing industries are ensnared in a catch 22 situation or a vicious circle of backwardness as described by academician V.Polterovich¹³: innovation cannot drive economic growth, as backward production does not create demand for innovation and suppresses supply, while absent supply in its way tends to be a drag on demand.

The overall innovation performance has not changed visibly: the panel has registered an unchanged number of formal innovators¹⁴ (Fig. 18).

In fact, if we deviate from the formal criteria of innovator enterprises and include in this category those which on top of product and technology innovations also had some R&D expenditure (essential today at least for successful technology adoption and use), it would appear that the share of innovative enterprises contracted during 2005-2009. The deepest fall will be then observed in the low-tech timber and food sectors.

¹³ V.M.Polterovich, The Vicious Circle of Backwardness: Russia has chances to escape. // Pryamye Investitsii. 2009, № 5(85), p. 8-11 [Полтерович, В.М., «Ловушка отсталости: Россия имеет шансы выйти из нее. // Прямые инвестиции, 2009, № 5(85). С. 8-11].

¹⁴ We classify as formal innovators those enterprises that have reported technology innovations over the last three year, including a new product offering and/or new technology absorption. We have additionally shown enterprises reporting high-tech exports (among exporters) and those who gain competitive advantages via their new to market product innovations.

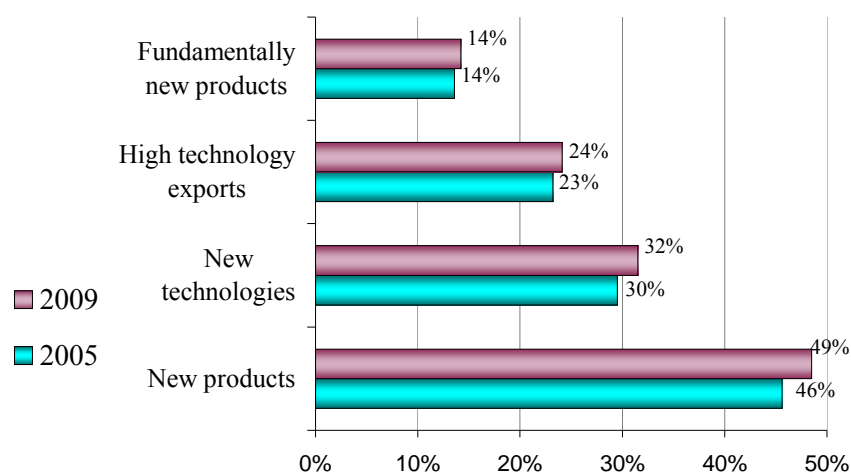


Figure 16. Innovation performance metrics in 2005 и 2009, % of total responses

While grouping the companies, we have taken into account not only their use of innovation, but also their R&D spending and the specificity of the markets which new products target. Table 1 shows that the manufacturing sector is dominated by abstainers (no innovation) and imitators, who opt for adopting off-the-shelf solutions. A mere fifth of the companies while absorbing innovation have at least the whole domestic market in mind, with most of such enterprises concentrated in electronic engineering. Global innovators are most numerous in the chemicals sector and are altogether absent from the timber sector.

Table 1.

Grouping enterprises by their innovation performance in 2009: % of total responses

	Global innovators, %	Domestic innovators, %	Innovators for in-house use, %	Imitators, %	Abstainers from innovation, %
Food	1,3	11,5	3,0	37,9	46,4
Textiles and garments	1,1	10,1	6,73	36,0	46,1
Timber and woodworking	0,0	4,9	3,7	30,9	60,5
Chemicals	9,1	19,3	18,2	21,6	31,8
Metals and fabricated metal products	3,1	18,4	7,1	29,6	41,8
Electrical, electronic and optical engineering	6,0	32,5	10,3	17,9	33,3
Transport vehicles and equipment	3,5	29,1	5,8	15,1	46,5
Machines and equipment	2,5	27,6	9,8	20,9	39,3
Average	3,0	19,1	7,5	27,4	43,9
Number of responses	29	183	72	262	411

Note: Global innovators offer new products for the global market, while using in-house research and development. Domestic market innovators absorb products or technologies new for the Russian market, while doing at least partial in-house R&D. Innovators for in-house use have their own R&D, but their new products and technologies are new only for their own enterprise. Imitators adapt and absorb off-the-shelf technologies and products, they have no in-house R&D. And, finally, abstainers have neither new products, nor technologies, nor R&D expenditure.

Technology underperformance is among the crucial reasons behind low competitiveness of Russian industrial firms. Enterprises perceiving themselves in line with the national best practice in technology performance and above have productivity 45 percent higher than all the other enterprises in the sample. Accordingly, *ceteris paribus*, proactive investment behavior has been raising productivity by 26 percent, while proactive innovation behavior (eyeing at least the national market backed by in-house R&D spending) has been adding another 15 percent to productivity gains.

And still, the trends observable prior to the crisis provide good reasons for cautious optimism. Unlike in earlier years, when proactive innovation was not always rewarded by improvements in competitiveness, the situation was more healthy and market-driven by 2009. Innovative enterprises now are really more competitive. Moreover, competitiveness improves as innovation goes deeper (Fig.17).

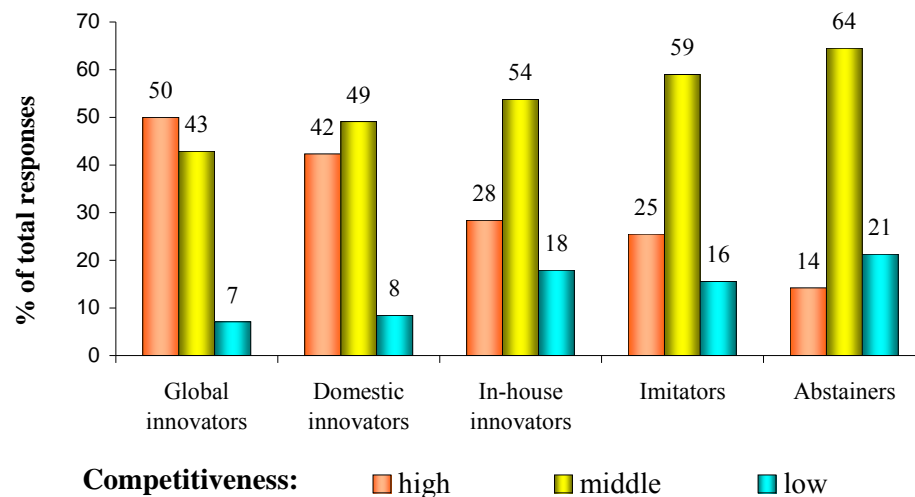


Figure 17. Association between firm competitiveness and firm innovation performance

An assessment of the current trends suggests that an innovative core inside Russia's industry is coming into shape. On the one hand, the proportion of enterprises with non-zero R&D investments decreased from 55 percent in 2005 to 36 percent in 2008. On the other hand, the group of enterprises continuing their R&D spending saw a contracted proportion of micro-spenders – under 1 million rubles – and a respectively increased share of bigger spenders on R&D. (Fig. 18).

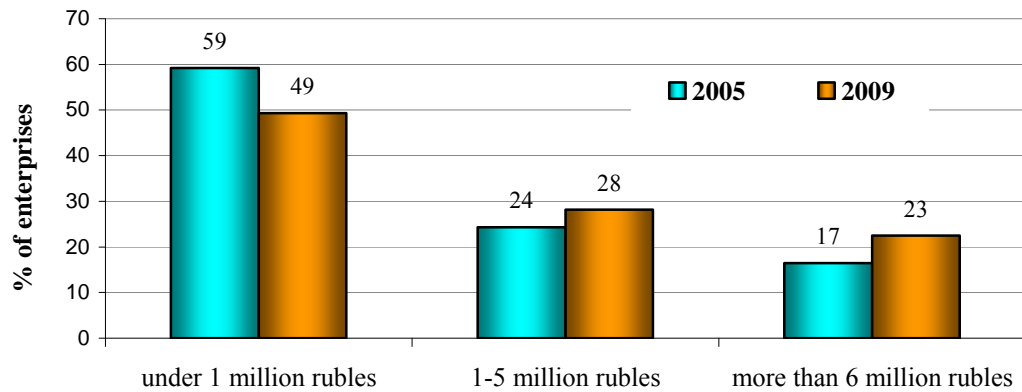


Figure 18. Distribution of enterprises by the magnitude of their R&D spending, %

In 2008, a noticeable proportion of highly competitive and productive enterprises leveraged innovation to drive growth and get competitive advantages on the back of improved production technologies and pioneering products. It should be noted that as regards economic efficiency there is not much point or any reason in opposing in-house R&D and borrowed technologies. Both approaches have revealed a strong relation to competitiveness, therefore it is useful to encourage both irrespective of the sector.

Development of corporate governance: from Russian specifics to international practice

Throughout almost the whole transition period, two key features of Russian corporate governance have been unanimously noted by researchers. Russia features a very high equity concentration ratio, giving rise to tight control of the dominant owner over the corporate processes and management bodies, sometimes to the detriment of minority shareholders.

Our data suggest that the Russian system of corporate governance has been evolving toward convergence with systems of most advanced economies. These developments provide for a gradual future improvement of corporate governance in Russia.

