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**FROM RUSSIAN FORESTS
TO WORLD MARKETS**
**A Competitive Analysis of
the Northwest Russian Forest Cluster**

ETLA, The Research Institute of the Finnish Economy

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ABSTRACT: This study examines the Northwest Russian forest industry, traditionally the region's most important industry, its competitiveness and future prospects. The transition to the market economy and privatization have left their mark on the industry. Demand and markets have changed, requiring new strategies, operation models and industrial policy. The book analyzes competitiveness employing the so-called cluster analysis approach. The competitiveness of the Northwest Russian forest industry is currently based on production factors, whose conditions have, however, deteriorated during the reform process. Machinery and equipment are outdated, productivity is low and production consists mainly of products with low value added. In principle, the Northwest Russian forest cluster has all the necessary elements that, if developed and improved, could make the cluster competitive. Such developments and improvements require substantial investments and cooperation amongst companies. The book also introduces the most important forest industry companies of Northwest Russia. For many companies export revenues are the main source of income. Investments in production and infrastructure are needed to keep exports at their present level and to increase them. Foreign investors can play a very important role in the development of the Northwest Russian forest industry, if the risks associated with, and barriers to, investment are reduced.

KEY WORDS: Northwest Russia, forest industry, industrial clusters, competitive advantage, economic development, industrial policy

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TIIVISTELMÄ: Tutkimus käsittelee Luoteis-Venäjälle perinteisesti tärkeää metsäteollisuutta, sen kilpailukykyä ja tulevaisuudennäkymiä. Venäjän siirtyminen markkinatalouteen ja yksityistäminen ovat jättäneet jälkensä metsäteollisuuteen. Kysyntä ja markkinat ovat muuttuneet; nyt tarvitaan uusia strategioita, toimintamalleja ja elinkeinopoliittikkaa. Tutkimuksessa analysoidaan kilpailukykyä ns. klusterianalyysin avulla. Tällä hetkellä kilpailukyky perustuu tuotannontekijöihin, joiden tila on uudistusten myötä kuitenkin heikentynyt. Koneet ja laitteet ovat vanhentuneita, tuottavuus alhainen ja tuotanto keskittyy jalostamattomiin tuotteisiin. Periaatteessa Luoteis-Venäjän metsäklusterilla on kaikki peruselementit, joita kehittämällä siitä voisi tulla kilpailukykyinen. Uudistuminen vaatii mittavia investointeja ja yhteistyötä yritysten kesken. Tutkimuksessa esitellään Luoteis-Venäjän tärkeimmät metsäteollisuusyritykset. Monille yrityksille vienti on pääasiallinen tulonlähde. Myös sen pitäminen nykyisellä tasolla ja kasvattaminen edellyttävät investointeja tuotantoon ja infrastruktuuriin. Ulkomaisten investoijien merkitys metsäteollisuuden uudistamisessa voi olla suuri, jos investoinnin esteitä ja riskejä saadaan pienennettyä.

ASIASANAT: Luoteis-Venäjä, metsäteollisuus, teolliset klusterit, kilpailuetu, taloudellinen kasvu, elinkeinopoliittikka

Preface

Finland has for centuries lived on forests and wood processing. We call our forests green gold and renew them continuously. For this reason, it is easy for us to see what a huge potential our neighboring country Russia has in its forests, which are the largest unexploited forest resources in the world. Forests can bring continuous wealth to Russia unlike its exhaustible natural resources, and the wealth can be evenly distributed throughout the country.

This book studies forestry and the forest industry in Northwest Russia. The forest industry has long traditions in the region. In the 18th and 19th centuries, it was the leading industry in Northwest Russia. Wood products were sent to Europe via the Archangel and later the St. Petersburg seaports. Production volumes continued to grow during the Soviet period due to state investments, although the country's competitiveness deteriorated on the world market. Today, exports consist of products with low value added and they are based mainly on raw materials, transportation, energy and cheap labor.

