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**UPGRADING RUSSIAN ENTERPRISES FROM  
THE VALUE CHAIN PERSPECTIVE:  
THE CASE STUDY OF TUBE & PIPE, AND FURNITURE  
SECTORS**

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**Upgrading Russian Enterprises:  
the Value Chain Perspective.  
The Case Study of Tube & Pipe, and Furniture Sectors<sup>1</sup>**

**Abstract**

The paper is the first analysis of the competitiveness of Russian enterprises from the perspective of value chains, with a focus on the example of tube & pipe and furniture producers. In both industries, Russian firms enjoy an advantage on the raw material side. Nevertheless, the overall competitiveness level of Russian producers remains modest. Domestic industries primarily owe decreased competitiveness to the inadequate operation of the final links in the value chain: from end-product production to the end-user. In addition, the competitiveness of domestic producers is limited to the ability of key players in the chain to redistribute additional gains in their own favor. Study shows that any non-selective methods of supporting enterprises (such as tax reductions) exert extremely limited influence on the status of players in those chains where one of the links is characterized by serious entry barriers and related opportunities of rent redistribution in favor of a particular player. Paper suggests several policy measures which aim to improve the ability of the producers to reposition themselves along the chain or to modify the chain itself.

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## Introduction

The key challenge for Russia's industrial policy is to make Russian producers more competitive. In this context, a student of Russian industry should seek to explain factors that inhibit the increase in competitiveness. This study discusses the competitiveness of Russian enterprises from the perspective of value chains, with a focus on the example of tube & pipe and furniture producers. This approach, proposed by Raphael Kaplinsky and Gary Gereff, has been enjoying increased popularity as a sectoral and market analysis tool in developing recommendations on ways to improve competitiveness. As opposed to the classical market or sectoral analysis, value-chain approach permits to cast a closer look at the various aspects of inter-firm relationships, to identify opportunities and failures of company competitiveness within the value chains, to uncover barriers that impede company growth and to provide policy advice with a view to eliminating those barriers.

The unique feature of value chain analysis is the definition of competitiveness. The competitiveness of a specific company (or a group of companies) is addressed from two perspectives: from the perspective of adding value and from the perspective of its distribution. In this context, a high degree of competitiveness implies the possibility of creating added value which will not be redistributed towards other agents in the chain.

An important variable for each specific chain is whether the chain is driven by producers or buyers. The position of the governing link in the chain depends on which of the markets included in the chain has a higher entry barrier and, consequently, a better possibility of creating rents. Rent is formed due to the fact that the agent governing the chain is in a position to assign proportions to the different agents in the course of added value distribution. The more stringent the governance tools employed in the chain, the greater the scale of added value redistribution. Upgrading of chain agents may also entail: 1) greater competitive edge for producers within the given particular position in the *chain*, 2) a repositioning of the given producer in the chain, and 3) a change in the value chain itself.

Value chain analysis has a relatively short history and still lacks clarity in terms of the choice of research approaches. Both theoretical and empirical studies have been undertaken, mainly since the early 1990's, primarily at the Institute of Development Studies (United Kingdom) which hosts working groups and conferences focused on the subject. The first book to thoroughly outline the main issues and to offer an analysis methodology was *Commodity Chains and Global Capitalism* [Gereffi and Korzeniewicz, 1994]. *A Handbook for Value Chains Research* [Kaplinsky, Morris, 2003] was a significant (though not final) landmark in this evolution. A number of empirical studies have been undertaken since the mid-1990's (see, e.g. [Gereffi, 1999, 2001], [Kaplinsky R et al., 2003], [Meyer-Stamer et al., 2001], [Bazan, Navas-Aleman, 2001]), which have permitted to confirm the correctness of one part of recommendations ensuing from the theory and correct the other part. This study discusses the competitiveness of Russian enterprises from the perspective of value chains, with a focus on the example of tube & pipe and furniture producers. No empirical studies, according to our knowledge, have been undertaken in Russia so far involving the methodology of value chains analysis.

At the same time, the application of the value chain analysis method to the assessment of the competitiveness of Russian industry is appropriate, because Russian

enterprises were outside the value chains when the adjustment period came following the liberalization reform of 1992. Prior to 1992, contracts between producers, wholesalers and retailers were purely administrative in their nature. The position that Russian producers had actually occupied until the mid-1990's is largely responsible for the relatively low degree of competitiveness of their products to date.

The present study aims to test the value chain analysis methodology as it applies to Russian industry and to analyze the competitiveness of two selected sectors: tube & pipes and furniture. An empirical basis of the study includes the findings of 30 formal interviews and 17 informal interviews with enterprise managers and business associations in the pipes and furniture sectors, enriched by a broad range of collected market-level and enterprise-level data.