While in 2005 as much as 75 percent of business companies had controlling owners (above 50 percent of the company's stock), in 2009 such companies accounted for 64 percent of the sample. Panel data indicate that the proportion of companies having a controlling owner has shrunk by more than 6 percentage points for all business companies and by more than 4 percentage points for joint stock companies (AO).

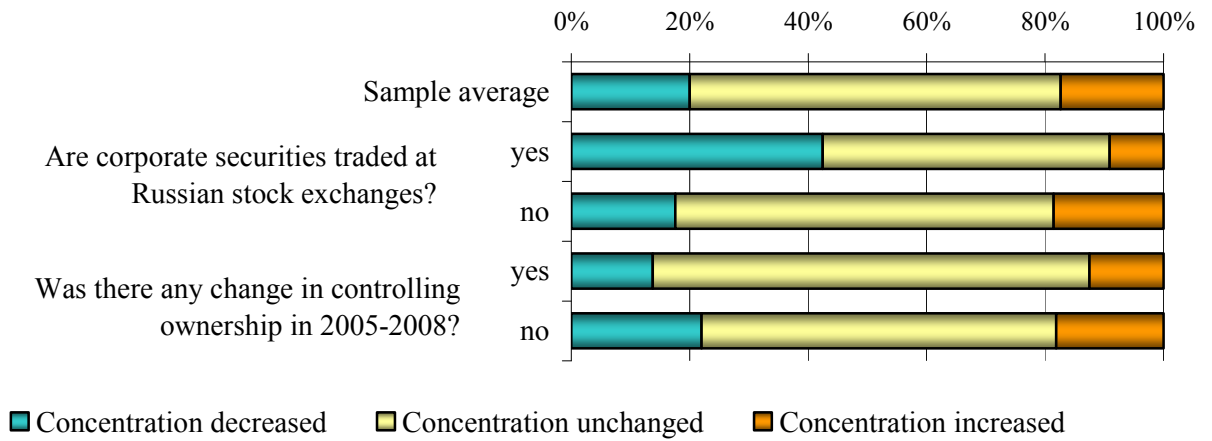


Figure 19. Changes in ownership concentration and external corporate governance mechanisms (panel data)

This development is observed more as a tendency rather than as a universal phenomenon. A panel data analysis shows (Fig. 19) that each fifth firm has decreased its ownership concentration, while each sixth company has increased it. Lower concentration has been a result of deliberate measures by dominant owners, as incumbent business owners were more frequently reducing the ownership concentration ratio. Increased public offerings and trading in company stock and bonds further contributed to the same effect. It should be emphasized that stock exchange funding increased during this period, as the share of JSC publicly trading in their securities (shares and bonds) doubled over 4 years – from 4.8 percent to 9.6 percent.

Another important development over the recent years was the emergence and strengthening of the trend to transfer control from owners to hired managers. According to the data from the second round of the monitoring, 41 percent of business companies in 2009 had no major shareholders among their top managers, while their chief executive officer had no shares (ownership interest) in the companies under their leadership at all. A comparison with data obtained in the course of a 2005 survey of 822 JSC¹⁵ shows a 10 pp increase (i.e. roughly by a third) of companies engaging hired managers in the group of large and medium sized manufacturing JSC.

It is important to emphasize that the trend for separation of ownership from executive control is supported first of all by enterprises participating in corporate integration. Indeed,

¹⁵ For a more detailed discussion of the findings of this study see: Dolgopyatova, T., Iwasaki, I., Yakovlev, A., eds., 2009. Organization and Development of Russian Business: A Firm-Level Analysis, Palgrave Macmillan, Basingstoke, 2009 2007.]

when a company joins an integrated business group, its owner manager would often be replaced by a hired manager. The survey data indicate that over 70 percent of subsidiaries within holdings are already headed by hired managers, while it is only 32 percent for independent enterprises and only 23 percent for parent companies.

Separation of management from ownership creates incentives for large owners to use standard internal corporate procedures to oversee the operations of executive management, thus boosting demand for corporate governance rules and procedures on behalf of business.

And, finally, one more important trend should be mentioned, specifically, a wider participation of foreign owners (investors) in the equity of Russian manufacturing firms. In early 2000s, empirical studies identified 1-2 percent of foreign interest in manufacturing. The 2005 survey of 822 JSC found out that on average foreign investors accounted for up to 4 percent of equity in manufacturing, while JSC with foreign participation accounted for less than 10 percent. These figures are also consistent with the data obtained in the first round of the monitoring: 8 percent of the surveyed JSC had foreign co-owners, whose interest was on average 3.6 percent.

Table 2.

JSC with foreign participation by sectors (panel data), %

	2005	2009	Change over 4 years, p.p.
Total JSC sample	8,2	11,4	+3,2
Food producers	4,9	6,0	+1,1
Textiles and garments	3,0	3,8	+0,8
Timber and woodworking	16,7	18,2	+1,5
Chemicals	18,4	28,1	+9,7
Metals and fabricated metal products	8,8	13,3	+4,5
Electrical, electronic and optical equipment	10,0	13,9	+3,9
Transport vehicles and equipment	10,5	17,6	+7,1
Machines and equipment	1,6	2,0	+0,4

In the panel part of the JSC survey the share of foreign ownership increased almost by 2 percentage points from 2004 to 2008, with the proportion of companies with foreign participation expanded by a third to make 11.4 percent. The trend for increased foreign ownership of companies was across-the-board, with no visible signs of concentration in individual sectors. The proportion of JSC with foreign ownership increased across all the economic activities without exception (Table 2), and most of all in the chemical industry, manufacturing of transport vehicles and equipment, and in the metals sector.

Ownership structure and firm behavior: role of foreign shareholders and the state

Russian (and other) economists and policy-makers have long been heatedly debating the impact of ownership structure on business operations. The primary issue of contention is of course the role of government ownership. However, the role of foreign ownership also gives rise to divided opinion. In Russia, it has always been especially difficult to pinpoint and dissect the ownership factor from many others, not in the least because of low transparency of ownership structures. This is why empirical studies (not very numerous) would generate differing, sometimes conflicting results.

Our study suggests that firm behavior and business competitiveness have developed more close links to the structure of equity capital. Specifically, there has emerged an explicit positive correlation with foreign co-ownership and a somewhat less pronounced negative correlation with government ownership, earlier observed both in advanced and transition economies.

Foreign participation and its beneficial impact

Foreign equity participation is reported by each 10th business company in the 2009 sample, while more than half of them have controlling foreign owners with a stake over 50 percent. Though the total share of foreign investors in the sample is not very high (especially in contrast to other countries) averaging 6 percent of the total equity, foreign owners in Russia tend to have rather large stakes. In companies with foreign co-owners their interest would be exceeding 60 percent.

Looking at the sample across the sectors, on average foreigners hold almost a quarter in chemicals, a sixth in the timber and woodworking sector, with the lowest participation at a mere 2.4 percent in machines and equipment. Foreign investors tend to hold bigger stakes in companies employing above 1000 people.

Foreign participation boosts vigorous modernization behavior of enterprises (Fig. 20), promoting comprehensive development of business and alignment of strategic and day-to-day managerial objectives. Enterprises with foreign ownership are seeking market leadership (43 percent of those), as they are more inclined to strategic behavior and more active in investments. These enterprises are looking for strategic partnerships, first of all, internationally. Strategic targets are based on benchmarking with foreign competitors and significantly more frequent leveraging of other management technologies, business restructuring measures and measures to enhance accounting and reporting.

We sometimes hear that foreign owners are not interested in innovative development of their Russian assets, as they focus on their assets at home. Our study shows that it may be not quite so. Firms with foreign interest demonstrate a more proactive innovation behavior (Fig.21). Over 60 percent of them offered new products, while over 50 percent developed new technologies. As a result, firms with foreign participation include 50 percent more innovative firms. However, we should make a reservation on this point that it may be due to the positive selection effect, i.e. because foreign investors initially tend to cherry-pick more efficient enterprises for their participation. Whatever the case, firms with foreign interest show twice as high a proportion of top competitive firms (competitiveness leaders) than other business companies.



