The Russian Furniture Industry: Firms' Upgrading According to the Value-Chain Theory

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The Russian furniture market is demonstrating fast and stable growth, which is both attractive and promising. At the same time, most Russian furniture producers exhibit insufficient and inconsistent restructuring. Taking into account the results of in-depth, semi-structured interviews with different types of furniture market participants (furniture producers, including downstream integrated and specialised; retailers; and suppliers of raw materials) the paper describes the restructuring strategies of domestic firms in the framework of the value-chain theory. Particularly, the article aims to explain the obstacles for Russian producers to upgrade as suppliers of specialised products, or parts of products, despite the experience of successful restructuring in the furniture industry of the former socialist countries in East Europe that resulted from a fragmentation of production.

KEY WORDS Value-chains, Industrial upgrading, Furniture, Russia

Introduction

Since 1998, the Russian furniture market has been growing rapidly. The annual growth rates from 1998–2004 were about 10 per cent in contrast to a 15 per cent annual decline from 1991 to 1998. In the first years of economic recovery (1999–2000), this growth was due to the expansion of domestic furniture products, but since 2001 these have given place to imported goods. In 2003, imported goods exceeded the threshold of 50 per cent of the furniture market, confirming the fact that domestic furniture producers are not competitive enough. Why is this so?

This paper is an attempt to explain the low competitiveness of the Russian furniture industry in the framework of the value-chain concept. The Global Value-Chain Concept (GVCC hereafter) integrates different approaches in modern theoretical literature such as international trade, industrial organisation, and transaction cost economics (Gereffi et al. 2005). According to this concept, the value-chain is defined as a complex of value-adding activities that is governed by specific agents according to specific rules. Two principal points of the GVCC are that (i) hierarchical governance does not require ownership, and (ii) different types of hierarchical governance may be effective, depending on the complexity of transactions, the ability of the dominant agent to codify transactions, and the capabilities in

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the supply-base (Gereffi et al. 2005). Gereffi et al. classify governance in the value chain into five types: (i) market; (ii) modular; (iii) relational; (iv) captive; and (v) hierarchical. According to the position of the dominant firm in the chain, chains are classified as producer-driven or buyer-driven. Recently the GVCC concept has become an important theoretical tool to understand the upgrading of national and local producers, sectors and industries (Bair 2005).

From the GVCC view, there are at least two important questions we may ask to identify the level of competitiveness of a certain producer (or cluster of producers). First, to what extent is the value chain in which the producers participate competitive? Second, what is the location of a certain producer (or cluster of producers) in the value chain? Even in a value chain that produces highly competitive products, the value added by a given cluster of producers and the possibilities to upgrade for those producers may be rather small (Bair 2005; Kaplinsky 2004).

The performance of the participants inside the value chain depends on what stage of the chain is responsible for the rent created. Rents are associated with the stages at which entry barriers are the highest. These barriers are not static but dynamic; they are associated with property rights over specific resources, both because of the scarcity of natural resources, and because of uniqueness due to successful innovations. So, for the barriers and rent inside the value-chain, the Schumpeterian-type process of creative destructions is typical.

Value-chain analysis has a relatively short history. Both theoretical and empirical studies have been undertaken, mainly since the early 1990s, primarily at the Institute of Development Studies, Sussex, in the UK, which hosts working groups and conferences focusing on the subject. A number of empirical studies have been undertaken since the mid-1990s but none, to our knowledge, has been devoted so far to the value chains in Russian furniture, involving the methodology of value-chain analysis.

In accordance with the objectives of our paper, we consider as important the results of the analysis of both international trends in the development of the furniture industry, especially in the developing countries, and the improvement of other value chains, driven by buyers, in the economies in transition. With reference to the first, these are given in papers of the Institute of Development Studies devoted to the furniture sector in different countries. The South African experience (Kaplinsky et al. 2002) shows that even if there are local comparative advantages in the resource base, an absence of coordination between the participants in the chain (for South Africa, between sawmills and furniture producers) may prevent the country's competitiveness in the world market. Indonesia provides an example of how the industry, where informal activity is prevalent, can be at the same time more or less successfully integrated into the global furniture value chain, with the incentive to upgrade, provided by IKEA (Loebis & Schmitz 2005). In the literature on the specific value-chain restructuring countries in transition, an explanation of the vertical relation in the agro-food sector, especially in the dairy industry is given (Swinnen 2005; Swinnen et al. 2006). As in the furniture industry, in dairy and other agro-food sectors the development of efficient vertical contracts is of crucial importance for a market-oriented restructuring of the producers; and the buyers, i.e. refineries and supermarkets, play a critical role in this process.

The present study aims to test the value-chain analysis methodology as it applies to the Russian furniture industry, to explain the obstacles facing Russian enterprises in upgrading, and to discuss the implications of the analysis. The problems discussed have implications for much more than the furniture sector alone. To escape the trap of resource-dependent growth in Russia, it is necessary that new industries and new sectors develop. For example,

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the wood and timber sectors are definitely among the industries with rich growth potential and at the same time show a high risk of extensive and inefficient use of resources. On the one hand, the scale of timber felling in Russia is less than a quarter of the environmentallysafe level. On the other, products with a low value-added dominate in the structure of exporting in comparison with products with a high value-added, which are relatively non-competitive. Internationally, there are some examples of the successful development of wood and timber-based high value-added activities. Finland, for instance, shows welldeveloped sectors with high added value based on forestry (Sutela 2002). Success in the value-adding sector requires new vertical relations within the existing chains as well as emerging ones, and that makes the problem discussed of vital importance for Russia. The next section is devoted to data and methodology. In Section 3 the sources and obstacles to the competitiveness of the Russian furniture industry are analysed using the traditional approach to competitiveness in order to explain why it is important but insufficient. Section 4 explains the relationships between the participants in the furniture industry value chains with different types of governance. The main objective here is to show how different types of governance influence the ability and incentives of the furniture industry enterprises to upgrade. Section 5 concludes with a discussion of the challenges Russian enterprises face on the way to upgrading.

Data and Methodology

The results of the in-depth, semi-structured interviews with the managers of 21 companies producing and trading furniture in different Russian regions provide the empirical base of the paper. The interviews were conducted in autumn 2004. Table 1 presents the basic characteristics of a sample from the furniture industry.

