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Roundwood Procurement Channels and Prospects of the Logging Enterprises in Leningrad Region

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Master's Thesis
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| Tiivistelmä — Referat — Abstract <p>The first purpose of this study was to describe local logging companies and find out what kind of future prospects these companies have. This study concentrated on small logging enterprises in Leningrad Region, who were operating near the Finnish boarder. The second objective was to produce up to date information of these companies' perceptions of political, economic, social, technological and ecological aspects to their logging companies business. The third purpose of this study was to describe different procurement channels of roundwood from the local logging companies to the local markets in Leningrad Region. The existing export channels to Finland were also studied.</p> <p>This study is a descriptive study, consisting of descriptive statistics on northwest Russian and Leningrad Region's forest sector, as well as the results from personal interviews. The theoretical source material of this study mainly includes domestic and foreign literature, articles as well as information from websites about defining the current markets in Northwest Russia and Leningrad Region. The primary material consisted of the interviews of Russian logging companies.</p> <p>There are no previous studies, which are concerned with local logging companies and roundwood procurement channels in Leningrad Region. The development of modernizing company's logging technology is in a different position in different companies. Especially bigger companies are using more intensively Nordic cut-to-length method. The most important challenge in future development of logging companies where the high taxes, the high interest charge of credit in bank and the uncertainty of government raising the export taxes. Interviewed companies see that the biggest changes in the future markets would be the development of local sawmill and wood working industry in Leningrad Region.</p> | | | |
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| Tiivistelmä — Referat — Abstract <p>Tutkielmassa selvitetiin Leningradin alueen paikallisten puunhankintayritysten tulevaisuuden näkymiä ja tutkittiin yritysten suhtautumista niihin ympäristökijöihin, joilla on merkitystä yritysten oman liiketoiminnan kannalta. Tutkitut yritykset olivat paikallisia venäläisiä puunhankintayrityksiä, jotka toimivat Suomen lähialueilla. Tavoitteena oli lisäksi kuvailla Leningradin alueen paikallisia puunhankintakanavia ja puun vientikanavia Suomeen.</p> <p>Tutkimuksen viitekehys muodostuu kahdesta osasta: pelkistetystä venäläisen raakapuun jakelukanavakuvauksesta ja sitä ympäröivästä makroympäristöstä. Tutkimus on luonteeltaan kuvaileva ja tutkimuksessa käytettiin sekä sekundääri- että primääriaineistoa. Sekundääriaineisto koostui Luoteis-Venäjän metsäsektorin tilastoista, aihetta käsittelevistä koti- ja ulkomaisista julkaisuista ja artikkeleista ja internet-lähteistä. Primääriaineisto kerättiin henkilökohtaisilla haastatteluilla venäläisissä puunhankintayrityksissä.</p> <p>Aiheesta ei ole aikaisempia tutkimuksia, jotka olisivat liittyneet puunhankintayrityksiin Leningradin alueella. Venäläisten puunhakuuyritysten edellytykset uusia kalustoaan vaihtelevat riippuen yrityksen koosta ja siten sen käytettävistä resursseista. Erityisesti suuremmat yritykset hyödynsivät aktiivisesti tavaralajimenetelmää puunkorjuussaan. Haastateltujen yritysten mukaan tärkeimpiä tulevaisuuden haasteita yritysten kannalta ovat korkeat verot, pankkilainan korko ja epävarmuus mahdollisten puun vientitullien korotuksesta. Haastatellut yritykset kokevat suurimpina mahdollisuuksina tulevaisuudessa Leningradin alueen paikallisen saha- ja puutuoteteollisuuden kehittymisen.</p> | | | |
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1. BACKGROUND OF THE STUDY

1.1 Russian Federation and Its Different Industry Sectors

Russia is in many ways an interesting country for foreign investors practically in every industry sector. Especially the Russian forestry sector has become the focus of increasing attention by the global forest industry. Russia's forest resources include about 883 millions hectares of forest land, which is about 20 % of world's total forest resources. They are globally important because of their size, carbon-storage capacity, biodiversity, and extent of their timber and non-timber forest products. Russia is also a very lucrative country for the world's pulp and paper industry in terms of import. Russian gross domestic product has shown increasing growth annually and paper consumption follows generally changes in the GDP.

Russia has also a large population and low consumption of paper and paperboard products per capita. According to World Resources Institute statistics, paper and paperboard consumption per capita in Russian Federation were 34.50 kilograms per annum in 2004. For example, in Finland it was 216 kg per capita in 2005 (Finnish Forest Industries Statistics 2006, 14).

The Russian forestry sector has showed immense progress since the difficult period in the early 1990s, when production volumes dropped and its cost- and quality-competitiveness was challenged. In the 1990's, the production of forest industries in Russia decreased two or three times on average (for some products like forest chemicals and standard wooden houses more than ten times) and the Russian forest industries reached the lowest point in the mid 90's (Dudarev et al. 2002a,13).

Nowadays Russian export revenues are heavily influenced by oil price trends. According to BOFIT Russian review (2006), with prevailing high-energy prices, the energy accounts for 67 % of Russia's total exports. Metals and metal products, another important export sector, have a 13 % share. Chemical products and machinery each account for about 5 %, while the Russian forest sector accounts only for 3 % of Russia's total exports.

Most of the forest industry enterprises were privatised in the beginning of the 1990s along with fundamental changes in Russian economy. The domestic market for forest products was opened for competition. The final products of the Russian forest industry were rarely competitive with foreign products mainly due to the inherited lack of incentives to respond to customer-oriented demand (Vinokurova et al. 2005, 7). Only low value-added products, such as roundwood, plywood and sawn timber, were relatively highly competitive in export products.

As mentioned oil, natural gas, metals, and timber account for more than 80% of exports, this leaves the Russian Federation vulnerable to swings in world market prices. Other problems include a weak-banking system, a poor business climate that discourages both domestic and foreign investors, corruption, and widespread lack of trust in institutions. Most fundamentally, Russia has made little progress in building *the rule of law* (it is the principle which intended to be a safeguard against arbitrary governance), the bedrock of a modern market economy (CIA 2006). According to the Bank of Finland Institute for Economies in Transition (BOFIT) Russia's real GDP will increase 6.1 % in 2007 and then will be slowed up to 5.6 % in 2008 (BOFIT Russia Review 2006).

In 2005 Russia ended with its seventh straight year of growth, averaging 6.4% annually since the financial crisis of 1998. Although high oil prices and relatively cheap ruble are important drivers of this economic rebound, since 2000 investment and consumer-driven demand have

played a noticeably increasing role. Russia has improved its international financial position since the 1998 financial crisis, with its foreign debt declining from 90% of GDP to around 31%. Strong oil export earnings have allowed Russia to increase its foreign reserves. These achievements, along with a renewed government effort to advance structural reforms, have raised business and investor confidence in Russia's economic prospects. Nevertheless, serious problems persist. Economic growth slowed to 5.9% for 2005 while inflation remains high (CIA 2006). According to BOFIT institute, Bank of Finland, the 12-month inflation in Russian Federation has decreased from 15.1% (2002) to 10.9% (2005) and is estimated to be 9.5% in 2006.

Table 1. Production index by kinds of economic activities (1991=100)

| | 1992 | 1995 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2005 as % to 2004 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|----------------------|
| Mining and quarrying ¹⁾ | 88.2 | 70.7 | 74.3 | 78.8 | 84.2 | 91.5 | 97.7 | 99.0 | 101.3 |
| of which: | | | | | | | | | |
| mining and quarrying of energy producing materials | 94.7 | 77.8 | 80.9 | 85.8 | 92.1 | 101.6 | 109.4 | 111.4 | 101.8 |
| mining and quarrying, except of energy producing materials | 71.0 | 52.0 | 60.0 | 57.7 | 57.2 | 58.6 | 63.6 | 61.6 | 96.8 |
| Manufacturing ¹⁾ | 81.8 | 47.5 | 51.0 | 52.0 | 52.6 | 58.0 | 64.1 | 67.8 | 105.7 |
| of which: | | | | | | | | | |
| manufacture of food products, including beverages and tobacco | 80.0 | 50.2 | 54.5 | 58.9 | 63.1 | 67.5 | 70.5 | 73.6 | 104.4 |
| manufacture of textile and textile products | 71.9 | 22.0 | 23.4 | 25.2 | 24.6 | 24.9 | 23.9 | 23.5 | 98.5 |
| manufacture of leather and, leather products | 78.0 | 20.8 | 15.5 | 17.6 | 19.6 | 21.9 | 21.8 | 21.2 | 97.3 |
| manufacture of wood and wood products | 78.7 | 40.8 | 37.5 | 36.6 | 38.1 | 41.8 | 45.4 | 47.4 | 104.5 |
| manufacture of pulp, paper and paper products; publishing and printing | 88.0 | 62.7 | 81.2 | 89.0 | 92.6 | 99.8 | 104.9 | 106.1 | 101.1 |
| manufacture of coke, refined petroleum products and nuclear fuel | 82.8 | 62.2 | 60.1 | 61.8 | 64.6 | 66.0 | 67.6 | 71.3 | 105.4 |
| manufacture of chemicals, chemical products and man-made fibres | 79.0 | 54.7 | 69.8 | 70.0 | 70.1 | 73.9 | 78.8 | 80.8 | 102.6 |
| manufacture of rubber and plastic products | 79.5 | 38.4 | 52.5 | 53.3 | 53.4 | 56.3 | 63.9 | 67.4 | 105.5 |
| manufacture of other non-metallic mineral products | 80.9 | 46.9 | 40.3 | 41.8 | 42.3 | 45.4 | 49.2 | 50.9 | 103.5 |
| manufacture of basic metals and fabricated metal products | 82.3 | 57.6 | 66.8 | 69.9 | 73.5 | 78.8 | 81.9 | 86.6 | 105.7 |
| manufacture of machinery and equipment i.e. | 84.4 | 38.1 | 32.3 | 34.4 | 31.4 | 37.4 | 45.3 | 45.3 | 99.9 |
| manufacture of electrical, electronic and optical equipment | 79.8 | 37.3 | 45.3 | 49.1 | 45.3 | 64.9 | 87.3 | 105.4 | 120.7 |
| manufacture of transport equipment | 85.3 | 45.0 | 53.1 | 39.1 | 38.7 | 44.1 | 49.2 | 52.2 | 106.0 |
| manufacturing i.e. | 91.2 | 60.7 | 60.4 | 65.5 | 68.1 | 75.5 | 83.4 | 84.0 | 100.7 |
| Electricity, gas and water supply ¹⁾ | 95.3 | 80.2 | 76.9 | 78.0 | 81.7 | 84.4 | 85.5 | 86.5 | 101.2 |

¹⁾ Data is given with the account of adjustment for informal activities.

Source: Federal State Statistics Service 2006

Russian investment atmosphere is slowly improving, which in turn has a beneficial effect on economic growth. During the past year share prices have reached record highs and investments being made in Russia have grown fast. There has been an annual growth of about a 10% in total investment in Russia in the years since 2000 and the investment ratio (including change in inventories) is slightly over 20% of GDP (BOFIT Russia forecast 2006).

Russia's long-term economic challenges are its location between two economic superpowers – China and the EU. China's colossal and fast growing markets are strongly advantaged by lower wages and an explosion in technical expertise. The EU boasts high productivity and advanced technology, as well as huge markets and mature institutions. Russia is an important energy and raw material supplier to China as well as the EU. At the same time Russia has difficulties to compete with these powerhouses on other fronts. Growing state control is likely to harm development of the Russia's private sector – by far the most dynamic sector and the engine of economic growth (Rautava 2005).

1.2 Trade Policy and WTO Accession for Russia

The overarching issue regarding Russian trade policy is accession to the World Trade Organization. WTO accession will impact a wide range of policy areas including not just explicit tariff policies on imports of goods that were the focus of GATT, but also a wide range of structural and “behind-the-border” reforms—such as liberalization of services, reform of FDI policies, protection of intellectual property rights, modernization of customs, transport and trade facilitation, enhanced domestic competition especially in utilities, improvements in the area of product standards, rules for public procurement, and judicial reform (The World Bank 2006).

Russia's accession to the World Trade Organization (WTO) will enable the country to attract more foreign investment. By acceding to the WTO Russia pursues for example the following goals:

- Improvement of existing conditions for access of Russian products to foreign markets and provision of non-discriminatory treatment for Russian exporters
- Access to the international dispute settlement mechanism; Creation of a more favourable climate for foreign investments as a result of legal system change in accordance with the WTO standards
- Expansion of opportunities for Russian investors in the WTO member-countries particularly, in the banking area
- Creation of conditions for growth of domestic production' quality and competitiveness as a result of increased flows of foreign goods, services and investments to the Russian market

Russia is raising the export duties of felled timber so high that it is likely to mean the end of imports of raw timber from Russia into Finland within a few years. Wood issues need to be taken up in the discussions (Ulkoministeriö 2007).

1.3 Russian Forest Industry and Roundwood Exports

Russia is especially important for Finland, because of the geographic location; Finland and Russia have a long common border and long history in trading. According to Mutanen et al. (2005, 30) Russia is an important foreign supplier of roundwood to Finland and at the same time it is a competitor in the markets for sawnwood and other wood products. Despite many structural issues that remain unsolved, there is great potential and opportunities that need to be concentrated and studied. Economic development of the Russian market offers export opportunities for Finland. In this study the term "roundwood" is used as a common name for forest

raw material intended for pulpwood or saw timber. The Northwest Russian region is especially significant to Finland, because of its forest resources and the city of St. Petersburg with a population of over 5 million. The growth potential of this one of the biggest cities in Europe is an interesting target for ongoing and future export and investment activity for different Finnish industry sectors.

Table 2. Main indicators of performance of logging, woodworking and pulp-and paper industry and industrial structure in Russia.

| | 1992 | 1995 | 2000 | 2001 | 2002 | 2003 | 2004 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Number of acting organizations (the end of year), thou. | 8.2 | 16.4 | 22.4 | 21.2 | 23.0 | 21.9 | 23.2 |
| Output, bln. RUR (trln. RUR before 2000) | 0.8 | 50.5 | 189 | 221 | 260 | 308 | 354 |
| Average annual number of production workers, thou. persons | 1813 | 1383 | 1102 | 1054 | 1010 | 968 | 846 |
| Balance (profit less loss) ¹⁾ , mln. RUR (bln. RUR before 2000) | 135 | 5864 | 16893 | 13337 | 8260 | 5649 | 11793 |
| Profitability level of sold products (works, service) ¹⁾ , percentage | 37.6 | 21.8 | 16.5 | 11.5 | 9.2 | 7.0 | 7.8 |
| PRODUCTION: | | | | | | | |
| roundwood removals, mln. dense cu. m | 238 | 116 | 94.8 | 96.3 | 97.0 | 105 | 103 |
| of which commercial round wood | 183 | 88.7 | 77.1 | 79.9 | 80.5 | 86.5 | ... |
| sawnwood, mln. cu. m | 53.4 | 26.5 | 20.0 | 19.0 | 18.6 | 20.2 | 19.8 |
| plywood, thou. cu. m | 1268 | 939 | 1484 | 1590 | 1821 | 1978 | 2233 |
| parquet floors, mln. sq. m | 7.2 | 4.0 | 2.1 | 1.8 | 1.8 | 1.7 | 1.9 |
| wood particle boards, thou. standard cu. m | 4522 | 2206 | 2335 | 2545 | 2744 | 3204 | 3603 |
| fiber boards, mln. standard sq. m | 427 | 234 | 278 | 283 | 310 | 325 | 347 |
| pulp, thou. tons | 5676 | 4197 | 4960 | 5272 | 5579 | 5764 | 5916 |
| paper, thou. tons | 3608 | 2773 | 3326 | 3442 | 3552 | 3682 | 3879 |
| of which newsprint: thou. tons | 943 | 1458 | 1694 | 1732 | 1714 | 1814 | 1979 |
| bln. sq. m | 20.0 | 30.5 | 36.9 | 38.0 | 37.9 | 40.2 | 44.0 |
| of it with mass of 45 g/sq. m, | ... | 7.7 | 26.6 | 29.8 | 32.0 | 34.4 | 37.3 |
| bln. sq. m | 2157 | 1301 | 1985 | 2225 | 2428 | 2696 | 2910 |

1) For 1995-2003 - according to book-keeping records.

Source: Federal State Statistic Service (Russia in figures 2005)

Table 2 shows that in spite of vast resources, the annual timber removals have dropped from about 240 million m³ in 1992 to 100 million m³ in 2004. Roundwood removals have increased during the past five years, but the

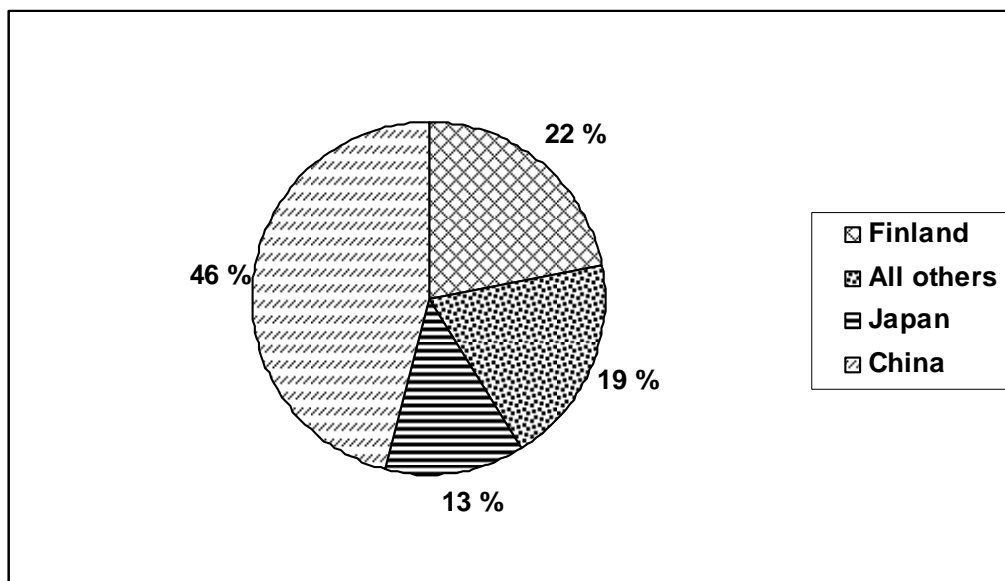
sawnwood production has not yet increased. Despite of that the production volume of Russian forest sector has increased (except sawnwood production), only production of plywood has been clearly bigger than the level of production in year 1990. The decline in timber removals is largely attributed to loss in production capacity.

As a country rich in resources, Russia's exports to Finland are comprised mainly of oil, natural gas, metals and other raw materials. The structure of Finland's exports to Russia has changed in the 1990s more than the corresponding structure of Russian exports to Finland. Finland exports more information-intensive products and Russian exports are competitive only in roundwood and basic commodities (Kotilainen et al. 2003, 10).

Russia is the owner of the largest share of the world's coniferous forests and it should secure its present and future interests regarding the use and renewal of its vast forest resources. Currently, the aim of the forest policy in Russia is to promote domestic value-added production and to attract both domestic and foreign investments in the forestry sector.

Russia is the biggest roundwood exporter on global scale. From the beginning of the 1990s annual roundwood exports from Russian have grown significantly. The decrease in roundwood fellings stopped in Russia in 1998. Since then harvested volumes have begun growing - although slowly. In 1992, the total volume of export was about 10 million cubic meters, while in 2001 it has grown to over 32 million cubic meters and in 2005 to 48 million cubic meters. The main reasons for this development are liberalisation of foreign trade in Russia in the early 1990s, devaluation of rouble in 1998, and the increase in demand for Russian roundwood in neighbouring countries both in Europe and in Asia (Vinokurova et al.. 2005, 12). Figure 1 shows that Russia exports roundwood mainly to China.