Interviewing scenarios were designed based on the Kaplinsky/Morris methodology described in *A Handbook for Value Chains Research* [Kaplinsky, Morris, 2003]. This toolkit is pitched to obtain expert assessments from respondents both inside and outside the value chain, permitting to characterize value chain patterns, identify the composition and roles of their agents, and to explore the potential for an increase in added value. Two types of upgrading are considered in this work: intra-link and inter-link. In these cases, upgrading is interpreted as activities aimed to improve process efficiency; introduction of new products or improvements on existing ones; changes in the range of activity areas; transition into another value chain.

In the course of interviewing, all respondents were asked a *basic set of questions* pertaining to the development of end markets for products, the composition of the value chain, existence of barriers impeding access to the chain, major factors determining the competitiveness of Russian companies on domestic and international markets. This set also included questions regarding consumer preference patterns and an assessment of their willingness to pay a higher price for product features relevant to them. The common "nucleus" of questions permitted to verify information received through expert query from a variety of respondent types. The basic set of questions was complemented by questions *specific to the value chain positioning of various agents*. In the interview scenario for manufacturers and merchandisers, the emphasis was made on identifying market leaders, selecting suppliers, determining the more relevant selection criteria, characteristics of relations with suppliers, discussion of product competitiveness and link-specific upgrading issues.

The choice of tube & pipe and furniture sectors as analysis subjects was prompted by the fact that enterprises in those sectors belong to different groups of industries: pipe production targets business and state demand, whereas furniture production largely targets end demand. At the same time, agents in both sectors are involved in foreign trade and are or become elements in global value chains. Upgrading capabilities and directions for Russian enterprises in those sectors are determined to a great extent by the type of governance in relevant value chains.

Pipe producers are part of a chain governed by raw material producers (metallurgical plants). Furniture-makers belong to a buyer-driven chain. In spite of the differences between them, the considered chain types share an important feature. Notwithstanding the comparative advantages generated by the availability of natural resources (iron ore, forest), there is still a pressing need to modernize the end links of value chains. This includes, primarily, research and development, improving design, marketing, branding and market promotion of own brands.

## **Upgrading in value chains: tube & pipe sector**

The Russian tube & pipe sector is one of the largest in the world. The Russian Federation boasts over 100 enterprises and specialized facilities, and seven enterprises (each among the world leaders in terms of output) account for as much as 80 percent of the pipes produced. In 2004, 6 million tons of steel pipes were produced, i.e. there was a growth of 2.2 times compared to 1998. Around 20 percent of the pipes produced were bound for export, although about 15 percent of domestic pipe demand was met through imports. Pipe production in Russia is unstable. Impressive growth figures for 1999-2001 were followed by a decline in output. The year 2004 saw an absolute reduction in output, especially in the production of individual types of pipes destined for companies in the energy sector. Output dynamic in the sector is seriously influenced by investment activity in consumer industries and by the world market. Pipe production growth between 1999 and 2003 was achieved due to a considerable increase (over 3.5 times) in pipe export supplies. In its turn, pipe imports following the introduction of restrictions went down by 31 percent in 2002 compared to 2001 and amounted to 720,000 tons in 2003-2004 – less than one million tons. Products supplied from Ukraine accounted for the main portion of import reduction.

Pipe producers are united into vertical holdings, each with its own raw material base and sales network, accounting for 20 to 40 percent of the market (depending on the estimate source). They include United Metallurgical Company, Pipe Metallurgical Company and Open Joint-Stock Company Chelyabinsk Pipe Roll Plant Group. Horizontal mergers in the tube & pipe industry reflect the worldwide trend of business consolidation in this sector. In the recent years, mergers and restructuring resulted in the number of the world's largest seamless-pipe producers going down from ten to three: Vallourec & Mannesmann, Tenaris Group and Sumitomo Metals.

The structure of domestic consumption in Russia is highly concentrated. Approximately one third of pipes produced is bound to serve energy-sector companies, one quarter is used for trunk pipelines, and still another quarter is utilized by construction firms and utilities. On the one hand, such demand structure alleviates restrictions imposed on pipe producers, since public-sector companies will purchase products at prices that cover costs and ensure a low but still positive profit. On the other hand, a considerable proportion of demand is accounted for by large private-sector companies for whom the costs of concluding contracts with alternative suppliers (excepting administrative restrictions) are relatively low.

National pipe sales are based on a system of direct contracts. Over the recent years, changes in the pipe markets and in the structure of Russia's pipe industry have led to higher barriers for market entry. The centralization of pipe sales through trading houses of integrated companies (OMK and TNK) and the conclusion of long-term contracts with suppliers of strips and pipe shells resulted in a steep decrease of competition among producers seeking consumers. The market segment of pipe sales in the 1990's was characterized by high transaction costs, which, in a certain way, arrested its expansion. In the recent years, the volume of metal sold by commercial organizations did not exceed one quarter of the output.