The structure of the sample and design of the questionnaire meet the requirements of the analysis. The furniture value chain entails many successive stages: machinery, forestry, sawmills, furniture manufacturing, wholesaling and retailing. Every stage of value adding needs supporting products and services, such as seed and water for forestry; chemicals, machinery and logistics for the sawmills; again specialised machinery; and design, paint, adhesives and logistics for furniture manufacturing. The end of the value chain is recycling and refuse disposal (Kaplinsky et al. 2003). In this paper, only part of the value chain is analysed: from the furniture industry itself (including parts of furniture) to retailing.

In the sample we tried to include representatives of different types of participants in the value chain. We consider producers (17 respondents) as well as retailers (4). Producers are divided into four sub-groups. The first one is companies, which are neither global retailers nor domestic vertically-integrated companies (respondents 1–5). The second group consists of suppliers (or former suppliers) of a global retailer (respondents 6–12). The third group consists of only one respondent, namely the largest domestic vertically-integrated company (respondent 13). Finally, the fourth group is formed by suppliers in the value chain which are domestic vertically-integrated companies. Not all the respondents are producers of furniture or furniture parts. For instance, suppliers of domestic integrated companies produce only raw materials such as boards, accessories, and so on. All the retailing companies are 'one-shop retailers', according to Kaplinsky's classification (Kaplinsky 2003). It may seem strange to interview only small retail companies, but this can be explained by the fact that in Russia there are practically no such market participants as domestic specialised buyers in the furniture sector.

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TABLE 1
Sample characteristics

		Dan	Sample chai acteristics	2		
s s	Position in value chain (operations completing)	Types of furniture produced	Region	Number of employees (2004)	Relations with main buyers in Russian furniture market	Respondent
_	Drying, product design, assembling, wholesale and retail trade, after-sale services	kitchen suites, bedroom sets, cabinet units	Voronezh	1700	N _O	Head of manufacturing department
2	Assembling, retail trade, after-sale services	cabinet units, kitchen suits, sliding-door wardrobes	Novosibirsk	25	°N O	Director
æ	Product design, assembling, retail trade, after-sale services, transportation	upholstered furniture sets, bedroom suites, kitchen suits, sliding-door wardrobes, beds sofas	Novosibirsk	40	°Z	Consultant
4	Board making, blank making, product design, production of prefabricated furniture, assembling, wholesale and retail trade, after-sale services, personnel training, marketing, advertising	cabinet units, upholstered furniture sets, kitchen suites, sliding-door wardrobes	Novosibirsk	400	°Z	Regional wholesale manager
ς.	Blank making, product design, assembling, retail trade, after-sale services, transportation, tailoring, marketing advertising	cabinet units, bedroom suites, kitchen suites, sliding-door wardrobes	Novosibirsk	10	No	Director

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			Continued			
° °Z	Position in value chain (operations completing)	Types of furniture produced	Region	Number of employees (2004)	Relations with main buyers in Russian furniture market	Respondent
9	Timber cutting, blanking, production of prefabricated furniture, assembling	cabinet units, wardrobes	St. Petersburg	500	Enterprise within the holding of global buyer	Director
	Timber cutting, blanking, product design, development of technologies, assembling, wholesale and retail trade, after-sale services, personnel training, advertising	upholstered furniture sets	St. Petersburg	100	Supplier of global buyer	Commercial director
∞	Timber cutting, drying, recycling, blank making, product design, production of prefabricated furniture, wholesale trade, personnel training, frame-house production, marketing, advertising	shelves, beds, bedside-tables	Mari El Republic	1150	Supplier of global buyer	Executive director
6	Timber cutting, drying, recycling, blank making, product design, production of prefabricated furniture, assembling, wholesale and retail trade, personnel training, transportation, marketing, advertising	sofas, beds, shelves, doors	Tver	440	Supplier of global buyer	General director

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	Respondent	Commercial Director	Commercial	Head of marketing department	Deputy director on corporate governance and finance
	Relations with main buyers in Russian furniture market	Supplier of global buyer	Supplier of global buyer	Supplier of global buyer	Domestic vertically integrated company
	Number of employees (2004)	400	200	1240	3500
TABLE 1 Continued	Region	Moscow	Kirov	Tyumen	over Russia
	Types of furniture produced	upholstered furniture sets, sofas, folding divans, armchairs	cabinet units, bedroom suites, sliding-door wardrobes, dinner- tables, writing tables, beds, chairs	cabinet units, bedroom suites, writing tables, chairs	all kind of furniture
	N° Position in value chain N° (operations completing)	of prefabricated furniture, assembling, wholesale and retail trade, after-sale services, personnel training, transportation, marketing and advertising	I Timber cutting, drying, board making, blank making, production of prefabricated furniture, product design, assembling, wholesale and retail trade, after-sale services, personnel training, transportation, mirror production, marketing, advertising		
	ZZ	10	1	12	13

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TABLE 1
Continued

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$\overset{\circ}{Z}\overset{\circ}{Z}$	N° Position in value chainN° (operations completing)	Types of furniture produced	Region	Number of employees (2004)	Relations with main buyers in Russian furniture market	Respondent
41	Accessories production	accessories	Moscow	40	Supplier of domestic vertically integrated company	Executive director
15	Production of prefabricated furniture assembling, wholesale trade, personnel training, marketing, advertising	Bedframes, bedlegs	Kaluga	100	Supplier of domestic vertically integrated company	Commercial director
16		wood fibreboard, chipboard, modified fibreboard	Kaluga	2150	Supplier of domestic vertically integrated company	Commercial director, financial director
17		Accessories	Kaluga	130	Supplier of domestic vertically integrated company	Executive director
18	Assembling, wholesale and retail trade, after-sale services		Novosibirsk	12	o o N	Deputy director
19	Product design, assembling, retail trade, after-sale services, personnel training		Novosibirsk	20	N _o	Manager
20		1	Novosibirsk	15	No	Manager
21	Retail trade, after-sale services, transportation		Moscow	15	No	Director

Source: results of the interview.

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It can easily be seen from Table 1 that respondents are widely spread across the Russian regions. Enterprises of very different scales are included. Almost all of them are former state enterprises, a substantial number of which were sold after privatisation, and almost every enterprise is managed by an executive director appointed after privatisation and the change of the main owner. At the time of interview, all furniture companies were achieving a relatively good financial performance, and none had losses. At the same time, a marked number of respondents were quite sceptical as far as future performance was concerned.