Figure 1. Russian roundwood exports in 2005, total 48 mill. m³



Source: World Trade Atlas 2006

A new Russian Federation Forest Code has been accepted in the State Duma during year 2006 and will be come into effect in the beginning of year 2007. Thus, the changes in Russian system of forestry and forest management, the pressures to raise the export duty on roundwood and the increased international investments to Russian forest industry will be affect to Finnish forest industry operations.

1.3.1 Increase of Russian Export Tariff on Logs

The new export tariffs, which went into effect in June 2006, increased the tax on Russian log exports by €1.5 to €4 per m³ (or to 6.5 percent). The new taxes are part of an effort to help reduce Russian exports of unprocessed wood and to develop Russia's own wood processing sector. According to Finnish Forest Industry Federation (2006a), The Russian government has decided to increase the export duty of roundwood – excepting birch timber with a diameter less than 15 cm – from 4 euro to at least 10 euro per cubic metre. The tariff increase will add €15 million to €20 million to Finland's wood-processing industry costs. Finnish wood

processing industries are likely to be particularly hurt by the increased export tax, because imported wood has been vital to the Finnish industry as can be seen in chapter 1.3. Especially imported sawlogs have been important for mills in coast of Finland near Finland's border with Russia. The increased price of imported roundwood makes long term plans more difficult and increases the uncertainty of successful roundwood procurement. The availability of domestic wood would be more and more important.

Russian logs make up as much as 21% (14,4 million m³) of Finland's total roundwood supply. The possible negative impact on Finnish sawn softwood and paper exports is not yet clear. However, as the Finnish forest industry is highly export-oriented, selling 70 to 90 percent of production abroad, the increased Russian tax can only have a negative impact on Finland's international competitiveness. Especially the new tariffs make supply of raw material in Finnish sawmill industry more difficult (Finnish Forest Industry Federation 2006b).

1.3.2 Finnish Forest Industry Companies in Russia

The Russian forest sector tries actively to attract forest investments to create more value added production in Russia and to survive in international competition in final product markets. Along with the global profit maximisation, many foreign forest enterprises have been established especially in Northwest Russia during 1990's and 2000's. Most of these investments are of small-scale such as saw- and veneer mills and packaging plants. They can be seen as pilot investments to test market environment and, especially, the functioning of wood procurement (Holopainen et al. 2006, 13).

Many Finnish companies from different kinds of economic activity have been attracted by profitable possibilities of Russian markets. According to

Holopainen et al. (2006, 5) Russian forest resources, other competitive factors of production and developing domestic final product markets can be seen as supporting factors for forest investments in Russia. Also, the vertical integration strategies and wood procurement of international forest companies over the national borders are important factors to determine the location of investments. Establishment in forestry industry in Russia has been carried on by direct green field investments, purchasing existing capacity and operational chains, or by joint ventures with Russian partners.

Western companies have lately invested in sawnwood and panel production, with Stora Enso, UPM-Kymmene and Metsä-Botnia as good examples. UPM operates one sawmill and one plywood and veneer mill in Russia. UPM's Forest Russian roundwood procurement was about 5 million m³ .and about 1 million m³ go to UPM's units in Russian (UPM-Metsä 2006)

Table 3. Finnish forest industry companies production units in Russia

| Sawmills | Name of the mill | Founded | Location | Capacity m³/year |
|---------------------------------|-------------------------|----------------|---|------------------------------------|
| Stora Enso | Impilahti | 2003 | Southwest Russia, about 300 km from St. Petersburg, by Lake Ladoga. | 120000 |
| Stora Enso | Nebolchi | 2004 | In the small village of Nebolchi Novgorod Region, southwest Russia | 120000 |
| UPM-Kymmene | Pestovo | 2003 | Novgorod Region | 300000 |
| Botnia | Svir | 2006 | In the city of Podporozhye in Leningrad region | 200000 |
| | | | | |
| Plywood and veneer mills | | | | |
| UPM-Kymmene | Chudovo | 1988 | Novgorod Region | |
| | | | WISA birch plywood | 80000 |
| | | | Craft veneer | 6000 |
| Packaging board mills | | | | |
| | | | | Capacity m²/year |
| Stora Enso | Arzamas | 2004 | Corrugated packaging | 90000 |
| Stora Enso | Balabanovo | 1998 | Corrugated packaging | 150000 |
| Stora Enso | Luhovitsy* | 2008* | Corrugated packaging* | 150000* |
| | | | | |

*the project is estimated to be ready in 2008

Source: Stora Enso 2006, UPM-Kymmene 2006, Metsä-Botnia 2006

Stora Enso has two sawmills in Russia. The main function of the Impilahti sawmill is to process Karelian spruce for Finnish and Russian sawn timber markets. The Impilahti sawmill consists of one modern small-log line.

Stora Enso's Nebolchi Sawmill is concentrated to produce sawn timber for building industry in Europe (mostly to Germany) and delivers some of the product to Stora Enso Timber's Estonian sawmills for further processing. Therefore it can be called as an export-platform type of investment. The Sawmill has a modern profiling saw line for small logs. Stora Enso's wood procurement volume from Russia was 7.5 million m³ in 2005, including own harvesting volume of over 1 million m³. Stora Enso also is the biggest wood supplier in northwest Russia (Stora Enso 2006).

The Russian sawmill OOO Svir Timber, is 100% owned subsidiary by Oy Metsä-Botnia Ab. At the beginning of operations, approximately 30 % of sales go to the Russian market. The most important customer groups in Russia are the processing industry, distribution chains and construction industry. Part of the production goes abroad (Metsä-Botnia 2006).

It is important to notice that the potential investors are currently facing many institutional hurdles in Russia. These concern land ownership arrangements and the position of foreign companies in regard to taxation and capital transfers. Also investments in the infrastructure for roundwood harvesting and transport are essential if wood resources in Northwest Russia are to be harvested economically (Ollonqvist & Toppinen 2003, 42).

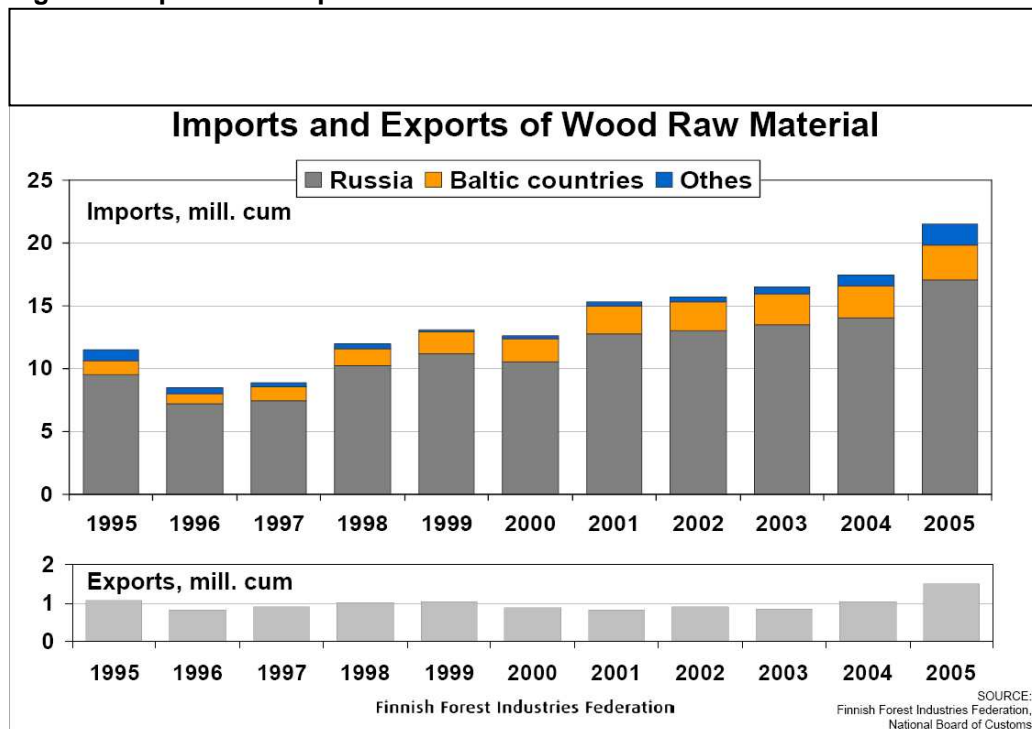
1.4 The Imported Roundwood to Finland

Imports of roundwood have played a significant role in the Finnish forest industries' raw material supply since the 1950s. Together with the changes in Russian society and economy, the roundwood trade between Finland

and Russia has undergone a structural change. The previous patterns of bilateral trade agreements in bartering protocols are not working and the trade is currently organised between the private companies and middlemen both in Finland and Russia (Vinokurova et al. 2005).

Volume of roundwood imports has increased continuously in Finland, especially from Russia and the Baltic States. Imported birch pulpwood has been clearly the dominated wood species. Over 80 per cent of Finnish total wood raw material imports are from Russia and the rest primarily from the Baltic countries. (Toppinen & Toropainen 2004, 15).

Figure 2. Imports and exports of wood raw material 1995-2005



Source: Finnish Forest Industries Federation 2005

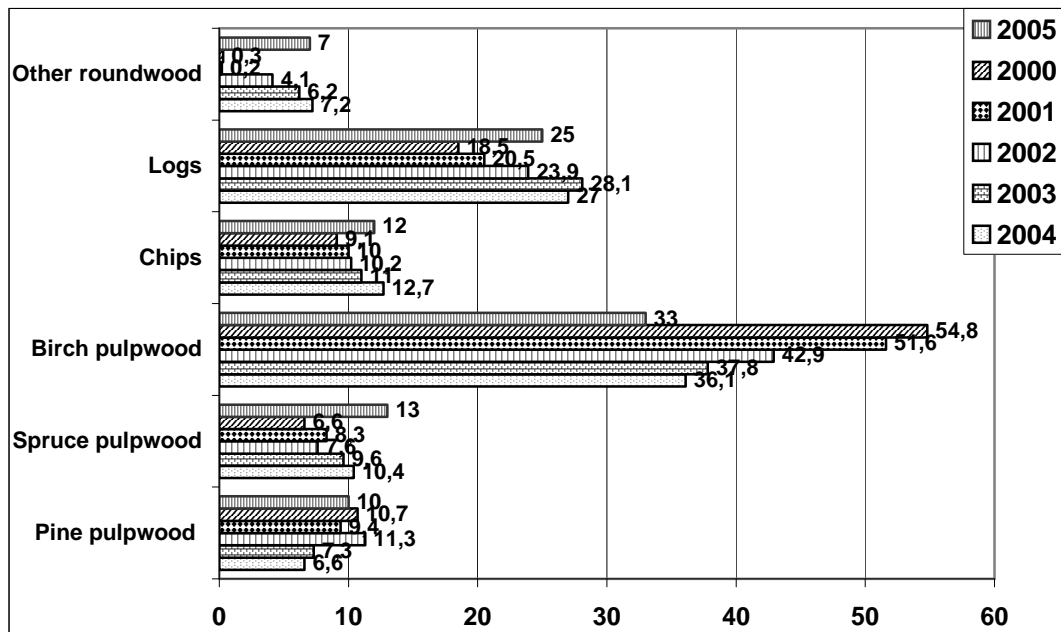
Russian roundwood has become particularly important for Finnish forest industry, as can be seen in figure 2, partly because of the geographic location. The volume of imports of roundwood and wood chips to Finland has been growing steadily during the last decade, reaching 18 million cubic meters in 2005, and accounting for about 26 % of the total industrial use of roundwood in Finland. The main reason for increased imports is

that domestic supply has not been able to satisfy the demand, especially birch pulpwood is needed.

In the early 1990s, over 90 percent of the roundwood imports from Russia to Finland consisted of birch and pine pulpwood. While birch pulpwood is still the most important import assortment, the share of softwood logs has increased especially after the mid-1990s (Vinokurova et al. 2005, 16-17).

A clear view of different trends in imports of roundwood by different wood species is given by Figure 3. The proportions of the different timber species in Russian roundwood imports have changed during the past five years as can be seen above. As mentioned, import of birch pulpwood has been clearly the most, but its share of total imports has been decreasing continuously. The proportion of imports of wood raw material consumption in Finnish forest industries have increased only marginally, because the forest industry used also domestic wood raw material more than before.

Figure 3. Imports of roundwood and chips to Finland by species, %



Source: Yearbooks, 2001, 2002, 2003, 2004, 2005 and 2006. Finnish Forest Industries Federation

Roundwood imports from Russia are important to Finnish forest industry and Russian government plans to gradually raise more roundwood export tariffs. It seems that the Russian Government aims not to increase so much commercial fellings, but decrease raw material exports (including round wood) and instead replace them with exports of more highly processed products. Instead concentrating only developing sawmilling and wood products industry on regional level, government wants to attract more investments primarily to establish pulp and paper mills in Russia. In this situation it would be interesting to know more about practical trade arrangements and what kind of future prospects small Russian logging companies have and what are their perceptions about the current business environment in Leningrad region. Concentration on the forest industry sector of Northwest Russia, in this study to Leningrad Region, gives a good viewpoint to Russian forest industry from Finnish point of view.

2. THE PURPOSE OF THE STUDY

2.1 The Motivation of the Study

This is a descriptive study. There are three main purposes in this study. In Northwest Russia, there are over 4000 registered logging companies (Karvinen et al. 2005, 56) and the first purpose in this study is to describe business environment of local logging companies, to find out what kind of future prospects these companies have. The second purpose is also to produce up to date information of their own perceptions of political, economic, social, technological and ecological aspects to their logging companies business in the Leningrad Region. Third purpose is to describe different procurement channels of roundwood from the local logging companies to the local markets or from Leningrad Region to Finland. This study is concentrating on small logging enterprises in Leningrad Region, who are operating near the Finnish boarder. From the previous studies that come closest to this research are Nilsson & Kleinhof (2001) and Gerasimov et al. (2005). The results of used roundwood procurement channels can be compared to the Pekko Kohonen's master's thesis (Kohonen 1996).

Gerasimov et al. (2005) study consisted of an analysis of logging companies in the Republic of Karelia. The aim of that study was to collect data on the current state of logging companies in Karelia and to demonstrate how their new business environment, and their economic, social and ecological impacts have forced local logging companies to update their technology, machinery and management. Data of the study was collected by personal interviews in 9 different companies. Qualitative and quantative data was acquired from questionnaires, as well as face-to-face interviews with the managers of the logging companies. The study introduced main current issues in the Karelian forest industry. Results of the study were that the technological, economic, social, and environmental

states of the logging companies vary greatly. Other findings were that local logging companies in Karelia are becoming a part of vertically integrated structures based on pulp and paper mills or sawmill that can improve the development of logging. The Nordic cut-to-length method is rapidly being fully established. The study also emphasizes the uncertainty of the future, because there will be a shortage of forest resources for wood supply development in the Republic of Karelia in the near future. This issue means that implementation of sustainable forest management based on commercial thinning operations and the Nordic cut-to-length method is urgently needed.

Study of Nilsson & Kleinhof (2001) concentrated on the long-term prospects of profitably harvesting the forests in northwestern Russia in a sustainable manner, indicating the potential short and medium term competitiveness of Russian forestry in both domestic and international markets. According to the study, which was based on Porter's framework, the most important competitive advantage for Russian enterprises is the availability of resources and skills, although a significant portion of the Russian forestry resource is either physically or economically inaccessible. The domestic demand for roundwood in Russia has historically paid more attention to quantity than to quality issues. The Russian wood products and pulp industry is suffering from some quality problems. The study of Nilsson & Kleinhof emphasizes the fact that to stay competitive in the long run, Russian forestry firms must either accommodate foreign leases and harvesting crews or increase the quality of their output. The development of renewed domestic demand for forest raw material is of great importance. The study highlighted the critical issue, which was that the Russian forest industries could survive, but it needs a necessary critical mass of domestic demand (the current domestic demand was a weak link) that makes it possible. The core conclusions are that the collapse of domestic demand for forest products may be damaging for local forest

enterprises. Export could be one solution for this problem, but the low quality of Russian products makes this unlikely.

2.2 Implementation of the of the Study

To achieve the target of this study, primary data will be collect and knowledge about the elements of rounwood distribution channels and macro-environment (demand, supply, and other macro-environment) in Leningrad Region is needed. The main research questions are:

What kind of macro-environmental forces form the company's general or business environment in Leningrad region?

What kind of roundwood procurement channels are local Russian logging companies using in Leningrad Region and in their supply to Finland?

How will demand and supply develop in future and what are the most important factors, which influence macro-environment in Leningrad Region?

The general business environment includes political, economic, socio-cultural, technological, environmental and legal influences (Worthington & Britton 1997, p.6). It is important to gather information based on secondary data from Northwest Russia and Leningrad Region when trying to answer the research questions related to the background of logging companies' business environment. Review of literature helps to concentrate on relevant aspects and specify the research questions for logging companies' interviews. Primary data consists of personal interviews of managers in Russian local logging companies in Leningard region. Interviews will give information about companies' current perceptions on company level concerning the factors of institutional structures of markets

and companies perceptions of development of their business operations in the future.

Secondary data is gathered from different sources and a general view of current macro environment is important to understand the different forces, which local logging companies are facing. These forces can be found when starting to analyse the environment of local logging companies and the situation where companies are operating. Secondary data gives a background for the study and information of general background of companies and information of demand, supply and other macro-environment is needed. Secondary data presents the business environment and its factors on general level. Primary data helps to discuss about these factors on the company level. Interviews concentrate on how individual logging company perceives these issues and how these factors will affect to company's business activities and develop in the future.

This study is concentrating on the local logging companies in Leningrad region and their different possibilities to supply roundwood to the market: via timber merchants, straight to Russian forest industry and via exporting roundwood to Finland. Identifying the different members and their relations in the Leningrad Region and explore possible vertical integration structures in the forest industry of Leningrad Region roundwood distribution channels can be found. The questionnaire of this study is broadly based on Kohonen's (1996) findings and questionnaire. These and others procurement channels are part of Russian roundwood supply in our framework.

Here demand means the local demand in Leningrad Region and Finnish forest industry demand (export demand). The purpose is to overview the development of roundwood demand in the long term (over three years). The purpose is to overview of supply of roundwood development in the long run (over three years) in Leningrad Region. Development of future

roundwood supply by different wood assortment species categories is studied.

Other macro-environment includes different factors: political, economic, socio-cultural, technological, environmental and legal factors. These factors are known as **PESTEL** factors. Factors may be critical determinants of the threats and opportunities, which the company will face in future. PESTEL Analysis is an effective way to understand the external factors that influence companies and identifying relative important factors in the different categories (Johnson & Scholes 1997). These external factors (PESTEL factors) are discussed in the questionnaire with different sections where interviewers express their perceptions about different aspects of macro-environment.

