Ports in Transition in Countries in Transition

The changing situation for ports in Russia and the Baltic states in times of geopolitical and economical transition

Alf Brodin

Abstract

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The aim of this study is to describe how the changing geopolitical environment in the former Soviet Union (FSU) has created a new transport geography, and thereby resulted in new patterns of foreign trade routes, port competition and market economic adaptation in the Baltic Sea fringe.

The geographical limitation is the western part of the FSU and the Baltic Sea. The time-span is the years from the beginning of the 1990's until mid 1999. The role of, and situation in, the port sector is here used to describe the difficulties that have faced primarily Russia in the years of transition. In its current extension, Russia faces severe limitations in port capacity compared to the demand generated by domestic industry and raw material producers. Instead, the Baltic states possesses a port capacity that vastly exceeds local demand.

A number of proposed Russian projects for new port capacity are described and the Russian North West is set in relation to the Baltic Sea region as a possible competitor. In addition, other changes and developments within the Russian transport- and port-sectors during the years of transition are described.

The thesis show that any near future large-scale development of new Russian port capacity is unlikely, and economically hard to motivate, therefore the currant Russian dependence in the port-sector of the Baltic states will remain.

The results of a five-year longitudinal Port Survey of Swedish foreign trade with the FSU countries 1993 – 1999, conducted by the author in Swedish ports, is also presented. The purpose has been to thoroughly study the actual flow of cargoes between Sweden and the FSU and at the same time evaluate the official trade statistics presented for this trade relation, which has uncovered substantial divergences.

Keywords: Port, transition, Baltic Sea, transport geography, geopolitics, Russia, Baltic states, former Soviet Union, trade statistics, entrepôt, trade relations.

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Syftet med denna avhandling är att beskriva hur den förändrade geopolitiska situationen i det forna Sovjet har skapat en ny transportgeografi, och därmed resulterat i nya mönster för utrikeshandelsflöden, hamnkonkurrens och marknadsekonomisk anpassning vid Östesjöns östra rand.

Geografiskt behandlas den västra delen av det forna Sovjet och Östersjön. Tidsmässigt täcks perioden från början av 1990-talet fram till mitten av 1999. Hamnsektorn används för att beskriva de omställningssvårigheter som framförallt Ryssland har haft under den senaste tioårsperioden. I sin nuvarande utbredning är Ryssland kraftigt hämmat med avseende på tillgången till hamnar. Speciellt allvarlig är situationen jämfört med den efterfrågan på kapacitet som genereras av den inhemska industrin och olika råvaruproducenter.

Ett antal föreslagna ryska projekt för att i Östersjön snabbt kunna öka den befintliga hamnkapaciteten beskrivs, liksom att regionerna i nordväst sätts i relation till Östersjön, såsom varande möjliga konkurrenter. Avhandlingen behandlar också till hamnverksamheten relaterade förändringar och utvecklingstendenser inom den ryska transportsektorn.

Det kan också visas att någon storskalig utbyggnad av ny rysk hamnkapacitet i den nära framtiden är mindre trolig, och kan knappast motiveras ekonomiskt, varför det nuvarande ryska beroendet av hamnar i de baltiska staterna kommer att bestå.

Även resultaten från en femårig *Hamnenkät* avseende svensk utrikeshandel med det forna Sovjet under åren 1993 – 1997, som författaren utfört ges en detaljerad presentation. Avsikten med enkäten har varit att närmre kunna studera de faktiska flödena av gods mellan Sverige och det forna Sovjet genom hamnarna. Samtidigt har det statistiska materialet gjort det möjligt att kunna utvärdera den officiella statistik som presenteras för den svenska handelsrelationen med länderna i det forna Sovjet; något som har pekat på avsevärda avvikelser.

Nyckelord: Hamnar, transition, Östersjön, transportgeografi, geopolitik, Ryssland, Baltiska staterna, forna Sovjet, handelsstatistik, handelsrelationer, entrepôt.

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This study would never have been completed without all the positive support I have been given from friends and colleagues all over the world, only a few of which can be mentioned here.

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That I would devote my time to the former Soviet Union should be contributed to the passion for the region and the inspiration transmitted by Peter de Souza. He turned my focus eastwards and helped me survive in the academic circles during some insecure years. We never give up !

The third great inspiration in my early academic life was Dag Björnland, who through inspiring lectures opened my eyes to the fascinations of transports.

A group of important supporters along the way have been all my friends from IE-linjen at Handelshögskolan, that have meant so much to me over the last ten years, and where many of my best friends are to be found. Thanks to each one of you for all the fun we have had, from London and on into a new Millennium; and hopefully during many years to come. The same also goes to my brother Frank and sister Helene who are always there when I need them. Without continuous support from Malin during critical stages, when a too extensive material was to be put together to form this book, all the late evenings and weekends needed would probably not have been spent.

It is not only on the personal side that I have a lot of contributors to pay tribute to. There are also all the people I have met during study tours and survey work. In some cases the distinction has nearly become blurred as to whether certain people are friends or interviewees. The human response of the people east of the Baltic Sea has made me come back repeatedly, and I will continue to do so. I wish you all a positive future. Just mentioning some, as examples could be: Kravchnko in Arkhangelsk, Kareva in Vyborg, Oliferchuk in St. Petersburg, Tapina in Liepaja, Jokubaitis in Klaipeda and Kurakina in Novorossiysk. On the Swedish side each port deserves a special gratitude for having, year after year, spent time to fill in my forms. Without having let me persuade you to do the work I would never have had the empirical material I can present here.

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For
Mother

and
Janne

who will never have the opportunity to read the book.

Göteborg 2000-02-14 Alf Brodin

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1. INTRODUCTION

1.1. Background

This study concerns the development of ports in Russia and the Baltic states from a number of aspects in the period since the falling apart of the Soviet Union. A long process was needed to find the specific subject, before this study was initiated. When my interest in the former Soviet Union (FSU) started to emerge, the wider aspects around transport issues slowly became the area to explore. First, the focus was set upon transport from a general point of departure, with emphasis on the inland waterway sector. As waterway transport often starts, or terminates, in high sea port cities, and much of the transported cargo passes through these ports, a shift in focus was not far-fetched. At more or less the same time as ports came into focus, the USSR unexpectedly quickly and calmly started to fall apart. A period of dramatic geopolitical changes that lead to even more dramatic changes in the port and shipping sectors as well as geographical patterns of foreign trade. With the immobility of the ports a completely new transport geographical layout arouse and that such radical changes would give rise to in-numerous new research questions was easy to understand. Questions like: what would happen to the use of infrastructure in all the existing ports, would trade flows change, would volumes of different cargo types increase of decrease, how would politics influence the development.

When the focus had been set on ports as the subject for the study, the working environment for ports also had to be established. A wide range of factors can be identified that influence the position of a port. The role a port is given can often be derived from how it is positioned in the competition between transport chains and transport solutions, rather than competition between individual ports. In the end, much also comes down to estimations of the future development of individual demand generating companies in the hinterland of the port and the transport arteries that the port is set to serve[1]. Expectations based on general assumptions about the economic performances of different regions, or even countries. The performance of ports can thus shift dramatically over time, as can the kind of cargoes handled. Shifts that are the result of how

[1] Hinterland is here defined as the area of origin of out-bound and the destination of in-bound cargo flows through a port.

transport-generating industries in the hinterland area of the port and national transport patterns develop over time are well explained by the work of Bergman (1999). In the western part of the FSU economic development has, during the transition years, come to be clearly unevenly spread between the different countries concerned.

1.2. Aim of this study

The aim of this study is to describe how the changing geopolitical environment in the FSU has created a new transport geography, and thereby resulted in new patterns of foreign trade routes, port competition and market economic adaptation in the Baltic Sea fringe.

The dissolvement of the FSU has constituted a new setting for the organisation of foreign trade between the Russian Federal Republic and Western Europe. To a large extent goods now have to be carried through independent states to reach ports that previously were parts of the Soviet Union. At the same time, several of these ports were originally outlined and built within the framework of a centrally planned economy and received their volumes through administrative directives. Now they have to compete by offering the best possible economic solution for their part in the transport chain from seller to buyer.

The current position of these ports, and the towns that surround them along with the transport arteries leading to them, will be evaluated from different perspectives. The dependence upon these ports will be shown as being one of the most important reasons, if not "*the*" most important reason, behind the fact that Russia's relations with the Baltic states, especially Latvia and Estonia, for so long after the break-up of the USSR have continued to be tense[2]. A tension that has through their importance, and Russia's dependence upon them, given these port a strong symbolic meaning. The geographical changes that have taken place in the region and how these have come to influence the current position of ports in Russia and in the Baltic States is therefore an inevitable theme here. Changes of a magnitude such as the disintegration of the FSU are slow to be accepted and much smaller and less important geopolitical changes have often resulted in lasting conflicts between neighbouring countries. Here, the outcome has been that the different states have been involved in

[2] The expression *"the Baltic States"* here refers to the three states Estonia, Latvia and Lithuania.

a geopolitical game while the individual ports have continued to work on their commercial position as ports. The port sector constitutes a rather small sector of the Russian economy, but for the newly formed Baltic states, the port sector is far from insignificant. Therefore, both these larger frameworks, national economic situations and the development within the transport sector, must be covered before going into greater detail with the development of individual ports. In the transport and port sectors the emphasis will be placed on the developments in the western parts of the FSU.

At the same time as the individual port is focused upon here, the intention is to take a dualistic approach to the position ports hold in the transport sector. It has been attempted to consider the port as just one of the links in a longer transport chain, rather than as an independent entity, especially so when discussing the importance of ports in relation to one another. This perspective will be developed further, especially in section 2.3 where the often subordinate position of a port in a transport chain is set in perspective. This approach should be seen as an attempt to not only focus on the discussion about the prosperity of one or the other of the Baltic ports, in relation to Russian alternatives, but rather as a discussion about overall performance and development of the Russian / Baltic port sector. Principally, this approach to port development and competition between ports, considering aspects like the increasing ease of relocation within the shipping- and transport industry, to whom ports are just a service provider, could from certain aspects be seen as controversial (Rodrigue, Slack and Comtois 1996).

To enhance the statements in the study it will be shown empirically how FSU ports, first of all along the Baltic Sea coastline, have developed and how Swedish foreign trade volumes, handled by FSU ports, have changed during the years of transition[3]. The intention is that the empirical material will show how the actual development has come to change for different countries, ports and within different categories of cargoes[4].

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[3] The word *"transition"* here refers to the process induced when formerly centrally planned economies transform their economic system, to adapt principles of a market economic system (Sachs 1990). The word "transition" emphasising the economic change, as opposed to the term "transformation" reflecting a stronger influence of social science (Hamilton 1999).

[4] Strongly related to the operation of ports is the development within the shipping sector which has intentionally been left out here. Excellent coverage of East European changes during the years of transition in this sector can be found in e.g. Roe (1996) and Zurek (1997), and will not be covered here.

In order to fulfil the given aims, the study has been carried through in three steps:

The first step: - is to describe and set into perspective the geopolitical situation that reigned before the initiation of the transition process. A process of large scale geopolitical changes that in its stride has come to incur major geopolitical and transport geographical changes in the western FSU area. Changes that had fundamental repercussions on the Russian foreign trade pattern and the port sector.

The second step: - To clarify the background of the current development, a description of the ports, and related sectors in the FSU will be given. The port sector serves as a very good example of a sector where Russia, as the big neighbour to the Baltic states, is facing an extremely large deficit in domestic capacity. A deficit that emerged after the break up of the Soviet Union. Because the capacity of the ports had previously been built up as *"all union"*, it now vastly exceeds the needs of the Baltic countries, contributing to increased envy and mistrust. Ports demands long term, but also large-scale, investment solutions, which are often complicated to finance. The existence of surplus capacity in foreign locations, and deficits domestically, has forced the parties, albeit very reluctantly at times, to share the use of already existing ports, but also to prepare for domestic expansion.

The third step: - Through an in-depth analysis of the development of Swedish trade with the countries of the FSU, changes during the early 1990's, from both a geographical as well as a volume perspective, will be exemplified[5]. The most commonly used method to show the importance, and development, of a port is to follow up the volumes handled. On this level, the traded volumes of cargo and the trade relations between Sweden and the countries of the former Soviet Union will be analysed. The results of a yearly survey conducted in Swedish ports since 1992, which is a unique empirical material that includes the volumes handled in this trade relation, will be used to evaluate the development.

[5] The reason why a volume perspective is used is because the emphasis here is put on the transport sector, and for transport, volume is more important than the more common denominator, value.

1.3. Method

1.3.1. Collection of primary and secondary data

To carry out a project of this kind will, by its nature, come to include the use of a multitude of methods to find and combine all the different facts needed. The information base for the material presented here has been drawn from a wide range of different sources, in an attempt to find solid ground when fulfilling the aim given above.

Still, the method used is to its kind both conventional and unconventional. Most of the facts presented have been based on secondary written sources of both Scandinavian and international origin. In the parts that cover trade in Swedish ports with the FSU, sources are nearly exclusively domestic, and primary to their nature, while in other parts they are nearly exclusively international and secondary. Furthermore, statistical sources, academic journals, periodicals and newspapers and even different home pages on the world-wide-web have been used to find information relevant for the survey.

What makes the general method used in this study somewhat unconventional in relation to other studies, presenting similar types of material concerning Eastern Europe, is the extensive fieldwork that has been an integrated part of the fact-finding process. A large number of visits have been made before, as well as during, the transition process was initiated in the FSU. Every single of the important ports and cities that are mentioned in this study has been visited, in person and at least twice, during later years. During 1997 and 1998, all major ports on the western FSU coastline starting in Arkhangelsk, on the Arctic coast, and west- and southward ending in Novorossiysk, on the Black Sea, have been visited. As a result of this extensive travelling it has been possible to include the knowledge from a large number of primary sources. In this respect, information has been collected in personal interviews, but more often in less formal meetings and conversations, often during study tours of port areas, with people working within the port and transport sector.

In chapter 5, where the empirical example of Swedish seaborne trade with the FSU is presented, a separate methodological discussion can be found. It has been limited to the special research problems that relate primarily to the collection and use of the empirical material which is presented in the chapter.

1.3.2. Reliability of sources

A general problem when writing about a subject related to the FSU area, on all levels and for all topics, is that of the reliability of sources. Official statistics that can be used as a fundament on which to build a descriptive study often do not exist, or could easily be questioned. The general quality of trade statistics, and other forms of statistics, are problems that could not be over-stressed. In addition, previous routines that recorded trade, transport volumes, production and many other fields of activity in the Soviet Union, as well as in post-Soviet Russia, were highly inefficient, which has led to a high degree of uncertainty concerning statistics (World Development Report, 1996 p. 19)[6]. Russia today is an example of a state with a weak administrative apparatus, which here, as in most other countries in the same situation, leads to frequent underreporting of economic activities. The Russian State Statistic Committee has indicated that about 60% of local trade operations and 15% of industrial activity remains unreported. The reason for this is first of all to avoid taxes (RFE 1999-02-13). But not even the state statistical organisation itself, *Goskomstat,* has remained untouched by the misuse of statistical material as its managing director and vice director were arrested in June 1998 accused of *"systematic distortion of statistical data...."* (RFE 1998-06-09)[7]. How accurate then can statistics that are elaborated on the lower levels in such an organisation be? Still there is rarely any other material that can be used for a study of this kind and the statistical material remains a weak spot. Simultaneously a number of monographs, by prominent international organisations whose creditability can hardly be doubted, despite being based on Soviet/Russian statistical material, have been published in later years. Such examples, that are also referred to in other parts in this study are e.g. from the EBRD - *Transition Report* (1996, 1997, 1998) and from the OECD - *Economic Survey of the Russian Federation* (1997:c), from the EU – *Russia and the EU Member States* (1998). With this background, the method of comparing official statistics and statistics from alternative sources that is presented in chapter five should also be seen as an attempted initiative to find and test a new methodological development. A way of working that could be seen as a full-scale test of a possible way to extend the statistical base under insecure circumstances.

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[6]This is not a new phenomenon though and was observed as early as 40 years ago (Godlund 1958).

[7] Quoting government spokesman Aleksei Volin. Director Yurkov, arrested along with an unspecified number of senior data processing workers, was appointed to head Goskomstat as early as in 1993.

After having studied a number of papers and reports in great detail dealing with different aspects around the use of the ports and transport arteries many have been found to contain very detailed information. Often with very positive conclusions regarding the aspect studied. Few of the papers have attempted to draw more general conclusions about near future development regarding ports, and an often neglected aspect has been competition between ports. Instead, reports have often just shown that initiatives are technically possible and the costs of investments needed to realise these intentions have been calculated. Little is said about the viability of the proposed projects in relation to other alternatives[8].

There is a great difficulty in illustrating and describing the present, and the near future setting, before attempting to draw conclusions. Conclusions that, in a Russian environment, could suddenly be made invalid due to unexpected changes in basic assumptions. This also includes prediction aimed at summarising what, at the time of writing, can be considered as *"facts"*. The difficulties in making projections about development in the Russian environment are considerable and not even the most professional of organisations manages to foresee the quick turns of events that characterise the Russian market[9]. The difficulty in making projections relates also to many of the statements made in this study. There is always a possibility that some new arrangements have been made, either very recently or have not been made reasonably public, which offsets what is being stated. On the other hand, it is more a rule that when projects are presented in Russia, it is often indicated that everything has been negotiated and that binding contracts have been signed. In reality this could well be the case, but such official statements can never be double–checked, and experience has time and again proved that the *"very-little-will-happen"* rule is the most likely outcome of presented intentions.

For information concerning the Barents region and the Russian Arctic coastline, the long series of INSROP working papers have been found to be the most encompassing, and up to date, of sources[10]. Several such INSROP papers have been refered to in later parts of this study.

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[8] Some such examples can be found in the list of references

[9] A clear cut example of this difficulty is the estimations of development of the Russian GDP for 1998 that a number of international institutions offered in late 1997 or early 1998: The Economist +2%, JP Morgan +4%, OECD +3%, PlanEcon +2.7%, Russian Government +2%, Union Bank of Switzerland +2%. A year that resulted in a fall of the GDP by –0.5% (Bofit 1998:various issues).

[10] INSROP - is the acronym for *"The International Northern Sea Route Program"*, administrated by the Fridtjof Nansen Institute in Lysaker Norway, having issued about 170 working papers.

1.3.3. Interviews

An important part of the primary fact finding has been done in the form of different types of interviews. The structures of these have, dependent on the occasion, been anything from completely free to well-prepared and structured. Contact and information seeking missions have, in some cases, just been door knocking and keeping your fingers crossed that anyone will find time to give information. In other cases, interviews have been well prepared by fax/letters in advance and included a booked meeting with someone at a certain time. The first kind being more common in the early stages, often leading to another meeting at a later stage. On such occasions it has also been an advantage to be a foreigner as that simple fact has made people less inclined to deny a short *"door opening"* conversation. On the next occasion a form of semi-structured meeting (interview) has often followed where the conversation with the appropriate person to question has been prepared. Not seldom though, higher ranking persons are pressed for time, and have delegated a mid-rank official to look for more material or to show, e.g. the port area. A line of action that gives a possibility to discreetly double check information from the first interview.

Initially, interviewees in the FSU area have often shown a certain reluctance towards an interested visitor from a university. Often because research in this form was never performed by universities during FSU years. Research was instead the interest of different research institutes, often organised under the appropriate Ministry. It has not been less surprising that the visitor has been a foreigner taking an interest in ports and shipping related issues. To somewhat compensate for the fact that the time spent by the interviewee answering questions has not been revenue generating, the interviewer has always tried to include a component of information sharing about issues discussed. A thin line to walk though, as discussions have mostly become smoother when the interviewee has come to understand that the visitor also possesses a certain knowledge about the line of business being discussed. At the same time it has been important not to inform about, what the sources could consider to be secrets, or even sensitive matters, thereby making the present interviewee believe that the same could happen to any sensitive material that he might

reveal[11] In all these situations, the interviewer's previous working experiences, that includes several years as travelling sales representative and being of above average PhD student age, have been of invaluable importance to get accepted as a creditable *"partner"* from the interviewees.

A drawback for any interviewer approaching a commercial structure, not representing a potential customer, is always that what can be hoped for is that the interviewee, for one reason or the other, finds it interesting enough to let normal duties be. Being exposed to the mercy of others, it has not been possible to organise meetings / interviews with certain key people that would have been of great interest to meet. This is especially so for high-level decision-makers, both on the state and commercial side.

The language used has in nearly all cases been English and in some unique cases German. The use of English has been inevitable, because the interviewer's knowledge of Russian is far from sufficient to keep up a longer conversation. In probably less than 10% of the cases, interviews have been translated from Russian by company interpreters to English. The use of a language that is foreign to both parties involved is not positive for mutual understanding. What is positive, when it comes to the use of foreign language in the port sector, is that all through the Soviet Union years, foreign contacts have been relatively frequent in ports due to visiting foreign ships. The process of selecting people to meet has generally come be steered towards officials that are English speaking. Knowledge of English is generally widespread in administrative circles of the port sector, and is continuously becoming even more so, although sometimes at a pigion level. If seen as a selection criterion of people interviewed, language knowledge has to a only a limited extent negatively affected the possibility to conduct this kind of survey, and the results obtained. The most severe effect is probably that it has slowed down the process and made it more difficult to carry out.

As for the reliability of spoken sources, this is a difficult issue. With time, it is probably so that the sources have become increasingly reliable. First from increasing knowledge on the interviewer's side allowing for better understanding of the subject. Time has also increased the awareness on behalf of the interviewees that the fact seeking in this case has been a constant process over several years giving the interviewer increasing

[11] *"He"* has been used here as probably well over 90% of the interviewees and conversation partners over the years have been men. Nothing unique for the FSU area though, as by mid 1999 3% (2 of 65) of Sweden's heads of ports were women (Association of Swedish Ports 1999).

creditability. After all , it is very little of the material collected and the notes taken during interviews that turn up as statements in this text. Instead, the large number of meetings with people in different lines of business related to ports, and people working in ports, adds-up to a stronger general knowledge, as well as a spontaneous feeling for what is reasonable and probable in different situations. The influence from any type of misunderstandings during interviews, e.g. because of deficiencies in translation or lack of English knowledge, will most probably have been compensated by later experiences.

To sum up what has been mentioned about both written and oral sources above, the general impression must be that the reliability of different sources can often be questioned. To somewhat compensate for this, the area of study has been visited many times over the years of study, including all the ports covered in the study. Visits that have been made to include the actual port areas where the physical handling is performed. Another way to compensate for possible deficiencies in reliability is that a wide range of written sources have been used, to widen the understanding of the subject studied.

1.4. Delimitations

1.4.1. Time: 1990 - 1999

In relation to time, the processes that are focused upon in this study were initiated shortly before the disintegration of the former Soviet Union. A period of time that is often referred to by its two slogan-like words "*glasnost and perestroika*" [12]. Words that are more associated with the early stages of this transition process. A transition that came to accelerate after the attempted *coup d´état* against President Gorbachev in August 1991, an incident that triggered the final breaking up of the Soviet Union and the forming of the 15 new states, among them Estonia, Latvia and Lithuania. Material used here has continuously been collected during this process, with most of the written material referred to as sources having been issued during the period 1996 – 1999. The personal interviews, and those

[12] *Glasnost and perestroika* could be translated as *"openness and restructuring"* and are in the West often described as associated with President Gorbachev, 1985 - 1991, but several *"perestroika"* came to be initiated during Soviet years by different leaders, e.g. by both Stalin and Brezhnev. The *"glasnost"* initiative, on the other hand, was more unique in its approach and nothing similar, of this size, had previously been tested during Soviet times.

by telephone or fax/letter, in most cases refer to the same period of time. The overall time-span covered is, more or less, from the beginning of the 1990's until mid 1999. To find specific kinds of background information, a number of invaluable older sources have also been used when needed.

With the aim of using comparable statistics for all different aspects included, it has been attempted to use as up-to-date statistics as possible, and when possible including the first six months of 1999.

1.4.2. Geographical limitations: Russia and the Baltic Sea[13]

The study is limited to the parts of the FSU port sector directly affected by the geopolitical changes that have taken place in areas adjacent to the Baltic Sea. The description given of ports and projects is focused in this study upon ports in Russia and only Russian ports and projects are therefore described in greater detail. In a follow up study to this one, the intention is to widen the focus by giving a more in-depth coverage of port infrastructure in the Baltic states as well.

There is a somewhat unique, geographical problem that arises when studying ports in this part of the world. In the former Soviet system, central decisions steered the cargo flow to the port available. Depending on the type of products, average transport distances could be anything from 1000 kilometres to both 2000 and 3000 kilometres (Mellor 1982, North 1996). Therefore, the border between regional and national has become blurred for the ports. The habit among hinterland shippers to use very distant ports in relation to the site of production has not changed much, largely due to the relative scarcity of ports. Therefore it is still a problem to establish the origin of cargoes as large raw material resources and other transport generating activities, located very far away from the ports, could still be of importance.

The hinterland of Russian, Baltic and many of the larger European ports, has today become increasingly hard to demarcate, in the way that this has traditionally been done by the likes of Mayer (1957). Increased influence of the choice of transport routes, from other factors than just price, and particularly so under increased competition, has made it ever more difficult to establish the hinterland of a particular port (Hoare 1986, Klaassen 1987). As a result of this, it has become a more delicate matter to

[13] A map over the FSU area can be found in appendix 1.

make estimations about the present and near future potential of a port. The number of factors that must be considered relative to its competitors has increased dramatically. This is presently the case in this region too as competition is a novelty that since the beginning of the transition has come to reign over the whole of the FSU area. For these reasons, port development in regions, that are over 1000 km away, especially in the Russian North West, will also be thoroughly covered here[14]. This, because the development, in e.g. the Baltic Sea area is likely to influence the development of the ports in the Russian part of the Barents Sea area, and vice-versa, as much as any form of regional initiatives will. The near non-existence of proposed port projects on the 400 kilometres of Russian coast line in the Black Sea is in itself proof that the dynamics, and the demand, in the Russian port sector points elsewhere, i.e. the Baltic Sea[15].

1.5. Outline

The content of each of the following chapters is briefly outlined here just to help the reader that wants to find a short cut to his area of interest, or just to better familiarise himself with the content of the different chapters.

Chapter 1 gives an INTRODUCTION to the study. The chapter gives the basic structure of the study, the aim of the study, methodology used in gathering information and limitations applied.

Chapter 2 introduces the concepts GEOPOLITICS AND TRANSPORT GEOGRAPHY. The term geopolitics will here be used as a means to assess the relation between the much bigger country Russia and its superpower contender USA, and its much smaller and newly-formed neighbours of Estonia, Latvia and Lithuania. Transport geography and ports as transport nodes are then introduced from a theoretical point of view before being applied more specifically to the FSU region.

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[14] Here the expression *"North West"* is used differently from its conventional Russian use. Here it is only used to denote four regions: Republic of Karelia, Murmansk Oblast, Arkhangelsk Oblast and the Nenets Autonomous Okrug.

[15] A number of proposed projects in the Sea of Azov has been identified, but as the Sea of Azov only offers a water depth of about 7 – 8 meters, such projects must be considered to be of only local importance. The only exception is the planned buoy-loading platform planned west of Novorossiysk for the pipeline from the Tengiz fields in north-western Kazakhstan. However, this projected pipeline was planned to pass both Dagestan and Chechnya where near warlike conditions look likely to jeopardise any type of larger project.

The last part of the chapter summarises possible Russian transport routes to the West, based on present constraints, derived from the incurred geopolitical changes and changes in transport geography.

Chapter 3 examines THE RUSSIAN SITUATION AND RUSSIAN TRANSPORT in greater detail to further prepare the fundament for the understanding of the more specific port issues. This description includes the economic situation in the country at large and a short economic-geographical assessment of relevant raw-material resources. This is followed by a presentation of existing ports and port projects, all within competitive reach of the Baltic Sea from Arkhangelsk to Kaliningrad.

Chapter 4 concentrates upon THE TRANSIT STATES and first introduces the economic situation in the region. The given description of the port sector is based on the ports legacy as FSU ports and their competitive situation in relation to Russian ports and other possible transport corridors in the region. A region that in this case includes Finnish ports that face a situation similar to the ports of the Baltic states.

Chapter 5 is devoted to SWEDISH FOREIGN TRADE WITH THE FSU; an empirical example. The emphasis here is first of all on the foreign trade between Sweden and the FSU. A considerable part of the chapter has been devoted to the presentation of the development, measured in volume, of Swedish seaborne trade with the countries of the FSU during the years 1993 - 1997.

Chapter 6 is devoted to FUTURE PROSPECTS. In this last chapter it is time to find, and tie together, all the lose ends from previous chapters, converting them into a logical synthesis. The chapter therefore recaptures and revitalises earlier discussions, but with a setting in the present and near future time.

Chapter 7 is devoted to the final CONCLUSIONS. The very last part includes the author's own conclusions based upon the facts presented in previous chapters.

2 THEORETICAL FRAMEWORK

2.1. Choice of theoretical framework

Before going into a more detailed description of Russian transport geography and the ports themselves, a general and brief outline of the geopolitical framework will be given to highlight the increasing importance of the Baltic Sea region. The following parts will include references to writers in geopolitics whose concepts have influenced the thinking in this field.

As noted in the introduction, the falling apart of the FSU came to initiate the changes that are focused upon in this study, a dismantling of a political system that begins in the late 1980's and slowly improves what had been a tense, but stable, state of relationship between the superpowers. It is during this period of time that the Baltic states re-appear as self-governing states and that the important port and transport geographical changes dealt with here will take shape. How this seemingly stable and relatively long lasting state of relations between the USSR and the USA, as the system's main actors, came to be formed and developed from WW II and onwards is the first issue that will be dealt with from a geopolitical perspective.

In the following parts of this chapter, a background is also given, in theoretical terms, to transport geography. What is concentrated upon is the situation facing ports and the transport corridors used to reach these ports, including a summing up of possible Russian transport corridors to/from Western Europe.

2.2. Geopolitics – with applications

2.2.1. Conceptions and their inherited meaning

Any concept introduced in a text carries an inherited meaning, but the meaning might vary for each reader depending on the reader's background and previous experiences (Holme & Solvang 1991, Sayer 1992). Therefore, this first part will introduce some of the concepts related to geopolitics that will be briefly commented upon.

"The first thing that comes up in our minds when thinking about a foreign power is, without doubt, the picture of a map"
(Kjellén, 1917, p. 20, author's translation)[16]

This quotation shows how strongly we relate a state to the land surface it dominates. These words by Kjellén are still as valid as ever, but what is often forgotten is the fact that pattern showed on a map is only a static picture of the world as it looked at the time when the map was drawn. This pattern, as illustrated by borders between countries, has over time been constantly changing. The region under study here, e.g. what today is the Baltic States, serves as a very illustrative example of this. During this century the number of border adjustments has not decreased in proportion to e.g. increased level of economic and social well being in the countries involved. On the contrary, one can even say that Europe of the late 20th century has few borders that are older than most borders between e.g. nations in Africa (Taylor 1993).

This constant process of change, when strong states extend their sphere of influence relative to weaker states has over time been given different names. Geopolitics could well be compared to the older, and more negatively sounding term, Imperialism. The often violent expansion of the Spanish and the British empires in the 16th to 18th centuries were given the label imperialistic. In the 20th century, the long and world-wide, struggle for influence between the superpowers, has instead been staged under the label geopolitics. An attempt to structure the use of the two expressions in a simple way is given in figure 2.1.

C o n c e p t i o n :	***Geopolitics***	***Imperialsim***
S i g n a l :	***Rivalry***	***Dominance***
W h e r e :	***Between East and West***	***Between North and South***

Figure 2.1 Interpretation of concepts within political geography

Source: Author's adaptation of Taylor (1993)

[16] In Swedish: *"Det första som kommer upp i vår fantasi vid tanken på en främmande makt, är utan tvifel en kartbild"*. Rudolf Kjellén (1864-1922) is said to be one of the writers who introduced the term, and the science, Geopolitics. The quotations included here, and on the next few pages, are all from the book *"Staten som Lifsform"* (1917). The book was originally written and published in German with the title: *"Der Staat als Lebensform"*.

2.2.2. Geopolitical changes and the Baltic states

Academically, geopolitics could be defined as a subject on the borderland between political science and geography, a definition that is hardly controversial. The intention here is not to define the domain of Geopolitics, but it could for simplicity be said to cover studies of the importance of the geographical factors on the political process.

Perhaps the first writer to become internationally renowed outside the German-spoken world in this field was Halford Mackinder, contemporary to the previously quoted Kjellén. A British scientist, famous for his long discussed, and later twice revised, *"Heartland Theory"* (Mackinder 1904). This theory came to have an influence on international (geo-) politics, and the actions of the superpowers of the world up to the end of the cold war. Fundamental for his line of thinking was that the British Empire had to see to it that Germany in collaboration with Russia, later the Soviet Union, would not come to dominate, what Mackinder had called, the "*Heartland of the world"*. However, it was the US, instead of the British Empire as Mackinder had assumed, that came to play the role as the leading power in the West. In his definition, the Baltic States were included in what Mackinder called the *"Rimlands"*. Indicating an area directly bordering Mackinder´s *"Heartland"*. He expressed his anxiety and fear for the development in three famous sentences from the above article[17]:

"Who rules Eastern Europe rules the Heartland
Who rules the Heartland commands the world-island
Who rules the world-island rules the world" (Mackinder 1904, p. 106)

During the Cold War period, deterrence came to be complemented by other ways of obtaining a *containment* of the enemy, in what came to be called the "*Kennan Doctrine"* (Kennan 1947)[18]. Much due to the technological development of different weapon systems, the level of "*deterrence*" came to influence the relation between the superpowers of the world through their mutual *"balance of power"*. The ultimate aim for this

[17] *"The Heartland"* should be understood as the great landmasses of the world that could not be reached from the sea, with its centre approximately in today's Central Asia. In the first version of his theory, from 1904, the heartland excluded what today are the Baltic States, included in his more detailed 1916 version, but again excluded in his 1944 version (Mackinder 1916 and 1944). Whether the Baltic states were included in the heartland or the rimlands was somewhat ambivalent, as the borders of the heartland area did not follow national borders.
[18] The article first appeared in Foreign Affairs under pseudonym: *"X"*.

balance, that came to result in an *"arms race"*, was for each of the contestants to create for himself a position superior to the position of the opponent. This was in line with Mackinder's Heartland theory that the position of the Soviet Union, especially after WW II, was superior as most of the Heartland was still to be found within the Soviet sphere of influence. Consequently, countries in the West needed nuclear arms to be able to stop any possible further expansion of the "*communist threat*". At the same time the Soviet Union could, from a completely opposing point of view, argue along the same lines to motivate, e.g. its own needs of nuclear arms. A conclusion to this political lecture could be that:

> *"Some ideas never seem to go away as long as they continue to have an ideological utility" (Gray, 1977)*

As the Heartland was under the restriction of the potential enemy, from a US point of view, it was seen as a necessity to restrict, as far as possible, any further enemy expansion. One way to obtain this for the US was to foster the relations to, and to secure strong influence in, a number of countries in what Mackinder called *"rimlands"*. It was here, in the rimland with different movements and governments as agents, that the battle between the two superpowers indirectly came to be staged. The whole rimland had to be supported, simultaneously, so that the influence of the enemy could be contained. The theory about the falling domino pieces fitted in very well to explain why the wars in Korea and Vietnam had to be fought. Wars fought to stop the spread of communist ideological influence in a rimland of crucial importance.

A number of writers in geopolitics, following decades after Mackinder, have also based their theses on the global level and have attempted to further explain the factors that influences global processes. A more functional approach was introduced by e.g. Gottman (1973), among others. The geopolitical thinking of this group focused on forces that could break up or unite a state, but with the state as a given unit.

Wallerstein (1984) however, argued that the whole world should be considered as one unit. A logic result of Wallerstein´s first thesis was that social changes in one country could only be understood as an integrated part of a larger system. At the same time, Wallerstein presupposes the existence of a *"world system"* and that the world only consists of one single market and that this market is capitalistic. The production that takes place is not to be consumed by the producer himself, but is supposed to be traded.

Braudel (1984) argued for the influence of a global process where fundamental changes in the character of a state could be explained through slow and irreversible changes in economic and social roots. Changes that lead to what Braudel called "*longue durée*".

Another, not as strictly defined line of thinking, described as "*Containment by Integration",* was about to become an alternative to the superpowers just after the end of WW II (Gaddis 1982). An approach that could have manifested itself in different ways, e.g. by offering close ties on different levels and that could have been tried earlier and more persistently. Alternatively this approach should have been organised through international organisations like e.g. the League of Nations, or later the UN. Instead, this form of integration approach never came to be given a full-scale test until after the end of the Cold War when Russia slowly broke with its traditional way of seeing the world as bi-polar (Bundeszentrale... 1992). The relations between East and West that, for the most part reigned from the last years of the 1980's and through the 1990's, could be seen as the first full-scale test of this theory. If the transition period has been only positive to the development of, and stability in, the world remains to be evaluated by geopolitical scientists.

When turning our attention to contemporary Europe in the field of geopolitics one writer especially needs to be mentioned, the influential English scholar Peter Taylor. He gives his view about the purpose of the subject in the preface to his best selling book *Political Geography*:

> *"Political Geography is at the centre stage in attempts to unravel the complexities of our modern world"(Taylor 1993 p. x)*

If the interpretation about what should be dealt with within the subject of geopolitics that Taylor made is correct, then this study does exactly that. It focuses on the present situation for the larger of the FSU ports and the geopolitical and transport geographical changes that have taken place in the Baltic Sea region during this decade. The real impact of these changes will probably not be fully understood for another decade by the parties involved. The fact that the economic co-operation in the East under the auspices of the CMEA, the Warsaw Pact and the entire Soviet Union could disintegrate so quickly, and peacefully, was difficult to anticipate[19].

[19] The former US presidential security advisor Brzezinski in his book; "*Game plan: a geostrategic frame work for the conduct of the US - -Soviet contest"*, could be said to have foreseen the break-up *"...changes are inevitable. The only question is whether change will be deliberately facilitated by the*

In a way it was surprising that some major "*astonishing events"* in the former East could occur without having been correctly anticipated by the West, as was had been the case with the Hungarian rebellion, China's break with the Soviet Union and the Soviet crack-down in Czechoslovakia in 1968 (Billington 1968).

Nevertheless, the falling apart of the Soviet Union made possible the re-creation of the Baltic States. These geopolitical changes around the Baltic Sea also came to materialise in fundamental changes in the transport geography of the region, among many other kinds of changes. A number of ports in the Baltic Sea have come to be given an increased importance as nodes in the centre of these changes in transport geography. Ports that will continue to stay in focus in the following chapters, but will then be approached from a number of other angles.

2.2.3. The Russian containment of the Baltic states

So why then have a few ports in the Baltic Sea become so important to such a large country as Russia at the turn of the millennium ?

Russia, in the geographical form it had during the late 19th century, as well as during the times when it was the centre of world communism, has always had its economic centre of gravity placed well west of the southern Ural Mountains (Popova 1974, p.191). This relatively densely populated and heavily industrialised part of the country has always been the centre of industrial production, agriculture as well as the origin of most of its foreign trade. It is in this part of Russia that transport volumes are generated that are either imported or exported and thereby creating a demand for port capacity.

The contour that the Russian borders have after the break-up of the USSR can be seen as the result of a political process in space. In its current shape, Russia has natural access to open sea in all four cardinal directions. A brief evaluation of the situation along these outer borders shows that the access to open sea, that could look advantageous, is in reality more of an illusion. In the north, Russia has only two major international ports, Murmansk and Arkhangelsk, but practically only Murmansk can handle

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powers that are in a position to enhance this process, or whether it will be inhibited and obstructed, and therefore take place through revolutionary upheaval" (Brzezinski 1986 p. 70).

regular all year traffic[20]. East of these two ports, along the Arctic coastline, a lot of mostly very small, but locally important ports, can be found. In the Far East there is a number of ports located along the Pacific coastline, but most of them have severe ice-problems and only a few of them have an inland rail-connection. Of possibly ten different alternatives only the three most southern, Vladivostok, Vostochny and Nakhodka can be considered to be operating efficiently, according to Russian standards. Their main problem is that they are located thousands of kilometres away from their main markets in central Siberia, and nearly two weeks away from Moscow by regular freight train. A severe problem along the whole of the Russian southeastern land border is an exceptionally practical problem for transport. The width of the railway-gauge in the FSU area was made wider than in its neighbouring countries; 1524 mm instead of the more commonly used standard of 1435 mm. Along all outer land borders of the FSU, this same problem occurs, with Finland and Mongolia as the two exceptions. Along the southern coastline, in the Black Sea, only Novorossiysk, the largest of the FSU ports, and the port in Taupse remained under Russian control. All other important ports in the Black Sea, like Odessa and Nikolayev, are now Ukrainian, while some smaller ports, like Batumi and Suchumi, are situated in Georgia. Finally, the access to the Baltic Sea, that has been a crucial geopolitical fundament throughout Russian history, has once again been severely curbed by the third loss of direct access to most of the Baltic Sea coastline[21]. An access lost to the Baltic states that are all sharing most of their borders with Russia. Domestic Russian deficits in infrastructure are at the same time likely to increase the desire to maintain jurisdiction over the scarce resources available, and possibly also over lost ones, and thereby enhancing the geopolitical importance of infrastructure.