The Russian forest industry will face a period of widespread development. Increasing international competitiveness requires investments in production technology, improvements to quality, and a shift towards higher value-added production. Productivity levels must also be raised to offset rising production costs. Investments have to be made despite the crying need for funds.

Northwest Russia is the region best suited for the first development wave of Russia's forest industry. It has the country's best infrastructure, industrial traditions, export market expertise, an abundant labor force and ample opportunities for vocational training. And, above all, Northwest Russia is in close proximity to European markets and Russia's largest population centers.

The Finnish forest industry operates internationally. Our companies have cautiously started to invest in Russia, too. The risks associated with making big investments are still too high, however. Investment will nevertheless increase, especially if investment barriers are reduced as our Russian researchers suggest in this book.

Helsinki, November 2002

Pentti Vartia

Author's Preface

Authors of the present study are among the first that started to elaborate the necessary analytical base and material for understanding of the complex issues such as regional and industrial development in the period of transition. This Study is part of a larger project entitled "Analysis of the competitiveness of Northwest Russia," the goal of which is to assess the growth potential of the Northwest of the Russian Federation in the conditions of transition to the open market. The project implies the analysis of the five industries most important to the economy of this region: forest, energy, metallurgy and metalworking, ICT and food. The research was carried out by a consortium of participants, including: *The Center for Strategic Research* (www.csr.ru), a leading Russian think tank that prepared a current action plan and strategy for the Russian Government; *ETLA* (www.etla.fi) - the Research Institute for the Finnish Economy, a leading Finnish economic research institute; and *Solid Invest* (www.solidinvest.com), a St. Petersburg research-based consulting company. We are happy to express our appreciation of valuable help, understanding and support provided by these organizations in our research. The authors are grateful also for financial support from the Finnish Forest Industries Federation and the leading forest cluster companies: UPM-Kymmene, Stora Enso, Metsä-Botnia, Andritz, Metso Paper, and Timberjack that made it possible to analyze matters with significant depth and penetration.

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Helsinki, August 2002

Contents

Summary

Yhteenveto

1	Introduction	1
2	Theoretical Framework	4
2.1	Introduction	4
2.2	Concept of the Cluster	6
3	Identification of the Forest Cluster of Northwest Russia	11
3.1	Brief History of the Cluster	11
3.2	The Current Condition of Forest Stock	14
3.3	Cluster Structure	16
3.4	The Role of the Forest Cluster in the Economy of Northwest Russia	21
3.5	Macro Trends in the Global Forest Industry	24
4	International Trade and Position on the World Market	28
4.1	Competitiveness and Potential of Import Substitution	28
4.2	The Role of Northwest Russia in the Russian Forest Exports	42
5	Elements of the Forest Cluster of Northwest Russia	46
5.1	Cluster Industries and Their Agglomerations	46
5.2	Forestry and Harvesting	47
5.3	Mechanical Wood-Processing	52
5.4	Pulp and Paper	60
5.5	Equipment Manufacturing for the Forest Industries	64
5.6	R&D and Education	66
6	Factors of Competitiveness	71
6.1	Factor Conditions	73
6.2	Firm Strategy, Structure and Rivalry	77
6.3	Demand Conditions	84
6.4	Related and Supporting Industries	92
6.5	Government	96
7	Conclusions and Policy Proposals	101
	Appendix	114
	References	151