3. THEORETICAL FRAMEWORK OF THE STUDY

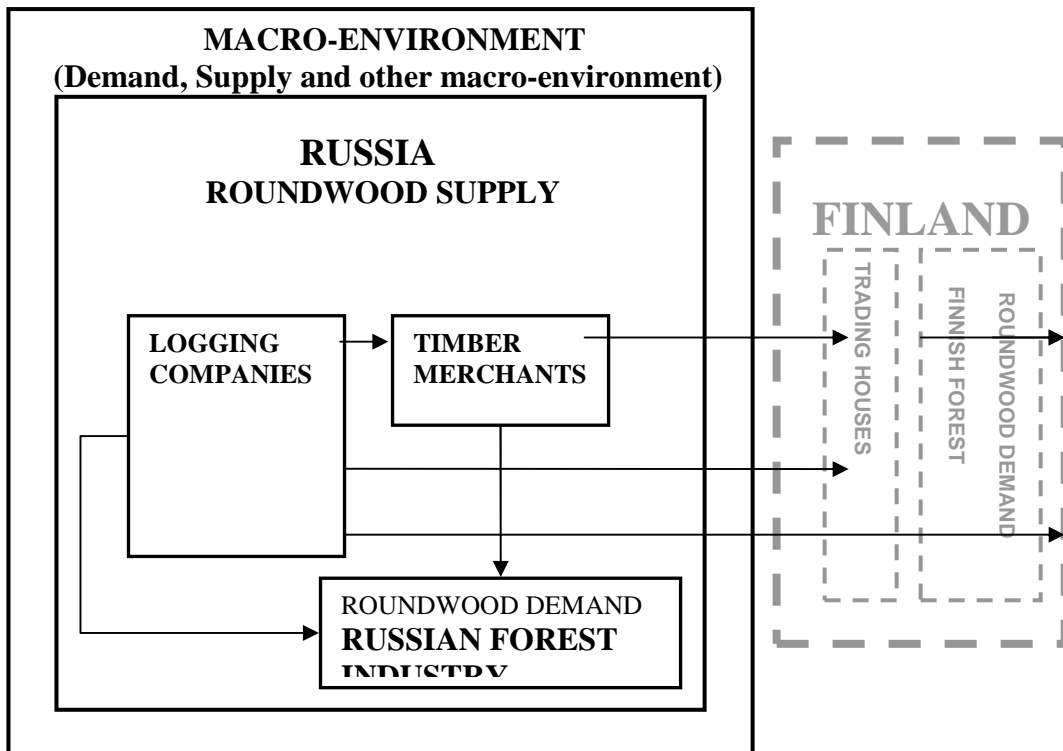
3.1 General Description of the Framework

This study concentrates on roundwood procurement channels and Russian logging companies' perceptions of their surrounding macro-environment. Environmental analysis should provide an understanding of current and potential changes taking place in the environment. Fahey and Narayanan (1986, 25-26) describe the levels of the environment where companies are operating and competing. They propose that the three levels of environment influence company's operations: macro, industry and a firm specific environment. The broadest level is macro environment. In this study, we are concentrating mainly to macro environment level and its factors. Macro environment includes all factors that can influence to organization, but that are out of their direct control.

The framework consists of two parts: *the description of wood exporting channels in Russian roundwood supply* and *the surrounding macro-environment*. The macro-environment includes demand, supply and other macro-environment, which includes Political, Economic, Sociocultural, Technological, Environmental and Legal factors. The macro-environment consists of larger societal forces that affect the entire micro-environment (other company departments, suppliers, marketing intermediaries, customers, competitors, and various publics).

The six forces making up the company's macro-environment include demographic, economic, natural, technological, political and cultural forces. These forces shape opportunities and threats to the company (Armstrong & Kotler 2003, 122). The macro-environmental forces shape opportunities and pose threats to companies. Although the company is not able to control these factors there is a continuous need for monitoring and responding to them (Kotler 1997, 150).

Figure 4. Wood procurement channels and exporting channels from Russia to Finland

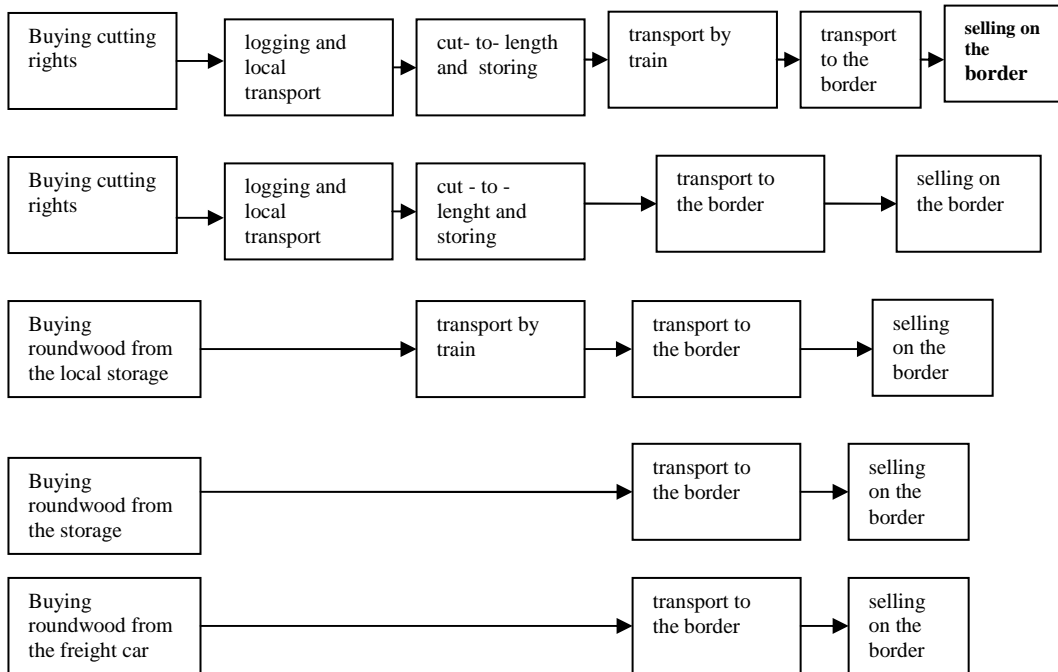


This study will give a quick view of whom the local logging companies are selling roundwood to and describing possible vertical integration structure. Are the companies selling wood to timber merchants, straight to Russian forest industry (wood working or/and pulp-and paper industry) or exporting roundwood (mainly to Finland) in Leningrad Region? The network of wood procurement channels and exporting channels from Russia to Finland is generally described above Figure 4. According to Dudarev et al. (2002b, 59-60) the Russian network of the wood processing and pulp-and-paper industries are based on links with procurement companies

Vertical integration in Northwest Russia is observed in three main areas:

- Harvesting → Mechanical Wood Processing
- Harvesting → Pulp-and-Paper
- Harvesting → Mechanical Wood Processing – Pulp-and-Paper

Figure 5. The used procurement channels of Russian logging companies (1996)



Source: Kohonen 1996

Figure 5 shows what kind of procurement channels were used in 1996 when Russian companies were exporting roundwood to Finland. The questionnaire of this study is broadly based on Kohonen's (1996) findings and questionnaire. The results of used roundwood procurement channels will be compared shortly to Kohonen's results.

After concentrating to the background information of local logging companies and different procurement channels, we analyze external macro-environment. A scan of the external macro-environment in which the firm operates can be expressed by different factors. The PEST-analysis considers the importance of Political, Economic, Social and Technological influences on an organization's performance, opportunities and threats and its strategies (Johnson & Scholes 1997, 93-96). When analysing other macro-environment, the study includes also Environmental and Legal factors (PESTEL-analysis) which are affecting the logging company's ability to serve its customers. The study is trying to identify the

major trends in the firm's natural and technological environments as well as the key changes in the political and cultural environments.

3.2 Operationalization of the Framework

3.2.1 Background Information of Interviewed Companies

The study focuses on local Russian logging companies, who are operating not far from the Finnish board. Following tables show what kind of information was collected as a primary data in **PART A** in questionnaire.

Table 4. General information of company/production unit's background

| Basic information of the company | <u>Interviews of Russian logging companies,</u> |
|----------------------------------|---|
| | Name of the company, name and title of interviewed person in the company, |
| | Year of establishment, in which regions company operates, what is the company form? |
| | The turnover of the company in 2005, ownership structure, |
| | Number of total personnel in 2005, other business areas |
| | The percentage of the turnover that comes from export, |

Table 5. Wood procurement, marketing and export

| Wood procurement, marketing, export | <u>Interviews of Russian logging companies,</u> |
|-------------------------------------|--|
| | The main export products of company, who and where are the customers |
| | To which countries company is selling roundwood? |
| | Annual volume of roundwood procurement in cubic meters in 2005, |
| | Total roundwood volume by different wood species which company delivered |
| | To customers in 2005, how much did company sell roundwood? |
| | how much did company buy roundwood from other companies? |

Table 6. Forest resources

| Forest resources of the company | <u>Interviews of Russian logging companies,</u> |
|---------------------------------|--|
| | Actual sizes of the total leased and operation area, |
| | If company leased forests, for how long are the lease contracts? |

3.2.2 Roundwood Distribution Channels in Leningrad region

The study focuses on the use of different roundwood procurement channels and identifying different members of distribution channels. The

study also focuses on describing volume of roundwood flows: how much roundwood and how often local logging enterprise is selling to timber merchant, Russian forest industry or exports of roundwood to Finland.

Description of timber flows is discussed in the questionnaire **PART B**. The main question is *“What kind of the procurement channels and how much companies are using in Leningrad Region or when exporting roundwood to Finland?”*

Different kind of roundwood procurement channels were identified by interviews, where Russian logging companies could choose the channels they usually use and how much they use them. The multiple procurement channels description form (and questions of companies' background) was mainly based on Pekko Kohonen's questionnaire, which he used in his Master's thesis in 1996. Possible other roundwood procurement channels were also studied by interviews of Finnish roundwood buyers and using secondary data. There were few other publications, which considered the Northwest Russian forest industry and vertical integration between Russian logging, sawmill industry and pulp-and paper industry (i.e. Nilsson & Kleinhof 2001).

3.2.3 Prospects of Interviewed Logging Companies

In **PART C** in the questionnaire, the study focuses on finding out the Russian logging companies' prospects and perceptions of local of their own business environment. Defining the macro-environmental forces such as political, economic, socio-cultural, technological and legal approaches general business environment issues. The elements of the market environment – i.e. demand, supply and other macro-environment –can be specified as follows:

DEMAND (local demand and export demand of Finnish forest industry) and SUPPLY include following aspects:

- Development of roundwood demand (volume) in the long term (over 3 years)
- Development of prices
- Development by end-use sectors

It is important to analyze the local demand, because existing demand allows achieving economies of scale in local production. The demand is formed by local and export constituents. The local demand is a necessary starting source for creating competitive advantages for firms (see also Nilsson & Kleinhof 2001). Such specific characteristics of domestic demand as high quality and diversification requirements of consumers, or user-producer cooperation and consequent demand for specific solutions and or product/service combinations also substantially enforce the sustainability of competitive advantages of domestic producers (Dudarev et al.(2002a, 5).

SUPPLY

- Development of roundwood supply (volume) in the long term (over 3 years)
- Future supply by different wood assortment species categories

Table 7. Macro-environment (demand, supply)

| | |
|-----------------------------|---|
| 1) Demand | |
| of roundwood | <u>Interviews of Russian logging companies.</u> |
| | The development of export demand of roundwood to Finland in long term (over 3 years). |
| | The development of export demand of roundwood to Finland in long term (over 3 years). |
| | The development of export demand of roundwood to other countries in long term (over 3 years). |
| | |
| 2) Supply of | |
| roundwood | The development of local supply of roundwood in Leningrad Region in long term (over 3 years). |
| | The supply of roundwood in Russian sawmill industry in Leningrad Region in the long term (over 3 years). |
| | The supply of roundwood in Russian wood-based panels industry in Leningrad Region in the long term (over 3 years). |
| | The supply of roundwood in Russian pulp-and paper industry in Leningrad Region in the long term (over 3 years). |
| 3) The future supply | by different product (wood species) categories |

3.2.4 Other Macro-environment

PART D concentrates on gathering information of the Political, Economic, Sociocultural, Technological, Environmental and Legal Factors and future challenges. OTHER MACRO ENVIRONMENT (i.e. the political, economic, social, technical, environmental and legal environment) can be divided in different factors:

- Economic development of the market by industry categories
- Development of market norms, regulation, legislation and etc.
- The general technological development and industrial policy
- General political and social development
- The environmental movement and other business climate

The detailed questions, which follow, are divided into different categories (the Political, Economic, Sociocultural, Technological, Environmental and Legal Factors).

Political Factors (Government and politics)

The political issues are such as the government stability, the impact of national legislation and taxation on corporate planning force threats and opportunities for companies (Andrews 1999, Cook & Farguharson 1998, 346-348 and Johnson & Scholes 1997, 96).

The political arena has a huge influence upon the regulation of businesses, and the spending power of consumers and other businesses. Political environment includes laws, government agencies, and pressure groups that influence and limit various organizations and individuals in a given society (Armstrong & Kotler 2003, 138).

- How stable is the political environment in Leningrad Region?
- How will government's policy influence laws or taxes that regulate or tax the firm's business?

- If the Russian Government plans to raise roundwood export tariffs, how will it influence the firm's activities on markets?

Tables 8, 9 and 10 include different factors and gather needed information of logging companies' macro-environment. Following questions, which are divided into different factors, help to concentrate the interesting factors in the loggings companies' surrounding environment.

Table 8. Other macro-environment (the political, economic, sociocultural, environmental and legal factors)

| OTHER MACRO-ENVIRONMENT | Interviews of Russian logging companies, |
|--------------------------------|--|
| The Political, | Lack of financing capital |
| Economic, | Role of regional taxation for efficient business |
| Sociocultural, | Bargaining power of roundwood buyers |
| Technological, | Investment barriers to entry a market |
| Environmental, | The quality of production technology and machinery |
| and Legal Factors | Forests for efficient roundwood procurement |
| | Competition between roundwood suppliers |
| | Employment costs |
| | Unexpected changes in legislation |
| | Competence of personnel |
| | Operating Russian logging companies in region |
| | Lack of trust between firms in the industry |
| | Non-sound business practices (e.g. corruption) |
| | Harvesting in compliance with national and regional legislation governing forestry |
| | Secondary data |
| | data which deals with current issues of other macro-environment |

Economic Factors (The national/international economy)

The economic environment consists of factors that affect consumer purchasing power and spending patterns. Marketers need to consider the state of a trading economy both in the short and long-terms (Armstrong & Kotler 2003, 131).

- What kind the current economic environment conditions are there for logging companies in Leningrad Region?
- Is there a high competition among logging companies in Leningrad Region?
- How actively the firm develops or tries to find new course of action in different processes when operating on markets?
- How big share of exporting roundwood to Finland is for the firm's activities on markets?
- What are the future prospects of markets in long term (over 5 years): concentrating to special products or extend production?
- Are the companies concentrating on more to export roundwood? How do they feel the future potential of domestic markets?

Sociocultural Factors

Social development and its effect on an organization is the third important aspect which the strategist should consider within PEST-analysis. The social and cultural influences on business vary from country to country. The cultural environment includes institutions and other forces that affect society's basic values, perceptions, preferences, and behaviours (Armstrong & Kotler 2003).

- What kind of experiences do the local Russian companies have about Finnish roundwood buyers?
- Do the logging companies deliver roundwood straight to final end-users or do they mainly deliver roundwood to timber merchants/trading houses?
- What is the firm's own perception of its own competitive advantages comparing to other companies?

Technological Factors

The last capital, T, of PEST-analysis refers to the technological development and its effect on a company's operations and strategic planning. Technological environment includes the forces that create new technologies, in turn creating new product and market opportunities. Technology is vital for competitive advantage, and is a major driver of globalization (Andrews 1999, Armstrong & Kotler 2003).

- Does technology allow for products and services to be made more affordable and to a better standard of quality?
- How many companies are using the traditional tree length cutting method and how many are using the Nordic cut-to-length method in Leningrad Region?

Table 9. Used technology, machinery and infrastructure

| Used Technology, machinery and infrastructure | Interviews of Russian logging companies, |
|--|--|
| | Machinery fleet |
| | Used logging methods |
| | Use of traditional tree length cutting method and use of Nordic cut-to-length method |
| | Investing in foreign equipments |
| | Secondary data |
| | data which deals with issues of forest industry in Northwest Russia |

Table 10. Important objectives to the companies during the next 3-5 years

| OTHER MACRO-ENVIRONMENT | Interviews of Russian logging companies, |
|--------------------------------|--|
| The Political, | Stumpage price for the roundwood |
| Economic, | Investigating to cut-to-length logging techniques |
| Sociocultural, | Extending production/harvesting capacity |
| Technological, | Attracting more Russian investors |
| Environmental and | Planning to start concentrating to special products |
| Legal Factors | Increasing company size through green field investments |
| | Increasing the scale of operations to lower the production costs |
| | Attracting more qualified personnel |
| | Finding partners for retailing the roundwood |
| | Attracting more foreign investors |
| | Increasing the environmental quality of operations & products |
| | Increasing company size through mergers/buy outs |
| | Expanding operations/market share in Russia/FSU |
| | Moving the company to another, more attractive location |
| | Secondary data |
| | data which deals with current issues of other macro-environment |

PESTEL-analysis includes also Environmental Factors and Legal Factors

- Is it normal among local companies that the logging companies always do their operations according to the environmental laws?
- How important does the companies see the environmental issues in their future roundwood procurement?
- How does new the forest code and the regional government's policy (laws etc.) influence to firm's business and whole forest industry sector?

4. DATA AND ANALYSIS

4.1 Secondary Data

Secondary data is analysed exploiting the PESTEL framework. In order to get an understanding of different factors, which were affecting to the logging companies' surrounding environment, PESTEL-analysis was used. The secondary data gives a background to this study and is also used for describing the general factors and aspects of the Russian logging companies along with their business. A lot of secondary data from the Russian Federation was available. From this study the main quantitative data was derived from different publications; Internet sources, statistics and databases.

There are no previous studies, which are concerned with local logging companies and roundwood procurement channels in Leningrad Region. Studied topics are more frequently related (e.g. Gerasimov et al. 2005) to the Republic of Karelia and its forest industry sector or generally (Nilsson & Kleinhoff 2001) the development of wood industrial procurement in Northwest Russia. There are many different sources to analyze economic developments of the Russian Federation including its macroeconomic indicators. For example The Bank of Finland Institute for Economies in Transition (BOFIT) has high-level research on transition economics and monitors economic developments in Russia. Certain kind of internet web pages were also used to collect secondary data such as Finnish Forest Industry Federation, Federal State Statistic Service, Finnish Forest Research Institute (METLA), Central Bank of Russian Federation, CIA – data bases and FAO forestry web site. From these web sites data, which were gathered, was usually related to macroeconomic performance, financial markets, general economic development and up to date information of Russia Federation.

4.2 Primary Data

When the secondary data was gathered for giving background for the study, the primary data is collected specifically for this study to specify general issues and current factors on company level. It provides the possibility to examine and analyze the current situation and prospects of interviewed Russian logging companies. In this study companies were chosen using *convenience sampling*. *Convenience sampling* was a useful method, this is because it only needs few resources and a sample consists of easiest available participants (Robson, 1994). When this kind of method is used, statistical generalization can't be done because it will not produce representative results. Convenience sampling is a very useful method in pilot- and preliminary studies. The multiple procurement channels description form (and questions of companies' background) was mainly based on Pekko Kohonen's questionnaire, which he used in his Master's thesis in 1996. Possible other roundwood procurement channels were also studied by interviews of Finnish roundwood buyers and using secondary data. Most of the interviewed companies were available because of researcher's network of personal student contacts in Vyborg Region and city of St. Petersburg. In this study, personal contacts were important, because in other studies there have been problems in conducting the data collection and interviews.