Because of the problems described above it is along the western borders that the bulk of Russian exports and imports are transiting, and most probably will continue to transit[22].

[20] The detour needed to reach e.g. Hamburg from Moscow via Murmansk instead of Tallinn add some 1500 km, or approximately 90%, extra to the transport distance by sea (Lloyd's Maritime Atlas 1998).

[21] Losses of access to the Baltic Sea that have occurred in 1918, 1940 and in 1991.

[22] Transit should here be understood as the transport of cargoes passing the port area en route to a customer in the hinterland of the port, or to a ship in the port (Vigarié 1979).

2.2.4. The containment of Russia by the Baltic states

Since the break-up of the FSU, the three Baltic States have a number of, according to their own needs, well-oversized ports. If seen from a Russian perspective several very important ports, that at present are foreign, have as a result of the formation of the Baltic states come to be an infrastructure beyond direct Russian control[23]. The geopolitical importance of these ports is given by the fact that they, to 70 - 95%, handle cargoes "*en route*" from or to Russia. The most important of these ports in the Baltic States, from north to south, are Tallinn, Riga, Ventspils, Liepaja and Klaipeda. (See figure 4.1). As a result of these changes, the Baltic states now house a number of ports that have come to be exposed in an enhanced and bright geopolitical focus, after the dissolution of the union. It is this Russian dependence that constitutes the basis for the discussion about the geopolitical situation and again the writings of Kjellén fit in well to describe, in some few words, the complexity of the situation:

> *"Even statebodies have their Achilles heels and their hearts. Such vital parts are primarily the capitals and the big arteries of trade"*
> *(Kjellén, 1917, s. 50, author's translation)*[24]

It is without any doubt so that the Baltic states, of course involuntarily, have come to hurt the Achilles heel of their big neighbour and this will remain a constant source of irritation, even when all other reasons for conflicts have been sorted out[25]. To hurt the Achilles of a state like Russia becomes extra sensitive, as Russia happens to be a state that is in general disorder and that experiences a period of deep economic crises. At the same time it is a state with a constantly increasing dependence on world trade, and where the westbound trade routes will continue to be of great importance for foreign currency earnings. It is as break-bulk points on these important routes that the ports of the Baltic States have become key-players in a large-scale geopolitical game. Russian transport problems, the factor that is being stressed here, are not the only problems taken into consideration when the Russian side evaluates its relation towards the Baltic States. There are, of course, many other aspects that can be

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[23] A perspective that sees Russia as the natural bearer of the Soviet heritage.
[24] In Swedish: *"Äfven statskropparna ha sina Achilleshälar och sina hjärtan. Sådana vitala delar äro främst hufvudstäderna och samfärdselns stora pulsådror".*
[25] What is often referred to is the large Russian ethnic minorities in Estonia of approximately 30% and in Latvia of approximately 34% (Smith 1995). Another unsettled issue is the border disputes between the same three countries.

considered as problematic from a Russian horizon, than just questions connected to transport issues. Transit issues though, have by the Russian side often come to be used as a way of executing pressure on the Baltic States for results during negotiations, or as a form of punishment, no matter what has been negotiated.

Such is the situation today for the world's largest, but when it comes to the access to ports, severely restricted country. A country that now must use what have become foreign ports in the Baltic States, which puts both the control of and the handling of cargo in foreign hands. All costs for the use of these transit routes, the cargo handling and all other transport expenses, must now be paid in hard earned foreign currency by Russian cargo owners. Russia has not only lost the above mentioned transit routes and infrastructure, but also, and not least important, the direct control over transports *"within"* the country, which is an important psychological factor for the national self-confidence.

The aim of this first part of the chapter has been to give an outline of the geopolitical development that has formed a background to the changes that have occurred during the transition period. In the continuation from here the focus of the chapter will turn to problems related to transport geography being the result of the geopolitical changes just mentioned. After a theoretical introduction, the focus will be placed on transport corridors and the position held by the different ports in these corridors, questions that are pivotal for the understanding of the shifts in transport patterns.

2.3. Ports role in an economic geographical context

2.3.1. A theoretical introduction to transport geography

Regardless of the political system applied, the need for transport is generated by the desire to move goods from one location to another. The main generators of transport have traditionally been industry with its need to move bulky raw materials to be processed and then to transfer the semi-finished goods to other locations, or to distribute finished goods to consumers.

The three main types of transport needs could then be summarised as:

-- Re-allocation of raw materials and power resources
-- Transfer of semi-finished goods
-- Distribution

The essence in the academic interest, from a geographical point of view, in transport studies is well summed up by Ullman (1956):

> *"transportation is a measure of the relations between areas and is therefore an essential part of geography"*

A century ago though, the academic approach to study processes in transport geography often concentrated upon the prerequisites given by nature for the routing of transport (White 1977), which has also left its mark on some Soviet studies (Mathieson 1975). Later approaches attempted to explain the compromise in infrastructure construction cost with the cost of operation. This angle was in line with the work of Alfred Weber (1909) that thoroughly studied the effects of different factors on industrial location and saw transport costs as one of the decisive factors[26]. Decades later though, new methods and techniques allowed complicated networks, which in the meantime had come to be developed, to be described in greater detail. Ever more complicated transport needs, e.g. in the military sphere during the two world wars, came to initiate new approaches to transport research and logistic solutions (Trolley and Turton 1995). Behavioural principles as an approach to transport geography in recent times have come to foster advanced studies in new directions, such as studies of supply-demand relations and mobility (Hoyle and Knowles 1992).

In most cases of transport, and in line with the general principles of *economies of scale*, transport costs per both distance-unit and weight-unit will fall up to a certain volume and distance. Other factors than pure transport cost per unit should also be considered though as the longer the distance the longer the transport time, and normally also the risk involved. The modal decision from a transport buyer's point of view is often based on the desired combination of factors like volumes to be

[26] The detailed mechanics of Weber's theory of industrial location is comprehensively explained in Lloyd and Dicken (1990).

moved, frequency, timing, length, availability and price[27]. In Figure 2.2, the difference between three common carriers has been outlined to show that the longer the distance the more likely is the use of water transport[28]. This figure indicates a linear correlation between cost and distance that, of course, only under perfect conditions is as clear cut as is indicated. Besides, the price quoted for a transport service is not necessarily enough to cover the costs involved. This shortfall could be compensated for by a subsidy to cover some of the fixed and/or variable costs, or a combination of the two. A subsidy can be given by e.g. the state on social grounds or by a private operator that can *"subsidise"* in the form of under-pricing, to e.g. encourage the use of a service. It must be remembered though that the prices quoted depend not only on the combined cost structure for the transport service rendered, fixed as well as variable, but in a market economy as much on the competitive environment in which the transport company operate.

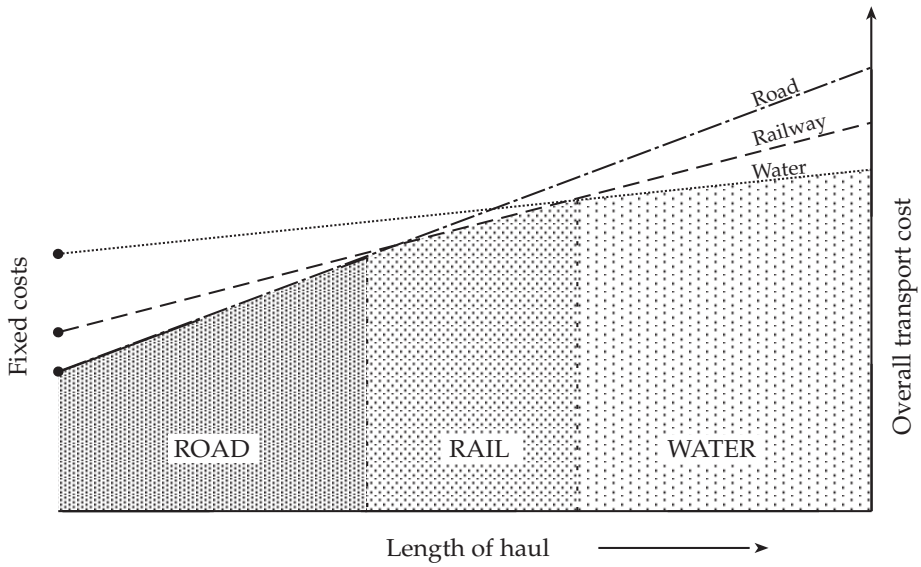

Figure 2.2. Relation between fixed and variable costs relative to distance

Source: Author's adaptation of figure in Smith (1971 p. 72)

[27] What is considered here is only freight. When passenger transport is being studied, e.g. the purpose of the journey would be among the most important factors to study.
[28] Any reference to the influence of the size of the shipment has, deliberately, not been included in the figure.

A current tendency is that the cost of the raw material input in the sales price of goods is continuously declining. This is one factor that contributes to make longer hauls of low price goods possible, even though it has long since been known that generally it is more expensive goods that move further than cheaper goods (Haggett 1965). At the same time, a continuous shift in location of manufacture, away from its main markets, and to fewer production and distribution centres will inevitably increase average transport distances between manufacture and consumption. A process that is eroding the strengths of the findings of Weber, who emphasised the importance of transport costs as factor of location. Costs of transport continue to be of importance, but new manufacturing processes and an ever-increasing average goods value per weight unit forces transport buyers to seriously evaluate the importance of other factors like transport time, cargo safety and the quality of both the transport operation as such and its administration. A tendency that has opened up a new field of logistic services for both specialised smaller companies and larger international operators that both, as a part of their business idea, try to be present in as many markets as possible.

2.3.2. Ports and corridor competitiveness

The previous paragraph discussed transport geography and transport economics from a more general point of departure and this part will narrow the discussion to the position of the subject this study; the position of the ports from a geographic perspective.

A port is most often just one of many links, although important, in a long transport chain where several of the above mentioned types of haulages can be involved[29]. In this transport chain it is commonly so that a port alone can not decide its possible success. Each port remains dependent on other actors in the chain and the competitiveness in terms of quality and cost of the whole transport chain used by a transport buyer[30].

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[29] A transport chain is here defined as the routing of transport used for the transport of a consignment by a cargo owner. Transport corridors, on the other hand, are the results of concentration of transport chains to certain corridors. Corridors that originate / terminate in transport generating / absorbing points that are relatively limited in number, when referring to larger corridors.

[30] *"Havnens rolle i transportkorridorer"* (*"A port's role in transport corridors"*; author's translation) by the Norwegian Institute for Transport Economy (1998:a) is an extensive study that uses this point of departure.

In any situation a port can, of course, positively contribute to the competitiveness of certain transport corridors, where it serves as a node, by offering reliable basic services like:

-- Deep enough waters
-- Good availability of quays
-- Suitable/compatible equipment
-- Efficient handling
-- Good general service level

If a suitable mix of the factors mentioned above can be offered it will certainly enhance the possibility that a specific port will be used, i.e. be included in the transport chain. The situation for the port becomes problematic though, when several other ports in a region can simultaneously offer the same set of factors or services. The decision of a consignee as to which of these ports and/or corridors to use can therefore, in the end, come down to a negotiation about the handling price charged by the different ports as the decisive factor.

For a port, as with any other kind of business undertaking, there are a lot of factors in the surrounding milieu that influence the future of the operation, which is exemplified in Figure 2.3. Some of these factors can directly, or indirectly, strengthen the position of a certain port, in both economic and turnover terms, while others can prove to be as negative for the development.

The port itself can indirectly influence some such factors, while the effects of others must be seen as beyond the control of an individual port. How the port should position itself in relation to such changes is an important commercial decision. As demonstrated by Figure 2.3, a large number of factors can be identified that all influence the performance of a transport system which complicates decision making.

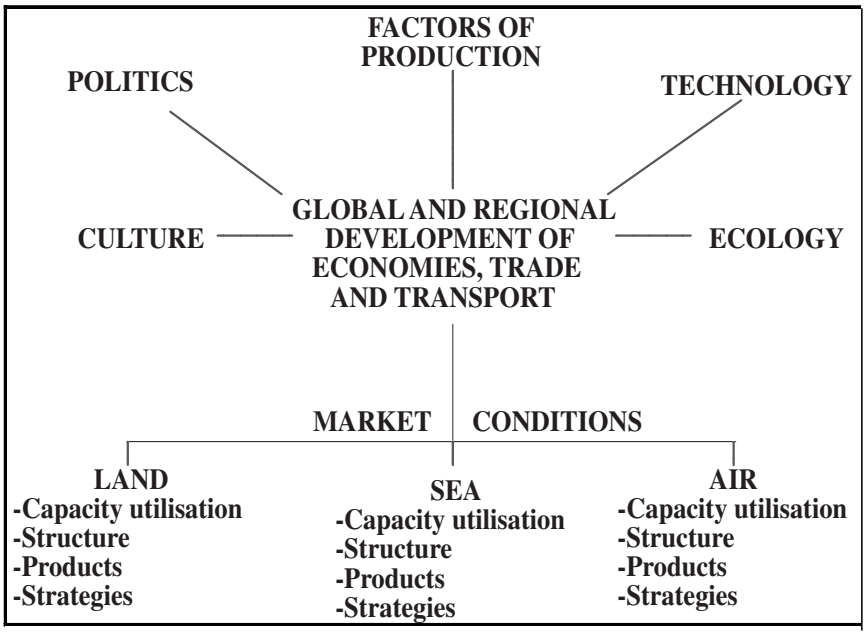

Figure 2.3. Generation of transport demand

Source: Author's elaboration of a figure developed by the Swedish Institute of Shipping Analysis (1998)

With focus upon a number of sub-factors, as outlined in Figure 2.4, a port's relation to several external forces and development trends today, and in its planning for the future, is of great interest. Present development trends can show different faces in different ports, but will largely depend on the set of factors shown in Figure 2.4. The importance of the factors for the individual ports can often be derived from e.g. history and current geographical position, which will also influence the future development of the port. Still, these trends force management to take strategic decisions, as do factors like rivalry among existing ports and the appearance of new entrants in the market. Through their geographical position, ports are an interface between sea and land, but also a point where compatibility between handling systems is put to both an economic and practical test. A test where much time and money can be saved if handling is optimised correctly, and much competitiveness could be won.

Figure 2.4 emphasises a number of factors that will most probably influence the situation for ports in the near future, especially so in an FSU setting. Factors that will all be commented on separately in the following.

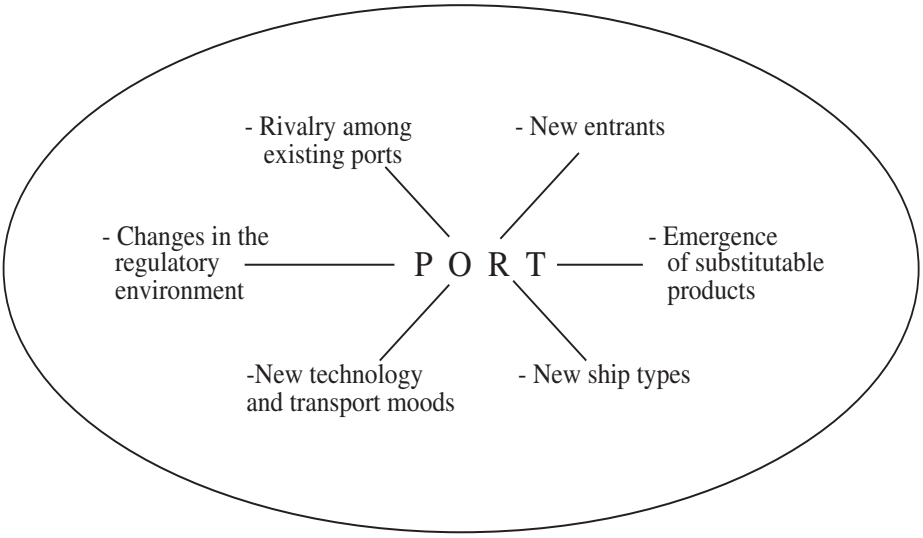

Figure 2.4. External forces, influencing ports

Source: Author's elaboration of a model by Östergaard (1998)

Changes in the regulatory environment for Russian ports have been frequent, and more often then not unexpected, during the years of economic transition. National legislation concerning ports should constitute the same kind of restraint on all ports and ought not to result in competitive advantages or disadvantages for one port in relation to other ports. If this is the case, in today's Russia is beyond the scope of this study to examine and would probably not be possible to fully establish. Changes in the regulatory environment also refer more to regional and local regulations that, of course, can be both advantageous and restrict the freedom of the port operator. In this respect the situation in the Baltic state has been much more stable and has instead been focused on improvements in the competitiveness of domestic ports in relation to those of the neighbouring countries.

The two items at the top of the figure, rivalry among existing ports and new entrants, include the two factors that are mainly dealt with in this

survey. Both are of great interest for the possibility of evaluating the future of Russian and Baltic ports.

Rivalry among existing ports is fierce in this region, but has only become so during the transition years. In the previous centralised system, ports in the FSU did not compete due to the centralised division of cargo between the different ports. After the break-up of the FSU, it took time for the prerequisites for a more open competition to come into being. In the last few years of the 1980's and the first years of the 1990's, total volumes handled in Russian ports were on the decline and during the first years of Baltic liberation this trend continued. During the past 6 - 7 years, this has completely changed and competition in this region is as aggressive as in other important port regions, e.g. in the North Sea range.

New entrants are generally not very common in the port sector, as the barriers to entry are much larger than in most other sectors of business society. Ports are first of all extremely long-term investments that need large waterfront areas. Areas that are expensive to acquire, their development is most often sensitive from an environmental point of view and it is often so that suitable sites are located adjacent to population centres. The most common practice is therefore that an already existing ports open up a new, or re- developed/equipped, terminal that can become what here is called, a *"new entrant"*.

The relatively short Russian coastline in the Baltic Sea is now scattered by proposed port projects even though not all of these projects are likely to develop in full scale; perhaps two or three are. Their entrance in the market will severely disturb the existing balance between ports and further increase competition. Another new entrant, but in a slightly different form, is an ever expanding net of direct cargo-train connections. A system that, during the years of transition, has been expanded to connect the biggest European ports such as Rotterdam and Hamburg. Systems that are intended to attract first of all containerised and other valuable cargoes directly to the ports in the North Sea range (Nuhn 1996; van Klink and van den Berg 1998). A concept that is constantly finding new customers and that attracted no less than 27 000 container units (TEU) from the Warsaw region, to the port of Hamburg in 1997 (Lloyd's List 1997-12-12)[31]. Such transport systems will continue to expand and

[31] A volume that corresponds to nearly 70% of the TEU turnover in nearby Klaipeda in Lithuania and nearly 15% of total TEU turnover in Polish ports in 1997 (Port of Klaipeda 1998 and Swedish Maritime Administration 1999:b).

become even more far-reaching into the former East, and Russia. Different logistic solutions, of which this is just one example, are likely to develop into strong competitors of the ports in western FSU as the reach of this kind of networks continues to expand (van Klink and van Winden 1998). The fact that these competing systems attract the most valuable cargoes makes this form of competition extra sensitive.

Emergence of substitutable products does not relate so much to the actual port as to the type of cargoes handled in the port. An example is the appearance of new products, or substitutes to products that are handled in the port. Sooner or later, the result of this will be the loss of cargo volumes for the port as trade routes are re-directed locally and/or internationally. A development that an active port constantly must be aware of and prepare for. This is best done by maintaining a close relation to important customers and by being aware of development trends in it's most important customers lines of business. An awareness that includes a continuos search for, attraction, and development of new business opportunities whenever possible.

New ship types that are being developed could mean that a port must invest in new equipment to be able to handle cargo to and from these ships. A common need of new ship types is often deeper waters, which could call for expensive dredging of approach channels to the port, extended turning areas for larger ships and the reconstruction as well as strengthening of quays. A decision not to deepen the waters in the port, when requested by shipping lines as a prerequisite for continued use of a port, often puts the port in a very awkward situation, risking the loss of traffic. Another typical example of new needs is the special equipment or quays needed to service special ship types or to increase the capacity of different kinds of handling equipment[32].

Such choices should be seen in the light of the fact that ports have far fewer possibilities today to remain attractive for cargo owners over a long period of time than traditionally which has been shown by several writers (Slater 1993; Rodrigue, Slack and Comtois 1996). Ports often have to invest heavily in new equipment and new terminals to stay attractive, but still find it very difficult to bind shipping lines and cargo owners to them for more than a year or two at the time. One possibility is to invite external

[32] Several ports, e.g. Göteborg in Sweden, have faced such choices in later years. In this case either to invest in the latest generation of Post-Panmax container cranes, or major clients have threatened to stop calling.

ownership, in part or full, to become terminal operating companies, which would then serve as an incentive to secure continued use of a certain port or terminal. What is otherwise at risk is that shipping lines and/or cargo owners make different transport alternatives, including ports, bid for the handling of cargoes in smaller lots, or for a shorter period of time, and in that way keep changing the port of call; *"hop-around"*. The aim of this practise is to bind less capital and to make use of the port and the transport alternative that, for the time being, proves to be the cheapest.

New technology and transport modes are problems facing all Russian and Baltic ports today. As for new technology, it refers to all types of technology, not only handling equipments like cranes and straddle carriers that are visible on the quays of the port, but also less visible equipment, e.g. administrative systems and cargo control systems. To make a port appear creditable in the face of long-term users, advanced new administrative computer systems will be needed, both to improve internal administration, like work planning and invoicing, but also to lift the handling side by the use of e.g. cargo tracking systems, to international standards. The trend in many ports of the former East, to have a large number of handling companies working in the port, could well prove positive in creating competition, but makes the introduction of these kind's of systems problematic. To make such upgrading economically viable a critical mass in handling is needed, which may be difficult to achieve under a system that promotes a widely dispersed ownership.

Another big change is in the modal split with an increasing share of cargoes arriving/departing on different vessel types, e.g. more RoRo and less bulk. To have a larger share of the cargoes transported by trucks to and from the port can prove to be a giant challenge to ports that have originally been designed to just lift cargoes in and out of railway cars. An extended use of trucks could, in certain cases, force ports to reconsider the whole present layout of the port area, as new and larger areas will be needed to allow increased driving and storing on the port premises. Especially so if the handling of containers is expected to increase[33].

[33] The possible implication of such changes is one of many dimensions related to morphological changes faced by several Baltic port cities. The most dramatic changes will occur where the port is located in the city centre, like in the two biggest cities St. Petersburg and Riga. This is an interesting subject in itself, but falls outside the aim of this study.

Of the six factors dealt with here, it is new entrants that constitutes the most severe threat to existing ports in the region under study in the near future. A fact that should make ports think twice before taking decisions to expand existing capacity. Not only will increased competition lower profit levels, at least theoretically, but can also induce other changes that can be difficult to foresee.

Before completely shifting focus to Russia and the Baltic States some trends in the European port sector need to be exemplified, especially so as the Baltic States currently strive at giving an as positive and, to EU regulations, as streamlined appearance as possible. Another reason for this outlook is that what will appear, as *"new"* trends in the FSU are likely to first have found their adaptation in Western Europe (Vare 1998). This as a result of the slowly rising western participation, and influence, in e.g. different FSU port handling companies. After this look at the European scene follows a description of the possible transport links connecting ports in the West with ports in the FSU.

2.3.3. Forced and necessary organisational changes

Institutional changes have been carried out in the port sector of the FSU, but as this and the following passages intends to show, questions concerning privatisation and competition are being discussed in the West from several angles. The purpose of this section is also to show that port competition is a controversial and far from easily resolvable issue even in a long-established market economic system.

During the Soviet years the transport sector, including the ports, has had large difficulties in achieving efficiency. Many reforms and large investments were directed to the sector to lift efficiency, but the payoff was not what could have been expected (EBRD 1992; Holt 1993; North 1995). Privatisation of public utilities to raise efficiency, in ports and other transport-related infrastructure, have long been discussed and partly initiated both in the West and in the East, despite the fact that this raises very complex issues that do not apply to other industries. Entities discussed for privatisation are often typically large and capital intensive, often critical to the functioning of the whole of the local, regional and in some cases the national economy. Utilities, like ports, are hence often viewed as being strategic. Parts of some ports are also natural monopolies in which competition is technically impossible, or very difficult, to achieve. For largely political reasons such public utility companies have

often charged low centrally controlled prices, compensated for by direct or indirect subsides. However, operations have still resulted in financial losses for the operator, i.e. mostly the state, a situation that does not refer to ports only.

To open up for competition and market economic thinking is not the same as converting former state assets into joint-stock-companies (JSC) which is the step often taken in Russia[34]. It requires much more than that. Russian ports have since 1993 been administrated by a Maritime Authority (Administration) that in turn lease facilities to what, during the first years, was mostly state-owned handling companies[35]. To achieve this, companies should first of all be removed from the control of Ministries when converted into self-governing and profit-seeking JSCs. JSCs that report to a board of directors, not completely put in place by the state. This has, in a way already been done in Russia, as ports have formed JSC's that generally lease the installations from a state controlled Port Authority. This port operator, often called "*Sea Commercial Port of Any-Town*" has been converted into a JSC where the state often remains as owner of at least 50% of the shares and often with the employees possessing a large part of the remaining shares. In this respect Russia is just one example out of several of the former centrally planned economies that have joined the trend in the West towards infrastructure privatisation; that is if the Russian measures can be called privatisation. Other such examples among transition economies are the Czech Republic, Estonia and Hungary (World Development Report, 1996 p. 57).

Even in the West the understanding of the true cost of port operations has often been hidden by subsidies, leading to user charges having rarely been cost covering. If this sector applied free-competition, an optimal allocation of handling in ports could be established. Small steps in that direction are being taken, but a breakthrough, in this respect, still seems many years distant.

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[34] JSC supposed to correspond to what in the West is called a company with limited liability, often abbreviated as Ltd. If that really is the case in a Russian setting is a juridical question, well beyond the scope of this study.

[35] The creation of Sea Commercial Port Administrations was made according to the Russian Federation Governmental Resolution no. 1299, from December 1993, named *"Organisation of the State Governing Sea Commercial Ports"*(Source: Copied from official documents presented in a Russian port).

The arguments used for a conservation of the present system are often:

- other ports are also being subsidised, or use some form of *"creative-pricing"*, and therefore have a bigger share of traffic that is being taken from competitors
- indirect effects that are generated by a port are such that subsidies can always be justified

Among others, Klaassen and Vanhove (1971 p. 546) criticise such lines of arguing by stating that the first of the two statements *"is circular"* to its nature and that the second is, *"quite frankly, false"*. However, all ports in their everyday operations face an as complex reality as was outlined in Figure 2.3 and 2.4. For many operators, the easy way out of a difficult situation will, at times, continue to be to call for state or regional subsidies or protection. As long as such procedures continues to be viable options, these types of solutions will probably stay in use.

To change a long standing tradition of subsidies in transition countries is not, and will not, be possible in a short period of time. The same way as it has taken a long time to initiate a public discussion in western Europe about these issues. Still, the sooner such complicated matter are attended to, the better. Privatising infrastructure could, or should, be one of several measures taken to facilitate fair competition. A restructuring that should at least be made to include the following four steps:

- Some form of commercialisation of the enterprises
- Attracting private sector participation through e.g. privatisation
- Attempts to introduce competition by separating the monopoly parts from the competitive parts, allowing new firms to enter in the competitive parts and possibly restructuring the monopoly parts
- Establishing laws and institutions to regulate price and quality in the parts that constitute the monopolies

The process of introducing one, or several, of these kinds of changes has advanced in the Baltic countries, but much less so in Russian ports. The need to introduce changes has been strong in the Baltic countries, often because of their intense attempts to impress on the EU by way of showing an open-minded attitude towards reforms and the competitive environment they work in. The reason behind this is that the EC has over the last two years started to tighten regulations when it comes to the avoidance of competition in ports and the EC has now started to push

forward on this issue. The intention is that even ports must open up to increased competition and that indirect aid to ports must be made public. In perspective, these are regulations that will have to be introduced in both Russian and Baltic State ports (Lindström interview 1999-05-12). To be called free competition from an EC perspective, the aspects as shown in Figure 2.5 must be fulfilled.

Aspect:	Example:
Ports must not receive discriminatory aid	Within the EU state aid may not be given without pre-approval of the EC
No abuse of dominant position	e.g. this could be in regard to a special market only forcing customers to take a service not needed a s o
Anti-competitive arrangements	e.g. alerting other parts about price increases, any form of discriminatory arrangements a s o
Essential facilities and an operation of such a facility may not, without an objectively valid reason, refuse to supply a service	

Figure 2.5. Aspects of free port competition[36]

Source: EC Green Paper on *Ports and Infrastructure for Shipping* 1997; Lloyd's List 1997-08-29, p.8

The privatisation of ports is not a new phenomenon, far from it, but still not very common either. Until late 1998, the world has seen a total of about 120 port privatisation projects. P&O Australia is the by far the biggest international private port operator. P&O have taken part in over 20 of these privatisation's. One early such contract for P&O Australia was also the first in Russia, and what seems to have been a fairly successful one. The privatisation of the container terminal at port Vostochny in the Russian Far East. A contract that was signed as early as in 1994 (Morskie Porti 3:1997). The other foreign partner in that project, Sea Land of the US, is also involved in the operation of a terminal in St. Petersburg (see also 3.8.3)[37]. These are just two examples, of an increasing number, included

[36] It is still debated and e.g. FEPORT (Federation of Europe's Private Ports) strongly argues that new legislation is needed to create *"a level playing field"* for ports in this respect (Lloyd's List 1999-04-02).

[37] The second biggest international port operator, Hong-Kong based Hutchinson Whampoa, has

here to show that foreign involvement in Russian port projects is possible and could be a possible future option for the restructure of ports in the region. In the Russian setting, it could sometimes be questioned whether enterprises can be restructured, though. In interviews and conversations, westerners active in Russia often stress problems like constant and unpredictable changes in legislation and that costs neither can be isolated, nor analysed, properly within companies. In turn, this forces investment decisions to be based on less rational information than it should be. Different forms of *"creative bookkeeping"* make it yet more difficult to set a real value to assets, but also to find out the exact future cost of liabilities carried by a commercial structure (EBRD 1998:b).

It is still not so that good availability of private funds and long established market conditions, as in the West, are a guarantee that the privatisation of ports and the expansion of ports are issues that are easy to handle but rather the contrary. One of the largest attempts to privatise ports, in later years, was the port privatisation plan for the UK, initiated in 1983. A plan that came to be introduced after changes and reversals to similar plans had been made over several decades (Goss 1998). Pre-privatisation criticism focused on the fact that the selling price set by the government was far too low. What happened was that on several occasions the winners of the tenders were able to re-sell their assets at a substantially higher value within two to three years, without having made any larger investments (Baird 1995). It is not only for economic reasons that it can prove problematic to privatise port assets, as initiatives by the new operators can spill over and create political turmoil in the region (Basset 1993). Evaluations of the British privatisation process show that the outcome has produced both positive and negative results; as in the form of job losses, increased job flexibility, increased productivity as well as company profits (Turnball 1991). Other, non-European, examples of port privatisations can be found in India and Argentina. The Indian experience has been similar to the British with difficulties in transferring the operation of port property to private companies (Shashikumar 1998). In Argentina, on the other hand, large freedom and public bidding for the rent of infrastructure and equipment have generated increased productivity, higher volumes and large tariff reductions (Estache and Carbajo 1996).

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made public (Lloyd's List 1998-02-20) that they are prepared to take on projects in the FSU. The main difference between the two is that HW rarely involve themselves in only terminals of ports, like P&O, as HW prefer to control the operation of the entire port.

It is not only in the UK, among the EU countries, that port privatisation has become a much-debated issue. The discussions at EU level are not only focusing around the selling price, but a wide variety of legal issues from price to financing as well as national policy issues (Rotterdam and Delfzijl, Lloyd's List, Netherlands October 1997; German Port Policy Warning, Lloyd's List 1997-10-27; Voltri-Genoa, Lloyd's List, Italy November 1997). It is obviously so that port privatisation, attempts to introduce transparency of accounts and the giving of undercover public financial support have stirred up a very infected debate in Western Europe. However, a marked tendency can be observed that stronger ties, - usually financial in nature- are being formed between ports and the private sector (Lloyd´s List Supplement June 1999). Still, it is perhaps utopian to believe that port and infrastructure privatisation could be initiated, on any larger scale, in transition countries for many years to come without a number of both pros and cons that must be sought out carefully first. By issuing its Green Paper on *Ports and Infrastructure for Shipping* (1997) the EC has at least set the stone in motion, but it remains to be seen how fast the member countries will allow it to roll, but also how far into the East possible changes will reach.

What has been discussed here so far is transport corridors for foreign trade and port development in very general terms. To prepare the ground for the discussion in coming chapters the following passages will now include different factors that distinguishes one Russian transport corridor from the other. Factors that make some corridors competitive while other find it difficult to attract cargo.

2.4. Possible Russian transport corridors to the West[38]

In the introduction to this study, Russia's transport containment was mentioned as an often-neglected fact. In nearly all potential transport corridors to and from Russia, the use of ports is inevitable, which enhances the international interest in free and fair competition in the FSU port sector. In previous chapters, this Russian containment has only been indicated, but what will be elaborated here is the problematic situation of finding suitable transport routes, confronting Russian international trade.

[38] In the following the text, for simplicity, only refers to Russian export transactions. The reason for this is that export volumes are normally many times larger than import volumes, but the discussion could simultaneously be said to cover even import transactions, in the opposite direction.

An attempted illustration of this is given by Figure 2.6. What is indicated in the figure is an outline of all major Russian trade corridors to countries in the West. In principle, ten different transport corridors can be identified, but as a simplification, these have been grouped into three main categories, being numbered from 1 to 3. Each of the three main categories indicated portray one of the possible types of trade routes that are presently available from a Russian horizon.

-- 1 - Direct link from a Russian port to markets in the West.

1A - *direct from a Russian port in the Gulf of Finland*

1B - *direct from a Russian port in the Barents Sea*

1C - *direct from a Russian port in the Black Sea*

The biggest advantage, from a domestic point of view, related to these three alternatives, is that they completely avoid the involvement of a third country for transhipment[39]. The ideal corridor of the three is, of course, 1A. Not even this is a route without drawbacks though, largely in the form of capacity restraints in the few existing Russian ports in the area; St Petersburg, Vyborg and Vysotsk. This route, over existing ports, is what has been indicated by 1Aa, while the lower leg of the arrow, 1Ab, indicates a possible future flow over what still are only proposed ports in the Gulf of Finland. Detailed descriptions of both existing, as well as the proposed ports will be given in later chapters, but what is stressed here is that the *would-have-been* ideal export route, for the time being remains a *could-have-been* ideal export route. The 1B alternative indicates the use of ports in the Russian Barents Sea, like Murmansk and Arkhangelsk. These two corridors, 1A and 1B, are also those of the Russian alternatives that will be most extensively covered in later chapters, as both have their natural direction towards the West.

[39] A possible 1 D route would be shipments over ports in the Russian Far East, or overland through the Central Asian republics and China, but these alternative routes includes too long de-tours to be considered further.

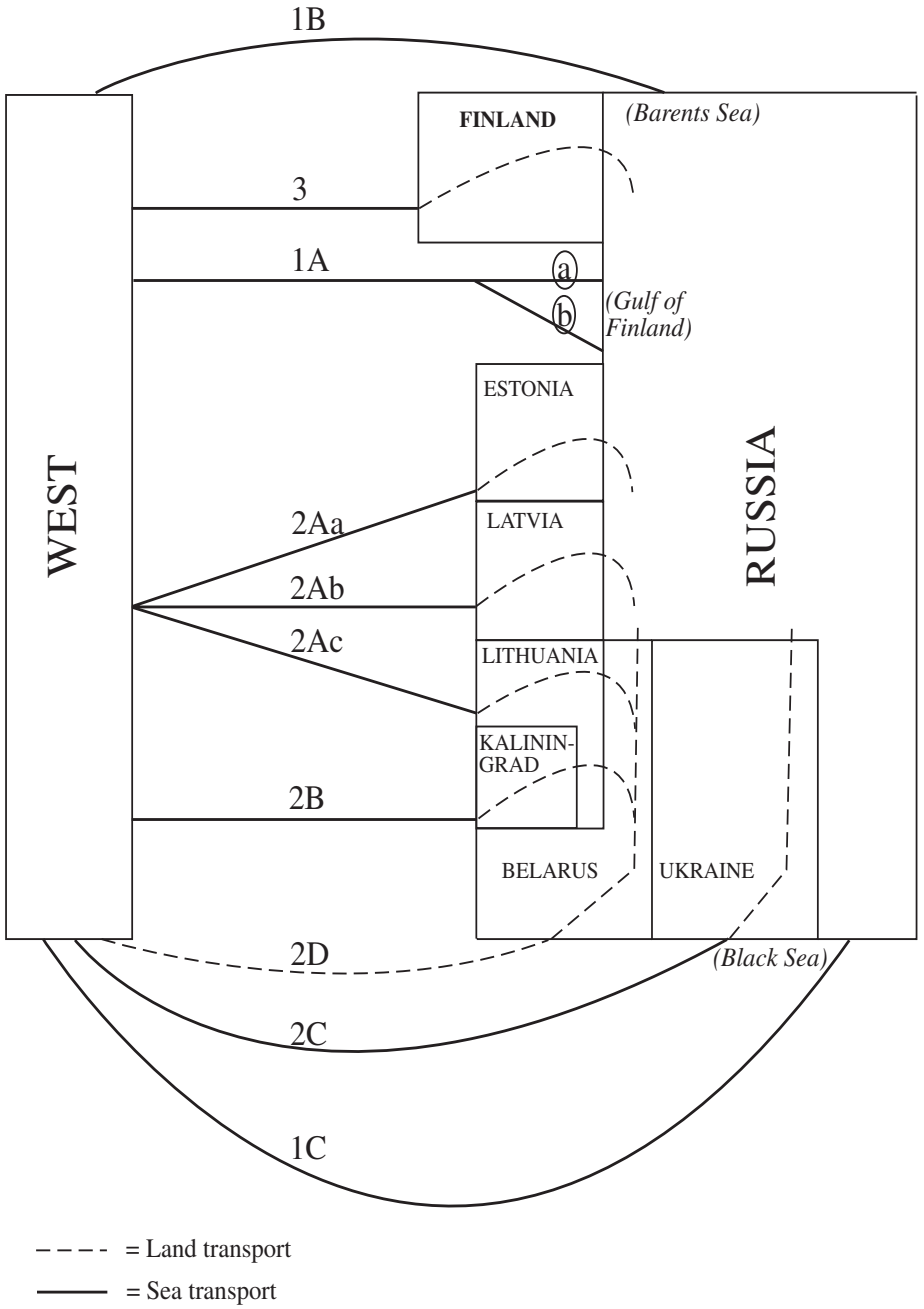

Figure 2.6. Russian alternative transport corridors to the West
Source: Author

For the third of the corridors, 1C, its use not only results in longer transport distances on land and at sea that are negative, but also the passage of the Bosporos Strait. After a number of incidents in the Turkish strait strong resistance is mounting against the use of this corridor for larger transit volumes, of especially crude and oil products[40].

-- 2 - The six different corridors being grouped under 2 all indicate a transport corridor between Russia and the markets in the West that include the crossing of one, or more, extra foreign border for cargoes transported before reaching a port.

2A – *exported from one of the Baltic States*

2B - *exported from Kaliningrad, in Russia, but cargoes must cross the borders of Belarus / Lithuania, alternatively Belarus / Poland before reaching a port.*

2C – *exported from a port in the Ukraine crossing one border and a long overland transport to reach a port.*

2D - *cargoes could transit practically any country bordering Russia being transported overland, through e.g. Belarus, the Ukraine, Poland, on to any destination in mainland Europe.*

From a domestic Russian point of view, none of these four alternative corridors could be said to be ideal. All involve the crossing of one or more foreign borders, a process that presently, and for the near future, will remain a time-consuming and often insecure process. Depending on the kind of products transported and applicable customs regulations, taxes, transit fees a s o must be paid in foreign currency. Which of the different corridors that can be said to be the best suitable could probably not be determined without deep knowledge of the type of cargoes and volumes involved, but what could be said is that none are officially recommended. The 2A alternative remains the most widely used, 2B is in limited use, 2C is restrained by the problematic economic and administrative situation in

[40] When international passage rights in the Bosporos Strait were negotiated in 1931, on average three commercial ships per day passed, whereas in 1997 the average was nearly 140. From 1985 to 1997 nearly 200 accidents and groundings have been registered (Lloyd's List 1997-11-26). In 1936, Istanbul had less than 1 million inhabitants and today an estimated 10-12 millions live in the metropolitan area surrounding the 500 meters wide Bosporos Strait.

the Ukraine while 2D is used mainly by trucks carrying import cargoes, but less so for export[41].

-- 3 – The Finnish corridor

3 - *indicates a transport corridor through Finland from Russia and on to markets in the West, but still includes the crossing of a foreign border.*

In addition, for this alternative, cargoes must cross the borders of one of the EU member states, before reaching a port. Having once crossed an EU border, there will be a less complicated access to other member countries to which much of the Russian export is destined. This is also the only important transit corridor through a western country, and a corridor that was in use even during the years of the FSU (see also 4.4).