Figures

Figure 2.1	“Diamond” Model	4
Figure 2.2	Cluster Structure	7
Figure 3.1	Production of Primary Forest Products in Russia in 1988-2000	13
Figure 3.2	Forest Stock by Countries, billion m ³	14
Figure 3.3	Structure of the Forest Cluster of Northwest Russia	17
Figure 3.4	Flow Chart of the Forest Cluster of Northwest Russia	19
Figure 3.5	Roundwood Use in Russia of Total 118.5 mln. m ³	20
Figure 3.6	Share of the Forest Industry in the Industrial Production Structure of Northwest Russia in 1999	22
Figure 3.7	Share of the Forest Industry in the Industrial Production Structure in 1999	23
Figure 3.8	Certified Forests by the Mid 2001, million hectares	25
Figure 4.1	Russian Forest Export Structure by Products, %	28
Figure 4.2	Volume of Exports in the Total Output of the Russian Forest Industry, %	29
Figure 4.3	Dynamics of Russian Forest Exports	29
Figure 4.4	Structure of Exports of the Forest Industry of Finland by Main Product Group, %	34
Figure 4.5	Share of the Forest Industry in the Exports of the Northwest Russian Regions in 1999	43
Figure 4.6	Product Distribution of the Northwest Russian Forest Industry in 1999	44
Figure 5.1	The Largest Agglomerations within the Forest Industry of Northwest Russia	47
Figure 5.2	The Largest Harvesting Companies of Northwest Russia	48
Figure 5.3	Estimated Number of Workers Needed per 1 million m ³ Using Scandinavian and Traditional (American) Logging Technologies	50
Figure 5.4	Profitability of the Russian Harvesting Industry, %	51
Figure 5.5	The Largest Mechanical Wood-Processing Companies of Northwest Russia	53

Figure 5.6	Profitability of the Russian Mechanical Wood-Processing Industry, %	53
Figure 5.7	The Largest Companies of the Pulp-and-Paper Industry of Northwest Russia	63
Figure 5.8	Profitability of the Russian Pulp-and-Paper Industry, %	63
Figure 5.9	R&D and Education in the Northwest Russian Forest Cluster	66
Figure 6.1	Northwest Russian Forest Cluster	72
Figure 6.2	Investments in the Russian Forest Industry, billion USD	74
Figure 6.3	Personnel Quality in the Regional Forest Industry (5-point scale)	75
Figure 6.4	Forest Industry Ownership Breakdown	78
Figure 6.5	Number of Personnel in the Finnish Forest Industries and Forestry	83
Figure 6.6	The Structure of Forest Product Sales in Russia	86
Figure 6.7	The Sophistication of Local Customers as Compared with Foreign Consumers	87
Figure 6.8	Share of Imported Components in Furniture Production, % of Total Consumption	89
Figure 6.9	Average Prices for Russian Pulp on the World Market during 2000-2002, USD per metric ton	91
Figure 6.10	Geography of Main Suppliers of Equipment for the Forest Cluster of Northwest Russia	93
Figure 6.11	Finnish and Russian Shares in the World Figures	96
Figure 7.1	Competitive Advantages and Disadvantages of Agglomerations	108
Figure A1.1	Prevailing Species	115
Figure A1.2	Harvesting Volume, Allowable Cut and Net Growth in the Main Forest Regions of Northwest Russia in 1999, million m ³	119
Figure A2.1	Production of Tractors by Onezhski Tractor Plant, units	124
Figure A4.1	Scheme of the Main Transportation Routes in Northwest Russia	139
Figure A4.2	Density of Road Network in Northwest Russia, Baltic States and Sweden, miles/ha	140
Figure A4.3	Scheme of the Energy System of Northwest Russia	146

Figure A4.4	The Consumption of Electricity in the Forest Industry of Finland in 1985-2000, billion kWh	147
Figure A4.5	Scheme of the Data Networks of Northwest Russia	148

Tables

Table 3.1	Share of the Forest Industry in Industrial Production in Some Regions of Northwest Russia at the Beginning of the 20 th Century	11
Table 3.2	Modernization of the Largest Companies of the Forest Cluster	12
Table 3.3	Forest Resources of Northwest Russia in 1993 and 1998	15
Table 3.4	Harvesting Volumes of Allowable Cut in Northwest Russia in 1994-1999, %	16
Table 3.5	Share of the Forest Industry in the Russian Economy	21
Table 3.6	Shares of Federal Districts of Russia in Total Output of Forest Products, %	22
Table 3.7	Share of the Forest Industry in the Industrial Production Structure of Western European Countries	23
Table 4.1	Total Currency Earnings from Russia's Forest Exports	28
Table 4.2	Share of Russia in Total Output and Exports of the World Forest Industry, %	30
Table 4.3	Key Figures of Russia's Foreign Trade in Forest Products with OECD Countries	30
Table 4.4	Competitiveness of Russian Forest Products on OECD Markets	31
Table 4.5	The Largest Markets for Forest Products and the Position of Russia, HS 4-digit level	32
Table 4.6	Competitiveness of Russian Forest Products, HS 6-digit level	33
Table 4.7	Relative Potential of Import Substitution of Forest Products in Russia	35
Table 4.8	Import Substitution Potential of International Trade Products	36
Table 4.9	Potential of Import Substitution for Forest Products, HS 4-digit products	37
Table 4.10	Potential for Import Substitution, HS 6-digit level	38