The primary data in this study consists of data gathered through personal interviews with the persons in charge of some Russian logging companies in Leningrad Region as well as complementary data from 3 interviews with Finnish buyers. An essential part of the data gathering was the research questionnaire; open-ended questions were also used because they allow interviewees to freely describe their feelings and attitudes towards their current situation in their company. The data was therefore collected as a combination of written questionnaire and personal interviews in Russia, mainly in Vyborg district of Leningrad Region.

Qualitative data from logging companies was acquired from questionnaires, as well as the answers of interviewed managers from the logging companies. The questionnaire was translated in Russian and the interviews were usually held in companies' offices in Russian language. All interviewees were able to understand the questions in questionnaire quite easily. Personal interviews were altogether made during September in 2006 in 6 Russian logging companies. Representatives of companies were typically interviewed for approximately one hour. The atmosphere in all interviews was in the end quite comfortable and unreserved. This was probably due to the reason that interviews were made in the Russian language. On the other hand, it has to be taken into account that keeping interviews in foreign language, could affect of course the quality and scale of interview results

4.3 Analysis of collected data

Data of the study consists out of secondary and primary data. Gathered data for this study consists of descriptive statistics of northwest Russian forest sector, as well as the results from personal interviews. Reservation needs to be made about generalization of the results of this study because a descriptive sample of firms was used and the number of firms is small (6). It was important that interviewees were able to see the researcher as an objective neutral party, not as a subjective representative of competitors of Finnish forest industry. Thereby, the quality of the answers can be estimated with accuracy. It would be interesting to compare gathered data of interviews concerning used procurement channels to Kohonen's (1996) result. The different factors were discussed and presented in different tables and figures. Different factors can be highlighted after interviews and they are discussed in chapter 6.3. The results of interviews are presented in frequency tables in case multiple choice likert-type scales involved. Due to the small number of

observations and high variability between companies sizes no means, medians or standard deviation between companies have been calculated.

5. RESULTS

5.1 General Background of Northwest Federal District (NWFD)

Northwest Federal District (NWFD) is one of the seven federal districts in Russia, established in May-June 2000 by Decrees of the President of the Russian Federation. The forest industry has been traditionally the most important industry in Northwest Russia. This is easy to understand because more than a half (54%) of all the forested area of the European part of Russia (which is 12% of the total Russian forest stock) and 67% of boreal coniferous forests are located in Northwest Russia. The main educational centres of the forest industry in Northwest Russia are St. Petersburg, Arkhangelsk and Petrozavodsk.

Figure 6. Map of Russia and the area of Northwest Russia (dark) and Leningrad Region (extra dark)



Source: Wikipedia 2005

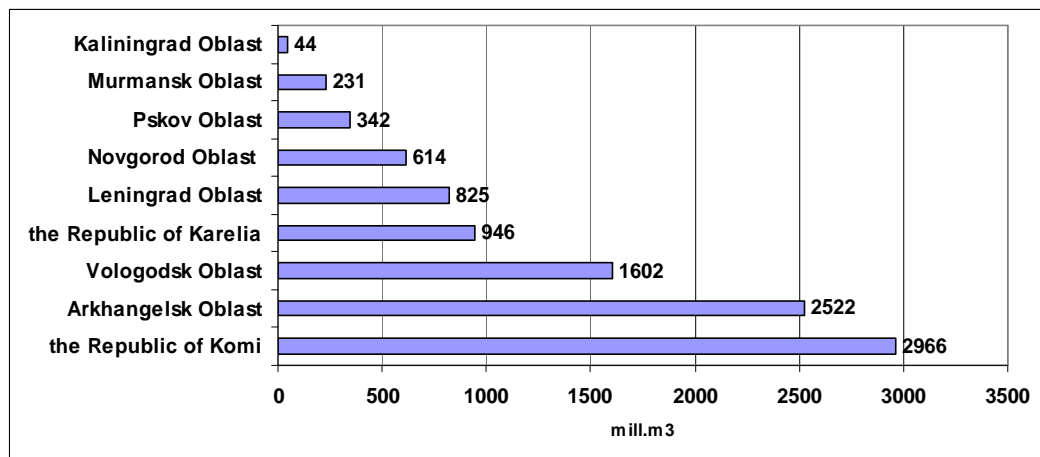
The most developed forest industry in Russia can be found in this region. Its advantages are vast boreal forest stock, relatively developed

infrastructure comparing to other regions in Russia, industrial traditions, export market expertise, qualified labour force and Northwest Russia is in close proximity to European markets and Russia's largest population centres. Northwest Russia further occupies the leading position among the regions of Russia in the manufacturing of main wood products (Dudarev et al. 2002b p. 21). Northwest Russia is and has been important, especially to Finnish forest industry's wood supply. The vast forest resources and low material costs could give significant competitive advantage to companies operating in the Northwest Russia compared to companies operating in the Western European countries.

However, due to the lack of forest roads and the condition of infrastructure in general, logging operations have concentrated on areas where there is a working road network. When companies of Northwest Russia are compared to Siberia and the Russian Far East, it can be seen that it is operated with a relatively well-developed transport infrastructure.

Figure 7 shows that most of the forest stock areas are in the Republic of Komi and Arkhangelsk Oblast. The forest industry has the largest share in the economies of Arkhangelsk Region and Republic of Karelia.

Figure 7. The total volume of forest in Northwest Russia, million m³



Source: Karvinen et al. 2005 (Lesnod fond Rossii 2003)

The Republic of Komi is also one of the major producers of forest products in Russia. This region lacks the opportunity to exploit its forest resources more effectively due to its poorly developed transport infrastructure and its distant place from main markets.

The future growth will depend on Russian's success in improving the institutional framework (new forest legislation), effectiveness of developing the infrastructure, increasing investments in expansion and modernisation of production capacity by domestic and foreign owners and a clarification of the role of different public organisations in the forestry sector. In spite of the industry's good cost-competitiveness, poor logistics and complex as well as continuously changing regulations harm its capacity to serve international markets efficiently (Pihlajamäki & Romanovsky 2003). In a previous study, Nilsson & Kleinhof (2001) estimated that weak domestic forest industry in Russia would be the most important challenge for developing logging operations in Northwest Russia. They also stated that the most important competitive advantage for Russia is the availability of resources and skills.

5.1.1 Forest Land classification

The Russian administration system distinguishes the land-use functions of the forest lands. With respect to their economical and ecological characteristics, location and intended use, Russia's forests can be divided into three management groups.

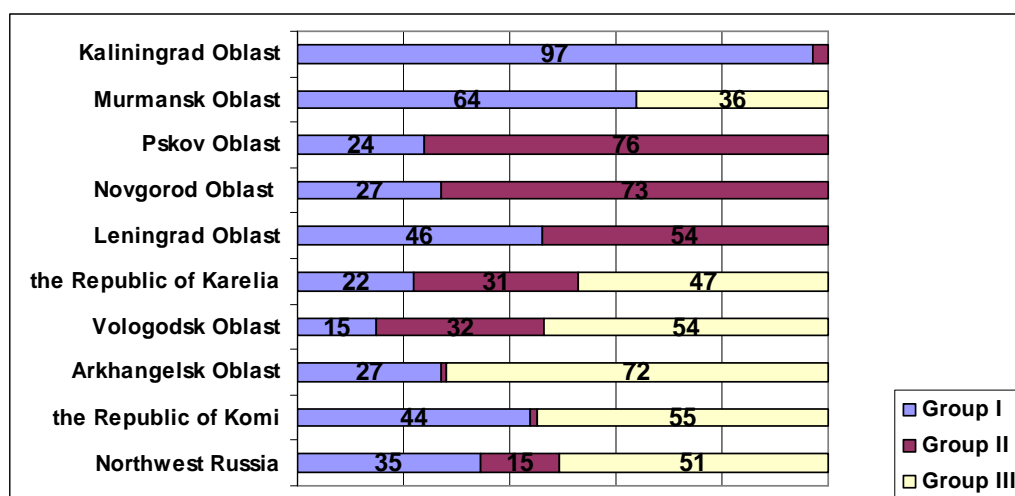
- 1. The First Group (Forests for ecosystem services)** comprises forests with a protective function. This includes all forests providing for water regulation, environmental protection, and for important sanitary or health-improving functions. These forests are situated along lake and river systems, public roads, railways, and around cities as well as areas with strict nature conservation such as state nature reserves, national parks, and nature parks belong to this

group. Clear felling is mainly forbidden in Group I forests, whereas other types of final felling as well as intermediate felling (thinning) and sanitary felling are usually allowed (Karvinen et al. 2005, 14-16, Russian Forests 2003).

2. **The Second Group (Forests for light extensive uses)** includes all forests within densely populated areas that provide both environmental protection and goods from limited exploitation. This group comprises forests with both protective and economic functions. Forests characterised by insufficient timber resources also belongs to this group. In Group II forests, annual volume of felling is limited to equal annual growth and clear felling is allowed if regeneration is secured (Karvinen et al. 2005, 14-16, Russian Forests 2003).
3. **The Third Group (Forests for intensive uses)** includes all forests of richly wooded regions that are mainly managed for exploitation. They are expected to provide the national demand for timber on a sustainable basis. Group III comprises commercial forests intended for meeting the national economy's demand for industrial roundwood without incurring damage to their protective values. In Group III forests intensive forest use methods, such as clear felling are allowed (Karvinen et al. 2005, 14-16, Russian Forests 2003).

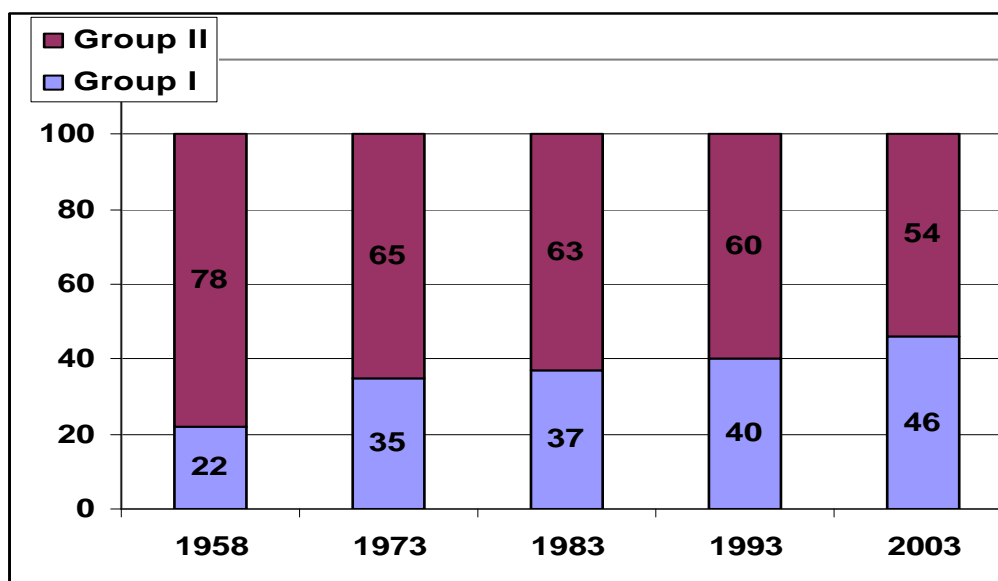
Figure 8 shows that there are no Group III forests in Leningrad Region. Since 1958, the area of Group I forest has steadily increased. These forests can mainly be found in the western part of the region. Figure 9 shows that the share of Group I forests have increased steadily during the past decade in Leningrad Region. In 2003, 46% of the forest in Leningrad Region was assigned to Group I (special protection) forests. The other 54% belongs to Group II (multi-functional forests). From 1958 to 2003 Group I forest area has increased from 22 to 46%.

Figure 8. Share of different forest groups in Northwest Russia, %



Source: Karvinen et al. 2005 (Lesnod fond Rossii 2003)

Figure 9. Development of the group I and group II forests in Leningrad Region



Source: Päivinen et al. 1999, Karvinen et al. 2005

5.1.2 Land Ownership Structure

The Federal Forest Service of Russia controls over 94% of the total forest land area in Northwest Russia, which is a little less than in total (96%) in Russia. The other leading forest-owner group is local regional governments (Karvinen 2005, 19). The structure of forest ownership is highly diverse in the regions concerned. In the Leningrad Region, the

State Forest Committee of the Leningrad Oblast controls 75% of the forests.

5.1.3 Logging Permissions in Russia

The major forest owner in Russia is federation and logging companies are only able to get logging permissions by renting forest areas or through a special auctioning system. According to the Forest Code of Russian Federation (Lesnoi kodeks...1997) it is also possible to make logging contracts between logging companies and local leshozes (forest management unit) (Vinokurova et al. 2005). According to Vinokurova et al., there are three different ways to receive logging permission in Russia:

1. **In auctions**, logging company can buy a short-term logging permissions; the longest is valid one year after the auction. Since 2005 the federal government is in charge for distribution of forest resources. The direction is a long-term contract up to 99 years based on an auction. While foreign companies might have difficulties to enter directly into the Russian roundwood market, auctions is quite an open way of trade which can be the best choice until a company has created enough relationships and is used to business culture. Finnish forest industry companies have begun to use more Russian middlemen in their roundwood procurement. Perhaps partly due to that, the share of auctions has diminished over the past few years (Vinokurova 2005, 7-10).

2. **Renting of forest areas** is still the main way of receiving logging permissions in Russia: the relative share of auctions has been about 20 percent of annual roundwood removals according to Vasin in Vinokurova et al. (2005, 10). By renting forest areas, company can get up to 49-year long logging permission according. Russian logging companies rent a lot of suitable forest area, because in forest renting system social economic aspects matter often more than buyers' solvency In auctions, the price level is usually too high for the majority of Russian companies, and

therefore they try to get logging permissions through some other way (Vinokurova et al. 2005, 10-11)

3. The share of concession, the third legal way of receiving a logging permission, has been very small. The dominance of auctions and renting is mainly due to the weak infrastructure in Russia where large forest areas are practically not exploitable and accessible from the economic point of view (Vinokurova et al. 2005, 10-11).

Among Russian authorities, renting of forest areas is considered to be a better way of selling logging permissions than, for example, auctions mentioned Vasin in Vinokurova et al. (2005). In Russia, forest industry has been quite short-sighted: both local and foreign logging companies have used almost all accessible forest resources while state has had no possibilities to look after the forest regeneration and other duties as mentioned Gareyev in Vinokurova. Thus local authorities have decided to prefer longer logging permissions that can change Russian forestry towards more sustainable forest management. If logging permissions were longer, logging companies may have interest in investments on local infrastructure and forestry (Vinokurova et al. 2005,11).

According to Vinokurova et al. (2005, 11), the behaviour of small and large logging companies – lespromhozes – to receive a logging permission is not similar. Small logging companies obtain logging permissions through an auction. Large logging companies usually use rent as a method for receiving logging permission. The share of short term contracts is approximately 80%. While there is no guarantee for the contract prolongation, both the small and large forest companies are not willing to invest in road building, reforestation and other infrastructure.

The findings in the study of Vinokurova et al. concerning to the small logging companies logging permissions differ the findings of this study. In

this study, the behaviour of small and large logging companies to receive a logging permission was similar: also small logging companies had long (49 years) rent contracts.

Typically, risk-averse or cost minimising buyers prefer short-term logging permissions, because with longer ones, buyer is responsible for costs and duties to forestry such as regeneration. Russian logging companies are used to explore their relationships on local level by making straight contracts with leshozes and authorities (Vinokurova et al. 2005, 11).

5.2 Elements of the Forest Cluster of Northwest Russia

5.2.1 The Forest Industry of Northwest Russia

The forest industry of Northwest Russia consists of a network of different forestry and harvesting enterprises. The network of the wood processing and pulp-and-paper industry is based on links with procurement companies.

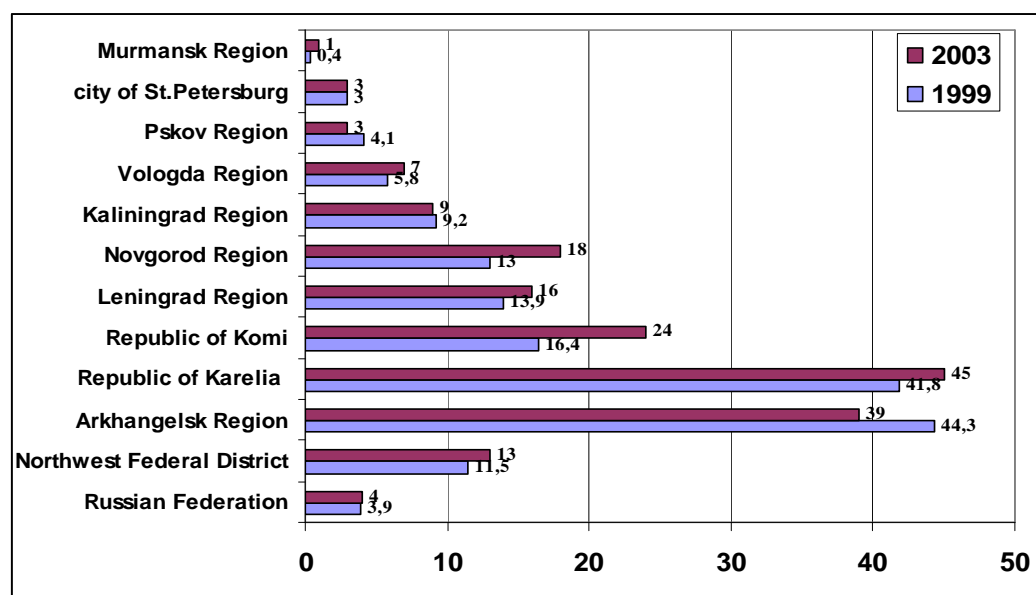
All the main sub-sectors of the forest cluster are represented and there are three main industries in the forest cluster, each of them manufacturing products to be exported (Dudarev et al. 2002b, 55). They are divided into:

- Forestry and harvesting,
- Mechanical wood-processing,
- Pulp-and-paper.

Forestry and harvesting provide raw materials for the processing sub-sectors: mechanical as well as pulp and paper. In addition, industrial wood is currently the main export article from Northwest Russia. Forestry and harvesting companies make up a rather uniform high density network, without nodes of concentration.

The companies of Northwest Russia have the advantage of relatively well-developed transport infrastructure and proximity to the main consumer markets. Unfortunately the infrastructure network varies greatly from region to region. The main production facilities still operating today were primarily built during the Soviet period. By the end of the 1980s, the forest industry had become one of the leading and rapidly developing branches of the regional economy. The period of the 1990s was characterized by a sharp decline in production. The forest industry, metallurgy and machine building, is historically one of the leading industries of Northwest Russia (Dudarev et al. 2002b, 47, 54-55, 59). According to Karvinen et al. (2005, 74), the share of forest industry of the total industrial production of the Northwest Federal District amounts to 13%.

Figure 10. Share (%) of the forest industry in the industrial production structure in 1999 and 2003



Source: Rosstat (Russian State Committee for Statistics)

High costs in transportation and harvesting of especially remote forest are among the reasons for current low profitability of forestry and for the increased pressure to start harvesting those ecologically valuable forests, which are available. The result is that Russia is facing both economic and ecological diversification of wood supply from young and immature stands

close to transportation means and wood demand on mature forests in remote or ecologically sensitive areas (Niskanen et al. 2003, 46)

Logging in Russia is experiencing large changes due to economical, ecologic and social pressures from both inside and outside of Russia. It results in traditional Russian wood harvesting systems being used side-by-side with Nordic cut-to-length technology. The most rapid changes are taking place in the Russian cross-border regions (Gerasimov et al. 2005, 1). Since the 1990s, the logging companies have been developing significantly in order to adopt the new business environment. Economic, social and ecological impacts forced logging companies to adopt the latest technology, machinery, and management, and to contribute to local communities.