Figure 20. Behavior profile of companies with foreign equity

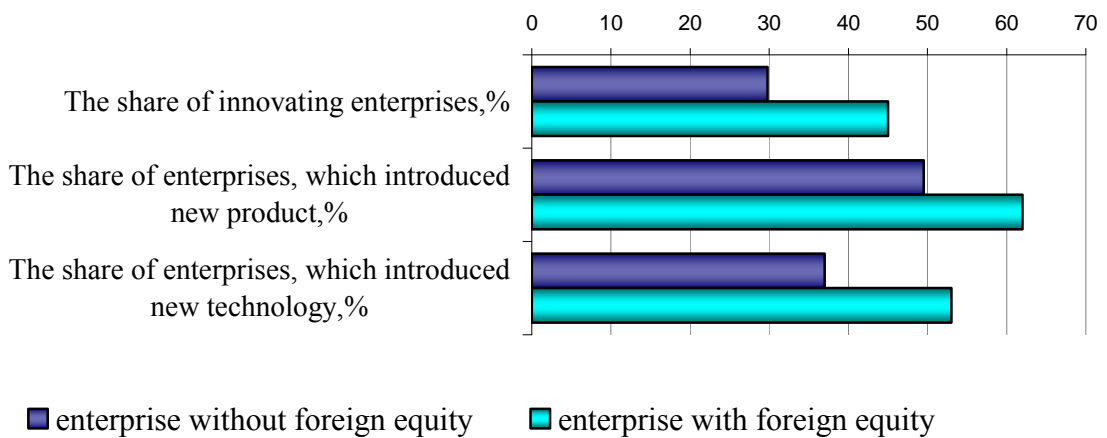


Figure 21 . Innovation activity of enterprises with foreign equity

It should be also noted that our survey does not support a general understanding that foreigners come to Russia exclusively to tap the domestic market. In real fact, almost 89 percent of enterprises with foreign equity are exporters, notably, not only in resource-intensive sectors (chemicals, metals, timber). These enterprises have exports shares in their sales 4 times exceeding those for enterprises without foreign equity. Another feature to be noted are target countries of exports: foreign-controlled companies are more than other exporters targeting non-CIS countries. These companies take 39 percent of their exports to non-CIS vs 21 percent of non-CIS exports for other enterprises.

Changes in government ownership

Earlier empirical studies revealed that about each fifth or sixth JSC had public authorities of various levels among their shareholders, with 7-8 percent of equity holdings. All Russian and foreign experts agree that the second half of the 2000s saw an increasing role of the federal government in the economy. It included expanded equity participation in many companies, establishment of government corporations and government holdings to receive stakes in a number of enterprises, while government-controlled companies actively engaged in corporate control transactions. However, the government focused its invasion mostly on major resource companies, including the blue chips and the defense sector.

While we in no way seek to dispute these facts, our data, however, suggests that contrary to the general perception large and medium-sized manufacturing enterprises are currently seeing decreasing government participation on average, as companies of mixed ownership are getting fewer.

While in 2005 each sixth JSC in the survey had a government stake, in 2009 it was only each thirteenth. Panel data (Fig. 22) indicate that the proportion of JSC with government-owned equity collapsed by almost 40 percent in 2009, while only every eleventh JSC (under 9 percent) in the survey reported government participation, with over 40 percent of them holding a controlling stake. The average government interest also edged down by 1.5 percent, but solely due to decreased stakes of regional and local governments.

On average, the government controls about 3.4 percent of JSC equity. Meanwhile, in companies with government participation federal authorities would hold 47 percent, while regional and local – 35 percent of equity. The government has a significantly higher stake in larger companies employing above 1000 people and in two economic activities: manufacturing of transport vehicles and equipment, and electrical, electronic and optical engineering.

In 2009, the survey covering enterprises of all forms of ownership and incorporation included 11 percent of companies with government interest or government and municipal unitary enterprises. Enterprises with government participation also demonstrated a somewhat different behavior. Such companies would often set ambitious goals without supporting them with appropriate behavior and management methods.

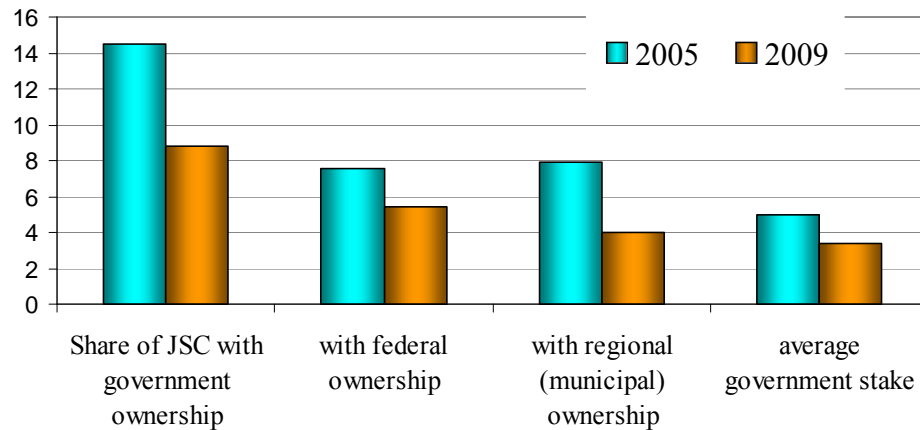


Figure 22. Government participation in JSC equity (panel)

For example, enterprises with government participation tend to seek absolute leadership in global markets (over 53 percent indicated this goal). However, this goal is not supported by investment or innovation activity, or by advanced management technologies. It appears that these companies are not much different from other firms in how frequently they use most management technologies, but they much more rarely utilize technologies like brand creation and promotion, business process diagnostics and restructuring, and outsourcing of functions and business processes. In the past, these enterprises showed low investment and innovation performance.

Quality of management: sound management is essential for competitiveness

For many years, poor management of Russian enterprises associated with inadequate management skills has been seen as a key weakness of the Russian economy. Meanwhile, it is management innovations and enhancement against the backdrop of weak investments and low performance in technological innovations that drove firm efficiency in the first half of the 2000s. Our earlier study found out that by 2004-2005 the quality of management at Russian manufacturing enterprises was highly varied. Some enterprises were leveraging a wide array of state-of-the-art management technologies and engaging MBA graduates, while others did not use even the most elementary modern production management methods.

An empirical survey may assess the quality of management by the number of management technologies employed. Generally, the higher the number, the better would be the management. Distribution of enterprises into three groups¹⁶ shows that about a third falls into a group with underdeveloped management, about a half performs at a mid-range level, while a fifth has management above the average. It is noteworthy that a long tail of poor performers in management is quite characteristic for other BRIC countries (e.g. for Brazil and India) and is not specifically limited to Russia¹⁷.

Despite the limitations of the indicator used to measure the quality of management, many determinants identified at Russian enterprises are surprisingly similar to those discovered by cross-country surveys. Thus, the quality of management appears significantly better in larger enterprises, in foreign-owned companies and in exporters. (Fig. 23). In the Russian context, a better performance is also seen in companies, which make part of integrated business groups, and in firms established in 1992-1998. The Russian picture differs from other countries as evidenced by similar surveys in that there is no satisfactory evidence of poorer management in state-owned enterprises. However, as indicated above, there are some observable differences in certain areas (frequency of use of specific management technologies). Nor do we have any evidence of better management of enterprises headed by hired CEOs versus owners.

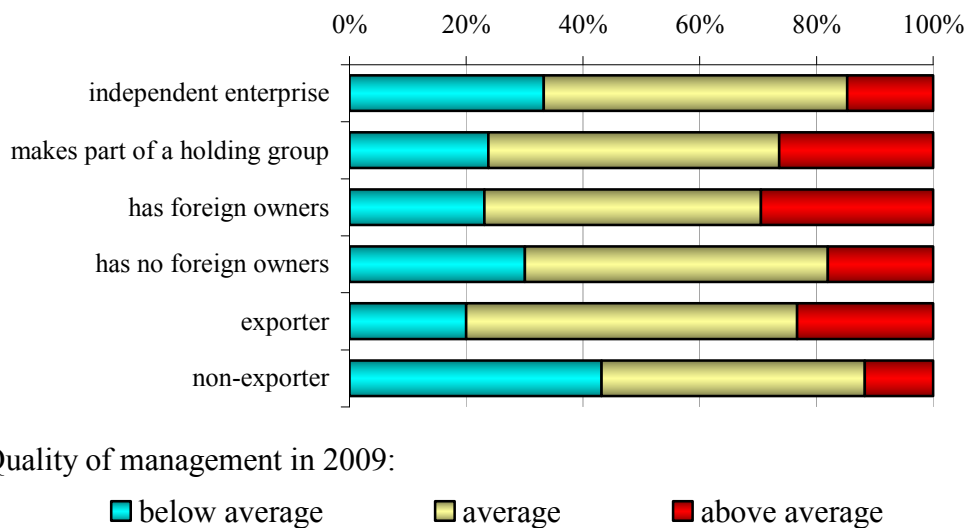


Figure 23. Quality of management across groups of enterprises in 2009, %

¹⁶ The highest possible number of management technologies assessed in the survey is 14, the sample average is 4.12, and the median is 4. We have classified the surveyed enterprises into three groups by their management performance: “considerably lower than average” (0-2 technologies utilized); «average» (3-5 management instruments); and «above average» (6 and more).

¹⁷ See Bloom, Nickolas & van Reenen, John. Why Do Management Practices Differ across Firms and Countries? Journal of Economic Perspectives, 2010, Volume 24, Number 1, Winter 2010, pp. 203-224

The quality of management is an important contributor to firm competitiveness. Other variables constant, firms with management performance “above average” tend to become leaders 5+ times more frequently than firms with management performance “below average”.

Competitiveness leadership is most related to such management technologies as branding and ISO certification. A significant association between competitiveness and branding is a new development, not observed by the survey of 2005. The value of trademarks and brands was growing in recent years, as evidenced by the fact that branding was adopted by a quarter of the enterprises in the panel, which had not been involved in this activity before 2005.