Table 4.11	Key Figures of Northwest Russian Forest Exports in 1998-1999	42
Table 4.12	Exports of the Forest Industry of Russia, Northwest Russia and the Regions of Northwest Russia in 1998-1999	42
Table 5.1	Production of the Harvesting Industry of Northwest Russia in 1995-1999, million m ³	48
Table 5.2	Production Volumes of the Mechanical Wood Processing Industry of Northwest Russia in 1995-1999	52
Table 5.3	The Largest Sawn Timber Producers in Northwest Russia	54
Table 5.4	Production of Sawn Timber within the EU in 2000, million m ³	55
Table 5.5	The Largest Plywood Producers in Northwest Russia	56
Table 5.6	The Largest Particleboard Producers in Northwest Russia	57
Table 5.7	The Largest Fiberboard Producers in Northwest Russia	57
Table 5.8	The Largest Furniture Producers in Northwest Russia	58
Table 5.9	Pulp-and-Paper Production in Northwest Russia in 1995-2000, thousand tons	60
Table 5.10	Production of Pulp in the EU in 1998, thousand tons	61
Table 5.11	Production of Paper and Paperboard in the EU in 2000, million tons	61
Table 5.12	The Largest Companies of the Pulp-and-Paper Industry in Northwest Russia	62
Table 5.13	Profitability and Labor Productivity per Employee at Some Machine-Building Plants in 2000	65
Table 5.14	The Largest R&D Institutions of the Forest Cluster of Northwest Russia	68
Table 5.15	Educational Institutions of the Northwest Russian Forest Cluster	69
Table 6.1	Top Players in the Forest Industry of Northwest Russia	80
Table 6.2	Labor Productivity in the Top 25 Northwest Russian Forest Industry Companies	82

Table 6.3	Consumption of Forest Products by Country per 1,000 persons	86
Table A1.1	Types of Forest	114
Table A1.2	Forest Resources of Northwest Russia in 1998	115
Table A1.3	Prevailing Forest Growth Classes by Region	116
Table A2.1	Level of Equipment Depreciation in the Forestry Sector of Northwest Russia in 1999, %	123
Table A2.2	The Age of Operating Equipment in the Pulp & Paper Industry of Northwest Russia	128
Table A3.1	Investment Risk and Investment Potential of the Regions of Northwest Russia in 1999-2000	138
Table A4.1	Density of Transportation Routes in the Regions of Northwest Russia in 1998	140

Boxes

Box 2.1	A Survey of Theoretical Routes	8
Box 3.1	Pskov Model Forest – A Sustainable Forestry Model	16
Box 3.2	The Pan-European Forest Certification System	26
Box 4.1	Methodology of Foreign Trade Statistics Analysis	39
Box 4.2	Solombala LDK – Export-Oriented Sawmill Located in the Arkhangelsk Region	43
Box 5.1	Case Study of Pervaya Mebelnaya Fabrika of St. Petersburg	59
Box 5.2	Giprobum – an R&D Institute's Experience of Survival during the Transition Period	67
Box 6.1	Development of the Forest Cluster Focused on Mechanical Wood-Processing in Ireland	97
Box A3.1	Case Svetogorsk PPM – International Paper Successful in Entering the Russian Cut-size Office Paper Market	137
Box A4.1	The Transportation System of the Arkhangelsk Region	141
Box A4.2	Belkomur – a New Railroad	142
Box A4.3	Petrolesport – the Forest Terminal of the Port of St. Petersburg	144
Box A4.4	The Finnish Experience of Industrial Energy Supply	147
Box A4.5	The Finnish Experience in Automation of the Forest Cluster	150