A significant number of small, medium, and large harvesting, mechanical wood-processing, and pulp-and paper companies operate in Northwest Russia compared with other Russian regions (Dudarev et al. 2002a, 21).

The forests of the region are supervised by the state forestry enterprises (lekhozy). The main tasks of these organisations are forest care, reforestation, evaluation of forest stock, and determination of annual allowable cut. Harvesting is carried out primarily by private companies, which are based on privatized assets of the former state-owned harvesting organizations (the so-called lespromkhozy). Today, many of these former state harvesting enterprises are divisions of large vertically integrated companies that have been formed around local mechanical wood-processing and pulp-and-paper companies (Dudarev et al. 2002b, 56).

During recent years, corporate strategy within the cluster has led to the establishment of a number of vertically-integrated holdings which were formed around the largest players of the pulp-and-paper as well as the mechanical wood processing industries. Integration in the area of

harvesting to mechanical wood industry and pulp-and-paper industry aims at strategic coverage of the market, but two processing sub-sectors of the forest cluster –mechanical wood-processing and pulp-and-paper –have weak relations with one another. The only example of interaction is the use of pulp chips in the pulp-and-paper industry, which are the by-products of sawn timber production (Dudarev et al. 2002a, 20).

The regional manufacturers of equipment specialize primarily in production of harvesting and pulp-and-paper machinery. However, their production volumes have been rather small in the past decade, because domestic equipment producers are not competitive on the world market (Dudarev et al. 2002a, 18). As a result, forest companies prefer to buy imported equipment.

At the same time, most of the companies still cannot afford to purchase new imported equipment. It is for the reason that they must either buy second-hand imported equipment, or simply use their old equipment. Other companies (which are the minority) use new cheap equipment produced by domestic manufacturers, though its performance is rather low (Dudarev et al. 2002a, 18).

Currently, the applied technologies and the operating equipment (the industrial assets) are worn-out and outdated for the most part, and require significant modernization. Other problems are the undeveloped infrastructure and the lack of forest roads which can be use all round the year. Russian companies are using the Nordic cut-to-length method more and more where possible, but the main used is still traditional method (Karvinen et al.. 2005, 59, 64).

5.2.2 Environmental Issues and Knowing the Origin of Roundwood

The current situation in the forest resources of the Russian Federation offers conditions for the successful development of forestry, environmental

protection and nature conservation programs at the local, national, and especially, international levels. There are pressures to get Russia more systemically involved in certification process and promoting sustainable development in forestry. As of January 2007, there were 36 FSC forest management certificates on 12.89 million hectares in and about 5 million hectares are in process of FSC certification hectares in Russia (forest Russia 2006).

Promoting sustainable development is important for Finnish paper and pulp industry when wood is supplied from Russia, this is because of increased customer interest in forest issues and therefore they usually require sound environmental practices from its paper suppliers and the importance of forest certification is its informing role to customers. Generally wood suppliers must provide and certify origins and ensure that the wood comes from well-managed forests. Similar information is required for purchased pulp as well.

According to Finnish forest companies, when wood is supplied from Russia, it also gives new challenges to gathering and checking the data on the origin of wood to companies and emphasizes the importance of audits. It is important that Finnish forest industry companies request that suppliers does not only follow Russian legislative regulations, but also companies own principles and policy of environmental sustainability, as well as providing comprehensive information on the origin of the wood. Finnish companies have to verify that the wood raw material supplied to the company's mills is sustainable sourced, legally logged and not from protected forest areas. The guidelines also commit the company to verify that its suppliers are operating responsibly and are complying with the company's policies and guidelines.

5.3 The Leningrad Region

This chapter gives background information of the environment where interviewed companies are operating. The Leningrad Region is located in the northwest of Russia and borders both Finland and Estonia. The region shares an administrative border with five subjects of the Russian Federation: the Novgorod, Pskov, Vologda Regions, the Republic Karelia and the city of Saint-Petersburg (the 4th largest city in Europe). Population of Leningrad Region (Data compiled during the last government census of the population of the Russian Federation in 2002) is 1669 thousand people, among them: City - 1109 thousand people (66.4%) and rural areas - 560 thousand people (33.6%). The territory of the Leningrad region is approximately 83908 km² (Leningrad Region 2006).

Figure 11. Map of Leningrad Region



Source: Leningrad Region 2006

City of St. Petersburg and surrounding Leningrad Region offer a combined population of approximately 6.3 million and constitute the second largest regional market after Moscow in Russia. The city of St. Petersburg is

presently the most important Russian Baltic Sea port. St. Petersburg and its neighbouring areas represent by far the largest concentration of population, business activity as well as of the education and R&D institutions in the Northwest. (Leningrad region 2006)

5.3.1 The Forest Resources of Leningrad Region

The Leningrad Region is situated in the boreal zone; 80% of its forests is classified as southern taiga, and 15% as middle taiga. 5% of the Leningrad Region is situated in the southern Karelian taiga sub-zone (Päivinen et al. 1999). According to Lesnoj fond Rossii 2003 the total area of the Leningrad Region forest fund was 5.9 million ha. On 2003, the total wood reserve was 825 million cubic meters (Karvinen et al. 2005)

Table 11. Area of forest lands by land category & year in Leningrad Oblast, 1961-1998, thousand ha

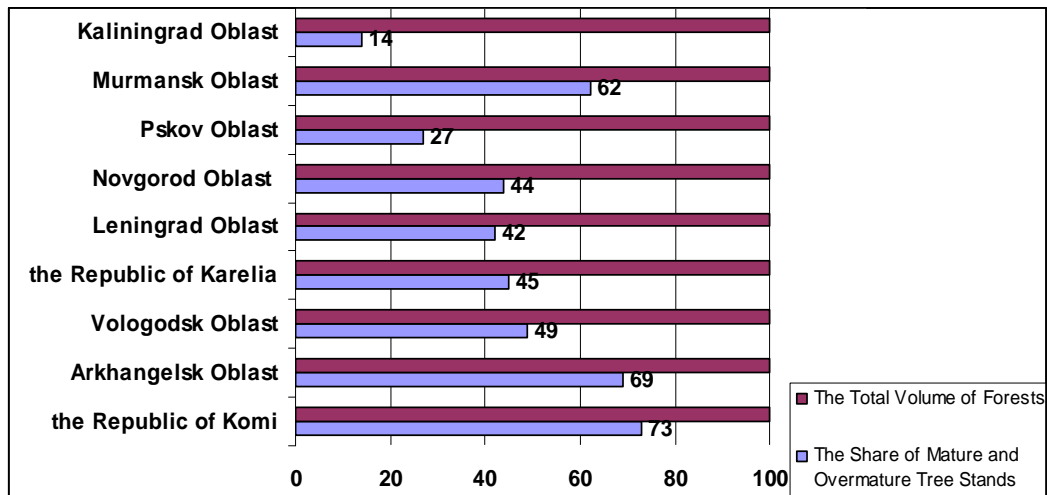
| Tree stand Category of Forest lands | 1961 | 1966 | 1973 | 1978 | 1983 | 1988 | 1993 | 1998 | Change between 1961- 1998 Thousand ha | % to 1961 |
|---|--------|--------|------|------|--------|------|------|------|--|-----------------|
| Coniferous | 1953,1 | 2040,5 | 2136 | 2228 | 2243,9 | 2330 | 2337 | 2305 | 352,2 | 18 |
| Deciduous | | | | | | | | | | 50 |
| hardwood | 0,2 | 0,3 | 0,2 | 0,3 | 0,4 | 0,3 | 0,3 | 0,3 | 0,1 | |
| Deciduous | | | | | | | | | | -2,1 |
| softwood | 1215,8 | 1263,7 | 1283 | 1213 | 1148,2 | 1088 | 1072 | 1190 | -26 | |
| Subtotal | 3169,1 | 3304,5 | 3419 | 3441 | 3392,5 | 3418 | 3409 | 3495 | 326,3 | 10,3 |
| Stocked land | 3169,1 | 3304,5 | 3419 | 3441 | 3392,5 | 3418 | 3409 | 3495 | 326,3 | 10,3 |
| Nonstocked land | | | | | | | | | | -39,3 |
| Total of forest land | 3362,2 | 3480,5 | 3575 | 3589 | 3530,5 | 3555 | 3554 | 3613 | 250,5 | 7,5 |

Source: Alexeyev et al. 2004

The development of forests in the Leningrad Region over the past few decades has been characterised by a steady increase in growing stock, both as an increasing area in the mature and overmature stands as well as an increasing average growing stock per ha in the mature stands. There are various reasons for this, the main reason being the under-

utilization of the annual recommended amount of felling along with changes in methodology of forest inventory (Päivinen et al. 1999).

Figure 12. The total volume of forest and the share of mature and overmature forest in Northwest Russia, %



Source: Luoteis-Venäjän taskutieto 2005 (Lesnod fond Rossii 2003)

The Leningrad region is characterized by uneven distribution of wood stock. Forests around St. Petersburg have been considerably depleted through lumbering. The afforested area in the central and South-western regions is also relatively small: secondary forests prevail in these areas. The east of the Leningrad region is characterized by significant but is still not well-used forest resources (Dudarev et al. 2002a, 118).

Table 12. Volume of growing-stock in tree stands, in Leningrad Oblast, 1961-1998, million m³

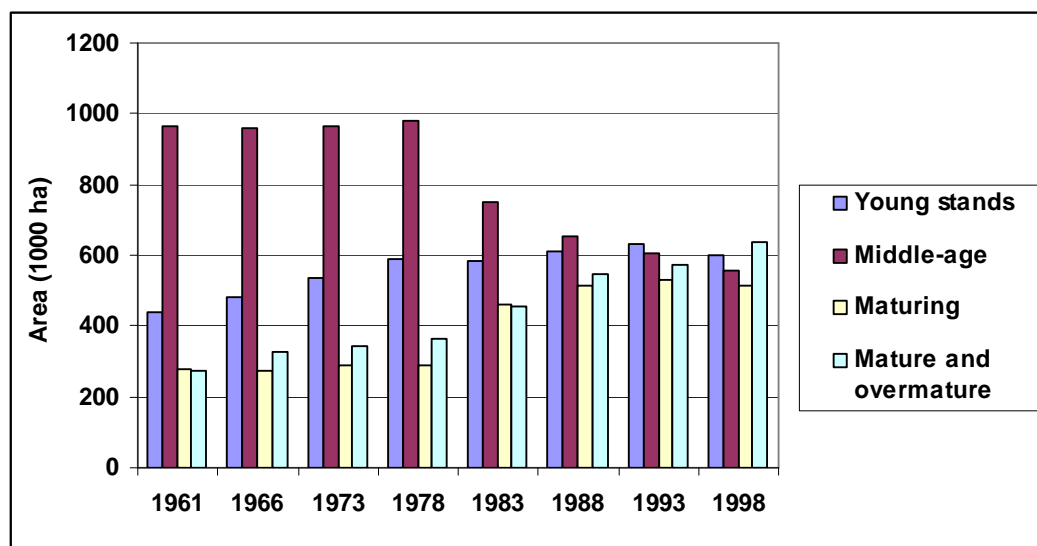
| Leningrad Oblast | Year of account | | | | | | | | Change between 1961-1998 | |
|--------------------|-----------------|---------------|---------------|---------------|---------------|--------------|---------------|---------------|--------------------------|-------------|
| | 1961 | 1966 | 1973 | 1978 | 1983 | 1988 | 1993 | 1998 | mill. m ³ | % to 1961 |
| Tree stands | | | | | | | | | | |
| Coniferous | 264,22 | 281,03 | 331,19 | 356,26 | 378,89 | 399,21 | 403,47 | 415,48 | 151,3 | 57,2 |
| Deciduos hardwood | 0,02 | 0,03 | 0,02 | 0,01 | 0,04 | 0,03 | 0,03 | 0,06 | 0 | 200 |
| Deciduos softwood | 106,84 | 137,51 | 161,47 | 172,75 | 178,81 | 183,66 | 179,68 | 225,73 | 118,9 | 111,3 |
| Total | 371,08 | 418,57 | 492,68 | 529,02 | 557,74 | 582,9 | 583,18 | 641,27 | 270,2 | 72,8 |

Source: Alexeyev et al. 2004

The areas by different age classes have also changed over the last decades. There has been a steady increase of mature and over mature stands, mainly in the western part of the region. Table 12 above gives these age class areas since 1961. The present age class structure is far from optimal from a sustainable yield forestry point of view. It can be seen that the area of “maturing and over mature” forest area has increased very rapidly during last two decades.

According to Dudarev et al. (2002a, 118), differences in site qualities in the Karelian Isthmus (Karelian Isthmus forest fund counts approximately 1.17 million hectares, which exceeds 75% of its square area) compared the rest of the Leningrad Region have led to a significant increase in the amount of coniferous stands in the North-western part of region: 81% of the total forest area of the Karelian Isthmus is occupied by coniferous. However, the growing stock of the mature and overmature stands (1993) is only 29%. This is due to the intensive harvesting in the most accessible stands and the relatively low productivity sites of the Karelian Isthmus.

Figure 13. Area of stocked forest lands by groups of tree stands and age, 1961-1998, thousand ha in Leningrad Region



Source: Alexeyev et al. 2004

5.3.2 Forest Sector and Logging Enterprises in Leningrad Region

The Leningrad Region timber sector consists (similar like in Northwest Russia) of three interrelated branches, the lumbering sector, the wood processing sector, and the pulp and paper sector. The timber sector's share of the total industrial production in the region is 23%. Currently, there are about 770 enterprises including 70 - 80 large and medium-sized businesses, over 20 saw mills, 20 furniture enterprises, three pulp and paper mills, and five cardboard factories. Their capacities provide for over seven million cubic meters per year. The productive capacities would allow for production up to 12,000 cubic meters per year of plywood, up to 56,000 cubic meters per year of chipboard, up to 400,000 tons of cellulose, up to 420,000 tons of paper, and up to 200,000 tons of cardboard (Leningrad Region 2006).

The maximum annual wood production volume that can be harvested without harm to the environment is 12.3 million cubic meters. The calculated annual cut for main use is 9.8 million cubic meters (Leningrad Region 2006).

The main goals of the Leningrad Region lumber sector are (Leningrad Region 2006):

- Increasing the degree of wood processing;
- Providing for rational wood use;
- Applying wood saving technologies;
- Changing the production structure in compliance with the requirements of the domestic and foreign market;
- Developing transport and information infrastructure

5.4 The Results of Interviews of Russian Logging Companies

5.4.1 Background of the Interviewed Russian Logging Companies

The interview data consists of six interviews with Russian logging companies, who were operating in three different regions; *Vyborg Oblast*, *Priozersk Oblast* and *Kirovsk Oblast*.

Figure 14. The location of the interviewed companies



The arrows on the map in Figure 14 show in which areas and regions the interviewed companies were generally operating. One company is operating in two different regions

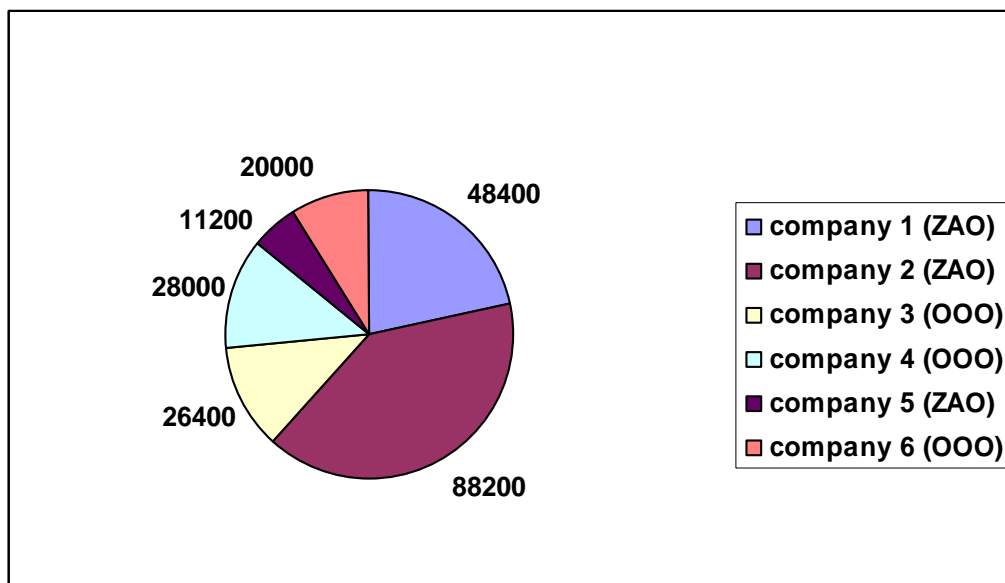
Three companies were founded before 1996 and three companies after 2000. The main business of all interviewed companies was logging. All companies also had other businesses, like forestry, helping to extinguish forest fires, freight services and small-scale sawing. The percentage of the turnover that comes from export varies from 44% to 75%. One of the

interviewed companies did not export roundwood at all. The main export product in companies was roundwood.

Only one company answered the question about annual turnover. Interviewees told that turnover is a business secret. This is quite usual trend, because same kind of problems appeared in Toppinen et al. (2007, 18) study; interviewed managers did not provide the value of turnover in their companies. The reason could be that interviewees perceived that the question about annual turnover was related too much with the profit. This is understandable, because in Pissarides et al. (2003, 510) study the most important objectives for Russian small and medium enterprises (SMEs) were profit and output. It might be also that because of taxation companies are not willing to show their profits to outsiders.

All companies were private enterprises and the legal forms of the companies were Partnership (3 companies) and Ltd Company (3 companies). The two biggest companies were Ltd companies and they were founded before 1995. All companies were renting forest area, rent time was 49 years and this is an interesting finding if comparing the findings of Vinokurova et al. (2005). Figure 15 shows the rented forest area. The biggest company is also operating in another area in Leningrad Region, but in this study we consider only its operations in Vyborg's Region.

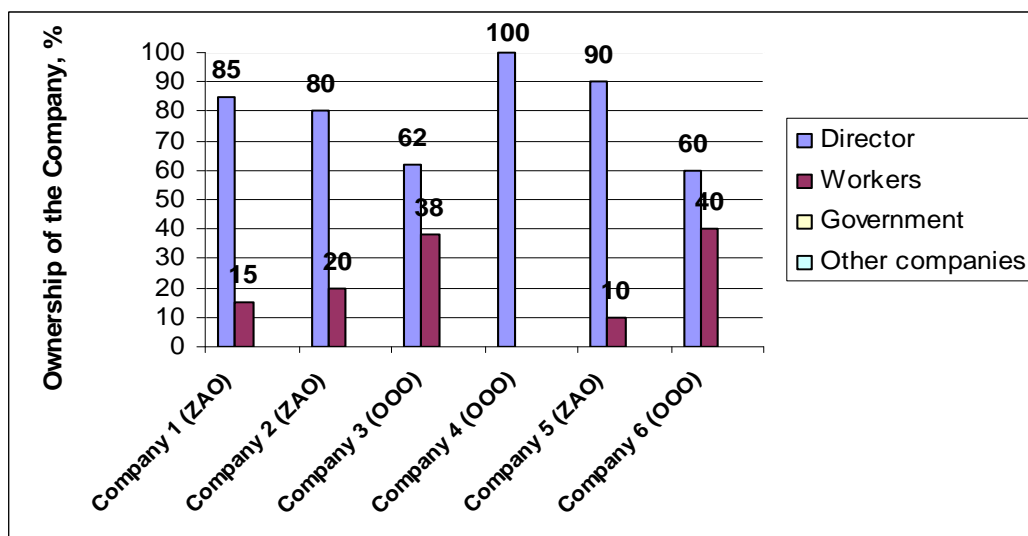
Figure 15. Rented forest area, ha (approximately)



Most of the surveyed logging companies use a long-term lease (25 or 49 years) as a method for receiving logging permissions and companies have approximately 2 million ha forests on lease.