In addition to pipe-making enterprises representing the ultimate stage of metallurgical production, key players in the pipe-sector value chain include integrated metallurgical companies, large energy-sector companies and government bodies. The pipe sector is an example of a *producer-driven* chain, more specifically, one driven by suppliers of raw materials. The pivotal role in the pipe-sector value chain is played by metallurgical enterprises and producers of strips and pipe shells. The production of pipe shells and strips account for as much as 40 percent of added value created in the chain, whereas the share of the production of pipes *per se* is almost twice as little (Fig. 1).

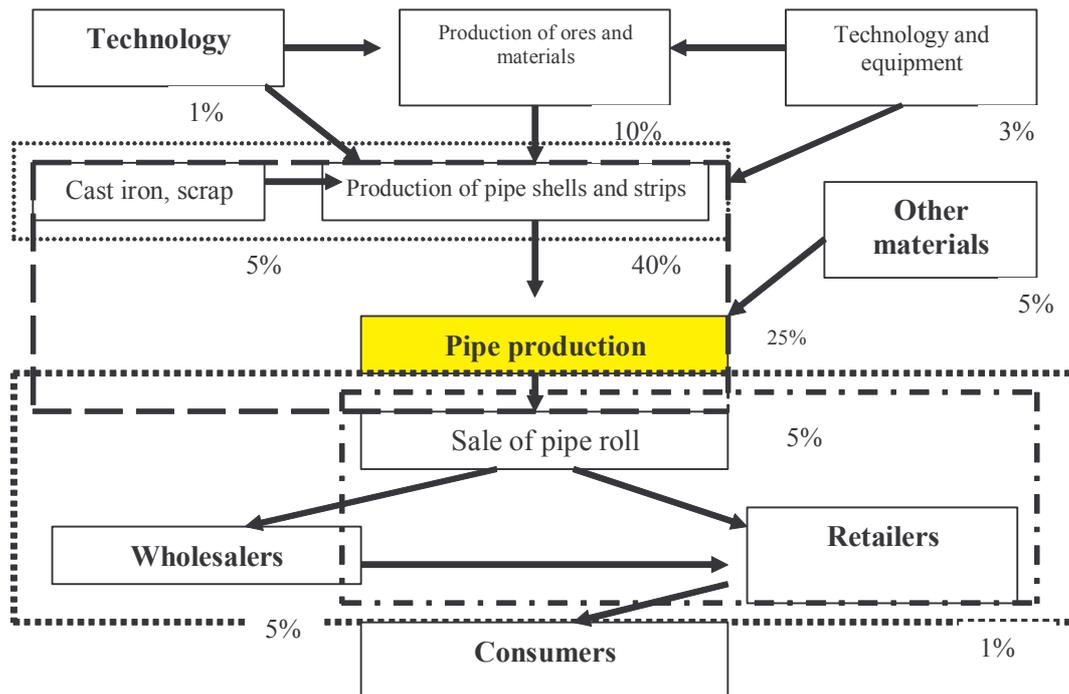


Fig.1. Value chain in the pipe sector

The fact that the value chain is governed by metallurgical companies is explained by the high entry barriers to this market on the one hand and by a high degree of material consumption in pipe production on the other hand. Expenses on primary goods and materials account for approximately 60 percent of the production cost of pipes. In its turn, the cost of metallurgical semi-finished products account for 60 to 85 percent of the total material costs for various types of pipes. Pipe producers rely on their own supplies for an average of 27 percent of materials, and many plants lack their own metallurgical production capability which makes them dependent on external metal supplies.

The role of resource supplies for pipe producers is rather conspicuously evidenced by a high degree of capacity utilization at pipe-producing plants that have their own metallurgical facilities. In the years following 2000, a swift growth has been registered in the production of pipes by metal-producing enterprises for which this type of production is a non-core activity. Pipe-producing facilities are being set up

within metallurgical combines (e.g., West Siberian, Kuznetsk and Novolipetsk) and works. The Nizhny Tagil Metallurgical Combine and Severstal are implementing projects to create tube-rolling facilities, and pipe plants are active in developing their own steel works.

Between 1990 and 2004, value added was in the process of redistribution among individual interconnected stages in the process of meeting the end demand in metal products. This is primarily reflected in the dynamic of relative prices of individual types of metal products: between 2002 and 2004, the prices of individual types of metal products increased by almost 1.5 times compared to pipe prices (see Table 1). The fast growth in the prices of primary goods and materials for pipe-producing plants in the course of added value redistribution lowers their competitiveness in terms of price.

Table 1. Metal products price ratios, 1991-2003, rubles per ton

№	Value chain link	1991	2003	<i>Price growth</i> 1991-2003 (times)	Price/roll level ratio, %	
		Rubles	Rubles		1991	2003
1	Iron ore (merchantable)	26.91	269	10	5%	3%
2	Iron-ore pellets	45.38	726	16	9%	8%
3	Cast iron	245.65	4805	19.56	50%	51%
4	Ready-made rolled products	491.52	9385	19.09	<b>100%</b>	<b>100%</b>
5	Pipe shells	424.4	6709	15.81	86%	71%
6	Metal sheets	490.3	9863	20.12	100%	105%
7	Sheet strips	340.46	8730	25.64	69%	93%
8	Sheet steel (zinc-plated)	801.31	15918	19.86	163%	170%
9	Molded shells	509.07	11063	21.73	104%	118%
10	Steel pipes	658.51	14600	22.17	134%	156%

Source: producer data, calculations by the author.

