



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

SCANDINAVIAN FOREST ECONOMICS

No. 41, 2006



Proceedings
of the Biennial Meeting of the
Scandinavian Society of Forest Economics
Uppsala, Sweden, 8th-11th May, 2006

Lars Lönnstedt and Björn Rosenquist (eds.)

Uppsala

Business environment and strategies of woodworking companies in Northwest Russia – results from a pilot study in Leningrad and Vologda regions

Anne Toppinen, Natalia Tatti, Ritva Toivonen , Antti Mutanen and Vadim Goltsev*

Abstract

Political and economic development in Russia and other Eastern European countries have been the major driving force of the changing European markets for wood products since the early 1990s. However, very little is known about the organizational structure, strategic orientation and future goals of woodworking firms in Russia. Theoretically, an increasing body of literature emphasises the strategic choices of core competencies/capabilities based on resources, and the combination of these with firm-level strategies. This study examines the issue in the case of 18 small/medium-sized wood industry companies in the emerging markets of Northwest Russia using thematic structured interviews. The interviewed Russian woodworking firms emphasised closeness to the markets, good logistic connections and large market size as the main sources of competitive advantage. Therefore, other than raw material based issues appear to provide competitive advantage or disadvantage to the Northwest Russian woodworking companies. High taxation, corruption and lack of capital strongly characterized the problems in their business environment. In the future, these companies wanted to change from commodity products towards more specialised products and focus more on export markets in Europe than the domestic markets. If the results are more generalizable, competition on the European markets for wood products will intensify, extending also to the markets for higher value added wood products.

Keywords: wood products industry, Northwest Russia, resources, business strategies, business environment, competitive advantage

Introduction

Political changes and economic development in Russia and the Eastern European countries have been the major driving force behind the changing European markets for wood products since the early 1990s. Recent development shows strong growth in exports of sawnwood and plywood from Northwest Russia (NWR), which have doubled since devaluation of rouble in 1998 (European forest sector...2005). Traditionally strong Scandinavian producers have lost their market share in European wood product markets for Russia and suffer currently from low profitability.

Russia has today 23 % of growing stock of forests and 50 % of coniferous forests. Russian forests maintain the highest diversity of boreal species globally and serve as a sink for 15 % of accumulated CO₂. Russia's forest resources are vastly under-utilized and final fellings account for only one quarter of allowable cut. Although the share of economically accessible timber is estimated to be only one half of total harvests due to lacking infrastructure and poor quality of road network, there is great potential in increasing the utilization of forests of Russia. Consumption levels of wood industry products in Russia are extremely low, for example official statistics show annual per capita consumption for sawnwood to be 0,06 m³. Especially there is high potential to increase consumption of wood industry products around the booming cities of Moscow and St.Petersburg, where also the density of small and medium sized enterprises (SMEs) is highest (Liuhto et al. 2004). One of

the biggest weaknesses of Russian enterprise sector is claimed to be a low number of medium sized firms, which would create flexibility in production.

The low wages, stumpage and energy prices together with high potential in consumption growth make Russia a very lucrative target for investments in forest sector. So far foreign investment activity in forest sector has been only modest and concentrated in less capital intensive woodworking industry. The current Russian economic policy presses development of wood processing industry instead of exporting roundwood, as is also indicated by the recent increase of export duties on coniferous roundwood from 1,5 € to 4 €/m³ (see www.idanmetsatieto.info). As a downside for the positive incentives related to market size, potential growth and cost competitive inputs, there are obviously many unresolved problems present in Russian economy. Investing in Russia includes significant risks, e.g. bureaucracy, changing legal environment and widespread corruption, which raise risk premiums for investments.

Despite of high potential of Russian forests and forest industry, economic research on Russian forest industry business is very limited. Also changing market and institutional environment requires topical research in order for results to have any relevance. Previous studies analysing Russian forest sector development (e.g. Backman 1995) have focused on market level issues and have not used firm level empirical data. As an exception, Nilsson and Söderholm (2002) have studied institutional obstacles in Russian forest sector from the viewpoint of foreign investors. Their study concluded that foreign investments in Russian forest sector are likely to remain low until a fundamental change takes place in the legal and political system.

