



УДК 338.45  
ББК 65.301  
G60

G60 **Golikova, V.** Russian Manufacturing at the Crossroads. What Prevents Firms from Becoming Competitive [Text] : presentation at IX International Academic Conference “Modernization of Economy and Globalization”, Moscow, Apr. 1–3, 2008 / V. Golikova, K. Gonchar, B. Kuznetsov, A. Yakovlev ; State University — Higher School of Economics. — Moscow : Publ. house of SU HSE, 2008. — 60 p. — 500 ex. — ISBN 978-5-7598-0594-6.

УДК 338.45  
ББК 65.301

*Научное издание*

Голикова Виктория Владимировна  
Гончар Ксения Романовна  
Кузнецов Борис Викторович  
Яковлев Андрей Александрович

**Российская промышленность на перепутье.  
Что мешает нашим фирмам стать конкурентоспособными**

На английском языке

Подписано в печать 27.03.08. Формат 60×88 1/16  
Гарнитура Newton. Усл. печ. л. 3,64. Уч.-изд. л. 3,6  
Тираж 500 экз. Заказ № . Изд. № 957

ГУ ВШЭ. 125319, Москва, Кочновский проезд, 3  
Тел./факс: (495) 772-95-71

ISBN 978-5-7598-0594-6

© Оформление. Издательский дом  
ГУ ВШЭ, 2008

## Table of contents

<b>Acknowledgements</b> .....	5
<b>1. Executive Summary</b> .....	6
<b>2. Diagnosis: Decreasing Competitiveness, Segmentation, and Structural Growth Problems</b> .....	12
<b>3. Competitive Leaders: Location, Purpose, and Number</b> .....	18
3.1. Competitive Share of Manufacturing .....	18
3.2. Export as an Indicator of Competitiveness .....	21
<b>4. External Factors of Competitiveness</b> .....	24
4.1. Investment Climate .....	24
<i>The Competitiveness of Russia's Investment Climate</i> .....	25
<i>Investment Climate Constraints that Cause the Greatest Concern among Manufacturing Firms</i> .....	26
<i>What Enterprises Will Benefit from Improving Specific Business Climate Constraints?</i> .....	29
4.2. Competition and Competitive Advantages .....	30
4.3. Economic Geography of Manufacturing as a Factor of Competitive Advantage .....	31
<b>5. Internal Factors of Competitiveness</b> .....	34
5.1. Management .....	34
5.2. Competitiveness and Innovation .....	36
5.3. Investment as a Factor of Competitiveness .....	39
5.4. Labor Relations and Worker Qualifications .....	43
5.5. Ownership Structure and Competitiveness .....	45
<b>6. Government Policy: Efficacy and Demand</b> .....	48

<b>7. Policy Implications: The Possibility of Increasing the Group of Leaders and Reducing the Number of Losers.....</b>	<b>53</b>
7.1. Policy toward Leaders: Removing Barriers for Growth and Creating Incentives .....	53
7.2. Policy toward Market Followers: Reducing Innovation, Investment, and Foreign Trade Risks and Costs.....	54
7.3. Policy toward Outsiders: Removing Barriers in Regional Markets and Developing Entrepreneurship .....	56

## Acknowledgements

This report on the competitiveness of the Russian manufacturing industry by State University — Higher School of Economics is based on the results of a project carried out in partnership with the World Bank and partially funded by the Ministry for Economic Development and Trade of the Russian Federation. The report was first published in Russian in early 2007.

This report was prepared by Victoria Golikova, Ksenia Gonchar, Boris Kuznetsov, and Andrey Yakovlev with the assistance of Yevgeny Yasin as the scientific supervisor. Further contributions were made by Vladimir Gimpelson, Leonid Grigoryev, Rostislav Kapelyushnikov, Anna Kosygina, Valery Mironov, and Ksenia Yudaeva.

Useful comments and observations were received from Andrey Belousov, Vladimir Drebensov, Irina Denisova, Vera Yeliseyeva, Natalya Ivanova, Andrey Klepach, Evgeny Kuznetsov, and Victor Polterovich. The authors are also grateful to Kristalina Georgieva, Itzhak Goldberg, Alexandra Gross, Radj Desai, John Litvak, Yevgenia Savchenko, Hong Tun, Alan Watkins, and Mark Shaffer for their valuable cooperation.

# 1. Executive Summary

The manufacturing sector is presently one of Russia's most problematic sectors. There are strongly divergent views concerning its future. They vary from eliminating it as a waste of resources to transforming it into an engine of growth by redistributing natural resource rent in the interest of industry modernization which in effect, would restore a pre-reform structure of the economy. Other ideas include transferring the focus of policy from reforming unsuccessful enterprises to establishing new firms that could start from scratch and unencumbered with new production and management techniques. The findings presented in this report make it possible to assess the prospects for implementing such scenarios and provide a glimpse of micro-level processes within manufacturing.

In summary, the main findings of this research are as follows:

1. Russian manufacturing is the most vulnerable segment of the national economy because of its inefficiency and lack of competitiveness of its products in domestic and international markets. An assessment by World Bank experts based on cross-country analysis conducted as a part of the joint project indicates that firm productivity in Russian manufacturing lags behind that of Central and Eastern Europe and developing countries, such as Brazil and South Africa and of course even more that of advanced industrial economies. In terms of productivity, Russian manufacturing is comparable to that in China and India, however, its labor costs are higher. Russia's lack of competitiveness relative to other countries is evident in its lower export activity and focus on the domestic market. Only 10% of large and medium-sized companies have exports exceeding 20% of sales, and, even then, three quarters of exports are targeted toward markets in former Soviet states (CIS).

2. The rapid increases in manufacturing productivity in the last decade are rooted in the intensive use of available resources (greater capacity and labor resources), while the number of jobs has decreased and the manufacturing sector itself has diminished seriously in absolute and relative terms. In recent years, the process of labor force reallocation across sectors has slowed down. Labor costs have been increasing just as that of other production factors. The chances for extensive non-investment growth have been shrinking, and the price factor of global competitiveness has been deteriorating, in line with the appreciation of the national currency. Further productivity growth will only be possible through rapid

development of intensive production factors, such as investment, innovation, and human capital development.

3. This study shows that Russian companies are characterized by a considerable diversity in productivity levels, with dispersion within each sector being considerably larger than that among sectors. In the group of the most competitive and effective firms that make up to 20–25% of the total number, productivity is three or more times higher than the sectoral average. At the same time, a large percentage (30–40%) of all firms have extremely low productivity. There are clusters of inefficient firms in each sector, even in the most competitive ones. The intersectoral dispersion between the best 20% and the worst 20% of firms is as great as 20–25 times. These results prove that there are high entry and exit barriers, which prolong the life of the ineffective, non-market sector of manufacturing.

4. In the chemical and food sectors, the proportion of successful and effective firms is higher than elsewhere. Productivity is the lowest in the textile industry as well as in timber and wood processing. A comparison of labor productivity dynamics by value added (VA) per worker and VA generation per one ruble of wages indicates that, in most manufacturing industries, labor costs are rising faster than productivity. There is a sustained tendency for the decline of returns for each ruble of wages in such sectors as machine-building, light industry, and wood processing.

5. Inefficient enterprises are most often segmented in relatively small size group (100–150 employees), they are often located in small and medium-sized towns (under 100,000 population) and in underdeveloped regions. They are mainly focused on the local market. Such firms have low profitability, and they owe their continued existence to low wages and the use of existing fixed production assets, even though they are worn out and outdated, rather than to investment: 70% of firms in this group have equipment that has fully outlived its normal service life span. The findings have shown that Russian manufacturing is multilayered, with the least competitive segment locked in a kind of vicious cycle of ineffectiveness with low productivity, low profitability, unattractive investment opportunities, absence of technological modernization and innovation, and declining competitiveness. In fact, the efforts aimed at increasing competitiveness should concentrate on breaking up this vicious cycle of ineffectiveness, increasing the amount and stability of the leaders' competitive advantages, and reducing the number of non-competitive firms.

6. Firms possessing different levels of competitiveness have a different demand for institutions. Whereas successful growing firms require better access to land and infrastructure and a more qualified workforce, ineffective firms are more interested in lower taxes and market protection. On the whole, this study shows that investment climate parameters in Russia are comparable to those in other transition economies. However, the investment climate of competitors is improving faster than those of Russia.

7. The group of competitive leaders is unstable. As much as one half of the most competitive firms has not innovated in the last three years. The physical equipment depreciation in the group of leaders has also reached a dangerous level. Only one quarter of the leaders have machine and equipment pools that may be considered acceptable (less than 20% of all equipment beyond a normal service life span). More than half of the leading firms have no long-term development strategy. As a result, many of the present leaders are running the risk of losing their competitive positions as a result of insufficient attention to intensive growth factors. If the present tendencies remain unchanged, the percentage of competitive firms in the manufacturing industry can be expected to drop by 50% to approximately 10–12% even if the market does not punish the producers with a sharp change in cost level and structure.

8. The low innovation activity of many enterprises stems from a low level of competition in many markets. While, on the whole, the intensity of competition does not directly affect company effectiveness, competition, especially with imports, undoubtedly stimulates firms to engage in active restructuring and innovation. It is reflected in greater use of new equipment, acquisition of new technologies, and R&D activity.

9. The analysis of investment activity data has shown that more than one third of all large and medium-sized firms made absolutely no investment into their fixed assets. A further 20% of the firms made only minor investments, less than that necessary for simple reproduction. Therefore, only 45% of all firms invested on a scale that made it theoretically possible to expand production. A large percentage of all investments in equipment are used to purchase imported products. Machine-building is the only sector in which the share of investment into domestic equipment is more than 50%. At the same time, the higher a firm's investment activity and competitiveness, the greater the share of imports in its total equipment purchases. In the group of the most actively investing firms, the share of imported equipment exceeds 70%. It seems that domestic equipment is

mainly used for simple reproduction (replacement of equipment, maintenance, and repairs), while imported equipment is mainly intended for expanding production capacities.

10. The financial indicators have shown a tendency to decay in recent years. In 1999–2004, the firms covered by this study were rapidly accumulating debt. Long-term loans grew by more than 18 times compared to 1999. Total credit grew mainly at the expense of firms with the most stable growth, but inefficient firms were also increasing their indebtedness. It is noteworthy that, irrespective of competitiveness or financial status, firms hardly ever use the stock market as a source of capital. Only 4.3% of the firms were listed on Russian exchanges, while less than 1% of all firms were traded abroad. Few firms were planning to attract external strategic investors. The more competitive the firm, the more negative the respondents' assessments of its prospects for attracting a major outside shareholder.

11. Analysis of the survey data indicates that such a method of increasing efficiency as integrating firms into larger business groups has been largely exhausted. Our findings show that one third of all firms in manufacturing belong to integrated business groups (IBG). On the whole, business-group members do not differ in any of the indicators that reflect various aspects of competitiveness, although the share of bad firms in that group is smaller. We also failed to discover any positive effects of property rights transfer. Despite the active replacement of owners (approximately one quarter of all companies were transferred to new owners over three years), a new owner does not generally effect any major changes for the better.

12. A relatively recent but already quite serious problem in Russian industry revealed during the analysis of competitiveness factors is a shortage of qualified workers at all levels — from manual workers to top managers. While the qualifications of high-level managerial workers are improving, there is a gap in the skills between top- and medium-ranked managers (specialists). Even among the leading firms, the number of those in which the quality of management is similar to the best international practice is quite low. The shortage of skilled workers ranks second among the 20 most significant obstacles to growth; the problem was acknowledged by more than 50% of the surveyed companies. In ineffective firms, on the other hand, the main reason for the shortage of skilled personnel is the inability to offer adequate pay.

13. Contrary to the widespread belief that the authorities have not been paying sufficient attention to supporting industry, this study shows that as many as one in four firms did actually receive some form of state stimulus in recent years. Yet, one important support measure, i.e., export support, was made available to less than 3% of all firms. On the whole, effective and competitive firms receive state support more frequently; however, even then, its effectiveness is not considered to be exceptionally high. Furthermore, the support provided by regional authorities is generally appraised higher than measures taken by the federal government.

14. Taking into account the above conclusions, we have formulated several principles that seem important for developing new industrial policy mechanisms:

- It is advisable to design different policies for different groups of firms that need to be categorized according to their competitiveness rather than industrial sectors or products, aiming to remove all obstacles to the expansion of the leaders, and provide assistance for business development in the second echelon, thus increasing the number of leaders and creating conditions for ousting outsiders from the market by releasing resources for new and more effective players.
- It is important to enhance the role of government as an intermediary between poorly interacting market agents (such as between large and small firms, research and production-oriented entities, or metropolitan and regional companies).
- Given the greater concentration of ineffective firms in small, regional towns and their dependency on regional investment risks (as shown by this study), it is necessary to design integrated industrial and regional policies.