Interviewing scenarios were designed on the basis of the Kaplinsky and Morris methodology described in *A Handbook for Value Chain Research* (2003). This toolkit is pitched to obtain expert assessments from respondents inside the value chain, permitting us to characterise value-chain patterns, to identify the composition and roles of their agents, and to explore the potential for increase in added value.

In the course of interviewing, all the respondents were asked a basic set of questions pertaining to the development of end markets for products, the composition of the value chain, barriers impeding access to the chain, and major factors determining the competitiveness of Russian companies in domestic and international markets. The basic set also included questions regarding consumers' preferences and their willingness to pay a higher price for product features relevant to them. The answers to these questions enabled us to draw conclusions about the allocation of rents inside the value chain (in the case of wooden furniture). The common nucleus of questions permitted us to verify information received through expert query from a variety of respondent types. The basic set was complemented by questions specific to the value-chain positioning of various agents. In the interview scenario for manufacturers and retailers, the emphasis was on identifying market leaders and selecting suppliers, on determining the more relevant selection criteria, on the characteristics of relations with suppliers, and on a discussion of product competitiveness and link-specific upgrading issues. Besides the respondents' answers, statistical data characterising the Russian furniture industry are used in order to check whether the picture drawn on the basis of a very restricted sample correlates with the general tendencies in the industry.

Analysing the data of the survey, we should keep in mind that the respondents' answers reflect not only the market conditions as they are, but also the respondents' perception of these. On the one hand, this gives us an advantage because we can draw conclusions not only about competitiveness in general but also about how the directors of enterprises interpret the current situation, and therefore, what we should expect they choose as a main direction of upgrading. On the other hand, we should be extremely cautious interpreting some of the answers, because Russian managers tend to overestimate their competitive advantages whilst at the same time exaggerating the obstacles they face.

Finally, it should be emphasised that not all the respondents were ready to answer all types of questions (for reasons of trade secrets, and so forth.). That is why the number of answers received is specially indicated later in the article,

Sources and Obstacles to Competitiveness in the Russian Furniture Industry: a Traditional View

Why Do Russian Furniture Producers Have to be Competitive?

The furniture industry is one where there have been strong predictions about high competitiveness and good financial performance of Russian producers since 1998. First, from the beginning of the reforms, the producers have benefited from the large unsatisfied demand

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for furniture. During the late Soviet period, furniture was in short supply. The main obstacle to a huge increase in the industry's sales immediately after liberalisation in 1992 was a sharp decline in Russian citizens' disposable income. So, the increase in disposable income since 2000–2001 should have resulted in a remarkable market growth. Indeed, from 1998 to 2004 the average annual growth rate of the furniture market in Russia in real terms was about 10 per cent.

According to the Russian Federal Statistical Agency, the annual retail purchases of furniture in 2004 were about 3.6 billion Euros, and this data definitely underestimates the market due to the existence of a. large informal sector. Furthermore, although Russians exhibit a stable preference for imported furniture as being of better quality, domestic producers have country-specific advantages in manufacturing the kind of furniture which is not met all over the world. A striking instance is the Malyutka ('little one') sofa, which folds into three, and so is very suitable for a typical Russian room with little space. Regardless of taste, preference, advertising and quality, the Malyutka sofa will remain among the most popular kinds of furniture until the whole style of living in Russia (including type of housing) changes. The same is true of many types of furniture, including kitchen suites, bedroom suites, and upholstered furniture. Third, in the sector of wooden furniture, domestic producers can rely on a wide national resource base, including a growing production of chipboard, fibreboard, and so on. Potentially, the domestic board could be of relatively good quality and affordable prices but unfortunately this is not always so, as can be seen from the interviews, but the existence of a domestic resource base is incontestable.

Next, Russia's vast expanses leave room for the local production of goods that require high transportation costs. Since furniture is not a very compact kind of commodity, this is an important factor. Last but not least, up to now there have been relatively high import tariffs on furniture in Russia. Custom duties on furniture products during the last five years have remained constant at a level of 20 per cent. Of course, importers try to evade duties if they can. One popular way to decrease custom fees is to declare furniture (which is transported un-assembled) as wood fibreboard.

In spite of all the above, we know that Russian furniture producers' competitiveness is not high enough. The share of imported products sold in Russia declined after the national currency devaluation in 1998, but after that it has demonstrated a stable increase. According to retail trade data, in 2003 the share of imported products in value of furniture bought by Russians was 53 per cent and in 2004 it reached a threshold of 60 per cent.

Why do Russian Furniture Producers Have to be Non-competitive?

Let us refer to our sample to explain why the producers questioned (thinking of them as representatives of the industry as a whole) are not highly competitive. First, according to international standards most of these companies are too large. A prevalence of medium and large-scale producers is still the norm for Russian industries; and the furniture industry is no exception. If the size of an enterprise exceeds an efficient one, this provokes diseconomies of scale. Second, the output of a typical company is highly diversified. Even small enterprises have product variety of at least 4–5 items. Again, under certain circumstances we could expect diseconomies of scope. It seems to be no accident that suppliers of the global buyer (who should be more competitive than the industry on average) are at the same time more specialised. Among other operations carried on within a company's boundaries, the mysteriously frequent appearance of *marketing and advertising* needs to be examined.

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Third, the degree of vertical integration is quite high. Again, this is a characteristic feature not only of the furniture industry but of a great number of privatised enterprises in Russia. It has only recently become important to diminish the scale of activity, apart from core competence, and to outsource for a restructuring of almost all Russian companies. A historically high level of vertical integration is due to the resource allocation under socialism. Unfortunately, this is not the only Soviet legacy to be found in the environment of an economy in transition. High transaction costs and unsatisfactory vertical coordination make integration the most successful and widespread form of coordination in the Russian market (Swinnen 2005). In the international context, however, Russian companies seem to be outweighed by the activities outside core competence. Sometimes employment in the core business is less than employment in adjacent activities. In one of the furniture-producing companies in our sample, for instance, half of the 400 workers are employed in the transportation unit alone.