The comparison of the levels of added value of pipe-producing plants and major primary goods and materials suppliers reveals a considerable difference both in terms of worker remuneration and profitability per employee (Table 2). The difference of value added among major metal producers (primary goods and materials suppliers) is due to the peculiar features of the product and existence of controls over iron ore and coke suppliers. Thus, Severstal, a producer of bulk rolled metal, is turning a significantly higher profit per employee than producers of high-quality products: Mechel, and Oskol Electro-Metallurgical Combine (OEMC). Still, even the previously loss-making OEMC provides for a level of wages that is 1.5 times higher than at pipe companies. Profit differentiation among pipe-making plants is determined by the moment of entry into the value chain: whether it is the stage of steel-melting or pipe production *per se*. Enterprises disposing of their own steel-making capacity enjoy relatively higher profits (an additional 15-20 percent) per employee and per ton of pipes produced.

Table 2. Value added per employee, enterprises positioned in various links of the value chain (December 2003), '000 rubles

Added value components	Metallurgical combines			Special steel producers		Pipe producers	
	Magnitogorsk Metallurgical Combine	Severstal	West Siberian Metallurgical Combine	Oskol Electro-Metallurgical Combine	Mechel	Vyksun Metallurgical Combine	Taganrog Metallurgical Combine
Wages inclusive of Social Tax	11.867	16.208	14.659	13.455	9.188	8.952	9.423
Depreciation	6.675	6.075	3.042	4.530	3.012	1.084	2.095
Gross profit	81.973	66.251	13.699	-0.087	2.500	1.012	-2.445
Total added value per employee	105.262	88.534	31.400	17.898	14.700	11.048	9.073

Source: enterprise data, calculations by the author

Structural differences in value added deserve special mention. In spite of the relatively narrow gap between gross wages at different enterprises and between their capital/labor ratios, there is a *fundamental difference in the profitability of enterprises*. This generally results in a per-employee added-value gap of almost 10 times between metallurgical enterprises and the tube & pipe sector (Table 2).

The redistribution of added value influences the sources and values of comparative price competitiveness of the pipe-making sector. Russian pipe producers purchase metal products at world-market prices and as a consequence do not benefit from *rents generated by state support and formed by companies at earlier stages of raw-material processing*. The advantage of low regulated tariffs of natural-monopoly services is enjoyed by metallurgical combines but not pipe-producing plants. Moreover, undervalued tariffs on state-controlled resources steal competitive advantage from pipe-producing enterprises with the least resource-intensive technology. For example, the energy component in the cost structure of the Russian pipe-making sector does not exceed 6 percent, i.e. twice as little as at modern Western enterprises. As a result, even a double difference in the level of energy-intensity between enterprises is virtually not reflected in their economic performance.

A redistribution of a significant share of added value in favor of metallurgical combines creates considerable investment limitations on the upgrading potential of the pipe-making sector, even where incentives for such upgrading are in place.

Russian producers' market position is compromised by the persistence of relatively low product quality and a large proportion of faulty output. In late 2003 and early 2004, Yukos rejected as defective 40 percent of pipes supplied by Taganrog Metallurgical Plant and about 80 percent of pipes supplied by Severstal. A relatively small proportion of pipes, about 25 percent, has undergone certification against world-market standards.

The need for upgrading is prompted not only by the value-for-money ratio, but also by the pervasive problem of equipment aging typical for Russian industry at the beginning of the current decade. The wear-out rate of fixed assets of large and medium-sized pipe-making plants is around 58 percent, and individual pipe-making plants have reached a fixed-assets wear-out figure of 80 percent; 24 percent of

equipment has been in operation for over 60 years and has no potential for upgrading, and about half calls for significant upgrading. The average age of machines is 37 years, and it may be recognized, given the age structure of equipment at Russian pipe-making plants, that they all, without exception, require serious upgrading.

A majority of steel-making vessels used in the pipe sector do not have a satisfactory level of technical and economic specifications. The best arc-furnace shop in the industry, the one at the Volga Pipe Plant, was built back in the late 1980's and is now significantly below the contemporary technical requirements. The liquidation of inefficient capacities and the installation of state-of-the-art steel-making equipment are a lengthy process involving immense investment. The comprehensive nature of the problem entails a gradual creation of extra-furnace steel processing systems (furnace-bin installations), continuous steel teeming (MNLZ) and construction of an electric furnace. Such works need to be performed at Seversk Pipe Plant, Chelyabinsk Pipe Roll Plant, Vyksun Pipe Plant and Taganrog Metallurgical Plant that currently use Martin furnaces and at a number of other enterprises equipped with old electric furnaces.