This paper fills the gap partially by focusing on the business development and future prospects of woodworking firms in NWR. As a background, we shortly describe forest sector and woodworking industry in the regions of Vologda and Leningrad and in city of St.Petersburg. Second, we report results from a survey on Russian medium sized wood industry firms' marketing strategies, perceived sources of competitive advantage and the state and development of their business environment. This type of exercise gives new insights in the relative importance of market factors, institutional factors and firm's internal resources and capabilities in the self-observed competitiveness of woodworking firms. Results will be also useful as a background in assessing the future competitive situation of the European markets for wood products especially from the viewpoint of competitors in Scandinavian wood products industry.

Industry background

Wood and forest industry products account for 4 % of Russian export earnings, and lower value added products, i.e. roundwood represents over 40% in forest sector exports. Northwest Russia accounted for 29 % of total Russian exports of roundwood, 35 % of plywood exports and 40 % paper exports in 1999 (Dudarev et al. 2002). In terms of production of wood based panels, Vologda is most important region in NWR, while in sawnwood Vologda is second most important producing region and Leningrad fourth (Karvinen et al. 2005). Thus, in terms of competitors for Scandinavian forest industry, industry situated closest around St.Petersburg and in Vologda is of highest interest.

The role of forest resources and sawmill industry in the Leningrad and Vologda regions are compared in Table 1. Forest resources in Vologda region are twice the volume in Leningrad region and also the use of allowable cut is lower there. Instead, the population is concentrated in the city of St.Petersburg, which has a growth in construction industry around 10 % annually and thereby provides great consumption potential for wood products. Rate of capacity utilization in the sawmill industry is in both regions, and especially in the city of

St.Petersburg, very low, which provides potential for growth even without major new investments in capacity (Karvinen et al. 2005).

Table 1. Characteristics of Leningrad region, St. Petersburg and Vologda region (2003).

	Leningrad oblast	St.Petersburg	Vologda oblast
Population, mill.	1,67	4,66	1,27
Urban population %	66	100	69
GDP per capita (USD)	1696	2076	1865
Forest sector in region's exports, %	10,9	-	9,4
Value of forest sector exports, mill. USD	297	269	159
Forest resources, mill.m3	825	-	1602
Use of allowable cut in forests under Ministry of Natural Resources, %	54	-	41
Sawnwood production, 1000 m3	491	64	919
Capacity utilization rate in sawmill industry, %	65	4	54

Sources: Karvinen et al. (2005), Liuhto et al. (2004), Sutyryn, S. & Sherov, V. (2005).

Theoretical background and data

Our theoretical background is based upon an increasing body of literature, which emphasises the strategic choices of core competencies/capabilities based on resources and capabilities, i.e. resource based view (RBV, Barney 1991, Fahy 2002), and the combination of these with firm-level strategies in creation of sustainable profitability. Compared with traditional industrial organization perspective and Porter's (1985) generic strategies, where sustainable competitive advantage arises from cost leadership, differentiation or focus, resource based view (Barney 1991) defines availability of resources - either tangible, intangible or human - and their heterogenous combination in the formation of competitive advantage. While the Porter's commonly applied framework is dominantly based on the industry characteristics, resource based view underlines the role of firm's internal resources and is therefore more suitable for analysing heterogenous group of small- and medium sized firms, as in this case.

Previously, the resource based approach has been adopted in management studies of woodworking industry in e.g. Korhonen and Niemelä (2005), but not regarding transition countries. It is important to note that any component of the total offering may be a source for competitive advantage. In fact, quality of physical products and low costs may be strategic necessities or the "license to operate" in some markets, whereas the real competitive advantage is derived from elsewhere, such as service skills or relationships. Services, information and other intangible characteristics increasingly build up the total offering provided for customers also in wood products industry (e.g. Toivonen et al. 2005). As a remnant of socialistic era, networks are an important part of Russian business culture where firms based business relationships on informal ties and extending favours. Therefore, the role of institutions, politics and various modes of business networks between firms and relations between firms and local authorities need to be acknowledged as potential sources of competitive (dis)advantage.