Summary

Forest industry has traditionally been an important part of the Northwest Russian economy. In the course of the last decade, the Russian industry underwent drastic changes and transition to the open market and the private ownership. Changes in the domestic demand associated with the reforms, collapse of the demand and then gradual increase, greatly shaped the existing production and corporate structure of forest industry. All this calls for a new understanding of the current situation and development prospects, which is also required to elaborate a competent industrial policy at all levels. The collapse of the Soviet planning system left behind a big industrial policy gap. There is a need for new approaches and strategies based on understanding of the newly emerged realities, assessment of the changes and usage of required theoretical tools.

In the present study the authors have chosen a “diamond” model of the national competitiveness introduced by Harvard professor Michael Porter in his book “The Competitive Advantage of Nations” as a basic approach to the analysis. This model was developed and applied to studies of the regional development issues in later studies that were also taken into consideration in the present study. We also identify and describe the regional agglomerations of the forest cluster in Northwest Russia. This part of the analysis is based on regional economics and new economic geography studies.

The companies of the Northwest Russian forest industries together with their local technology and services suppliers, companies from related and supporting industries, such as transport and logistics, energy, chemicals etc., form a potentially competitive cluster of industrial activities. In the study we review the existing situation, analyze competitiveness of the Northwest Russian forest industry, and identify the key issues affecting the competitiveness in the future.

Competitiveness of the Northwest Russian forest cluster today is mainly determined by production factors. Primarily, these are the substantial but under-utilized forest stock, the infrastructure inherited from the Soviet period, and industrial and human capital. Unfortunately, in the period of reforms the overall state of the production factors has deteriorated. The malfunctioning infrastructure and underdevelopment of the harvesting and processing facilities undermine opportunities arising from raw wood resources and human capital. In general, the cluster is characterized by low productivity and outdated technologies. Hence the companies of the

Northwest Russian forest cluster occupy important positions only in products with low value added. The cost-based competition is the main strategy of the domestic producers. The current factors underlying competitiveness of the cluster do not allow for its sustainable development and growth without substantial efforts and investments. It is essential to increase cooperation between the primary product manufacturers, technology producers, and service providers, as well as related industries.

In the transition from the centralized planning system to the open market, the Russian economy is in now at the stage of integration into the international markets. For the majority of forest industry companies export revenues are the main source of income. This is a factor, which will dramatically influence the development of the forest industries in Russia. Northwest Russian companies are now exposed to competition on the international and domestic markets and follow the trends in the international markets.

After the collapse of the Soviet Union in 1991, domestic demand for forest industry products dropped. The companies shifted their focus to servicing export markets. As a result, since 1992, exports and their share in the total forest cluster production have significantly grown. A statistical analysis of the Russian international trade with the OECD countries (see Chapter 4) has served to identify the key export items: roundwood, pulp and newsprint. As this analysis shows the Russian exports are competitive only in raw wood and basic commodities. There is also a substantial import substitution potential in high value added products groups such as the furniture and paper products. Therefore there are two major parallel ways for the further development of the forest cluster. One is to increase the share of higher value added products aimed at exports. This implies “quantum leap” in improving infrastructure, training, regulations and business climate. Going this way means substantial private investment and commitment on the government side. The other is to target development of domestic manufacturing through import substitution. This approach also requires substantial investments, better infrastructure and skills. It is also less efficient in creating the sustainable competitive advantages due to lesser exposure to global rivalry and presumed government protection of the markets through the tariff policy. As both approaches are not exclusive the mix of both will be present in the near future in Russia.