Figure 16 shows the ownership structure of interviewed companies. The ownership structure is not depending on the size or the age of the company. The ownership is strongly director concentrated. In some cases the director is as well the founder of the company.

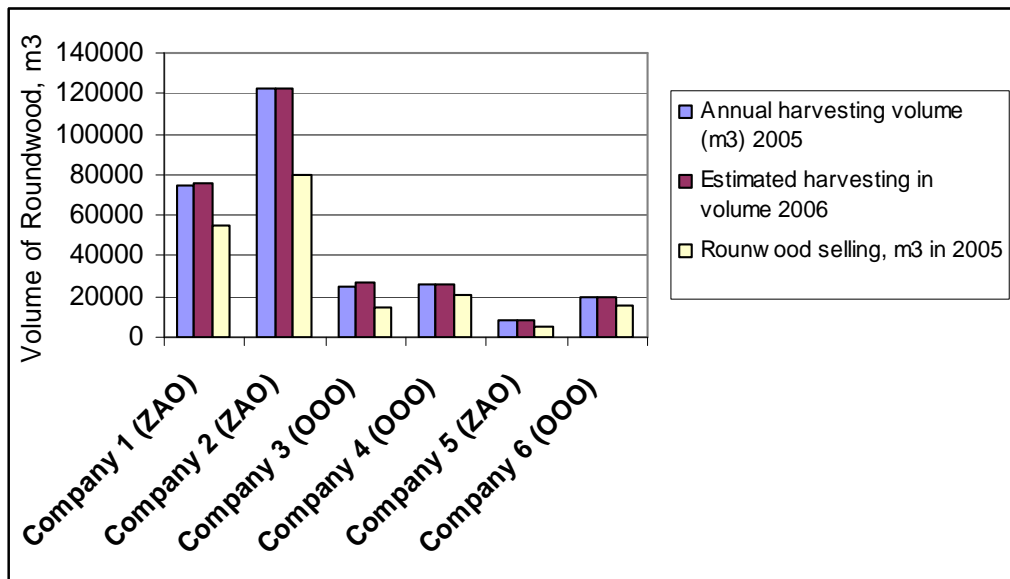
Figure 16. The ownership of the company, %



According to Pissarides et al. (2003, 525), Russian small and medium enterprises were characterized by concentrated ownership. This same kind of phenomenon also seems to be among Russian logging companies.

Figure 17 shows the variation of companies' size according to annual harvesting volume and selling. In the data, there are two clearly bigger companies and the rest of the interviewed companies are typical local and small logging companies. According to Karvinen et al. (2005) only few percentage of companies are harvesting annually more than 100 000 m³ in North-West Russia

Figure 17. Annual harvesting and roundwood selling in 2005



The variation of the number in personnel in companies was from 20 to 150, when the average number of personnel (not including the clearly biggest company) was 39 workers. Annual harvesting volume also varies quite substantially: the annual harvesting volume in the smallest company is about 9000 m³ when in the biggest company it is about 122000 m³. Total annual harvesting volume of interviewed companies in 2005 were about 0.28 million m³. According to Karvinen et al. (2005, 50) the logging

plan in Leningrad Region in 2003 was 7.5 million m³ and actual loggings were only 4 million m³.

According to interviews conducted with procurement managers of Finnish forest industry companies, their typical Russian roundwood supplier is quite small (annual harvesting volume is usually from 30 to 50 000 m³). The average number of personnel could be from 50 to 100 workers and it is usual that the supplier sells part of or all the roundwood to Finland. The size of the suppliers could of course vary a great deal.

Table 13. Interviewed companies' machinery and equipments

| | | less than 5 years old | 5-10 years old | <i>Interested in to invest in foreign equipment?</i> |
|------------------------|----------------------------|-----------------------|----------------|--|
| Company 1 (ZAO) | | | | |
| | harvester/felling machine | 1 | 1 | harvesting machines |
| | skidding tractor | 1 | 1 | transport vehicles |
| | log truck | 3 | 3 | |
| Company 2 (ZAO) | | less than 5 years old | 5-10 years old | <i>Interested in to invest in foreign equipment?</i> |
| | harvester | 1 | 2 | harvesting machines |
| | forwarders skidding tract. | 1 | 2 | loader equipments |
| | log truck | 3 | 7 | equipments for woodworking |
| Company 3 (OOO) | | less than 5 years old | 5-10 years old | <i>Interested in to invest in foreign equipment?</i> |
| | harvester/felling machine | 1 | | harvesting machines |
| | skidding tractor | 3 | | transport vehicles |
| | | | | loader equipments |
| | log truck | 5 | | equipments for woodworking |
| Company 4 (OOO) | | less than 5 years old | 5-10 years old | <i>Interested in to invest in foreign equipment?</i> |
| rented from Finland | harvester | 2 | | |
| with drivers | skidding tractor | | 3 | transport vehicles (log truck) |
| | log truck | 4 | | |
| Company 5 (ZAO) | | less than 5 years old | 5-10 years old | <i>Interested in to invest in foreign equipment?</i> |
| | harvester/felling machine | 1 | | loader equipments |
| | skidding tractor | 2 | | equipments for woodworking |
| | log truck | 4 | | |
| Company 6 (OOO) | | less than 5 years old | 5-10 years old | <i>Interested in to invest in foreign equipment?</i> |
| rented | harvester/felling machine | 2 | | transport vehicles (log truck) |
| | skidding tractor | 1 | | equipments for woodworking |
| | log truck | | 3 | |

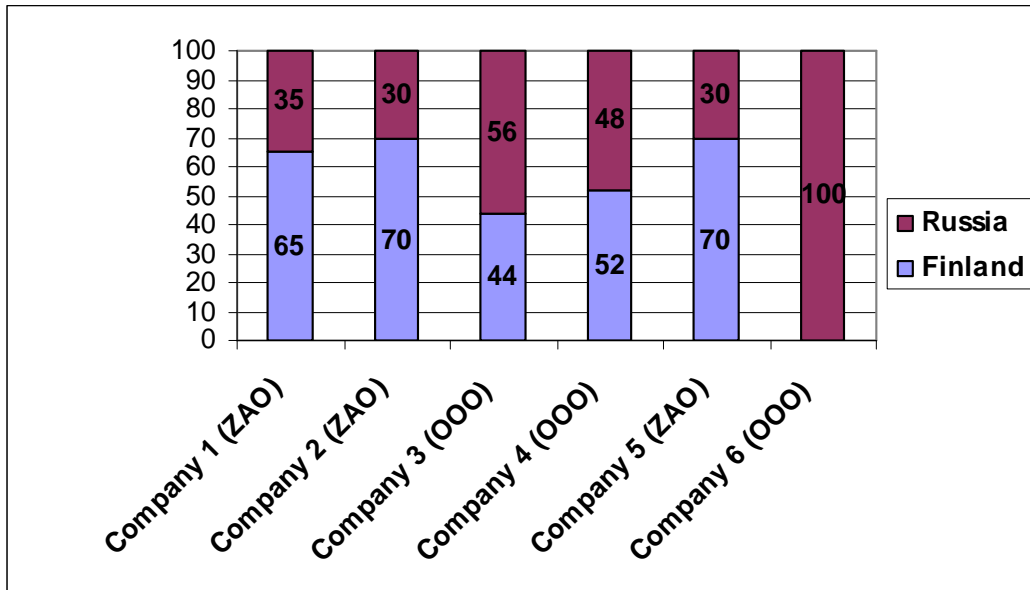
Table 13 gives background information of interviewed logging companies' machinery and their future plans to invest in foreign equipment. It shows how old used machines are and how many there are at present. According to the gathered data, companies are not using machines which are older than 10 years. As can be seen from Table 13, every company is planning to invest in new foreign equipment in the nearby future. Especially, the bigger logging companies are interested to buy more new harvesters or transport vehicles. They also have enough resources to invest in more expensive technology. Smaller companies are concentrating on less expensive investments, like equipment for woodworking. The reason is that they are more often using the traditional tree length cutting method.

According to data, the interviewed companies are using traditional tree length cutting method in 50% and Nordic cut-to-length method in 50% of total harvesting operations. All companies are still using Russian technology in cutting and transporting in some part of their operations. Bigger companies are using Nordic cut-to-length method more extensively.

5.4.2 Supply of Roundwood

Five companies were exporting roundwood to Finland while one company was only selling roundwood to Russian timber merchants. Four companies were exporting more roundwood to Finland than selling it locally. Figure 18 shows how much of total trade each company is selling to Finland and Russia respectively and figure 19 shows the volume by different wood species being harvested.

Figure 18. The share of total selling: exporting roundwood to Finland and selling it locally, %



As can be seen from Figure 18, interviewed Russian logging companies are selling either to Russian roundwood merchants, Russian pulp-and paper industry or exporting to Finland. Exporting is the main business for most of the companies. The reason for this is that most of the interviewed companies were operating near the Finnish border.

It seems that logging companies believe that roundwood export to Finland will continue strongly in the future. Every interviewed logging company admitted that the increased taxes for exported roundwood would be an important negative factor in future, but they still believe in the continuous export will stay in demand. They are waiting for more investments in the local Russian sawmill or plywood industry.

Figure 19. Total harvesting by different wood species, m³

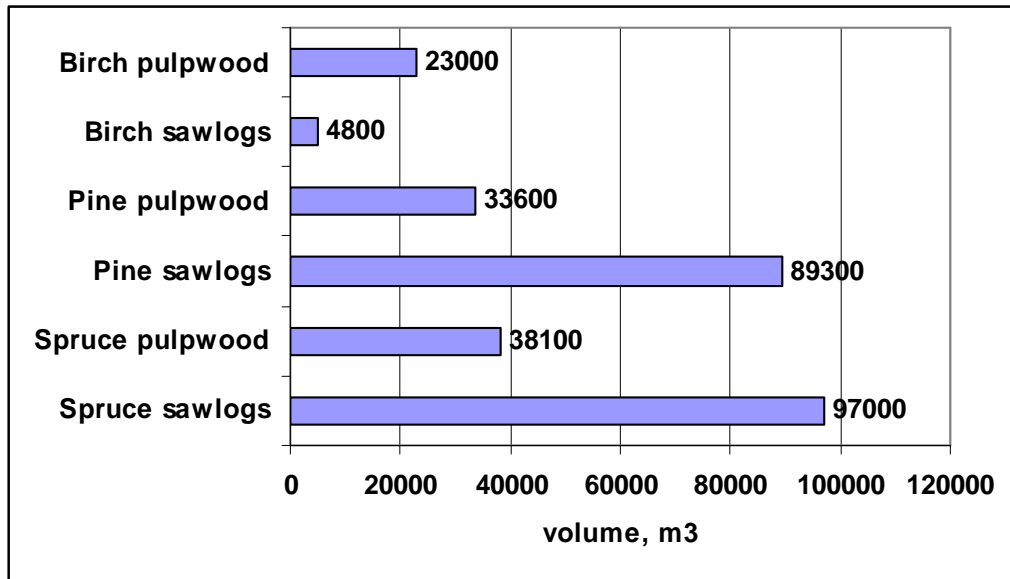


Figure 19 shows what kind of wood species and how much interviewed companies harvested during 2006. According to interview data, currently none of the logging companies are directly selling roundwood to the Russian sawmill or plywood industry, which may have their own logging companies. Russian roundwood merchants could also sell roundwood to the Russian sawmill or plywood industry. A remarkable part of interviewed companies' trade goes to Russian roundwood merchants

According to the interviewed Finnish roundwood procurement managers, imports of roundwood have changed a lot during the past ten years. The share of birch pulpwood has decreased dramatically. On the other hand, the share of logs has increased outstandingly and woodchips have become more important than earlier. Finnish roundwood procurement managers estimated that average current imports consist of the following shares:

- the main import product is birch pulpwood 40-60%

The rest of the imports comprise (estimate):

- birch sawlogs 10%
- pine pulpwood 10%
- pine sawlogs 15%

- spruce sawlogs 10%
- spruce pulpwood 10%
- others 5%

Table 13. Roundwood selling to different branches of industry

| | | | | |
|--|------|------|-------|-------|
| Company 1 (ZAO) | 2004 | 2005 | 2006* | 2007* |
| Russian roundwood merchants | 15% | 20% | 18% | |
| Russian pulp-and paper industry | 10% | 5% | 7% | |
| Exporting roundwood to Finland | 75% | 75 % | 75% | |
| Company 2 (ZAO) | 2004 | 2005 | 2006* | 2007* |
| Russian roundwood merchants | 20% | 20% | 20% | |
| Russian pulp-and paper industry | 10% | 10% | 10% | |
| Exporting roundwood to Finland | 70% | 70% | 70% | |
| Company 3 (OOO) | 2004 | 2005 | 2006* | 2007* |
| Russian roundwood merchants | 34% | 33% | 33% | 30% |
| Russian pulp-and paper industry | 22% | 23% | 23% | 25% |
| Exporting roundwood to Finland | 44% | 44% | 44% | 45% |
| Company 4 (OOO) | 2004 | 2005 | 2006* | 2007* |
| Russian pulp-and paper industry | | 30% | 40% | |
| Exporting roundwood to Finland | | 70% | 60% | |
| Company 5 (ZAO) | 2004 | 2005 | 2006* | 2007* |
| Russian roundwood merchants | 28% | 28% | 28% | 30% |
| Russian pulp-and paper industry | 20% | 20% | 20% | 18% |
| Exporting roundwood to Finland | 52% | 52% | 52% | 52% |
| Company 6 (OOO) | 2004 | 2005 | 2006* | 2007* |
| Russian roundwood merchants | 100% | 100% | 100% | 100% |

* estimated selling percentage

It is interesting that according to the interviews of Russian logging companies, these companies are exporting to Finland mostly pine and spruce sawlogs. According to Finnish import statistics (Figure 3), the most important import product has been birch pulpwood. Thus, interviewed logging companies are more heavily involved in the exports of sawlogs than the average Russian exporter. If comparing Figure 20 and Table 14, the difference between the shares of different kind of wood species of

imports can be seen as well as which share what kind of wood species interviewed companies are exporting.

Figure 20. The share of exported roundwood by wood species, m³

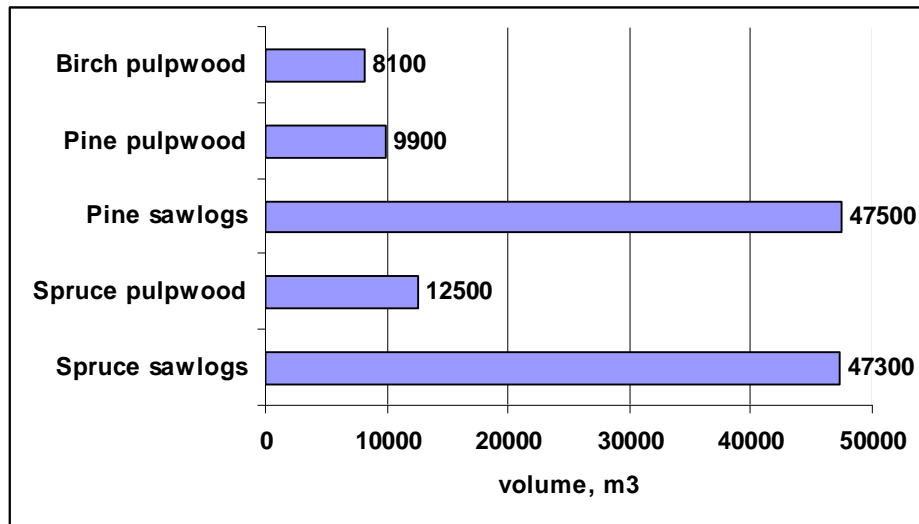


Table 14. Imports from Russia in 2005 by wood species

| Wood species | volume, 1000 m ³ | value, mill. € |
|---------------------------------------|-----------------------------|----------------|
| Total | 17010 | 558 |
| Roundwood | 16696 | 555 |
| Coniferous wood | 7335 | 283 |
| Pine | 2960 | 109 |
| Pine sawlogs | 1625 | 73 |
| Pine pulpwood | 1335 | 37 |
| Spruce | 4344 | 173 |
| Spruce sawlogs | 2700 | 126 |
| Spruce pulpwood | 1644 | 47 |
| Other coniferous wood | 31 | 1 |
| Other coniferous sawlogs | 0 | 0 |
| Other coniferous pulpwood | 31 | 31 |
| Broad-leafed deciduous species | 7978 | 240 |
| Birch | 7463 | 227 |
| Birch sawlogs | 835 | 37 |
| Birch pulpwood | 6628 | 190 |
| Other deciduous species | 516 | 13 |
| firewood | 186 | 1 |
| Wood chips | 1197 | 31 |
| refuse wood | 314 | 3 |

Source: Metla, forestry statistic fact sheet 829, 7.7.2006

Interviewed companies are concentrating on more coniferous sawlogs in their export. One reason for this could be that the forests in Leningrad Region comprise more coniferous than deciduous. That matter was

illustrated in Table 11, which shows the area of forest lands by land category. The other reason could be that interviewed companies are concentrating to get as much valuable roundwood material as they can and are thereby maximizing their current profits

5.4.3 Members of Roundwood Procurement Channels

Figure 21 shows what kind of procurement channels of roundwood interviewed Russian logging companies are using in Leningrad Region and/or when they are exporting roundwood to Finland. The company and % number shows how frequently the company is using each channel.

Figure 21. The used channels are indicated by %.