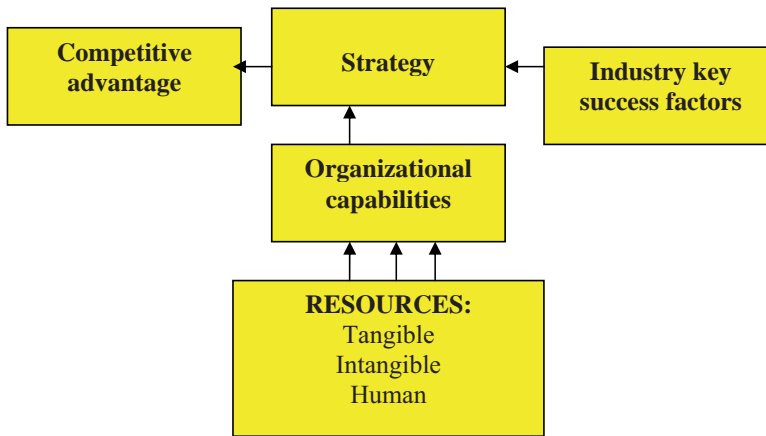


Figure 1. Relationships between resources, capabilities and competitive advantage (Grant 2002).

Figure 1, adapted from Grant (2002), broadly summarizes our theoretical frame of reference. Importantly, both competencies and capabilities need to be aligned with the business environment where the company operates to identify industry key success factors.

We operationalized in the empirical survey factors related to competitive advantage arising from various platforms, such as firm resources, market demand and other operating environment, technology and organizations, communication and logistics and external networking between firms as areas where potential sources of competitive advantage of Russian woodworking firms could be realized. The lists of potential attributes were given to the managers of the firms, and they were asked to weigh them according to their perceived importance. Some attributes were excluded, because companies were found not to be familiar enough with them (e.g. possibility to attend Kyoto protocol).

We also inquired about firm's marketing planning decisions, which are conceptualized here as a hierarchical process, where strategic decisions of products, customers, and market-area set guide-lines for marketing functions and structures (Juslin and Hansen 2003). The model results in a typology of three different product strategies (commodity product, specialty product and custom-made product strategies), three customer strategies (serving of as many customers as possible, few well defined end-use segments or a few known end users) and four market area strategies (export markets, domestic Russian markets, few target countries, as many countries as possible).

The questionnaire of 7 pages was prepared for the study, including both multiple choice sections on sources of competitive advantage, competitive position of firms and development of business environment, and a few open ended questions about future development (available in complete in Toppinen et al. 2006). The interviews were targeted to the companies that have actual production of sawnwood or other wood based products (not pulp and paper), and used annually more than 10 000 m³ wood.

Data were obtained through personal interviews of managers of the companies operating in the regions. Interviews in Leningrad region and St. Petersburg were conducted by M.Sc. Vadim Goltsev in May-June 2005 and in Vologda by Forestry Student Natalia Tatti in December 2005-January 2006. There were problems in Leningrad regions to get companies to participate (only 12 of contacted 45 firms agreed to participate and returned completed questionnaires in person or by mail afterwards). It was also difficult to compose an accurate timetable of meetings. In Vologda region practical problems were not present,

possibly because interviewer was originally from Vologda herself and quite familiar with the industry there.

Due to small sample, we report mainly descriptive statistics averaged over regions. However, the small sample size (18) is typical of the difficulties in conducting quantitative research in transition countries, as also stressed by e.g. Mockaitis et al. (2006). Firms in transition countries are in general hesitant to participate in research and especially give out any financial information, which would be public in western economies and partially would also in Russia be available through public sources. Due to taxation and in the fear of organized crime, firms are not willing to show profitability in their operations. Most commonly used indicators for the success of companies were productivity of employed labor and sales growth, and financial performance came only third in importance. The interviews showed that the managers of the companies have large experience on forest business and know very well features of business processes within the Russian woodworking industry. There were just few cases of misunderstanding or incorrect interpretation of the questions that the interviewers had to clarify.

Results

Woodworking firms of the study

Background statistics of interviewed firms are given in Table 2. These value mostly refer to year 2004, but there were some exceptions that data was available only for the previous year. All interviewees represented private enterprises, which had either Russian or foreign ownership or were joint ventures.

All interviewed companies did not provide the value of their turnover, but the number of employees was given for each company. The average number of employees was 389 persons, but the range was wide form smallest (23 employees) to largest (1540 employees). Due to very low labour productivity in Russia, in terms of turnover these firms could nevertheless be classified with EU standards as either medium or small sized enterprises (SMEs).