Fourth, there are limitations on the competitiveness of furniture production in the adjacent technological chains. The Russian machine-building industry does not produce the necessary equipment of satisfactory quality. The same is true of the accessories: to use domestic products is the best way to lose consumers. The share of imported components in inputs – not to mention equipment – is rather high (up to 80 per cent for the companies in the sample with a median of between 30 and 40 per cent). Exceptions to this are the enterprises producing furniture from wood or wooden board, which spend not more than 10 per cent of variable costs on imported materials.

Fifth, most respondents use obsolete equipment and technologies. This gives rise to at least two specific features of management in the Russian industry (not only plants producing furniture) with far-reaching implications. Obsolete equipment prevents flexibility of product variety and production management. Several respondents said:

to be competitive, we have to adapt production facilities according to the design needs. But what we do is the opposite: our design is adapted according to what is available using our equipment.

All these factors are important, but they cannot fully explain why very few Russian furniture enterprises can overcome obstacles to being competitive. Why during the last fifteen years has it been difficult to adjust employment and product variety, to attract financial resources and to renew equipment in order to use the advantages of location and domestic resources? The transition period seems to have been long enough to adapt to a new economic environment. To answer these questions, it is necessary to analyse governance in the Russian furniture value chain and the incentives of economic agents within it.

Prospects for Upgrading in the Russian Furniture Industry from the Standpoint of GVCC Theory

Types of Value Chain in the Industry

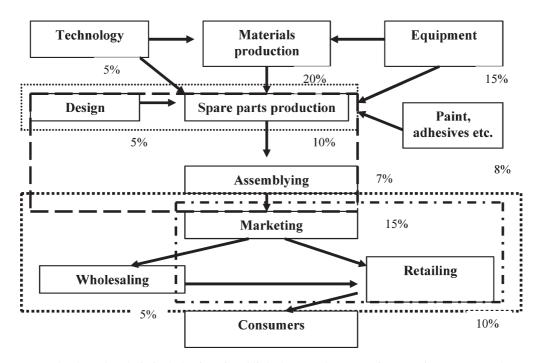
As mentioned above, the furniture industry belongs to the buyer-driven value chain. The wholesale and especially the retail trade are characterised by significant entry barriers, which mainly have to do with the need to possess a brand, to offer a broader range of services to the consumer and to organise product promotion. Therefore, a considerable part of value-added generated in this chain is accounted for by marketing, while the production

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of components and assembling of furniture claims a smaller share of overall value-added. Figure 1 presents the contributions of the successive stages of production and retailing to the whole sum of value-added, for wooden furniture.

Another segment with rather high entry barriers and a significant share of rent is the production of chipboard and fibreboard (especially chipboard). Virtually all Russian producers of cabinet units note that the availability of chipboard is a bottleneck for output expansion. The special role of chipboard in the Russian value chain is proved by the fact that IKEA, a company which in other national markets usually invests exclusively in the design, marketing and retail infrastructure, pursues a different policy in Russia and invests in the build-up of its own capability for chipboard and fibreboard production. Other foreign companies are also active in this sector: according to current estimates, by 2010 every second board in Russia will be produced by a foreign-owned producer.

There are three alternative types of governance in Russian furniture value chains: market-based, hierarchical, and captive. The most interesting options in terms of value chain upgrading are the latter two. Market-based governance is mainly the legacy of the Soviet system of sales, whereby independent producers supplied their products to independent wholesale warehouses and retail outlets. The industry segment organised along these lines has been shrinking consistently in recent years. In contrast, segments with hierarchical and captive governance systems have been displaying a swift growth rate.



Note*: The value chain includes functional links but not the types of companies. However, the figure demonstrates typical options of Russian companies' organisation inside the chain.

*Source: author's estimates on the basis of the interview results.

Fig. 1. The value chain and value-added distribution in the Russian wooden furniture industry (2004).

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Hierarchy as a type of governance is exemplified by several Russian companies, the most well known of which is Shatura. Founded more than thirty years ago, and privatised and restructured eleven years ago, Shatura became the great expectation of the domestic furniture industry in 1999, when its annual growth rates rose to 30–40 per cent. Recently, its growth records and financial results have become modest, but still Shatura is considered the only domestic company that can compete with the global buyer IKEA. Shatura's share in Russian furniture production is about 12 per cent; correspondingly, its market share is about 6 per cent. The company provides several types of furniture, but specialises in wooden products. The furniture produced comprises bedroom suites (50 per cent), office units (30 per cent) and other furniture from wooden or wooden-modified boards (20 per cent). Other types of furniture (upholstered furniture, above all) are supplied to. Shatura's shops by other furniture producers. Shatura's product variety is oriented towards middle-income consumers, so the target market is the same as that of IKEA. The trademark Shatura is the only national furniture brand known to almost every Russian. At the time of the interview, the ratio of brand recognition was 70 per cent in Moscow and 58 per cent throughout Russia. Shatura is almost completely oriented towards the Russian domestic market, exporting only to Kazakhstan and the Ukraine. At the time of the interview, export to Europe was being organised, but as a respondent put it, out of sporting interest only. The company has become not only a big producer but also a big retailer.

The development of hierarchy as a type of governance in the furniture industry seems hardly understandable from the GVCC standpoint. The choice of highly-centralised coordination is justified when product specification is difficult to codify, products are complex, and competent independent suppliers cannot easily be found (Gereffi et al. 2005). The only explanation valid for many industries in Russia is that the cost of coordination outside formal ownership rights is high due to (a) poor protection of contract rights and (b) large and highly-specific investments needed to govern the value chain. Shatura and other new Russian companies should invest more to obtain the necessary degree of power to govern the value chain, rather than this being done by a global buyer with extensive experience in the field.

The biggest actor implementing a captive type of governance is IKEA, a global buyer active in the Russian market since 2000. Five big furniture supermarkets have opened in Moscow, the Leningrad region and Kazan. This presence is expected to increase very soon. IKEA's share of the Russian furniture market is about 8–10 per cent. About 75 domestic furniture producers are suppliers to IKEA. According to GBCC (Gereffi et al. 2005) the ability to codify by dominant actor in the chain is high, the complexity of product specification and supplier capabilities are low, therefore switching costs for furniture enterprises which. supply IKEA is extremely high. Moreover, as we will see, the upgrading of furniture enterprises in this type of chain increases switching costs.