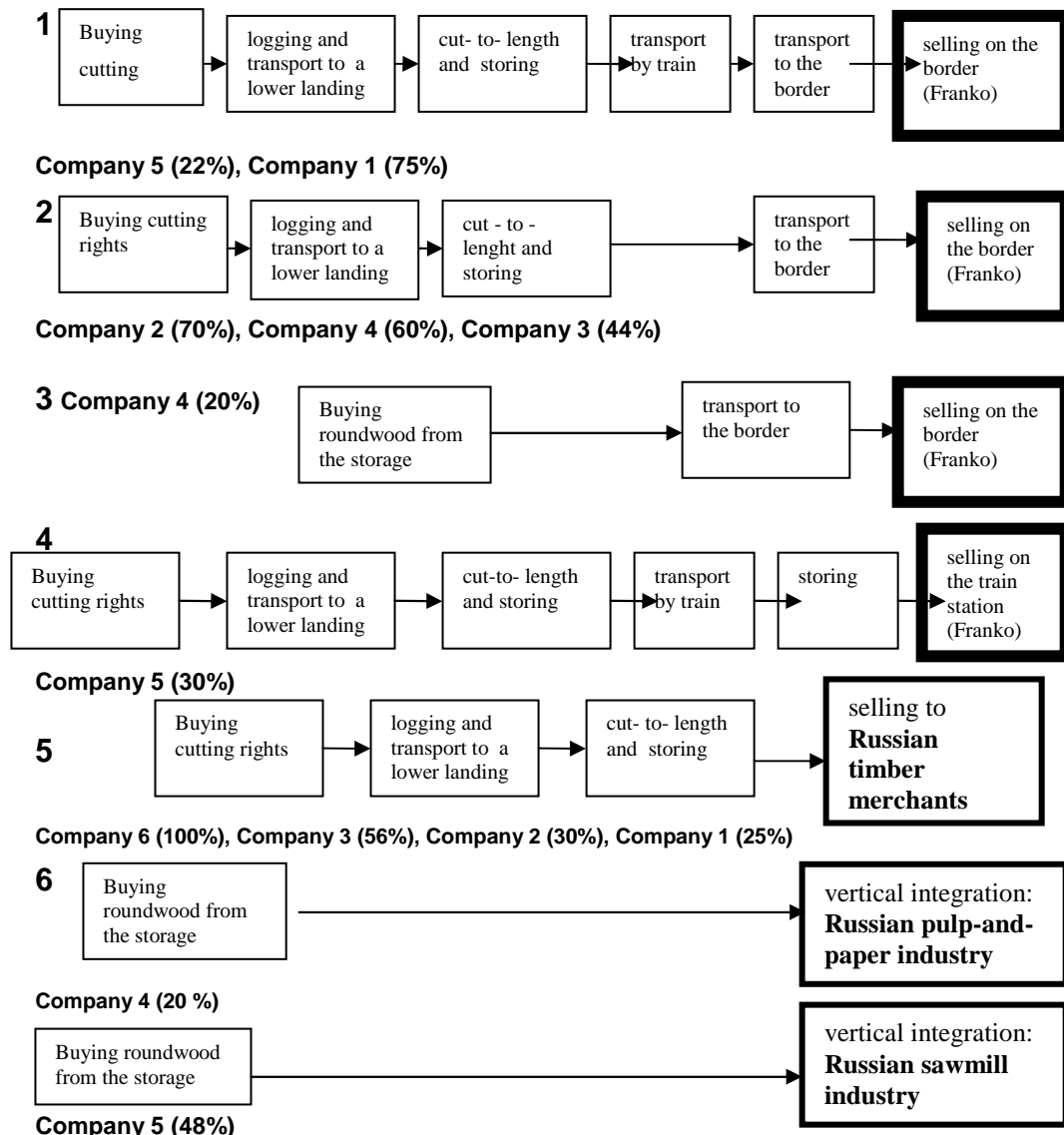


Table 15 shows that Finnish roundwood buyers are using three different kinds of transportation systems and the most used is railway transportation. The interviewed Finnish roundwood buyers estimated that from Leningrad Region 50% of imported roundwood is transported by vehicle.

Table 15. The used roundwood procurement channels of imported roundwood from Russia and used terms

| | Finnish buyer 1 | Finnish buyer 2 | Finnish buyer 3 |
|---------------------------------------|-------------------------|-----------------------------|-------------------------|
| railway transportation | 63 % | 60 % | 50 % |
| vehicle transportation | 23 % | 25 % | 5 % |
| sea or inland waterway transportation | 14 % | 15 % | 45 % |
| | | | |
| railway transportation | FCA (80%), DAF (20%) | FCA (80%), DAF (30%) | DAF (10%), FCA (40%) |
| vehicle transportation | | DDU/DDP (40%), FCA (10%) | DDU/DDP (100%) |
| sea or inland waterway transportation | FOB (100%) | FOB (100%) | FOB/CIF/DES (15%) |

Finnish companies are using mostly FCA (80% means that 80% deliveries by railway are held by FCA supply term) supply term when importing roundwood by railway from Russia and FOB supply term when using waterway transportation. The supply term in waterway transportation depends on the sale contract. It is difficult to tell the exact shares of used transportation ways when importing roundwood from Leningrad Region to Finland, because Finnish forest industry companies are usually using the supply units which cover the whole northwest Russia. When using FCA or FOB supply terms, Finnish buyers buy roundwood at the station or in the harbour and then take care of logistics and transport. In Finland roundwood imports are usually transported straight to the mills (there is no intermediate depots) from the board. Roundwood is usually transported by Finnish transporting companies or by Russian roundwood suppliers' long-distance trucks.

5.4.4 Demand, Supply and Other Macro-environment

The following tables describe what kind of perceptions different interviewed companies have about demand and supply. According to interview data, nearly all managers fully agree that the development of local demand of roundwood **in Leningrad Region** will be increasing in the long term (over 3 years). They do not agree at all that the development of export demand of roundwood **to Finland** will be decreasing in the long term.

Table 16. Demand for roundwood

| DEMAND of roundwood | 1= fully agree 3= not agree, not disagree 5= do not agree at all | | | | |
|--|--|----------|----------|----------|-----------|
| | 1 | 2 | 3 | 4 | 5 |
| The development of local demand of roundwood in Leningrad Region will be increasing in the long term (over 3 years) . | **** * | | | | * |
| The development of export demand of roundwood to Finland will be decreasing in the long term (over 3 years). | | | * | | **** * |
| The development of export demand of roundwood to other countries will be decreasing in the long term (over 3 years). | * | | * | | **** * |

Symbol * means an answer

There are some cases where interviewed companies have different perceptions. Especially, opinions of development of supply vary a lot. Companies, which have been doing business longer, were more sceptical to increasing supply in Leningrad Region. Some misunderstanding could also cause variation in answers. The questionnaire was translated into Russian and there were some problems with finding the right terms, but problems were solved.

Most of the companies do not agree at all that the development of local supply of roundwood **in Leningrad Region** will be increasing in the long term (over 3 years). Half of the companies do not agree at all that the supply of roundwood in Russian **sawmill industry** in Northwest Russia will be increasing much in the long term. Some of the interviewees told

that they have already waited so many years for the local sawmill industry to become more important in Leningrad Region, this is why they have such a sceptical point of view.

Table 17. Supply of roundwood in Leningrad Region

| SUPPLY of roundwood | 1= fully agree 3= not agree, not disagree 5= do not agree at all | | | | |
|---|--|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | 5 |
| The development of local supply of roundwood in Leningrad Region will be increasing in the long term (over 3 years). | ** | | | | **** |
| The supply of roundwood in Russian sawmill industry in Leningrad Region will be increasing much in the long term (over 3 years). | ** | | | | **** |
| The supply of roundwood in Russian pulp-and paper industry in Leningrad Region will be unchanging in the long term (over 3 years)? | *** | | | | *** |

Table 18 show the future supply by different wood species, where pine and spruce will be most important.

Table 18. Future supply by different wood species

| What kind the future supply by different wood species (product) categories will be? | 1 | 2 | 3 | 4 | 5 |
|---|---|---|----|-----|------|
| Pine | | | * | * | **** |
| Spruce | | | | ** | **** |
| Birch | | | ** | ** | ** |
| Aspen | * | | ** | * | ** |
| Woodchips | * | | | *** | ** |

1= very poor, 2=poor, 3=satisfactory, 4=good, 5=excellent

5.4.5 Other Macro-environment

The interviewed managers expressed their opinion regarding following the arguments which describe current situation in Leningrad Region (table 19). Especially, opinions in lack of financing capital varied a lot. The reason could be that the financial position for different companies is different. Smaller companies do not have enough capital to invest as much as they want to. Almost all the managers are thinking that taxation is high. Some interviewed companies fully agree that the regional political environment is stable; some companies can not say anything and some companies do

not agree with this at all. Therefore, the regional political environment can not be very stable, if opinions are varying so much.

Table 19. Other macro-environment

| Other MACRO-ENVIRONMENT (the political, economic, sociocultural, technological, environmental and legal factors) | 1= fully agree 3= not agree, not disagree 5= do not agree at all | | | | |
|--|--|---|-----|---|-----------|
| | 1 | 2 | 3 | 4 | 5 |
| Lack of financing capital | * | | * | * | *** |
| High taxation | ***** | | | * | |
| Regional political environment is stable | ** | | ** | | ** |
| Poor quality of production technology and machinery | ** | | | | **** |
| There will not to be enough forests that can be exploit commercial ways in future in Leningrad region | ** | | | * | *** |
| High competition among logging companies | ** | | | * | *** |
| High employment costs | | | | * | **** * |
| Non-sound business practices (e.g. corruption) | | | *** | | *** |
| Low competence of personnel | | | * | | **** * |
| Strict environmental regulations | * | | ** | * | ** |
| The stump price of roundwood is satisfactory | ** | | * | | *** |
| Absence of confidence between the firms in the industry general | | | ** | * | *** |
| The logging operations always doing by the environmental laws | *** | * | * | | |
| It is easy to work with Finnish companies | **** | | ** | | |
| The image of your own company is much better if you comparing to other companies | **** | * | ** | | |

Other claim also divides the perceptions; most of the companies think that they have poor quality of production technology and machinery, but some do not agree with this argument at all. From this viewpoint the development of modernizing company's logging technology is in different position in different companies. Bigger companies have obviously more resources and capital to invest in for example new cut-to-length technology. Interviewees also had different opinions whether or not there will be enough forests that can exploit commercial ways in the future in Leningrad Region. This can be understood if you look at the Figure 10.

It also seems that employment costs are not perceived to be high and the personnel are very competent. The logging operations are always done by the environmental law, because companies are aware that their customers

(especially when exporting roundwood) require it. The question about how satisfactory they are with the stumpage price of roundwood also divides the companies' perceptions. Some of the companies fully agree, but most of the companies do not agree at all. Companies gave the impression that there is no lack of confidence between them. It is easy to understand, because usually managers of different companies know each other when they are operating in the same local area (for example in Vyborg District).

Generally, the image of Finnish companies and their buyers is very good and all interviewed Russian companies have the perception that it is easy to work with Finnish companies. According to the interviews, there were some problems which interviewed companies mentioned when doing business with Finnish buyers. Sometimes Russian logging companies feel that Finnish buyers are not so interested in doing business with Russians. Representatives of Finnish companies frequently arrive late at meetings and sometimes change the amount of roundwood that they actually want to purchase after the first meeting regarding the contract of purchase. It is quite a difficult situation, especially to small local logging companies which are highly dependent on exports. The company just has to approve to these kinds of situations. Nowadays, when Russian logging companies are exporting roundwood to Finland, the buyer often accepts only 75-85% of the delivered roundwood volume, although there were no complaints about the quality earlier in stands marked for cutting.

It is interesting that the self-image of Russian logging companies is usually much better if they are comparing it to other companies. Most of the companies have an optimistic attitude to their business and a bright development for their company's future. This indicates sound entrepreneurship orientation of managers.

5.4.6 Future Challenges of Logging Companies in Leningrad Region

In table 20, following objectives are important to interviewed companies during the next 3-5 years. A very important objective to all companies is to get a better price for the harvested roundwood.

Table 20. Important objectives to the companies during the next 3-5 years

| 1=Very important objective 3= Not important or unimportant 5= Unimportant objective | | | | | |
|---|-------|---|-----------|---|------|
| | 1 | 2 | 3 | 4 | 5 |
| Get higher price for the final product (roundwood) | ***** | | | | |
| Environmental issues are important part of business | ***** | | * | | |
| Attract more Russian investors | ** | | *** | | * |
| Reduce price of products to get bigger share of market | | | **** * | | * |
| Attract more qualified personnel | ***** | | | | * |
| Going to extend production/harvesting capacity | **** | | | | ** |
| Attract more foreign investors | | * | *** | | ** |
| Increase the environmental quality of operations & products | **** | * | | | * |
| Russian government is planning to raise more the export taxes for roundwood | ***** | | * | | |
| Expand operations/market share in Russia to new regions | * | | *** | * | |
| Increase company size through mergers/buy outs | | | *** | * | ** |
| Increase company size through green field investments | | | *** | | *** |
| Attract | | | | | |
| Move the company to another, more attractive location | | | ** | | **** |
| The effect of new forest code | *** | | ** | | * |
| Planning to investigate Nordic cut-to-length logging technique | ** | * | *** | | |

Environmental issues are also a very important part of every company's future business. Companies also want to attract more qualified personnel. The Increasing environmental quality of operations and products is very important for most of them. This could mean that companies or their customers are not satisfied with current quality of their logging operations. Generally, the quality requirements of delivered roundwood are increasing All companies admit that Russian government plans to raise the export taxes for roundwood are very critical issue in future. This is a critical issue,

because exporting to Finland is so important part of interviewed companies' business. Companies are satisfied to operate in their current regions and they do not see any need to move the company to another, more attractive location. During the interviews, Russia had not finished the new forest code and thus it was not possible to have opinions from interviewed companies. They admitted that the new forest code is a very important issue to companies' business in future.

Planning to invest in Nordic cut-to-length logging techniques is very important to some companies; other companies are already invested in Nordic cut-to-length techniques. Those companies, who have not yet started to use it much, assume that it is a very important objective to them during next 3-5 years. Most of the companies have started to use the Nordic cut-to-length method side-by-side (about 50% of operations are done by old methods) with traditional Russian tree-length technology, but only few of them are mainly using it. The traditional wood harvesting method is also supported by effective western machinery. This kind of development means that in the near future there will be a demand for new wood harvesting productivity which can be achieved using versatile, efficient machinery harvesting technology. It can also mean that competition between companies will become more difficult and only cost-effective and large enough companies can survive.

According to the interviews, the most important development in logging companies' market environment in Leningrad Region will be the increase of local wood processing and sawmill industry and the effects of the new forest code. Some companies are interested to receive more special offers or brochures of new harvesting technology. The most important challenges or sources of uncertainty for the successful future development of logging companies were the high taxes, the high interest rates of credit in bank and the uncertainty of the government plans to raise the export tariffs. Some companies experienced that the high credit rate in Russian

banks will prevent effective investments of new technology. They are afraid to invest in new technology and equipment, because they have to finance investments on credit. It was not clear what they need in order to finance investments whether it is only on credit or with cash flow as well.

Pissarides et al. (2003, 525) found also same kind of problems in their study. Their study shows that the typical Russian small and medium supplier firm was facing financing problems that hinder expanding production. In obtaining financing, the firm is also facing high level of interest rates. Their study indicate that firms use internal finance to fund investment projects, but that constraints on external financing limit in important ways of their ability to expand production.

The Russian bank systems and banking connections are quite underdeveloped when compared to Western standards. According to the Central Bank of the Russian Federation, the current interest rate in Russia is about 10% (Central Bank of Russian Federation 2006). The interviewed logging companies wanted more stability to the current development of business environment and therefore it was also important to maintain a good relationship between Finnish and Russian governments.

6. CONCLUDING DISCUSSION

6.1 Discussion

The total roundwood imports from Russia to Finland has more than doubled from the early 1990s to 2005 consisting 18 million m³ (representing 26% of total use in Finland) which is over 80% of the total roundwood import to Finland. In future roundwood imports from Russia could be reduce remarkably if export tariffs increase as Russian goverment has planned. This was a descriptive study and it was quite challenging to write this study using two different languages such as English and Russian. There were many interesting aspects during this project and I'm satisfied that I could successfully interview local Russian logging companies and gather current information of their perceptions.

This study consisted of many different steps and needed time. The purpose of this study aimed at find out what kind of future prospects the local logging companies have and produce the up to date information of their perceptions. Perceptions include political, economic, social, technological and ecological aspects to their logging companies business in Leningrad Region. The other purpose of this study was to describe different procurement channels of roundwood in Leningrad Region from the local logging enterprises to the local markets and to Finland. Since the number of interviewed companies was only six in this research study, normative generalizations naturally cannot be made. However, it should be also notice that the interviewed companies had remarkably large rented forest areas and interviewed managers were well aware of studied issues. These two things increase the reliability of results. In addition, the interviews of Finnish buyers complete the results. The explicit research questions of the study were as follows:

- What kind of macro-environmental forces form the company's general or business environment in Leningrad region?

- What kind of roundwood procurement channels are local Russian logging companies using in Leningrad Region?
- How will demand and supply develop in future and what are the most important factors, which influence macro-environment in Leningrad Region?

First of these questions was answered partly on the basis of previous studies conducted in this area and information gathered from macro-environment of Leningrad Region. On the basis of the previous research, different roundwood channels could be forecast quite well. According to findings of Dudarev et al. (2002b) the network of the wood processing and pulp-and-paper industries were based on links with procurement companies. The results of that study support these findings and it seems that vertical integration inside the industry is concentrated more from harvesting to pulp-and-paper industry near Finland.

Interviewed companies were selling roundwood either to Russian timber merchants, Russian pulp-and paper industry or exporting it to Finland. It was interesting to compare gathered data of interviews concerning used procurement channels to Kohonen's (1996) results. The most common roundwood channels, when exporting roundwood to Finland can also be found from Pekko Kohonen's master's thesis (1996). Kohonen concentrated on in his study to describe exporting channels to Finland. This study gives new information about the roundwood flows in Russian local market. The results describe three different kinds of roundwood procurement channels in Russia. It is important to notice that exporting was the main business for most of the companies. Companies were selling more sawlogs than what on average is being imported to Finland.

Interviewed companies represent quite well Finnish forest industry's typical Russian roundwood supplier. According to previous studies the local demand and supply, supply will not increase drastically in future.

According to Dudarev et al. (2002a) and Karvinen et al. (2005), Leningrad Region is characterized by the uneven distribution of the wood stock. Forests around St. Petersburg have been considerably depleted through lumbering. The forested area in the central and South-western regions is also relatively small: secondary forests prevail in these areas. In Leningrad Region does not exist the third group forests, which are for intensive commercial use. Most of the interviewed companies did not agree at all that the development of local supply of roundwood in Leningrad Region will be increasing in the long term (over 3 years). According to interview data, almost all companies fully agree that the development of local demand of roundwood in Leningrad Region will be increasing in the long term. The development of export demand of roundwood to Finland will not be decreasing in the long term. Although the increased export taxes may affect roundwood exports to Finland.

6.2 Major Findings

Available secondary data gave a skeleton to this study and analyzed secondary data confirmed lots of same kinds of findings, which were appeared during local logging companies' interviews. Local logging companies mentioned for example financial aspects and uncertainty of the effect of increased roundwood export tariffs.

The study has four main implications. First of all, the development of modernizing company's logging technology is in a different position in different companies: bigger companies have clearly had more resources and capital to invest in e.g. new cut-to-length technology. On the other hand, traditional Russian wood harvesting systems are currently used side-by-side with Nordic cut-to length technology, relatively in smaller companies. These kinds of results can be found also from available secondary data (see Gerasimov et al. 2005). The technological, economic, social, and environmental states of the logging companies vary greatly.

However, even smaller logging companies had long term leases in contrast to what was claimed in Vinokurova et al. (2005) (see page 45).

Secondly, the most important challenges in future development of logging companies were the high taxes, the high interest charge of credit in bank and the uncertainty of government raising the export taxes. However, companies had a positive view on their own future and they believe that Finnish forest industry will need Russian imports of roundwood in the future as well.

Third, companies see that the biggest changes in the future markets would be the development of local sawmill and wood working industry in Leningrad Region. This was also indicated by an earlier study of Nilsson & Kleinhoff (2001). Local logging companies see that the future development of market in Leningrad region is strongly related to investments to Russian saw mill and wood-working industry.

Fourth, interviewed logging companies were concentrated to export pine and spruce saw logs. Roundwood imports from Russia to Finland generally consist out of birch pulpwood, although the share of coniferous logs has increased significantly. The most used exporting roundwood procurement channels were mainly same as in Kohonen's study (1996). It was a pity that the new Forest code was under processing in Duma, when interviews were made and representatives of companies could not discuss the topic more closely.