Of all the alternatives described above only the very first one, 1Aa (existing ports in the Gulf of Finland), and to some extent 1B (Russian North West), could be said to genuinely correspond to Russian needs. All other alternatives show serious drawbacks by way of dependence on other countries, money outlays or longer transport distances, or both in combination. From this respect, it could be understood that Russia since the early 1990's has argued that new port capacity should be added in the Gulf of Finland to enhance capacity where it is best needed.

The arguments brought forward so far stress the present geopolitical situation in the Baltic Sea region, and argues that the relations between the countries remain tense much due to the complicated Russian transport situation. A situation that can be exemplified by the different alternative transport corridors as outlined in Figure 2.6. The current transport and port situation in this region is rarely mentioned in books, works and reports, perhaps because many writers have not come to understand how severe a strain to the Russian economy and the current self-esteem this situation is or because the focus in much written material is purely technical and quantitative. As the aim is to use a wider perspective and relate the development in the field of geography, centred upon ports, considerations concerning transport corridors and increasing competition among ports in the region will continuously be dealt with in this study.

[41] It should not be forgotten though, but is outside the field of study here, that the overland export route is very important for the Russian export of oil and gas through several pipelines that cross e.g. Belarus, Ukrainian and Polish territory.

3. THE RUSSIAN TRANSITION PROCESS

This chapter deals with the economic and social dimensions of the transition process in first of all Russia. This is followed by an evaluation of the direct operation of ports and the development of transport corridors, as outlined in the aim of the study. The first part deals with developments within Russian political, economical and social life at large of which the transport sector is an integrated part.

3.1. Introduction

Since the years of the late 1980's, Russia has gone through fundamental political and economical changes. With the appointment of Gorbachev as General Secretary of the Soviet Communist Party in 1985 he became the fourth party leader in just 28 months; a revolution in itself. He took over as leader of a country that at the time was the world's leading producer of steel, raw materials and energy, while its malfunctioning economy ensured that shortages were commonplace (Aldcroft and Morewood 1995). Economic reforms were from then on slowly implemented in the FSU, as a part of the *"perestroika"* program. Still the real transformation of the Russian economy in the direction of market economic reforms did not start until January 1992 with the first liberalisation of the price system. A number of different measures have since then been adopted that display a mixture of advances and setbacks. These reforms have ended central planning, but have only to a very limited extent created real markets. The unpredictability of the process can be seen as reflections of an often complete lack of national consensus politically, e.g. in the democratically elected Duma.

This refers to the direction of the transition, goal of the transition, but also about the speed with which it should proceed. What probably are unwanted side effects of this process, for the average Russian citizen, can be noticed everywhere in society. The economic- and social climate of the society in which the transport sector works will be on display here before concentrating on the transport sector and port issues.

3.2. Political turbulence

The present relative stability in Russian political life is often said to be related to the physical well-being of its president Boris Yeltsin. A leading social scientist, Victor Kremenyuk, head of the US - Canada Institute think-tank in Moscow stated in December 1997 that:

> *"There are still good reasons to doubt the stability of the present Russian government and the future of democracy in the country"*
> *(SR 1997-12-01)*

That such a statement can be made on good grounds could be explained by the inability of politicians to steer the economical and social development process. Three months after this statement, 1998-03-23, came the unexpected dismissal of the long serving premier minister Chernomyrdin. This was followed by a month long and dramatic struggle between the president and the Duma to get his predecessor, the relatively young and inexperienced Kiriyenko, into office. After this exhaustive campaign to get Kiriyenko installed, few could have expected him to be dismissed as early as in August the same year. Next to take office was the ex-Minister of Foreign Affairs, Primakov, who inherited a Rouble in free fall, after the Central Bank had given up attempts to defend its value in August of 1998. This led to both the Rouble exchange rates and the economic situation being eroded. After eight months in office, that, considering the point of departure, had resulted in a relative stability of the economy the president declared that the Prime Minister *"was good at the moment, but for the future we will see"* (RFE 1999-03-15). A statement that did not serve to inject stability into already deeply worried economic markets. To follow up his statement President Yeltsin two months later dismissed Primakov. A step the president motivated with, "*that he had done so little to improve the economic situation*, and was therefore replaced by the former Minister of the Interior, Stepashin (Financial Times 1999-05-13). As Premier Minister Stepashin came to last for only three months until Putin, seen as more loyal to President Yeltsin, was promoted to lead the government in August 1999[42]. Vladimir Putin became the fifth Premier Minister to head a Russian government in just 15 months

[42] Exactly the same had been said about Stepashin just before he became Prime Minister: *"Primakov goofed by saying Yeltsin should retire, while Stepashin is known for his loyalty to the President"* (Business Week May 17 1999).

Under present political conditions, with a non-reformist Duma often with a number of political fractions objecting the not too frequent presidential reform proposals, the steps forward are slow in all aspects. Nevertheless, the general direction that has been followed over the last decade has still been mostly reformist. The year to come can well prove decisive for the future, as there are upcoming Duma elections in December 1999 and presidential elections to follow, probably in June 2000.

3.3. Economic transition

1997 was to become the first year, since the break-up of the former Soviet Union, that GDP development was to show a positive outcome, a prediction that matured by the end of the year. The same sources forecasted a growth of GDP of 3.0% and 1.5% for 1998 (OECD 1997:a, EBRD 1998:a). During the first half of 1998, a positive trend was more or less maintained, and even during the Kiriyenko crises in March 1998 both GDP and inflation remained relatively low and stable. These advancements were to be completely wiped out during the autumn by the Rouble crisis that erupted on August 17th 1998. As can be seen in Table 3.1 the full year GDP figure for 1998 came to –4.6%, far short of expectations[43]. The outlook for 1999 is negative indeed with both the IMF (1999) and the EBRD (1999) expecting a fall in GDP, –7% and –5% respectively (see Table 3.1)[44].

To maintain a positive development in the future, it was important that inflation, one of Russia's major economic problems during the transition period, seemed to have been curbed during late 1997 and the first half of 1998. From a level of 195% in 1995 inflation had come down to 47% for 1996 and by January 1998 to 10%, but is by mid 1999 back at around 100%, with a clear decreasing tendency though. Another result of the August 1998 crisis, and the free fall of the Rouble, was the sharp fall in purchasing power of the Rouble, relative to other currencies[45]. By the end of July 1999 the Rouble had lost approximately 75% (from 6.3 to 24.2 RUB/USD; Bofit 34:1998 and 26:1999) of its August 1998 value to the US dollar and average

[43] The EBRD figure was in late 1998 (EBRD 1998:b) revised to –5% for 1998.
[44] Inflation has started to come down again, but in June 1999, 12 month inflation, still stood at 120% (1995 and 1996 figures: Business Central Europe 1996-1997; 1998 figures: Bofit 27:1999).
[45] RUB is the ISO abbreviation for the Russian Rouble that was adopted along with the introduction of the new Rouble from 1998-01-01 when its value was increased 1000 times by taking away three zeros.

wages had fallen from a level of USD 300/month to just above USD 100/month (RFE 1999-02-18). It could be hoped that the low Rouble value could result in a revitalisation of the long-time (tr-) ailing domestic industry. A pick-up that in turn could generate slowly expanding household incomes to lift consumer spendings some way into the next century.

A today widely accepted international indicator of economic stability in a country these days is the credit rating given to countries by institutes like Standard & Poor and Euromoney. For institutions like these, debt servicing is a very important indicator. As a result of the August 1998 crises, Russia has defaulted on several international scheduled interest payments on loans. After the first quarter of 1999, the Russian foreign debt stood at about USD 140 billion, of which USD 100 billion is ex-Soviet debt take over by Russia (Bofit 15:1999). In March 1999, Russian creditworthiness was ranked at 161st place out of 180 countries listed by Euromoney (Euromoney March 1999)[46]. When 1998 was summed up, 55% of all large and medium sized Russian companies were unprofitable, with the agricultural sector showing figures well below average (RFE 1999-03-03). As no well established accounting system, as we know it in the West, has been fully established, the term *"unprofitable"* probably includes a good margin for what could be defined as subjective opinion. When reading these figures it must also be kept in mind that a disproportionally large share of the economic activity in Russia is not being recorded (Starrel 1992, Åslund 1995, EBRD 1998:b). It must also be remembered that there are a number of methodological problems around credit ratings and financial indicators, but the trend is more than clear about how negatively international credit rating institutes look upon possible Russian borrowing. Something that clearly restricts the possibility of finding investment capital for the Russian port projects that are discussed elsewhere in this study.

The importance of political stability, and a good credit rating, is often pointed out as a basic factor for developing countries in search of foreign economic investments and aid. From this perspective it is understandable that Foreign Direct Investments (FDI's) in Russia, according to World Bank statistics showed a decline from USD 2.0 billion in 1995 to USD 1.8

[46]Previous rankings were March 1997 - 66; December 1997 - 75; March 1998 - 127. The positions for the Baltic States in March 1999 were Estonia - 50; Latvia - 62 and Lithuania – 63.

billion in 1996, but picked up during 1997 to an estimated USD 2.2 billions (Bofit 6:1998)[47].

Table 3.1. Russian economic indicators 1992 – 1999

	1992	1993	1994	1995	1996	1997	1998	1999#
GDP	-14.5	-8.7	-12.6	-4.2	-3.5	0.8	-4.6	-2.9
Industrial Production %	-18.2	-14.2	-20.9	-3.0	-4.0	+1.9	-5.2	+4.5
Unemployment % (*)	4.9	5.5	7.5	8.2	9.3	9.0	11.8	12.4
Exports, USD billion	53.6	59.7	68.1	81.3	88.4	86.7	73.9	32.6
Imports, USD billion	43.0	44.3	50.5	60.9	61.5	66.9	59.5	19.7

* = end of period[48] # = as end of first half[49]

Source: Goskomstat 1999 WWW; 1999 figures from Bofit (1999:c WWW)

For 1999 the Economy Ministry expects FDI's in the range of USD 3.5 billion, but admits that it is an optimistic figure, and in a forecast expects FDI´s to increase to USD 14 billion by 2005 (Moscow Times 1999-05-04). FDI´s for the 1995 to 1997 period are 35-45% of the levels recorded in Poland and Hungary (Transition 1997, p. 23). It is also negative that foreign companies, when making FDI's in Russia, deliberately locate close to the centres of power whose approval they require to do business. Proximity becomes extra important in Russia as the twists and turns in direction from central authorities have proved so hard to anticipate. This is the result of what appear to be chronic problems for foreign companies operating in Russia, the weak legal system and the poorly defined property rights (Boyko, Shleifer and Vishny 1995; Sachs, Pistor and Olin 1997). Taken together this results in a further concentration of FDI's in and around the Moscow and St. Petersburg areas, areas that already receive a disproportionate share of FDI's (Bradshaw 1997). FDI's in Russia have so far concentrated upon service and the financial sectors (Business Central Europe 1998).

All the same, dramatic future rises in foreign FDI's in Russia could, sooner or later, be expected. Especially of FDI's from the US, with an emphasis on

[47] FDI's is a field where clearly contradictory figures can often be found depending on source. Differences can often be related to how FDI´s have been recorded and what has been included or not, e.g. if portfolio investments are included, if local (domestic) contributions to a project are included or if they are pure realised foreign capital contributions.

[48] Official statistics are based on registered unemployment while labour force surveys conducted, e.g. by the ILO, often indicate 50 - 100% higher unemployment levels.

[49] Prognosed GDP for 1999 by the IMF (1999) is –7.0% and the EBRD (1999) –5.0%.

the oil and gas sector (Neftegazovaya Vertikal 1999). Lack of foreign investments has been a blow to an oil industry that has been hard taxed by Russia's cash-bound government, which is due to the considerable degree of tax evasion by companies and individuals in all sectors of the economy (EBRD 1998:a)[50]. To pave the way for something like a take-off in FDI's, first of all, four major obstacles remain to be attended to:

- Ratification of several bilateral investment treaties, e.g. with the US.
- Some clarifying amendments to the production sharing legislation[51].
- For the general investment climate, the major elements of the tax legislation should also be clarified.
- Lack of export financing in the West to financially uncertain markets, like Russia.

When the time comes for FDI's in Russia and in the Commonwealth of Independent States (CIS), to gain momentum, the pure size and diversity of the region is such that the FSU can probably not be expected to be jump-started by FDI's alone. What will be even more important for the economic comeback is a general improvement in the local conditions for enterprising, which could lead to new investments, e.g. from ex-domestic capital that has fled the region during the years of transition a flight of capital that has been estimated to have exceeded USD 150 billion during the years of transition. A figure equal to approximately four times the present average yearly pay for all Russian workers (Pirani 1999). The same source expects flight of capital to be in the range of USD 15 billion during 1999. Figures which incredible size are better understood if compared to the Russian levels of FDI's mentioned above and trade surpluses in the next passage.

Russian foreign trade in both 1997 and 1998 showed themselves to be two more years when total Russian exports well exceeded imports, generating surpluses of USD 19.8 and 14.4 billion respectively (see Table 3.1). What makes these official trade figures uncertain is the different forms of barter trade, especially between the CIS countries, and unofficial shuttle trade by private entrepreneurs, which is not fully registered in trade figures.

[50]Collection of taxes running at 52% of budget by the end of 1997 (Transition, December 1997; p. 27) and for 1998 the same percentage was about 70% (Bofit 7-99). By mid 1999, tax collection is still behind what has been agreed between the IMF and the new government to obtain new stabilisation loans, but strongly improving (Bofit Monthly 6:99).

[51] During early 1999 some minor amendments have been adopted to the PSL to improve the investment climate, and three new fields in the Sakhalin area have been approved by the Duma under the new legislation.

Despite a continuous positive foreign trade balance it is not unreasonable to also expect future competition in Russian State administrative circles between those in favour of protectionism and self-sufficiency and those in favour of continued international integration. Nor is it unreasonable to expect this to spill over into international co-operation and generate friction in the relation to foreign countries and organisations like the EU, other CIS countries as well as the Baltic countries. The proposed Russian re-unification with the economically very weak Belarus is one such issue.

The last problem that must be remembered is corruption, with all the negative effects corruption has on growth (Tanzi and Davoodi 1998). In another form wide spread corruption existed even during the years of communism. Corruption has now emerged, in a new and more direct form, on many levels in former Soviet societies together with a growing influence from an ever more influential grey sector of the economy. These kinds of problems can be found in most sectors of society, not only in national and regional administrations, but have in later years spread into the private sector. As rules and regulations are often too complicated, or open to interpretation, both enterprises and individuals often see bribing authorities as a way to avoid difficulties. In the annual evaluation of world-wide corruption by Transparency International for 1998 Denmark was ranked as practically corruption free, while Russia was ranked as number 76, lowest of the seven transition economies included, and well behind e.g. China (Transparency International 1999, WWW)[52].

As understood from the above neither political nor economic life in Russia has been running especially smoothly during transition years. The transport sector is affected directly by these societal problems, facing a lower than normal demand from strained manufacturing and retail sectors. The effect is also in-direct for the sector as it must allocate resource to meet and operate under insecure circumstances and a severely restricted availability of investment resources.

[52] That the low ranking of Russia on the list is not all wrong is reinforced by the fact that the Prosecutor General, in a speech to the Duma, has admitted that 56.000 crimes involving government officials have been officially exposed with corruption charges over the last four years (RFE 1999-03-08).

3.4. Social situation

Any interested visitor to Russia can today see the effects that the political and economic turmoil has had on the life of ordinary people. In 1997, a statistically good year for Russia, resulted in that 85% of Russian respondents in an early 1998 survey considered it to have been *"a bad year for the country"* (Nezavisimaya Gazeta no. 4 1998). This was before the new economic crisis erupted in mid August 1998, which rapidly converted what had looked to be a year of economic recovery into another year of stagnation.

That the August 1998 crisis strongly deteriorated the situation for common people is indicated by the fact that in a public survey, 64% considered themselves as poor in July of 1998, but 75% in October. The number of citizens that saw the situation as catastrophic increased in the same period from 39% to 51% (Riisnp 1999, WWW). The few positive macroeconomic results of transition has far from been evenly disbursed among the population, as GDP fell by 4.6% during 1998, real per capita income fell 16.5% (RFE 1999-01-22). Another indicator of poverty is the official subsistence level which in Russia was set at RUB 407 000, or slightly below USD 70 per month, in December 1997. After this adjustment, over 20% of the country's citizens, or some 30 million Russians, had money incomes below the subsistence level (Bofit 50:1997). A year later things had changed from bad to worse as by the end of 1998 nearly a quarter of the population lived on a wages below the adjusted RUB 493 (USD 22) monthly subsistence level (RFE 1999-01-22).

Another alarming example of how badly the administration of public and private finances have been are public and private wage arrears. In December 1997, as calculated by the Central Statistical Committee, wage arrears came to USD 9.4 billion and in June 1999 had fallen to USD 2.4 billion (Bofit 1:1998; Bofit 30:1999). A reduction in dollar terms that largely can be derived from the steep fall in the RUB/USD ratio[53]. The end to wage arrears and prompt payment of wages was one of many promises that helped president Yeltsin to stay in office in the 1996 presidential election[54]. The inability of the government to solve this problem has

[53] 1998-01-01, 1 USD = RUB 5.9 and on 1999-07-01, 1 USD = RUB 24.2, or less than 25% of the 1998 value.

[54] This problem was one of the top domestic issues for the previous Primakov administration that took office in October 1998 and has remained so for both the short-lived Stepashin and the present Putin administration. The printing of new money has somewhat relieved the pressure,

strongly influenced the every day life of the Russian population, and provoked several organised protests in the form of street demonstrations, but also numerous desperate hunger strikes (ILO 1999, WWW).

The former Czech Premier Vaclav Klaus has distinctly summarised the distribution of the costs of transition and the assistance the former communist East has received from the West as:

> *"These costs have to be paid by the citizens of the transforming countries themselves (with the exception of Germany) while the contribution of the rest of the world is marginal (if any, and if not a negative one)"*
> *(Klaus 1999 p. 5)*

3.5. International economic relations

One effect of the measures adapted during the process of transition is that Russian economic dependence on the West has increased sharply. One important such field is currency stabilisation loans administrated by the IMF and the World Bank. The need for such loans, and the long-term effect of such dependence, has been much disputed, especially in Russian conservative circles.

A field more directly related to the flow of cargo in ports is trade policies. Despite contentions between EU and the US on one side and Russia on the other, it is first of all in the field of trade policies that the parties have shown willingness to discuss positions and seek mutually acceptable solutions. From the West's standpoint, the reason behind the extended co-operation with Russia is to secure a stable economic and democratic development, now and in the foreseeable future[55]. Indirectly this is hoped to result in enhanced long-term European security.

For Russia, the reasons behind the desire for extended co-operation is very obvious as the EU has already become Russia's by far most important trading partner. During 1998 the EU was the destination for nearly 33% of export (40 % in 1996) and the origin of 37% of Russian

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but also fuelled a reborn inflation and further reduced the value of the often year old non-paid wages.

[55] "...and make possible the building of "*a common European house of freedom*"..." (from Gemeinsame Erklärung von Gorbachev und Kohl 1989-06-13; quoted in Birnbaum (1990 p. 17).

imports (32 %) (1996 figure, European Union 1997, 1998 figure Eurostat News Release 29/99)[56].

At the moment, the EU-Russian co-operation is based on the Partnership and Co-operation Agreement (PCA) from June 1994 that entered into force from 1997-12-01 (Bofit 50:1997). It is on the basis of the PCA that the EU administrates its TACIS program, which is the single largest aid program. Apart from the TACIS it is under the Barents Co-operation Council and other bilateral arrangements, that many smaller projects are being carried out with the good intention of improving e.g. often grossly neglected west-east/east-west transport links. A long term neglectance that is deeply rooted, and that has led to the current situation where the volumes of both freight and passengers crossing the national borders are considerably lower than what could be expected from a geographical point of view.

It is undoubtedly so that the prevailing Russian political, economical and social uncertainty makes all investors, foreign and domestic, think at least twice before deciding to invest in Russia. This general insecurity in turn gives rise to a *"wait-and-see"* attitude that also affects the establishment and development of transport-links, which in turn adds to the already existing international hesitance in developing long-term business relations with Russian partners. Under present financial conditions, Russia desperately needs to find international funding to be able to realise its larger investment projects, such as the new transport infrastructure, but it is understandable that investors continue to be hesitant. The continued hesitance of international investors can, in the light of recent years' developments, not be blamed.

3.6. Natural resources

The exports of raw materials remain a major income for several of the FSU states. Accordingly, these countries are very exposed to price fluctuations on the world market, Russia being a good example of this.

[56] It must be remembered, though, that the Russian dependence on the EU is a one-sided relation as it was only USD 22 bn of a total EU exports of USD 765 bn (2.9%) and 24.1 bn of total EU imports of 745 bn (3.2%) that is related to Russia. Combined trade corresponds to only 3.6% of intra EU 15 trade. Figures for Q1 1999 indicate a sharp drop in EU exports to Russia, -60%, compared to Q1 1998, and a fall in imports of –14% during the same period (Eurostat News Release 61/99).

Furthermore, raw material transport accounts for the absolute majority of the total ton-kilometre transport work performed in the region. First of all for domestic consumption, but also for export, generating turnover in the ports. This Soviet time dependence on natural resources has continued in a situation where very few products from the domestic industry are internationally competitive. It continues to be products of a low level of elaboration, various raw materials, in raw or semi-treated form that have found their way onto the international market.
Therefore this section will give an overview that includes the four resources that in recent years have generated a considerable share of the turnover for the port sector; oil, coal, iron ore and wood/timber[57].

3.6.1. Development of world market prices

The Soviet Union was often referred to as the only country in the world that within its borders housed practically all elements that can be found in the periodical table. Several regions are extremely rich in minerals and only in the Murmansk Oblast over 700 different minerals, in more or less recoverable quantities, can be found (Finnish Barents Group 1995)[58].

It is this richness in natural resources and the possibility to exploit them, together with a large and well-educated population, that initially attracted foreign companies to enter the Russian market. A strong belief in the turn of the economic tide have made companies, time after time, shrug off the economic setbacks incurred during the years of the 1990's and continue their impatient wait for the expected Russian economic break-through.

Simultaneously the hard-pressed government uses this export of raw- and basic materials as a cash-cow by levying a number of export tariffs on first of all oil, but also on e.g. aluminium, fertilisers, ferrous and non-ferrous metals. Products, that together with raw materials, have been large-volume exports during the years of transition. In the export markets though, it is a draw-back for the FSU that several producers are located in the interior with long over-land hauling distances to export terminals (Eronen 1998). This makes them extra vulnerable and, as can be seen in

[57] An account of pre-transition, i.e. Soviet period, influence on international commodity markets can be found in Kostecki (1984).
[58] Oblast is the most common of the basic administrative unit of the Russian Federation. Other administrative units, with slightly different freedom of decision-making, are: Autonomous Republic, Autonomous Oblast, Kray, Okrug, and Autonomous Okrug. A system inherited from the Soviet Union and well explained in Symons (1990) p. 1-5 and 245 ff.

Figure 3.1, average world raw material and oil prices have been falling during 1998 and early 1999. Raw materials have remained low until mid 1999 while the oil price has rocketed to more than twice its March 1999 level in just five months.

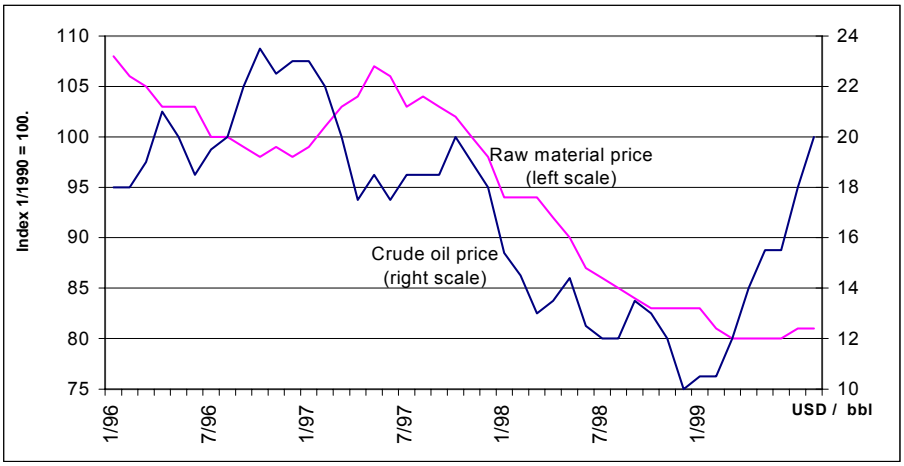

Figure 3.1. Raw material and oil price on the world market, monthly 1996 – 1999

Sources: Raw material: WTO 1999:a, WWW; Crude Oil: BP Amoco 1999, WWW

3.6.2. Oil resources

The first oil in the FSU area came from the western coast of the Caspian Sea, around Baku, in today's Azerbaijan. When large oilfields were found east of Volga in the southern Urals, the area came to be called *"Second Baku"*. It is here and later further to the north east, deep into northern Siberia, where the lion share of oil production has been concentrated since the late 1950´s. The most important area in Russia for hydrocarbon extraction in the late 1990's is West Siberia providing approximately 70% of oil and 90% of Russian gas production (New Europe 1:1998 p. 18). To estimate the size of today's oil and gas reserves is a delicate business and

estimations are often contradictionary[59]. Total proved reserves at the end of 1996 stood at about 10 billion tonnes of oil that corresponds to approximately 4.5% of world reserves[60].

Proven reserves for gas are an incomprehensible 49 trillion cubic meters, which corresponds to 35% of world reserves (BP Amoco 1999)[61]. When broken down further, these large reserves of Russian oil and gas resources show a considerable degree of geographical concentration where the Khanty-Mansiysk AO holds less than 1% of the population, but nearly 55% of oil production and 42% of the reserves. In the same way, Yamal-Nenets accounts for 88% of gas production and 76% of reserves with 0.3% of the population (Moe and Kryukov 1998).

Table 3.2. Oil production in the FSU area 1940 – 1998[62]
(million metric tonnes)

Area	1940	1960	1970	1980	1985	1990*	1995*	1998*
Volga/Ural	2	104	223	191	139	n.a.	n.a.	n.a.
USSR	31	147	353	603	595	516	307	304
Azerbj.	22	18	20	14	12	13	9	11
Kazakh.	1	2	13	18	23	26	20	26
Other FSU republics	2	0	0	0	0	16	19	20
Total FSU	56	271	609	826	769	571	355	361

* = Volga /Ural value included in the Russian Fed. value.

Sources: Figures for 1940 – 1970 from Mathissen (1975), for 1980 from Hove (1983), for 1985 from Symons (1990) and for 1990 – 1998 from BP Amoco (1999)

[59] OECD (1995 p. 172) states that *"Most western estimates put Russian proved and probable reserves at a 8-11 billion tonnes".*

[60] BP Amoco (1999 p. 4) definition of proved reserves reads: *"Proved reserves of oil are generally taken to be those quantities which geologically and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions".*

[61] Gas has largely been excluded from the coverage here which is due to the fact that all production and transportation is under control of the gas giant Gasprom and its vast pipeline network. A company which is still profitable, despite a large stock of non-paying customers. Russian gas production is often closely related to oil production, but gas nearly exclusively is transported in pipelines to both domestic and international consumers. Presently Russia has no LNG or LPG export that makes this is a product with very limited influences on ports and shipping. Russia has a vast medium term potential in this field though, but findings are often located in the inner and northern parts of Siberia or offshore in the Barents Sea or around the island of Sakhalin (BP Amoco 1999).

[62] Conversion factors for oil and gas volumes can be found in appendix.

The domestic Russian oil sector has over the last years been characterised by a number of fundamental changes. The elements of these large changes consist of major state privatisation's and giant mergers between oil companies in a sector under deep stress from record-low world oil prices. Prices reaching a four-year low of USD 10 per barrel by March 1999, but has during the second and third quarter of 1999 doubled to over USD 20 per barrel[63]. Low oil prices have made oil-companies press hard for tax-breaks during the last two years, but since the beginning of 1999 the government has instead imposed an extra export tariff on crude exports by ECU 2.50 – 5.00 as a way to find additional incomes for the state coffer. Parallel to this, the state has forced oil companies to pay taxes in cash instead of goods (i.e. oil), by indirect orders from the IMF, a line of action that has nearly bankrupted some of the larger oil companies (Bofit 14-99)[64].

Oil and gas from Russian reserves are generally transported in pipelines to consumer markets in central Russia, port terminals or to customers elsewhere in Europe. Long distance rail transport of oil and oil products are still in use though, e.g. to mid-size export terminals like Tallinn and St. Petersburg, which have no pipeline connections. The operation of the large state grid of 46 000 km oil-pipelines has remained in the hands of the still fully state owned company Transneft, that remains a near monopoly operator (rusinfoil 1999, WWW).

In the Timan-Pechora area, Arkhangelsk Oblast and Nenets Autonomous Okrug, oil was found as early as in the first years of the 1930's and production had started before WW II[65]. During the years of 1960's several new and very large fields were discovered and production increased.

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[63] Lowest at USD 10.16 per barrel but USD 19.40 as of late July 1999 (IPE quotation; Financial Times 1999-02-18 and 1999-07-29 respectively). As a contribution to this artificial (?) rise Russia promised OPEC to reduce exports by 100 000 barrels/day during 1999, at the same time as the 1998 export was the largest recorded in its seven years of existence, 2.3 md (Bofit Monthly 3:1999).

[64] Below USD 9.80/barrel no additional charge is made, between USD 9.80 and 12.30 ECU 2.50 is being levied and ECU 5.00 if the price is above USD 12.30. Normal taxes on oil are particularly burdensome, being flat rate taxes that do not fall along with the price per ton. It should be noted though that Russian oil often fetches an average price around USD 1 below the North Sea Brent price quoted as it is not seldom sulphur-rich (Sassen et. al. 1995). On 1999-06-27 Russian benchmark Ural blend was traded at USD 18.69 and North Sea Brent at USD 19.57 (SPT 1999-06-30).

[65] Named after the Pechora River that limits the area in the north and the low mountain ridge, Timan, which limits the area in the south-west. An area that exceeds 300 000 km2 (app. the size of Italy).

As an example of the size of the investments needed here, it can be mentioned that an 1800-km pipeline of 720-mm diameter from Ukhta to the Moscow region was laid and could be opened in 1974. A pipeline that is just one example among many that was built during the most expansive period for the energy grid[66].

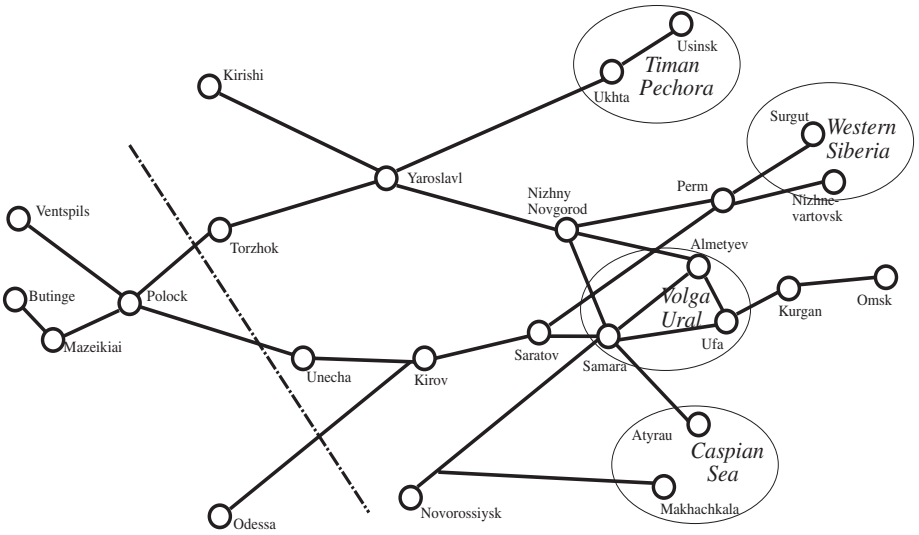

Figure 3.2. Major oil pipelines, production areas and export terminals in Russia, Ukraine and the Baltic states
(Situation by mid 1999)(Map not to scale)

Source: Neftegazovaya Vertikal 1:1999

In the middle of the 1990's, known oil and gas reserves in the Timan-Pechora region equals known reserves in Norway, but again estimates are contradictionary (Wood and Martin 1996). Although the size of the reserves has not been fully established, they are still large enough to motivate one, or perhaps several export terminals. That is only if oil can be brought to a terminal, e.g. in the Gulf of Finland, at a reasonable cost. Both Russian and foreign scientists have evaluated alternative routes to southbound pipelines, like oil and gas shipments in ice-strengthened

[66] It was in December 1995 that common public attention in the West was first brought to the oil fields in the Timan-Pechora region and the low quality of Russian pipelines. A spill of some 2 million tonnes in an area west of Usinsk from a pipeline that had been broken for a year before it broke completely. An emergency that took large scale foreign assistance to be controlled.

tankers along the Northern Sea Route (NSR) (Isakov et al 1997:b). Both a northbound and a southbound alternative will require large scale laying of pipelines, either to export terminals along the Arctic coast or to terminals in the Gulf of Finland. Both alternatives will be extremely costly, at approximately USD 3 - 4 million per km pipeline (Andresen and Backlund 1996, Isakov et al 1997:a) [67]. Pipelines are probably the cheapest alternative in the long run, but for the transport of oil, Russia still ships considerable volumes by rail domestically. Until 1995, only 8% of oil reserves and 15% of gas reserves had been recovered in this region. Figures that can be seen as indicators of the difficulties involved in oil and gas exploration in semi-arctic or arctic areas in northern Russia, not only physically, geographically, administratively but also financially. Another negative factor is that most fields probably contain heavy oils with a high content of paraffin that makes it somewhat less attractive (Sassen 1995). 1993's production in the Timan–Pechora area was in the range of 11 million tonnes, far below the peak figures in 1983 when oil production was 20 million tonnes (Wood and Martin 1996).

The possible exploitation of different arctic minerals and hydrocarbon resources are of great interest, not only to the oil industry but also to the transport industry as it will require a wide range of specialised logistic services, often imported. During the exploitation stage there is a need to transport people, building materials and components as well as fuel to building sites. When the production stage has been reached, the transportation of production to customers is the big challenge, but also the constant supply of spare parts and provisions will have to be secured. Evaluations from other large-scale oil development areas have shown that cargo handling related to exploration can not be expected to more than marginally increase the turnover of ports in concerned and nearby regions (Wood and Martin 1996). What can still be hoped for are other positive side-effects generated by offshore explorations, but these will probably have to be waited for even longer than on-shore operations.

The pre-March 1999 oil price level has for a long time meant falling revenues for the large oil-companies in later years, which do not only have a dramatic effect on the share values at the stock exchange. Low oil prices have also made oil companies less interested in proceeding with expensive and probably adventurous development projects in the Russian

[67] With gas and gas condensate volumes in only the largest of all fields in the Barents Sea, Shtokmanovskoe, being estimated to 2.9 trillion m^3 and 21 million tonnes, respectively, then the potential is definitely there also for offshore extraction (Isakov et. al. 1997).

interior, and especially in the north. Regions with large extraction and well established as oil districts, become extra valuable to low prices, as the oil industry is often the only large employer, and taxpayer, in one-sided economies. Scheduled projects in the north will most probably not be completely cancelled, but be postponed or developed on a go-slow basis until price levels have stabilised. Under current circumstances, i.e. an oil price above the USD 20/barrel range, Russian oil companies have proved eager to export fuel oil to earn foreign currency, instead of supplying the domestic market (Neftegazovaya Vertikal 6:1999). A way of acting that has been blamed for having caused a domestic shortage and manifold increases in domestic fuel prices during the summer of 1999 and mounting governmental pressure to increase local supplies. One explanation of this turbulence in the domestic market is that domestic prices, even during transition, have been kept well below world market levels, therefore suppliers focus more on foreign markets in times of both high prices and high demand (Business Week, August 16 1999).

Despite the problems concerning the future of the Russian oil industry, production in 1997 and 1998 seems to have stabilised. Russian energy exports (oil, gas, coal and electricity) constituted 40% of exports in 1998 of which oil alone was 19% (24% in 1997) and is expected to rise sharply if present oil price levels will be maintained for the remaining part the year (Bofit Monthly 3:1999). Of the 127 million tonnes exported during 1998, at a value of 9.8 billion USD, the most important international buyers were Germany taking 18.8 mt, Poland 14.5 mt and Italy taking 11.2 mt (Mezhdunarodnyi Ekspeditor 1:1999)

3.6.3. Other raw material resources

Coal

The historic centre of coal mining in the FSU has been the Donets basin (Donbas) in today's Ukraine providing nearly 90% of production at the time of the revolution (Mathieson 1975). The coal production of the Soviet Union reached its peak in 1985 when 726 million tonnes were mined with nearly 400 millions coming from mines in today's Russia. Coal extraction under Soviet years, but also during transition, has been a typical area of heavy subsidies and still in 1993 received 1% of GDP in the form of production subsidies, which helped to maintain a high production, even at chronically loss-making mines (World Bank 1997 WWW:a).

Production has over the years since WWII shifted from high quality, but difficult to mine, coal in Donbas to easily accessible open pit mining of lower quality coal in Siberia and Kazakhstan.

With the falling apart of the union some of the largest mines, like in Ekibastuz and Karaganda in today's Kazakhstan, were disconnected from their consumers in southern Urals, and all parties involved came to face the problems that arouse from the erection of new national borders. The two most-well known Russian coal mining districts today are probably Kemerovo and Vorkuta, but not for the volumes and quality of coal mined, but instead for being districts with the largest wage arrears and most frequent workers protests, by way of e.g. railway blockades[68]. Large-scale privatisation and mine closures of non-viable mines, along with massive worker protests, have been common ingredients in the coal industry during the years of transition. The scale of the problems has led the World Bank to issue a structural adjustment loan of USD 800 million to support the restructuring of the sector (ibid.). Reserves are enormous though, 16% of world resources, but are often located in remote areas in Siberia that are difficult to access and will, at current consumption levels, last for another 500 years (BP Amoco 1999). About 80% of coal reserves occur in the Siberian part while 80% of demand is in Russia's European parts (Arsky et al 1993). The export potential to the West is immense, but is complicated due to long over-land transport distances before reaching potential export terminals in e.g. the Baltic Sea. A fact that makes the sector dependent on high world prices for exports to be increased from what today is a rather modest level.

Iron ore

Mineral resources have previously been of great importance to the FSU states. The most important of the FSU deposits of iron ore are Krivoy Rog, in the Ukraine, together with mines in the south and west of the Urals like Kursk, Novokuznetsk and Zheleznogorsk. Iron ores are normally metal bearing to 50-60% when mined, but when easily accessible, i.e. for open cast mining, concentrations as low as 25-35% were often mined in the FSU area (Metal Bulletin 1997). In the first years of the 1990's, about 7000 mines were in operation in the Soviet Union, working about half of known metal deposits. Over 70% of the volume mined in 1992 came from the European parts of the FSU, but approximately 70% of that volume of

[68] A major reason for the non-payment of wages in this sector, as in many others, is that over 80% of customers, mostly industry, do not pay for deliveries (US Department of Energy 1999 WWW).

iron ore came from fields in what today is the Ukraine. Of existing iron ore resources, 86% of FSU deposits were located in Russia with 11% being classified as easily accessible (Arsky et al 1993).

Mining has been hard hit by the fall in demand from the iron and steel industry that has contracted by over 50% between 1990 and 1995 (Sager 1996). As for coal, iron ore extraction was severely affected by the disintegration of traditional supply patterns, being cut off by new state borders. The massive payment crises among potential customers triggered this collapse. Prognoses made for the first years of the next millennium do not indicate any improvement (ibid.). Instead, Russian low price steel exports, that have been growing in later years, have also come under pressure and Russia has been forced to accept Voluntary Export Restraints (VER's) in relation to both the US and EU (Moscow Times 1999-02-16)[69]. Production costs in Russian mines in the late 1999´s have been estimated to be on a level with Australian mines, i.e. more expensive than Brazil, but less expensive than in e.g. Sweden (Hellmer 1999).

Declining domestic demand for ore should, at least theoretically, free large volumes for export, but strong competition from other large-scale ore exporters, like Brazil, together with Russian difficulties in timing supplies have so far limited export volumes. The bulk of Soviet, and post-Soviet Russian, iron ore exports were transported by rail to other CMEA countries in Europe, or exported overseas to other like-minded nations that had a domestic deficit. In addition, this export has decreased, as well as exports of unrefined metal ores in general. The volume exported to former CMEA countries in central Europe has fallen back from 45 mt in 1987 to 30 mt in 1996 and is likely to continue its contraction (ibid.) [70]. Export potential to the West in this sector is considerable, but hampered by long over-land transport distances before reaching potential export terminals in e.g. the Baltic Sea, or other overland markets. The potential and the resource base is there, especially for the high quality ore (with above 60% iron content) mined at the few mines in western Russia that have managed to continue to export (ibid.) The capacity to market and deliver is still restricting what potentially could be developed into an important export product and, at the same time generate large volumes in the port sector.