### Box 1

#### Survey Description

The survey was carried out within the HSE — World Bank partnership project and included more than 1,000 face-to-face interviews of large and medium-sized firms in 8 sectors (according to the National Bureau of Economic Analysis (NACE) codes). The project was commissioned by the Ministry for Economic Development and Trade. The survey was conducted from September 2005 to February 2006 by the GfK-Rus Company using direct interviews with top company managers based on a standard question-

naire of more than 200 questions. A random stratified sampling technique was used based on NACE code segmentation. Each sector was represented by at least 90 firms varying in size except for the very large ones, which had more than 10,000 employees. The smallest size group had no fewer than 100 people. The survey was conducted in 49 regions of Russia. On the whole, the surveyed firms make up 5% of the aggregate total population of manufacturing enterprises with 600,000 employees and with a total output of more than 384 billion rubles in 2004. After the survey was completed, the subjective data from questionnaires was linked with financial and accounting information purchased with project funds from the SPARK database. Furthermore, experts from the Development Center, the CEFIR, and the Finance and Energy Institute think tanks participated in the research. The sample structure is shown in Fig. 1.1.

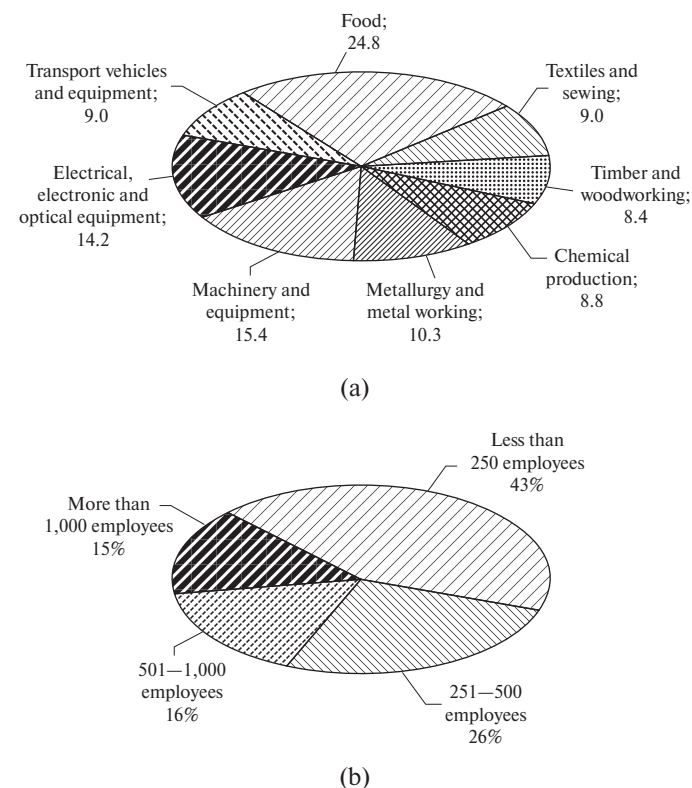


Fig. 1.1. Survey sample structure by sector (a) and size (b)

## 2. Diagnosis: Decreasing Competitiveness, Segmentation, and Structural Growth Problems

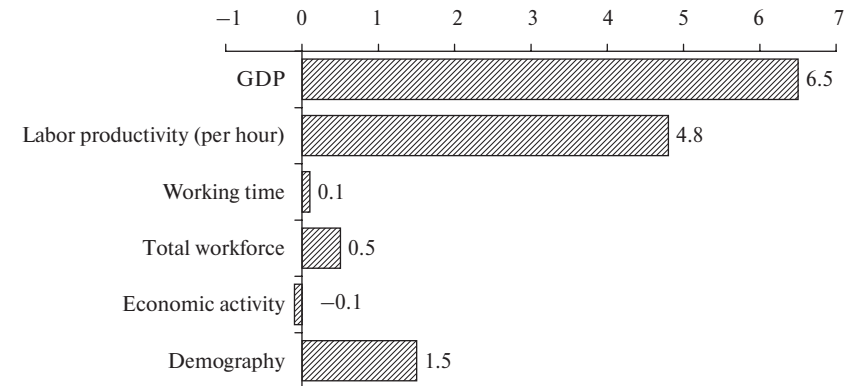
The Russian economy has had a high stable growth rate for almost seven years. Almost all macroeconomic indicators have been improving over this period: the average annual GDP growth has been more than 6%, inflation has dropped, individual and company incomes have increased at a considerable rate, and investments have climbed even faster. The quality and sustainability of this growth, however, are a cause for concern, as they stemmed initially from national currency devaluation and import substitution, and, more recently, they have been supported by favorable international markets for natural resources. The competitiveness of the national economy has, therefore, become a crucial part of the national agenda, including the factors underlying competitive advantages and consideration of industrial policies for managing competitiveness.

If economic growth is to be sustained, it is imperative that Russia improve competitiveness by raising productivity. In fact, recent growth has been attributed to intensive factors. A decomposition of GDP growth factors from the viewpoint of resource use efficiency has indicated that, of the 6.5% GDP growth in 2001–2004, almost 5% was generated by increased labor productivity (see *Fig. 2*). It is noteworthy, however, that factor accumulation also played an important role during the same period. The total workforce grew by 2.7 million (4%) compared to 2000, when the total population decreased by 2.8 million. This source of growth will no longer be available in the medium term: according to forecasts, the tendency for workforce growth will be reversed, and the decline will start as early as 2008.

The concept of national competitiveness involves numerous factors. The various components supplement each other and generate sustainable growth and prosperity during globalization as well as relatively free international trade and open financial markets<sup>1</sup>. Please check and change or clarify as appropriate.) While there is no universal definition, there

<sup>1</sup> For instance, dozens and sometimes hundreds of individual indicators are used in international ratings for the purpose of comparing the competitiveness of national economies.

is a general understanding that a nation's competitiveness depends directly on the competitiveness of individual sectors of its economy, which in turn depends on the competitiveness of firms belonging to a specific sector and, ultimately, on the competitiveness of the goods and services they produce. The present study focuses on analyzing the situations and factors that determine the competitiveness of firms comprising Russian manufacturing.

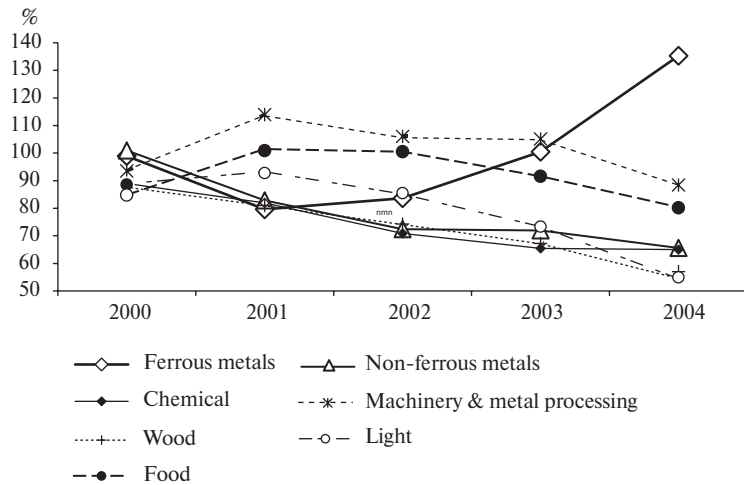


*Source:* Development Center calculations based on Russian Statistical Committee data and selective surveys of employment for 2000–2004, as of the end of November, and 2003–2004, including the 2002 National Census findings.

**Fig. 2.1.** Factor input into average annual per capita GDP growth (in real terms) in 2001–2004, shown in percentage points

The selection of the manufacturing sector as the subject of study was not accidental. The situation in this sector of the national economy determines its position in the world market. This part of the economy suffered most during the transformation crisis in the late 1990s, when a large number of jobs were eliminated<sup>2</sup>. In spite of the growth in manufacturing from 1999 through 2006, output is still far below the 1990 level. Meanwhile, the growth rates in manufacturing, except ferrous metallurgy, are still considerably lower than those of the economy as a whole, while its share in total industrial production is shrinking (see *Fig. 2.2*).

<sup>2</sup> A greater decline occurred only in agriculture.



Source: Russian Statistical Committee, data for large and medium-sized companies.

Fig. 2.2. Sectoral input into value-added generation in Russia's industry

The overall decline of industry would be less serious if the survived part of Russian manufacturing were efficient and competitive. Unfortunately, it is not. World Bank experts have reported that, in terms of productivity, Russian manufacturing firms have lagged behind not only those of developed European countries but also those of central European economies that recently completed market transition and even many of those of developing countries, such as Brazil and South Africa. ***Labor productivity in Russian manufacturing is close to that of Chinese and Indian firms, but Russian labor costs are considerably higher, which undermines its competitiveness in Russian and global markets.***

The relatively low competitiveness among Russian manufacturing companies and their products is indirectly reflected in foreign trade dynamics. Even as Russian manufacturing was expanding, most of the products were intended for the domestic market. While exports hardly increased, the imports of finished goods grew rapidly, especially in recent years, which had the consequence of limiting domestic producers from the markets. In other words, Russian manufacturing is in a defensive position on its own turf and still losing the battle.

The situation is further aggravated by the likelihood of even tougher conditions in the medium term for the currently viable Russian companies. The Russian economy is opening up to product flows as well as to foreign firms willing to operate in Russia. Extensive sources of relatively low-cost growth, such as idling capacities and a cheap, often excessive workforce, have all been used up. In recent years, capacity utilization in most of the efficient firms has reached reasonable limits, while wages are growing at the same rate as productivity or, even worse, faster.

The prices for production resources are likely to be climbing at a faster rate, including those for fuel, energy, and land. ***If the competitive positions are to be maintained, the efficiency of using these resources must be increased, and that in turn requires radical technological upgrading, new product development, and improved quality.*** If these changes do not occur, Russian firms that are mostly using Soviet-era machines and technologies will barely be able to survive in the competition with firms from large developing economies, such as China, where industry emerged at a later date and is using far more modern technology. Radical production upgrading calls for major investment, and, in principle, the necessary funds are available both domestically and on international financial markets. It is noteworthy, however, that the present profit margin in most manufacturing firms is hardly attractive to foreign investors, while their own funds are insufficient for meeting the great challenge of modernization.

One solution would be to create new, highly effective firms in the manufacturing sector that would not be burdened with inherited obsolete technologies and financial constraints. In fact, such a tendency is beginning to emerge. However, most of the newly established firms are targeting domestic markets and/or import substitution in segments that have some protection against foreign rivals and are incapable of making any difference to Russia's resource-dependent positioning in the global economy. Moreover, the establishment of new firms is hindered by a number of obstacles, most importantly, the investment climate, administrative barriers, increasingly difficult access to the infrastructure (engineering and transport communications, and energy), limited access to cheap fuel sources (primarily, natural gas), and the growing shortage of skilled workers.

This downbeat assessment of Russian manufacturing does not mean that the industry has no prospects at all. Low productivity rates in some

of the sectors do not indicate an absence of growth sources. *If the situation is analyzed on a micro-level, it becomes apparent that the low average figures are obscuring gigantic disparities in the development level and the dynamics of efficiency in individual firms.* The survey by the Higher School of Economics and the World Bank has shown, for instance, that the productivity gap between the best 20% and the worst 20% of the firms is as great as 10 to 20 times depending on the sector. The best 20% of all companies have 2.5–3 times higher efficiency than the sector average. *Contrary to all expectations, the differences between sectors are far less significant than those within sectors* (see Table 2.1).

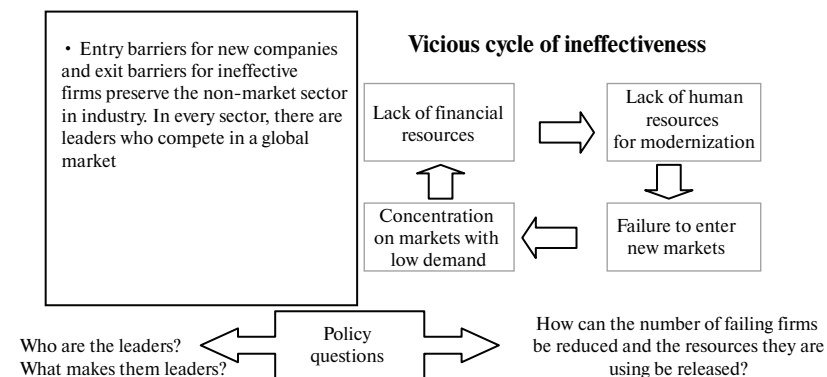
**Table 2.1.** Inter-sector distribution of firms by labor productivity

	Average value added per 1 worker, thousands of rubles per worker		Labor productivity by industry among leader group relative to outsider group
	Outsider group — 20% firms with lowest productivity	Leader group — 20% firms with highest productivity	
Food	27	636	24
Textiles and sewing	14	226	16
Timber and wood working	25	604	24
Chemical production	79	818	10
Metallurgy and metalworking	30	707	23
Machinery and equipment	38	437	11
Electrical, electronic, and optical equipment	53	483	9
Transport vehicles and equipment	32	365	11

Source: Survey data.