Figure 2 depicts the shares of different types of governance in the supply of Russian furniture enterprises. Integrated and captive types of governance in the industry are prevalent. The most important channel of sales is the company's own retailers. Even the companies which are not included in the hierarchical or captive chain prefer not to supply Russian retailers. Instead, sales at the factory (as a sort of retailing, without using specialised retail capacities) were widespread in the early 1990s and are found even now. In this respect, the global buyer does not replace the independent domestic retailers. It is the development of retailing capacities of the producers that is substituted by the global buyer.

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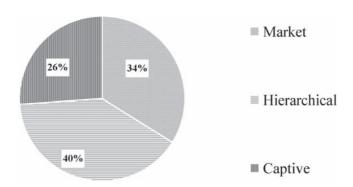


Fig. 2. Shares of three type of governance in the sales of furniture-producing enterprises, by percentage (weighted average by the number of employees, 10 respondents).

Most of the companies working in the framework of hierarchical chains are suppliers for the local market only. Certainly, vertical integration by small-sized companies could not be competitive enough in comparison with all-Russian or global retailers. Instead, suppliers either of global buyers or domestic vertically-integrated companies (as well as rather large integrated companies themselves) supply the whole Russian market. Suppliers of a global buyer are the only exporting producers in the sample. It is also characteristic of the Russian furniture industry that IKEA accounts for over 50 per cent of a very modest amount of furniture exports.

Why is the market type of governance so unattractive for furniture enterprises? To answer this question it is necessary to stress the common feature of any type of supplier-buyer relationship in Russian industry, and that is the fierce competition at the level of furniture production. Producers feel that the competition they face is tougher than that at the level of raw materials production as well as in retailing. What are the results of the competition which should provide market participants with incentives to upgrade? For the buyer (whoever it is – a vertically-integrated company, a global buyer or a one-shop retailer), there are unrestricted opportunities to change the supplier; therefore, upgrading by the existing supplier is not of serious importance. Let us illustrate this by comparing the assessment of critical success factors by different market participants, on the one hand, and by considering the requirements of retail and vertically-integrated companies for their own suppliers, on the other.

Incentives and Opportunities to Upgrade in the Value Chain

A comparison of the assessment of critical success factors (CSF hereafter) by different groups of market participants (retailers, suppliers of global buyers, domestic vertically-integrated companies and stand-alone enterprises) is helpful for several reasons. First, to show the trajectories of upgrading they feel necessary and, second, to compare CSF with the requirements of national retailers and vertically-integrated companies for their suppliers. As far as an overall assessment of CSF is concerned, different types of market participants are almost unanimous (Figure 3). The assessment received correlates highly with that presented by Kaplinsky et al. (2002). Quality and delivery are most important while the ability to upgrade is of medium importance. The only serious difference is that standards, according

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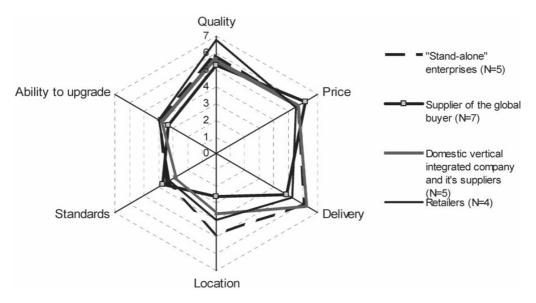


Fig. 3. Critical success factors for producers according to different market participants: from 1 – not important to 7 – extremely important.

to market participants, are not considered so important in Russia in comparison with international practice. The minor differences are that suppliers of global buyers appreciate the standards and quality of products more than other producers and even retailers. Domestic vertically-integrated companies do not see location as a source of competitive advantage or disadvantage, and stand-alone producers, in contrast, consider location to be important. These differences can be easily explained keeping in mind the position of different respondents in the value chain. Suppliers of global buyers have to introduce and follow specific standards, including those which bring about acceptable quality. Stand-alone furniture producers are usually oriented towards a narrow, localised market, so location is important. In their turn, vertically-integrated companies have developed a retail network spreading across almost all Russian regions. However, it is significant that the ability to upgrade is the least important CSF for all market participants in Russia.

A different picture emerges if we compare the perception of CSF by market participants (retailers and domestic vertically-integrated companies) with the requirements of buyers (Figure 4). We can see that the ability of a producer to upgrade for one-shop retailers is of modest importance. Instead, the price is more important for them than for furniture-producing companies. Formally, retailers assessed the quality of domestic products as fairly high, but the feeling of the interview as a whole was that, from the retailers' point of view, Russian producers should compete for the consumers with a low willingness to pay for the quality. Domestic vertically-integrated companies have even stricter expectations of their suppliers: price, quality and certification are of primary importance, but ability to upgrade is of no interest at all.

The results of interviews with producers also give the impression that Russian retailers and vertically-integrated companies put pressure on furniture producers to cut prices but definitely do not assist them in upgrading, in contrast with international practice as presented by Kaplinsky et al. (2003). Questions to furniture companies about their relationship with suppliers showed that they implement the same type of practice for their own suppliers:

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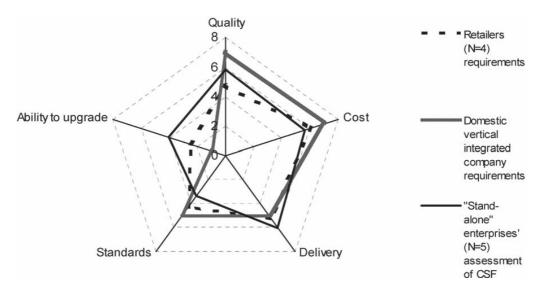


Fig. 4. Critical success factors according to producers and requirements of one-shop retailers: from 1 – less important to 7 – extremely important.

there are no special attempts to provide suppliers with specifications or any standards or to support them to achieve the goals set by buyers. According to market participants, in the context of extremely fierce competition, the very threat of breaking a delivery contract provides strong incentives for suppliers.

Ideally, fierce competition should induce a strong incentive to upgrade. In fact, the structure of incentive is shifted towards cost reduction only. Considering the trade-off between price and quality, all the retailers were sure that their target consumers prefer lower quality at a lower price. Where buyers are not willing to pay a premium on certification or the ability to upgrade (in terms of product variety, quality, and so on), cost reduction becomes the main aim. As a result, domestic producers can compete with foreign ones only in the lowest price market segment.