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[69] Metal products constituted 17% of total exports in 1998 (Bofit Monthly 3:1999).

[70]During the years 1990 - 1993 the trade between the former CMEA members collapsed. Russian exports to this group of countries fell from USD 31 billions to 8 from 1990 to 1993 and imports from 36 billions to just 3 billions (Ferreira 1996 p. 25).

Forest

The combined timber resource in Soviet forests is in the range of 80 billion m3 (Howe 1983)[71]. The area needed to house this, the worlds largest forest reserve, is above 800 million hectares which constitutes 25% of the world's forested area and 52% of world's coniferous area (US Dept. of Trade 1999, WWW).

The geographical distribution of the forested area in the FSU corresponds roughly to the shape of the country, with around 25% of forest resources in the European part with the remaining part east of the Urals[72]. Of total annual growth about 70%, or 225 million m3, is accessible in the medium term (Runar 1999 WWW). Annual forest harvests in Russia have continuously been falling during the years of the 1990's, from 82 million m3 in 1989 to approximately 21 million m3 in 1996[73]. During this same period of time, the share for the European part of Russia has increased from 57% to 66% (Backman and Zausaev 1998)[74]. The malfunctioning of many of the institutions administrating the Russian forest sector today continues to be an important reason that hamper a development towards market adaptation in the forest sector (Malmlöf 1998)

During the late Soviet period the annual wood harvests in only the three regions, Karelia, Murmansk and Arkhangelsk were larger than the harvest in any single European country (Tykkyläinen 1996). This immense availability of wood resources leaves its mark in the regional trade pattern. Presently the most important item, measured in volume, in the Barents trade relation is pulpwood and products from Russian sawmills and the paper and pulp industry (Sundström 1999-02-23).

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[71] Howe discusses the problems of the definition of *"forest"* among different writers. The variation in area for the different definitions is 581 million hectares. The more generous definition *"forest"* indicates 916 million hectares, while *"timber producing areas"* (defined as *"where industrial extraction can be undertaken"*) indicates an area of 328 million hectares.

[72] Eronen (1984 p. 53) gives the figure 147 million hectares for the European part of Russia and explains the large share of deciduous forest, and its increase by 40 million hectare over 40 years, by low replanting levels. The timber volume figure for Sweden in 1996 was 2.8 billion m3 (NUTEK 1996).

[73] Symons (1990) indicates that forest fire and careless handling of timber causes losses in the range of 160 million m3 per year.

[74] World Bank (1999:b WWW) gives a much higher production figure *"Annual wood production averaged more than 300 million m3, accounted for 2% of GDP, and employed 2 million people directly and 10 million indirectly"* and in continuation *"...production has fallen dramatically to less than 100 million."* (no year is given).

Arkhangelsk is the second most important region in Russia, after the Irkutsk region, in forest and wood processing with a 7.5% share of total Russian production in 1995 (Huber et. al 1996, p. 34).

Of the many millions of tonnes of pulpwood that has been shipped from ports in the Baltic States to Western Europe, especially Sweden, during the years of transition, an estimated 85% has been felled in the Baltic States (Brodin 1999)[75]. Pulpwood and forest products are very important items in several of the ports under study here. Ports that now load large volumes of pulpwood, which is a product that does not require a very sophisticated, nor careful, handling. During the years of transition the handling of pulpwood and forest products has expanded rapidly and will probably continue to do so in the medium term. There is no doubt, as the figures above have demonstrated, that the potential is there for both a continuous rise in exports and a sharp future rise in domestic consumption.

3.7. Russian transport geography

Comparing a map over Russia with most other countries the sheer size of the country and the enormous distances involved are the features that stand out the most. In his early writing even Lenin argued for more research in the field of industrial location, motivated by the country's transport-geography and a desire to minimise transport work (Ådahl and Perlowski 1976 p. 330 ff.; Sjöberg 1982 p. 79)[76]. The ever-ongoing attempts to better organise what was called *"the unified transport system"* should be seen against a background of attempts to profit from possible advantages of scale and agglomeration[77].

Many resources were to be set free by the fact that each entity in the system worked for the common good, avoiding competition. From an

[75] The export of round wood and pulpwood is also considerable in the Russian Far East. Gareyev (1998) states that *"since 1993, Russian exports of unprocessed timber in the East have grown from 4 million m3 to nearly 18 million m3 in 1997"* (which is still said to be 50% below annual allowable cut).

[76] Karl Marx wrote *"the absolute amount of value added to goods by transportation is, other things equal, inversely proportional to the distance over which the good is transported"* Marx Works, Vol 24 p. 170; (quoted in Popova 1974 p. 230).

[77] What was inherited when forming the Soviet was a market-oriented railway system. Foreign capital from France and the United Kingdom had largely financed much Russian infrastructure, e.g. the building of the Russian railways, before and after the turn of this century (Nove 1992).

ideological point of view, competition within, or between, different means of transport was negative and indicated a wasting of scarce resources. Centralised decision making could therefore only generate positive results. The importance of different ideological arguments like national self sufficiency and an even spread of development among all the greatly dispersed regions were other factors taken under serious consideration and given too much attention (North 1990). During the Soviet years, Weberian ideas of cost minimisation were ideologically unsuitable as a location criterion (Eronen 1998). Not only these but other aspects like different military considerations and negative effects of location often came to be compensated for by subsidies.

This shows a pattern of a country where the cost of transport came to be subordinate to a number of other considerations that were regarded as more important. As a result of the combined effects of the mentioned considerations, the former Soviet transport system, and today's Russian, makes it, from many aspects, reasonable to consider it to be a special case (Holt 1993). Long distances, ideological considerations, industrial location and large subsidies to transport have caused an exceptional modal split where over 90% of all transport work is made by train when in western countries about 70% is made by truck and trailers (North 1995). The share for freight transport by lorries, according to estimates, should reach 25% by the end of 1998 (MTC 1993:b). The depth, and duration, of the economic recession in later years has postponed this change. The share for lorries in transport though, will continue to rise, probably not to 40% by the year 2015 as the same study predicted, but will rise as the transport system continues to adapt to a life guided by market economical principles.

Theoretically, central planning would give considerable advantages of scale while the entire negative wasting of resources, e.g. due to competition, could be avoided under centralised supervision. Largely as a result of the escalating *"departmentalism"* within the different branches of both industry and the transport sectors these nice words remained just rhetoric[78].

[78] The fact that each of the many central ministries increasingly came to focus its activities on what in the first place served their interest, to meet given plan targets, instead of the common good of the Union.

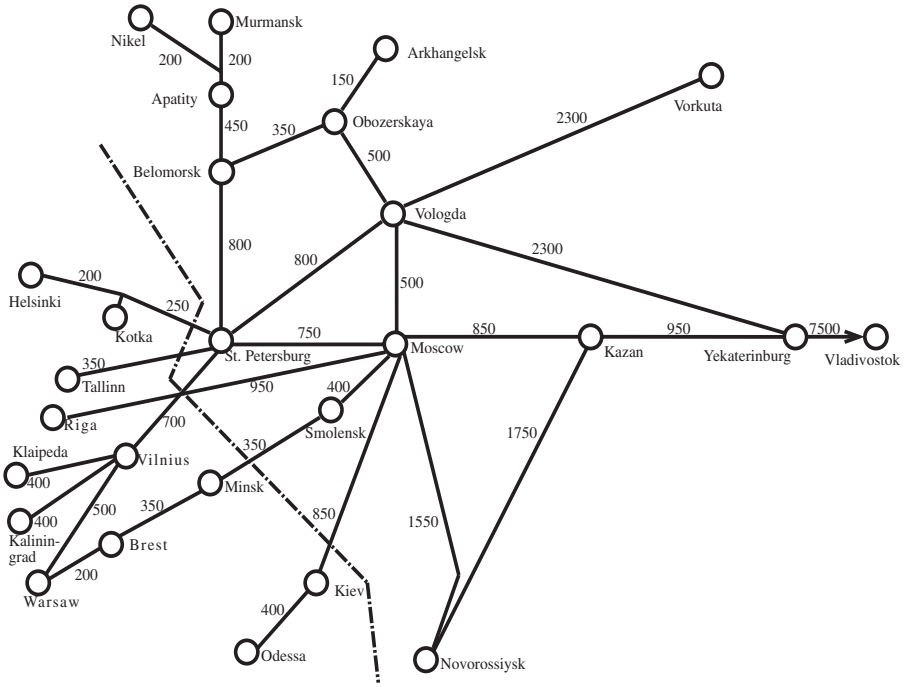

Figure 3.3. Topologic map of railway distances between Russian larger cities and possible export destinations (Map not to scale)

Source: Compiled by the author. Based on distances in km from Yates (1996)

The desire during the Soviet period to concentrate and centralise also left it's marks in the port sector. To obtain maximum advantages of scale in goods handling only a few of the ports in the FSU concentrated on the handling of each type of cargo (Holt 1993, several interviews). In each of the different ports this came to be seen as a possible answer to the needs of enhanced capacity. During the 1970´s and the 1980´s, the export of different raw materials e.g. oil, ore, coal over these Baltic ports grew rapidly in line with an increased world demand (National Maritime... 1992). This led to the concentration of the handling of bulk cargoes, like coal and ores in one port, oil in another, chemical bulk in a third and so on. A concentration that was made possible by the fact that the steering of cargo flows was centrally administrated during the Soviet era. From central authorities it was decreed which port a domestic organisation had

to use when exporting or importing cargoes[79]. In this way all ports involved came to work on the basis of central orders and never came to look upon a nearby port as a potential competitor. No company could, on their own, change ports for the handling of their products, even when they were not satisfied with the service offered in their assigned port. The incomes obtained in foreign currency from exports came to pay for much of the necessary Soviet import of advanced technology during this period, of which little came back to the port and shipping industry[80].

During Soviet years, the transport system worked at a level well above what is performed today. Now the existing facilities suffer from long neglected maintenance and replacement investments in past decades and are therefore building up an ever-increasing need of large-scale investments. The current investment needs are also the result of previous neglect, which is emphasised by Tismer, Ambler and Symons:

> *"Comparisons of the rate of growth of the volume of traffic and transport capacity (Transport routes, tractic power, rolling stock) during specific planning periods repeatedly led to the conclusion that in the countries concerned there has not been enough investments in the transport system" (Tismer, Ambler and Symons 1987, p. xiii)*[81].

What is indicated above about the status of the transport system refers to the mid 1980's and any interested visitor today can easily find more than enough evidence that the situation, at large, has not changed for the better during the past 15 years.

With the falling apart of the Soviet Union not only domestic transport but also the previously prevailing transport pattern for what was Soviet foreign trade has come to change dramatically. All as a result of a slow continued breakdown of an already shaky logistic system (Byrne, Paramonov, Bouis 1995). Long established Soviet time supply-patterns were broken when, what used to be administrative borders between

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[79] The word *"domestic"* has been used because exports, and imports, operations during Soviet times, as far as possible used domestic carriers. Therefore, it was largely domestic organisations that used the ports (North 1996).

[80] Certain kinds of equipment used in ports were imported though, but mainly from other CMEA members. TAKRAF cranes of GDR origin were (are) as common in ports all over the FSU area, as Hungarian Ikarus buses in the streets of the cities (author's observations).

[81] A statement supported by Hall (1993), while North (1996 p.2) notes that *"after the mid-1970´s, however, investments funds became scarce. Those available were eaten up by a few big projects, principally gas pipelines from north-western Siberia and the BAM".*

national republics, became national borders. This, over night, converted formerly domestic suppliers to foreign trade partners. An additional problem has been to fulfil payments between new and unstable currencies, which, at times, came to be a severe problem that restricted trade further. In a simultaneous process, all the newly established nations strived to carry through an as far-reaching foreign trade reorientation towards the West as possible.

Subsidies played an important part in the centrally planned system and strongly offset the effects that market forces would have had on long distance transport. After some years of market liberalism, freight tariffs increased considerably, and perhaps sometimes randomly, often to non-realistic levels. Even today, the railways remain the by far most important transport sector. Rail freight tariffs have in later years been reduced by as much as 25-50% for the most important of the rail freight cargoes, like mineral raw materials, coal, timber and lumber, oil and fuel oil:

> *"The criteria for the new tariffs were simple -transparency and universality for all consumers. No exceptions. There will be far fewer discounts than before" (Min. of Railways, Nikolai Aksyonenko; Business in R., August 1997 p. 18)*[82]

Less then a year later another reduction of rail-tariffs, this time by 25%, was made public by the then Deputy Prime Minister Boris Nemtsov for the transport of coal, ore, oil and fuel oil *"as a key step in the government industrial policy"(RFE 1998-06-09)*[83]. One result of the reductions in the price for this kind of transport can well be that long distance freight will again prove sustainable, but with less direct subsidies, distance will be much more clearly related to a price-tag than before. As it has been proved that *"transparency and universitatlity"* is still distant in railway tariffs it is difficult to predict the effects this will have on large-scale transport consumers like the extractors of natural resources.

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[82] Aksyonenko is in the early autumn of 1999, Deputy Prime Minister in the Putin administration.
One thing that has been made very clear during different meetings with people in the transport business since then, is that the discounts given are not *"far fewer"* as stressed by the Minister of Railways, but as many as, before (Sources decline to be quoted).

[83] The railways are already losing about USD 1 billion/ year, but have, according to the Deputy Prime Minister *"volunteered"* to take future losses.

3.8. Russian ports in the Baltic Sea area

The following part of this chapter will concentrate on the Russian port sector with the aim of showing recent developments within this sector. First, a brief discussion in general terms about turnover development in the sector before going into detail about different ports in the Gulf of Finland and the Russian North West. As the Russian North West, in the region itself and by other officials, is often referred to as a possible solution to the Russian search for domestic port capacity, the coverage tries to somewhat cover the regional setting around the ports.

3.8.1. Present handling in perspective

In a 25 year perspective, Soviet seaborne export volumes peaked in 1977 reaching 154 million tonnes and then slumped during the coming years. In 1983 the export volume had recovered and reached a new high of 166 million tonnes (mt), or 47% of total exports (Lydolph 1987 p. 148). As shown in Table 3.3, total handling in Russia's 40 most important ports in 1998 was 136 mt (Morskie Porti 1:1999; p. 62)[84].

Russian practise when it comes to the handling of cargo in ports has two typical Soviet peculiarities that must be mentioned, but also the non-existence of a third is of importance. The first of these is a result of the FSU dependence upon the railways for long distance transport:

> *"It is the Russian practice to load and unload directly into rail cars which has strongly linked, and links, port performance to railway performance and makes ports much less flexible. The port in St. Petersburg is just one example of this typically Russian phenomenon" (Holt 1993 p. 131)*

To avoid this **first** phenomenon, ports in the West have depots of the cargo in question in the port area and use high capacity handling equipment to load/unload - departing or arriving ships with the intention of shortening the turn-around time of ships. This method of handling has not, as understood, been common in FSU ports. The **second** feature typical for Russian ports is the imbalance in volume between loading and unloading. The turnover in most ports is based on bulk handling, as a

[84] Less than 5% of handling in 1998 was cabotage, despite preferential handling fees that apply to cabotage cargoes and the long Russian coastline. For Sweden in 1998 this figure was 15% (SSG 22/99).

result of the concentration of Russian foreign trade on the export of basic raw materials. Therefore, the volumes loaded in the bigger ports is often 10 - 20 times larger than the volume unloaded (Brodin 1996)[85].

The **third** of the features, the non-existing one, has become an international trend in other ports, but has so far not been introduced in this region:

"The value-adding at source represents growing efforts by many developing countries to obtain better income from indigenous products which were once shipped in their raw state but are now increasingly processed prior to shipment" (Peters 1993:b p. 9)

The *"value-adding"* at source discussed by Peters could of course be done already by the manufacturer, or raw material extractor. For many types of products this is instead performed in the port area, as a way for the port to add-value to the products handled, and to generate more work for the port itself. A tendency in this direction can perhaps be seen in the ports of the Baltic countries where the opening up of the announced *"Free-Zones'"* in several of the ports will be aimed at generating value-add for the ports (Brodin 1999). The only known example in Russia, at the moment, of this kind of value-add operations connected to ports is some re-stuffing of containers that is performed by some freight-forwarders in St. Petersburg.

3.8.2. Capacity and turnover

Today Russia has about 40 important seaports which together handle about 95% of all cargo. In 1998, Russian ports handled about 136 mt of cargo (139 in 1997) of which 62 mt was liquid cargo (see Table 3.3). Average export volume of bulk cargoes over the period 1990 - 1996 has been in the range of 95 - 110 mty of which around 50 mty have been handled in foreign ports due to lack of domestic capacity. According to a larger World Bank mission studying Russian ports in 1996, possible Russian port capacity was estimated to 275 mty, but to reach this figure a number of changes in operations had to be introduced (Hayter interview 1997-09-09). Capacity was estimated to be sufficient for most types of cargoes, but not adequate for containers and neither did enough capacity

[85] An unbalance that can be seen in many raw material exporting countries, e.g. Canada and Australia, but then often at devoted terminals and not so clearly in conventional ports.

exist for the handling of oil. If these World Bank estimations are true, there would be a minor need to increase Russian port capacity:

"The 100% difference in capacity estimation comes from the fact that the Russian figure is set, based on Russian norms of handling, no margin for improvement has been included, no floating transhipment facilities are used and the Russian figure does not have any allowance for changes in operation"
(Hayter interview 1997-09-09).

To be forced to make use of foreign ports for both export and import operations is seen as a major annoyance by Russia, as a country marked by a long tradition of autarchic thinking (Nove 1986). It is therefore no surprise that domestic calculations have tried to estimate the annual cost for Russia to make use of these foreign facilities.

Table 3.3. Turnover in larger Russian ports 1998 (1000-tonnes)[86]

	HANDLING		TRADE			
	Dry cargo	Liquid***	Export**	Import**	Cabotage*	Total
(Baltic Sea)						
Vyborg	661	0	637	6	18	661
Vysotsk	1 838	0	1 824	1	13	1 838
St. Petersburg	15 576	5 982	17 802	3 756	0	21 558
Kaliningrad	3 315	1 142	3 831	626	0	4 457
(North West)						
Murmansk	7 322	797	6 002	1 286	831	8 119
Arkhangelsk	983	96	813	72	194	1 079
(Black Sea)						
Tuapse	3 220	10 580	13 190	610	0	13 800
Novorossiysk	12 571	38 057	47 736	2 823	69	50 628
(Far East)						
Vostochnyj	7 161	0	6 328	330	503	7 161
Nahodka	3 945	1 392	5 259	76	2	5 337
Vladivostok	5 022	681	4 583	627	493	5 703
Vanino	4 562	1 851	4 411	394	1 608	6 413
Total 12 above	66 176	60 578	112 416	10 607	3 731	126 756
Total all ports	73 500	62 100	116 700	11 100	7 800	135 600

*** = Nearly exclusively export
** = Excluding liquid bulk
* = Cabotage handling is recorded both as goods loaded and unloaded

Source: Morskie Porti 1:1999 p. 63

[86] The same statistics covering 1996 can be found in appendix.

Morskie Porti (2:1997) has estimated the cost for Russia to use these foreign ports to USD 600 - 700 million per year. Other sources give other values, e.g. figures between USD 300 million to USD 1.5 billion per year was given in Business in Russia (Sept. 1997) and the cost was set to USD 3 billions in the next issue of Morskie Porti (3:1997)[87]. In none of these articles have any calculations been included, so nothing can be said about the price tags that have been set to different factors and about what costs that have been included. It would be of great interest to know if such calculations include only transport costs or have been set to include e.g. even *"lost"* taxes and intended dues and fees.

Today Russian foreign trade is dominated by trade with Western Europe and especially transport routes towards Europe have changed and have had to be revitalised. For transports between Russia and Western Europe, a number of different transport routes can be distinguished. Which of these a forwarder will choose depends on the type of cargo that is to be moved and the prices quoted. Generally, the route going through Finland, (no. 3 in figure 2.6) has for long been considered to be the safest of the three major west-bound alternatives while the inland route through Poland has been considered the cheapest. All three alternatives have an estimated transit time between Rotterdam and Moscow of about one week. That is if the transport for the Baltic and Finnish alternatives are co-ordinated with a departing ship. Large-scale studies have clearly indicated that Russian companies generally regard transport cost to be the key issue in their choice of route (VTT 1997). This indicates that future links must not only be well-working but also prove cost-efficient to become successful among Russian users.

3.8.3. Existing Russian ports in the Gulf of Finland

Of the 40 Russian sea ports for which official 1998 years statistics are presented, only four can be found in the Baltic Sea area and two more in the North West. During Soviet times, another five ports in the Baltic Sea could have been added to such a list. The turnover relation between the ports of the Baltic countries and the named Russian competitor ports is 2.35 to 1.

[87] The figure 3 billions has also been used by A. F. Parfenov, General Director of Lenmorniiproekt (interview 1998-10-23).

A striking difference that gives an indication of the Russian deficit[88]. With such a limited Russian port sector, it is not difficult to understand the excitement showed by many foreign companies and institutional investors for port projects in the only Russian outlet in the Baltic Sea, the Gulf of Finland. A number of factors that point in favour of establishing new Russian ports here are:

- competition from other Russian ports in the East, South and North is not very strong
- the flow of imports from the West is normally destined for the most populated and densely industrialised parts of western and central Russia
- export cargoes transiting westwards most often originate from locations in western and central parts of Russia
- cargo owners routing of cargo to/from Russian ports would prefer to avoid the additional insecurity of border crossings

At the same time as this is a description that could well be aimed at attracting investors to different port projects that will be covered separately below, this is the environment where the three existing ports Vyborg, Vysotsk and St. Petersburg already operate. A location that, without deeper knowledge of the local situation, could be seen as predominantly positive. Therefore the position of these ports will be described in greater detail in the following than what has been done in previous parts of this study. Starting with Vyborg near the Finnish border in the Gulf of Finland.

Vyborg and Vysotsk[89]

Two, of the three existing Russian ports in the Gulf of Finland, are Vyborg and Vysotsk. The two ports are organised under the administration of the Sea Administration of Ports in Vyborg and Vysotsk[90].

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[88] Calculated form the statistics as presented in Table 4.2 (Tallinn, Riga, Ventspils, Liepaja and Klaipeda) and Table 3.3 (Arkhangelsk, Murmansk, Vyborg, Vysotsk and St. Petersburg) resulting in the summed up figures; 88.3 / 37.8 = 2.35. For 1996 the same figure was 3.3.(see appendix for 1996 years Russian turnover statistics).

[89] The port in Vyborg, including the island where the port of Vysotsk is located, was in July 1990 declared *"zone of free entrepreneurship"*. An initiative described in Brodin (1994:b), but until mid 1999 this had, by no means, led to the benefits for the Rayon that was hoped in 1990 (Kareva interview 1999).

[90] It should be remembered that the City of St. Petersburg and Leningrad Oblast, where Vyborg and Vysotsk are located, are two strictly separate administrative units, and when it comes to ports, competing actors. St. Petersburg and Moscow are the two city-states within the Russian Federation while Leningrad is one of the 87 regions.

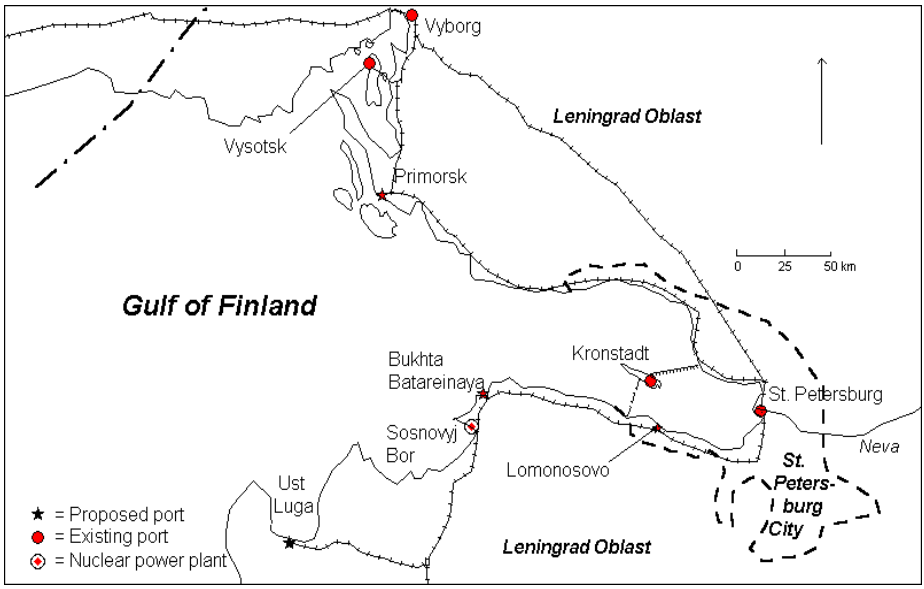

Figure 3.4. Existing and proposed Russian ports in the Gulf of Finland

Source: Compiled by the author from various sources

Both ports are located in the Gulf of Vyborg, on what was Finnish territory until the end of WW II. The Gulf of Vyborg is a northern off-shoot of the Gulf of Finland, with Vyborg at the north-eastern shore of the gulf while the port of Vysotsk has been build on an island on the eastern shore of the Gulf, at its most narrow passage[91]. The port in the city of Vyborg on the other hand is located in the city centre. Today the port is completely surrounded by the city itself, while the port in Vysotsk is located adjacent to a smaller navy base and has practically no physical restrictions to a future expansion.

The city of Vyborg has the advantage of having both the main highway and railway between the Finnish border and St. Petersburg passing near the port, which is not the case in Vysotsk. Being located some 50 km south

[91] Because the strait was so narrow, some 100 meters, what today is Vysotsk was called Trångsund during the Swedish years, which translates to exactly that "*The Narrow Strait*". This was the most important wood exporting port in Scandinavia in 1920, supported by its location at the mouth of what today is Saimaa Canal. First opened in 1856, and still today rented by Finland (Kareva interview 1993 - 1999).

of Vyborg, the port is serviced by a non-electrified branch line of the railway and a gravel road that, over several years, has been very badly maintained. A major problem for both ports is the limited draught in the Gulf of Vyborg, roughly 7 - 8 meters, which restricts the size of ships[92].

In 1998, the two had a turnover of 0.6 (1.1 in 1996) and 1.8 mty (0.9 in 1996) respectively, with an extreme dependence on exports, 99% (see Table 3.3)[93]. Both ports have presented plans for expansion that would lift their turnover to 3.5 and 4.5 mty, respectively (Vyborg Rayon 1999:b WWW). For these projects, as for many others, no financing had been arranged by 1999[94].

St. Petersburg[95]

The history of the port and the city is strongly interlinked in a city that was first established to become the new port to the West, but also the new capital of Russia. This was in the first years of the 18th century, and the city came to be named after the ruling tsar, Tsar Peter. At that time it was a good strategic choice to have the capital located on several smaller islands at the innermost part of the gulf. The location was directly at the mouth of the river Neva, which also connects the city to the two biggest lakes in Europe, north east of the city, Ladoga and Onega. Relatively soon though, the island of Kronstadt, located in the inner reaches of the Gulf of Finland, about 25 km to the west of St. Petersburg, emerged as Russia's early naval-base in the Baltic Sea. Kronstadt was also the port where cargoes, in the 18th and 19th century, were transhipped from ocean-going ships to smaller barges that could be used in the shallow canals of the town or taken upstream to the lakes and further into the river system. Relatively soon the depth in the inner part of the gulf had to be attended

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[92] Regarding draught in the Baltic Sea ports, the draught is limited by the passage in the Danish Great Belt, to just above 20 meters, in Little Belt to just under 20, in the Drogden Strait, to about 8 and under the new Öresund bridge, in the Flint passage to 7 meters (Ministry of Foreign Aff. 1999 WWW).

[93] Local information material states slightly higher turnover figures for both ports.

[94] When this statement is made here, and on the following pages, there is always a possibility that some arrangements have been made, either very recently or that some kind of arrangements exist that have not been made reasonably public. On the other hand, it is more a rule that when projects are presented in Russia, it is often indicated that everything has been arranged. In reality that is very rarely the case, but such official statements can never be double–checked, instead experience has, time and time over, proved the *"very-little-will-happen"* rule as the most likely outcome to presented intentions.

[95] A comprehensive description of the transition period with a regional economic focus on St. Petersburg, and complementary to this description, can be found in MTI (1994) and for the following years in Kirkow (1997).

to. As early as in 1885, a 27 kilometre long channel was dug, which starts near Kronstadt and ends in what is the port of St. Petersburg. Initially the depth of the channel was 8,5 meters, which in later years has been deepend to 10.5 and a widening of the channel to allow two way movements of vessels is under way.

What from the beginning looked like the best available location would later prove to have a number of disadvantages, especially from a sea-transport point of view. Being located at the innermost part of the Gulf of Finland the city has been subject to several floodings and the water is relatively shallow and sweet. As a consequence of this even fairly mild winters lead to severe ice conditions that hamper the shipping industry. The regularly prevailing westerly winds contribute to worsen these problems by lifting the water level and by packing together drifting ice in the inner part of the gulf[96]. It is only during this century that the assistance of ships by icebreakers, at times of ice problems, has been developed, but still today the use of icebreakers is a time consuming and costly undertaking. A big problem that still remains in this part of the Gulf of Finland is that constant dredging is needed to compensate for the sedimentation from the river Neva, especially so in the port basin and in the inner part of the channel. From having been an acceptable depth for an approach to a large port, the depth in the channel has now become a severe restriction to shipping. Today a ship with a dead weight of over 25 000 tonnes normally need deeper waters to enter a port[97].

St. Petersburg has another geographical disadvantage, i.e. the port is also completely circumvented by the city itself, limiting most plans for expansion. On the other hand, St. Petersburg has one advantage that none of the competing ports in the Baltic Sea can match, which is its direct access to the Russian canal system. With the European tendency of the increased use of canals for long-distance bulk transport, this could prove to be a considerable advantage for the port in the future (Rissoan 1994).

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[96] The town has been affected by severe floodings several times e.g. in 1824, the worst this century in 1924, but the situation has been critical as recently as during the summer of 1998 and early autumn of 1999.

[97] To give a rough indication of the depth needed in a port a few examples will be given, but it must be remembered though, that draught for larger ships can vary with several meters due to ship-design, and that a ship must be given at least a meter of margin. A larger ferry has a draught of about 8 metes, a 10.000 dwt Ro/Ro vessel about 7 meters, a 70.000 dwt bulk carrier around 13 meters, a 1.500 TEU container carrier around 10 meters and a 5000 TEU one around 14 meters, an Aframax crude carrier (tanker of app. 100.000 dwt) 15 meters (Wijnolst and Wergeland 1996).

That is if the canal-system can be kept in an acceptable working order while waiting for an upswing for this mode of transport.

The kind of problems faced by the port in St. Petersburg did not have any real national implications, as long as ship sizes and foreign trade was small in volume and several ports shared the large Soviet hinterland. It was when Soviet's international trade started to grow, at first with the expanding trade with what was often ideologically like-minded nations of the world, that more port capacity had to be developed and waters depth became a restriction. The Soviet need for port expansion was also an effect of the emerging raw material crisis in the western world that together with high raw-material prices came to act as strong pull factors on Soviet export.

In the late 1960's and early 1970's, a number of ports in e.g. the Baltic States, were greatly expanded and gradually came to be of national importance to the Soviet Union offsetting the position of St. Petersburg in this respect. As can be seen in Table 3.3 St. Petersburg is the most important Russian port, but compared to the ports in the Baltic States it is since 1997 second in terms of tonnage turnover with 21.6 mt in turnover for 1998 (20.6 for 1997). Before 1997 figures for St Petersburg were in the 10 mty range and have since doubled, but mostly because several port areas are now summed up to give the total[98].

One explanation to the fact that St. Petersburg has had difficulties in attracting cargo is probably that during the years of transition St. Petersburg has been considered to be an expensive port for shippers to call at. During these years, most dues and fees have been set at a level well above comparable dues and fees in competing ports in the Baltic countries (County Administrative..., 1997)[99]. On the initiative of the Minister of Interior at the time, Stepashin, a plan was decided upon to free the port from destructive elements. In a report to the minister it was stated that: *"today the port is severely affected by organised crimes like smuggling, fraud, and embezzlement"* and that the measures that will be taken, but not made public, will soon end this state of affairs (Olsson 1999-04-12, quoting Izvestia 1999-04-05).

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[98] It has, e.g., not been possible to find out how cargoes that just transit on the river are calculated.

[99] The port has announced discounts on port dues of 20 – 50% *"with the aim of attracting new traffic*" to foreign shipping lines (Lloyd's List 1999-01-22 p.7).

Corruption and bureaucracy are definitely not a new phenomena and the Russian system was even crowned *"a paradise for intermediaries"* some years ago (Byrne, Paramonov, Bouis 1995)[100].

The port authority in St. Petersburg, on the other hand, has been successful in leasing terminals in the port to operators in a way that few others have. Today there are some 21 different stevedoring companies working in the port and competition between these is fierce. Compared to the number of licences that have been issued, which is an incredible 350, 21 is still a small figure. The by far most important among these, with over 50% of the handling, is JSC Sea Port of St. Petersburg that rents 8 km of quayage, approximately 40 berths, from the Maritime Administration.

The pioneer among foreign stevedoring companies in the port of St. Petersburg was the large US company Sea-Land[101]. It started it's first joint venture in the port in 1990, at the same time as the co-operation with the Trans-Siberian-Landbridge project was initiated[102]. In the port of St. Petersburg, private operators have been given the chance to lease whole terminals, a process which has been working fairly smooth. Examples of this are the terminal operated by Sea-Land, and another the terminal operated by Containership. The latter of the two has managed to secure a 30% market share of the container handling in the port. A success that is attributed to the fact that the company makes use of its own cranes and is not dependent on others (SSG 35:1997). The near future container flow in the port is estimated to 190 000 TEU and a new terminal for another 250 000 TEU will be build within five years (Transport Business in Russia 1:1999 p. 33)[103]. A major change that took place in the port during 1997 was that the largest stevedoring company in the port suddenly found itself in the hands of a new majority owner. The OBIP bank consortium had, on the open market, bought 43% of the shares in the company (Lloyd´s List 1997-07-26)[104].

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[100] That corruption in the port of St. Petersburg, as well as in most other ports, during the Soviet years is well documented. Especially hard hit was the US Food Aid Program during the late 1980's and early 1990´s as shown in Forbes (1993).

[101] In July 1999 Sea Land was taken over by the world's largest container shipping company, Maersk Line (Lloyd's List 1999-07-09).

[102] The expression *"Trans Siberian Landbridge"* refers to the use of the Trans Siberian railway as a transport alternative to and from Japan/Korea and Europe. In its peak year, 1981, it handled 140 000 TEU and in 1997 22 000 (Morskie Porti 3:1998) To be compared to nearly 8 million TEU by sea (Hammer interview 1999-01-21).

[103] Figures that are probably a bit optimistic, especially so as container handling in the port was 50% below the 1998 level during the first quarter of 1999 (SSG 27/28:1999).

[104] OBIP is the Russian acronym for *"Consortium of Banks Investing in Ports"*. The previous chief

The future prospects for the port in St. Petersburg improved greatly in November 1997 when the Russian Minister of Transport at the time, Nikolai Tsakh, could announce that IBRD had allocated USD 200 million for the development of the ports in St Petersburg and Novorossiysk (Business in Russia; December 1997). These funds are only made available by the IBRD for upgrading in two existing ports, St. Petersburg and Novorossiysk, and not for the development of new ports in the Gulf of Finland. From the port's side it is hoped that foreign credits will make it possible to double the turnover over the next few years. However vice governor Grishanov still complains that foreign partners do not consider St. Petersburg as a perspective port and that EU credits are directed to the expansion of Finnish ports (Transport Business in Russia 1:1999). Total investments in St. Petersburg increased by 9% during 1998 to USD 0.5 billion and among the largest of all investments in the city was the Neste oil terminal, that is located in the port of Lomonosovo (RP 1999-01-27 WWW).

3.8.4. Common reasons to build new port capacity

Before describing the individual Russian port projects being planned in the Gulf of Finland, some general arguments for new port investments should first be discussed. As investments in new or extended ports often involve huge sums of money, a number of positive effects from the investment can also be identified. The crucial question is whether the positive effects will be large enough in the end to make these kind of large investments pay for the costs incurred, even when enhanced competition from new capacity will make possible profit margins shrink. Some of the effects that are likely to lower unit costs for cargo can easily be identified as:

- Lower costs as e.g. larger ships can be accepted
- Lower costs as result of shorter transport distances for customers
- Lower costs as more up-to-date equipment is introduced
- Lower costs as traffic is not lost to other ports
- Lower costs as the port attracts extra traffic
- Lower costs with larger volumes to carry fix costs

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of privatisation in St. Petersburg protested sharply against this and was later murdered. No connection has been proved, but his predecessor clearly indicated a possible connection. By early 1999 OBIP still possesses 45% of the shares (giving 65% of the votes), 20% is Federal property and 29% (with no voting rights) belongs to the City Property Administration and the remaining 6% to private persons (Morskie Porti 1:1999 p. 14).

If the above set of statements can be fulfilled by a project it is definitely a good beginning, but there are more factors that must be evaluated. When new investments are made, it should be remembered that lowered transaction costs, which is what port developments are often hoped to result in, must be shared between the developer and users. It is rarely the case that a developer can isolate all positive effects for himself. Instead these benefits must be shared with domestic cargo owners and in an international port, like what is discussed here, possible welfare effects must be shared with foreign users.

To be able to calculate who will come out on top takes deep knowledge, e.g. about price elasticity of cargoes handled, and cargoes that are expected to be handled. It would probably be more accurate to discuss a kind of *"combined – elasticity"*. Such calculations should also include the competitive situation in the regional port sector, near future development for the cargoes in question as well as general economic development trends, both in the national market and in the consumer markets for the products in question. A set of questions that we are unlikely to possess enough information about to give acceptable answers to. It is therefore understandable that the long term benefit of port investment projects can easily, and often rightly, be questioned. Especially so in an environment where an absolute minimum of the background information is made public.

To open up a lot of new port capacity will pave the way for another of the risk factors; the *"hop-around"* of shipping lines. This is a factor that can come to constitute a most severe risk for the ports in this part of the Baltic region. To some extent already today but especially so if, or when, one or even several new ports open up in the Gulf of Finland. The new volumes of cargo that will appear in the market just because of the availability of new port capacity are probably fairly limited. Even if transported volumes were to grow, e.g. 10% per year over the next five years; it would still be outgrown by the probable capacity increase among existing ports. Capacity that already exists and development projects only within existing ports can be expected to well outgrow even such an increase in demand. How much new capacity that will be added to that already existing, depends on how many of the planned projects that materialise. The effects of public transport infrastructure development on regional and national economic development has been a highly debated topic in economic geography for decades. Recent evidence though, has demonstrated, that:

"linkages are more complex than specified heretofore in the literature and that previous estimates of these linkages are likely to subject to specification -error and simultaneous- equation bias" (Tally 1996, p. 1)

Still some scholars emphasise the positive side and see transport investments as a *"catalyst for growth"* (Garrison 1994) while others (Harvey 1990) show that such investments, despite their good intentions, run the risk of *"crowding out"* other more rewarding investments. That some writers are very optimistic about the positive effects of infrastructure investments can be clearly demonstrated:

"Public infrastructure investments and private-sector growth are strongly complementary, and the contribution of public investment to private productivity is rarely disputed. Efficient investments in transport and other infrastructure can make a significant difference in supply response" (Dervis et al 1996, p. 13)

Such statements refer to improvements of the whole transport sector, and not only the port sector, as some times seem to be planned in Russia. When only a part of the transport sector is focused upon, it is probably so that the arguments used by Harvey (1990) are being enforced. Therefore it should be kept in mind when reading the following sections about the different port projects, that it has been stressed by the then Minister of Transport, Nikolai Tsakh, that there will be no funds from the federal budget for the building of new structures[105]. Money from the federal budget can only be used to invest in the creation and modernisation of port navigational and security systems for which the ministry has established a special reserve fund, which is a policy that has not been changed in later years:

"Everything else must be financed only on a joint-stock basis with Russian and foreign credit sources. The government can only offer credit guarantees" (Tsakh, in Business in Russia December 1997 p. 7)

In an early 1999 interview, the Minister of Transport, Serge Frank, admitted that federal sources finance less than 10% of investments in his sector, but the Minister stated that USD 450 millions in foreign credits have been obtained, to be used for improvements during the year. Regarding port projects in the Gulf of Finland, the Ministry states that:

[105] Yuri Mikhailov replaced Mr Tsakh as Russian minister of transport 1998-02-28 only to be replaced by Nikolai Aksyonenko and later the present (August 1999) Serge Frank.

"*we are late in realising these important projects*"
(Morskie Porti 1:1999 p. 18).

3.8.5 Proposed Russian ports in the Gulf of Finland[106]

From a pure analysis of cargo flows, as presented in other parts, compared to existing Russian port capacity it could perhaps be placed beyond doubt that Russia needs more port capacity in the Baltic Sea. In these kinds of sweeping Russian economic estimations though, it is not stated from whose position the arguments for more capacity should be seen and who will benefit from it. If such an analysis concentrates on short-term benefits for the port authority involved, it can always be expected to be positive. If what is at stake is the common good for Russia and its citizens, in a social cost benefit analysis, then the answer is far from as clear cut.