The survey showed that Russian manufacturing is characterized by significant diversity, with the least competitive segment locked in a vicious cycle of ineffectiveness (see Fig. 2.3). Essentially, the task of increasing competitiveness consists of breaking up this vicious cycle of inefficiency

and increasing the number and sustainability of the leaders' competitive advantages while reducing the share of non-competitive firms. We propose to analyze the methods of achieving this task by examining the external and internal factors that appear to affect the competitiveness of firms.



**Fig. 2.3.** Productivity gaps within sectors — key problem of competitiveness

### 3. Competitive Leaders: Location, Purpose, and Number

#### 3.1. Competitive Share of Manufacturing

The survey results indicate the presence of leading and failing firms in all industrial sectors. Different estimates (depending on the selection criteria) indicate that between 20% and 25% of all firms can be placed into a group of leaders.<sup>3</sup> About one half of them have higher productivity and increased output, and their productivity growth rate is above average for the sector. These firms have the greatest potential for growth and are currently the locomotives of economic development.

At the same time, 35–40% of all surveyed companies belong to the group of losers, which demonstrate low-level and negative dynamics of production effectiveness and are patently losing competitiveness. In the future, these firms will either have to undergo major restructuring or be altogether ousted from the market by more effective companies. Even though, from the viewpoint sales and percentage of the total, the number of firms is slowly declining, they still account for a significant part of Russian manufacturing.

Our analysis has shown that *the probability of a firm joining the group of leaders increases with its size and location in a large city with the status of the regional or federal capital*. For instance, among firms with more than 1,000 employees, the share of highly competitive companies is more than double that among firms with 100–250 employees (see Fig. 3.1). Similarly, a “metropolitan” status increases the probability of firms belong-

<sup>3</sup> We tested several methods of grouping for identifying the group of competitive companies, each with its own advantages and disadvantages. In the first method, we defined firms as competitive if their labor productivity by VA was above average in their sector and they considered themselves to be leaders in their field. In the second method, we defined firms as competitive if they both increased their output and had absolute productivity (by VA) above average in their sector. In regression models, these groups as well as various individual indicators were used as dependent variables, i.e., productivity growth rate and absolute level by VA and average annual sales growth. In this section, we are using the former method to identify competitive firms in the illustrations. What needs to be pointed out, however, is that regardless of the method of grouping used for calculation purposes, the main conclusions concerning competitiveness factors remained the same.

ing to the group of leaders by 2–3 times. Therefore, as in the past, the concentration of production in large firms in industrial agglomerations largely determines a company’s position. The reasons are many and varied. They include different externalities: scale economy, better production factor markets (except perhaps land, as its shortage and barriers to access prevent further concentration of industry), as well as better resistance to all kinds of shocks, especially in transition periods, and greater availability of transport and other infrastructure.

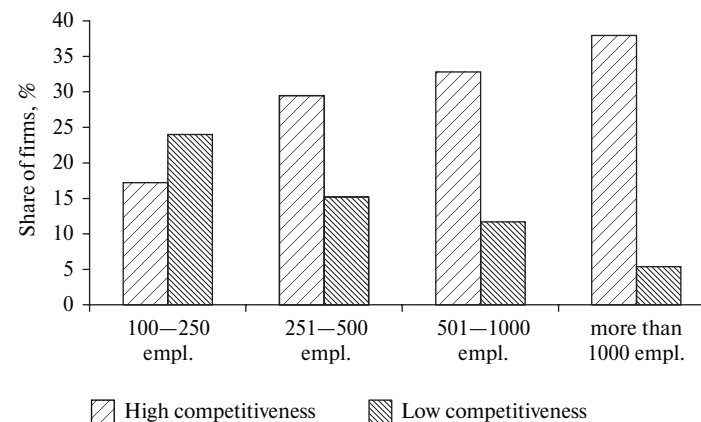


Fig. 3.1. Share of competitive firms by groups with different numbers of employees

*It is important that the nature of the sector is not a major factor of a firm’s competitiveness:* i.e., there are very competitive leaders even in the more depressed sectors. It cannot be denied that export opportunities and tradability of the chemical industry’s main products contributed to the fact that the share of leaders there is greater than in other manufacturing sectors (Fig. 3.2). It is noteworthy, however, that major steel companies were not included among the surveyed sample in order not to distort the general picture for manufacturing as a whole. The low rank of the food sector can be explained by the fact that the productivity gaps in this sector are the greatest, while the sectoral average, which served as a benchmark for calculations, is excessively high due to the input of firms that produce goods subject to excise taxes.

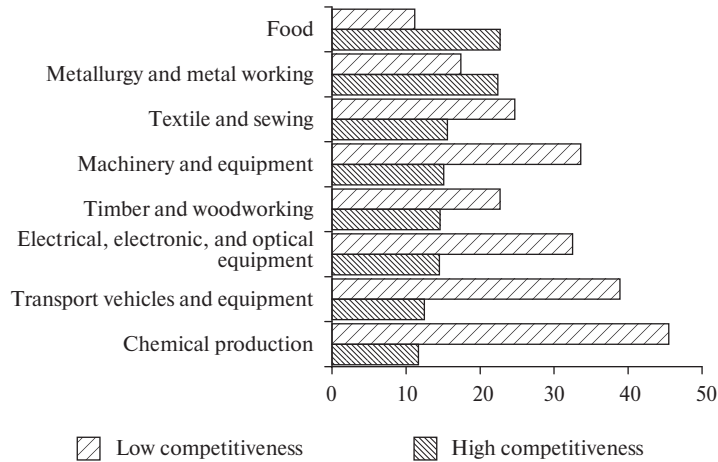


Fig. 3.2. Distribution of competitive and failing enterprises across sectors

An analysis of the behavioral models of the leaders indicates that they create and maintain competitive advantages by closely following textbook algorithms. Such firms export more to compensate for the limited demand on domestic markets, and they innovate actively, thus laying the foundation for future growth. The qualifications of managers and the quality of their technical support to their skills are much higher and they use more advanced management practices focusing not only on cost and quality control. The leaders provide personnel training on a permanent basis and pay higher wages, thus winning the competition for skilled workforce.

At the same time, the survey revealed some problems even in the group of competitive leaders. In fact, 50% of all competitive firms did not report technological innovations, while 9% had not engaged in either technical or organizational innovation in the last three years. The physical depreciation of equipment in the leading group has also reached dangerous levels: only one quarter of the leaders have machine and equipment pools that can be considered acceptable (less than 20% of equipment beyond service life), while one half of the leaders have equipment that is completely depreciated. More than a half of the leaders have no long-term development strategy, while 51% of the leaders and 60% of outsiders are experiencing a shortage of skilled workers. These figures alone indicate that the group of competitive leaders is unstable. One half of the present leaders are running serious risks of losing their competitiveness in the near future through

insufficient attention to intensive growth factors. *If the present trends continue, the share of competitive companies in the manufacturing industry can be expected to shrink by 50 to 10–12% even if the market does not punish the producer with sharp changes in cost level and structure.*

### 3.2. Export as an Indicator of Competitiveness

The main sales market for Russian manufacturing is the domestic market; nevertheless, our survey has shown that *the number of competitive firms among exporters is twice that of companies selling exclusively in domestic markets, irrespective of the export share of total sales* (see Fig. 3.3). The more competitive and effective firms export considerably more often and in larger amounts.

It would appear that this means that *export activities should unequivocally be treated as a sign of competitiveness and, thus, be supported with industrial policy measures.* On the one hand, the volume of exports is less than modest even though more than one half of the companies sell abroad, amounting to contracts that are usually one-time sales and accounting for no more than 5% of the total sales.

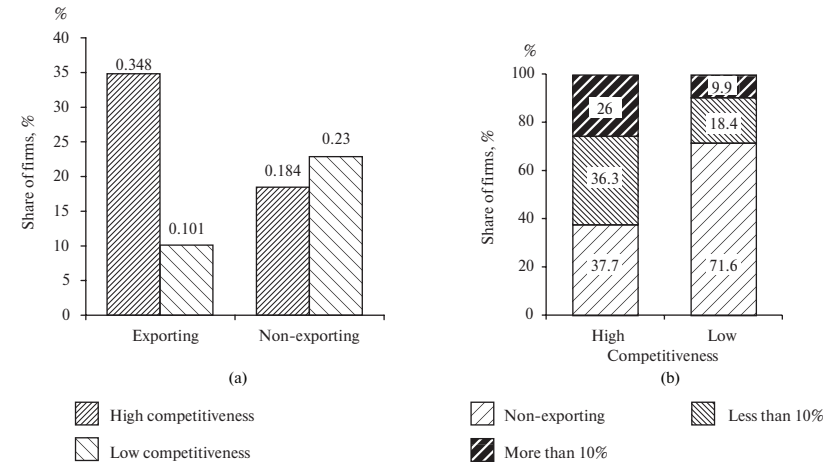


Fig. 3.3. Share of competitive firms among exporters (a) and distribution of companies by proportion of exports depending on the level of competitiveness (b)

On average, the share of exports in total sales of surveyed companies accounts for approximately 12%, most of which goes to CIS countries (*Table 3.1*). The timber and woodworking sector is excluded in this respect, as it targets mostly developed countries. The share of real exporters (those with more than 20% of exported sales) does not exceed 12% of surveyed companies. Still, the larger the firm, the bigger, on average, the share of exports. In the group of large companies, almost 40% receive more than 10% of their revenues from exports. The regression analysis has also shown that a higher proportion of exports has a significant positive effect on sales profitability and absolute productivity by VA.

**Table 3.1.** Export structure by sector

	Total sample	Food	Textiles and sewing	Timber and woodworking	Chemical production	Metallurgy and metal working	Machinery and equipment	Electrical, and electronic, and optical equipment	Transport vehicles and equipment
Exports (% of sales)	12.1	2.4	7.0	18.6	20.6	14.4	8.4	13.5	9.9
<i>Export structure by region (% of exports)</i>									
CIS countries	62.1	83.3	64.2	27	53.6	60.2	75.1	61.6	79.8
Developed countries	16.3	8.3	22.9	53.9	18.2	25.0	6.8	2.5	7.1
Other countries	21.6	8.3	12.9	19.1	28.2	14.8	18.1	35.9	13.1

The relatively low exporting activity of most firms in manufacturing can be explained by the low rank in competitiveness of their products in international markets and the lowering of returns from exports resulting from growing domestic prices and high transaction costs, which make access to foreign markets too expensive given the low scale economy of export operations. Nevertheless, the study shows that the low level of exports by Russian manufacturing companies results first of all from the problems of the companies. For instance, *enterprises with foreign owners managed to discover more effective niches for exporting goods produced in*

*Russia.*<sup>4</sup> The share of exporters among the group of companies with foreign capital is as high as 74%, and more than one half of this group has a share of exports that is above 10% of sales. This group also has a better regional export structure. More than 60% of all exports go beyond the CIS states, compared to approximately 30% in the group of Russian-owned firms.

<sup>4</sup> The factor of positive selection should be considered, as foreign investors chose to acquire the assets of the more competitive companies.

## 4. External Factors of Competitiveness

According to the theory of competitiveness, many of the factors that determine a company's competitive status are external to the firm and depend on its location, presence of industrial clusters, nature of the business climate, and access to the main production factors, including infrastructure. On the whole, in this respect, our findings turned out to be quite puzzling. It seems that the effect of the national investment climate on manufacturing companies is not as critical as it would appear from the literature, and, in fact, it is generally believed that many market agents have learned to cope with the problems caused by the business environment and government institutions. Conversely, *we discovered severe problems rooted in geographical location and investment risks at the regional level.*

### 4.1. Investment Climate<sup>5</sup>

External factors of competitive advantage are considered in this report in the context of investment climate and its various parameters, which can either increase or decrease production costs, thus affecting the enterprise's advantages against producers in other regions and countries. The study raises three primary research questions:

(1) To what extent is Russian business climate better or worse than that in the countries that compete with Russia for markets and investments?

(2) What business climate constraints cause the greatest concern among managers?

(3) What investment climate problems limit company effectiveness and competitive advantages?

To answer the first of these, we used empirical survey data on business climate in transition economies (BEEPS)<sup>6</sup>, which allow making dy-

---

<sup>5</sup> This section of the report benefited from Ksenia Yudaeva's research results, presented in her paper "Investment climate and infrastructure: Effects on enterprise competitiveness" (manuscript).