Our information about retailing in the Russian domestic furniture market confirms the impression gained from interviews with producers. Most specialised retailers (except global buyers, of course) are small and unable or reluctant to provide furniture producers with any services that would help them to upgrade. Besides, it is important to note that retailers usually do not compose the bundles of furniture produced by different enterprises; they just display the furniture items for sale as they arrive from the producers. That is why almost all furniture producers, including very small ones, manage operations inside the enterprise which include marketing and advertising. That is also why enterprises still use *sales at the factory* as an important channel of product distribution. One respondent said:

To sell at the factory . . . to sell in a furniture shop. . . . It's just a trade-off between the number of consumers (who may not arrive at the factory) and the discount to the retailer.

From the GVCC viewpoint, it is not the domestic specialised retailers who govern the value chain, but the furniture-producers who perform the role of retailers themselves instead.

Recently, several big furniture retailing centres have opened in Moscow and other big cities, but till now the greatest difference between them and small retailers is that the

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furniture of a large number of producers (including domestic and foreign ones) is displayed there. Up to now, these centres have served mostly as exhibition places, as most consumers first choose furniture there, and then buy it directly from the producer at a discount of about 10–15 per cent. To conclude, domestic retailing companies do not govern the value chain in an appropriate way, do not give producers incentives to improve, and therefore, independent retailers are hardly competitive in the long run.

There are two alternatives to market governance in the Russian furniture market: captive and hierarchical governance. Comparing the relationships between the global buyer and the suppliers in Russia on the one hand, and in the international context, following Kaplinsky et al. (2003), on the other, we can find similarities as well as differences. As in international practice, the global supplier promotes process upgrading more actively than product upgrading. More precisely, the only product upgrading provided for furnitureproducers by the global buyer is the specifications of products supplied. In some cases, according to the respondents, they can be important enough to increase the quality of the products. At the same time, compared with the evidence presented by Kaplinsky, the global buyer in Russia is far from implementing all the devices to promote upgrading by the supplier. Among the basic tools specified as 'work with suppliers', 'set targets and comply', 'provide finance', 'provide training' and 'promote supplier cooperation' (Kaplinsky et al. 2003) in our sample we found only two. Of the six respondents which are or used to be suppliers of a global buyer, four pointed out that the buyer worked actively with them and set very hard targets which stimulated upgrading. No-one pointed out that the buyer provided finance and training programs for them while almost all (five out of six) said that they derived a lot from learning-by-doing. Several respondents have heard that the global buyer provides credit to Russian furniture-producing companies but none of them is included in our sample.

As for certification, which is an important part of upgrading strategy, suppliers of the global buyer have an advantage over the other respondents, but at the same time their success is modest. All the six respondents have only quality standards (ISO 9000); four of them have also introduced labour standards. All six also meet the standards of forest use, many of which are obligatory in Russia but usually very few market participants follow them. For instance, suppliers of a global buyer demand that their own suppliers of wood should have cutting certificates to confirm the legality of their timber cutting. All the companies pay for all the stages of certification themselves.

As in international practice elsewhere, the global buyer protects its control of the key resources, first of all, of brand name and design. Products supplied to the global buyer, similar parts and products of similar design cannot be sold to other market participants. Following international practice, all furniture supplied is sold under the brand name of the global buyer. In exchange for high demand, the profit margin is at a level of about 2–4 per cent, which in the period under consideration was substantially lower than the average. Only one respondent indicated that the profit margin in the contract with the global buyer was at the same level as in other contracts.

Nevertheless, almost all the furniture producers in the sample prefer to be included in captive and/or hierarchical relationships. Of the 17 producers interviewed, only two said that they had no plans to become a supplier of a global buyer or a domestic vertically-integrated company. Producers indicated specific types of gains they derived from supplying to a global buyer. In relative terms, the advantages are highest for medium-size and narrowly-specialised companies. Two respondents with more than 500 employees said

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that improvement of internal organisation, certification, quality, and so on was achieved independently of their contracts with the global buyer. In contrast, suppliers with up to 500 employers highly appreciated the contribution of the buyer to their restructuring.

Hierarchically-organised companies in Russia historically start with the production of furniture and then develop a retail and marketing segment. A strategy of vertical integration is consistently implemented, with few exemptions (timber-felling is one example). The biggest company's assets include two furniture factories, a chipboard factory and a trading house. The company only purchases: timber for chipboard production; hardware; adhesives; paintwork materials; accessories; and uses the services of several transport operators. Two major suppliers account for over a third of inputs. There are no particular attempts to promote suppliers: none of the suppliers of vertically-integrated companies indicated that the buyer encourages upgrading, except quality control. The typical gains from supplying to vertically-integrated companies are: a stable and relatively high level of sales, and the reputation of a high- quality producer for other buyers.

Hierarchically-organised companies also try to establish stronger control over the final link in the value chain. Exemplifying this, the biggest company interviewed relied during a short period of fast growth on a network of retailer-franchisees but is currently restructuring the system of product distribution, shifting from franchisees to the company's own retailing. This process was initiated in spite of a clear understanding that it will lead to a slow-down in sales growth and can result in a deterioration of overall financial performance within the next few years.

Integrated companies relying on upgrading through repositioning in the value chain focus on product renewal and aggressive market strategies. At the same time, according to the results of the interviews, insufficient attention is paid to the optimisation of the production process and cost management. Headquarters of companies. not only fail to pay great attention to cost-saving, but also often lack sufficient information on the level, structure and major determinants of final product costs. By the time of the interview, the company researched had not introduced a system of product costing.

In order to discuss how governance within value chains influences the incentives and the abilities of furniture producers to upgrade, we have first to consider which directions of improvement managers feel it is necessary to take. Two types of questions were posed during the interviews. One concerned the competitiveness of Russian producers in comparison with foreign ones; the other was about the plans of the company to improve competitiveness. It is interesting that there is a difference between furniture producers not involved in the global value chain, suppliers of global buyers and one-shop retailers. The first group assesses as relatively high their comparative advantages in price, delivery and even design. They feel their problems are in the field of standards, certification and especially branding. The suppliers of a global buyer agree that they are good enough in quality, delivery and standards, but they are more unpretentious as far as design is concerned and see they are at a serious disadvantage with certification. The retailers' assessments of the domestic industry's competitive advantages are lower than those of furniture producers on almost at every point, with the exception of delivery and standards.