The first decision to build new ports in the Gulf of Finland was taken as early as in 1992, in conjunction with the presidential decree *"On Measures for the Revitalisation of the Russian Commercial Fleet"*. Despite this, it was not until 1997 that the first concrete steps were taken in the direction of fulfilling the decree. The revitalisation of the initiatives concerning the building of new port structures in the Leningrad Oblast derives largely from the appointment of a new Governor, Vadim Gustov, in 1996[107]. Strong lobbying in Moscow followed his appointment, which lead to President Yeltsin signing a decree to build three new ports in the Gulf of Finland when he visited St. Petersburg on June 6, 1997[108]. Two of these, Primorsk and Bukhta Batareinaya, should primarily handle oil, while the third, Ust-Luga, should serve as a coal-transit terminal, in its first phase.

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[106]As for development projects related to ports and shipping in Russia the most well informed sources are the biggest research institutes in this field in the country, the St Petersburg based Central Marine Research Institute - CNIIMF and Lenmorniiproekt. When other sources are not indicated in this paragraph, the mentioned institutes have supplied the information used.

[107] In August 1998, Gustov withdrew as Governor to serve as First Deputy Prime Minister in the Primakov administration. Only to be dismissed 1999-04-27, along with the rest of the cabinet. He intends to run again for re-election, as Governor in the Oblast, but according to opinion polls his victory over stand-in Governor Valery Serdyukov is not self-evident.

[108]The decree was called: *"Transport and Technological Provisions for Freight Transport Through Shorepoints on the Gulf of Finland".*

It could here be worthwhile to remind ourselves of what Holmgren and Williamson (1984) had observed in the early 1980's, in a study regarding Swedish port planning:

> *"Harbour policies and harbour planning to date have had very little effect on actual harbour development, owing, e.g. to the lack of means of control. This situation is not expected to change in the foreseeable future."*
> *(Holmgren, Williamson 1984 p. 9)*

Moreover, that old truths are slow to change will once more be shown in the following presentation of the different projects. To organise the preconditions needed for the construction of a new port, from just a juridical point of view, have in all the below examples proved very difficult and unpredictable.

One such example is the construction of the Primorsk oil port where the OBIP Company filed an arbitration court complaint against the governor of the Leningrad Oblast, Vadim Gustov[109]. OBIP argued that the expropriation of 110 hectare of land that once belonged to an OBIP majority-owned company, called Baltport, locks them out of the project. OBIP claimed that the land area will be included in the area claimed for port construction and money spent on a feasibility study by Baltport would be wasted (SPT 1997-11-24). In March 1998, an arbitration court turned down the complaint and a construction permit was given to the developer. The next step taken by OBIP has then been to include the large German industrial company Preussag AG in their bid. Preussag has made public that they are prepared to invest USD 180 millions in the project, if the local government give them a green light to take it over (SPT 1998-02-22). The next hurdle to pass was the environmental examination of the projects that also came to end up in court resulting in months of delays. The port in Ust-Luga is another example of exactly this procedure and has had to pass through several court appeals before construction started.

Despite these problems, the legal issues surrounding these projects have proved to be a minor problem compared to finding financial support. Most probably though, the two factors are strongly interlinked in such a way that it resembles a Catch-22 situation. Under present conditions in Russia, few investors are willing to pour money into large-scale long-term projects under unclear/insecure legal conditions. On the other hand, a

[109] OBIP is the same company that, since late 1997, is majority owner of the port in St. Petersburg.

project with secured funding and official support, would surely have found its way through all kinds of bureaucracy rather smoothly. The only difficulty is that it is probably impossible to predict the extra costs that must be covered to make the latter of the two procedures reasonably quick. What is also lacking is a presentation of the economic calculations and alternative solutions to the projects proposed. Complete openness is perhaps not to be expected, but at the moment, arguments are based on very insecure estimations or pure speculation[110].

The four proposed port projects, of which two have been initiated, are all in different stages of preparation, which from one month to the next could change from a complete standstill to intensive construction work and back to a standstill the following month. If just two of these ports would come into operation some years into the next millennium, the result would be a considerable capacity injection in the Russian part of the Gulf of Finland. For the moment, only the port Lomonosovo, of the four port projects that will be mentioned here, can show any cargo turnover. The possible future influence in the port sector from this group of ports will be commented on in chapter 6, when the complete picture of the region and cargo handling has been given.

Primorsk

The port near Primorsk is located on the north-eastern shore of the Gulf of Finland about 170 km west of St. Petersburg and 80 km south-east of Vyborg. The plans here are to build a port, primarily for the handling of oil and other liquid bulk cargoes. It is here in Primorsk that the before mentioned pipelines from the Timan-Pechora fields are hoped to find their export outlet (see also chapter 3.6). The site in question has previously served as a naval base and it offers fairly deep waters and quayage is planned for depths ranging from 7 to 17 m. Compared to other alternatives, that will be presented, the proposed port at Primorsk needs only minor or modest spendings for dredging and is probably one of the most suitable sites for a new deep-water port in the Russian part of the Gulf of Finland. In a first phase, the capacity of the port is hoped to reach a turnover of 19 mty. In the second phase, capacities will be extended to 29 mty and at full development 45 mty. During the first phase, the port will only handle oil products and the second phase expansion will first of

[110] A good example of how port development projects could be handled publicly could be given from Norway *"Cost-benefit analysis for the extension of the port of Oslo and two alternative port solutions"* -authors translation. Title in Norwegian: *"Nyttekostnadsanalys av utbyggning av Oslo havn og to alternative havnelösningar"* (Norwegian Institute for Transport Economics – 1998:b).

all be based on crude oil. In the third phase, another 10 mty of crude oil handling will be added together with both smaller volumes of liquefied gas and general cargo. All crude oil will be delivered by pipeline while other cargoes will be shipped by rail. No construction work had begun when the site was visited in the summer of 1997, but has since started, e.g. by creating a small number of storage tanks. A small Swedish company, Arne Larsson & Partners AB, has been named as responsible for the co-ordination of financing and of the construction work by the local authorities. Despite some stormy years, the small Stockholm-based company has remained the leading co-ordinator for the project.

In early 1999, no official financing of the total project, valued at USD 3.7 billion, of which 1.2 billion for the first phase, had been organised (SPT 1999-02-23)[111]. Financing for the first stage of the project, valued at USD 604 million, has not been fully organised, but Arne Larsson & Partners have organised the initial USD 125 million needed to get the project started (Gorosch interview 1999-06-17). Parallel to the legal process described above the interests of the originally nine different Russian oil companies that initiated and initially backed the project in 1996, along with some foreign newcomers, have also proved hard to co-ordinate. During the spring of 1999, the government has ordered the Pipeline operator Transneft to build both the 2700 km of pipeline needed, from Usa to Primorsk, as well as a terminal in Primorsk. Transneft has from the summer of 1999 been authorised to collect an extra tax of USD 1.5 / ton that should be set aside to pay for pipeline construction the Timan-Pechora area. A major problem is that incomes from the tax will not cover more than a minor share of construction costs (RFE 1999-06-05) [112]. The operation of the Transneft company is simultaneously severely disturbed by a management shake-up over control, as stated by newspaper sources in the late summer of 1999, from influential pressure groups in the same way as gas giant Gasprom. One probable outcome of these struggles for power in both these state-owned giants is delays in larger investment projects, especially in times of Duma and Presidential elections.

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[111] USD 3.7 billion is the figure most frequently seen, while other sources could use completely different sums, but without specification about what is to be covered. One such example is USD 525 million given by the Rayon Administration (Vyborg Rayon 1999.b WWW).

[112] The Gulf of Finland is far from the only region in the FSU where the construction of pipelines and new ports for the export of oil, gas and other raw materials has proved to be a difficult question to solve. The transit of oil and gas from Central Asia to consumers in the West and China/India is another, near usolvable such example in the FSU. Expansion of ports like Anakalia and Susha in Georgia compete with an expansion of the Russian port in Novorossiysk and a proposed pipeline to Ceyhan on the Mediterranean coast of Turkey.

Lomonosovo

Lomonosovo is located on the south-eastern shore of the Gulf of Finland, only some 40-km west of St. Petersburg just inside the Kotlin barrier. The plans here are to enlarge a smaller existing port, partly by way of land reclamation, east-ward from the present port area. The largest part of the new port will be primarily for refrigerated cargoes and exports of metals, but also a Ro/Ro terminal where a line to Mukran in Germany has been discussed. In 1998, the small existing port, had a turnover in the range of 400 000 tonnes of primarily general cargoes and with approximately 25% of turnover being timber. Depth has been dredged to 7 meters and considerable dredging will be needed for the port and an approach-canal to reach the planned 12-m depth. In a first stage, the capacity of the port is hoped to reach a turnover of some 2 mty of which nearly 50% is planned to be containerised cargoes and 40% metals. As for the other alternatives, financing has proved to be the biggest problem. In early 1999 no official financing for the USD 230 million project, with an estimated construction time of 4.5 years, had been organised by the two companies that work in the port, Port Lomonosovo and Fregat. Construction is now planned to start during 2000 (Transport Business in Russia 1:1999).

The Finnish oil company Neste has invested FIM 180 million in the port, to secure own storage facilities for the supply of oil products to filling stations in the St. Petersburg area from late 1997. It proved a slow process to get the project started though, but tank facilities, with a yearly capacity of 500 000 tonnes per year, could finally be built by Neste St. Petersburg. By mid 1999, the project had advanced so far that it had been taken into limited operation. Since mid 1998 even the Swedish lubricant producer Nynäs has been trying gain permission to build a small bitumen plant adjacent to the port, but has so far been turned down by the local authorities (Ribin interview 1999-06-07).

Bukhta Batareinaya

Bukhta Batareinaya is located on the south-eastern shore of the Gulf of Finland, about 60-km west of St. Petersburg. The plans are to build a smaller port for the handling of oil products, mainly from the Surgutneftgas refinery in Kirishi east of St. Petersburg. Products that will be delivered in a, still-to-be-built, 150-km long pipeline. This port is not planned to become as large as the others, and will be built to accommodate smaller ships. The site is in a small bay facing westward, but the shape of the landscape does not indicate deep waters in the bay, which is confirmed by a nautical chart over the area. A site that will

probably need considerable dredging to reach the proposed depth of 12 - 14 meters, which is much for small ships. In a first stage, the capacity of the port is hoped to reach a turnover of 6 - 8 mty. A drawback for the Bukhta Batareinaya alternative is the fact that the chosen location is only some 6 km north of the nuclear power plant of Sosnovyj Bor. Initially the port will not be connected by pipeline and the oil to the port will be transported by rail. The future oil pipeline to the port is planned to be laid in the vicinity of the nuclear power plant at Sosnovyj Bor, which has been criticised from environmental circles.

No construction work came to start when it was first intended and in February 1998 it was made public that the proposed costs of construction have surged from the initially estimated USD 300 million to nearly USD 1 billion. This tripling of the costs is due to increasing costs to clean up from left over navy ships and disposed ammunition. Little has happened on the site, and as the oil company has been hard pressed for a long time by taxes and low oil prices, it can be anticipated that additional investors will be needed to get the project going. In early 1999, no official financing for the project, apart from Surgutneftgas assets, had been organised, but the project is still fully controlled by the Siberian oil company (Morskie Porti 2:1999).

Ust-Luga

Ust-Luga is located on the south-eastern shore of the Gulf of Finland about 120 km west of St. Petersburg and 220 km east of Tallinn. The plans are to build a port, primarily for the handling of general cargo. Its location is east of the mouth of the river Luga, in a larger bay facing north in the direction of the Gulf of Finland. The site is said to have been chosen because of the deep waters in the bay, which should be 11.5 m according to the information issued. As for the other alternatives, this is not supported by nautical charts over the bay where water depth near the coastline falls in the category *"less than 7 meters"*.

A considerable dredging effort will most probably be needed for an approach-channel as certain terminals are scheduled to have a 15 m depth alongside, and the port should be able to accept 70 000 dwt vessels. After completion of the first phase, capacity of the port is hoped to reach a turnover of 17 mty[113].

[113] The second of the terminals that are due to be opened in this first phase is for fertilisers, a product that has been the most quickly expanding cargo in Murmansk in later years. From then on the producer in Novgorod Oblast can make use of an export terminal just 300 km away, instead of 1600 km, to their current export terminal in Murmansk.

After full development, the intended capacity will be 35 mty. Basic construction work begun as early as in 1992, but the building of a port at Ust-Luga has, right from the planning stage, been under fierce criticism from environmentalists. As for all the other alternatives, financing has also been the biggest problem in Ust-Luga. What was initially raised lasted only for some six months of construction and construction work has continued on a stop-go basis since then[114]. Presently construction work of the first stage is said to have been resumed to complete 350 m of quayage for a coal terminal that is expected to have a 8 mty capacity. Costs for this six-year part of the project have been estimated to USD 166 million in Morskie Porti (2:1997), but to USD 670 million in the next issue (Morskie Porti 3:1997)[115]. The first initiative to build a port in Ust-Luga was taken by the St. Petersburg financier Ilya Baskin, who is still director of the project. Baskin has lost some of his former influence as the project has, as so often in Russia, been shaken by rumours of financial embezzlements.

In early 1999, no official financing for the complete USD 2.4 billion project, as estimated in mid 1997, had been organised (Morskie Porti 2:1997). Contradictions are not scarce in the Russian port industry, so the next issue of the same publication stated:

> *"The cost of construction will be about 1770 M USD approximately, cost of the port facilities in the sum of about 1284 M USD including[sic]"*
> *(Morskie Porti 3:1997 p. 13)*

3.8.6. Kaliningrad[116]

Everywhere in the Soviet society, the interests of the armed forces were often pivotal for the decisions about the location, construction and use of infrastructure. In few other areas were the effects of the strong barging power of the armed forces shown as clearly as in their influence in certain

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[114] Instead the Harbour Captain in the Muuga port in Tallinn declared that a large share of the construction workers was now involved in construction work aimed at extending that port in Muuga instead (Raudsalu 1998-10-31).

[115] Newspapers have indicated that construction works are proceeding with work on a coal terminal having been initiated in February 1997, a general cargo terminal in October 1997 and then a fertiliser terminal on January 26 1998. Contracts for the handling of over 7 million tonnes are said to have been signed. The same article indicates that the full port will be completed by 2010 at a cost of USD 4 billion (St. Petersburg Times 1998-01-27).

[116] In 1946 former German Königsberg was renamed Kaliningrad after the Soviet president Kalinin.

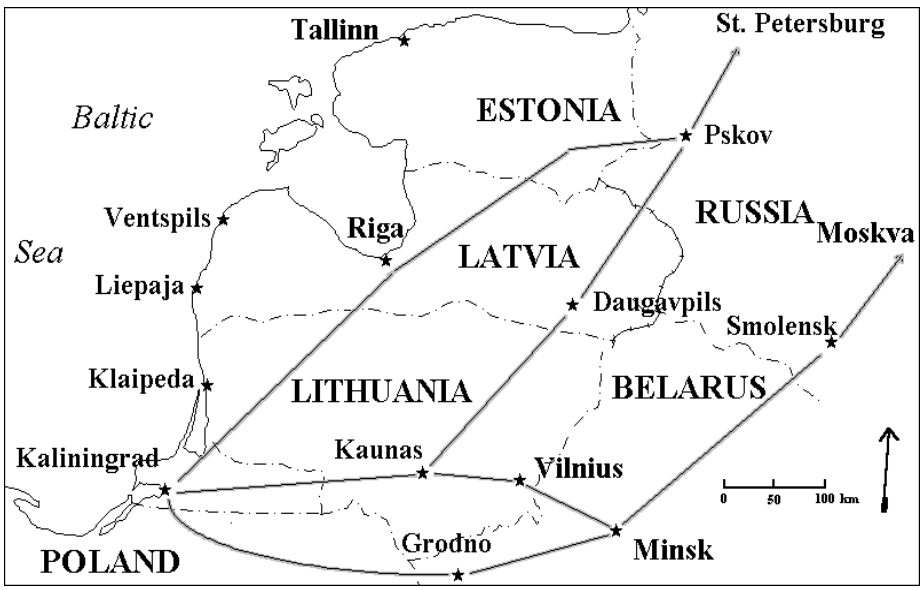
port cities. Kaliningrad, with its strategic position as the south-western-most corner of the Soviet Union, is a very good example of this. The Kaliningrad Oblast, after WW II, became a stronghold for the armed forces and an area where much of its activities in the Baltic Sea came to be concentrated. It was first of all the navy that came to centre its activities to Kaliningrad. Therefore the Oblast was forbidden territory for foreigners during Soviet years, and practically continued to be so until 1993 - 1994.

On the remains of what used to be a small Prussian naval-base, previously named Pillau and renamed Baltijsk, the Soviet navy from 1945 built what was to become the centre for the Soviet Baltic Fleet. The harbour at the base, located on the tip of a peninsula, was deepened to 11 meters and extended to house 20 - 50 000 sailors, many of them with families. During the years of troop-withdrawal from the countries in Eastern Europe in the early 1990´s, the Kaliningrad area, under shorter or longer periods of time, is said to have held well over 100 000 soldiers. At the same time the Oblast's present position, as the last remaining Russian fortress in the west and as en exclave, has strongly enhanced Kaliningrad's geopolitical position.

The more peaceful and trade-related port activities are concentrated in the centre of the town with the same name. The commercial port is located at the mouth of the river Pregol, about 35 km off the high sea. Kaliningrad has a long important tradition as a port under German rule and at the outbreak of WW I it was the second largest in the Baltic Sea, a position it achieved thanks to the export of Russian agricultural products (Hiden 1987). By the 1930's conditions had changed completely, the port was still a transit port but now exports were slightly less than a third of imports that were traded in it's hinterland. Over the years, Kaliningrad has been a port that has had several restrictions in common with St. Petersburg. As is the case of St. Petersburg, the port in Kaliningrad can only be reached via an approximately 40-km long and 8 m deep channel that was dug in 1901. Another severe restriction is that the old channel is only wide enough to permit one way traffic with today's ship sizes and the port cannot accommodate ships over 10 000 dwt. Traffic in the channel with larger ships is today organised in 12 hour turns. The port itself is organised around three different basins. The largest of the three has long been used as base port for, what used to be, the Soviet Atlantic fishing fleet. This is a fleet that during the transition years has severe financial problems and many of the biggest trawlers and supply-ships have now been scrapped. The fishing port has instead widened its activities and today competes for

the handling of all types of cargoes, which includes the handling of the ferry traffic between Kaliningrad and Kiel. The two smaller of the basin's in the port are operated by the Sea Commercial Port of Kaliningrad that is the, now privatised, remains of the former state port structure (Terenia interview 1998-10-22)[117].

Kaliningrad's position as exclave, that arose when the Soviet Union fell apart, has from several aspects proved to be problematic. This is so because all passenger and goods movements by train or road between the Kaliningrad Oblast and mainland Russia must now cross foreign territory. A routing that either includes the crossing of the borders of at least two neighbouring countries like e.g. Lithuania and Belarus, or another of the combinations indicated in Figure 3.5.



(NB: lines do not indicate exact configuration of infrastructure)

Figure 3.5. Possible combinations of countries to transit: Kaliningrad - Russia

Source: Compiled by the author from various sources

[117] There is also a third port in Kaliningrad, the River Port of Kaliningrad, but the turnover of bulk here is very low, and the river port is difficult to reach due to a concrete road bridge that limits height.

A *"domestic"* alternative would be to use sea transport to/from the Gulf of Finland area. An alternative that from the cabotage figures in Table 3.3 has found a very limited use. With limited access to suitable sites for port construction on Russian soil in the Gulf of Finland area, several proposed port projects have instead been launched in the Kaliningrad area. For a number of reasons, the complex transit situation from Russia being one, non-of these port projects have been realised[118].

It is not only from a transport point of view that Kaliningrad's position has proved problematic, it has also proved difficult to manage the Oblast politically, in relation to the central authorities in Moscow.

Major local initiatives in the Kaliningrad area, like the developing of the *"Yantar"* free trade zone, have for years been counteracted by the central administration in Moscow[119]. Since the break up of the Soviet Union, a number of different proposals have been discussed concerning the future of the Oblast. Anything from business as usual, the forming of the Yantar free-zone (to become the Hong-Kong of Europe), forming some kind of loosely connected federative part of Lithuania, being re-integrated with Germany (at least economically), forming an independent fourth Baltic State, or, what could perhaps be realistic, an independent unit within the Russian Federation[120]. It can be assumed that again it is the geopolitical considerations that will be given the upper hand here over what could be considered to be the best strategy from a local Kaliningrad perspective.

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[118] To somewhat facilitate the exchange with Lithuania, the TACIS program will fund the building of new infrastructure at the most busy of the border crossings with Lithuania, at Chernichnoe / Kybarti. Russian costs will be covered while Lithuanian costs must be covered by the state budget (RFE 1999-02-23). The latest agreement between regions of Lithuania and the region of Kaliningrad, regarding transit issues, was signed by Primeminister Paksas in Moscow 1999-06-29 (Ministry of Foreign Affairs of Lithuania 1999 WWW).

[119] One reason for this has been that fraudulent certificates have been issued in Kaliningrad on domestic goods qualifying it for duty-free status (Kushnirsky 1997). The name Yantar (Russian for amber) has been chosen because some 90% of the world's findings of amber come from the Kaliningrad Oblast.

[120] The last of these proposals has previously been mentioned, but revitalised by the chairman of the Federation Council, Vladimir Shumeiko, in March 1999 (RFE 1999-03-22). A suggestion that was categorically denied as unrealistic by the governor of the Kaliningrad Oblast, Leonid Gorbenko (RFE 1999-03-23). What exactly distinguishes one proposal from the other is often hard to establish.

3.9. The Russian North West

3.9.1. Introduction

During the years since the falling apart of the FSU, the Baltic countries and the Russian regions around St. Petersburg and Kaliningrad have been given a relatively wide coverage in the West. The Baltic countries for their unique situation as reborn states, St. Petersburg for its size as well as its cultural and industrial importance and Kaliningrad for its strategic location. The sparsely-populated Russian North West on the other hand is rarely mentioned.

Therefore, the first part here will include a short description of the regional setting in which the two major ports in the region, in Murmansk and Arkhangelsk, operate. The reason that both these ports should be included in the analysis is that on Russian territory there are no other potential domestic competitors in the westbound direction. It is only in the

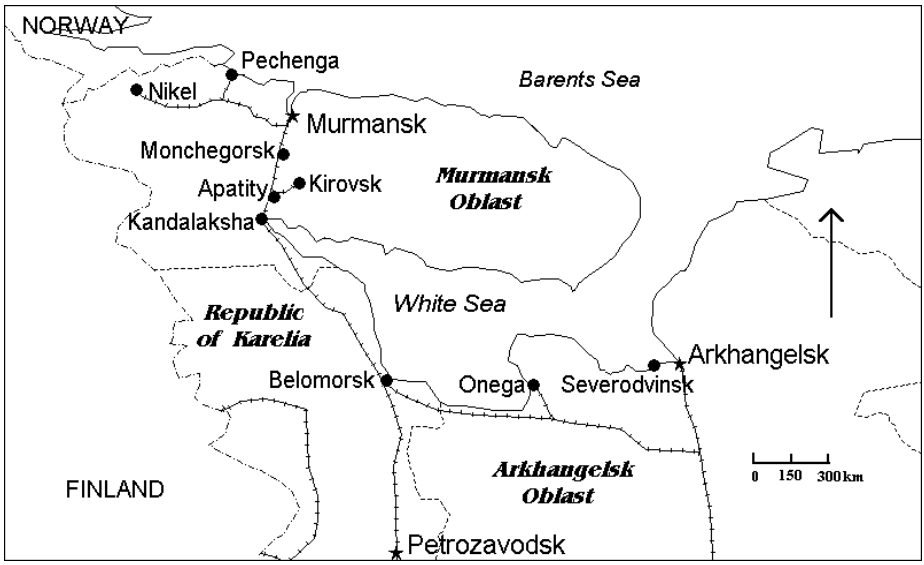

Figure 3.6. Larger Cities and railway connections in the Russian North West[121]

Source: Compiled by the author from various sources

[121] The main St. Petersburg – Murmansk railway has partly been electrified, apart from approximately 450 km between, Volkhovstroj Utjachtok, south of Petrozavodsk, and Loukhi, just south of the Karelia / Murmansk Oblast border. (own observations and Malmlöf interview 1999-05-21).

Russian North West that, at present, existing port structures can be found with a potential to affect the development of the port sector in the Baltic Sea region[122].

3.9.2. Regional situation in the Russian North West

The two most important coastal oblasts in the Russian North West are Murmansk and Arkhangelsk. Together the two oblasts house a population of 2.5 million, with 400 000 and 350 000 respectively in the two main cities, on a surface of 560 000 km^2 (bigger than France) (Finnish Barents Group 1995). It has also been shown that the Russian North West and Far North, at the beginning of the 1990's had a population density that are 20 to 30% higher than other northern latitudes of the world, like Canada and Alaska, and northern transport was: *"far in excess of anything in the Scandinavian or American North"* (North 1996 p.3). There are good reasons to believe that the development of the regions of the north, during Soviet years, was neither economically nor environmentally sustainable. Under a market economic system, Russia can no longer afford to subsidise and thereby maintain its northern regions at the previous level (Transition, October 1997 p. 18). To further prove this statement right, it could be mentioned that the North Western regions were among the 79 Russian regions, out of 89, that in 1998 showed a net loss in population. This as deaths exceeded births by 50 - 70% and a continuous negative migration (Arctic Centre 1999).

From a transport point of view, the whole of the Scandinavian and Russian Barents region could be divided into sub-regions. Between these regions the flow of both passengers and freight could in perspective be expected to increase manifold, but from very low levels. For freight it is probably so that what will increase the most is processed high value products in general, transported first of all by truck or train packed in containers. New, and/or extended, future transport links also open-up possibilities for a more diversified Russian industrial base to replace the old structure that was based on pure raw material processing (Cordi 1997).

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[122] The main drawback for these ports is their location. Distance at sea from Murmansk to Rotterdam is approximately 3000 km (1700 nm) and from Arkhangelsk another 800 km must be added. From St. Petersburg to Rotterdam the distance is 2500 (1400 nm) and 2000 km when using the Kiel-canal.

Food and fuel are two of the most essential supplies needed by the inhabitants in the north and both must be brought in from the south in large quantities. Subsidies from the central Russian government have been heavy in this field and so far, problems related to this have not been fully solved by market forces. This is because recipients in the north, for the most part, do not have the means to pay for seasonal deliveries, especially not in advance as they often have incomes based on raw-material extraction or processing. Suppliers in the south thereby take great risks in delivering goods due to non-, or delayed, payments and complicated transport logistics when covering such a huge area[123].

What is often talked about as a way to secure, or even lift, present employment levels in these regions are FDI's in e.g. mining, wood working or in the oil and gas sector. This seems to be only lip service as in an international investment ranking of the 89 Russian regions Murmansk, Arkhangelsk and Karelia were placed in the middle or the lower middle of the ranking (Bank Austria, 1998). This indicates that they are only average, or below average, regions when it comes to the certainly subjective but utterly important ability of taking care of foreign direct investments.

In addition, the environmental side of the Russian type of large-scale industrial production, especially on the Kola Peninsula and in Norilsk, should be questioned[124]. The few larger urbanised areas often have one large mine, processing industry or metal smelters as their sole employer. Smelters and industries that at the same time are heavy polluters using processes that at their present standards are completely unacceptable environmentally. As a result of this the level of SO_2 emissions from smelters such as in Nikel and Monchegorsk, for example, has been registered at 50 times the emissions registered for all northern towns like Kemi, in Finland, and nearly 250 times the emissions from Kirkenes in Norway (Geological Survey 1999 WWW). Air pollution is far from being the only environmental problem in larger conglomerations in the area; other such pressing problems are solid waste management and wastewater treatment.

[123] A more detailed description of supply-problems in the north can be found in Granberg (1997).
[124] Norilsk Nikel is a large producer of nickel and copper, but its strategically importance is in the production of other rare metals. One example is palladium for which it was the only Russian producer in 1998, and supplied nearly 70% of world production (RFE 1999-03-04).

The northernmost nuclear power plant in Russia has been located in the Murmansk Oblast. The plant in Poljarnye Zori, just north of Apatity, has now been in use since the middle of the 1970's. Apart from electricity from nuclear energy for industry and households, oil is the energy base for other uses, like heating and transport, and is delivered to the region by railway. During the last few years, there has been a surplus of energy production in the Murmansk Oblast that, to some extent, has supported the Arkhangelsk Oblast (Wiklund 1998-02-13). The most important industries are the working of mineral deposits in the Khibiny Mountains, centred in Kirovsk and Apatity, as well as the metallurgical centres in Monchegorsk and Nikel. There are fishing and woodworking industries in the Oblasts, but these are of minor importance.

3.9.3. Transport co-operation in the Russian North-West

It is not only in the Baltic Sea region that co-operation and trade with the West has a long tradition. The first trade-related voyage to the mouth of the river Dvina (today's Arkhangelsk) was made by Richard Chancellor as early as in 1533, thereby extending the already existing Norwegian – Russian *"Pomor-trade"* to other European countries (Maurseth 1997)[125]. Over 450 years after Chancellor, on January 11 1993, the Arctic Council was founded by the signing of the so-called Kirkenes Declaration, by Norway, Sweden, Denmark, Iceland, Finland, Russia and the European Union[126]. Parties that all take an interest in co-operation with the Russian North West, and have here joined forces to co-ordinate a large number of common projects.

The nine national regions co-operating in the Barents area are all geographically large regions and the distance to central powers is considerable[127]. The whole Barents Region definitely has long transport distances in common, a fact that is further enhanced by the lack of good trans-national transport structures. If the dissolution of the former Soviet Union had not been followed by a long economic crisis in Russia, the

[125] Just after the revolution, Sweden, semi-officially, tried to re-establish trade relations with Whites in Siberia in 1919 by entering the Ob river, bypassing Communist Russia. The description of this venture is the most fascinating text read during the preparation of this survey (Under svensk flagg 1988).

[126] In the Euro-Arctic Council there are also nine observer countries: United Kingdom, France, Germany, the Netherlands, Poland the USA, Canada, Japan and Italy (MTI 1997).

[127] These regions are in Norway: Finnmark, Troms and Nordland; in Sweden: Norrbotten and Västerbotten; in Finland: Lapland; in Russia: Arkhangelsk Oblast, Republic of Karelia, Murmansk Oblast and Nenets Autonomous Okrug.

latter of these restricting factors would perhaps have been better attended to at an earlier stage.

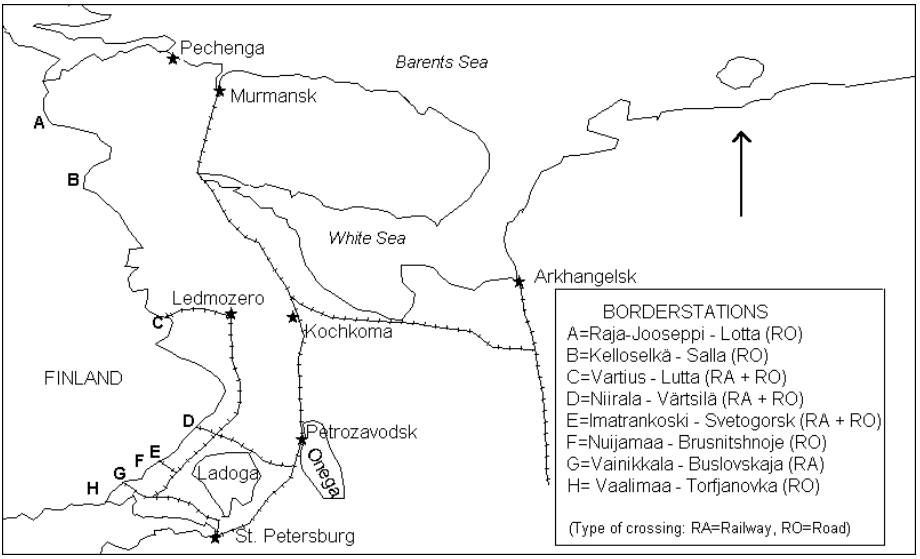

Figure 3.7. Border crossings between Finland and Russia in the North – West

Sources: Author; based on MTC 1993:a, MTC 1995, MTC 1997:c[128]

From an EU, a Scandinavian and a Russian, perspective the need for infrastructure improvement in the Barents region has been identified in several national and international studies[129]. In the study, *"The European North - challenges and opportunities"* a few of the most pressing infrastructure improvements in the area are listed (MTI 1997). The first two of these are clearly relevant for the aim of this study:

1. Modernising the commercial seaports of Murmansk and Arkhangelsk
2. Completing the construction of the 126 km railway link Ledmozero - Kochkoma along the route to Arkhangelsk

[128] Several more border stations are under consideration to be opened or accessible with special permits.

[129] The closest the many large scale EU transit-road projects get to this area is the E75/E4 around the north of the Baltic Sea; Stockholm - Sundsvall - Tornio - Oulu – Helsinki - St. Petersburg and on to Moscow. In all some 2700 km.

The importance of the ports in the Russian North West has been acknowledged within the framework of the Barents Euro-Arctic Council. The ministers of transport from all the Barents countries approved in 1996 the reconstruction and modernisation of the commercial seaports in Murmansk and Arkhangelsk as top priority. What is surprising on the list from the ministers meeting is that the railway connection between Ledmozero and Kochkoma was placed fifth (MTC 1997:b). Not much has happened to this top priority project though. As nearly always, it comes down to the lack of available funding. Under the framework of TACIS, a number of different feasibility studies have also been commissioned. Most of these concentrate on different aspects of the transport issues mentioned above (European Commission 1999:a WWW)[130].

One such field of mutual interest in the Barents area is the handling of formalities at the border crossings (e.g. see Figure 3.7). Problems that can be attributed to two general reasons on the Russian side:

- The long and largely unguided period of transition from a centralised to a market system
- The difficulties for the society to steer away from the administrative and legislative regulations of the past.

Many of these administrative problems could be avoided, but again fall back on missing or neglected routines and inherited work-patterns at the border stations. This results in increasing costs, mainly due to longer working- and waiting-hours, but also the tying up of capital intensive capacity and the unpredictable recording of passing cargoes, resulting in unreliable statistics. Border problems are also manifested in the slow handling of documents, poor provision of information, considerable unpredictability as to time and documentation needed for clearance. A problem during the years since the start of transition, at most bordercrossings, has been that any improvements in the speed of document and passenger handling achieved have constantly been neutralised by an even faster growth in traffic (FMT 1997). To address this kind of problem, another EU initiative is the joint working group under the Finnish and German Ministries of Transport that is to co-ordinate questions in relation to border crossings. This as a result of reports from the European Conference of the Ministers of Transport (ECMT), and the

[130] The EU has allocated ECU 3 000 million for the TACIS program for 1991 – 1999 and another ECU 4 000 millions for the period 2000 – 2006 (European Commission 1999 WWW:c).

Pan-European and Regional Transport Conference (PERTC). Their first recommendation for future actions is:

> *"Border crossing infrastructure and organisation in relation to Eastern Europe are to be improved quickly"*
> *(National Board of Customs of Finland et.al. 1995 p.23)*

By fulfilling such statements, periodical long hold-ups of 10 to 20 hours at border crossings for transiting trucks is hoped to be shortened to acceptable levels. The latest meeting of the PERTC that was held in Helsinki in June 1997 resulted in few new near future actions to facilitate cross-national trade and connections on this level (FMT 1997, Feldt interview 1999-06-15)[131].

It is most certainly so that especially from the Russian part of the Barents area there is a strong urge, and need, to both find and reach new markets for the present production of first of all wood and mineral products. At the same time the need to find reliable transport routes for the import of the much-needed material for oil and gas developments, and the export of production in the next stage, grows stronger. An industry that is hoped to become the production base in the north in the near future. It is on near future and future developments in this field that much of the, often optimistic, plans for the development of infrastructure in the region has been based. The support for this depending to a great extent on the relation between Russia, the US and EU, which has been much improved over the last few years, although much more needs to be achieved. Despite an ever-expanding Barents and EU co-operation for the Russian North West, the most important economic factors are still to be found in the local environment in the Russian regions.

3.9.4. Larger Barents ports and transport routes

The cargo volumes that pass the two major ports of the Russian North West, Arkhangelsk and Murmansk, are small compared to the volumes handled in the ports along the coast of the Baltic Sea. Some 9 mt in the north, compared to approximately 120 mt in the FSU Baltic ports in 1998. Still these northern ports are from time to time being referred to as competitors with a large potential (Morskie Porti 1:1999). These two ports

[131] This was probably the last PERTC meeting as its future activities are likely to be absorbed by different branches of the EU organisation (ibid.).

are mainly being used for locally generated transport needs, but could well also be used for the transit of cargo to/from Russia. For this reason, they will continue to be of strategic importance, and there must be a federal interest in that they are kept in acceptable working order, despite being small in turnover. Three major domestic transport routes can be identified that lead to and from these ports, and the Russian part of the Barents region. These main routes are:

- The Northern Sea Route[132]
- The railway St. Petersburg - Petrozavodsk - Murmansk
- The railway Yaroslavl - Arkhangelsk[133]

On the Russian side there is also the alternative of using the White Sea Canal. Freight volumes on the canal have been falling dramatically though, and in 1997 the freight volume is said to have been in the range of about 1 mt (Tärling 1998-02-05)[134]. Negotiations concerning the possible international use of the canal, as well as all other Russian inland waterways, have been initiated by the EC and are said to advance very slowly. A continued low level of utilisation of this, and other canals, can only result in further downgrading of the Russian canals in general and the White Sea Canal in particular. Future use of the canals is just one example of often contradicting interests between western partners and domestic Russian interests (ibid.). Cabotage shipping in Russia is also strictly regulated and has to date remained forbidden territory for foreign transport companies (Morskie Porti 1:1999).

3.9.5. Murmansk Oblast and port

Before the opening of the railway connection from St. Petersburg in 1916, the Murmansk region was of minor importance to Russia and instead stood under certain Norwegian and Finnish influence. The same year as

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[132] For a description of the early development of the Northern Sea Route see Armstrong (1980).

[133] Murmansk and Arkhangelsk Oblasts are also connected via an non-electrified railway south of the White Sea (see Figure 3.6 and Figure 3.7.).

[134] The canal was built under extreme hardship by forced labour and was opened for traffic in 1933. It has not been very well maintained, albeit larger reconstruction works that were started in 1977 which involved the reconstruction of 14 of a total of 19 locks. The traffic on the White Sea Canal in 1988 was 7.5 mt, a volume that had fallen to 2.5 mt in 1992 (MTC 1993, p. 63). One of the reasons behind falling volumes is that the locks in the canal, north of lake Onega, are only 70 meters in length and would need to be enlarged to make the canal more competitive. Such an enlargement would also promote the use of ports in the White Sea. The yearly five months' winter closure is another considerable drawback for the canal.

the railway line opened, the town privileges were given. Soon, the importance of the region was to decline again as a result of the revolution and the years of civil war. By the late 1920's, when the large mineral deposits in the Khibiny Mountains were discovered, the town held only 30.000 inhabitants. To many people in the West, the existence of a port in Murmansk is well known as the destination of the Allied convoys during WW II. These shipments commenced in early 1941 and continued until the end of the war.

It is not difficult to find a number of factors that are often brought forward in favour of the port in Murmansk, as the best and most easily accessible in the northern region. The most frequent such examples are:

- the only ice-free deep-water port in North Western Russia
- the port has direct and free access to maritime routes
- existing transport links with central Russia
- relative proximity to other West-European ports

The port in Murmansk is first of all commercial, but in Severomorsk, just north of Murmansk, the Gulf of Kolsky also houses large navy installations. Among them a navy base that services a considerable number of conventional navy vessels, some aircraft carriers, but also over 50 nuclear submarines, some half sunken (SPT 1998-01-30). Vessels that have also rightly attracted a lot of media attention in the West. The commercial port in Murmansk is located about 25 nautical miles south of the Barents Sea, on the eastern shore of the Gulf of Kolsky. The Gulf of Kolsky does not freeze, even in very severe winters, but instead, the relatively warm water in the gulf can give rise to long spells of dense fog during the winter-season[135]. Another problem in the gulf is the near two meters of tide that changes every six hours[136].

1989 remains the year with the highest turnover ever recorded in the port, 8.8 mt. In the following years turnover fell constantly until 1993 when 4.1 mt was recorded. In 1994 turnover recovered strongly, and reached 5.7 mt. In the years 1995 to 1998, the total turnover has showed a continued increase to reach 8.1 mt in 1998. Over the years since 1992, dry bulk has constituted around 70%, or more, of the turnover with general cargo

[135] To have stood on the quays of the port and see the Golf of Kolsky covered in dense fog in a temperature below -30 degrees is probably a rather unique experience.
[136] A more detailed description of physical conditions in the port of Murmansk can be found in Isakov et.al. (1997:b).

making up another 25%. A division that well reflects the port's intention to be a strong bulk handler (Ivanov interview 1998-02-14)[137]. In addition, the structure of the tariffs on the railways supports this as the more expensive the cargo, the higher the tariff. The long transport distance to Murmansk would thus make shipments of valuable cargo less attractive. A way of setting the freight tariff, (now being in the range of 30 – 40 different ones, but under constant adjustments) instead of the previous 3 different, that have been introduced since the break up of the FSU (Bernelius interview 1999-05-11).