<sup>6</sup> The BEEPS project (The Business Environment and Enterprise Performance Survey) is intended to examine investment climate constraints and barriers to doing business in East European and Middle Asian transition economies. The BEEPS

dynamic cross-country comparisons. Answers to the other two questions were based on an HSE-WB survey of 1,000 manufacturing companies. The survey results were analyzed by regression analysis methods, making it possible to evaluate the links between certain investment climate components and the company specificity (i.e., size, location, competitive performance, exports, and participation in vertically integrated structures). From the viewpoint of economic policy, such analysis helps to learn which companies would gain from improvements in specific business climate features.

### The Competitiveness of Russia's Investment Climate

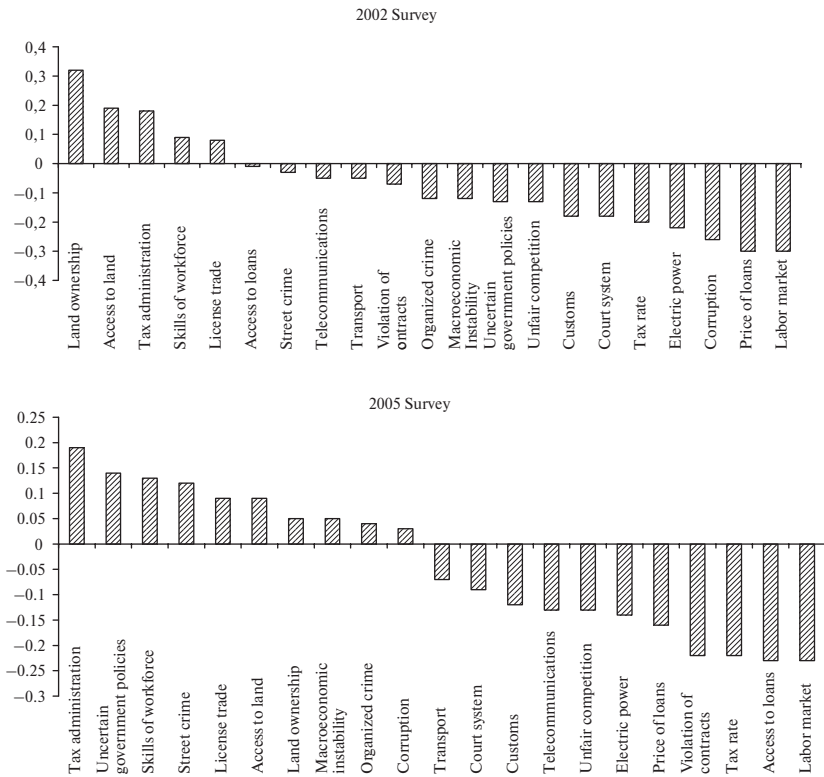
*Russia's investment climate is far more competitive than generally thought compared to other transition economies. However, this advantage is fast shrinking, mainly because the competing economies are doing much better at improving their business environments.*

Our analysis was based on the findings of a study of the business environment in transition economies. Russia's indicators were compared to aggregated data for other countries covered by the survey. It turned out that, in 2002, Russia was above average for the surveyed group in three out of four business climate parameters, as perceived by Russian businessmen (*Fig. 4.1*). Even such constraints as corruption, political uncertainty, and the threat of organized crime were evaluated as less significant than average for the other economies.

A repeat survey from 2005 has shown a deterioration of Russia's investment climate in at least one quarter of the positions. Thus, it remained better than international average in only 50% of the parameters. The greatest decline occurred in political uncertainty and corruption, and Russia fell even further in labor force qualification and licensing. The only improvements were in access to land and title registration.

---

database covers 27 countries, including Russia. The surveys are conducted once in 2–3 years, allowing a comparison of Russian responders' absolute and relative positions over a wide range of indicators over time. Russia was represented with 551 observations, including industrial and service companies from groups of all sizes; a standard questionnaire of 73 questions was used, as was the case for all other economies.



The bars above the horizontal axis reflect the constraints that were estimated to be worse relative to the consolidated sample by responders in Russia. The size of the bar reflects the gap in perceptions in Russia and the rest of the economies.

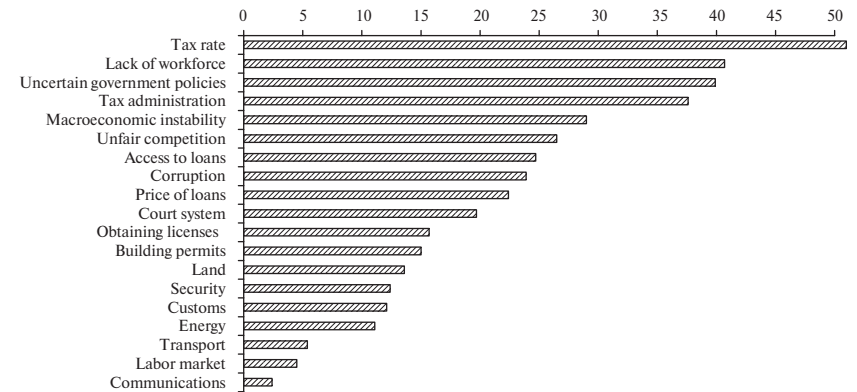
Source: Selected BEEPS surveys.

**Fig. 4.1.** Comparative investment climate constraints: Russian firms' perceptions relative to the average consolidated sample for 26 transition economies

### Investment Climate Constraints that Cause The Greatest Concern among Manufacturing Firms

The declining competitive advantage of Russia's business climate in terms of such factors as workforce quality and economic policy uncertainty is confirmed by the perceptions of manufacturing companies. *Figure 4.2* shows that 51 and 38% of all companies are concerned with tax

rates and tax administration, respectively. Taxes are always the primary complaint of businessmen in all countries regardless of their actual rate. ***Our study has indicated, however, that the issues of workforce quality and uncertain government policies are abnormally high on the list of obstacles.*** On the other hand, communications, transport, and labor regulation are not ranked high among barriers to business.



**Fig. 4.2.** Company perceptions of business climate constraints (proportion of those who believe the obstacle to be serious or very serious, % of all respondents)

Despite the low rank of constraints associated with the labor regulation compared to other constraints of the business environment, it is noteworthy that only one in three enterprises report no difficulties with labor market regulations. Considering the forthcoming workforce shortage not only as structural (in some of the professions and skills) but also as absolute, the barriers to access to the workforce will have to be decreased in the near future.

*Table 4.1* displays the problems associated with employment protection regulation that cause the greatest concern among respondents, including both competitive leaders and non-competitive enterprises.

The problems common to both leaders and losers are: hiring and firing rules, working time use, and hiring of foreign labor. As far as the less competitive enterprises are concerned, they have significantly more problems with timely payment of wages, while competitive entities have more difficulties with hiring and firing, short-term labor contracts, and work time utilization.

**Table 4.1.** Respondent perceptions of labor market regulations

	Total sample	Leaders	Non-competitive enterprises
Hiring and firing rules	18.8	15.1	17
Short-term work contract	11.8	15.1	12.1
Working time regulation	15.3	15.1	15.6
Conformity to minimum wage requirements	10.6	7.3	15.6
Social benefits provision	12.5	8.7	13.5
Rules on timing of wage payments	12.1	7.3	24.1
Regulations on relations with trade unions	4.1	2.3	2.8
Regulations on hiring of foreign labor	20.2	21.8	17
Other	3.1	5	2.1
No problems at all	39.7	38.6	33.3

Finally, the study reveals *a declining role of financial markets as a barrier to enterprise growth*. Macroeconomic stabilization is notably enhancing the reliability and effectiveness of the financial system, particularly in comparisons with earlier years. It appears that the more competitive firms have better access to external funding at costs that are smaller than those for ineffective enterprises. The share of the stock market as a funding source remains modest. So far, only 4% of the surveyed firms raised capital on the Russian stock market, and less than 1% were listed on foreign exchanges (it is noteworthy that the surveyed companies were large and medium-sized).

At the same time, there are signs of extremely fast debt accumulation by the less successful firms. The average long-term debt of the surveyed firms grew 18 times more than that in 1999, while short-term debt increased 2.4 times. Debt increases were particularly notable in sustainably profitable companies and in those enduring extreme financial difficulties. *In other words, the decline of financial stability of firms can be attributed to large debt and the growing instability of the financial markets, both of which stem from the continuation of unprofitable companies receiving loans and accumulating bad debt.*

## What Enterprises will Benefit from Improving Specific Business Climate Constraints?

In this study, the perceptions of the investment climate constraints by enterprises, controlling for the level of their competitiveness, investment, and innovation, ownership structure, size, and location, were analyzed. The analysis showed that the higher the firm's productivity compared to the sectoral average, the less, on average, their problems in dealing with institutions, infrastructure, financial markets, and labor. It seems that the more competitive firms have learned to cope with business climate problems, which gives them further advantage over the less effective enterprises. At the same time, newly established companies run into problems within the market place in that they must start from scratch, obtain licenses, gain access to production factors, and deal with institutions.

Our analysis shows that, to develop further, competitive enterprises seek the following:

- simplified procedures for obtaining and registering their land and property rights,
- simplified procedures for obtaining building permits,
- simplified customs procedures,
- a more developed financial market.

The less competitive enterprises, on the other hand, seek:

- lower taxes,
- protection from power cuts off when energy bills go unpaid,
- restrictions on competition.

*The survey confirmed severe constraints associated with the regulation of foreign trade, including customs control and VAT refunding procedures. Both increase entry costs into foreign markets and erect barriers to gaining competitive advantages.* Moreover, firms that export beyond CIS borders have greater requirements on the quality of institutions. Exporters happened to be the only group that reported noticeable dissatisfaction not only with unpredictable government regulations and tax administration measures but also with corruption.

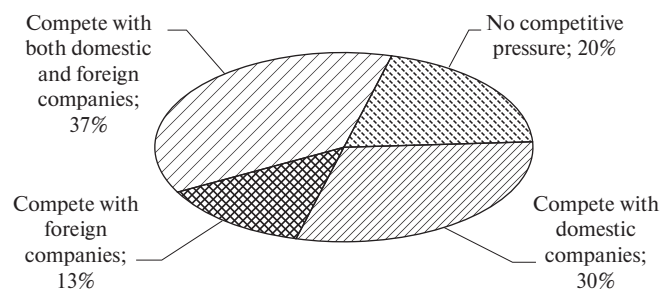
There was just one business climate constraint that seemed to worry all groups of companies irrespective of their effectiveness, and that was the problems connected with the deteriorating quality of labor, the increasing number of complaints being proportional to a company's size. This constraint contributed dramatically to the decline in manufactur-

ing competitiveness. Moreover, competing for skilled labor appears to emerge as a new and so far unacknowledged type of company behavior.

## 4.2. Competition and Competitive Advantages

This study is based on the assumption that competition is an important factor that determines a company's behavior and choice of strategy for gaining a competitive advantage. A change in the competitive environment within a market can transform a competitive firm into a loser and vice versa.

Findings from the study show that Russian manufacturing is barely involved in global competition. The majority of manufacturing enterprises target domestic markets or even narrower regional markets, where they compete with domestic firms similar to them. *Figure 4.3* demonstrates that one in five respondents felt no noticeable competitive pressure, one third competed exclusively with domestic producers, 13% said they had foreign rivals, and less than 40% competed with both domestic and foreign companies. The only sectors in which competition with foreign companies operating in Russia appears to be rather strong are light and chemical industries. The level of competition appears to be sensitive to the situation on the product markets. It is weaker in fast growing markets and very high in stagnating or shrinking markets.



**Fig. 4.3.** Distribution of enterprises by level and type of competition

Approximately 30% of firms target mainly their regional markets. As revealed by regression analysis, a focus on regional markets has a negative effect on company profits and growth rates and correlates with low innovation, and lack of restructuring. Conversely, an exporting company

tends to have higher returns and more innovation, while there seems to be no significant difference in growth rates.

The intensity and type of competition with domestic or foreign companies have a positive effect on a company's innovation, investment activity, and restructuring mode. Moreover, firms facing strong competitive pressure are more likely to generate higher requirements on the quality of the institutional environment, especially the tax system, financial market infrastructure, and regulation and administration of foreign trade.

However, in general, the level of competition has a somewhat ambiguous impact on enterprise productivity, and *the actual competition, especially that involving imported goods, undoubtedly stimulates more active restructuring and innovation among firms.* This is reflected in such activities as developing new products, purchasing new technologies, and R&D.