These data let us draw a simple conclusion: retailers will not ask producers to comply with standards more than they do now. Retailers are sure that Russian furniture is of poor quality and design. Furniture producers feel that their quality and design are good enough for the (low) prices, but they seem to overestimate their price competitiveness. Both retailers and furniture producers feel branding to be extremely inadequate, particularly producers. Suppliers of global buyers regard design and certification as their most important problem.

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Now let us look at the plans of furniture producers to improve their businesses. Of interest are the plans about the companies' internal structure. Although almost all the producers, as we have seen above, seem too diversified and integrated, very few respondents look for outsourcing and, on the contrary, most of them try to integrate. Half of the respondents feel it necessary to integrate downstream, and a quarter upstream. There are no plans for outsourcing, even when respondents feel that inside their companies there are operations which are not profitable for the company as a whole.

Concerning other plans to improve their competitiveness (the question was put in such a way as to allow free answers), half of the respondents felt it necessary to expand the sale of items produced at current prices, a third reported they wanted to move to the segment with higher prices, and a third of the respondents said they wanted to develop their own brand name. As for product variety, only a third of the respondents are going to adjust product variety: one company considers it necessary to narrow product variety and others to expand it.

We can draw a number of conclusions in assessing the plans of the companies. First, many companies feel unsatisfied with their positioning inside the value chain. This is understandable because most of the value-added is located at the final stages of the value chain, namely, marketing, wholesaling and retailing. Plans to develop a brand name and to integrate with retailers are closely linked: from six respondents. those are going to expand downstream, four consider they already have a trade mark known by customers and two intend to develop one. Assessing this profile of upgrading, we must immediately point out that it is feasible for only a very small share of the 2,500 Russian furniture producers. And even where feasible, there are no guarantees that it will be achieved. Evidence shows that the fast growth of integrated companies at the beginning of the twenty-first century is being replaced by a slow-down. It is no surprise that upgrading inside the hierarchical chain involves high risks. Losses of competitiveness can occur due to the diseconomy in vertical growth, including decreasing incentives to improve efficiency, coordination failures inside the company and so on. The captive type of governance should have the advantage of flexibility over the hierarchical one. In the Russian context, however, high risks are connected with governance at the final stage of the value chain. A domestic vertically-integrated company that is in the process of restructuring its retailing reduced the number of dealers from 500 in 2002 to 150 in 2004. The immediate cause of this was the free-rider (Goldberg 1984) problem: franchisee retailers tried to sell the furniture of other producers under the company's brand name.

At the same time, vertical integration gives a company a chance to participate in the profit accumulated in the final stage of the value chain; that is, in marketing and retailing. This type of development is made attractive by weak development of specialised retailing on the one hand, and by the integrated and diversified internal organisation inherited from the Soviet past, on the other.

An alternative way of upgrading is the market or captive type of governance. But looking at the direction of upgrading proposed by a furniture producer we may come to an ironic conclusion: it seems that restructuring actions proposed are likely to prevent and not promote competitiveness. If these plans are implemented, companies will be more integrated and more diversified and their ability to control their costs will decrease. Why are many market participants reluctant to upgrade as part of a captive chain, whilst they also want to become a supplier to the global buyer?

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The answer seems to be connected with the distribution of rent within the chain. Incentives for upgrading in value chains under captive and market governance may be even higher due to the increased toughness of competition, but the resources for upgrading are scarcer, since furniture production is the least profitable link in value chains. A global buyer and especially retailers are not ready to pay furniture producers rent on quality improvement and brand development. Without upgrading by means of repositioning in the value chain, domestic producers of furniture are forced to pursue upgrading that is almost exclusively aimed at cost minimisation.

For domestic furniture producers, circumstances are worsening because the global buyer today is the only customer for the kind of product it needs (the standardised product of a specialised producer). In a market with high competition on the part of specialised suppliers any given producer faces *hold up* or *quasi-rent extraction* problems (Klein et al. 1978). The price of goods produced using specific assets tends to be equal to opportunity cost (second-best price), which is quite low for a specialised furniture supplier. Other authors have also discovered this kind of problem in the network of the global buyer:

The Russian supplier interviewed explained that the fear of losing existing orders from other clients and the decreasing variety and complexity of products made him cautious about prioritising Ikea before other clients (Tarnovskaya et al. 2005).

The results of our interviews show that the situation is even more dramatic: there are no other clients for specialised suppliers without brand name and service facilities.

So, many Russian furniture producers are at a crossroads now: potentially following two alternative ways of upgrading, they are expected to occupy quite different positions in the value chain. Both are associated with specific gains and specific risks. When trying to upgrade by means of vertical integration, there is an extremely great need for resources and extremely high competition at the final stage, discouraging investment by newcomers. Upgrading in the framework of captive governance, furniture producers have to concentrate on the stage of the value chain with the lowest profit margin and to lose the margin that they have as diversified and vertically- integrated companies.

Many market participants have not made their choice yet. That is why vertical integration, diversification and the scale of Russian furniture producers remain quite high and managers of IKEA in Russia are reporting that their demand is much greater than the Russian industry can cope with (Tarnovskaya et al. 2005). As for international data, the success of the furniture sector in former socialist East European countries was driven by outsourcing of multinational corporations and large retailers, accompanied by a process of production fragmentation (Kaminski & Ng 2001) and corresponding producers' specialisation. We cannot yet conclude to what extent this development path is likely in Russia.

Conclusion: Challenges for Firms' Upgrading in the Russian Furniture Industry

The results of the interviews discussed demonstrate the problems Russian domestic furniture producers face. Almost all of them need restructuring in order to enhance their competitiveness. The managers and owners of enterprises understand that very well. The problem is, however, that from the value chain theory's standpoint, we cannot speak of competitiveness outside the value chain context. To be competitive, a company should first

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of all be included in the competitive value chain, and should then meet the requirements of governance in that specific chain.