Much of the handling in the port of Murmansk is of various minerals[138]. Of these minerals only the apatite, metal concentrate from Norilsk and coal can be said to be long-standing transits. To handle the apatite export the port has, with the help of US investors, built a new loading terminal with a capacity above 1.5 mty[139]. A terminal that is the most profitable part of the port, was in late 1998 taken over by a new company that was created by the management of the biggest operator in the port, Joint Stock Company Commercial Sea Port of Murmansk. The new company was created unofficially and in complete opposition to the Dockers Union and the Murmansk Property Committee. The property transfer has been stamped by the Oblast government as illegal and is now to be examined by the Prosecutor General of the RF (Murmansk Vrestij 1999-01-10). Meanwhile, several other bulk cargoes handled in the port are late arrivals like the exports of fertilisers produced in the Novgorod region and imports of alumina for mainly Siberian aluminium smelters (see Figure 3.3 for distances). The last two are pure transit cargoes in the Oblast and could very well disappear as quickly as they appeared. Other minerals that are handled in the port are the bulk of the trans-shipments from Norilsk, along the NSR. Various supplies eastbound and a number of metals in concentrated form for refinement westbound, first of all to the smelters in Nikel and Monchegorsk.

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[137] In early 1998 the port did not consider Arkhangelsk to be an important competitor for cargo. But all Baltic ports are, and so are other ports in Finland, even though the later group is ironically referred to as *"summer competitors"* (ibid.).

[138] In contrast to alumina and fertilisers, the importance of the domestic coal handling has contracted sharply over the last few years and will probably completely stop shortly, as the mines on Spetsbergen have proved increasingly unprofitable. Instead, export of coal is hoped to become an important product as the port is deep enough, and will be dredged further, to accept larger ships (Malmlöf interview 1999-07-01).

[139] 1.5 mty was stated in the port, while the port indicates 3 mty on its home page (Murmansk 1999 WWW).

The by far most important cargo operator in the port is the JSC Commercial Sea Port of Murmansk that leases 16 berths from the Maritime Administration of the Port of Murmansk. This 10-year lease was initiated in 1992 and should, if not extended, expire in 2002. In the bay, draught is around 40 meters with 12.5 meters as a maximum at the deepest quay, but for other quays draught is in the range of 8 - 12 meters[140].

3.9.6. Arkhangelsk Oblast and port

The first economic expansion in the Arkhangelsk Oblast came with the opening of the port in the late 17th century and the second expansion phase of the area started in the 1860's with the opening of the railway from Moscow[141]. By the turn of the century, Arkhangelsk was one of the biggest cities in Russia and at the time saw a quickly expanding timber trade. At its height in 1920, the region held 400.000 inhabitants, but it was also now that the competition from Murmansk started to be felt. From then on, the port in Murmansk came to take over much of the quickly expanding cargo traffic. During the Soviet years the region came to be much dependent upon military production, like the two big shipyards in Severodvinsk, and the satellite base in Plesetsk (app. 40-km W and 250 km SW of Arkhangelsk respectively). The second biggest town in the Oblast is Severodvinsk, built around its shipyards, specialised in e.g. nuclear submarines. This concentration on military installations led to the fact that the whole Oblast used to be practically closed to foreigners during the Soviet years, but was open for a large number of allied convoys during WWII (Gilbert 1993)[142]. The conversion process from military to civil production during transition years has here, as in many other Russian regions, proved difficult[143].

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[140] The southern part of the quays belongs to the Fishing Port that has lost most of its importance in the 1990's and turnover has simultaneously fallen from nearly 1 mty to less than 100 000 tonnes in 1998.

[141] Arkhangelsk Oblast nearly corresponds to Sweden in size, with its northern parts in the Permafrost belt.

[142] Arkhangelsk was also used as a bridgehead by allied forces that supported the *"Whites"* against the *"Bolsheviks"* during the years after the revolution. 7600 British, 1200 French and 4900 American soldiers were landed in Arkhangelsk, and a year later withdrawn, after a failed assault, leading to the classification of the operation (Sloan 1997).

[143] To solve the Federal Governments debt problem with the shipyard the Oblast governor, Yefremov, in 1997 proposed that the yard instead, on its own, should sell two submarines that were ready for delivery to *"friendly countries"* (RFE/ RL 1998 WWW).

The Arkhangelsk region is not very rich in minerals, apart from late findings of oil and gas. It has instead its historical base in the forest industry and timber was shipped from the port long before the revolution.

Today Arkhangelsk gives the impression of being one of Russia's smaller ports, but has been of fundamental importance in Russian history. The town came to house both Russia's first commercial sea port, from 1693, Russia's first shipyard and also served as the natural home port for all early merchant ships[144]. The first decay of the port came with the expansion of the port in St. Petersburg during the first decades of the 18th century and the second with the opening of the railway to Murmansk. Arkhangelsk remains the only major port in the Oblast and the commercial port is located on the mouth of the Severnaya Dvina river.

Today the port has come to be spread out over several different terminals along the shores of the river, which is not surprising as the port over its history has moved several times between different locations along the banks of the river (SSG 18-19:1980). The most up-to-date of these terminals, the Ekonomia terminal, is the only one that can accommodate larger ships, which other terminals further up-river can not. Along the banks of the river, some ten different wood processing companies, which used to be about 20, can be found and each have their own quays to handle ship cargoes. Sedimentation from the river is a large problem in Arkhangelsk and constant dredging is needed to maintain depth, but for economic reasons this has not been possible to maintain as frequently as in the past[145]. During the winter season in Arkhangelsk, that starts in late October and lasts until the beginning of May, icebreaker assistance is mostly needed.

As in Murmansk 1989 was the year when the turnover in Arkhangelsk reached it highest ever level, 6.1 mt. In the following years turnover fell constantly until 1994 when 1.3 mt. were recorded. During the years of 1995 and 1996 the total turnover has continued to decline to a low of just 650 000 tonnes in 1996. 1997 and 1998 have both seen over 25% increases in turnover, resulting in a 1.1 mt turnover for 1998. Over the years since

[144] The first Russian built merchant ship, Saint Paul, was launched from the local shipyard in 1695 (Arkhangelsk Museum of Northern Seafaring 1997-02-18).
[145] In mid April 1999 it was made public that reloading charges will be lowered by 10% in the port and that federal money had been made available for substantial dredging work to be used at the Ekonomia terminal (Olsson 1999-04-20, quoting Delovoi Petersburg 1999-04-14).

1992, general cargo has constituted around 50 - 60% of turnover with timber making up another 25%. Liquid bulk that used to be an important product in Arkhangelsk, having had a yearly turnover in the million ton range, has now contracted to a volume well below 200 000. In 1996 the port handled 14 000 TEU internationally and 4 000 TEU in cabotage at the Ekonomia terminal. By far the most important cargo operator in the port is the Joint Stock Company Commercial Sea Port of Arkhangelsk that leases three terminals, Ekonomia, Bakaritza and the Left Bank terminal, from the Maritime Administration of the Port of Arkhangelsk. This 10-year lease was initiated in 1994 and should, if not extended, expire in 2004 (Kravchenko interview 1998-02-14)[146].

What makes the competitive situation problematic for Arkhangelsk, apart from its geographical location, is that the railway north of Yaroslavl has not been electrified which dramatically reduces its capacity. As a direct result of decreased handling in the port, and on the railway, it has become both easier and cheaper to find rail freight capacity on the line to Arkhangelsk (ibid.).

3.9.7. Other northern Russian regions and ports[147]

The last region that will be mentioned is the Nenets Autonomous Okrug and the most important ports along the North coast, and the main tributaries of cargo shipped on the Northern Sea Route, Dudinka and Igarka[148].

Until September 1996, the Nenets AO was administrated under the Arkhangelsk Oblast, and then come to form an administration of its own. Through a greater autonomy, the regional administration's intention is to gain better control over the revenues that future oil and gas developments in the northern parts of the Timan-Pechora region are hoped to

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[146] The future of the port is often said to depend on the construction of two missing links. The first of these is 230 km of missing railway between Karpagory - Vendinga that would give Arkhangelsk a direct railway connection to the centre of The Republic of Komi (Bärlund 1996). The other link is an approximately 640 km long gas pipeline that should connect Arkhangelsk with Nyksenitsa at an estimated cost of USD 550 millions (Snegovskoy 1997; Barents List 1998 WWW). As neither of the two are more than insecure *"future projects"* their could-be-influence is hypothetical.

[147] A map over the area with major ports can be found in Appendix.

[148] First Deputy Prime Minister Aksyonenko gave the volume shipped on the Northern Sea Route to 1.48 mt in 1998 to be compared to 6.58 mt in 1987 (RFE 1999-08-06). A development probably comparable with the fall in turnover in Dudinka and Igarka.

generate[149]. Nenents AO is a poorly developed and sparsely inhabited region with large parts situated in the permafrost zone. Here, as in all of northern Siberia, only the top layer of the ground melts during a short summer period, which makes living conditions, and the future of oil and gas exploration, very difficult. The region has no industrial base of its own and without Soviet strategic interest in keeping the northern coastline militarised and populated it is doubtful that it would have held a five digit population before the first oil findings[150]. What makes the region interesting is that it boasts extensive oil and gas reserves that could be developed if a good investment climate existed and sufficient capital, domestic or foreign, could be found. A search and extraction operation for oil and gas was originally initiated, on a smaller scale, already in the 1960's (Gerloff and Zimm 1978). The number of confirmed oil- and gas fields in the region are about 200, often relatively small, but the combined reserves are expected to correspond to the Norwegian findings in the North Sea. To this could be added approximately 125 identified offshore fields in the Pechora Sea, off the coast of the Okrug.

The two most important of the ports along the northern Arctic coast, apart from the above mentioned, are Dudinka and Igarka, located 350 and 700 kilometres respectively, upstream in the Yenisey river. Dudinka serves as port for the Norilsk Nickel plant and has, despite very difficult winter conditions, year around traffic in the range of 1 million tonnes. Igarka is the smaller of the two handling mostly timber, with a turnover well below 500 000 tonnes[151].

The only other port that can become important in the North West, in the foreseeable future, is the proposed port in Pechenga. Located some 50 km east of the Norwegian border, Pechenga is planned to become an important oil-reloading point, drawing on its location in a deep fjord. The intention is to use the port, that has served as a marine base, as

[149] A parallel development to what has happened in two other oil- respectively gas-rich regions, Khanty-Mansii and Yamal-Nenets Autonomous Okrugs in the oil-rich Tyumen Oblast.

[150] The Nenets Autonomous Okrug has an extremely low density of population, about 0.1 person per km2 (still above average for northern Siberia), and nearly half the population lives in the administrative centre Naryan Mar. Administratively the two groups of islands, Novaya Zemlya and Franz Josefs Land, are included in the Okrug which contributes to its large size, 170 000 km2 (twice the size of Austria).

[151] Due to the melting ice and snow in the southern reaches of the river, the quays of the ports in both Dudinka and Igarka are flooded every year during 6 - 8 weeks, beginning in late April. Detailed descriptions of smaller ports along the Russian arctic coastline can be found in Granberg (1997) and Isakov (1997:a). A general description of conditions in the Russian Arctic can be found in Armstrong (1978).

transhipments base from smaller ice-strengthened tankers. Tankers that can reach and load crude oil at terminals along the northern coastline and reload at Pechenga to VLCC's that because of the deep waters can approach the port[152]. As for many other large-scale oil projects in the Russian north, such a project would probably need a stable, and high oil price to become viable. Especially so as shipping costs alone, for a smaller ice-strengthened tanker came to roughly USD 60/ton for an EU sponsored experimental voyage, in winter conditions, from Murmansk to an oil terminal on the mouth of the river Ob (Ivanov interview 1999-06-18).

3.10. Conclusions to the chapter

In this chapter, we have seen a number of examples of the changes that have been taking place at different levels of Russian society during the years of transition, but also in the production of some major transport-generating basic products. The situation in the transport and port sectors had possibly looked very different indeed if e.g. the political development had remained stable since the first years of transition, irrespective of political direction. At present, Russia is a society that is severely strained by a number of problems, as exemplified in this chapter, and will also in the near future find it difficult to co-ordinate seemingly simple actions and carry through fundamental reforms. Of this, several examples have been given. At the same, time a considerable sensitivity for world raw-material prices remains, but to stay competitive in this line of business it also takes transport infrastructure and organisation. Resources loaded for any potential export terminals stay dependent on quality, prices and reliability of infrastructure connecting them with suitable export terminals. Indirectly a lot of factors are dependant on a stable development of society taking place, but instead society seems to be moving in a direction that remains of a vicious circle where competitiveness, in certain respects, is deteriorating instead. The long-term implications for the port sector are of course continued insecurity on all levels and continued low probability of a positive development in this sector in Russia in the near future.

As demonstrated by the different ports described, major changes in the Russian port sector have been carried out during the years of transition. Efficiency has not improved in line with demand, though. To compensate

[152] A port that was Finnish from 1918 until 1940 then named Petsamo.

for this, and to take back cargo "lost" to ports in the Baltic states, a number of new ports have been proposed in the Gulf of Finland. However, implementation has proved to be very slow and there are many conflicting interests. The federal government, sitting on an empty state coffer, finds it hard to promote what could have been genuine national interests. Haw genuine these projects are however, remains to be publicly proven.

4. THE TRANSIT STATES

In this chapter it is the possible competitors to Russian ports that will be focused upon. These competitors are the ports in the Baltic states and Finland that even today, to a large extent, fill their port areas with cargoes of Russian origin and that work hard to attract more Russian cargo.

4.1. Introduction to the Baltic states

The former Soviet Republics, Estonia, Latvia and Lithuania, have all gone through different stages in their development since their international recognition as independent states in August 1991[153]. All three have managed to steer their economies away from the former dependence on Russia and have been successful in integrating their trade with their Nordic neighbours and other EU countries (Smith 1999). Their economic development since the beginning of the transition period has not only been positive, it has practically demonstrated an *"economic U-turn"* as can be seen in Table 4.1, especially so when compared to Russian development in Table 3.1 (Hamilton 1999).

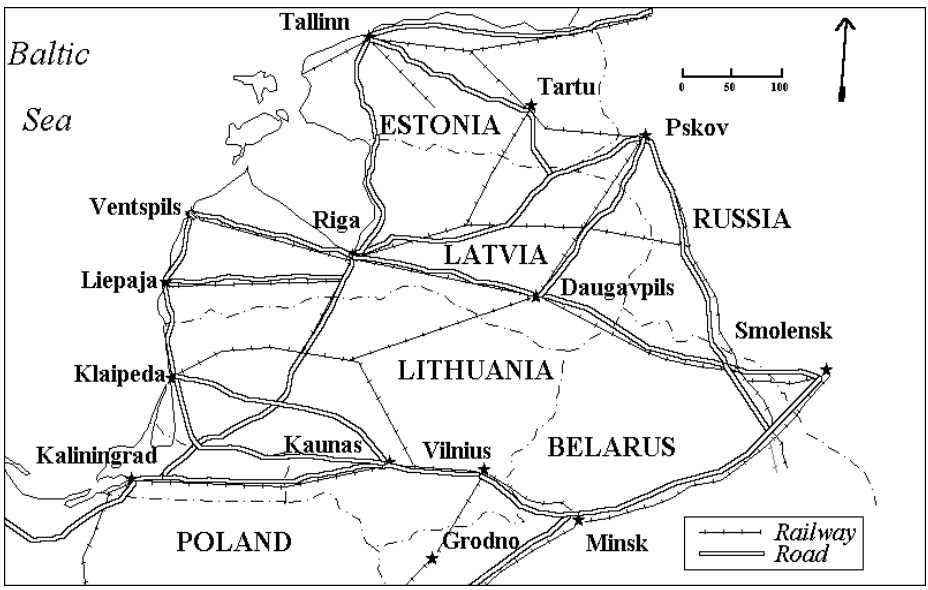

Figure 4.1. Railway and road connections to major ports in the Baltic states

Source: Compiled by the author from various sources

[153] Sweden recognised the three Baltic States on: 1991-08-27 (Swedish Min. of For. Affairs 1991).

In their first years, the three newly-formed states all started off dramatically by emphasising an independent attitude towards their large eastern neighbour. When it came to transport and port policies, all three countries soon came to realise that they were still dependent upon Russia, not only in the field of foreign trade, but also for transit cargoes to fill their suddenly largely oversized ports. Therefore, it did not take long until relations even on the political front started to slowly settle down. This chapter will therefore focus on the transit of goods, to and from Russia and other CIS states, and related aspects that are of importance to the Baltic states. First, by discussing the Soviet period influence on these ports, transit volumes and a possible new direction for the Baltic States and cities housing these ports.

Table 4.1. Economic indicators for the Baltic states 1994 – 1999

		1994	1995	1996	1997	1998	1999#
Estonia	GDP	-2.0	4.3	3.9	10.6	4.0	-5.8
	Industrial Prod. %	-3.0	2.0	3.4	13.0	0.5	-7.2
	Unemployment % *	5.1	5.0	5.5	4.6	5.1	6.1
	Exports, USD billion	1.3	1.9	1.8	2.3	2.7	-2.0%
	Imports, USD billion	1.7	2.5	2.8	3.4	3.8	-8.3%
Latvia	GDP	-6.0	-0.8	3.3	8.6	3.8	-2.0
	Industrial Prod. %	-9.5	-6.3	1.4	6.1	2.0	-13.9
	Unemployment % *	6.5	6.6	7.2	7.0	9.2	10.0
	Exports, USD billion	1.0	1.4	1.5	1.8	2.0	-10.9%
	Imports, USD billion	1.3	1.9	2.3	2.9	3.1	-11.0%
Lithuania	GDP	-9.8	3.3	4.7	7.3	5.1	-4.8
	Industrial Prod. %	-26.6	5.3	5.0	0.7	7.0	-9.0
	Unemployment % *	4.5	7.3	6.2	6.7	6.9	7.5
	Exports, USD billion	2.0	2.7	3.4	4.2	4.0	-23.0%
	Imports, USD billion	2.2	3.4	4.3	5.3	5.5	-19.1%

* = registered at end of period[154] # = as end of first half[155]

Sources: Statistical Office of Estonia 1999 WWW, Statistics Lithuania 1999 WWW, Central Statistical Bureau of Latvia 1999 WWW; Unemployment H1/99 from: Bofit 1999:b WWW

[154] Official statistics are based on registered unemployment while labour force surveys, e.g. conducted by the ILO, often indicate 50 - 100% higher unemployment levels in the Baltic countries.

[155] GDP prognoses from IMF (1999) and EBRD (1999) for 1999 reads: Estonia: +2.3, +3; Latvia: +4.0, +2.5; Lithuania: +2.5, +2.6.

4.2. Russian influence on Baltic ports[156]

As mentioned in the Introduction, the coverage here of the situation in the port sector of the Baltic states will not be taken into as great detail as for existing and proposed ports in Russia in the previous chapter. A deep coverage of ports in the Baltic states, from a number of aspects, will instead be given in a follow-up study that will include detailed descriptions of these transit ports. The intention here is only to fit the port sector of these foreign competitors into the framework of the general discussion in this study and have therefore been kept more superficial than the previous chapter about Russia.

4.2.1. The Soviet heritage

All the port towns of the Baltic states have a long tradition in this respect, but their roles have been changing during different periods of history. The development of the ports and the dependence on trade started to emerge during Hanseatic years in this part of the Baltic Sea (Vareikis 1997). It is not a new phenomenon that Russian inland regions, as during the years of Soviet Union, have been dependent on ports in the Baltic for their exports. Some of the ports, like Riga and Liepaja, were important during the latter part of the 19th century when Russia was a large exporter of agricultural products, especially wheat, to Western Europe (Hiden 1987, Goodwin and Grennes 1998). During the inter-war years, that carried the marks of inflation and protectionism in world trade, together with little Soviet involvement in world trade, these ports lived a more quiet life. During the years of World War II, all the different towns first fell into Russian hands, then German and finally the whole region ended up as being parts of Soviet territory. As a result of heavy fighting and air bombardment during the war years, much of the infrastructure in the ports were severely damaged, or had been completely destroyed, by the end of WW II. After the war all the various ports were, more or less, rebuilt. Still it was not until the late 1960´s and early 1970´s that these ports had managed to regain their lost importance, but this time it came to be within the Soviet Union.

[156] A description of other transport infrastructure than ports in the Baltic States can be found in Buchhofer (1995), for roads in Cullinane and Toy (1998) and an extensive general description in Böhme et. al. (1998).

It was in the late 1980´s that the transit volumes peaked at a time when world raw material prices, and especially the oil price, collapsed after 1985. In an attempt to maintain a high level of currency income, the Soviet Union instead tried to compensate for falling prices by increasing the export volumes further. It was during this period that all the different ports in the region recorded what, for several ports, is their still standing peak turnovers for a year. With a constantly increasing Soviet involvement in world trade, the importance of the ports slowly increased, but again based on the handling of cargoes from and to inland areas that transited the ports.

It was from a high turnover level in the last years of the 1980´s, that volumes started to fall, with its lowest in the period 1990 to 1992. The reason behind the falling volumes of cargoes in the ports did not depend upon one single factor. Instead, a number of different factors came to contribute to the contraction of trade. The single factor that hampered trade flows the most was the erection of a supervised national border between Russia and the Baltic States, but also between other FSU states[157]. Newly established and weak governments, general currency instability, a contracting Russian industrial production and falling demand in the West were other factors that contributed to the decline in volumes handled in the ports of the Baltic States.

Table 4.2. Turnover in major transit ports in the Baltic states; 1992 - 1998

(Million ton)

Port	1992	1993	1994	1995	1996	1997	1998	Important Cargoes
Tallinn	11.0	12.5	11.7	13.0	14.1	17.1	21.4	Oil, ferry cargo, pulp wood, steel
Riga	5.4	4.7	5.9	7.5	7.4	10.2	13.3	General cargo, containers, pulp wood
Ventspils	21.8	22.2	27.7	29.6	35.7	36.8	36.0	Oil, oil products, chemicals, fertilisers
Liepaja	0.0	0.4	1.1	1.4	1.6	2.1	2.6	Pulp wood, steel products
Klaipeda	12.9	15.8	14.5	12.7	14.8	16.1	15.0	Oil products, ferry cargo, steel
Total	51.1	55.8	60.9	64.2	71.4	82.3	88.3	

Source: Statistics supplied by each of the ports listed

[157] All kinds of border crossing problems have been mentioned in a number of interviews and conversations with employees on all levels, from truck drivers to management. In the Baltic mostly related to the early years of transition which has also been documented by others, e.g. Kauhanen (1993).

The decline came to be rather short-lived though, and, as shown in Table 4.2, the years during the middle of the 1990's have meant a strong recovery in export volumes for all the Baltic ports. The drop in handling during the early years of transition had been more or less fully recovered by the different ports by 1995 - 1996 (National Maritime... 1992; Brodin 1999).

4.2.2. Soviet handling legacy for the Baltic ports

The Soviet transport system also favoured concentration also in port handling. The best example of the effects of concentration in the port sector, among ports in the Baltic states, is probably Ventspils, that is the largest port of all the FSU ports in the Baltic Sea. The port has the advantage of being connected to the Russian oil grid with a double pipeline laid in the 1960's (see Figure 3.2). At the time of the two oil-price shocks in the first years of the 1970´s and the early 1980´s, the volumes exported came to grow quickly. Ventspils eventually became the second largest port in the Soviet Union, second only to Novorossiysk in the Black Sea. The handling of crude oil, chemicals and much of the handling of petroleum products in the Baltic Sea came to be concentrated to Ventspils. On the import side, the same pattern of concentration could be observed in the import of cereals. This need arose to compensate for failed domestic harvests, which led to the construction of one of the largest silos in the world in the new Muuga port east of Tallinn[158].

Other characteristics of transport during the Soviet period that made the reorganisation of the transport pattern and port handling in the Baltic states much more difficult were the large share of non-containerised cargo (general cargo) in foreign trade, and later the slow adaptation to containerisation[159]. With increasing Soviet trade, the need for ports that could handle large volumes of non-unitised cargo increased and this duty, among the ports in the Baltic Sea, was assigned to St. Petersburg, Tallinn and Klaipeda. With the increased use of containers in world trade,

[158] The silo in Muuga has a 300 000 tonnes storage capacity and 5 million ton/year capacity Grain remains the only major eastbound bulk product, but handling has fallen to a volume below 3 mty in 1997 - 1998, from a level well above 10 mty five years earlier (Brodin 1999). Another example of concentration was the location of freezers that were built in St. Petersburg and Kaliningrad.

[159] In Soviet terminology the English *"general cargo"* corresponds to *"non-unitised cargo"*; i.e. cargo where each piece of cargo must be handled individually as for large machinery parts or other cargoes e.g. on pallets, in rolls or in big-bags.

new terminals again had to be built. At first the Soviet container handling was concentrated to St. Petersburg, but was later followed by a terminal in Riga, both being ports with shallow waters and severe ice problems during winter, factors that today are of much greater importance as feeder traffic with containers are strictly bound to fixed arrival times and departures which was not the case at the time when these locations for the terminals were chosen.

Another important factor was the fact, as was previously mentioned in relation to St. Petersburg, that during the Soviet years all ports were extremely dependent upon the railways to handle arriving and departing cargoes. Even the Baltic ports were examples of this imbalance in modal choice. A strong growth in the trucking business during later years has somewhat lowered this dependence in the Baltic states. A general decline in the domestic use of railways in these relatively small and circumvent countries has on the other hand made transit traffic increasingly important to the local, still state-owned, railway companies. The share of transit in total handling for the railways is generally decreasing, but depending on type of cargo and destination/origin the transit share could vary widely.

4.2.3. Soviet perspective on Baltic ports

From a Soviet perspective, coastal towns like Tallinn, Riga, Ventspils, Liepaja and Klaipeda, that today have important commercial ports, were all relatively small towns on the outskirts of the union (see Figure 4.1)[160]. Soviet interest in the coastal Baltic cities often came to focus on military and naval matters at the expense of industrial and cargo port activities. A number of naval bases for the different branches of the Baltic Fleet also came to be established here. These bases were gradually developed, or extended, during the years after World War II, and especially during the Cold War years. The three most important, from north to south were the submarine base in Paldiski in Estonia, the naval base in Liepaja in Latvia and Baltijsk in the Kaliningrad area. Liepaja, served as a normal Soviet commercial port until 1966, but was from then on closed to commercial shipping and fully converted into a naval base[161].

[160] The exception is Riga, that in early 1999 holds a population in the range of 815 000.
[161] The port has since 1993 been re-opened, but only partly as left over Soviet-time pollution severely restricts the use of half the port and only limited funds are available for the much-needed large scale clean-up operation.

It was also in Paldiski and Liepaja that the Russian troops held on to the longest, and only most reluctantly gave up, when the Red Army finally had to retreat from the FSU bases in the Baltic countries[162].

From a Moscow perspective, the Baltic states were the part of the union that secured Soviet access to ports and naval bases. As each of the three republics had a background as independent states in the inter-war period and all having access to open sea towards the west, they were constantly looked upon with somewhat more suspicion from a Moscow horizon. Not only the states as such, but also the local population was seen as being potentially more unreliable than native Russians. Because of this suspicion, few persons that were former citizens of the inter-war states, or with relatives of that origin, could be expected to be completely loyal to the Soviet Union. Therefore, few were granted permission to work for shipping lines as sailors or in the high-sea fishing fleet. It was even so that a majority of the employees in the different commercial ports in the region were ethnic Russians.

4.2.4. Position of the ports during transition

As schematically described in chapter 2, strengthened competition for Russian transit cargoes after the break-up of the FSU also came to involve the governments of the different Baltic States. Governments that on the one hand wanted to take a firm stand against Russia on all levels, but that slowly also the came to realise the importance of the transit trade to the whole economies of their small countries[163]. One should not forget that all three countries participate in a geopolitical game with Russia as the most important actor. During the last few years, there have been a number of shifts in interest from the Russian side as to who to favour and who to go against. Much of this comes from the fact that both Estonia and Latvia hold large Russian minorities and that all three Baltic countries have actively been seeking NATO as well as EU membership[164]. As late as

[162] The very last of all bases in the Baltic states was the early warning radar base in Latvian Skrunda, that remained in use until early 1998 and the last Russian soldier is scheduled to have left by late 1999.

[163] Another example where different sources give different values for the share of the Latvian GDP generated by Transports and Communications: *"23%"* (Laving 1996). *"above 15%"* in 1998 (Lloyd´s List 1999-06-25), *"17%"* president Ulmanis (Business in Russia 11:1998) and *"14.9%"* in 1998 (when calculated from figures by Central Statistical Bureau of Latvia 1999 WWW).

[164] One such constant source of irritation has been the language laws that strictly promotes the use of the local languages, that only few ethnic Russians can write and speak with any fluency.

during 1998 and 1999, it has been Latvia that is being counteracted from Moscow, which has had direct implications for not only bilateral trade, but also for the volumes of transit trade[165].

At the time of writing (mid 1999), it is not even so that the borders of the three Baltic states have been confirmed in the form of a border treaty with Russia, despite seven years of negotiations. A first such agreement has been ratified, but not signed, between Russia and Estonia (RFE 1999-03-08). Lithuania, that only holds a small ethnic Russian minority, some 2 – 3%, has never the less had problems to come to term with its eastern neighbour for other reasons. Here the problem has been the sensitive transit traffic to the still Russian exclave of Kaliningrad (Illustrated in Figure 3.5). A question that, on several occasions over the years, has stirred up a lot of attention.

Under central planning, it was inevitable so that certain transport patterns were established. Here people on different levels in the system established personal relations that later, during the turbulent years of the early 1990´s would prove to be useful. When the USSR entered its final period of break-up, initiated by the coup in Moscow on August 19 - 21 1991, the transport patterns that included the use of these ports in the Baltic states were long since in place. Typical for the ports in the Baltic States is that the hinterland of the ports is not just domestic or limited to western Russia. Instead, it reaches all the way to inner Siberia as well as to Ust-Kamenogorsk in eastern Kazakhstan. It is every day business for these ports to handle goods for producers and customers located at a distance of 3000 km, or more, from the ports. It was also so that despite the fact that the ports of the Baltic States were far from free from all kinds of transitory problems, they were mostly able to load and unload the cargoes that came to the ports. Several Baltic ports have advantages over their Russian competitors such as being more or less ice-free during winter and some, especially Tallinn, have a natural depth of several meters more than what can be offered by competing Russian ports. A goods transit that used to bring export revenues to the Soviet State coffer now came to function differently. Instead, a large share of these revenues

[165] One such incident was triggered by a clash between Russian speaking pensioners and police in Riga. High level statements were made which only temporarily reduced transit volumes. The incident was summarised in Business in Russia (11:1998 p. 24) *"the demand for ready cash, which is met thanks primary to oil export, outlashed Russia's decisiveness in the matter of defending Russian speakers"*. Obviously, political threats only carry any weight when there are serious economic moves to back them up.

started to end up in the pockets of many fishy and unscrupulous persons, among the i.e. *"bizinezmen"*. Men that often took great risks, but also got richly awarded when un-authorised deals could be fulfilled (Numerous own interviews, Pirani 1999).

It was during years of an ad-hoc style of business behaviour that the independent Baltic states were established. It was also during these years that the first signs of full-fledged competition between these ports emerged. In few other lines of business, has competition between former neighbouring union republics in the three different Baltic States emerged so clearly and so quickly. Formerly, the only competition between the ports was for the allocation of investment resources from Moscow ministries, but cargoes used to be assigned to them from levels beyond their own control. But suddenly, in the shrinking market for transit cargoes that existed between 1990 and 1992, the competition for the handling of cargoes became even more exposed to market forces than in the capitalist world. Any type of handling could open a chance for certain employees, in medium or higher ranks along the transport chain, to enrich themselves in one way or the other, a fact that further came to sharpen competition[166].

What further came to enhance the importance of the ports was the sudden importance that came to be put upon imports from the West. One such example was facilities for oil imports that were urgently installed by the new governments. Facilities that had not existed before, and that had never been needed. During the volatile years, around 1990 – 1993, something happened with the mix of cargoes transhipped. Now the content of industrial products and general cargo was reduced and it was instead different raw materials in bulk that came to lift the volumes. At the same time, domestic export to the West from the Baltic countries also shifted and came to concentrate on products like pulp-wood and other goods with a low level of refinement (Brodin 1996). This indicates that the export pattern in the Baltic countries has swung from a relatively high level of average technical content, being east-bound, to product segments with a lower average of technical content, being west-bound, often based on wood working (Shteinbuka and Cirule 1996). With bulky raw materials being the most important items in the national export, few other

[166]A wide scale of different methods to achieve this has been identified in many interviews and conversations with employees in leading positions in ports and shipping lines, but who prefer not to be mentioned by name. It was e.g. common that different fees and dues for various services had to be paid to different foreign bank accounts.

alternatives than shipping existed for its long-distance transport flow of low value cargoes. On the import side though, much of the high value goods en route to Russia, instead came to be routed over Finnish ports, or trucked directly from western Europe to its destination in the FSU area (Sauna-Aho interview 1998-10-14).

4.2.5. Transit volumes

According to the port's own calculations for 1998 it can be assumed that 90% of the cargo turnover in Ventspils plus 70% of the total volume in the other ports in the Baltic states is transit to or from Russia. Thus the Russian transit volume amounted to approximately 58 mt, with the four Russian ports, Vyborg, Vysotsk, St. Petersburg and Kaliningrad excluded.

Another 4 mt, approximately, of Russian cargoes transited in the three Finnish ports of Helsinki, Kotka and Hamina during 1998 (information from the ports 1999). With both Finnish and Baltic figures added together, the volume of cargoes that has its origin or destination in Russia could be estimated to be around 62 mt. That is 62 mt of cargo originating from a Russia that, as self-named caretaker to the Soviet heritage, for long has strongly favoured austerity in all respects (Nove, 1992), a Russia that is now forced to use the Baltic States as entrepôt (gate-keeper) nations to handle such a large volume of its foreign trade. To better understand how large such a volume actually is, it could be mentioned that it is bigger than the turnover in any port in the UK, or more than twice the turnover in the biggest port in Scandinavia, Göteborg (SSG 22:1999). Such a volume could best be compared to the full turnover in 1998 in the third biggest port in Europe, Hamburg, which had a turnover of 72 mt in 1998.

Another way to understand the magnitude is to compare these 62 mt to the combined turnover in the Russian Baltic Sea ports, Vyborg, Vysotsk, St. Petersburg and Kaliningrad, of 28.5 mt in 1998 (see table 3.3) which is just some 46% of the transit volume. A volume that gives the Russian ports a market share for FSU cargoes in the Baltic Sea of just 31%. A percentage that in itself can be seen as a comprehensible argument for more Russian port capacity in the Baltic Sea. In a similar estimation, presented in full in chapter 5.7, it has been shown that about 4 mt, or 50%, of the Swedish foreign trade volume with Russia during 1997 was transit cargo[167].

[167] A more detailed calculation can be found in chapter 6.5 for Swedish FSU trade.

4.3. A new Baltic direction

The position of the here mentioned port cities in the Baltic states came to be greatly enhanced in the process of forming new independent states. From having been just cities with a port, they all came to be very important cities in their respective country, and even dominant ones as in the case of Riga, Ventspils and Tallinn[168]. A town like Ventspils, that had been more or less isolated within its region, which had been a restricted area during Soviet years, now instead found itself in a vital position for the national Latvian economy.

After the regained national independence, the Baltic ports have manoeuvred their way through some difficult years. Among the first things that had to be done in the Baltic States was to work out, and adapt, a new Maritime Legislation, that has since its first version seen several amendments (OECD 1997:b). The last few years have been a relatively successful period for the ports and they have managed to win back lost cargo volumes and restore previous Russian transit levels. It should now be time for the ports to prepare for the future. While doing so, a new problem is emerging. All the different ports now try to build up their own expensive capacity to handle all kinds of cargoes; resulting in possible over-capacity. This fear is a result of the fact that the capacities of the proposed new terminals will well exceed local needs. Expectations of a continued, and dramatically expanding, transit trade have become the hope upon which this new capacity is being constructed. Current competition between the ports is for any type of cargo, and especially containers, as all want to enhance their competitive edge. However, none of the Baltic states are satisfied with the fact that volumes have recovered, or surpassed, what was handled during Soviet years. Now the goal is set on expansion. Already by the year 2002, the port in Ventspils hopes to have nearly doubled its capacity, Tallinn hopes to have doubled its transit volumes during the first years of the new millennium, and more or less the same is planned in Riga and Klaipeda (Annual reports for 1998). At the same time, this means that the old Soviet thought of specialisation is languishing away.

[168] Especially so for the port Tallinn that has come to develop into the only large-scale ferry port of all FSU ports. The traffic to Helsinki, and to a minor extent Stockholm, has lifted from practically 0 when initiated in 1990 to nearly 5.5 million passengers in 1998 (Tallinn Satama, 1998).

In what is expected to be the most expanding segment, container handling, three of the bigger ports have now ventured into smaller or bigger expansion schemes. All three want to build new terminals, or extend the existing ones, to enhance handling capacity. For the handling of containers, in 1999, it is still only Riga and Klaipeda that can offer a container terminal with what today is standard gantry cranes. The Klaipeda terminal, that was opened as late as in December 1998, has an estimated 150 000 TEU per year capacity and is being served by two such cranes. The largest stevedoring company in the port, state owned Klasco, has borrowed a large share of the capital needed to build the terminal from the IBRD[169]. Just some 150 km to the north, the construction of a new terminal in Ventspils is in full swing. Intended capacity is 100 000 TEU when fully operational by 2002, but with a small-scale opening planned for March 2000, a first year turnover of 15.000 TEU is expected. With economic support from the EBRD and being managed, as well as 40% owned, by Noord Natie (of the Port of Antwerp), sufficient support seems to be in place (Tirmanis 1998-09-11, Lloyd's List 1999-07-23). At the same time, a terminal in Tallinn is *"on the cards"* with a long-term intended capacity of 250 000 TEU (Talvik 1999-06-16). The TEU handling in the different ports for 1998 (1997) were Riga 146 000 (132 000) Tallinn 55 000 (55 000) and Klaipeda 32 000 (37 000)[170]. Other ports in the Baltic State handled negligible volumes of containers. The turnover in TEU in these ports could be compared to their Finnish competitors. In the same year, Helsinki and Kotka/Hamina handled 405 000 and 261 000 TEU respectively, of which a large percentage contained Russian cargo in transit. Of the ports in the Baltic States, only Riga, this far, can offer a weekly return block train to Moscow, while the others have to arrange transport in this direction on an ad-hoc basis.

In the oil segment, the port of Ventspils even today can accommodate as big tankers as can enter the Baltic Sea through the Great Belt, i.e. to approximately 120 000 dwt and are constantly extending their storage capacity[171]. Just a few years back, both Tallinn and Riga opened their own,

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[169] Approximately the same amount, ECU 17.4 million, has been borrowed by the Estonian Railways from the EBRD for general rail rehabilitation and by the Latvian Railways, ECU 17.0 million, for rail improvements in Ventspils. Both investments are expected to have the impact to *"improve competitiveness for transit traffic"* (EBRD 1999:a, 1999:b, WWW).

[170] In 1995 the five major Baltic ports together handled under 150 000 TEU, which was below 50% of what was handled in Helsinki alone during the same year. 232 000 in 1998 is near 60% of the Helsinki volume that year.

[171] Anna Knutsen, of 129 000 dwt, left Ventspils after having loaded a record 120 000 tonnes on August 16 1998 (Tirmanis 1998-09-11). Ventspils Nafta, the oil handling company, showed a net

constantly expanding, oil-terminals, which used to be the speciality of Ventspils and to some extent Klaipeda. In-between Ventspils and Klaipeda, the new Lithuanian Butinge facility went into operation during August 1999 with an estimated yearly capacity of 10 mty. This oil-loading platform can handle crude tankers up to 80 000 dwt and product tankers up to 35 000 dwt, but only platform loaders though[172]. If all plans for the next few years are realised in full, another 40 mty of port and transit capacity will be added in existing ports. Nevertheless, the real boom would come to the port that could arrange to become the loading port of the additional pipelines that are planned from West-Siberian fields to ports in the Baltic Sea. During a tour of the Baltic ports in early 1999, the Managing Director of the biggest oil company, LUKOIL, stated in Ventspils that for such decisions: *"serious Russian - Latvian intergovernmental negotiations would be needed"* (RFE 1999-02-12). Ventspils port has already established a construction company for the laying of an additional pipeline, together with the Latvian operator of the existing pipelines, to prepare for an expansion[173]. No decisions whatsoever have been taken, but the local lobby machine is already at work and advertisements in branch magazines for the future pipeline operator, named *"Western Pipeline System"*, have become frequent during 1998 and early 1999[174].