A separate mention is deserved by the progress achieved in ISO certification. By now half of the industrial enterprises have been certified – 11.2 percentage points more than in 2005 (growth by 8.1 percent for the panel). While recognizing all the known facts of fraud, when some companies buy ISO certificates, honest certification is apparently also progressing, including business process streamlining and management enhancement. This is especially the case for larger enterprises, with two thirds of certified enterprises in the group employing 500-1000 people, and above 80 percent of companies in the group of companies employing above 1000.

A recent observable development is the use of management innovations not instead but along with major investments and technological innovation. This suggests that innovation in a broad sense as it is seen internationally may be applicable to some enterprises, i.e. innovation in business models, products and processes. The share of enterprises leveraging various management technologies is 1.5-2.5 times larger in the group of innovative and investment proactive enterprises (see Fig. 24). As a result, each third enterprise in this group demonstrates management better than average, while in the group of non-innovative and non-investing (or investing on a small scale) enterprises it would be only every tenth.

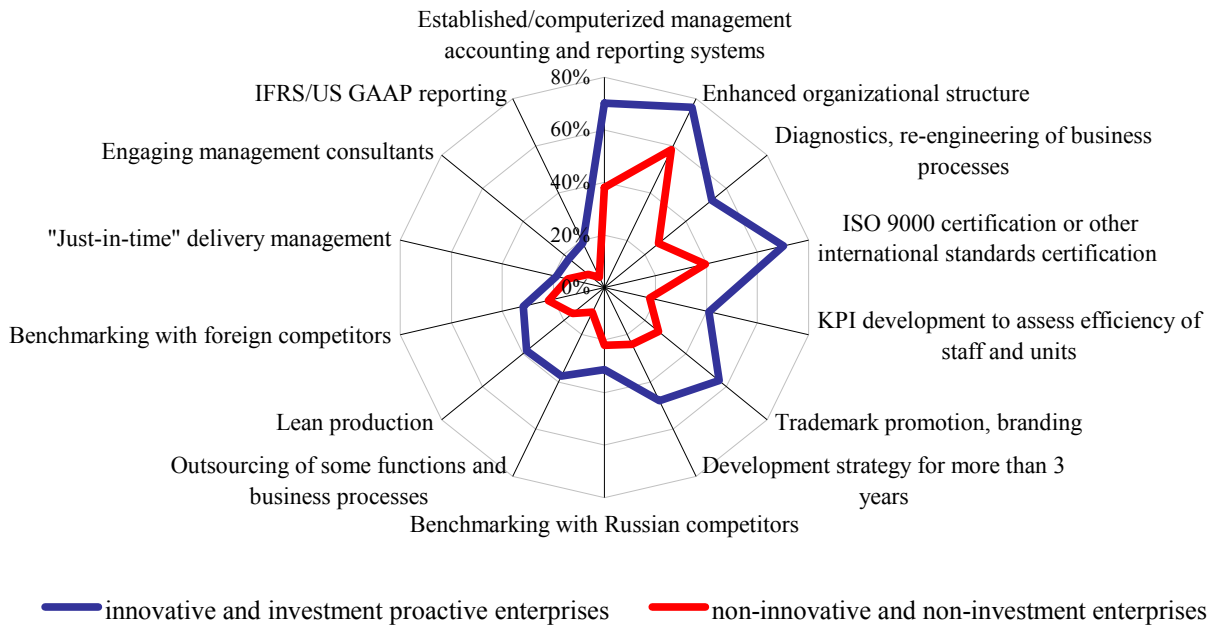


Figure 24. Use of management technologies in groups of enterprises by innovation and investment activity, %

Still another positive development in management is the longer planning horizon. The findings show that 2005-2009 saw a sizeable contraction (by 15 percentage points) of the proportion of enterprises unable to project beyond one year. Now more than half of the companies, despite the crisis, confidently plan for 1 – 3 years ahead (Fig. 25).

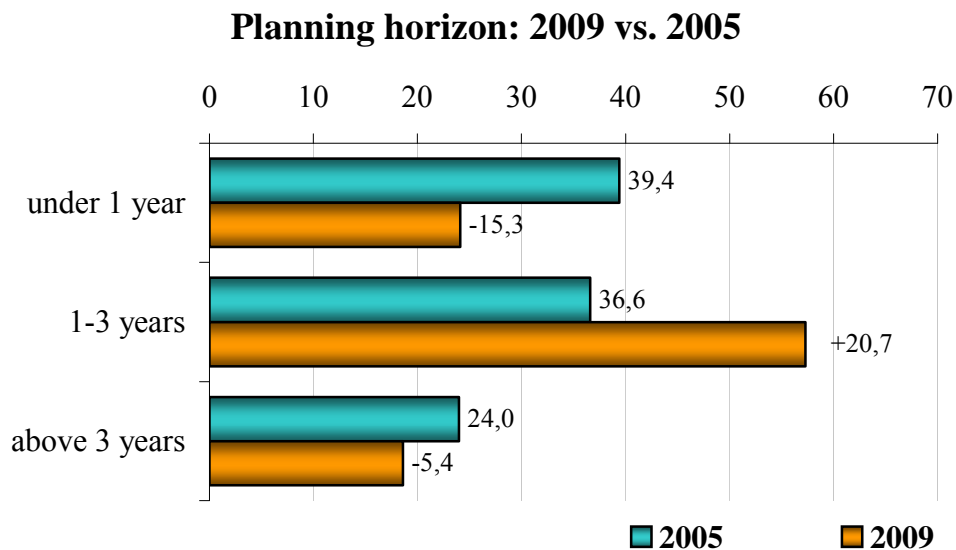


Figure 25. Planning horizons in 2005 and 2009 (% of responses)

This trend is fully observable with panel data as well. Half of the 159 firms that back in 2005 indicated a planning horizon under a year, in 2009 claimed they could plan for 1-3 years ahead, while 15 percent of them said they could plan for more than three years.

Generally, a longer planning horizon is typical for enterprises in holding groups, for enterprises employing over 500 people and also for companies geared toward innovation or imitation. The longer is the planning horizon, the more often enterprises tend to practice systemic improvements of management and major investments.

During the period from 2005 to 2009 management skills improved significantly. The number of firms employing MBA graduates of Russian business schools and universities doubled from 9 percent to 17 percent in the panel. Every seventh enterprise in 2009 included managers with a history of employment by a foreign firm. The share of enterprises managed better than average is about 1.5 times higher if the enterprise employs managers with such a background and training. Companies looking toward innovation leadership would invest not only in technology renovation, but also in human resources, trying to engage highly qualified and experienced managers. This group averages a twice as big proportion of MBA graduates of Russian schools, holders of international advanced degrees in economics and management and a history of employment by a foreign company, than the overall survey, and three times as big than in the group of innovation and investment abstainers.

Therefore, the Russian industry has developed a cluster of enterprises with top quality management staff employing a total range of the latest management technologies. This enclave is not vast, just about 15 percent, and it has not yet become dominant in determining the overall quality of management in Russia's manufacturing. According to the 2009 data, almost 45 percent of firms are doing quite well in their markets without innovation and major investment, as they only sluggishly undertake some management improvements.

The biggest challenges as regards management enhancement in Russian enterprises relate to launching regular benchmarking – comparisons with foreign and Russian competitors, and also to diagnostics and reengineering of business processes. Even within the group of innovative and investment proactive enterprises only a third practice benchmarking, while only half of them diagnose and restructure business processes. Meanwhile, a recent McKinsey study¹⁸ underscored weak business processes as the key driver of low productivity of Russian enterprises compared to benchmark countries.

¹⁸ Lean Russia: Sustaining economic growth through improved productivity. McKinsey Global Institute, April, 2009

The Labor Market: is manufacturing facing skills shortages

Throughout the 1990s, redundant labor persisted as the key labor-related problem faced by enterprises. It means enterprises had excess employees increasing their costs. In the 2000s, especially in the second half of the decade, enterprises were increasingly complaining about labor deficit, though complaints about surplus labor also persisted. Earlier studies¹⁹ revealed that less efficient enterprises are more likely to report labor deficit as regards skilled labor. We argued that labor deficit complaints were rather caused by low efficiency and inability to pay competitive wages than by the actual lack of skilled workforce in the labor market. It is noteworthy that these complaints sounded against the backdrop of sweeping redundancies in manufacturing (just in 2005-2008 manufacturing industries laid off 300 thousand employees).

The survey of 2009 offers a different macroeconomic context for an assessment of labor excess and deficit issues, i.e. a raging crisis and deep recession instead of rapid growth followed by overheating economy and increased demand for labor. Responses indicate that the labor shortage was resolved, albeit may be temporarily. While in 2005 about 60 percent of enterprises perceived their staffing level optimal, in the spring of 2009 when the survey was conducted this share exceeded 70 percent. At the same time, the share of understaffed enterprises halved (from 27 percent to 13 percent), whereas the proportion of excessively staffed firms remained virtually unchanged (edged down to 12 percent from the earlier 13 percent). In other words, the economic crisis, as it has dramatically reduced demand for labor and accelerated decline in employment, has demonstrated that the Russian manufacturing sector is rather dominated by the problem of excess employment. The fact of this switchover from deficit to surplus is further supported by other surveys of large and medium-sized enterprises²⁰.