Weak specialised domestic retailing and retailers' inability to regulate the value chain in an efficient way make it necessary for furniture producers to choose between two alternative ways of upgrading, i.e. downstream integration, or entering into the chain of the global specialised retailer IKEA. These two ways imply two opposite directions of restructuring. Following the first, it would be necessary to diversify, to expand product variety, and to turn core business from furniture production to furniture retailing. Following the other, it would be necessary to specialise, to narrow the product variety, and to pay much more attention to product costing, and so on. The same feature of a furniture producer is an advantage if the first way is adopted and a disadvantage if the second one is. So, the main question Russian furniture producers have to answer is whether *to specialise or not*. The choice in favour of specialisation is difficult because it would be a little exaggerated to say that in the domestic market there is only one specialised retailer which is able to govern the value chain efficiently. Recent tendencies seen in the furniture industry allow us to assume that both ways of development will be found in Russia.

In its turn, a lack of restructuring of market participants influences the scale and direction of investments in the domestic furniture market. Although the Russian market is large today and has all the potential to exhibit a high growth rate in the future, up to now significant investments have been made either at the. production, stage, which can be included in other value chains (for instance, wooden chipboard and fibreboard production), or in a small number of integrated downstream companies. Enlargement of IKEA is an important exception and it shows that the need for investment is high but that the payback period is very long. It is remarkable that IKEA has reported losses in the Russian market for several years.

It is worth noting that the Russian furniture company's problem to specialise or not to specialise and the investor's problem r to invest or not to invest are closely interrelated. For domestic producers specialising in items with rich domestic resources (wooden and board furniture, for instance), or, alternatively, for a domestic vertically-integrated company with an efficient retailing organisation, it would be possible to attract investment. On the other hand, the development of efficient specialised retailing in Russia would make relatively small furniture companies choose the way of narrow product specialisation.

The choice between two different upgrading trajectories – governed by hierarchically-organised companies or by global buyers, – has to be made not only by furniture producers. It appears that a similar choice is on the agenda for different industries. This is probably the most severe heritage of the Soviet administrative distribution system, where any efficient governance of a value chain by buyers was impossible. Till now, the prevalent strategy of upgrading has been, with few exceptions, inside vertically-integrated companies. Successful governance of a buyer-driven value chain is in evidence mostly in global companies. In the context of GVCC the Russian case displays that the choice of competitive type of governance by domestic companies may be impeded because of path-dependence and high transaction cost due to poor property rights protection. Even if global competitiveness requires vertical disintegration and specialisation, country-specific institutional environment prevents this way of restructuring. Even if medium and small-scaled producers clearly see the advantages of participation in value chains governed by global buyers, to be attractive they should first undertake deep restructuring, which nowadays still induces high risk for them.

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It is hard to identify any policy implications for the Russian government. Probably only one is clear: Russian industries could benefit from entry into the domestic market by companies able to govern the value chain. To prevent the occurrence of negative effects of such an entry, it would be necessary not to impede but to praise the activity of as many global companies as possible. Ideally, competition between dominant agents in the chain is beneficial for those Russian producers who try to restructure according to a specialisation strategy.

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References

- Bair, J. (2005) Global capitalism and commodity chains: looking back, going forward, *Competition and Change*, 9(2): 153–180.
- Gereffi, G. and Korzeniewicz, M. (eds) (1994) *Commodity Chains and Global Capitalism* (Westport, CT: Greenwood Press).
- Gereffi G., Humphrey J. and Sturgeon T. (2005) The governance of global value chains, *Review of International Political Economy*, 12(1): 78 –104.
- Goldberg, V. (1984) The free rider problem, imperfect pricing and the economics of retailing services, *Northwestern University Law Review*, 79(3): 736–757.
- Kaminski, B. and Ng, F. (2001) *Trade and production fragmentation: Central European economies in European Union networks of production and marketing*, World Bank policy research working paper 2611, at: http://www.wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2001/06/29/000094946_01061505074811/Rendered/PDF/multi0page.pdf.
- Kaplinsky, R. (2004) Spreading the gains from globalization: what can be learned from value-chain analysis?, *Problems of Economic Transition*, 47(2): 74–115.
- Kaplinsky, R. and Morris, M. (2003) *A Handbook for Value Chain Research*, Institute of Development Studies, at: http://www.ids.ac.uk/ids/global/pdfs/VchNov01.pdf.
- Kaplinsky, R., Memedovic, O., Morris, M. and Readman, J. (2003) *The Global Wood Furniture Chain: What Prospects for Upgrading by Developing Countries*, UNIDO, at: http://www.ids.ac.uk/ids/global/pdfs/woodfurnitureF1.pdf.
- Kaplinsky, R., Morris, M. and Readman, J. (2002) The globalization of product markets and immiserizing growth: Lessons from the South African furniture industry, *World Development*, 30(7): 1159–1178.
- Klein, B., Crawford, R.G. and Alchian, A. (1978) Vertical integration, appropriable rents, and the competitive contracting process, *Journal of Law and Economics*, 21(2): 297–326.
- Loebis, L. and Schmitz, H. (2005) Java furniture makers: globalization winners or losers?, *Development and Practice*, 15(3–4): 514–521.
- Sutela, P. (2002) How to escape the trap of resource-based development: contrasting experiences, *HSE Economic Journal*, 6(3): 315–323.

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- Swinnen, J.F.M. (2005) When the Market Comes to You or Not. The Dynamics of Vertical Coordination in Agri-Food Chains in Transition, World Bank, Washington, and DC, at: http://www.eastagri.org/meetings/docs/meeting12/VC%20version%20%2024 %20Feb%202005.pdf.
- Swinnen, J.F.M., Dries, L., Noev, N. and Germenji, E. (2006) Foreign investment, supermarkets, and the restructuring of supply chains: evidence from Eastern European diary sectors, LICOS Centre for transition economics, LICOS working paper series, WP 165/2006, at: http://www.econ.kuleuven.ac.be/licos/DP/DP2006/DP165.pdf.
- Tarnovskaya, V., Elg, U. and Burt, S. (2005) *The role of corporate branding in a market driven strategy*, Lund Institute of Economic Research, Working paper series, WP 2005/02, at: http://www.lri.lu.se/pdf/wp/2005-2.pdf.

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Author query

Paper No: COM 11/4-Avdasheva

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Author: Svetlana Avdasheva

Title: The Russian Furniture Industry: Firms' Upgrading According to the Value-Chain

Theory

1. does 'it' refer to the industry or to the traditional approach?

Kaplinsky & Morris 2003 or Kaplinsky et al. 2003? what does the asterisk refer to?

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