14 firms of the sample produced sawnwood, one firm produced panels, three were in joinery and carpentry and two were doing also business in wholesale trade of roundwood. Nine companies reported that they had also sales of chips, sawdust or bark and 3 companies provided firewood as a byproduct. However, logging operations, which are in Russia classified in forest industry, provided the main source of turnover in 5 companies (origin in lespromhozes). Thus, we have here some examples of vertically integrated organizational structures typical in Russia.

Table 2. Summary of interviewed woodworking companies.

	Number or value
Year of establishment:	
Before 1991	4
During 1991-1999	9
After 1999	5
Average number of employees	389
In smallest company	23
In largest company	1540
Number of companies according to their main field of operations:	
Logging	5
Sawmilling	7
Joinery and carpentry	4
Other, wholesale trade of wood	2
For sawmills, average production in m ³	32 000
Total average roundwood consumption in m ³	136 200

An average volume of sawnwood production in our sample companies was 32 000 m³ and the respective roundwood consumption (including the joinery and carpentry etc. firms) 136 000 m³. Thus, our firms were of substantial size and represented about 65 % e.g. sawnwood production volume in Leningrad oblast.¹ This counterbalances well the relatively small number of firms in the sample. Regarding Vologda, the firms were more oriented in production of panels, joinery and carpentry and the sum of sawnwood production in 3 interviewed firms producing sawnwood was 75 000 m³, representing a minor proportion of capacity (over 0,9 mill.m³) in the region.

Marketing strategies and sources of competitive advantage

Product, customer and market area strategies of companies were questioned regarding their choice of products (either commodity, specialty or customer made), customer (as many as possible, few well defined segments or known end-users) and by targeted market area. Most commonly, the companies did produce commodity products and they targeted their products for well defined end-use segments. Regarding the preferred choice of market area, export markets and Russian markets were equally appreciated.

The most important competitive advantages perceived by the managers of these companies are listed in table 3. The interviewees gave a list of 33 potential attributes, and the managers ranked these with 3 point scale as a source of perceived competitive advantage. We have listed here issues that were most clearly ranked and gave insights for various factors in the operating environments. Some attributes were excluded, because companies were not familiar enough with these concepts (e.g. possibility to attend Kyoto protocol). We have reported in Table 3 the number of responses in extreme cases, i.e. those that were considered “very important” or “not at all important”. This type of exercise gives insights about the relative importance of market factors, institutional factors and firm resources in the perceived competitiveness of woodworking firms in Leningrad and Vologda regions.

¹ Sum of estimated sawnwood production of interviewed firms in our data in St. Petersburg and Leningrad Region was 378 000 m³, while the official data for year 2003 indicated sawnwood production of 555 000 m³. However, after year 2003 there have been new foreign investments by e.g. Swedwood Tikhvin.

Table 3. Most important sources of competitive advantage for companies (3=very important, 2=not very important but also not clearly unimportant, 1=not important at all), calculated mean and number of responses in extreme values.

	Mean	“3”	“1”
Closeness to main market areas	2,4	13	5
Price of labour force	2,4	11	3
Good social relationships with people in other companies in the sector	2,4	9	2
Qualified and skilled personnel ¹⁾	2,3	10	4
Large markets	2,3	9	4
Strong R & D sources	2,3	10	5
Logistic connections	2,2	9	5
Possibility to learn from other companies in the same sector	2,2	8	5
Growth potential in the markets	2,2	7	3
Possibility to improve customer service	2,2	7	4
Secure and stable wood supply	2,1	9	7
Large potential forest resources in the region	2,0	7	11
Price of wood raw material	1,8	7	11
Low general cost level in the region	1,8	4	8
Existing networks of companies producing similar products	1,8	4	8
Low competition	1,7	2	8
Existing production facilities	1,4	3	14
Existing networks with distributors	1,4	3	14

According to these answers, closeness to main market area was seen on average as the highest: it was ranked as “very important” for all companies operating in Leningrad region, but only 1 company in Vologda region. The result is understandable as Vologda region is situated east of Leningrad, and therefore transportation distance is longer to export markets. Issues dealing with large markets and good logistic connections were given clearly higher grades in Leningrad region than on the average, which point out for the superior importance of market seeking motive in operating in Leningrad region. Factors dealing with labour quality and costs appeared also high on the agenda for these companies. Instead, issues relating with price of wood or low general cost level were given surprisingly low scores, and secure wood supply outweighed these factors. About 40 % of companies (and 100 % of companies in Vologda region) replied that price of wood is not at all important source for them as a competitive advantage. It is also notable that institutional factors, including good social relationships with administration were seen important (especially in Leningrad region), and in this aspect our results confirm the previous survey done for international forest industry companies operating or planning to operate in Northwest Russia (Nilsson and Söderholm 2002).²