In a crisis environment, it will be first of all successful companies that can maintain optimal staffing. For enterprises that assess their financial and economic position as sound, the magnitude of suboptimal employment (as a quantifying measure of variation from the norm), even if they report it, would be much lower. It does not exceed 10 percent of payroll headcount, while in the group of weak financial and economic performers the shortage would

¹⁹ See: V. Gimpelson, R.Kapelyushnikov, A.Lukyanova. Demand for labor and skills in manufacturing: between the deficit and surplus//Preprint WP3/2007/03. Russian manufacturing during the growth stage. Drivers of firm competitiveness. Ed.by K.R. Gonchar and B.V. Kuznetsov, M., Vershina, 2008. [В. Гимпельсон, Р. Капелюшников, А. Лукьянова. Спрос на труд и квалификацию в промышленности: между дефицитом и избытком // Препринт WP3/2007/03. Российская промышленность на этапе роста. Факторы конкурентоспособности фирм. Под ред. К.Р.Гончар и Б.В.Кузнецова. – М.: Вершина, 2008].

²⁰ The estimates received by IET in the course of its monthly industrial surveys are very close to those discussed above. See: Russian industry in August 2009. IEP Industrial Survey N 207, September 2009

be 15 percent on average (if they have a shortage, of course), while the surplus would be above 22 percent.

However, structural deficit, specifically, skilled labor deficit, arguably does have some reality behind it in manufacturing. It is evidenced, in particular, by the fact that even during the crisis skilled labor shortages are reported by over 36 percent of enterprises. Yet, compared to the 2005 survey, when this problem was reported by over half of the respondents, the improvement appears visible.

Summing up, labor shortage complaints have become much less frequent (though their occurrence is non-zero) than in 2005, while labor excess complaints occur relatively more frequently (though they have not become across-the-board despite the crisis). Many enterprises report both at the same time, though for varying occupational groups. During the downturn, as well as during the boom, the key contributor to labor shortages continues to be relatively inadequate compensation, rather than the physical deficit of workforce in the labor market. As for the structural deficit of certain staff categories, we believe it is rooted in the underdeveloped system of vocational and professional training, especially in-house training, rather than in their physical shortage.

Formally, staff training has been reported by every second industrial enterprise in our survey²¹, which may be considered reasonably high performance (though in 2005 this proportion was 69 percent). However, the key issue here is that the overwhelming number of enterprises pursue their training programs on a very small scale. This refers both to their coverage and duration. Indeed, only every fifth enterprise has training programs covering over 10 percent of employees, while only 15 percent has programs lasting for over a month.

Still another specific feature of the Russian labor market that may be driving deficits, including structural deficits, is its flexibility. Russian labor market flexibility primarily comes from the low share of the basic rate (fixed part of labor compensation) in total labor costs. On the one hand, this feature allows enterprises to promptly respond and adapt to any changes in the market and manage costs. On the other hand, it encourages high labor turnover, because employees tend to be predominately motivated by the current wage level. In its turn, high turnover creates disincentives for enterprises to invest in training and retraining.

Employment flexibility in Russia is vividly illustrated by firm response to the crisis, when about two thirds of enterprises had to adapt their employment and labor compensation to the changed situation. Notwithstanding sweeping changes in the overall Russian labor

²¹ Training and professional development data refer to 2008, when most of the year was non-crisis.

market conditions (institutional, structural and macroeconomic) in the 2000s, enterprises still use all the instruments and methods of crisis adaptation that date back to the 1990s. When faced with major economic difficulties, enterprises, like in the past, opt to take several routes simultaneously. They would cut their headcount, shorten working hours, stop paying benefits, reduce wages and salaries, and even may run arrears if the worst comes to the worst. The three key instruments – lay-offs, shorter working hours and salary cuts - were utilized almost in equal proportion with a minor bias toward shorter working hours. During the crisis, about 41 percent of surveyed enterprises resorted to headcount cuts, 46 percent opted for shorter working hours or administrative leave, while 39 percent reduced wages. (Fig. 26) Looking ahead, surveyed enterprises were planning to further maintain a diversified approach, using in almost equal proportions all the three adjustment strategies: headcount (42 percent), working time (47 percent) and cost (40 percent).

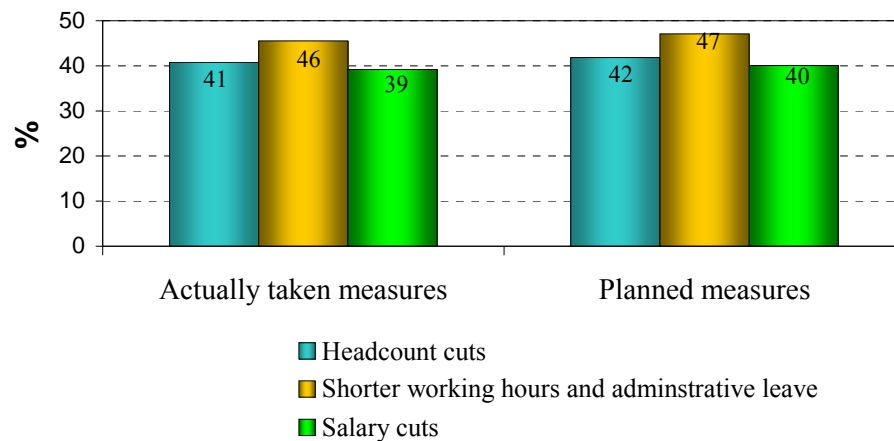


Figure 26. Actual and planned crisis response adjustment measures by enterprises in the domestic labor market²²

Is this kind of flexibility a competitive advantage or on the contrary a weakness of the Russian labor market paradigm? The answer to this question will largely depend on what sort of crisis we are responding and adjusting to. If we assume a short-term crisis caused by price volatility, which does not require a profound transformation of the economy's structure, then, apparently, such “uncivilized” measures as shorter working hours, unpaid leaves and salary cuts really help to cushion the shocks of the crisis and to support social stability. However, if we interpret the crisis as a signal that the economy structure is inefficient, in need of an overhaul, and, consequently, as a lingering crisis, then such instruments would rather mask real problems and prevent labor from shifting to more efficient sectors and more efficient enterprises, thus impeding recovery.

²² Note that data on the actual and planned measures refer to the spring of 2009.

A new role of regional and local authorities

Financial and organization support

The experience of China, Brazil, Mexico and some other developing countries suggest that local and regional authorities may help firms to attract investment, to modernize and get access to international markets. Our study shows that similar trends surfaced in Russia in 2007-2008.

Our review of business-government relations included several aspects: federal, regional or local fiscal support received by enterprises in 2007-2008, administrative support provided by government authorities of various levels during the same period²³, and regional social development support to regional and/or local authorities provided by enterprises in 2007-2008.

The data indicate (Fig. 27) that in 2007-2008, regional authorities were the most active providers of support. In total, 26 percent of firms in the survey received support from this government level, including 19 percent receiving administrative support and 14 percent financial support. It may be also noteworthy that the regional and local levels provided administrative support more frequently, while the federal level focused on financial support.

An important aspect of business-government relationships is support provided by businesses to regional and municipal authorities in social development of the region. This practice is almost universal. In 2007-2008, only 23 percent of firms did not provide any assistance to the authorities (Fig. 28). However, it would be fair to say that most enterprises did not incur burdensome costs while assisting the authorities (their costs on these purposes did not exceed 0.1 percent of sales).

This “socially responsible” behavior was often rewarded. Indeed, in the group of socially responsible companies 27-34 percent of respondents reported receiving some kind of regional government support, versus only 12 percent in the group of businesses that did not spend on social development of their regions.

²³ Organizational support was interpreted as any other than financial support, including assistance in contacts with Russian and foreign partners, other government authorities, in attracting investors, etc.

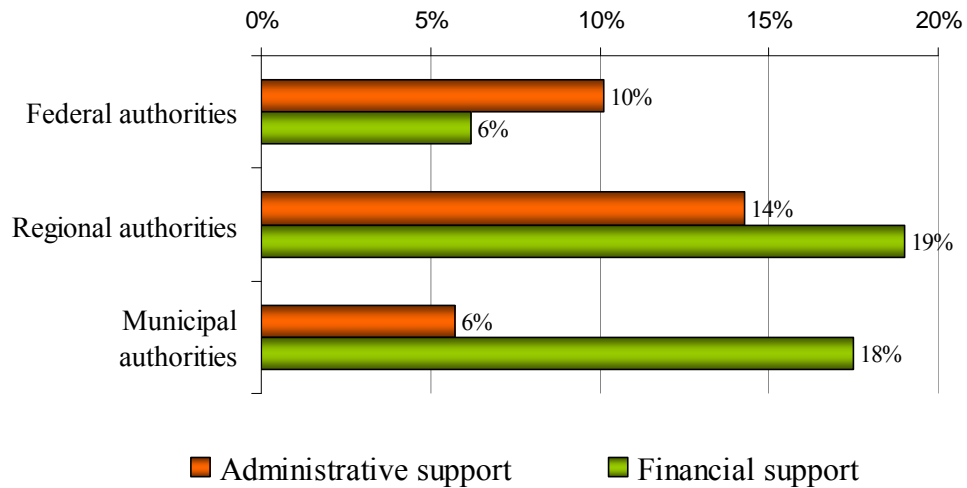


Figure 27. Share of enterprises receiving government financial and organizational support in 2007