As seen from the analysis of investment projects at a number of enterprises, the choice of priorities in the upgrading of the production infrastructure of pipe-making plants is determined by the value chain characteristics. Thus, priority is given to projects aiming to strengthen an in-house raw-material base, whereas the size of investment into improvement of pipe quality is at a relatively low level and is contingent on the modalities of import substitution policies and the increase in pipe exports between 2002 and 2004.

The upgrading of value chains in the pipe sector mainly proceeded within emerging holdings (Pipe Metallurgical Company, United Metallurgical Company, Chelyabinsk Pipe Roll Plant), which permitted them to double their output in the years following 2000. The establishment of trading houses and world-market entry became a component of institutional change. In parallel, value-chain entry barriers were growing, caused by imposition of quotas, by forcing independent companies out of the market etc.

Enterprise integration in the pipe sector is based on product specialization rather than technology employed. On the one hand, this is conducive to problems involving unequal profit distribution within the value chain (between mining, metallurgical and pipe-making operations). On the other, it boosts the role of pipe-making companies. The motivation for horizontal integration is the desire of pipe producers to enhance their role in the value chain at a level sufficient to control price competition on the domestic market.

Thus, in spite of the fact that pipe production is built into a value chain whose members benefit from rent generated by the maintenance of low primary goods and material prices, pipe producers only benefit, if at all, from non-specific state support within the framework of vertically integrated companies. The redistribution of added value in favor of metallurgical combines stifles both incentives and resources needed for upgrading, while the international competitiveness of Russian pipe-makers remains at a modest level, so that the maintenance of Russian producers' sales on the domestic market requires the use of import tariffs and non-tariff barriers.

## Upgrading in value chains: the furniture market

In the early years of economic revival, the Russian market for furniture exhibited a high pace of growth which, however, has subsided significantly in the recent years. Imports account for half of the Russian furniture market (in terms of sales). For a promising market in terms of future sales, it is certainly interesting to study competitiveness factors with respect to Russian producers.

Furniture producers are part of a *consumer-driven* chain. As opposed to the pipe sector, at least two sustainable types of coordination have emerged in furniture production: vertically integrated and modular. The vertically integrated governance type is employed mainly by fast-growing Russian companies, and the modular type is used primarily by international chain retailers (first and foremost, IKEA). The variability of key success factors of agents in these two value chain types not only accounts for a variety of incentive levels and upgrading opportunities, but also predetermines the choice of various upgrading strategies.

The consumer-oriented furniture value chain is governed by agents positioned at the end links of the value chain. Retail is characterized by significant entry barriers, which mainly have to do with the need to possess a brand, to offer a broader slate of services to the consumer and to organize product promotion. Therefore, a considerable part of added value generated in this chain is accounted for by companies whose marketing is a system of planning and placement of operations, advertising, promotion and sales (Fig. 2). Another segment with rather high entry barriers and a significant share of rent is the production of chipboard and fiberboard (especially chipboard). Virtually all Russian producers of cabinet furniture note that the availability of chipboard is a bottleneck for output expansion. The special role of chipboard in the Russian value chain is evidenced by the fact that IKEA, a company which on other national markets normally invests exclusively into design, marketing and retail infrastructure, pursues a different policy in Russia and invests into the build-up of its own capability for chipboard and fiberboard production.