## 4.3. Economic Geography of Manufacturing as a Factor of Competitive Advantage

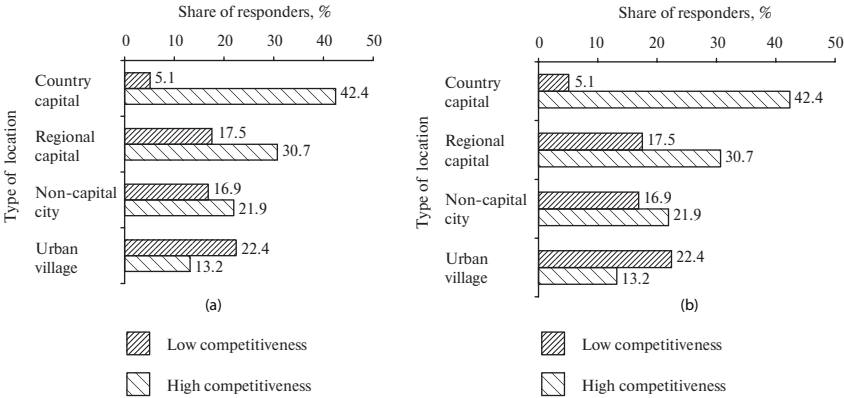
Locational factors involving competitiveness in manufacturing deserve special attention due to the extremely irregular spatial distribution of production factors and accrued competitive advantages in a country as vast as Russia. The regional component of the study conducted by the Higher School of Economics for the Ministry for Economic Development and Trade<sup>7</sup> showed that differences in the effectiveness of using accumulated resources and a recombination of mobile production factors are the main contributors to regional polarization. Inequality exacerbates as competitive advantages accrue in developed regions that are winning the contest for investment and a qualified workforce. As a result, obvious competitive advantages inherent in the more backward regions, which include cheap labor, available land, and inherited potential, become less important than the loss of vital mobile resources.

Empirical study of manufacturing enterprises conducted by the Higher School of Economics and the World Bank revealed some regional factors related to competition that supplement these conclusions, such as

<sup>7</sup> See: "Methods and analysis of competitiveness at the regional level (in the Samara Region)": report on research conducted in the framework of the project on competitiveness and investment climate assessment / ed. by L.M. Grigoryev. Moscow, 2005.

investment risks and the size and status of the communities in which they are located. A model was developed for analyzing the impact of external factors based on various indicators related to enterprise competitiveness (VAT productivity and sales and productivity growth). External factors included geographical location (regional capitals or remote sites as well as community size) and institutional features (investment risks within the regions and types of ownership).

The results were that *community size and regional investment risks always have a statistically significant relationship with every possible indicator of enterprise competitiveness*. Moreover, the impact of these factors is so much larger than any other specific element that location within a small community remote from regional capitals can be easily dubbed “a major force factor” because of the strength of its negative effect on the competitive positions of manufacturing companies. *Figure 4.4* demonstrates that the proportion of competitive enterprises in regional capitals is double that in ordinary towns. Similarly, the number of non-competitive firms increases in reverse proportion to community size.



**Fig. 4.4.** Concentration of competitive firms in capitals (a) and large cities (b)

In fact, we are witnessing the emergence of *areas of industrial poverty*. This is caused by an unfavorable combination of many factors, including a low-income population and the resulting low consumer demand, poor infrastructure, and excessive transportation costs in the cost structure. It seems that the problem of regional industrial poverty is just as difficult to

solve as social poverty because producers and consumers in such locations do not respond well to market signals or industrial policy incentives.

The good news related to the subject of regional competitiveness is the generally more positive assessment of various industrial policy measures at the regional level than those launched by federal authorities. This provides hope that there is some reserve for modernization at the regional level.

## 5. Internal Factors of Competitiveness

One of the most important conclusions from this study is that the main sources of competitive advantages lie within the enterprise itself and are determined by factors that, to a certain extent, can be influenced by the managers and owners of each company. These internal factors primarily include the quality of management and the firm's strategies in the areas of innovation, investment and finance, personnel policy, and improving ownership structure and corporate governance.

### 5.1. Management

Management development, including improvement of its quality and related organizational innovation, provided a major source of company growth and effectiveness in 2000–2004. Still, only the most active enterprises succeeded in taking full advantage of favorable market conditions to improve management (introduce new management technologies, attract highly qualified managers, and train personnel). As a result, *by 2004, the differentiation of Russian companies according to the quality of management became much stronger. Many firms are approaching management standards that are acceptable in market economies; however, many continue to have unsatisfactory quality of management.* For instance, one of ten companies never conducts competitive benchmarking, while nearly one half do not trace the activities of its foreign rivals. Relatively small companies, such as those in the food, textile, and garment sectors, and transport vehicle producers are more likely to ignore competitors.

In general, larger companies usually focus on strategies associated with innovation. Knowledge, qualifications, and skills are of key importance to them. In Russia, where labor mobility remains quite low, it is virtually impossible to hire highly qualified personnel with specialized skills outside large, central cities. The availability of developed skilled labor markets and R&D infrastructure in major cities encourages the concentration of firms that are more likely to follow innovation strategies. These agglomerations may later grow into innovation clusters.

A company's strategic goals and competitive advantages are reflected in its organizational structure. *The more competitive enterprises position themselves in the more lucrative links of the value-added production chain.*

They report the availability of product design and development, advertisement, marketing, and post-sales in-house services twice as often as non-competitive companies. They are also more likely to report in-house personnel training.

On average, the qualifications and educational background of Russian managers have improved considerably in recent years. One of ten enterprises has managers with a Russian MBA or a foreign university degree in economics. Such qualified people are usually to be found among top company management. On the whole, the number of people with Russian MBA degrees among top managers in competitive firms is much higher than that in the less competitive companies (15 and 4%, respectively), just as the number of specialists whose past experience includes work in foreign companies. Still, there are some problems remaining at the medium level of management. Such problems are acknowledged by 40–60% of competitive firms and 60–80% of less competitive firms. The most serious problem in all company units and departments is a shortage of properly qualified specialists, which is caused by a lack of adequate supply on the labor market and inadequate in-house personnel training. Among leading companies, only 40% have a regular budget for improving personnel skills, and only 16.3% of the failing companies have such budgets. On the whole, competitive enterprises invest more in improving their management systems, but they concentrate on cost control and product quality. In other words, their efforts are neither balanced in terms of various aspects of management (*Fig. 5.1*) nor coordinated with a clearly formulated development strategy. Compared to an earlier survey, the number of companies with a documented strategy of development for a 3–5-year period has not grown and remains at approximately 40%. A more balanced approach to upgrading management and introducing advanced management techniques can be found only in companies that have achieved ISO certification.

Our analysis shows that a company's competitiveness has a positive correlation with such management strategy factors as targeting the market of innovation-based products, well-ordered business processes, ISO certification in management systems, the use of IT technologies in company control, the availability of managers with MBA degrees, and an in-house marketing department. If an enterprise had not changed ownership, it was also more likely to have been in the leading group.

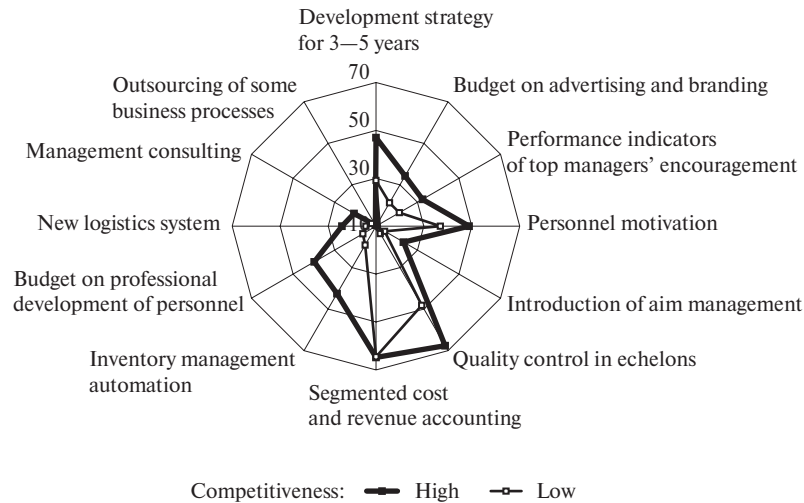


Fig. 5.1. Share of responders (%) reporting upgrading of management techniques among leading and failing companies

## 5.2. Competitiveness and Innovation

The survey results prove that the technological level of Russian manufacturing is highly uneven. Extremely poor indicators in some areas can be found with quite advanced development in others. *The technological capital<sup>8</sup> can, therefore, be described as uneven, and the utilization of its components as inefficient.* For instance, extreme physical depreciation of equipment and low R&D spending are reported alongside advanced ITC technologies, highly qualified personnel, and sophisticated internal organizational infrastructure, including R&D departments, computer nets, and ISO certification of management quality (Fig. 5.2).

Problems associated with outdated and worn-out equipment were serious for all enterprises in the study. Only one fifth of the companies surveyed reported that they had a good technological structure (less than

<sup>8</sup> In other words, the availability of basic technological capabilities, such as equipment, skills, qualifications, learning capacities, and conforming to technical and quality standards as well as the ability to adjust to new product and technology specialization.

20% of all machines and equipment totally depreciated). The situation in the food industry is better due to a relatively high investment rate in recent years.

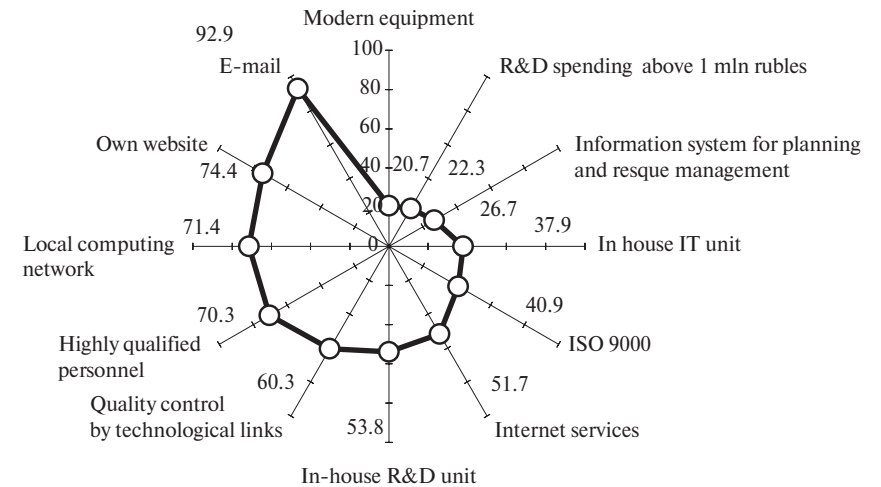


Fig. 5.2. Share of firms reporting technological capital components (% of responders)

Even the most competitive companies have problems with the technological structure of equipment. In this situation, *partial innovation will hardly allow reversing this negative trend. The obvious conclusion is that it is necessary to integrate innovation into the investment process and encourage investment by all possible means.*

The share of novel components in the technology capital more or less fits international standards for modern industrial production processes. Russia is ahead of its main rivals in middle-income countries and in Brazil, India, and China (BRIC) regarding the proportion of ISO-certified entities and share of companies that use ICT to interact with suppliers and clients and report product innovations. However, new technologies are not introduced at a sufficient rate. Furthermore, the level of production capacity utilization is the lowest among these countries. A possible explanation is that no greater share of outdated or worn-out equipment can be utilized for producing competitive goods. R&D spending is higher in Russia than in its East European neighbors or even South Korea (0.4%

compared to 0.1—0.2%, respectively) but is far behind that in China (2.5%) and Brazil (0.9%)<sup>9</sup>. China also has more companies that introduce new technologies, a process that reflects a transition from cost-based competition to gaining a competitive advantage based on intensive factors, above all innovation and training.

The percentage of innovating companies<sup>10</sup> is as high as 36.8% of the sample, and their economic weight is much greater. They account for 49.6% of the workforce, 57.9% of sales, and 59.2% of the value added. The largest percentage of innovating enterprises was observed in the chemical sector (67.8% of the workforce and 81.5% of sales). The smallest percentage of innovating enterprises was detected in the timber and woodworking industry (18.9% if measured by employee number) and in the textile and garment sector (25.1%) as well as in the food industry (25.1%). The gap between different industries does not reflect the leadership of one compared to the others so much as the possible gaining of a technological limit by the older industries where innovation risks connected with conducting R&D seem too high.

While the relative indicators are comparatively high if measured in absolute figures, R&D and spending on personnel training appeared to be quite low. The total spent on R&D and personnel training for all surveyed enterprises was 1.5 billion rubles in 2004, equivalent to approximately 30 billion rubles for the total population of industrial firms. Notably, only one half of all sampled enterprises had any R&D or technology-related spending at all, and only 20% spent more than 1 million rubles for that purpose.

The results of the regression model, which estimated how innovations affected competitiveness, show that, while innovation enhances future rather than current productivity, some kinds of innovation confirm a positive and significant relationship with competitiveness (measured by two indicators — VA labor productivity relative to the industry average and a VA labor productivity logarithm). The greatest input into productivity comes from the enterprise's technological capital (capital-labor ratio and

---

<sup>9</sup> Source: Data received during this study and the World Bank's Investment Climate Survey from Enterprise Survey database: <http://rru.worldbank.org/Investment-Climate/>.