The Baltic States are forerunners compared to Russia regarding privatisation of infrastructure. The possible privatisation of rail companies and rail operation is one such issue that has long been discussed in the Baltic States. The first major step in this direction was taken in Estonia in February 1999 when the Parliament, despite strong opposition, adopted a law that regulates the issuing of licences for the operation of railways (RFE 1999-02-25). When applied, an eventual Estonian rail sector privatisation will be the first major privatisation in

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profit in 1997 of USD 40 millions from a turnover of USD 120 million and the tax paid, USD 30 million gives Ventspils Nafta a position as Latvia's largest taxpayer (Business in Russia, November 1998).

[172] This loading terminal is fed by pipeline from the refinery at Mazeikiai in Lithuania which was an initiative taken as the refinery has been partly taken over by American investors; Williams and Co. Initiated in 1995 the terminal was initially aimed as securing supplies, by way of imports, for the refinery (Neftegazovaya Vertikal 1:1999 p. 72).

[173] Finnish calculations state that per ton transport cost under winter conditions from the Gulf of Finland area for an 80 000 dwt tanker is USD 4.76/ ton while the same shipping cost from Ventspils is USD 4.05 / ton. (MTC. 1998: Annex 1 p. 9).

[174] The fact that the EBRD has a 10% stake in the company will probably place the bank in an awkward position when requested to lend money to alternative Russian pipeline routes, e.g. to the Gulf of Finland (Neftegazovaya Vertikal 1:1999).

this field in the FSU area. To maintain it's attractiveness for transit cargoes during the years of transition, state-controlled railways have maintained low prices. Prices on especially the Estonian and Latvian, but also the Lithuanian railways have been kept very low. In Belarus prices are at twice the Baltic state level, while in Poland and Finland they are at a level several times higher (Laving 1996; Knopf and Bernelius interview 1999-06-11)[175]. At the same time, the three state-owned rail companies in the Baltic states have been restructuring their operations during the 1990´s, much due to falling domestic use, and the states have bailed out the losses incurred (Ludzisa interview 1998-10-18)

Privatisation of railways is far from the only issue and all three countries have far reaching plans to completely privatise the operations in their major ports. Allowing Russian capital to participate in this privatisation process of various Baltic ports, e.g. of the port in Ventspils, would help to partly erode nationalistic Russian arguments for building new ports in the Gulf of Finland. The privatisation of the biggest handling company in the port of Klaipeda, KLASCO, was made public in February 1998 which could have been used to opened up for Russian participation[176]. If, e.g, a large Russian bank or combine would have owner interests in a foreign transit port what can then be considered to be domestic and what is foreign? Even Baltic ports have had problems in finding financing for port projects, but planning continues and the need for new capacity is finding both domestic and international support, despite possible competition from the Russian port projects in the Gulf of Finland:

"The comfort for the Baltic's may be that the Russian trade potential is large and can provide room for all optional transport links to grow considerably"
(Korhonen 1996 p.29)

What can be doubted is whether planners and writers have taken in the full picture before such prognoses are made. It is most probable that the Russian foreign trade will continue to increase, but each project seems to more or less take, for granted that the whole increase can be steered to their port, without having to share the expected increase with its competitors· It is also so that when competition becomes public as in these

[175] At the same time freight quotations are difficult to compare as prices can vary widely, especially on the Russian side from one month to the next. Ton-kilometre prices fall sharply with transport distance, which can never be long in any of the Baltic states (ibid.).
[176] After a long process the privatisation agency made public the result of the tender in June 1999 when JSC Viachema, with on of the former directors as one of its largest owners, took over

oil and container examples, it could also be expected that all likely investors will do their outmost to obtain all forms of supplementary advantages by playing out one port, one town, or country, against the other when negotiating. As will potential users. In the end, it will probably be Russia that will gain the most from the competition between this *"could-have-been"* cartel of port cities. A reward that will be obtained in the form of lower transit costs. From a Russian point of view, all the ports in the Baltic states are more or less equal competitors as to e.g. transport distance, from the Moscow area.

4.4. Competition from Finland

In the Baltic region it is only Finland, and possibly Poland, of the non-FSU countries that have a geographical location making it realistic to compete for the handling of west bound Russian transit cargoes. After WW II, bilateral trade arrangements led to Finland being given a special status in its trade with Russia. At its peak in 1982, Russia took 27% of Finnish exports, but trade came to fall sharply during the years of transition to a low of 4% in 1992 (Komulainen and Taru 1999). During the years before the 1990's, the border had symbolised the confrontation between two political systems, with all the negative implications that this could have on e.g. handling times at border stations. Despite this barrier Russian transit trade, in larger quantities, started to pass through Finland as early as the 1970's, but has over the years showed sharp variations in volume from one year to the next. From 1993, with the introduction of the European Economic Space treaty (EES treaty), a new set of external regulations was superimposed on the national Finnish regulations. Despite this, a record transit volume of over 5 mt, came to transit Finland in 1994. With the Finnish membership of the EU, from 1995, the Finnish - Russian border became the only EU border that, so far, is shared with the countries of the FSU.

From its geographical position and trade pattern it is natural that Finland handles large volumes of cargo in ports and the total turnover in Finnish port in 1998 came to 77 mt. In the same year the volume of transit cargoes was 4.1 mt, or 5.4% of total port turnover (Kajander 1999). With one exception, Kokkola, the bulk of this volume was handled in the ports that are geographically best suited to handle Russian transit cargoes, i.e. on the south-eastern coast.

As can be seen in Table 4.3 it is the two ports located closest to the Russian border, Kotka and Hamina, that handled the largest volumes in 1998, 2.30 mt and 0.86 mt. Next in volume is Helsinki with 0.43 mt followed by Kokkola that handled 0.32 mt during 1998. Together, these four handled over 95% of the total transit volume, with a share of 92% for eastbound transit and 97% for westbound transit through Finland. Changes in volumes between 1997 and 1998 in Table 4.3 demonstrate that the sharp variations from one year to the next for Russian transit volumes have not subsided during the last two years.

Table 4.3. Larger Finnish transit ports for Russian transit 1997 – 1998
(1000 tons)

	1997			1998			Change % 1998 / 1997		
Port	Import	Export	Total	Import	Export	Total	Import	Export	Total
Hamina	301	1 051	1 352	273	591	864	-9%	-44%	-36%
Kotka	788	1 690	2 477	597	1 708	2 305	-24%	1%	-7%
Helsinki	515	24	539	407	25	432	-21%	4%	-20%
Kokkola	281	18	298	116	206	323	-59%	1044%	8%
Others	80	114	193	130	74	204	63%	-35%	6%
Total	1 965	2 897	4 859	1 523	2 604	4 128	-22%	-10%	-15%

Source: Ports listed in the table; *"Others"*- Centre for Maritime Studies, Turku.

Although no crude oil transited Finland during 1998, 400 000 tonnes of oil products did, but still it is the exports of chemicals, fertilizers and ores, all in bulk, that constitute the largest volumes of west-bound transit cargoes (see Table 4.4). The eastbound volume consists mainly of general cargo, most often high-value cargoes in containers that are often trucked to Russia. This volume is to a high degree a one-way traffic where containers are emptied in Russia and where the containers, that have never been lifted off the truck, are taken back empty to the port area on the same truck. This procedure gives rise to a large number of outbound empty containers from Russia in the Finnish ports. In Finland, contrary to the ports of the Baltic states, this flow has come to fit in nicely with a demand for empty containers for the Finnish export of paper and pulp (Arminen, interview 1998-10-27).

Table 4.4. Russian transit in Finnish ports by commodity 1997 – 1998
(1000 tons)

	1997			1998			Change% 1998 / 1997		
Port	Import	Export	Total	Import	Export	Total	Import	Export	Total
General cargo	1 552	37	1 589	1 225	49	1 274	-21%	32%	-20%
Ores	90	130	220	0	340	340	*	162%	55%
Metal	63	21	84	102	35	137	62%	67%	63%
Oil products	0	598	598	35	388	423	*	-35%	-29%
Fertilisers	0	741	741	0	696	696	0	-6%	-6%
Chemicals	71	1 272	1 343	52	1 009	1 061	-27%	-21%	-21%
Minerals	165	8	173	99	4	103	-40%	-50%	-40%
Other	23	90	113	10	83	94	-57%	-8%	-17%
Total	1 964	2 896	4 862	1 523	2 604	4 128	-22%	-10%	-15%

*= cannot be calculated

Source: Finnish Board of Customs

As shown by Table 4.3, the handling of transit cargoes in Finnish ports showed a strong concentration to just four ports. Despite this fact a number of Finnish ports have high hopes for a positive future when it comes to the possibilities of increased Russian transit volumes[177]. Something of a prerequisite for the northern of the about 10 ports that would like to be considered as serious competitors, possibly including the ports in Luleå in Sweden and Narvik in Norway, is the completion of the previously mentioned railway line Ledmozero – Kochkoma (Peterson interview 1999-05-11)[178]. A railway line that would give a direct connection eastwards from the Vartius border crossing (see also Figure 3.7). One advantage for several of these ports is their large and long established capacity in handling bulk materials, especially ores**.** The more flexible and the better coverage a Karelian and Barents transport network will be given, the more likely it will be that several more ports will compete for the handling of e.g. ores, pulpwood and wood-products of Karelian, Murmansk Oblast and Arkhangelsk Oblast origin. Depending on the point of departure, the development of such an international

[177] The northernmost Finnish ports already present themselves in detail on the net in relation to possible transit handling, also in Russian (Port of Oulu 1999 WWW).
[178] For the passage into Sweden, the strengthening of the railway between Kalix and Haparanda (near the Finnish border) has been taken up as a priority project while an experimental axel-adjustening-station at the border since 1996 (adjusting between the Russian/Finnish 1524mm and the more common European 1435mm). It is hoped to become part of an EU standard (ibid.).

transport network could be seen as a both positive and negative, connecting both Russian raw material resources and industrial producers to ports, outside of Russia. Such connections are most likely to be positive for the regions concerned, but would again contribute to the erosion of the position of Russian domestic ports. In the long run, it would also help to erode the potential for new capacity.

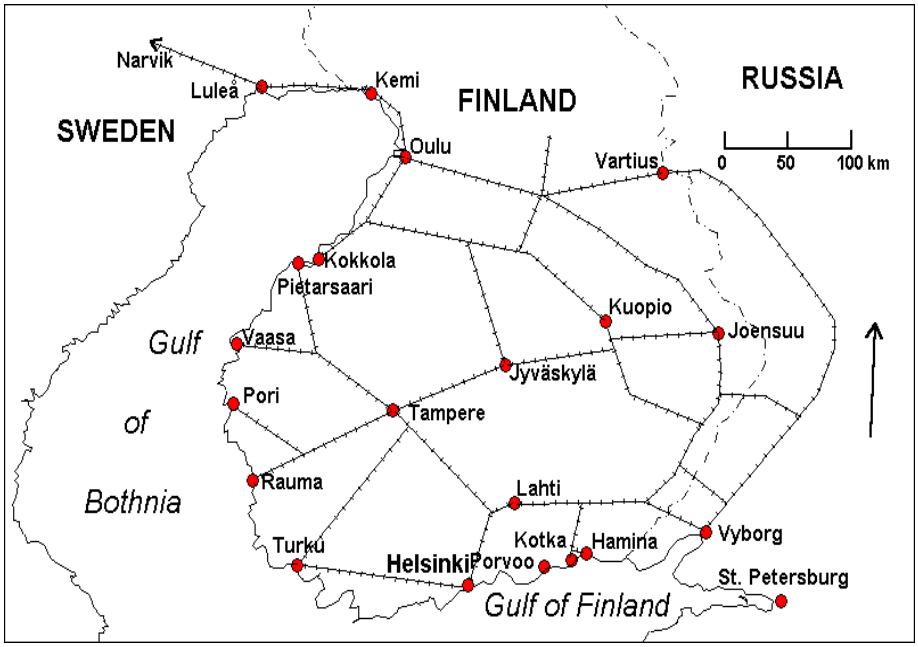

Figure 4.2. Finnish ports and major railways

Source: Author, based on Ratahallintokeskus (1999)

The port sector is not the only Finnish actor that strives to increase transit volumes. Among these are the Finnish State Railways (VR), the largest operator in the Finnish transit business, along with the state railways of the Baltic States. VR is in the happy position that Finland uses the same track gauge on its railways as Russia. Transport of Russian cargoes has grown continuously in importance since the break-up of the FSU for the Finnish railways. During the years of transition, VR has seen an ever-larger share of the tonne-kilometres transported being generated by the domestic consumption of Russian goods and Russian transit traffic. In all, 13 million tonnes crossed the Russian / Finnish border by train during 1998 out of a total freight volume of 41 mt (VR-Cargo 1999:a, VR-Cargo

1999:c WWW). As a consequence of a similar rail gauge, Finnish ports do not have to give any advantage to the ports in the Baltic States from this aspect, but the VR tariffs are several times higher than rail tariffs in the Baltic states (Knopf interview 1999-06-11). On the other hand, the Finnish railways offer block-trains to both St. Petersburg and Moscow, several times per week, including Trans-Siberian scheduled container trains to China and to ports in the Russian Far East, as do e.g. the port in St. Petersburg (VR-Cargo 1999:b, WWW).

It should also be noted that it is not only a marginal increase in transit volumes that Finland opts for; much more is at stake. Finnish initiatives could somewhat offset the whole discussions about Russian ports in the Gulf of Finland. Strong economic groups in Finland are trying to make the future pipeline from the Timan - Pechora fields bypass Russian ports altogether and instead terminate in Porvoo. From this main line only a sideline would then, later on, connect to the proposed port in Primorsk. The advantage here would be that practically all the necessary port facilities needed already exist at the Neste refinery in Porvoo. These plans have been known to exist for several years, but have been re-vitalised after the 1998 Russian economic crises. This was one of the principal items on the agenda when the two Prime Ministers, Lipponen and Primakov, met in St. Petersburg in February 1999 (RFE 1999-02-23)[179]. It should be noted though that the port in Porvoo, as intended Timan – Pechora export outlet, handled no transit cargo at all during 1998.

4.5. The difficulty of transit route building

The difficulties in making predictions about how a transport network for transit cargoes in general, and particularly how a Russian and Barents transport network will develop in the near future are considerable. From a number of prediction failures, just one example shall be mentioned here.

"The rail connection from the Vartius border station to the Murmansk railway will be opened in the beginning of 1994 when the connection between Ledmozero and Kochkoma will be completed" (MTC 1993:a, p. 56)

[179] The governor of St. Petersburg, Yakovlev, at the same meeting asked for USD 1 billion for water purification plants for the town, to support these plans. The city alone dumps about 1 million cubic meters of sewage into the Gulf of Finland per day at the moment.

This prediction was made just one year ahead of the proposed opening of the railway connection, but has still not come true (see Figure 3.7 for location). Two years later a new prediction was made about the development of the same project, but now the opening of this 126 km long railway connection was made public on the internet with the headline:

"New rail link in operation 1996"
(Nowerail 1998:a WWW)

This was announced on a home page that had been available for years. Responsibility for the construction of this crucial railway link had in the meantime been taken over from the Oktyabrskaya railway by the first private commercial railway operator in Russia in 70 years, Gelleflint Ltd (MTC 1995). Even this opening failed and the railway is still far from being completed[180]. Some few kilometres of track had been laid from both directions and the embankment along the whole intended line, as well as bridges, look prepared when inspected in the autumn of 1997, but no construction work has been performed since (Bärlund 1999-07-02)[181]. The superiority of existing Russian infrastructure over proposed, or even infrastructure under construction, is well demonstrated by this example. The Russian business environment is such that delays are frequent when opposing interests are at work. Also for that reason no new infrastructure can probably be build without inflicting on the interests of other interest groups that will then do their best to stop, or delay, interfering projects. All along the same line of action as in the description of the Russian Gulf of Finland port projects, e.g. in Primorsk (see also 3.8.5).

4.6. Summery of the transit countries

As has been demonstrated in this chapter, Baltic ports are in a relatively favourable position in relation to their Russian competitors. Soviet era patterns left ports in a difficult starting position, which forced them to restructure administrative routines, cargo handling systems as well as physical port structures and equipment. The quick comeback to positive

[180] Neither the fax nor the telephone-numbers given on the previous Home Page have been operational since late 1996. Since early 1999, the message on the Nowerail page reads: *"Nowerail under Update" "Nowerail WWW pages are currently under reconstruction. Please come back soon !"* (Nowerail 1999 WWW).

[181] The Ledmozero - Kochkoma track was originally designed for a capacity of 5 Mty and the Gelleflint company had agreed to transport 4.1 Mty (MTC 1995).

growth figures in the national economies, along with support from administrative circles on the national layers, the port sector in the Baltic countries managed to re-vitalise its operation. A comparatively smooth operation in the sector soon re-attracted Russian transit volumes which has made the come-back in the port sector possible. Both the dependence and vulnerability of the sector to the development in Russia is clearly demonstrated by Russian transit cargoes in the total turnover of the Baltic ports, over 65% in 1998. Finnish ports are here in a somewhat different position with a dependence on transit cargoes, around 5% in 1998, making Russian transit cargoes just complementary to a large domestic cargo base. In the next chapter the focus of the discussion will be narrowed to examine how the content and volume of Swedish trade with the FSU area, which is handled in the ports of the Baltic states and Russia, have changed during the years of transition.

5. SWEDISH TRADE WITH THE FSU; an Empirical Example

In previous chapters several different subjects related to the environment in which ports work have been covered. The focus has been on the geopolitical and geographical situation, the situation in Russia, and the development within its transport and port sectors of Russia and the Baltic States. All in order to describe the different alternatives that are available for first of all the seaborne export of general cargo and bulk commodities from Russia to Western Europe and exisiting as well as potential obstacles to transport.

5.1. Introduction

This chapter will go a step further and focus on the other end of the transport flow; i.e. first of all imports of commodities to Western Europe. To make this comprehensive the trade between Sweden and the countries of the FSU will be used to illustrate this angle. The changes in the flow of cargo between Sweden and the different FSU countries, that will be illustrated here, has been multidimensional during transition years. Not only have volumes changed, but also the content as well as origin and destination of cargoes on both sides of the Baltic Sea. Since 1992, these changes have been documented through a port survey, of all Swedish ports, where the result has been used to map cargo type, volume, origin and destination of all seaborne trade with the FSU area. It is first of all the results from this survey that will be presented in this chapter. Results that not only indicate foreign trade routs as well as shifting trade pattern, but also shifts in competitiveness in the port sector among the coastal FSU states.

5.1.1. Background

During the turbulent years of the break-up of the FSU, there were hopes in the West that one of the outcomes of this new opening would be a quickly expanding trade. This was especially the case among the neighbouring countries, with Sweden being one such example.

Today we know that so far and for several reasons, most such hopes have been proved over-optimistic, at least in the medium-time perspective. One reason was the dramatic fall in economic activity and industrial production in the FSU. The downturn was also fuelled by political unrest,

the breakdown of the CMEA and the internal trade within the Central and East European group of countries. A more structural reason behind the decrease was that the formally centrally planned, and well-protected, system for the first time had to face a more or less open competition from the West. In most East European countries, economic crises, related to transitory problems, developed alongside a parallel downturn in economic activity that severely affected many of the west European economies during the first years of the 1990´s.

The falling apart of the Soviet society made a lot of the routines and responsibilities break down with it, e.g. the collection of foreign trade statistics. From having been an operation run from the central level in the USSR, new national statistical offices had to be established in each of the new republics.

It was during these turbulent years that the collection of material for the Port Survey started. In a normal bilateral trade relation it would have been possible to compare trade statistics from the different countries involved, but for reasons mentioned, this was not meaningful here for the first years of transition. It took time until fairly reliable statistics, in any form, existed and another few years before it could be called acceptable. Since 1995 - 1996 though, these new organisations work, more or less, properly. But it was not only on the FSU side that the new situation led to problems[182]. Even on the Swedish side there were probably early misunderstandings about how the countries should be separated statistically, that can have affected the collection of data and thereby also e.g. the comparative study that is made in 5.3.1.

5.1.2. Statistical problems with entrepôt-nations in (transit-) trade

To be able to get a complete picture of international economic integration it is important that the statistics presented also reflect the real trade patterns. Today's trade statistics sometimes contain hidden errors about the correct origin of goods, as will be shown. Another problem is that statistics do not indicate the actual routing used by bilateral trade, and that it takes special knowledge to reveal this. One major problem is due to re-routing of cargoes during transport, which can make it difficult to establish the correct origin of products when they reach their country of

[182]. From 1991-08-27 the Baltic countries were treated as separate countries in Swedish trade statistics; from 1991-12-19 Russia, Ukraine and Belarus were separated. The remaining group of nine countries continued to be called *"Soviet Union"* until the end of 1992, which was one factor that came to cause confusion.

destination. What happens is that nations holding an entrepôt position, like the three Baltic states of Estonia, Latvia and Lithuania, increase their own volumes of trade on behalf of others when handling transiting trade cargoes. It is also so that the re-routing of Russian trade is much larger than what could have been expected. When measured in tons, the observed increase in this example has been in the range of 30% (Brodin 1999). Another such example was Hong Kong during its years as a British colony, a well-known example of this entrepôt phenomenon. Here, large volumes of trade transited to and from mainland China in only roughly estimated volumes resulting in large statistical discrepancies in trade (Alvstam and Johansson 1995, Feenstra, R. C. et al 1999). Huang and Broadbent (1998) also examine the strong effects on *"fair market access"* in the China – US bilateral trade that this has caused. A situation that probably is applicable to the analysis and description of the problems caused by transit trade and entrepôt nations. The Huang and Broadbent approach could also be applicable for the region under study here in relation to e.g. EU.

5.1.3. Purpose of the Port Survey

The purpose of this chapter is an attempt to sum up some of the most important findings from six consecutive yearly port surveys, 1992 - 1997, of Swedish trade with the countries of the FSU[183]. For each of these years, a Port Survey report has been written taking into account, first of all, the changes that have occurred during each year in relation to the previous year (Brodin 1993, 1994:a, 1995, 1996, 1999)[184]. Here it is not so much the yearly changes as the trends and volumes of the trade for the different categories of cargoes that will be described. Development in volume and content of goods in this trade will be shown in a number of ways and changes in geographical dimensions will be demonstrated. As the statistics that have been collected in the ports about the cargo handled at the same time constitutes Swedish seaborne foreign trade with this group of countries, this material is compared to official statistics for this trade relation.

From what is known no comparable empirical material about trade volumes with the countries in Eastern Europe, based on alternative

[183] A copy of the letter and the form sent to the ports can be found in Appendix 5 and 6.
[184] The 1992 evaluation covered only Russia and material from this survey has therefore not been used here, but is included in the general trend and as basic facts.

sources, have been collected and especially not so covering more than one year. The large and detailed statistical material used has also made it possible to show both the country of origin and area of destination of the different commodities included. This makes it possible to establish the actual routing that the goods in question have taken and to reveal some large regional imbalances on both sides of the Baltic Sea.

A number of new, and sometimes contradicting facts have been encountered when studying Swedish trade statistics with the FSU group of countries in greater detail. This made it inevitable to include a discussion of the reliability and presentation of official trade statistics as a second field of study. The statistical problems related to the transit of Russian cargoes through the ports of the Baltic states have proved to be a largely unknown field of research in the West, but similar relations, as in the Hong-Kong example given above, have been studied elsewhere.

5.1.4. Method

The initial methodological discussion in chapter 2 was kept on a more general level while methodological considerations here will directly refer to this chapter. To separate the two discussions has two advantages, one being not to burden the reader until the discussion is needed and the other to keep together the paragraphs that refers to the Port Survey.

The two sources used to collect the primary statistical material needed are one conventional and one less conventional. The conventional source is the official Swedish trade statistics as collected by the Swedish Customs Authority from importers and exporters and thereafter processed by Statistics Sweden (SS). The less conventional source used has been to collect material by way of a written postal survey, here referred to as the Port Survey (PS).

The secondary data from Statistics Sweden have not been refined in any other way than normal statistical material. What is unique about the statistical material is that the Swedish trade, both imports and exports, with this group of countries has during its first years, been separated in a commissioned processing by SS. This base material has in a second step been split into eight different Swedish transport areas (sometimes called *"customs regions"*; see Figure 5.2). In the next step, this regional information has been sub-divided into a listing containing each of the 74 Swedish transport areas. As the division becomes very detailed, each of

the custom-areas does not contain more than one port. Some of the areas do not contain any port at all as they are situated in the inner part of Sweden. One such example is the area around Östersund in the inner north of Sweden.

This listing of the individual transport areas was made to include all separate items, according to the SITC system of classification on a 3-digit level[185]. These listings include the reported volume of all types of cargoes that have been imported to and exported from each transport area[186]. The information supplied was then manually divided into the six different categories that are presented below.

As for the Port Survey, a written request has annually been sent to the 55 - 65 different ports and private port-terminals in Sweden to obtain the information needed in the port survey[187]. Together, the included ports and terminals handle over 99% of the Swedish seaborne trade with the countries of the FSU. The ports have been asked to fill in a form about their turnover of goods to and from ports in Russia and the Baltic States[188]. The first year the reply ratio was approximately 85% and has increased every year, to reach a near 100% for the last three of the conducted surveys, covering the trade in 1997. The cargo information supplied by the ports has been divided into six different categories. For the whole FSU area, the origins and destinations have come to include a total of nearly 50 different ports and loading terminals along the Russian coastline of the Baltic Sea and in the Russian canal system, ports in the Baltic states, but also, on rare occasions, ports along the Russian Arctic coastline like Murmansk and Arkhangelsk. Russian ports of origin in the Black Sea have never been mentioned by the Swedish ports during the years of survey. The information about the port of loading or unloading of a ship departing from or arriving to Swedish ports is normally given by the documents presented by the captain of the ships to the ports involved.

The reasons behind the selection of Sweden as a case study for the Port Survey are purely practical. The intention is never-the-less that it should

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185 SITC: Standard of International Trade Classification.

186 These listings have been possible to order from SS yearly, including figures for 1994. From 1995 such listings have only been obtainable against full cost coverage from SCB, making them practically un-obtainable. Total volumes for each country are still available though and have been used here, starting from 1995.

187 One or two more for each year as the coverage has increased, but also as imports have widened.

188 For a copy of the request and the *"fill in"* form see appendix.

be possible to draw conclusions from the material collected that can be applicable to the foreign trade with the FSU for any larger states in western Europe.

5.1.5. Comparing the Port Survey and official statistics

This attempt to use a *"port survey method"*, with information from the ports to establish the actual flow of goods and commodities is by no means the ultimate way to establish volumes that are not fully covered by general trade statistics. Both the current system, as used by Statistics Sweden, as well as the Port Survey method have advantages and disadvantages.

The Port survey
The ports are very cautious when measuring the volumes of cargoes they handle. Normally, weight is what ports base a large share of their handling fees on. At the same time, there is no guarantee that the correct volume is stated in the documents the importers present to the customs authorities. This should be the case, but as long as no import tax is applicable on the commodity in question, the stated volume and its origin will very rarely be questioned by the authorities. It is thus more likely that the volume calculated by the port is closer to the truth than the volume that is presented to the custom authorities by the importer. With a quickly increasing use of electronic data interchange, EDI, by the Swedish Customs Authorities this is normally done well in advance of when the unloading / loading is due to start. The Port Survey has been carried out in such a way that it has been based on voluntary contributions of statistical data from the ports involved. Being focused on ports, it categorisation of cargoes has been steered by how different cargo categories are handled in ports (to be explained in 5.3.5).

The Port Survey also gives a clear regional dimension, as the individual port of loading / destination in the different countries covered is given. This makes it possible to make deeper analyses with a regional dimension. A dimension of possible analyses that is not more than slightly touched upon here, but will be deepened in a future study.

Official trade statistics from Statistics Sweden
The greatest advantage of the present form of trade statistics is that it is an internationally accepted system. Conventional statistics have a strong

focus on goods values, and records the country of consignment / origin for imports and the country of destination for exports. The way this system works is well known to all actors involved, including private importers and exporters. Official trade statistics distinguish between all the different items that together make up the foreign trade, e.g. all the different types of manufactures, which a port survey hardly can be expected to ever comprise[189].

There is also a form of official port statistics that measures turnover in ports for different kinds of cargoes, distinguishing cargoes on the basis of origin and destination, but only as to domestic or foreign. This form of statistics is focused on volume and quantity.

Another factor that has complicated the collection of conventional trade statistics in relation to the countries studied here has firstly been the introduction of temporary currencies, later followed by new currencies, during the years of the 1990's. Currency fluctuations and the instability of exchange rates between the different currencies, often under pressure from high rates of inflation, was a stage in the economic development that the Baltic countries later came to terms with, but for a period this made trade operations difficult. Currency instability is a factor that can partly explain the high volatility of imports, when measured in value from the countries of the FSU, during the first years covered here. These initial problems have now been overcome, especially in relation to the Baltic states. Currency pegs, like the Estonian Krona to the German Mark, the Latvian Lat to the USD and the Lithuanian Lita to a currency basket based on SDRs, have in later years instead showed a tendency to appreciate these currencies relative to the Swedish Krona. It is unavoidable that problems related to exchange rate volatility have affected the accuracy of the collection of conventional trade statistics based on goods values. The port survey avoids these problems by using the quantitative volumes of trade rather then values.

[189] Sweden has one of the world's oldest, non-interrupted series of trade statistics. The first recorded trade statistics by the Swedish Customs Authorities dates as far back as to 1637. From 1732, statistics which are similar to today's statistics have been kept, recording trade separated on countries into origin for imports and country of destination for exports (SCB 1972).

5.2. The reliability of international trade statistics

One of the aims of this study was to show the changes in Russian foreign trade routes. One way to show this in very general terms is to use official international trade statistics, which is partly done here. The aim of this passage is focused on demonstrating the considerable biases built into the present form of trade statistics when used to describe the geographical pattern of international economic integration, in the form of international trade.

5.2.1. Reversibility of trade statistics

Even on the international level trade statistics can be compared, based on what is reported to different statistical offices like the UN, OECD, IMF, Eurostat and others. As demonstrated in Table 5.1, the figures reported as import and export values by the different trade partners can be anything from corresponding to clearly contradictory. It is not to be expected though that what one country reports as the value of its imports should correspond perfectly with what is reported as exports by its trade partner. A deviation in the range of 20 – 30% is usually accepted as perfectly normal, if it is not a permanent deviation that lasts over several years. If so, it probably indicates a structural error that can be caused by e.g. an entrepôt-nation effect or by various other statistical errors and omissions.

In Figure 5.1, Russia has been used as an illustrative example of the problems involved. It is clearly demonstrated in the figure how Russian foreign trade statistics constantly overvalues its export to Sweden in relation to the value set in Sweden to imports from Russia. The difference is well above what could be considered to be an acceptable level, with the quotient for 1997 being 2.38[190]. Only one value during the seven year time series, 1992 – 1998, being acceptable; the 1.12 for 1994. For both 1996 and 1997, the Russian side overvalues its exports by more than two times the compound Swedish import value from Russia.

In the case of Swedish foreign trade with the Baltic states, it is the other way around. Here it is the Swedish side that sets a higher value to the goods imported than what was assigned to the goods when exported from the Baltic states. Over the years studied there is no exception to this

[190] The values given have been calculated from DOTS's values as presented in Table 5.1. E.g. by subtracting the value given by Sweden for its import from Russia from the value given by Russia to its export to Sweden (985 – 414 = 571 million USD). The factor 2.38 is the Russian export (XR) value divided by the Swedish import (MS) value (985/414).

rule. The country with the, by far, smallest deviations is Lithuania with most years showing a below 10% deviation. At the other end of the scale is Latvia where the deviations for the first year could be said to be acceptable, with a quotient of 0.91. For the following years all quotients are gravely out of the acceptable, with 0.62 as the best, while four values are around or below 0.30, with 0.34 for 1997. This indicates, i.e. that Swedish imports from Latvia are statistically, more than three times larger than Latvian exports to Sweden.

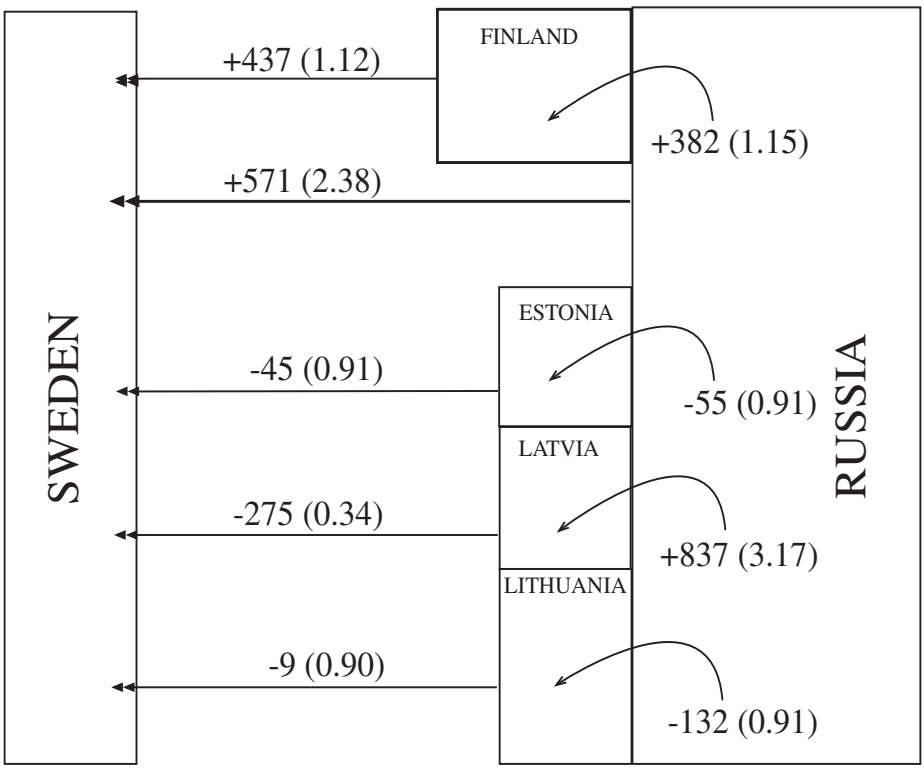

Figure 5.1. Difference in import and export values (mUSD) and quotients (Xi/Mi) for selected countries in 1997[191]

Source: Extracted from IMF, DOTS (1999:a)

[191]. The values given in Figure 5.1 have been calculated from DOTS's values as presented in Table 5.1. (see Footnote 190).

If Swedish trade with the Baltic countries, especially Latvia, in certain years shows a very large quotient this can also be found when studying Russian trade with Latvia. Apart from the first year with statistics, 1993, the only year when the Latvian import value exceeds the value of Russian export, the trade relation is extremely unequal. Between 1994 and 1998 the Russian export value exceeds Latvian imports by a quotient of 1.94 or more, with the 1997 value of 3.17 as the most unequal of all values included here.

Table 5.1. Swedish foreign trade in value and quotients 1992 - 1998 with selected FSU countries

	1992	1993	1994	1995	1996	1997	1998
Russia TO Sweden	654	783	811	646	995	985	746
Sweden FROM Russia	457	423	721	478	446	414	471
R export minus S imp	197	360	90	168	549	571	275
Russian export / Swedish import	1,43	1,85	1,12	1,35	2,23	2,38	1,58
Estonia TO Sweden	87	76	142	200	240	446	541
Sweden FROM Estonia	70	97	166	293	396	491	541
E export minus Swe imp	17	-21	-24	-93	-156	-45	0
Estonian export / Swedish import	1,24	0,78	0,86	0,68	0,61	0,91	1,00
Latvia TO Sweden	59	65	68	122	94	139	187
Sweden FROM Latvia	79	104	229	405	386	414	345
La export minus Swe imp	-20	-39	-161	-283	-292	-275	-158
Latvian export / Swedish import	0,75	0,63	0,30	0,30	0,24	0,34	0,54
Russia TO Latvia	0	180	627	788	1039	1223	663
Latvia FROM Russia	205	270	292	356	426	386	341
Ru export minus La imp	n.a.	-90	335	432	613	837	322
Russian export / Latvian import	n.a.	0,67	2,15	2,21	2,44	3,17	1,94
Lithuania TO Sweden	59	47	63	69	56	84	96
Sweden FROM Lithuania	65	51	82	75	93	93	102
Li export minus Swe imp	-6	-4	-19	-6	-37	-9	-6
Lithuanian export / Swedish imp.	0,91	0,92	0,77	0,92	0,60	0,90	0,94
Above FSU TO Sweden	859	971	1084	1037	1385	1654	1570
Sweden FROM above FSU	671	675	1198	1251	1321	1412	1459
Tot FSU export - Swe import	188	296	-114	-214	64	242	111
Tot FSU export / Swedish import	1,28	1,44	0,90	0,83	1,05	1,17	1,08

Source: Extracted from IMF, DOTS (1999:a)

The explanation to the large differences between Swedish import data and export data reported by the countries of the FSU is particularly the impact of transit trade. Goods imported to Sweden from Russia through the Baltic states are to some extent being classified as imported from these transit countries. At the same time, what is reported as export from Russia to Latvia in Russian trade statistics, is in Latvia obviously either classified as pure transit and therefore not recorded at all, or treated as imports from other FSU countries, i.e. Kazakhstan. Accordingly, as is shown in Figure 5.1, Russian data exceeded Latvian data by USD 837 million, or by 217%, which gives a ratio of 3,17.

5.3. The unbalanced trade volumes between Sweden – FSU

To make good use of capacity in a transport system it is convenient to find returnloads which, due to the type of cargo handled, can often be difficult. One characteristic for the Swedish FSU trade relation is the large unbalance. It is generated by a high share of one-way bulk traffic. For bulk products, special terminals are used and land transport becomes very expensive restricting the possible competition between ports.

5.3.1. Development of Swedish trade with the FSU

During the communist era, countries in the West that conducted trade with the Soviet Union often had a very unbalanced trade, measured in volume. In its trade relation with the West, Soviet exports often had a base in the export of raw materials.

During the latter part of its over 70 years of existence, the Soviet Union, in its foreign trade with countries in the West, exchanged basic raw materials, first of all fuels, for different kinds of advanced machinery and equipment, but also food. At the same time, a normal *"Soviet time"* trade relation, where the exchange of goods had been centrally negotiated, was often more or less balanced, if measured in value (Alekseev 1985).

Table 5.2. Swedish trade with the FSU 1960 - 1998[192]
(Quant. 1000 Mt; Value in MSEK)

	EXPORT		IMPORT	
Year	Value	Volume	Value	Volume
*1998	15 077	1 058	12 039	11 655
*1997	14 721	1 263	12 151	10 498
*1995	9 184	710	9 904	7 226
1993	4 628	250	5 467	5 488
1990	2 500	470	4 465	5 403
1985	2 664	909	5 606	4 017
1980	1 781	742	3 176	3 468
1975	1 213	272	2 205	6 254
1970	679	266	804	6 409
1965	260	99	374	3 852
1960	197	88	323	3 341

* = The 1993 - 1998 figures represent the summed up figures for all the 15 FSU states

Source: Statistics Sweden Trade Statistics, different years 1960 - 1998

The former Soviet Union was never a major actor in international trade though; in 1985 it produced 15% of world GDP but only contributed with a very modest 3% of world trade (Bradshaw 1994). A general outline of Swedish trade with the FSU, which has for a long time showed a slight Swedish deficit, is presented in Table 5.2. The value of total Swedish trade with the FSU during the five years studied has increased from SEK 10.096 millions in 1993 to 26.872 millions in 1997, or by 165% (SS 1994, 1998). Considerably more than the 112% that trade has increased in volume over the same five years (PS 1994, 1998) [193].

Total Swedish export to the FSU area has developed very positively during the time period under study. In value, the export has increased from SEK 4.628 millions in 1993 to SEK 14.721 millions in 1997, an increase

[192] The most important items in volume in Swedish exports have been: 1960-75 newsprints; 1980-90 cereals; 1995-97 refined oil products and on the import side oil & oil prod. 1960-90 and 1995-97 Pulpwood.

[193] See appendix for statistics covering total imports and exports measured in value for all FSU countries during the five years 1993 – 1997 and in volume for the four nations on the Baltic Sea coast. (For conversion: During the first half of 1999 1 USD has been equal to appox. SEK 8).

of 218% in just five years. Total Swedish import from the FSU area has also developed positively during this period. Measured in value imports have increased from SEK 5.467 millions in 1993 to SEK 12.151 millions in 1997; an increase of 122% in five years, but only 60% of the rate of increase showed by Swedish exports. A positive aspect for Sweden is that during these five years a trade deficit with the FSU group of countries of SEK 840 millions, or -8%, has been converted into a surplus of SEK 2.580 millions, or +10% (SS Trade Statistics 1999).

Trade statistics over value from SS indicates that every ton exported from Sweden in 1997 to the FSU was on average valued at nearly SEK 12 000 while one ton imported was valued at around SEK 1 100. The differences between the different Swedish foreign trade partners in the FSU are considerable. At the same time as the Swedish average export ton to Russia in 1997 was valued at SEK 27 000 the average export ton to Latvia was only valued at SEK 5 100, or at only 19% of the Russian ton value. The same phenomenon can also be observed on the import side, but here the differences in average values are less significant. The average import ton from Estonia was valued at nearly SEK 1 500 while the average ton from Latvia, on the other hand, was valued at just over SEK 500, or at 34% of the Estonian average. It is still worth to remember that the average price per ton for Swedish export products to Russia in 1997 was nearly SEK 27.000 (SEK 31.500 in 1995), while the average price per ton of Swedish import products from Russia was SEK 1.300 per ton (SEK 1.450 in 1995); i.e. more than 20 times less both years. At the same time the drop in values of both the export value and import value, 18% and 12% respectively, could be seen as an indication that the technical and/or the level of elaboration of the products included in this trade relation is declining.