6.3 Suggestions for Further Research

The logging companies that were studied in this research were all relatively small and operating near the Finnish border. Most of them do not have enough resources to carry out investments. Limited resources of course decrease the motivation and possibilities to make needed

investments on same scale as bigger companies. The situation is entirely different for big companies, who have been vertically integrated with wood processing and/or paper and pulp industry. In Northwest Russia, there are over 4000 registered logging companies (Karvinen et al. 2005, 56). Most of them are still operating as independent but bigger, more profitable logging companies have acquired existing smaller and maybe not so profitable logging companies. Therefore, it would be good to study the effects of increased roundwood export tariffs, effects of membership of WTO for development in Russian forest industry as well as to analyze with a larger sample of companies the possible effects of the rise of local saw mill and wood-working industry. It would be also important to know if the logging markets will concentrate on few big vertically integrated forest companies and will there be also some big acquisition by foreign forest industry companies.

Other interesting topic could be collect secondary information from different kinds of sources including internet to perceive the total image of the challenges of Russian custom and forest policy. Especially, characteristic of the roundwood trade between Russian and China should be studied and compare it to trade between Russia and European Union. As mentioned, about 43% of Russian roundwood exports goes to China.

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APPENDIX

Questionnaire for Russian Logging Companies. АКАДЕМИЧЕСКИЙ ИССЛЕДОВАТЕЛЬСКИЙ ПРОЕКТ

*Северо-западная Россия как бизнес-среда с точки зрения перспектив
деревообрабатывающей промышленности*

Исследование является публично финансируемым проектом Финского Министерства Сельского хозяйства и Лесоводства (www.mmm.fi). Проект рассчитан на 3 года, 2004-2007.

В проекте участвуют две исследовательских организаций:

Финнский Исследовательский Институт Леса (METLA), www.metla.fi

Экономический Исследовательский Институт Пелерво (PTT) www.ptt.fi

Руководитель проекта: Др. Анне Топпинен, METLA

Тел. +358-010 211 3181, адрес электронной почты: anne.toppinen@metla.fi

Цель этого исследования - описать Северо-западную Россию (в особенности Санкт-Петербург и Ленинградскую область) как бизнес-среду для деревообрабатывающей промышленности действующей в регионе.

Конкретные задачи исследования:

1. Описать деревообрабатывающую промышленность и ее бизнес-среду в Северо-западной России
2. Проанализировать привлекательность Северо-западной России как бизнес-среды сейчас и в течении нескольких последующих лет начиная с данного момента времени
3. Определить области где компании смогут улучшить их маркетинг или их управление бизнесом для того что бы стать более конкурентноспособными сейчас и в будущем.

Исследование будет выполнено в форме обзора состоящего из опросов предварительно отобранных компаний, общим числом около 25.

Все компании, участвующие в исследовании, будут оставаться полностью анонимными. Что получит Ваша компания от участия в проекте: Заключительный доклад даст участвующим компаниям повысить свою конкурентноспособность. С точки зрения управления компанией, исследование поможет Российским деревообрабатывающим компаниям выявить основные проблемы и области в управлении, маркетинге, которые нуждаются в развитии. В особенности, результаты исследования покажут как компании смогут использовать доступные ресурсы для того что бы создать реальные конкурентные преимущества. На основе заключительного доклада, каждая компания сможет сравнить себя с конкурентами. Так же, участвуя в исследовании, компании получат опыт который позволит этим фирмам взаимодействовать более эффективно с иностранными партнерами в будущем. Анализ Северо-западной России как бизнес-среды выявит области, которые могут быть развиты для того что бы лучше содействовать конкурентноспособности индустрии.

Научный интерес исследования заключается в анализе связей между основанием компании, причинами выбора расположения компании и путями использования доступных ресурсов.

Исследование пренадлежит большой научной программе «Россия в постоянном изменении», которая финансируется Академией Финляндии (www.aka.fi/russia).

Для более подробной информации пожалуйста используйте контактную информацию указанную выше.

Анне Топпинен

Руководитель проекта

Ритва Тойвонен

Заместитель руководителя проекта

АНКЕТА АКАДЕМИЧЕСКОЙ ИССЛЕДОВАТЕЛЬСКОЙ ПРОГРАММЫ:

Каналы поставки древесины и будущие перспективы лесозаготовки предприятия в Ленинградской области

Финский Исследовательский Институт Леса (METLA)

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Часть А: Информация о Компании/Подразделении

- A. 1 а Имя компании: _____
1 б Имя производственного подразделения: _____
1 с Сколько времени у Вас есть опыт в этой компании? _____
1 d Имя и должность отвечающей в компании/подразделении: _____
1 е Главная отрасль деятельности: _____
1 f Другие отрасли: _____
- A. 2 а Дата основания компании/подразделения: _____
2 б Место деятельности (Область/Город): _____
2 с Дочерние предприятия: _____
2 d Владельцы компании
Директора _____% Работники _____% Государство _____% Другие Предприятие _____%
3 е В Иностранном владении _____% страна _____
- A. 4. Число работников в компании/подразделении в 2005 году: _____
A. 5. Товарооборот г. 2005 (USD / € / Rb): _____
A. 6. Сколько процентов из всего оборота Вашей фирмы получается от экспорта _____
A. 7. Главные продукты экспорта: _____
- A. 8 а В каких странах Вы продаете древесину и их доля?
Россия _____% Финляндия _____% Швеция _____% Норвегия _____%
Германия _____% остальные (где?) _____%
- 8 б Собственные лесозаготовки 2004 - 2005 _____ m³
8 с Древесина покупаемая от других предприятия 2004-2005 _____ m³
8 d Валовая продажа древесины (с корей) 2004 - 2005: _____ m³
8 е Планируемый объем элспорта г 2006 _____ m³ г 2007 _____ m³ г 2008 _____ m³
- Проданная древесина г 2004-2005
ель: пиловочник _____ m³ в экспорт _____% балансы _____ m³ в экспорт _____%
сосна: пиловочник _____ m³ в экспорт _____% балансы _____ m³ в экспорт _____%
Береза: пиловочник _____ m³ в экспорт _____% балансы _____ m³ в экспорт _____%
Другая порода, укажите пожалуйста какая: _____
пиловочник _____ m³ в экспорт _____% балансы _____ m³ в экспорт _____% всего
100% 100% 100% _____%

А. 9. Проданная древесина из Вашего фирма для следующей%

| | 2004 | 2005 | 2006 | 2007 |
|--|-------|-------|-------|---------|
| Российская продажа древесины компании | _____ | _____ | _____ | _____ % |
| Российское Лесопильное/Фанерное производство | _____ | _____ | _____ | _____ % |
| Российской бумажные и картонные производство | _____ | _____ | _____ | _____ % |
| Древесины в экспорт | _____ | _____ | _____ | _____ % |
| Древесина экспорта в Финляндию | _____ | _____ | _____ | _____ % |
| Другой, что? _____ | _____ | _____ | _____ | _____ % |
| * оценка продажи древесины | всего | | | |
| | 100% | 100% | 100% | 100% |

А. 10. Пожалуйста, укажите источник древесного сырья.

Из Вашего своего леса Да [.....]

Нет [.....]

Если вы арендуете лес, на какой срок заключен договор аренды?

А. 10. В какой форме собственности находится компания?

Форма собственности (выберите соответствующее): _____

[.....] Государственное предприятие (100%)

[.....] Частное предприятие в собственности: [.....] Российский
собственник

[.....] Иностраный собственник

[.....] Совместное предприятие

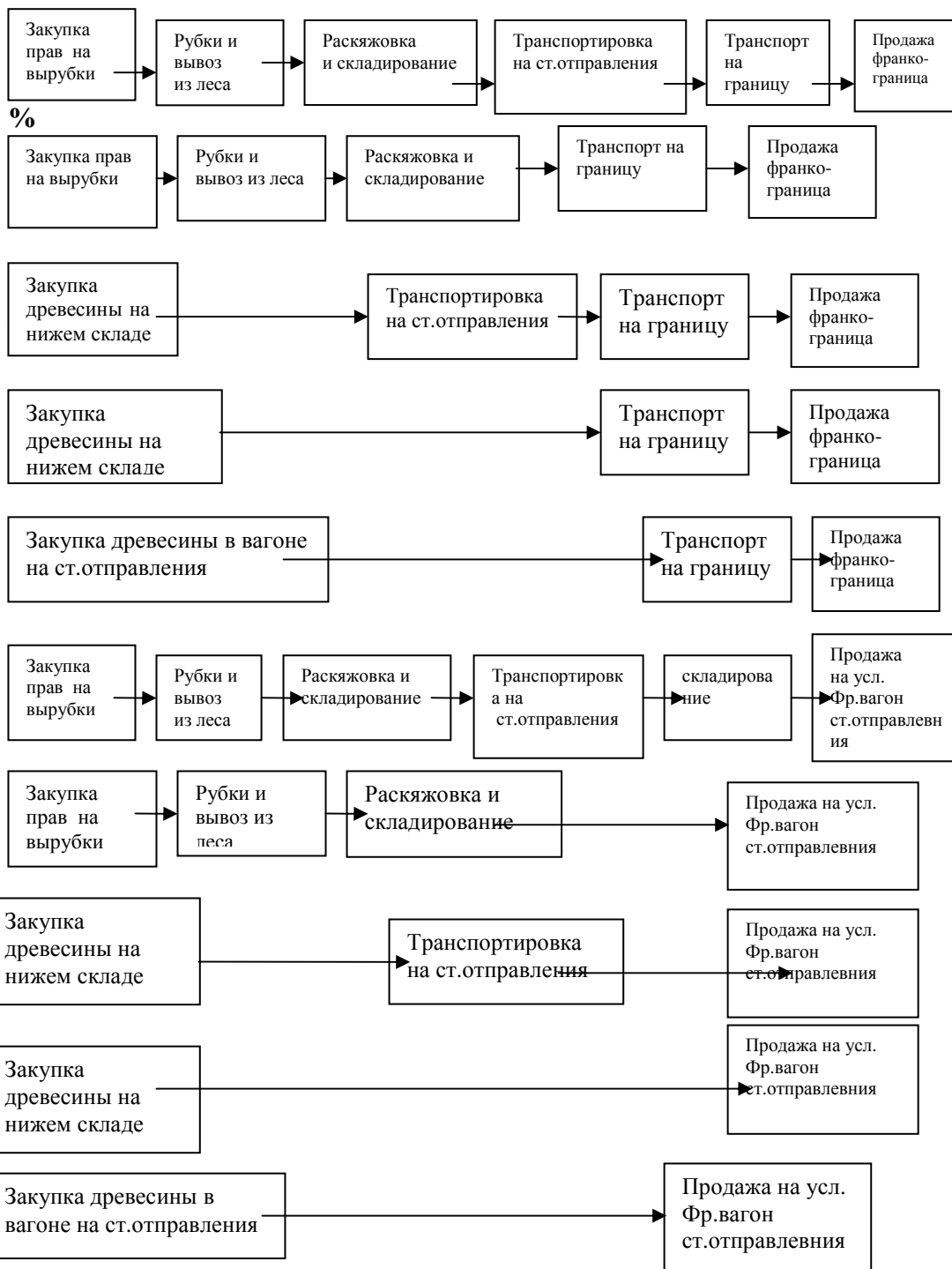
Юридическая форма:

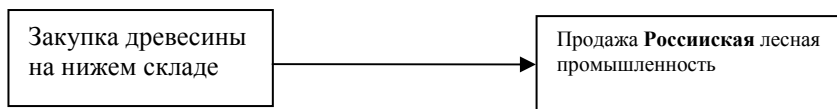
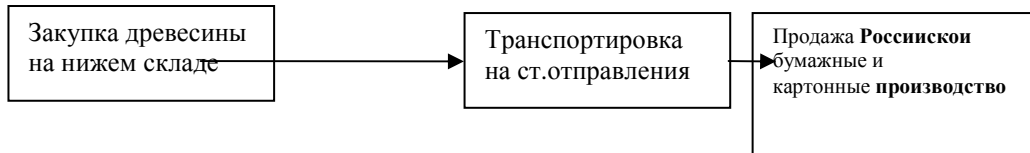
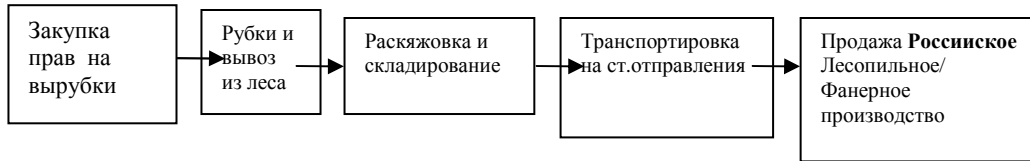
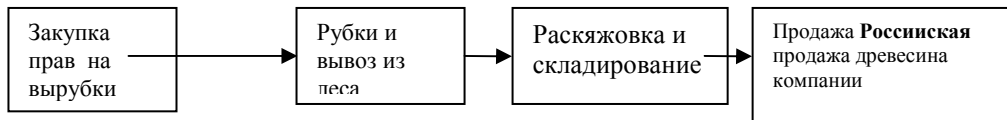
[.....] Товарищество (ООО)

[.....] Закрытое акционерное общество
(ЗАО) [.....] Открытое
акционерное общество (ОАО)

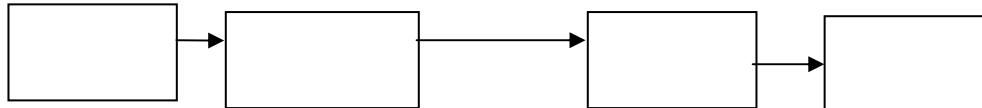
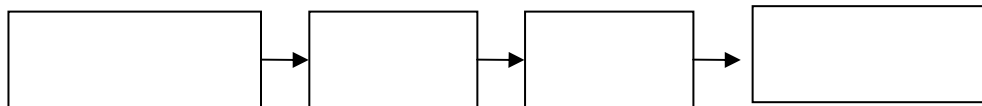
Какую долю древесины Вы хотели бы поставлять на условиях Франко-
граница _____% и какую долю на условиях Франко-вагон
ст.отправлевния _____%?

ЧАСТЬ В. Какие из следующих каналов Вы используете в продаже древесины на русском рынке в Leningrad Область или экспортируя к Финляндии? Какая их доля в процентах Ваших поставок? Покажите используемые каналы %





другой, что? Рассказываете пожалуйста какая.



ОБЩЕЕ КОЛИЧЕСТВО

100 %

ЧАСТЬ С: БИЗНЕС СРЕДА И БУДУЮЩИЕ ВЫЗОВЫ

С. 1. Как Вы считаете, как хорошо следующей утверждение изображает положение в Ленинградской области?

| Спрос древесины | 1= Я так думаю 3= Не знаю 5= Я так не думаю | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Местный спрос древесины в Ленинградской области не будет вырастать много в будущем (больше чем 3 года). | | | | | |
| Экспорт спрос древесины в Финляндии будет уменьшаться много в будущем (больше чем 3 года). | | | | | |
| Экспорт спрос древесины в других странах будет вырастать в будущем (больше чем 3 года) | | | | | |

| Предложение древесины | 1= Я так думаю 3= Не знаю 5= Я так не думаю | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Местный предложение древесины в Ленинградской области будет вырастать много в будущем (больше чем 3 года). | | | | | |
| Предложение древесины в Российское Лесопильное/Фанерное производстве в Ленинградской области будет вырастать много в будущем (больше чем 3 года). | | | | | |
| Предложение древесины в Российской бумажные и картонные производстве в Ленинградской области не будет вырастать в будущем (больше чем 3 года). | | | | | |

Как Вы думаете, какой будет предложение вид древесины в будущем?

1= очень плохой, 2= плохой, 3= удовлетворительный, 4= хорошо, 5= очень хорошо

| Какой будет Предложение другие категории продукта в будущем? | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| Сосна | | | | | |
| Ель | | | | | |
| Береза | | | | | |
| Осина | | | | | |
| Древесная щепа | | | | | |

С. 3. Насколько хорошо представленные ниже характеристики описывают бизнес среду в Вашей индустрии в Ленинградской области?

| OTHER MACRO-ENVIRONMENT (the political, economic, sociocultural, technological, environmental and legal factors) | 1= полностью согласен 3= не знаю 5= не согласен совсем | | | | |
|--|--|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Нехватка финансового капитала | | | | | |
| Высокие налоги в Ленинградской области | | | | | |
| региональная политическая окружающая среда стабилизирована | | | | | |
| Плохое качество производственной технологии и оборудования | | | | | |
| Не будут достаточные лес для эффективной поставки древесины | | | | | |
| Высокая конкуренция между лесозаготовки предприятиями | | | | | |
| Высокая стоимость рабочей силы | | | | | |
| Коррупция обще | | | | | |
| Низкая правомочность персонала | | | | | |
| Относящие к окружающей среде регулировки не слишком | | | | | |
| Цены на древесное сырье удовлетворительно | | | | | |
| Отсутствие доверия между фирмами в индустрии общее | | | | | |
| Древесины всегда сжат in compliance with лесохозяйство национального и регионарного legislation управляя | | | | | |
| Легко сделать дело с Финской покупателями древесины | | | | | |
| ваше изображение компании свои конкурентны преимущество хороший сравнивать к другим русским компаниям? | | | | | |

С2 Насколько важны ниже перечисленные цели для Вашей компании в течении следующих 3-5 лет?

| | 1=Очень важно 3=Нейтрально 5=Не важно совсем | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Достигнуть более высокой цены конечной продукции | | | | | |
| Относящие к окружающей среде вопросы важне | | | | | |
| Привлечь больше российских инвесторов | | | | | |
| Уменьшить цену продукции для того чтобы занять большую долю рынка | | | | | |
| Привлечь больше квалифицированного персонала | | | | | |
| Найти лучших партнеров для розничной продажи продукции | | | | | |
| Привлечь больше иностранных инвесторов | | | | | |
| Увеличить экологическое качество производства и продукции | | | | | |
| Правительство России планирует больше поднять вывозная пошлина древесины и склонения экспорта | | | | | |
| Расширить деятельность/рыночную долю на территории России/бывшего СССР | | | | | |
| Увеличить размер компании через поглощения/покупку долей в других компаниях | | | | | |
| Увеличить размер компании через новые инвестиции | | | | | |
| Интенсифицировать партнерские связи с поставщиками и покупателями | | | | | |
| Переместить компанию в более привлекательную местность | | | | | |
| Вступление в силу нового Лесного Кодекса | | | | | |
| Будет вашей компанией использующ больше Скандинавиян технология (Nordic-cut to length) метод | | | | | |
| Другое, укажите что? | | | | | |

Сколько у Вас следующих машин и сколько от них входят в н. у. группы возраста?

- Валочная машина ___ шт. меньше чем 5г ___% 5-10г ___% больше чем 10г ___%
- Ерелевочный трактор ___ шт. меньше чем 5г ___% 5-10г ___% больше чем 10г ___%
- Лесовоз ___ шт. меньше чем 5г ___% 5-10г ___% больше чем 10г ___%

У Вас есть планы проинвестировать в новыа виды технологии в будущем?

Да / Нет _____

Интересует ли Вас приобретение западного оборудования?

Лесозатовительные машины

Транспорт средство

Погрузочное оборудование

Оборудование для деревообработки

С 4. По Вашему мнению, как будет изменяться рынок лесозаготовки предприятия в будущем в в Ленинградской области?

С5: Пожалуйста оцените эффект от вступления в силу нового Лесного Кодекса для Вашей компании/подразделения.

С3 Пожалуйста, укажите наиболее важные вызовы или источники неопределенности стоящие на пути удачного развития Вашей компании/подразделения в течении следующих пяти лет:

С4: Укажите наиболее важные возможности для удачного развития Вашей компании/подразделения в течении следующих пяти лет:

БОЛЬШОЕ ВАМ СПАСИБО ЗА ПОТРАЧЕННОЕ ВРЕМЯ И СОТРУДНИЧЕСТВО С НАМИ!