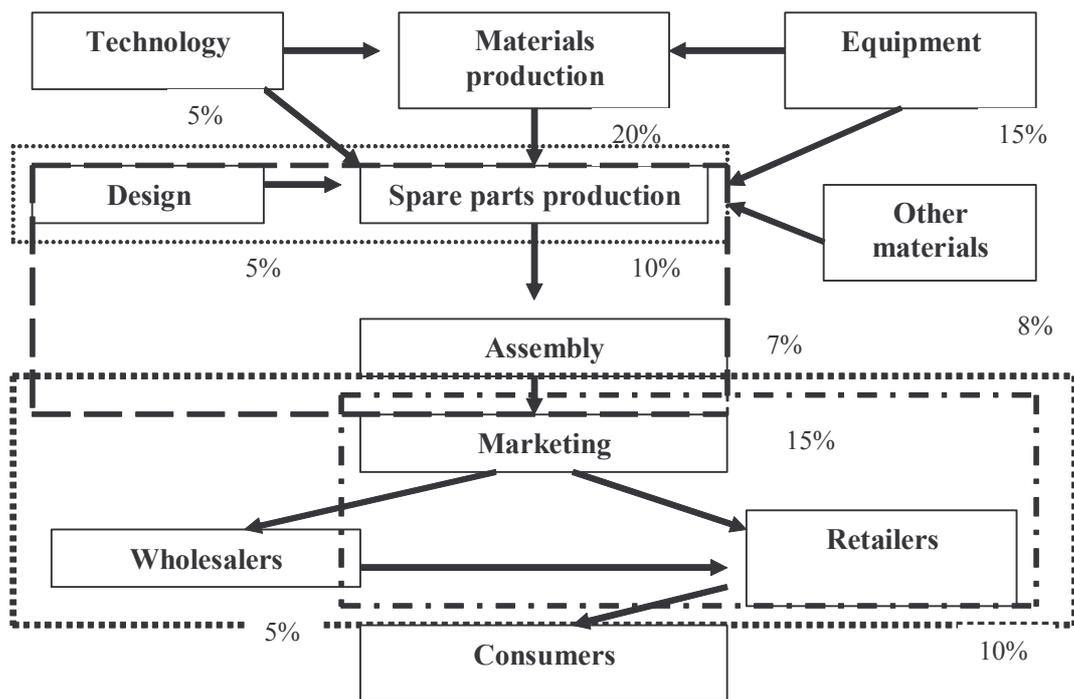


Fig. 2. Value chain (cabinet furniture). *Note: The value chain includes functional links. However, the figure demonstrates typical options of organizational consolidation of individual chain links (although the list is not exhaustive).*

The Russian market for furniture uses three alternative governance mechanisms in value chains: “market-based,” hierarchical, and modular. The most interesting options in terms of value chain upgrading are the last two ones. The “market-based” governance mechanism is mainly the legacy of the Soviet sales system whereby independent producers supplied their products to independent wholesale warehouses and retail outlets. The industry segment organized along these lines has been shrinking consistently in the recent years. Trade in this industry segment is imposing very strict requirements on suppliers: the key competitiveness factor is cost, and a considerably more modest role is played by product renewal capacity and product certification against international standards. Retailers have broad possibilities in terms of choosing among various suppliers and supplier groups and make their choices primarily on the basis of cost levels (supply prices). Fig. 3 demonstrates the gap between domestic producer orientations (suppliers to vertically integrated companies and merchandisers) on the one hand and their principal buyers controlling the end link of the value chain on the other. We can see that the main criteria in choosing suppliers are the price (cost), product quality and security of supply. At the same time, the possibility of product renewal, compliance with international standards and availability of quality certificates - factors of priority relevance for the producers – are not especially important for companies at the end links of value chains.

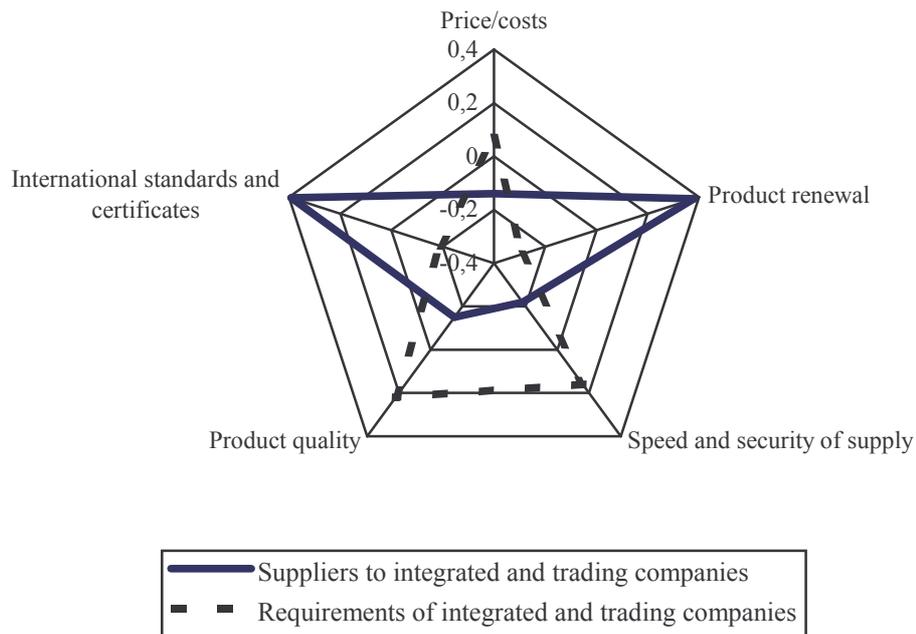


Fig. 3. Key success factors according to suppliers and requirements for suppliers to retailers and vertically integrated companies (individual estimates within the range from -1 to 1, where 0 is the average relevance estimate for a given respondent).

The responses received may be interpreted to conclude that furniture traders are not interested in product renewal possibilities at the level of each individual supplier, since they may renew their product assortment by way of switching suppliers. It is noteworthy that Russian wholesalers are not interested either in international standards or in being certified as producers of semi-finished and end product. If applied to vertically integrated companies, this result may imply that the latter are interested primarily in their own certification as opposed to the confirmation of compliance of suppliers' products with existing standards.