<sup>10</sup> The indicator used to include a firm into a group of innovators was their own reporting of having introduced a new product to the market and/or a new technology controlled by positive R&D spending.

availability of in-house IT units) as well as ISO certification. Conversely, the introduction of new products and new technologies has not proved that there is a significant impact on productivity. The availability of an in-house R&D unit or the use of outside knowledge sources is the most significant factor determining an enterprise's innovation activity. Exports and acquisition of technologies embodied in equipment also have a strong positive effect on innovation behavior. The likelihood of product- or technology-related innovation also grows when a firm conducts its own R&D.

### 5.3. Investment as a Factor of Competitiveness

Investment into more modern and productive equipment serves as one of the most important instruments for enhancing enterprise competitiveness. It is in this area that Russia's industry, particularly manufacturing, is trailing most emerging economies. While investment into fixed capital has been growing at a relatively fast rate, its overall size is still short of what is needed for the normal reproduction of fixed capital. The result, as noted above, is the large-scale use of outdated production facilities. Furthermore, the low average figures camouflage major differences across industries, as some enterprises make altogether no investments into fixed capital or the investments are so small that they barely suffice for capital repairs of the existing equipment and buildings.

Survey data analysis shows that more than one third of all large and medium-sized firms did not make any investment into fixed capital in 2004. Furthermore, 20% of the firms made investments that were considered to be below the simple reproduction level. Therefore, only 45% of all enterprises invested on a scale that was theoretically sufficient for expanded reproduction (provisionally, we have designated such companies as investment-active).<sup>11</sup> It is true that one year of data is insufficient for an adequate analysis of the investment process. Still, the dynamics of fixed fund value suggests that, if investment activity is low in a given year, this is usually because it was no higher in previous years and vice versa: in companies that could be described as investment-active in 2004, the

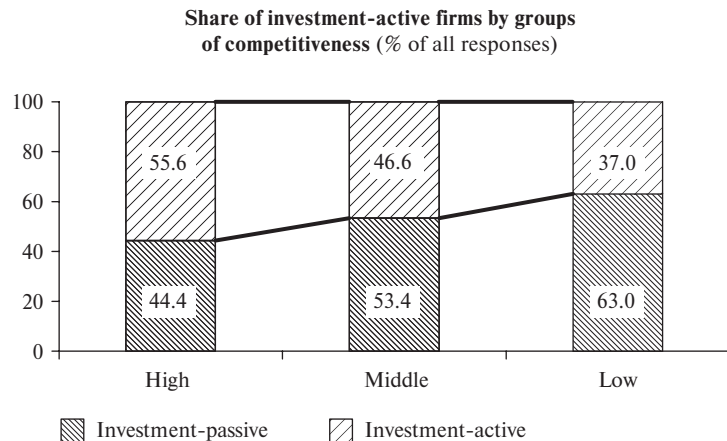
---

<sup>11</sup> In fact, this is an extremely optimistic assessment because, in the absolute majority of cases, far greater funds are necessary for reproduction due to the very low balance value of existing fixed funds.

growth rate of fixed funds, as shown on company balance sheets, is 2.5 times that of investment-passive ones.

Investment activity varies across industries, but not by large degrees: the percentage of passive enterprises is almost 70% in the textile and garment industry, approximately 60–65% in electrical, electronic, and optical equipment and transport vehicles, and about 50% in the rest of the manufacturing industry. Variations also vary little relative to company size, with the exception of small companies (those with fewer than 250 employees), which have shown less investment activity than the larger ones. It is noteworthy that the largest percentage of investment-active enterprises was in medium-sized cities (those with a population of 250,000 to 1,000,000), while investment activity was lower in large (more than 1,000,000) and small towns and cities. This may be evidence of the greater investment attractiveness of cities with developed infrastructure and labor market but relatively cheaper resources (land and labor) than those in larger cities.

On the whole, investment activity is associated with more competitive companies (see Fig. 5.3), as shown here, and, even in the less competitive group, 40% of all firms reported considerable investment activity.



**Fig. 5.3.** Competitive enterprises display greater investment activity

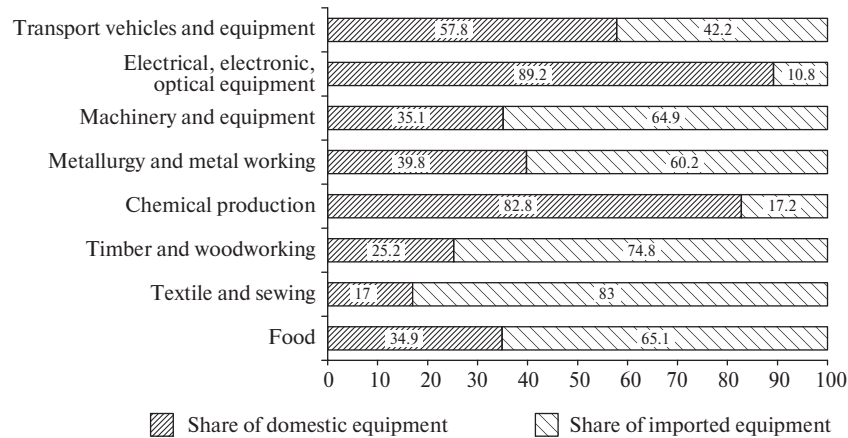
Identification of factors determining the likelihood that a firm would invest into fixed funds was done by analyzing investment activity indica-

tors, such as the investment-to-revenue ratio, investment for each employee (workplace), and investment relative to the fixed asset balance value. Each of these indicators has inherent faults. The first two strongly depend on the capital-output ratio and, accordingly, on the sectoral specificity, while the latter's reliability is undermined by the fact that the balance value does not serve as a sufficiently accurate measurement of real fixed assets. However, the analysis proves that, with other things being equal (we controlled for enterprise size and its sector according to the NACE classification), the main investment motivators are the profit rate and capacity utilization (the greater the utilization, the more likely the investment). The high sales growth rates for the three previous years also increased the likelihood of investment, as did a high percentage of revenues from exports. In other words, **investment flows are channeled into highly profitable, fast-growing enterprises, including those with access to foreign markets where the existing capacities are insufficient for increasing output.**

It is noteworthy that investment is attracted by high returns rather than abstract effectiveness. We failed to discover any correlation between investment activities and absolute or relative (compared to sectoral average) labor productivity.

A considerable amount of investment goes toward buying foreign equipment (see Fig. 5.4). The machine-building industry is the only one in which domestically manufactured equipment accounts for more than one half of the total. The average share of imported equipment purchased by the surveyed enterprises was above 50% and was higher in the more competitive and investment-active companies. In the group of competitive and actively investing companies, the share of imported equipment exceeded 70%. It is possible that domestic equipment is used for simple reproduction (replacement or capital repairs of existing equipment), while capacity expansion is mainly based on imported machines.

The relatively low investment activity is reflected in company balance sheets. Low investment is linked to shortages of in-house funds for development and the inability to attract investors. Even in the most competitive group of enterprises in 2004, returns on sales amounted to approximately 15%, and returns on assets, to 8%, which are very poor results when inflation is taken into account. Moreover, returns had a tendency to decline in all surveyed groups.

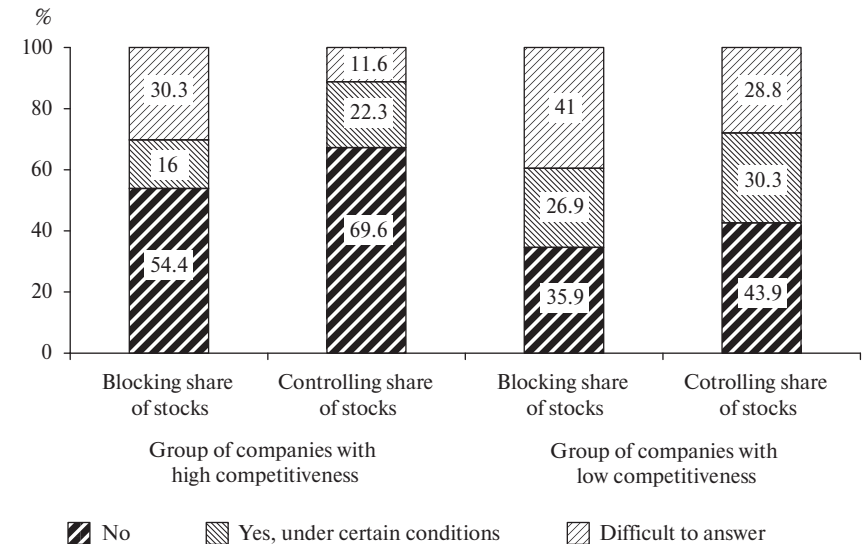


**Fig. 5.4.** Proportion of purchases of domestic and imported equipment by manufacturing sector (in percentages)

Notwithstanding the above, the sampled firms accumulated debt rapidly in the 1999–2004 period. Long-term debt grew by more than 18 times compared to 1999. The greatest proportion of total borrowing was made by companies with stable rates of returns, but even inefficient companies borrowed at relatively higher rates. ***On the whole, enterprises that are more successful in production are more competitive on capital markets as well.***

Notably, whatever the competitive position or financial situation of enterprises, they hardly ever turn to the capital stock markets. Only 4.3% of all firms are listed on Russian stock exchanges, while less than 1% are listed on foreign markets. Similarly, the enterprises are unprepared for attracting outside strategic investors. In addition, the enterprises are not prepared to attract outside strategic investors. Remarkably, the higher the level of competitiveness, the more negative the respondent’s attitude to their prospects of attracting an outside strategic investor (see Fig. 5.5). In the most competitive group, only 15–20% would be willing to consider such a possibility and, even then, only under specific circumstances. Companies in the groups with low-to-medium competitiveness had slightly more interest in attracting outside investors who would have

the potential to acquire a controlling interest or vote-blocking authority, but, even in such a case, only 20 to 30% of the respondents gave a positive answer.



**Fig. 5.5.** Are company owners willing to attract external investment by selling controlling or blocking share of stocks to outside investors?

#### 5.4. Labor Relations and Worker Qualifications<sup>12</sup>

In the early post-crisis period, the sharp devaluation of the ruble and a growing demand for domestic products, which was created by import substitution, made it possible for enterprises to increase output and maintain very low wages by using idle capacities and increasing the workforce without placing any serious pressure on costs. However, these practices had ceased by 2001. The reserves generated by devaluation and underutilized production capacities were practically used up. Market discipline was forcing old firms to look for ways to cut production costs, including workforce reductions. It was the workforce decline in the manufacturing

<sup>12</sup> This section benefited from the research results of V. Gimpelson and R. Kapelushnikov, presented in a memo titled “Labor market, labor relations, and qualification”.

sector that was the main source of productivity growth in recent years. On the whole, from 1999 to 2004, each 1% increase in output was accompanied by a 0.13% increase in the workforce, although the employment reaction varied considerably during that period. An intensive employment response to changes in business activity occurred until 2002, and, after that, while production grew, employment dropped or remained the same.

***The best progress was made by a group of enterprises that succeeded in increasing both their output and workforce. Their return on assets is double the average in the sample, and their labor productivity is 20–30% higher than the average.*** These are followed by a group of companies in which the workforce grew while the output declined. The group comprises companies in which production fell as a result of strategic restructuring. The ability to create new, effective, and, therefore, highly paid jobs reflects the considerable economic potential of such firms. The third place in terms of mean labor productivity and return on assets belongs to enterprises in which the output increased while the workforce declined. Most of such companies carried out protective restructuring. The least effective were the companies in which both the production and the workforce declined simultaneously. They failed to adapt to the competitive environment and quickly lost their market positions. They are most often located in small towns and among firms established before 1991.

During the entire transformation, low wages and the costs associated with dismissing employees made it possible to maintain a workforce above that which was necessary to meet production needs. However, the situation has changed significantly with growth, and, as a result, the number of enterprises with an excessive workforce is quite small at present. In the present survey, only one of seven firms in the sample had a redundant workforce. The share of enterprises with an optimal workforce was 59%, whereas understaffed companies accounted for 27% of the total. Thus, the problems associated with a labor shortage are becoming more urgent than those associated with an excessive labor force. The worst shortage is in skilled labor (mentioned by 51% of the leaders and 60% of the outsiders), less so in specialized labor (20.7 and 14.6%, respectively), and least of all in office personnel and top managers. The shortage of skilled employees ranks second among a list of 20 items considered to be constraints to business development.