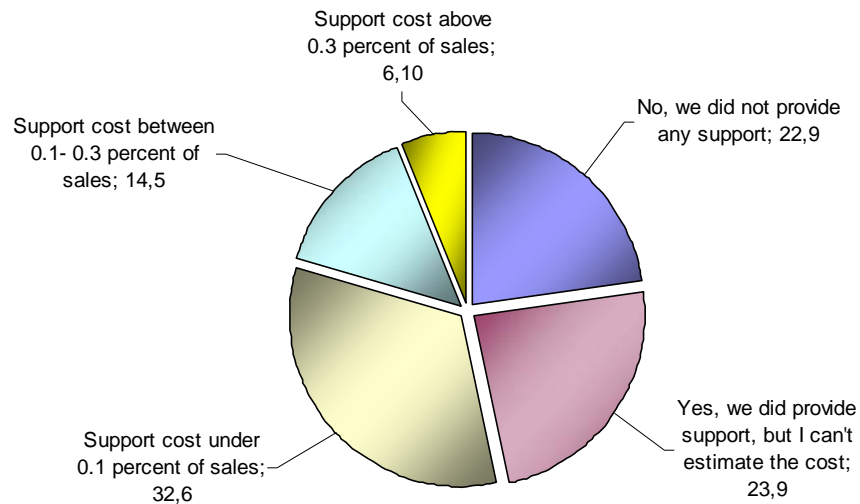


Figure 28. Business support to local and regional authorities in regional social development

Apart from business support to the region, explanatory variables behind government support also included other attributes. Those may be tentatively classified to three groups: structural features of enterprises, parameters (indicators) of their social responsibility performance and of their modernization performance.

Structural features included the enterprise's sector, its size, its age (when it was established), specific owners (the government, foreign investors), and the investment potential of the host region. To measure the social responsibility of enterprises, alongside the above mentioned support to local and regional authorities in regional social development, we also took into account respondents' job preservation and/or creation and their participation in business associations. Employment support (via job preservation and/or creation) may be an

element in the business-government interchange. In their turn, business associations are one of the channels for enterprises to communicate with the public authorities. Modernization performance was measured via export performance (other variables constant, getting access to export markets suggests higher competitiveness), occurrence of major investments in 2005-2008 and innovation performance (the fact of implementation of a new product/technology in combination with non-zero R&D expenditure).

The analysis indicates that government support is more often provided to firms located in regions with low and medium investment potential. This applies to all the levels of government, including the federal level. In our view, this may be an indication that the government in its support efforts is seeking to equalize conditions across the regions rather than create incentives for development. Another common feature is as follows: in all the cases the old firms dating back to the Soviet times have apparent preferences in getting access to government support. Interestingly, when social responsibility and modernization performance of enterprises are factored in, their size appears ultimately insignificant for getting government support.

Government support at the federal level may be different from the other levels in that only at the federal level government-owned firms get explicit preference. At the same time, federal support focuses on firms that preserve jobs. However, modernization variables tend to prove statistically non-significant. This combination suggests a sort of a “conservative exchange”, when the federal government issues support to older enterprises and companies with government stakes, while in exchange it expects the recipient companies to sustain their employment headcount.

However, the regional and local levels present a largely modified set of factors associated with access to government incentives.. An important predictor is support to the authorities in regional social development. This may be seen as a symptom signaling the existence of a peculiar “exchange arrangement”. Further on, another significant factor for getting support from government authorities is firm participation in business associations, confirming the role of associations as a business-to-government communication channel. However, contrary to expectation, neither job preservation nor government stakes are associated with access to the regional and municipal incentives.

Unlike federal support, getting regional and municipal support is conditional on some aspects of firm modernization performance. Thus, regional authorities in 2005-2008 conditioned their support on whether the enterprise engaged in major investment projects.

Municipal support in 2007-2008 was much more frequently provided to firms with foreign equity.

However, this may be a regular endogeneity problem: are regional and local authorities supporting companies that invest, or these companies are developing and investing thanks to the government support? A limitation of our data comes from the fact that due to the nature of our study we could survey only “insiders”, i.e. the companies that have already entered the regional market and developed relations with the authorities. Therefore they can feel relatively comfortable compared to outsiders, who have not yet entered the market. This “insider alliance” theory may be further supported by the evidence revealed in the course of the study that enterprises established before 1991 get priority in access to support at any level of government. However, preferences granted to firms with foreign equity run counter to this assumption, suggesting at least co-existence of a variety of criteria that may determine granting regional and municipal government support.

Analyzing data on actual and projected crisis response by enterprises, we have also estimated how support from any government level in 2007-2008 affected enterprise behavior during the economic crisis in 2009. As of the time of the survey (February-June 2009), there were only 6 percent of Russia’s manufacturing companies unaffected by the crisis fallout. Other most prevailing responses included supplier payment arrears, shortened working hours, output reductions, and suspension of new investment projects.

At the same time, 40 percent of respondents reported a proactive response to the crisis, including new market entry and search for new buyers. Another 33 percent of respondents shared their plans to implement major investment projects during the next 12 months, despite the crisis. It should be noted that in 2007, when the economy was booming, a similar question in one of the HSE surveys of industrial enterprises got only 50 percent of positive responses.

We tried to find out to what extent earlier received government support impacted the probability of proactive and aggressive crisis response by firms. It appears that major investment plans in 2009 were significantly affected only by the fact if the firm had any investment activities in 2005-2008. Any government support in this case was insignificant. In contrast, plans to look for new markets and buyers in 2009 proved closely related to earlier (in 2007-2008) receipt of regional and local government support. Federal government support did not have any influence on companies’ decisions to enter new markets.

Therefore, the results obtained during the survey suggest that business-government relations are dominated by the exchange model. In exchange for government support corporate recipients contribute to regional social development or preserve jobs.

And still, in 2007-2008, visible differences were observable in government support priorities between the federal level, on the one hand, and the regional and municipal levels, on the other. In the former case the entrenched exchange arrangement between the government and business was more conservative, with a focus on older enterprises, government-controlled companies and firms preserving jobs. In the latter case government support was more geared toward modernization, with investment performance and foreign equity as recipient selection criteria. A review of enterprise behavior during the crisis also shows that the companies receiving support from regional and local authorities in 2007-2008 would more frequently opt for proactive crisis response, in contrast to the companies with access to federal support.

By way of conclusion: will the crisis become a moment of truth for the Russian industry

Before the crisis, as we tried to show with reference to some cases, Russia's manufacturing was undergoing strong structural transformation, followed by enterprise behavior changes. These processes had a direct impact on firm efficiency and competitiveness. Certainly, a detailed study of the changes and their underlying causes requires further profound analysis. However, the general development trends seem quite obvious.

First, the second half of the 2000s was basically dominated by the earlier development paradigm that came into shape during the initial stage of economic growth in 2000-2004. This paradigm was primarily based on optimized utilization of available resources within the bounds of existing company markets and largely inside the entrenched basic technologies. This conclusion is supported both by the stable structure of product markets (targeting regional markets and the national domestic market, no significant breakthrough into global markets), and by low innovation and investment performance, accompanied by a persisting technology gap vis-à-vis international rivals. This development paradigm has persisted due to favorable macroeconomic conditions and rapid growth of domestic demand for industrial products. It may be said with some stretching that Russian enterprises generally continued manufacturing the same products using the same production capacities and technologies, while selling them to the same buyers. The only difference was a slight increase in sales and higher labor productivity gained largely on the back of lay-offs without any output reductions.

Second, this development according to the old paradigm was accompanied by some progress in a number of areas. Fixed assets were gradually (and not universally) overhauled and renovated (albeit within the same technological framework), management was enhanced, supplier and consumer relations were improved, firm organization was streamlined and

external sources of financing were increasingly tapped. All this contributed to higher production efficiency and somewhat better financial performance indicators. However, it did not help to significantly increase international competitiveness, because foreign rivals were also increasing their efficiency. There were also objective, external reasons behind the failure to achieve a breakthrough: increasing resource and labor input costs, and no noticeable progress in the business climate.

Third, while the public and experts were debating pros and cons of the catch up type of development, and the government urged for an innovative break-through, most enterprises seemed to bet on non other but the catch-up strategy, based on absorption and implementation of the existing (mostly foreign) technologies and equipment, and small-scale and imitating innovations. While the economy was growing, this strategy proved successful for many enterprises, albeit only for those who started pursuing it several years before the crisis. Fourth, an important healthy feature of industrial development before the crisis was “positive selection”. Indeed, more efficient competitive enterprises were growing faster than those less competitive. The latter (those who survived) were catching up with the leaders, contributing to some closing of efficiency gaps within the sector. However, these developments could be faster if Russia-specific protection mechanisms for inefficient enterprises had been dismantled. Such mechanisms include relatively low competition in many markets, geographical entry barriers related to distance and isolation of smaller towns, etc.