The received responses may also be interpreted as saying that, from the perspective of traders, Russian producers should compete for the market segment with low willingness to pay and a low level of expectations about quality. It should be noted that this group of customers displays an even stricter attitude with respect to the seller than their counterpart retailers abroad [Kaplinsky., Memedovic, Morris, Readman, 2003].

On the contrary, segments with vertically integrated, hierarchical governance systems (exemplified by Shatura Mebel which controls 12 percent of the Russian market) and with modular governance systems (exemplified by IKEA which is estimated to control 6.5 percent of the Russian market) have been displaying a swift growth rate in the recent years. A comparative advantage of the modular system is due to greater flexibility in operations organization. Severe competition among producers (especially those that are not vertically integrated) leads to a situation where the main discipline tool within the modular organization itself is the possibility to terminate the agreement (orders cease to come from the key player).

Modular governance in the value chain is exemplified by IKEA. Today, 75 Russian enterprises are IKEA suppliers. IKEA's purchasing prices ensure a profit margin of 3 to 5 percent for the suppliers, which for the majority of producers is lower than the profit margin of the rest of the product slate. IKEA contracts include a number of additional clauses, i.e.: products supplied to IKEA, their parts and structural features may not be sold to other retailers and the producer is not allowed to use its own brand. The main benefits derived by IKEA suppliers include the possibility to improve operations organization, to master new technology, to train personnel (mainly middle management and blue-collar workers) and to implement a quality management system. IKEA is ready to award its most reliable suppliers with loans on current assets and to invest into their production capacity in the form of long-term credit against goods (a kind of "borrowed restructuring"). Equipment supplies are paid in ready-made product of the enterprise. In individual cases, IKEA provides assistance in certifying production processes (in the case of a group of interviewed respondents, IKEA had insisted on certification, but the companies had paid for it themselves). IKEA introduces environmental standards and sustainable forest management practices in the Russian market. IKEA requires that all its suppliers confirm the legality of the origin of timber from which the furniture is produced.

In many advanced furniture markets, a significant portion of functions that IKEA performs with respect to its suppliers is fulfilled by wholesalers [Kaplinsky, Memedovic, Morris, Readman, 2003]. In this sense, IKEA has filled in a niche that was absolutely vacant on the liberalized Russian market.

Shatura, a vertically integrated company, has also occupied this niche. Shatura is Russia's largest producer, distributor and retailer of cabinet furniture. Unlike IKEA, which links its advantages to product diversity, Shatura's restructuring involved a significant reduction of the assortment produced. The firm's key step was to develop the retailing segment, including a system of franchising for company outlet stores. Accumulation of experience in an area of activities that was practically virginal in the late 1990's ensured a steep increase in sales and profits at the turn of the century (in 1999, 2000 and 2001, annual US-dollar earnings grew for 40, 33 and 27 percent respectively) and the growth pace declined to an annual 6-8 percent. Until now, the company has been consistently implementing a vertical integration strategy. The company's assets include two furniture factories, a chipboard factory and a trading house, and the company only purchases timber for chipboard production, hardware, coating and paintwork materials and uses the services of several transport operators. Two major suppliers account for over one third of primary goods and material supplies.

Upgrading needs of Russian furniture producers are prompted by their relatively low share on the end product market. The advantages generated by the relatively low labor costs in Russia (e.g., in the costs structure of Shatura products, labor costs account for only 20 percent, and for an average of 11 other respondents who agreed to disclose their cost data labor costs make up 19 percent, compared to an average of 70 percent in foreign countries) are redistributed in favor of companies that control the wholesale segment. The internal problems of Russian furniture producers still include poor product design and a low level of efficiency of production organization within enterprises.

In terms of quality, the situation varies for different supplier groups. For example, IKEA buyers note that the number of defect notifications with respect to

Russian products is significantly lower than in the case of other suppliers, and all parameters of technical specifications are higher than what is envisaged in the contractual technical specifications.

According to the results of the interviews with market players representing various links in value chains, the main weaknesses of Russian producers compared to importers include the lack of a recognizable brand and weaker possibilities of product renewal and modification. At the same time, the competitive advantages of Russian producers have to do with price and the possibility of quick execution of orders. We may note that the same situation is characteristic for producers in less developed countries (e.g., South Africa, see [Kaplinsky, Memedovic, Morris, Readman, 2003]) and it is normally accompanied by a reduction of the share of such producers in the total added value. In this environment, the upgrading of producers may aim either to create their own brand (the existence of a brand, all other conditions being equal, permits to obtain a 20 percent premium on the price) or to save on costs at the expense of optimization of the production process.