In Chapter 5 we analyze forest industries, services and available technologies in the region, as well as related industries. The analysis shows that the industrial facilities inherited from the Soviet period are characterized by low efficiency, outdated and polluting technologies and processes. Upgrading these facilities is an enormous task for the future. It is highly unlikely that many existing companies will remain as such. Waves

of mergers and acquisitions, bankruptcies and restructuring will be overseen in the near future. In many cases “greenfield” investments are a reasonable solution and the number of this kind of investments will increase. Foreign strategic investors could play a key role in renewing the Northwest Russian forest industry, if only investment barriers and risks could be reduced.

Chapter 6, the key section of the report, contains a competitive analysis, with competitiveness factors grouped to conform to the “diamond” model developed by M. Porter. The study reveals that the forest cluster of the Northwest Russia is virtually lacking any obvious competitive advantages to be developed without major investments. The most problematic bottlenecks are the domestic market capacity, which remains small and inadequate to achieve economies of scale for many products. Development of exports is prevented by the underdeveloped infrastructure and bureaucracy, as well as the weak networks and almost non-existing cooperation between the companies.

An important development constraint is the inconsistent and unstable industrial policy, which lacks the focus and commitment needed to provide a ground for higher value added activities. At the same time, the extensive forest resources of the Northwest Russia, which are the closest forest reserves to the European markets, and substantial inherited assets, skills and infrastructure form a unique basis for building competitive advantages for the firms in this region. The continuously growing demand for forest products and favorable future prospects could motivate the local companies to regain market power. Advances in the industrial policy, increasing interest in the forest industries and improving infrastructure are promising signs of a better future.

In the export markets there is room for Russian forest products. One of the possible alternatives is that Russia will follow a typical development pattern of the follower, i.e. invests in technologies that have already been developed and manufactures well-known products with established global market positions. Taking into account the existing cost competitiveness, such a strategy could lead to good results. Foreign direct investments could play a crucial role in this as a facilitator.

The project team believes that in the medium term the competitiveness of the forest cluster improves, although one should not expect a “big leap”. In spite of the increased production efficiency, the general lag behind the developed economies will persist a long time. The scale of investment and effort needed to improve the functioning of the Northwest Russian forest cluster leaves no doubt that this will be a long and painful process.

The study demonstrates that the forest cluster companies of today fall into two broad and rather different categories. The first and by far the largest category is formed by companies that inherited their assets from the Soviet period. These companies have, on average, a lower productivity and they are gradually deteriorating as compared with the other small but growing category, which is formed by new companies, created through green and brown field investments. Companies in the second category are more efficient, enjoy higher productivity and are much less polluting. This is the group that will identify the future of the forest cluster in Northwest Russia in the longer term. The government should concentrate its efforts on facilitating the networks and connections between the user and the producer in the forest cluster. Infrastructure has to be improved as well. In order to develop the forest cluster, the available scarce resources have to be directed efficiently to the most developable regions.

In the conclusions we describe regional agglomerations, which are North-Ladoga, Karelia, Archangel, Kotlas and Syktyvkar. We believe that in the regions where the forest industries are less developed but have a good resource base, focused efforts of the regional governments would lead to creation of new concentrations of the industrial activity. Some new agglomerations could even shape relatively fast, for example Vologda-Cherepovets. In order to sustain their positions, regions with developed forest industries have to concentrate their efforts on improvement of the business environment and operating conditions as well as development of infrastructure and education.

Long-expected improvements related to the forest use are essential for the future development of forest industry. Introduction of extra long leases (more than 49 years) and private ownership could substantially alter the corporate map and foster the development of the forest cluster.

Efforts by the regional and federal governments to develop infrastructure and improve education and training for the forest cluster will certainly bear fruit and ease concentration of the forest cluster in the areas where access to qualified labor force and efficient infrastructure is ensured. This, associated with the concentration of the activities in larger corporations, appearance of the competitive niche producers and evaporation of the less efficient players, would increase the vitality of forest industry centers and bring sustainable wealth.

Developing the Northwest Russian forest cluster is a difficult and challenging task. Nevertheless, there are tools that could ease positive developments. We believe that the study will provide good ideas for decision-makers of different levels and responsibilities to foster growth in the Northwest Russian forest industry.