² The same factors as for sources for competitive advantage in Table 3 were also asked in terms of their importance for company location. However, since the number of companies with foreign ownership was so low and some of the Russian companies were not exactly certain about the meaning of the question, we decided not to report these scores in detail. However, some companies gave identical scores for the attributes asking the source of competitive advantage and the relative importance for their location decisions.

Development of business environment

The general business environment sets boundaries for the development of individual firms. The interviewer gave a list of 20 arguments describing business environment, and the managers graded how well each of them describes the environment with a scale from 1 to 5 (5= I fully agree, ... 1= I do not agree at all). In Table 4, the factors are listed in the order of importance. At the top of the list stand high taxation and problems with non-sound business practises (i.e. corruption). Lack of financing capital reflects on the difficulties to develop operations and increase the production volume and quality and is also seen in the lack of R & D and poor quality of production technology and facilities. Problems in raw material acquisition are perceived in many companies to be present, while there exists also a group of companies which does not face these at all.

Table 4. Importance of following arguments describing business environment of woodworking companies in Leningrad and Vologda regions, calculated mean and number of responses in extreme values (5="I fully agree", ..., 1="I do not agree at all).

	Mean	"5"	"1"
High taxation	3,8	9	1
Non-sound business practices (e.g. corruption)	3,7	6	1
Lack of financing capital	3,6	9	3
Lack of R & D	3,6	5	0
Poor quality of production technology and machinery	3,5	6	3
Lack of trust between firms in the industry	3,3	4	2
Unexpected changes in legislation	3,3	5	4
Strong bargaining power of suppliers	3,3	5	4
Low competence of personnel	3,2	4	3
Problems in raw material acquisition	3,1	5	4
Strong bargaining power of buyers	3,1	5	4
High employment costs	3,1	4	3
High business cycle fluctuations	2,9	3	4
Difficulties in marketing and sales of products	2,9	3	6
Strict environmental regulations	2,8	4	5
Inflexibility of authorities	2,8	3	4
High competition between producers	2,6	4	7
Low investment barriers to entry the market	2,6	4	8
Oversupply of markets	2,6	3	6
High competition between substitute products	2,3	2	8

In the lower end of the Table 4, there are features in the business environment that the firms are not uniformly agreeing with, which mainly characterize existing market conditions. For example, firms do not perceive oversupply of markets or competition between substitute products to be present very much. Regarding investment barriers to entry, they disagree strongly that these are low, which is consistent with the existing lack of capital that they agreed on average to be the most clearly present in their business environment. In an open ended question other possible impediments for business environment were inquired and lacking investment mechanisms and structures was mentioned by two companies.

Overall, differences between companies in Leningrad and Vologda regions were not very high, although their operational environment differs both geographically and

institutionally (see Table 1). Lack of trust between companies was seen less of a problem in Vologda, which is consistent with the result behind Table 3 where firms in Vologda emphasized good connections between firms as a source of competitive advantage. Strict environmental regulations and inflexibility of authorities were perceived to be less severe obstacles in Vologda than in Leningrad region.

Regarding the future development of companies and their goals during the next 3-5 years, the three most commonly favoured ones were to increase the physical quality of products, to increase the scale of operations to achieve better cost efficiency and to increase company size by greenfield investments. The intent of growing through greenfield investments is in the face of scarce capital resources perhaps somewhat unrealistic. In contrast, firms were least often interested in moving the company to more attractive location, attracting Russian investors or increasing the size of their operations by mergers or buy-outs. These answers again reflect the lack of capital, which is an acute problem for Russian medium sized firms.

Finally, the plans for future development of firms were inquired. According to the managers, export markets will be clearly favoured over domestic Russian markets, possibly because of higher prices in export markets. If these findings bear any larger relevance in Russian forest industry, the role of Russian forest industry operating in European markets will strengthen in the future and extend also to markets of higher value added products.