The economic crisis of 2008-2009 disrupted the smooth evolution of Russia’s industry, as it dramatically changed the environment for development and generated new challenges and threats. In the spring of 2009, when the survey was conducted, more than half of the enterprises indicated lower demand for their products as a severe problem, while 40 percent faced the need to adjust employment and/or wages (via various forms of shorter working time and compensation reductions). Still another 40 percent declared axing their investment projects and programs. At the same time, an unexpected finding was that many firms intended to try new market entry as a crisis response measure. This intention was reported by 40 percent of respondents, dominated by more competitive enterprises. About a third of companies were planning major investments during the next 12 months, despite the crisis.

Such intentions indicate that the crisis could lead to market redistribution in favor of more efficient enterprises and create incentives for broadening one’s market and leveraging investment to enhance production efficiency. Admittedly, however, it would be more difficult in the post-crisis world even for Russia’s manufacturing leaders to move from the defensive strategy (defending one’s entrenched positions in existing markets) to an offensive break-

through into new markets or new product markets. We can hardly expect in the near future to get the same favorable conditions, i.e. cheap credit and galloping demand, as we saw in the years leading up to the crisis.

This may be the reason, as we see it, why many manufacturing enterprises have again found themselves at the cross-roads, facing a dilemma: should they revert to the earlier strategy of gradual evolutionary improvements aimed at catching up with competitors shooting ahead, or should they try and leverage the crisis (that has also hit hard producers in many comparator countries) to challenge their rivals and pressure them out both in the domestic market and in global markets? The way this dilemma is resolved will largely depend on government policies.

This is not an easy trade-off. Given the difficult situation many enterprises find themselves in, a wish to help and to protect is only too natural. Moreover, it is supported by the expectations of the business community. Thus, every second respondent in our survey spoke for a freeze on natural monopoly tariffs, while larger government procurement and import restrictions got 20 percent of votes each. Only tax reductions, banking system support and support to the ruble exchange rate are more popular with enterprise top managers than the above measures.

However, we feel that at this point in time different measures are needed to create a healthy business climate and to encourage firms to adopt more aggressive market behavior.

Improvement of business climate. While in the past difficulties in doing business in Russia were offset by growing demand, now the growth-driven advantages are no longer here, while the barriers persist. In 2005, according to BEEPS data, Russia performed worse on half of the business environment assessment parameters than Eastern Europe and CIS countries. In 2009, the ranking was lower on 16 out of the 18 parameters. In this context, it becomes crucially important to reduce business costs and especially market entry costs for new players.

International experience (including BRIC experience) suggests a considerable role of regional and local authorities in business climate enhancement. HSE survey data indicate that this trend is now surfacing in Russia. Specifically, back in 2007-2008 regional and municipal government support was considerably more often issued to investing firms, despite their size, sector and form of ownership. On the other hand, these shifts in Russia are more of spontaneous nature, because we don't think they are supported by *a conscious federal policy of best practice identification and encouragement*.

In our view, to improve business climate, best practice identification and dissemination mechanisms should be wider leveraged at the regional government level. This should be complemented by encouraging inter-regional competition for capital and investments. The following specific measures in this area may be suggested:

1. To implement the World Bank Doing Business project at the subnational level. This study assesses investment climate by 10 standard (comparable) indicators of business launch, doing and closure.²⁴ It would be advisable as early as in 2010 to considerably extend the coverage of the 2 round of this survey (30-40 towns and cities) with wide dissemination of the survey's findings and deliverables, including the description of the best management practices helping to reduce the costs of doing business.

2. To undertake a federal-level tender of regional projects aimed at enhanced competitiveness with business community participating in evaluation of programs and measures proposed by the regions to enhance business climate, and with federal co-financing of the best projects. As evidenced by Mexico's experience, this kind of tender proves an effective instrument for best practice dissemination as regards regional government interaction with investors and businesses. Additionally, it may provide still another channel of regional government-business communication with a view to achieving an optimal trade-off between their interests.

The focus should be on proactive firms instead of sectors. Alongside business climate improvement it is also important to identify more proactive and aggressive business players, willing to modernize. In this context, it is important to *focus on medium-size businesses*. In Russia, those would include firms employing up to 1000 people rather than 250. While small businesses have a high role in addressing social problems, given their capacity to create jobs, including those with low labor productivity, medium-sized companies are more capable of penetrating new markets and mastering new activities. Looking ahead, these companies potentially can compete with bigger companies, both domestic and global.

Specific practical measures to reduce direct new market entry costs and new product costs for medium-size businesses and to alleviate new project risks may include the ISO-9001 business process certification program. This standard is important to launch companies onto international merchandise and capital markets. Such a program has been successfully implemented in Chile, where medium-sized businesses got a 50 percent co-financing of their costs on these purposes (the total coverage of the Chile program was 25 thousand firms).

²⁴ Internationally, this project has been pursued annually since 2003, now covering 183 countries. In Russia, this project was first piloted by the World Bank in 2009. It got a lot of public attention, including about 90 media publications.

Another important measure is support to industry business associations. International experience suggests that such associations are a channel of business-government interaction. However, such associations prove efficient only when they are initiated by the business community. The government certainly may create incentives for business cooperation²⁵. In Russia, domestic companies are currently getting support for participation in international exhibitions. However, these exhibitions are selected by officials rather than by businessmen. No less important is systematic involvement of business associations in discussing and drafting amendments to laws and regulations.

Another suggestion may be to revert to the earlier arrangement of investment incentives prescribed in federal-level legislation, since active investments are still essential for most manufacturing sectors, and the firms active in investment since mid 2000s have shown stronger resilience during the crisis.

Export encouragement. A review of macroeconomic data shows that despite ruble appreciation during 2004-2008, the manufacturing sector maintained a trend toward some extension of the list of exporters. Moreover, the average proportion of exports in exporter sales also tended to grow. This may be an indication that most successful Russian enterprises are gradually hitting their niches in international markets and escalating their presence. Export and exporters' extension is highly important not only for generating incremental output growth, but also as a training instrument, because operations in global markets help to better assess global demand and consumers, develop management competencies, boost innovation and put in place prerequisites for deeper international cooperation.

It should be noted that the development of exports is driven both by market mechanisms and by government policies. The government has taken action to reduce administrative barriers to exports, resulting in a reduction from 60 percent to 36 percent of exporters complaining of delays in VAT refunds – of course, even this level is still outrageously high. Meanwhile, the number of complaints about customs delays has remained unchanged, showing lack of progress in this area.

We argue that government policy improvements and export diversification should pursue the following key objectives:

1. Further reduction of administrative barriers, first of all, VAT refund improvement and acceleration and customs clearing acceleration.

²⁵ For example, important practical lessons may be learned from the experience of Chile's government corporation CORFO as regards 50 percent co-financing of group trips for employees of 5 and more local firms to study technologies in international companies, of establishing contacts with technology centers and participation in international high-tech fairs.

2. Scaling of the existing export support measures. Specifically, we recommend revising the existing interest rate subsidizing procedures to extend the range of eligible exporters. At present, this instrument targets seasoned exporters and is unavailable for recent entrants into export markets. Additionally, it would be advisable to simplify and accelerate the procedures of issuing government guarantees to exports, which are currently very bulky and lengthy. They weaken the positions of Russian exporters, for example, when they participate in international bidding procedures.

3. Development of new special-purpose instruments of export support for start-up exporters and new international market entrants. This may be a system of grants or subsidies to partially compensate the greeners for their start-up costs of entry into export markets.

4. Companies going global. During the second half of the 2000s, the federal level economic policy has developed a bias toward support of foreign investments by Russian companies. Our survey has also noticed a less apparent tendency for higher engagement of foreign investors in Russian companies and regional and municipal support to this tendency. It should be noted that in 2007-2008 firms with foreign equity started to look much better compared to other companies. Specifically, they were more active in investment and innovation, in streamlining business processes, and had significantly higher export volumes, including to advanced countries. In our view, these positive developments were related to the latest management practices and new knowledge and skills, brought by foreign shareholders to Russian companies. An important contribution also comes from evolving cooperation with new partners.

It is essential to identify and disseminate the best practices in dealing with foreign investors, and also to create conditions conducive for improved integration of Russian companies in the international division of labor.

Until recently, federal policies to promote FDI mostly focused on major projects implemented in Russia by large foreign companies, and also on addressing problems faced by major investors. In many aspects, this policy was passive, only responding to initiatives by foreign companies seeking to launch production in Russia. This approach worked when Russia's economy was boosting and the Russian domestic market became increasingly attractive. The crisis changed the situation as investment inflows dried up, while experts do not expect their rapid reversal, especially in manufacturing. Besides, the crisis undermined Russian companies' capacity to buy foreign technologies, licenses and equipment. Meanwhile, no matter how much we may want it, Russia cannot upgrade all the sectors using

exclusively its own technological base, while enterprises are unable to break into international markets independently and overwhelmingly.

With regard to these considerations, the following adjustments should be made to government policies:

1. To extend the range of supported forms of international cooperation between Russian and foreign companies. FDI are far from being the only way of industrial integration. Important contribution may come from agreements on joint product development, both for the Russian market and for markets in third countries, cooperation in promoting Russian products in export markets, support of long-term contracts for supplies of Russia-manufactured parts to foreign producers, etc. Russia does have an experience in such forms of cooperation, but it requires generalizing and scaling.