***Enterprise managers reported that the main reason for the shortage of workers lies in a deficit of individuals with required skills in local labor markets as well as the low level of compensation offered by the company in question compared with others located in the same town/region. Thus, the managers believe that the main reason for personnel shortages is on the supply side. The analysis indicates, however, that the reason for the labor shortage is largely on the demand side, specifically, due to the fact that ineffective companies cannot afford to pay competitive wages.***

Job reallocation, i.e., the redistribution of workplaces between “shrinking” and “expanding” firms is a major element in sector restructuring and productivity growth. The tendency to eliminate jobs was stronger than that to create them in 2004, which resulted in a loss of 2.5% of workplaces for the year. Please check and change or clarify as appropriate. One half of all firms polled reduced their numbers of employees, with 24% cutting more than 10%. At the same time, 38% of the companies created new jobs, and 14% of them grew by more than 10%.

Job creators had better economic performance indicators than job eliminators. They had higher productivity, more capacity, better labor utilization, and a better financial position, and, on the average, they paid higher wages. This bears out the conclusion that the ***jobs are reallocated from less-effective to more-effective enterprises, eventually contributing to overall productivity growth.***

In many cases, firms need people with specific skills that are not supplied within the labor market. The survey results show that investment into in-house training is a pre-requisite for productivity gains and sustaining competitiveness. The incidence of in-house training at the enterprises is quite high (almost two of five firms provided full-time in-service training for their employees, while two of three firms sent them to specialized educational institutions). Still, while the formal indicators were good, the number of people receiving in-house training was small, and the courses were short. As a result, in terms of employee training, Russian companies are well behind their foreign competitors.

## 5.5. Ownership Structure and Competitiveness

Among surveyed enterprises that reported their ownership structure (639 of 1002, or 64% of the sample), the majority (63%) belong entirely to private Russian owners. A total of 17% were partially owned by the

state and represented by regional or federal government authorities. Seven percent were partially owned by foreign investors, and, in 13% of the firms, the owner could not be clearly identified. The ownership structure has a meaningful correlation with the type of a company's economic activities, its size and location, and the size of the town or city in which it is located. Thus, there are more Russian investors in the following sectors: textiles, metals and metalworking, vehicle manufacturing, and machine building. Foreign owners more frequently possess shares in firms belonging to wood processing, chemistry, and metals and metalworking industries. The number of state companies is significantly larger in capitals and cities with populations in excess of 1,000,000 (30 and 24% respectively, compared to 17% in the entire sample). Private Russian owners are represented more frequently in non-capital cities and towns, while foreign companies tend to prefer regional capitals.

The ownership structure has no effect on competitiveness, innovation, or investment activity. At the same time, the group of companies with foreign ownership has a slightly larger percentage of firms with high labor productivity and higher growth rates over 2002–2004 (29% compared to 22% in the group with private Russian owners and the group with state ownership). A possible explanation for this is the better than average state of the production facilities (equipment age structure) and more qualified managers (almost one half of the firms have managers whose background includes work for a foreign company) and staff attracted by higher compensation. As noted above, companies with foreign ownership also export more, especially beyond CIS borders.

The survey shows that one third of manufacturing enterprises (32%) participate in integrated business groups (IBG). This is more often the case with larger companies. ***The survey results do not support the hypothesis that companies integrated in a group have greater competitiveness.*** On the whole, the analysis did not prove that business groups were more likely to export, innovate, invest, or grow faster between 2000 and 2004 and have higher profitability and better production facilities. Returns on assets and production returns in 1999–2003 were consistently higher in independent enterprises in 1999–2004, and only in 2004 were returns higher in IBG (9.7%) than in independent firms (9.0), although, so far, this difference has not been statistically significant.

Still, there is a group of enterprises inside IBGs with steadily increasing competitiveness (higher than sectoral average productivity and sales growth rates). The number of such companies inside IBGs is significantly greater than that among independent firms (by 8 percentage points). At the same time, the number of “bad” companies, those with low productivity and a shrinking market share, is significantly smaller (31% compared with 37% among independent firms).

According to our analysis, IBG members have longer panning horizon. It is more than three years in one third of the companies (but in just one out of five among independent enterprises), IBG members are more likely to design strategy aimed at leadership with innovation products (39% compared to 32%) and to use an imitation strategy. IBG more rarely target traditional mass production markets (40% compared to 52%). In terms of management, IBG members pay more attention to human capital development, including motivation, training, and selection of managers. It is important to note that IBG membership helps to attract investment and generally leads to greater investment activity. The fixed capital per worker ratio is 1.5 times higher among IBG member firms than among independent enterprises.

## 6. Government Policy: Efficacy and Demand

It is widely believed that the Russian government provided practically no support to domestic companies in the early 2000s when policy was based largely on liberal values. The data we received indicate that this belief is not entirely true.

Specifically, according to the survey findings, the state support of innovation and investment reached 12.6 and 16.4%, respectively, of the large and medium-sized enterprises. However, only 3% of all respondents received incentives to export in 2004 (although export sales were reported by 45% of the total number of surveyed enterprises). On the whole, according to the survey data, more than one quarter of all enterprises received some kind of financial support. Moreover, they were also involved to a considerable degree in state procurement programs. In 2004, 28% of the enterprises received support through procurement contracts with the government. Thus, more than 44% of all enterprises received some sort of state support. They accounted for approximately 50% of total employment and sales in the sample.

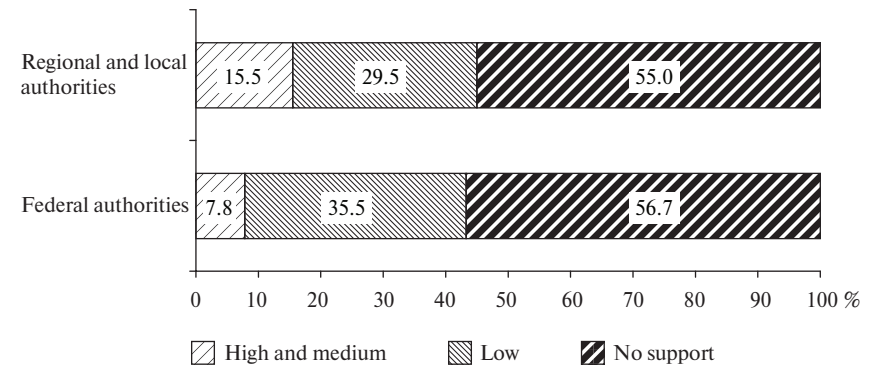
The following statistically significant links seem to characterize various government support measures.

- Large enterprises (in excess of 500 employees) and those belonging to IBGs are more likely to receive incentives to invest. Companies in which foreign investors own a controlling share of stock or large stakes (more than 5%) also are more likely to receive investment benefits.
- Innovation support is more often provided to large enterprises, IBG members, and companies located in large cities. It is more often given to state-owned companies and firms controlled by foreign investors, somewhat less to private companies co-owned by the state or foreign investors (stakes of more than 5%), and least of all to firms that did not respond to the question on ownership structure.
- A very meager support of exports is provided to large enterprises in sectors, such as machine-building, chemistry, and wood processing. Export support is most often received by large companies partially or entirely owned by the state and never by companies in which the controlling share of stock or a large stake belongs to a foreign investor (despite the fact that such firms display the highest

export activity) and hardly ever by firms that do not disclose their ownership structure.

On the whole, judging by the correlation between the extent of state support and objective indicators of company performance, more effective enterprises are more likely to receive incentives. This is particularly true for the groups of innovating and exporting enterprises. Still, while, in most cases, the relationships in question appear positive, they are not statistically meaningful. Thus, we do not have a sufficient reason to assert that government procurement policy tends to select and, therefore, support more effective suppliers. The possible positive effect remains within the margin of error.

The general perception is that government incentives to spur investment have little impact. *Figure 6.1* shows that more than one half of the respondents believe such measures are not even taken at all.



**Fig. 6.1.** Evaluation of the effectiveness of investment support measures (% of all responses)

At the same time, the evaluations of measures taken by regional and federal authorities are clearly different. While beneficiaries of federal support consider the assistance to be ineffective, many respondents evaluated regional support effectiveness to be at a medium or higher level.

The impact of government support can be assessed indirectly from the analysis of responses to the question about the most frequently occurring problems that exporting enterprises face. It is noteworthy that the majority of respondents (86%) did run into difficulties of one kind or another. Their biggest problem continues to lie in the complicated pro-

cedures of preparing the documentation and the delays with VAT refunding. On average, they were mentioned by 58% of the respondents. The less significant problems include customs clearance delays, high transportation costs, and difficulties with obtaining the required certificates in the importing countries, and these were mentioned by a smaller number of respondents (between 15 and 22%). This generally negative scene featured statistically significant variations within groups defined by size and ownership structure (see *Table 6.1*).

**Table 6.1.** Different problems encountered by exporting enterprises (% of exporting companies)

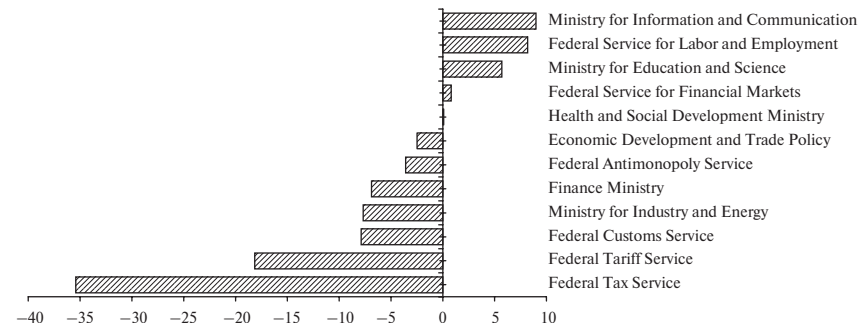
Groups by size	Under 250 employees	251–500	501–1,000	above 1,000
No problems	20.7	9.6	11.5	13.2
VAT refund problems	55.4	57.4	67.3	53.5
Main owners	Private Russian investors	Foreign investors (controlling share of stock or otherwise)	State control or stake	Undisclosed owner
No problems	12.6	7.0	24.3	11.9
VAT refund problems	60.1	74.4	45.9	52.5
Location	National capital	Regional capital	City	Town
No problems	25.0	13.6	13.5	9.7
VAT refund problems	45.8	57.8	56.5	80.6

In the first case, medium-sized companies with 251–500 and 501–1,000 employees reported more problems. The number of respondents not reporting problems with exports is lower among these groups, while the number experiencing VAT refund delays is higher. In the second case, enterprises with foreigners owning controlling or large stakes had the most significant problems. Conversely, totally or partially state-owned companies fared much better. However, even among this privileged group, only 24% of the respondents reported having no problems with exports, and almost one half (46%) did not receive VAT refunds on time. Finally, ex-

porters reporting difficulties tended to slightly decrease as the location status increased. This trend can probably be explained by differences in foreign trade infrastructure.

The survey shows that the activities of federal agencies have a generally weak impact on the performance of manufacturing enterprises. Of 12 key ministries and agencies, eight were described as having “no effect” by between 60 and 80% of the respondents, while three others, the Information and Communications Ministry, the Education and Science Ministry, and the Federal Service for Financial Markets, were similarly described by more than 80% of the respondents. The tax authorities were the only exclusion to this rule with less than 40% of neutral evaluations.

*Figure 6.2* illustrates the proportion of positive and negative evaluations of government agencies’ policies. These findings indicate that respondents who report that they are affected by federal agencies tend to give them more negative evaluations. Only five government organs received “final” positive marks calculated as the difference between positive and negative evaluations.



**Fig. 6.2.** The percentages of positive and negative evaluations of the effect of government agencies’ policies on business performance

It is noteworthy that, on the average, large firms are more satisfied with the policies of the Ministries of Information and Communication, Health and Social Development, Economic Development, Trade, and Industry, Energy, and the Federal Service for Financial Markets than they are with the Finance Ministry, the Federal Tariff Service, and the Federal Tax Service.

The analysis of correlation between the effectiveness of companies and their assessment of government agencies shows that the more effective companies rank the Information and Communications Ministry higher. Conversely, the work of customs authorities receives a negative rating with a high level of statistical significance. Companies that reached higher rates of output per employee in 2000–2004 gave more positive assessments than the sample average. Finally, innovative firms tend to give more negative ratings, including that of the Education and Science Ministry, which is tasked with implementing policies regarding innovation. Please check and change or clarify as appropriate.)

## 7. Policy Implications: The Possibility of Increasing the Group of Leaders and Reducing the Number of Losers

This survey shows that the prospects of Russia's economic development largely depend on the extent of structural shifts, meaning less at the sectoral level than among groups of enterprises with different levels of competitiveness. To a great degree, the low competitiveness of the Russian economy is a result of the fact that leading firms and failing firms, with large differences in productivity, coexist in the same markets. In addition to higher labor productivity, the leaders are also increasing their output and productivity much faster than the sectoral average. There is not a particularly large number of such companies, and they are present in all sectors. They actively pursue innovation, although their products are not exclusively hi-tech. Some of them produce such products as soap, sweets, wooden window frames, and dog vaccination kits. In effect, the prospects for economic growth and the rate of modernization today depend on increasing the number of effective and expanding enterprises.