Discussion

The study brought out new information about small and medium sized forest industry firms and their current business environment in Northwest Russia. In particular, the interviewed companies were found to agree upon closeness of main market area to be “very important” as a source of competitive advantage, especially to those firms interviewed in the Leningrad region. Also issues dealing with large markets and logistic connections were given higher than average grades, which points out for the superior importance of market seeking motive in operating in Leningrad region. Instead, issues relating with abundant forest resources, low wood prices or low general cost level were given relatively lower rankings, and secure wood supply outweighed these factors. This confirms results in previous survey by Nilsson and Söderholm (2002) on international forest industry companies operating or planning to invest in Russia, which found importance of well-developed infrastructure and market size to be more important factors for investment decisions than the cost of raw materials or low wages.

Regarding the external business environment, firms most commonly mentioned high taxation, which appears to be a general finding in studies of SMEs regardless of country. Problems with non-sound business practises (i.e. corruption) were also often claimed to exist. This reflects the real challenge especially for foreign investors. Nevertheless, due to lack of domestic capital in forest sector, Russian official policy has strongly pressed for the foreign investments in order to achieve higher utilization of forest resources and to modernize the capital stock to reach higher product quality.

Clearly our results can be considered only as a very preliminary step. Future studies should be targeted for obtaining a larger set of firms to enable better comparison between regions and between different ownership categories (i.e. Russian owned, foreign ownership and joint ventures). If data gathering provides very challenging, more case study oriented qualitative approach could be chosen instead of quantitative surveys. Also, to capture future development paths of forest industry firms in Russia, a comparative study could be planned for e.g. woodworking firms in the Baltic countries, who are in comparison with Russia clearly leading in the process of economic transition.

References

- Backman, C. 1995. The Russian forest sector: production, consumption, and export prospects. *Post-Soviet Geography* 36: 310-322.
- Dudarev, G., Boltramovich, S. & Efremov, D. 2002. From Russian Forest to World Markets: A Competitive Analysis of the Northwest Russian Forest Cluster. ETLA B 195.154 p.
- European Forest Sector Outlook Study. 2005. Geneva Timber and Forest Study Paper 20. Geneva. 234 p.
- Fahy, J. 2002. A resource based analysis of sustainable competitive advantage in a global environment. *International Business Review* 11: 57-78.
- Grant, R. 2002. *Contemporary strategy analysis*. Fourth Edition. Blackwell Business. 551 p.
- Hamel, G. 2000. *Leading the revolution*. Harvard Business School Press, Boston.
- Juslin, H. & Hansen, E. 2003. *Strategic Marketing in the Global Forest Industries*. 2003 Update. Authors Academic Press. Corvallis, Oregon.
- Karvinen, S., Väliky, E. & Tornainen, T. 2005. Luoteis-Venäjän metsätalouden taskutieto. Finnish Forest Research Institute. 116 p.
- Liuhto, K., Pelto, E. & Lipponen, K. 2004. Where to do Business in Russia – A report on Russian Regions, Firms, Foreign Trade and Investment flows. Pan-European Institute. Turku. www.tukkk.fi/pei/e. 105 p.
- Mockaitis, A., Vaiginiene, E. & Giedraitis, V. 2006. The internationalization efforts of lithuanian manufacturing firms – strategy or luck. *Research in International Business and Finance* 20: 111-126.
- Nilsson, M. & Söderholm, P. 2002. Foreign direct investment and institutional obstacles: the case of Russian forestry. *Natural Resources Forum* 26: 302-313.
- Sutyryn, S. & Sherov, V. 2005. Russian regions and their foreign trade. The Research Institute of the Finnish economy. Discussion Papers 995. <http://www.etla.fi>
- Toivonen, R., Hansen, E., Järvinen, E. & Enroth, R. 2005. The competitive position of the Nordic wood industry in Germany – intangible quality dimensions. *Silva Fennica*. 39: 277-287.
- Toppinen, A., Toivonen, R., Mutanen, A., Järvinen, E. Goltsev, V. & Tatti, N. 2006. Business environment and strategies of woodworking firms in Northwest Russia – results from a pilot study. Forthcoming in Working papers of the Finnish Forest Research Institute/Pellervo Economic Research Institute. 30 p.
- www.idanmetsatieto.info