2. To come over from passive to active policies in luring investors required for technology upgrading of Russian sectors in line with government industrial policy priorities. Stakeholders should not sit and wait for the needed investors to come. They should proactively look for them and convincingly invite them to cooperate with Russian enterprises.

3. To revise the traditional perception of the country mix of desirable investors and partners, i.e. that all the latest cutting-edge technologies come from advanced countries. Explosive growth of high technologies in developing countries, including our BRIC counterparts, opens up possibilities for equitable and mutually beneficial cooperation with investors from these countries. For a multitude of reasons (size of the national markets, narrower technology gaps, etc) this cooperation may be more feasible and efficient for all the parties.

Proactive approaches to investor and partner attraction, and the scale of international cooperation (hundreds of projects in various economy sectors would be required) make it unrealistic to manage these processes by federal ministries and agencies. Regions and business associations, which have a better knowledge of the actual sore points, should assume a higher role in initiating projects. The task of federal authorities would be to encourage them mildly, while adjusting the regulatory framework seeking to eliminate the barriers in the way of integrating the Russian industry into the global economy.

Innovation incentives. The findings of our empirical study show that the technological level of production in manufacturing is varied in the least. Big business is generally more innovative and technologically fit than small and medium-sized, though it spends inexcusably little on this purpose. At the same time, the depth and quality of innovation is inadequate in many companies.

In this context, an adjustment of current modernization strategies should be attempted, with regard to the reality of a segment of competitive business within the traditional manufacturing sector. Enterprises in this segment pursue innovation-based growth and have completed or are completing a technological overhaul. So far incentives for large companies in this segment are restricted to “provision of administrative support, aimed at creating internal incentives for innovation, including by means of support to self-regulating organizations, promoting implementation of voluntary standards of innovation at enterprises»²⁶. This sentence is quite vague and does not seem to address business demand for incentives. This demand, according to respondents from the industrial sector, contains the following key components:

1. To encourage technology upgrading via a sound customs and tax policy. This policy should promote technology and equipment procurement; reintroduction of capital investment incentives; capital expenditure write-off through depreciation; government guarantees against loans to buy technologies; further elaboration of technical regulations.

2. To support energy-saving policy with substantive incentives (e.g., via pricing policies), given that according to the current legislation energy saving may be in fact punishable.

3. To accelerate innovation in the manufacturing sector via tax holidays for new innovative enterprises, via technical regulations policies (encouragement of national standards) and access to long-term loans that may support long-term planning.

The crisis has strongly affected the environment for innovation in business. Many projects have been suspended. Innovation stakeholders (enterprises, banks and the government) are reducing their appetite for innovation risk, which was not very strong anyway. With regard to these developments, our study results in the following recommendations for economic policies in innovation.

First, upgrading and original innovation should not be opposed. Our study shows that in the closing years of economic growth innovation was integrated in investment, as equipment upgrading for many companies became a move toward technology innovation. However, the enterprises that have not finalized upgrading, are running a high risk of lower than expected returns on their investment and, respectively, failed plans to manufacture innovative products on the new equipment. This creates demand for support to investment inevitably leading to innovation. Investment incentives in this situation may stimulate

²⁶ A quote from the Explanatory Note to the Action Plan to Stimulate Firm Innovation (July 2009).

innovation more effectively than spreading a thin layer of fiscal support for innovative projects among unobvious champions.

Second, about a half of the enterprises in the survey consider their technological level good enough by Russian standards (in line with the best practice domestically), with chemicals and food leading and engineering dramatically lagging behind. Even if self-assessments are overoptimistic, signs of improvements on some components of the technological capital cannot be ignored, specifically, the increased share of ISO certified companies. Certification is closely related to technology performance and competitiveness assessment. A good instrument to encourage technological renovation of manufacturing may be obtained by retargeting technical regulators and supervisors from their current punitive role to assisting companies in getting international certification and implementation of international technical standards, including for PPPs.

Third, it seems that to stimulate innovation-based business the government today should rather influence market formation, including markets of technologies and other knowledge, than the generation of knowledge itself. Indeed, Russia's lagging in innovations seems to be largely coming from the demand side, determined by lack of markets for innovative products. Instruments for creating and sustaining demand for innovation are basically well-known. They include stimuli to competition, tax incentives, technical regulation and government orders. Tax incentives are more preferable than selective measures because decisions on R&D spending are taken by businesses, and such decisions are more likely to be successful than government programs. The decision to include R&D expenditure in product cost has been taken, but the quality of administration of this incentive reduces to zero all the effort invested in this decision. The same refers to depreciation incentives. While they were supposed to encourage upgrading, in real fact they have created an additional burden for businesses. According to our data, tax incentives of corporate R&D have in no way increased the number of companies engaging in research and developments, but have only served to build up research spending of those enterprises that already had R&D. Therefore, administration of this instrument should be improved and the range of tax incentives for R&D should be extended, for example, by including intangible assets in the coverage of depreciation incentives.

* * *

While recognizing the fairness of describing the pre-crisis period as a time of wasted opportunity, our analysis shows that in 2005-2008 most manufacturing firms assumed market behavior. Positive developments in the sector were building up, creating capacity for

economic growth. However, the speed of these positive changes is not high enough to close the gap with benchmark countries that has been growing throughout the 20 years of the transition period, marked with chronic underinvestment. In many ways, government policies are crucial in this aspect. Business is challenged not only by the poor quality of institutions, but by their instability and discrepancy between government words and deeds. This gives rise to uncertainty, higher risk assessment and investor risk aversion, inhibiting investments.

So far policy-makers have been staking on the “national champions”. However, our data suggest that “runners up” are more resilient and have a higher capacity for relatively low-cost growth. In our survey (which is generally biased toward medium-sized enterprises) these would be companies employing 500 and above people. Providing support to such firms poses fewer risks of government failure. As such firms are numerous, risks of supporting inefficient firms are neutralized. And still, appropriate channels and appropriately designed support instruments are essential.

The government should interact more with sector business associations. According to our data, these associations bring together more proactive companies, and are willing to represent sector interests of the business community. Sector associations may and should be used to implement quality standards, to promote firms to new markets and provide training. These associations may also act as a channel of support to efficient “runners up”.

We argue for using appropriate measures applicable and practicable in our less than perfect institutional environment. Ease of administration and outcome measurability may guide selection of support measures. In this context, examples of easily measurable processes will include export, investments and ISO certification. Our data show that export growth, major investment projects and ISO certification turn out to be connected with innovation, which is difficult to measure.

Government failure risks may also be alleviated by a focus on administrative support (which tends to generate fewer incentives for rent-seeking and is assessed by firms as more efficient), because the multitude of support channels creates competition, including at the regional level. A key factor is also regular monitoring of results and feed-back mechanisms (including interaction with business associations). This helps to promptly unwind failed instruments and wider use the measures that have proved effective.

In defiance of the entrenched stereotypes, the manufacturing sector has accumulated potential capable of driving economic growth. Today, it depends on the government and its willingness to interact with business how much of this potential will be tapped to drive development in Russia.

Annex 1. Data Base for the Study

The data base for the study was compiled in the course of the two HSE IIMS projects to monitor industrial enterprises in manufacturing. Both projects were commissioned by the Ministry for Economic Development, and in the first round of the survey the HSE partnered with the World Bank.

In 2005 and 2009, about 1000 top managers were surveyed using a comparable questionnaire. During the second round, in 2009, the survey was completed in February – June. In the first case surveying was done by the GFK-Rus company, while in the second – by the Levada Center, applying the method of face-to-face interviewing. The second round of the monitoring was targeting the same companies as in the first round, while, should this prove impossible, the earlier sample characteristics were to be preserved (by types of activity and enterprise size). The panel part of the survey, covering firms surveyed both in 2005 and in 2009, accounted for about a half of the total number of respondents. The sample enterprises employ about 9 percent of the total average payroll in the total population of manufacturing enterprises. In 2007, these enterprises produced 6 percent of the total manufacturing output.

The survey excluded small businesses and mega enterprises employing above 10 thousand people. On the other hand, the panel part required including a considerable share of enterprises employing below 100 staff. The latter largely represent those enterprises surveyed in 2005, which had downsized considerably by 2009.

The general data base of the study included data from the two surveys and SPARK statistical information on firm activities. Stratification of the surveyed enterprises by types of economic activity and size groups is presented in tables 1 and 2 of this Annex.

Table 1. 2005 and 2009 samples by sector

	2005		2009	
	%	N obs	%	N obs
Food	24,8	248	24,6	235
Textiles and garments	9,2	92	9,3	89
Timber and woodworking	8,4	84	8,5	81
Chemicals	8,8	88	9,2	88
Metals and fabricated metal goods	10,3	103	10,2	98
Electrical, electronic and optical equipment	14,2	142	12,2	117
Transport vehicles and equipment	9,0	90	9,0	86
Machines and equipment	15,5	155	17,0	163
Total	100	1002	100	957

Table 2. 2005 and 2009 samples by enterprise size group

	2005		2009	
	%	N obs	%	N obs
Below 250 people	43,8	439	45,0	431
251—500	25,6	257	24,1	231
501—1000	15,9	159	16,5	158
Above 1000 people	14,7	147	14,4	137
Total	100,0	1002	100	957