The success of the leaders rests on greater effectiveness, which in its turn results from obtaining new technologies, knowledge, and skills, gaining access to external markets, and integrating into global value-added chains. In this context, the key policy issue is what mechanisms can be used to facilitate the acquisition of new knowledge and skills by Russian producers. ***The government cannot pursue innovation, implement new technologies, export products, or invest in new machines and equipment. This is the task of private enterprises. However, the government can help by reducing the risks and costs involved in innovation, investment, and foreign trade, and it can create additional incentives for such activities.***

### 7.1. Policy toward Leaders: Removing Barriers for Growth and Creating Incentives

This study indicates that the number of competitive leaders in the national manufacturing market is small, there are few global players, and at least a half of the current leaders are in a tenuous position due to insufficient attention to intensive growth factors. The policy measures

regarding such leaders should, therefore, be focused on increasing their numbers and stabilizing their competitive advantages by removing administrative barriers and creating incentives for innovation, investment, and foreign trade. This does not mean a revival of selective support to national champions, which is usually fraught with risk of failure and corruption. *Table 7.1* gives a list of the problems that place the most serious constraints on a leader's growth and the economic policies that can be used to remove them.

**Table 7.1.** Policy implications: Measures directed at market leaders

Leaders' problems	Possible government solutions
<b>Workforce shortages</b> despite intensive training and relatively high wages. Lack of mechanisms allowing to ensure that trained workers stay in their workplaces.	<ul style="list-style-type: none"> <li>• Changes in labor legislation and development of standard contracts including workers' obligation to stay in their workplace for a certain period or refund training costs.</li> </ul>
<b>Insufficient investment.</b> Demand for investment exceeds the availability of funds even among profitable enterprises.	<ul style="list-style-type: none"> <li>• Establish additional investment incentives, including tax benefits.</li> <li>• Simplify the present mechanisms and make the benefit-granting policies more transparent.</li> </ul>
<b>Investment climate for leaders:</b> Remove existing obstacles to building new facilities, expanding businesses, and obtaining licensing.	<ul style="list-style-type: none"> <li>• Streamline procedures for obtaining title and documentation for land and construction permits.</li> <li>• Develop financial markets.</li> </ul>
<b>High foreign market entry costs</b> despite the fact that export activity, especially beyond CIS borders, increases the probability of joining the group of leaders.	<ul style="list-style-type: none"> <li>• Make government policy more predictable, especially that governing foreign trade regulations.</li> <li>• Streamline procedures for tax administration and VAT refunding.</li> <li>• Curb corruption.</li> <li>• Streamline customs procedures.</li> </ul>

## 7.2. Policy toward Market Followers: Reducing Innovation, Investment, and Foreign Trade Risks and Costs

Unlike leading firms, second-echelon firms have fewer resources; therefore, they need more support. It is best to use collective government support mechanisms for increasing the effectiveness of resource use. Such support should be targeted primarily at medium- and small-sized

companies. In any case, it is advisable to rely on a firm's own initiative because it is useless to spend public funds on something the firm is not willing to invest in. One possible outcome of such measures would be to allow firms to develop competitive advantages when they identify the risks, such as those involved in innovation and foreign trade, to be excessive. In effect, this potential solution would encourage innovation on a scale that exceeds that limited to production techniques, and, as a result, a higher value would be placed on the development of knowledge and skills that lead to increased business effectiveness.

The learning experience gained from foreign trade is particularly noteworthy. Entry into competitive foreign markets, even with small sales, allows a company to gain knowledge and skills that could lead to increases in a firm's market share and allow it to obtain resources for development and integration into global value chains. This jump-starts the mechanism of self-generating positive change. However, access to foreign markets usually involves major initial costs, such as the expense of participating in trade fairs, paying for market research, and conducting exploratory trips and negotiations. Such costs are quite high, particularly for medium-sized companies.

**Active government support of exports beyond former Soviet borders, targeted primarily at medium-sized companies** is, therefore, of primary importance. More vigorous policies encouraging export should include **a wider range of support measures and new mechanisms for providing such assistance.** The support of participation in foreign trade shows could be augmented with programs that have been used to good end in other countries, such as co-funding the expense of obtaining international certificates (ISO-9000 and others) and site visits to leading foreign companies. It would be advisable to go along with the choices and initiatives of the enterprises themselves, unlike the present practice of supporting participation in just a small number of selected international shows that appear on government lists. It is also important that measures directed at attracting foreign investment favor projects designed to produce goods for export.

Foreign experience proves that such support is **often more effective if provided to groups rather than to individuals**, for instance, in the form of subsidizing visits to leading foreign companies by groups of managers from various domestic enterprises. In such cases, group learning takes place, and cooperative horizontal ties are established within the sector.

This, in its turn, could help form effective clusters and collective brands in Russia, which could be comparable to those represented by Italian shoes and Chilean wines.

It is also important to *encourage cooperation with foreign partners with a view to learn the best business practices*. One way to do this would be to encourage outsourcing contracts between domestic producers and transnational companies based both in Russia and abroad. Another way for the government to reduce a company's market access costs would be to initiate bilateral internship programs for managers, which would be particularly useful with countries that have great promise as trading partners, such as China and India. One task of such programs would be to seek joint entry to third country markets.

It is advisable to *facilitate the procedures for providing guarantees to exporters that would be available not just to large companies but also to medium-sized firms*. Judging by the experience of other countries, parallel programs involving the governments of Russia's main trading partners might be the most effective.

At present, measures to support R&D and technological innovation consist primarily of tax benefits or direct public funding of R&D activity in a few firms. Our findings, as well as an analysis of international practices, suggest that *it may be more effective to use indirect measures to provide services, in the sphere of technology transfer*.

Table 7.2 is a summary of the measures suggested for the group of companies that can be described as second-echelon firms in terms of competitiveness.

### 7.3. Policy toward Outsiders: Removing Barriers in Regional Markets and Developing Entrepreneurship

Losers, at least one out of three firms in the sample, are not only ineffective to themselves. They drain space and resources that could be used to support others and, in effect, leave no room for the emergence and development of new, more competitive enterprises. Some of these companies experience what could be called a life-after-death existence. In other words, after years of producing negative value added, they continue to operate with a quasi-monopoly of regional markets that protects them with entry barriers and the limiting effect of regional isolation as a result of large distances, poor roads, low effective demand from the

Table 7.2. Policy implications for second-echelon companies

Problem	Possible economic policy solutions
High costs of access to foreign markets	<ul style="list-style-type: none"> <li>• Co-funding (government + business) of               <ul style="list-style-type: none"> <li>— international certification</li> <li>— travel and participation in trade shows</li> </ul> </li> <li>• Facilitating procedures for export guarantees and VAT refunding</li> <li>• Information support</li> <li>• Assistance in launching collective brands</li> <li>• Creating conditions conducive to joining global value chains through outsourcing</li> </ul>
High risks of innovation activity and poor interaction with external innovation and technological knowledge sources	<ul style="list-style-type: none"> <li>• Creating sectoral technology transfer centers</li> <li>• Co-funding the introduction of sectoral quality standards</li> <li>• Stimulating cooperation among manufacturers, universities, and R&amp;D institutions including innovation services (co-funding certification, introducing technical standards, and using imported technologies)</li> </ul>
Growing workforce shortage, especially among skilled workers and engineers	<ul style="list-style-type: none"> <li>• Stimulating cooperation of companies, including government grants to co-fund staff training programs in sectoral associations rather than in individual firms</li> </ul>

relatively poor population, and remaining opportunities for the leaders to expand into more prosperous areas. On the other hand, such economically unsound enterprises often have an important social function if they are, for instance, the only bread-making facility in the town or one of the few existing employers and, thus, cannot be realistically replaced.

The only way to undo a loser's quasi-monopoly and stimulate development is to facilitate access of other firms to their markets. This can be achieved by *measures to encourage entrepreneurship, including the creation of new business enterprises and shifting the support of entrepreneurship toward the cultivation of effective medium-sized businesses*, which means companies with up to 300 employees that, currently, largely determine the formation of the competitive environment. According to surveys of small businesses, few of them are actively trying to increase in size because, once they become medium-sized, they cease to be eligible for simplified taxation and other benefits. It is, therefore, important, in addition to creating new firms, to provide incentives for small business to become medium-sized and to support medium-sized companies.

Another mechanism of influencing the group that is failing would be **to encourage regional authorities to improve the business climate and create conditions that would attract investment**. Moreover, as shown in this study, access to land is a serious barrier to the expansion of competitive leaders. Furthermore, the regions will also improve their chances of attracting strong companies as they create a more favorable business environment. Further incentives could be created if the principles of distributing federal transfers were changed. For example, if the criteria for allocating funds transferred from the federal budget were based not exclusively on the level of social and economic development but also on the degree of effort the regional government is applying to improve the situation, improvements could be made. A public **contest of regional projects for improving competitiveness** might serve to formalize the criterion of evaluating such activities.

We believe that a greater role of regional authorities could effectively help to resolve another set of problems revealed during this study. The data shows that, in addition to unsatisfactory institutions, which the government has traditionally focused on, companies are finding **infrastructure problems** increasingly significant. It is alarming that 60% of medium-sized and large companies have experienced power blackouts and more than 40%, interruptions in water supplies.

The unstable work of basic infrastructure may grow into a serious factor undermining the competitiveness of Russian firms. The main reason, obviously, is the failure to complete reforms in the energy sector and utilities and a lack of economic agents with the incentives and capabilities necessary for maintaining infrastructure networks in working order.

In summary, the following measures on formulating policy measures toward market losers are being proposed:

- A reduction of entry barriers to regional markets for new producers and support of entrepreneurship that might help eliminate losers.
- Support for medium-sized firms (including incentives for small companies to become medium-sized ones) should be stepped up as they can pressure outsiders while at the same time help to create jobs.
- Resolving the problem of industrial poverty is the task of social rather than industrial policy. Furthermore, regional authorities might attract more competitive companies by creating a favorable business environment.

At the same time, it is important to remember that measures such as reducing taxes, cutting power supplies to companies that fail to pay for them, artificial restriction of competition, and relaxing the principles of

allocating budget funds will only extend the life of non-competitive companies but fail to increase the number of competitive ones.

The findings obtained during this project allowed us to formulate a number of government policy priorities for increasing the competitiveness of domestic enterprises. These priorities are listed in *Table 7.3* and characterized by their importance to different groups of companies.

**Table 7.3.** Impact of proposed support programs on different groups of enterprises

Government policy priorities	Groups of enterprises		
	leaders	followers	losers
Stimulating exports	**	***	
Increasing workforce qualifications	**	***	*
Stimulating the creation of new companies and the growth of small companies to medium-sized ones		**	***
Supporting innovation	*	***	*
Developing industrial infrastructure	**	**	*

These recommendations are based on the premise that, while institutional reforms must continue, additional measures should be applied to increase competitiveness; however, the general principles of the policies should be retained

The various groups of enterprises require measures specific to them; they include, for example, the removal of obstacles to leadership, assistance to followers with business development, and the establishment of conditions for eliminating losers, which would free up resources for new and more effective players.

- Incentives and support of initiative are needed more than funding.
- The government role should be enhanced not as an asset owner but, rather, as an intermediary stimulating contact among market agents that interact poorly (large and small companies, researchers, manufacturers, and centrally located and regional firms).
- Regional and industrial policies must be integrated to resolve the problem of industrial poverty and increase regional competitiveness (through demand, more attractive investment climate, and migration policy).

This publication was prepared by the Institute for Industrial and Market Studies (IIMS) under the State University — Higher School of Economics (Moscow). The Institute has been engaged in empirical research of transition economies since 1993. It helps explain the challenges and opportunities of the Russian economy and the emerging entrepreneurial culture. Its findings have been influential in the development of government policies in the fields of industry and financial markets' regulation, competitiveness and business development.

IIMS received research grants from the Russian federal authorities as well as grants of TACIS-ACE, USAID, IREX, TTPP, and other international research programs. The Institute monitors company behavior through large-scale enterprise surveys, and generates comprehensive electronic data sets, complementing the national statistics. The main research fields include restructuring and corporate governance in industry, competition policy, business environment, and private sector development, private-public relations, innovations in industry, competitiveness, and locational aspects of industrial analysis. IIMS regularly provides expertise and policy advice for the Ministry of Economic Development and Trade, Federal Antimonopoly Service, Russian Statistical Service and other federal agencies. The Institute organizes research seminars on the institutional problems of Russian economy for the academic, business community, and policy experts (see Institute's working papers in English at <http://new.hse.ru/C18/C13/preprintsen/default.aspx?filter=WP1>).

Contact: Andrei Yakovlev, Director, [ayakovlev@hse.ru](mailto:ayakovlev@hse.ru)  
Ksenia Gonchar, Lead researcher, [eartkg@online.ru](mailto:eartkg@online.ru)