Producers making part of vertically integrated and modular networks enjoy various incentives and opportunities and pursue a variety of upgrading strategies. Incentives for upgrading in value chains with modular and market coordination may be even greater (due to more serious competition), but upgrading resources are obviously more scarce, since the production of spare parts, and especially assembly of furniture as such, are the least profitable links of the value chains. In addition, surveys indicate that suppliers of products for vertically integrated companies and retail chains, according to their customers, attribute “too much” significance to the possibilities of product renewal and international certification, and on the other hand “underestimate” such issues as quality, security of supply and cost levels. In other words, *without upgrading by way of repositioning in the value chain, domestic producers of furniture are forced to pursue upgrading that is exclusively aimed at cost minimization.*

On the other hand, the group of vertically integrated companies relying on upgrading through repositioning in the value chain focuses on product renewal and aggressive market strategies. At the same time, insufficient attention is paid to the optimization of the production process and cost management issues. It is conspicuous that the head companies of vertically integrated firms do not only fail to pay great attention to possibilities of cost-saving, but also often lack sufficient information on the level, structure and major factors of end-product costs, which poses potential threats to an increase in competitiveness compared to foreign retail chains.

The furniture industry differs greatly from the pipe-making sector. Beyond the obvious differences, it should be noted that enterprises in this industry receive a significantly lower rent through maintaining the low regulated prices of resources. What they have in common is the fact that in both industries Russian enterprises (largely due to the history of their evolution) occupy a niche with a relatively low share of added value, which in the long term displays a downhill tendency.

## **Competitiveness from the value chain perspective: major conclusions**

We have demonstrated the characteristic features of competitiveness of companies in the pipe and furniture sectors in the context of value chains. In both industries, Russian firms enjoy an advantage on the raw material side. Nevertheless, the overall competitiveness level of Russian producers remains modest. It is universally acknowledged that domestic industries primarily owe decreased competitiveness to the inadequate operation of the final links in the value chain: from end-product production to the end-user. A convincing example is found in the low competitiveness rate of domestic furniture producers compared to their foreign counterparts. We have shown in addition to this, however, that the competitiveness of domestic producers built into value chains where rent is generated is limited to the ability of key players in the chain to redistribute additional gains in their own favor.

The development of a state economic policy in pursuit of greater competitiveness of the Russian economy should be informed by an assessment of possible consequences of using non-selective and selective support measures. In the context of economic globalization, it should be focused on measures conducive to an improvement in the ability of the producers to reposition themselves along the chain or to modify the chain itself.

We have shown that any non-selective methods of supporting enterprises (such as tax reductions) exert extremely limited influence on the status of players in those chains where one of the links is characterized by serious entry barriers and related opportunities of rent redistribution in favor of a particular player.

In the tube & pipe sector, producers of the end-product (pipes) do not earn a commensurate gain from the maintenance of low prices of resources for metallurgical combines, since pipe-makers purchase the latter's products at world-market prices or even more expensively. Additional gains from state policy limiting pipe imports into the Russian market lead to excessive costs incurred by pipe consumers and are redistributed in favor of strips and pipe-shell producers.

In furniture-market value chains governed by large retail networks, additional gains in all other value-chain links will be redistributed in favor of this agent. The effects of redistribution of gains from non-selective support become more obvious against the background of lower level of vertical integration in value chains. In extreme cases, players in subordinate links of the chain will not benefit at all from tax reduction / imposition of import tariffs on end-product in general.

However, neither are selective support measures safeguarded in advance against redistribution of additional rent in favor of leading agents. Therefore, in choosing methods of incentivizing industries and businesses holding subordinate positions in their respective value chains, it is necessary to bear in mind to what extent the considered measures permit a kind of upgrading that would enable a player to reposition itself along the chain or modify the chain itself.

Necessary measures include those that are aimed at restricting the capacity of the value chain's key player to redistribute added value in its own favor. Therefore, as ironic as it sounds, enrichment of resources for upgrading within the modular chains of the furniture sector may be secured by way of attracting a larger number of international networks into the domestic market, on the condition that domestic

producers would be used as subcontractors, which would allow to boost competition on the side of demand for outsourcing services.

Improved competitiveness of furniture-sector products is possible if technology and equipment access costs are lowered (first and foremost, it implies a reduction of import duties on equipment) and if investment into design and marketing expands. A major role could be played by stronger competition among companies representing the final links of value chains (marketing, promotion and sales). A possible form of state support could be the support (on a tender basis and upon condition of co-financing) of a national trademark of a wholesale/retail, marketing and sales network.

The growth of competitiveness of producers within modular chains can also be ensured through the support of internationally recognized certification of products and especially of spare parts and accessories as well as technology. Enhancing competitiveness of vertically integrated companies requires support for investment into marketing and trademark development. An important and promising role belongs to the protection of trademarks and intellectual property. In this context, a positive role may be played by financial and legal support (on a tender basis) and legal formalization of property rights with respect to Russian companies' know-how.

Producers incorporated into various types of value chains will become more competitive if import customs duties for furniture-sector equipment are reduced (or even eliminated).

It is advisable to make arrangements for the financial and organizational support of experience sharing in the area of technology, including organizational innovations (cost-reduction methods in production and logistics, interaction of design and production divisions, flexible production arrangements etc.).

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