Swedish imports from the FSU used to be dominated by bulk products and exports used to be dominated by manufactured and other refined products[194]. This has led to a long tradition of unbalanced trade if measured in volume. It is still so that the value per ton of exports, many times over, exceeds the import value per ton. Another way to show the unbalance is that the ratio in weight for imports over exports, that diminished during the 1980's again increased during the first years of the 1990´s, but has since then been fluctuating.

[194] In the following the terms export and import relates to transactions from a Swedish horizon, if nothing else is clearly being stated.

Table 5.3. Swedish volume import / export ratio with FSU 1965 - 1998

Year	1965	1970	1975	1980	1985	1990	1993	1994	1995	1996	1997	1998
Imp/Exp	38.4	24.1	23.0	4.6	4.4	11.5	21.2	16.3	18.2	11.5	12.4	16.1

Source: Statistics Sweden; Trade Statistics, different years 1965 - 1990
1993 - 1998 Calculated from PS material

During the 1960's and 1970's the volume of Swedish exports was very small and a large import volume of oil resulted in high values of unbalance ratio that lasted until the late 1970's. At about the same time as Swedish imports of Soviet Union oil, after the two oil crises, started to decrease, the export of cereals increased. The combined effect of a decreasing Swedish oil import and an increasing volume of cereals exported resulted in the very low figures for the Import/Export ratio in the 1980 – 1985 period. When the exports of cereals started to decrease, in the late 1980's, the unbalance increased again, but now less from oil and minerals imports than from an expanding import of pulpwood. As the export volume, during the period covered by Table 5.3, has been small in relation to imports, changes in first of all the export of cereals have been of major importance for fluctuations in the Import/Export ratio.

5.3.2. Changes in total volume[195]

As can be understood from Figure 5.2, total trade between Sweden and the FSU has expanded rapidly in volume over the six years from 1993 through 1998. Only during this short period of time exports has nearly quintupled, from around 150 000 tonnes to 730 000 tonnes while imports has more than doubled from 4.4 million tons to 9.1 million tons, according to the PS. Preliminary figures for 1998 indicate an export volume that has fallen back somewhat to 650 000 tonnes, while the import volume has increased to a record level of 10.5 million tonnes.

[195] As the Swedish export volume during the years studied is relatively small and concentrated to Oil and General Cargo, the coverage in the following will be wider for the much larger and more diversified Swedish import from the FSU.

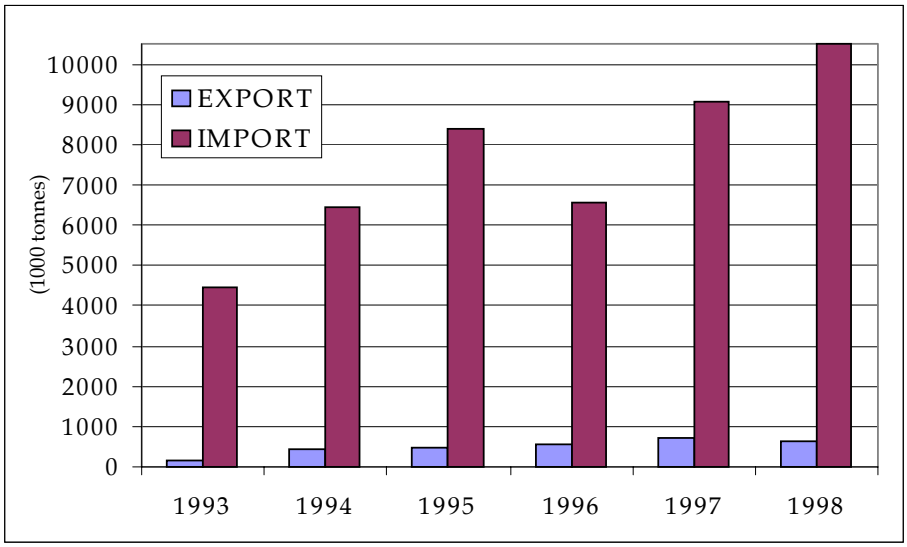

Figure 5.2. Total Swedish FSU exports and imports in volume 1993 – 1998

Source: Calculated from PS material

Figures 5.3 and 5.4 show the import volumes originating in each of the four FSU countries with which Sweden share a sea border, and through which, or from which, all seaborne FSU trade originates. Two countries stand out in importance, Russia and Latvia. This is a fact that is clearly shown by both the statistical material from Statistics Sweden and the material collected in the Port Survey. For the other two, that are much smaller in volume, it is Estonia that has the third largest volume while Lithuania has not been as successful in increasing its volume. At the same time Latvia and Estonia are the most important countries as origins of the growth in total trade. Figures 5.3 and 5.4 also show that statistics from SS overstates the volume from Russia and understates the volume for the other three nations included in the figures.

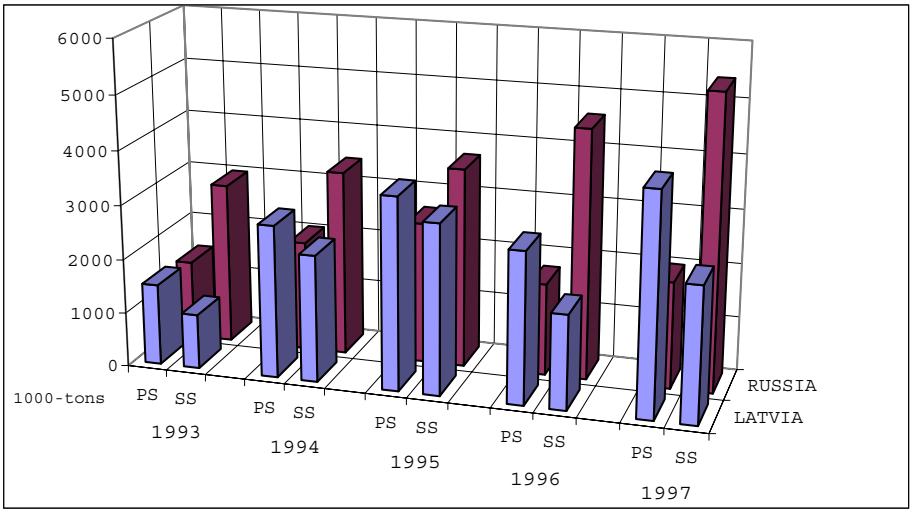

Figure 5.3. Swedish imports in volume: Russia and Latvia; 1993 – 1997

Source: Port Survey and Statistics Sweden; 1993 – 1997

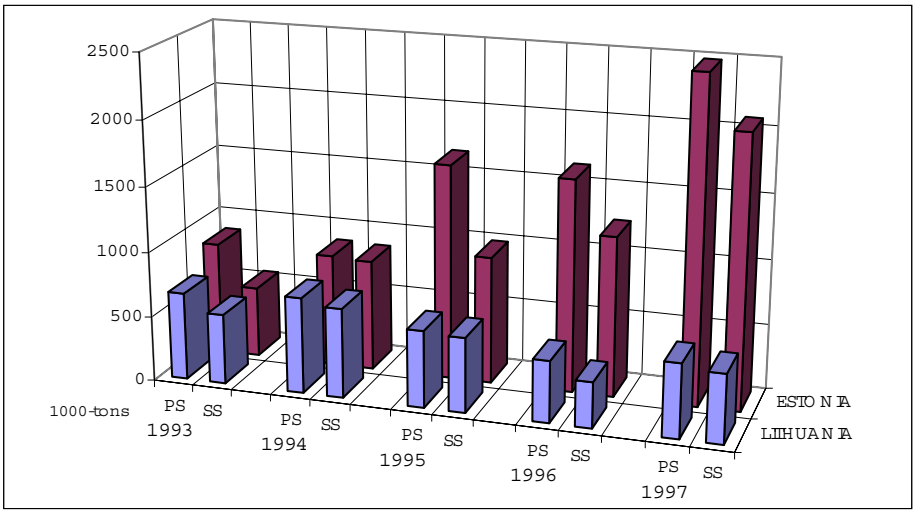

Figure 5.4. Swedish imports in volume: Estonia and Lithuania; 1993 – 1997

Source: Port Survey and Statistics Sweden; 1993 – 1997

The reason behind this effect is of course the transit trade, for which the more exact volumes will be calculated more specifically in passage 5.7. Here we only observe that what happens is that transiting volumes from Russia to the Baltic countries, as previously mentioned and perhaps expected, often change their origin. This form of transfer of origin occurs in favour of Estonia on the export side and in favour of both Latvia and Estonia on the import side[196].

5.3.3 Total trade 1993 - 1997 in shares

After having been at its highest in 1995 with 95%, the import share of total Swedish foreign trade with the FSU remained stable at 93% during both 1996 and 1997. In 1992, when Sweden was still a considerable cereal exporter, the volume share of imports in total trade stood at its lowest for many years at 88%.

When total Swedish foreign trade with this group of countries during the years 1993 - 1997 is split into percentage shares for the four FSU countries considered, the development will display a pattern as in Figure 5.5. The figure gives a general overview of the total Swedish seaborne trade with the FSU, import and export, which is dominated by the 40 - 45% share held by Latvia in later years. The Estonian share slowly expands while both the Russian and the Lithuanian share slowly contracts over the studied period. When total trade is divided into imports and exports, as in Figure 5.6 and Figure 5.7, some new patterns emerge. The smaller volume in exports contributes to enhance the volatility inbetween the years. Latvia is also here the most important country having expanded its share from being the third most important of the four, with a 20% share, to a dominant positon in 1997 with over 40%. At the same time the Estonian share has contracted the most, from 52% to below 30%, while both the Russian and Lithuanian shares have been kept on a low but irregular level, most years around 10%.

[196] During the years when this survey has been conducted, Russia as well as the Baltic states have applied for membership in the WTO. Latvia was accepted as member in October 1998 and Estonia in May 1999, while the applications from Lithuania and Russia, at the time of writing, are being considred by *"accession working parties"* (WTO 1999:b). This continued international integration, together with continued association talks with the EU will probably initiate considerable improvements in the field of trade statistics for several of the FSU countries in the years to come.

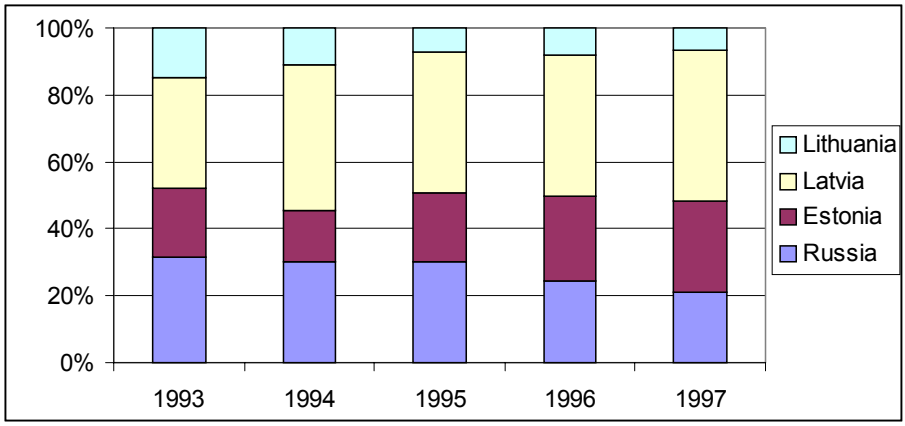

Figure 5.5. Shares of total Swedish foreign trade with the FSU 1993 - 1997[197]

Source: Calculated from PS material

On the import side the similarities between imports and total trade are striking. This is, of course, expected as imports constitute such a large share of total trade, having continously been 12 to 21 times larger than exports during the period studied.

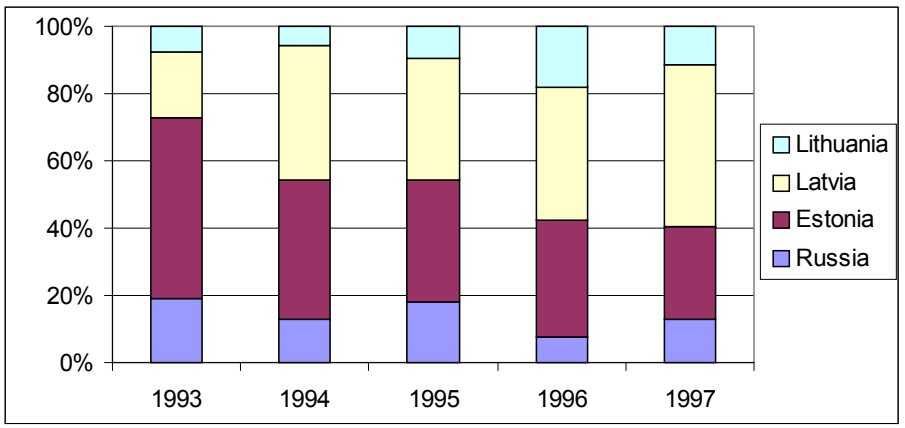

Figure 5.6. Shares of total Swedish exports to the FSU 1993 - 1997

Source: Calculated from PS material

[197] Exact figures can be found in appendixes. Figures and diagrams are only included to visualise relations.

Here the four countries in the figure can be divided into two very distinct patterns, either expansion or contraction, with two countries in each group. Again it is the large share held by Latvia, and its continous expansion from 34% to 45%, that stands out. The other country to increase its share is Estonia that displays an uninterupted expansion from 19% to 27% during these five years. The opposite can be said for both Russia and Lithuania. Both have seen their shares of Swedish imports contract for each year. Both have lost in the range of 10% of their market shares during the period, from 25 to 15 for Russia and 15 to 5 for Lithuania.

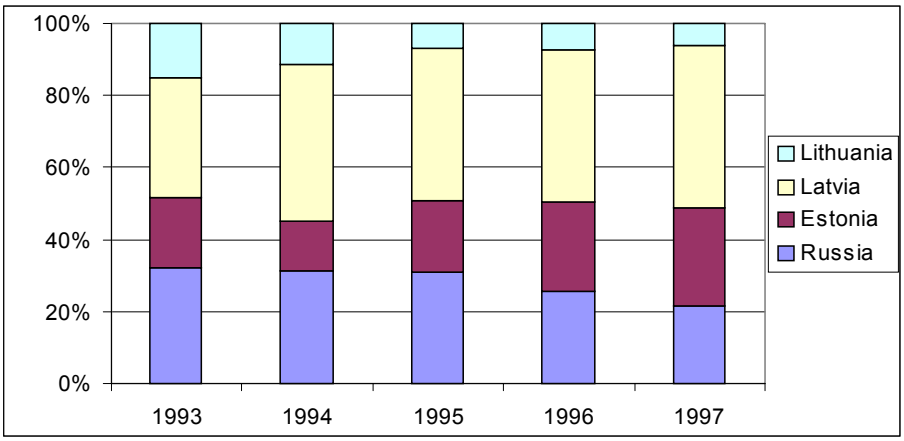

Figure 5.7. Shares of total Swedish imports from the FSU 1993 - 1997

Source: Calculated from PS material

5.3.4. Trade with other, non coastal, FSU countries

As for Swedish trade related to the remaining group of 11 FSU countries that have not been treated separately above, not much can be said and only by way fo SS figures. This is a group of countries that during the first years of survey constituted around 4% of total Swedish trade with the FSU area. During 1997 and 1998, their importance among the FSU countries has increased to over 5% and then to above 7%, but with over 11% of exports and just 2% of imports in 1998. On the other hand, it is very likely that the Swedish trade with these countries, both export and import, is larger than what can and is shown, by official statistics. This is because goods bound for, or coming from, these countries can well lose their original origin while in transit and in the next stage, be re-

exported/imported from e.g. Russia and the Baltic states. In this way these volumes statistically becomes Baltic or Russian in origin when they enter, or leave, Sweden. This is probably as true on the export side as on the import side, with the difference that with a large share of exports being expensive products their destination is likely to be known by the sellers than the, of bulk products dominted, import. Sweden probably imports oil from emerging new producers like Turkmenistan and Kazakhstan, but these volumes can neither be distinguished in the port survey nor by SS. Especially during the early years of transition, such transformation of origins probably contributed to the remarkable expansion of Swedish trade with the Baltic states. The existence of these kinds of effects are most often not accounted for, or are neglected, by many writers and officials.

5.3.5. Swedish FSU trade by category

To simplify the handling of the statistics involved in the PS, the material has been grouped into six different categories of cargoes: General Cargo, Pulpwood, Bulk, Ore, Coal and Oil.

- General Cargo- normal General Cargo including trucks, trailers and containers[198]
- Pulpwood- all types of wood in the form of logs and chips[199]
- Bulk- all forms of bulk cargoes; not included in other categories[200]
- Ore- all types of ores including scrap[201]
- Coal - all types of coal and coke
- Oil- all types of crude oils and oil products

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[198] When the supplied information has been given in numbers of containers and/or trailers, each unit has been estimated to contain 10 tons of General Cargo. This category also includes iron, and other metals in the form of ingots and billets, together with other steel products as well as sawn timber (planks).

[199] What has been included here is in the SITC system classified under the group 24 *"Cork and Wood"*, but the bulk of the content is classified under 247 *"Wood in the rough or roughly squared"*(in Swedish: *"rundvirke o grovt kanthugget virke"*). In the PS, this category, comprising all forms of non-refined wood, has been called *"Pulpwood"*.

[200] Chemical substances in larger lots than 1000 tons have been classified as bulk, even when, due to the type of goods, this could be doubted. One such example could be fertilisers and cement that could be packed in sacks, big bags or in bulk. Other chemical substances, like acids, no matter the size of the lot, have been classified as bulk.

[201] Scrap metals, in all forms, have been included in the category ore, as both scrap and ores are being used as raw materials in more or less the same manufacturing process.

When limiting the discussion to only the volume of exports during these five years, as outlined in Figure 5.8, it indicates that the expansion of Swedish exports has been limited to just two categories.

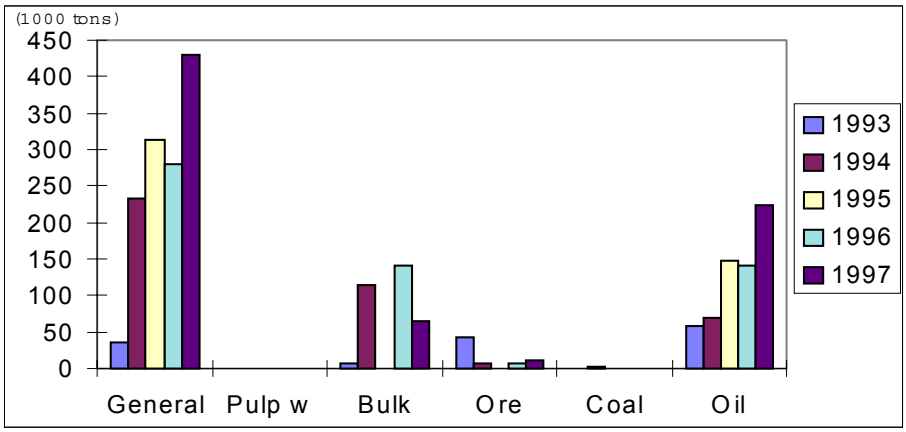

Figure 5.8. Total Swedish exports / category to the FSU 1993 – 1997

Source: Calculated from PS material

A considerable increase in the category general cargo and a smaller, but steady increase in the export of oil can be observed. The general cargo volume is twice as large as the oil volume and both categories show a pattern of a continued increase, apart from 1996. It is also in the category general cargo, with its often highly refined products, that the majority of the value is concentrated. Despite the fact that the difference between the average value per ton of export in relation to the average ton imported remains considerable in the Swedish - FSU trade relation, the difference still shows a tendency to even out, as both average export and import values have been falling (see 5.3.1). Of the other three categories, two, ore and pulpwood, show practically no handling, and a very small and diminishing volume of ore. In the category bulk though, the importance of cereals for this category is demonstrated; no cereals export, like in 1995, results in a very limited Swedish export of bulk products.

On the import side, illustrated by Figure 5.9, all six categories are represented, but pulpwood and oil are the two that dominate. The pulpwood category has been expanding rapidly while the oil export has stabilised after a quick expansion. Of the other categories, bulk is the most

important, but shows a slow decline, as does coal. The larger volume of Swedish imports from the FSU will in the following be analysed from a number of aspect.

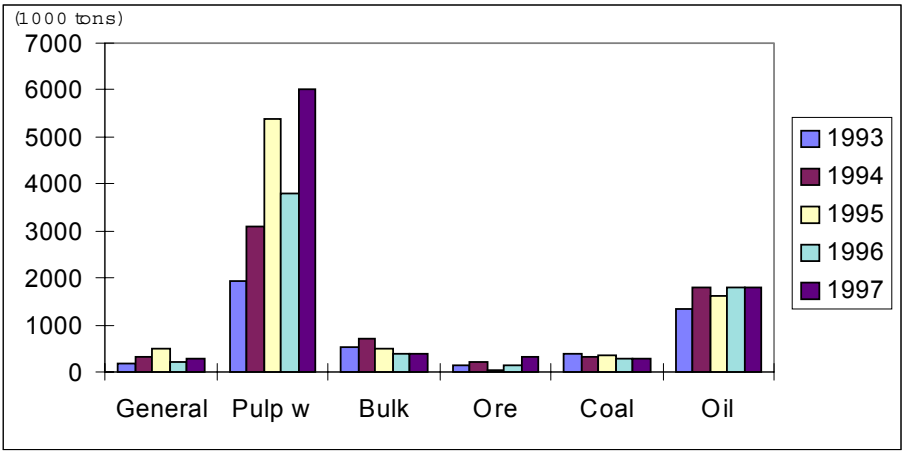

Figure 5.9. Total Swedish imports / category from the FSU 1993 – 1997

Source: Calculated from PS material

5.4. Trade with FSU countries by category of cargo 1993 – 1997[202]

By splitting total trade with the FSU according to the different countries and categories, changes in transport geography and routes becomes much more visible which, to a certain extent, corresponds to the development of the ports involved.

5.4.1. Volume of Swedish trade with Russia / category 1993 – 1997

The two categories that dominate Swedish export to Russia during the period shown by Figure 5.10 are general cargo and bulk. For the other four categories the volumes are small, or represent just spot loads. Again, the export in the bulk category is strongly connected to Swedish exports of cereals and therefore the pattern shows a striking resemblance to total FSU exports in the same category. As for general cargo, the bars show a

[202] It must be stressed that for some categories, especially on the export side, the volumes can be small when split on each of the four countries. As a result of this, just one large consignment can be enough to leave an impression in the following figures.

typical strong growth pattern interrupted during 1996, and then a strong come-back in 1997. Here, the importance of just one ferry connection is clearly demonstrated, as during most of 1996 there was no direct ferry from Sweden to Russia[203].

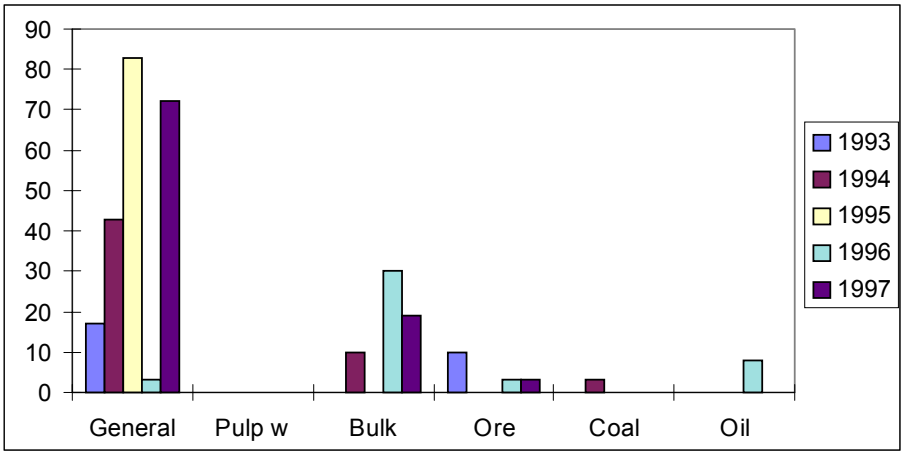

Figure 5.10. Swedish exports / category to Russia 1993 - 1997

Source: Calculated from PS material

As for total trade, the dominating import category is pulpwood that over the years studied has constituted 60 - 75% of the total volume imported from Russia. Despite its large and increasing volume, the Russian share in the Swedish import of pulpwood has still not managed to grow as fast as total import. The only category that has increased its share is coal where total Swedish import has been falling at the same time as the volume imported from Russia shows a slow but constant increase. Imports of general cargoes from Russia have been irregular over the years while both bulk and oil volumes have been falling.

[203] A connection that was re-established during 1997 and that by the end of 1998 went into bankruptcy, again, but with a new service scheduled to start in late 1999. As a result of this, it is most likely that if two more years had been included, the same pattern would have repeated itself once more.

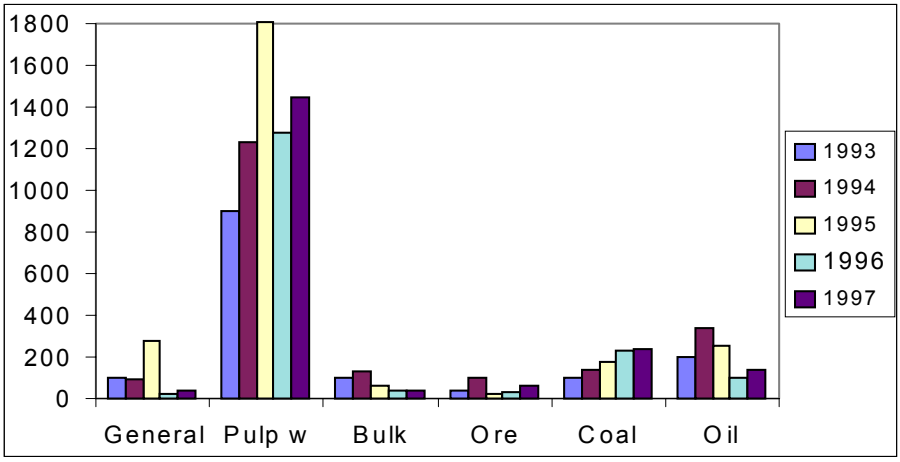

Figure 5.11. Swedish imports / category from Russia 1993 - 1997

Source: Calculated from PS material

The volume of general cargo that initially is larger than the export volume has been affected by the changes in the ferry traffic, but imports involve a considerable number of spot shipments of e.g. metals. Ore is a relatively small volume, while the falling volume of oil should be a worrying sign for Russian exporters. As for bulk, ore and coal, oil is one of the categories where 100% of the volume is transit cargo, when being exported from a non-Russian port. Oil is the most rapidly expanding category on the import side from the Baltic states and it is undoubtedly so that Russia has lost out in competitiveness to other transport corridors than the genuinely Russian.

5.4.2. Volume of Swedish trade with Estonia / category 1993 – 1997

The importance of a stable ferry connection for the handling of general cargo was mentioned above in relation to Swedish export to Russia, and is again demonstrated by the Swedish export volume to Estonia. The dominance of general cargo in relation to Estonia confirms this statement. Of Swedish exports to Estonia, 85-90% have been classified in the category general cargo over the period[204]. A single bar for ore in 1993

[204] This was probably the case during 1993 too, but non-reporting in one case is likely to have left out general cargo in the range of 60 000 tonnes for that year.

indicates Swedish ore sent for refinement in Russia, but this trade has practically ceased since then (see Figure 5.8). Sweden had started to export oil products to Estonia in irregular volumes just a year before this survey was initiated, a trade that today is dominated by Finnish suppliers.

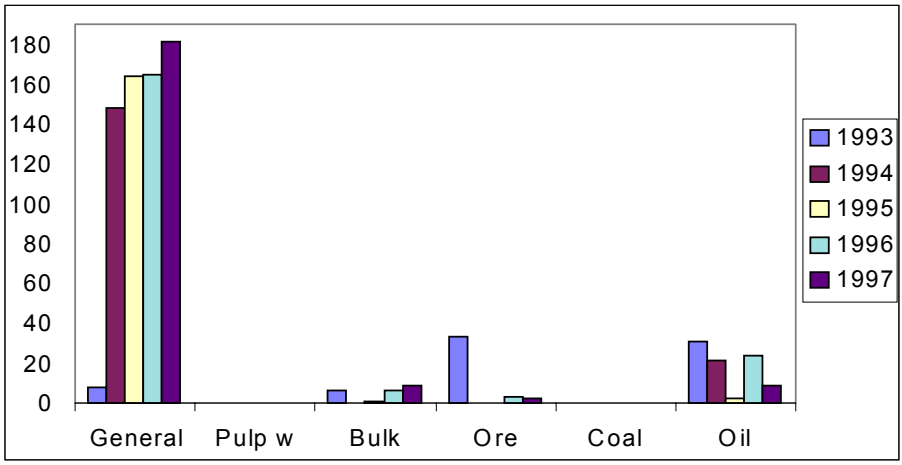

Figure 5.12. Swedish exports / category to Estonia 1993 – 1997

Source: Calculated from PS material

On the import side from Estonia the general cargo import is approximately as large as the export and the two are well balanced. This indicates that this relation has developed into an exchange of goods, resembling the trade pattern between most industrial countries, and is to a lesser extent the result of transit trade. It is instead the import of pulpwood that has been growing vigorously in volume over the period, from 377 000 tonnes in 1993 to near 1.5 mt in 1997, shooting up by 78% in 1997 alone. The ore category here shows a typical pattern of substitution with a falling volume compensated for by a rising share of scrap in later years. Coal handling has been constantly falling over the years, which is the result of a lower demand from Sweden. Transit volumes in Estonia of dirty bulk, like coal and ore, have probably been reduced also by local initiatives to move handling out of the City Harbour in Tallinn to the Muuga Port, to clear areas for the expanding ferry traffic. The quick expansion of oil handling in the port of Muuga has so far proved very successful and Sweden has also come to import considerable volumes via

Estonia. After having been just 124 000 tonnes in 1993, the volume has increased to 496 000 tonnes in 1997, or by exactly 300% (560% if calculated on the smaller volume of 1994). A rate of increase from 1993 to 1997 which is, to the exact percentage point, the same as for pulpwood category, 300%.

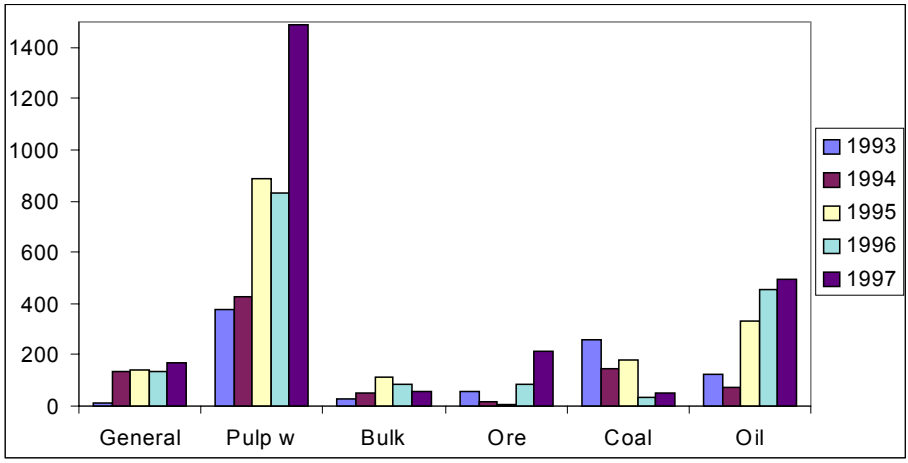

Figure 5.13. Swedish imports / category from Estonia 1993 - 1997

Source: Calculated from PS material

5.4.3. Volume of Swedish trade with Latvia / category 1993 – 1997

Swedish exports to Latvia have seen a very quick expansion of the export of oil products, but also a steady expansion in the general cargo category. Here, like in Estonia, the increased export in the oil category is the combined result of increased domestic car ownership and the non-existence of Latvian oil refining capacity. For general cargo the base flow is generated by the ferry connection Liepaja – Karlshamn that has been in operation since late 1995. The expansion in the general cargo category has at the same time been secured by the fact that a ferry connection Stockholm – Riga was restarted in 1997[205]. This has lifted volumes, but frequency, capacity and speed are still far below that of Stockholm – Tallinn. The relatively large volumes in the bulk category for certain years

[205] Sadly enough, the new operator also went bankrupt during 1999.

are the combined result of Swedish exports of cereals and granite, for construction purposes, to Latvia.

The volumes imported from Latvia are the by far largest from the countries included here, with the pulpwood volume in 1997 in itself being nearly 50% bigger than the combined import from Russia the same year. As can be seen in Figure 5.15, it is pulpwood that in later years have come to clearly dominate Swedish imports, taking over that role from crude oil imports in 1995. Shifts in demand between different years have been considerable though, over 1 mt between 1996 and 1997, and compared to pulpwood, oil imports have been kept stable in the 1 mty range. The only other category with any sizeable turnover has been bulk products, which in this case constitutes of a number of different chemical products like acids and fertilisers.

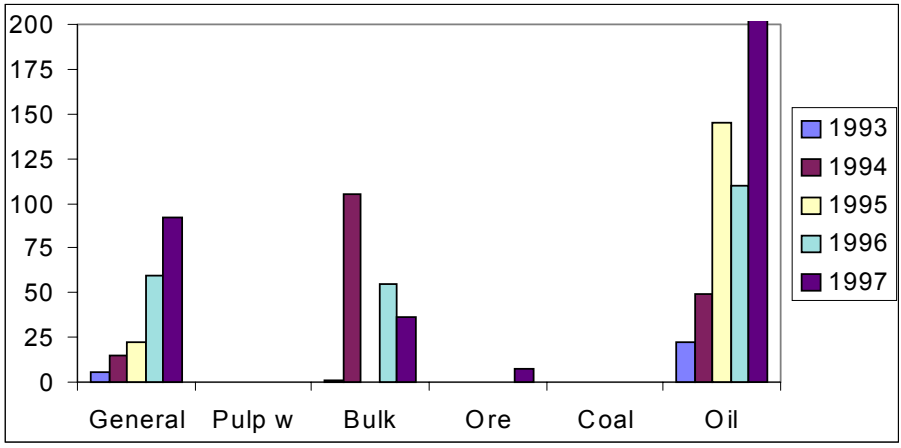

Figure 5.14. Swedish exports / category to Latvia 1993 - 1997

Source: Calculated from PS material

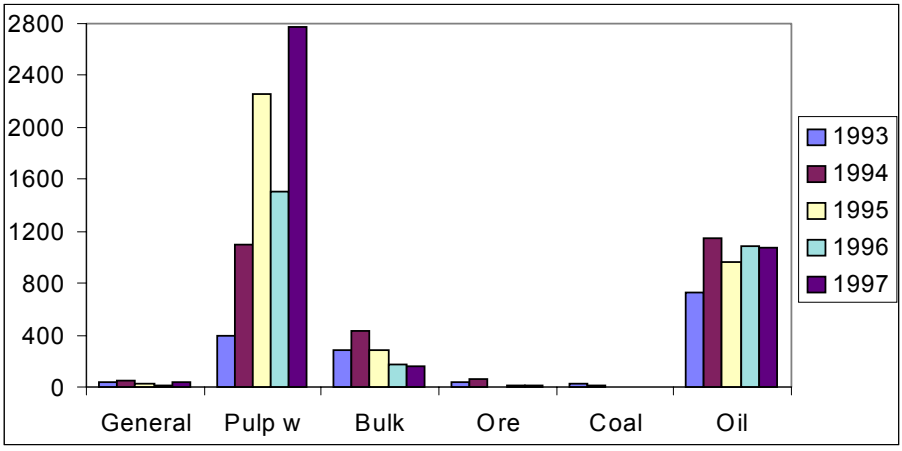

Figure 5.15. Swedish imports / category from Latvia 1993 – 1997

Source: Calculated from PS material

5.4.4. Volume of Swedish trade with Lithuania / category 1993 – 1997

Of the four countries presented, Swedish exports are the most concentrated to the general cargo category in the case of Lithuania. The explanation for this, as for the other two Baltic states, is first of all a stable and expanding ferry connection. In this case between Åhus and Klaipeda. The large bulk volume exported in 1996 was, as in the case of Latvia, the result of Swedish exports of cereals and granite. That Swedish exports of oil products to Lithuania are non-existent after 1993 can probably be explained by the fact that the capacity in the state owned Lithuanian refinery in Mazeikiai is enough to satisfy domestic consumption.

Swedish imports from Lithuania are, as for the other countries, dominated by pulpwood, but to a much less extent, apart from during 1994, a year when pulpwood imports expanded from all countries in the group and continued to do so in 1995 except in the case of Lithuania, where imports instead fell by 60% (compare Figure 5.9). This constitutes a good example of how quickly the terms of trade can shift in basic and unrefined products. When the prerequisites for a strong expansion materialise in nearby Latvia, it will take over the lost Lithuanian volume and instead doubles its own volume during 1995.

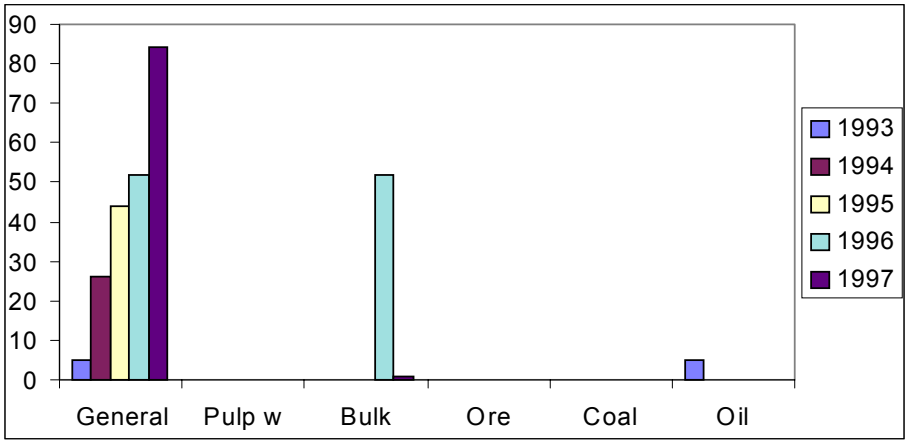

Figure 5.16. Swedish exports / category to Lithuania 1993 - 1997

Source: Calculated from PS material

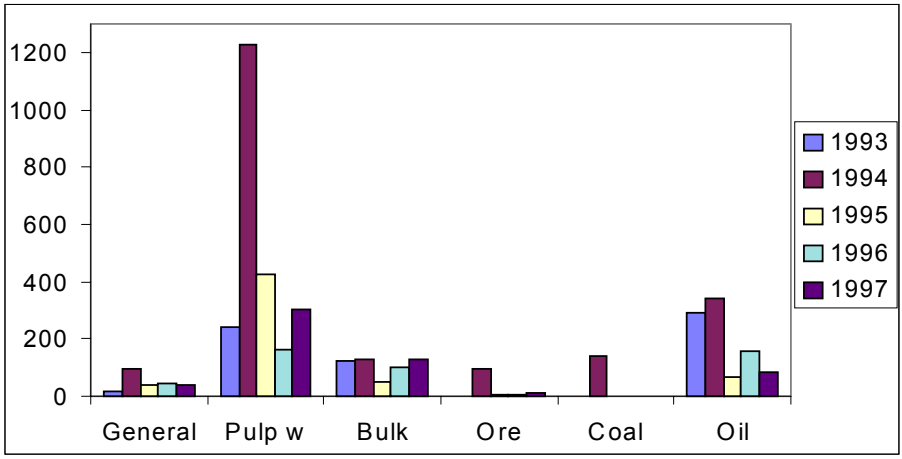

Figure 5.17. Swedish imports / category from Lithuania 1993 - 1997

Source: Calculated from PS material

In contrast to Estonia the import volumes of general cargo from Lithuania are much smaller than the Swedish export volumes, resembling the pattern in Latvia. This unbalance indicates a large dependence on transit trade for both Latvia and Lithuania in this category. Incoming cargoes to a

large extent transit east ward, at the same time as much less westbound return cargoes can be found for the trucks and trailers that are used to carry this transit flow. Bulk volumes from Lithuania are often fertilisers. Oil imports are nearly exclusively in the form of crude oil and were larger in 1993 – 1994 before the much-delayed reconstruction works started at the Klaipeda oil terminal.

To conclude this part about trade in different categories, some of these could be distinguished as categories with a good potential for the future while for others, the future looks bleak. Oil, especially from Estonia, is probably the category where a continued increase can be maintained in coming years. At the same time, this relatively newly established cargo flow constitutes a good example of the changing transport geography in the area. General cargo will continue upwards in volume at a steady but slower pace, where the stable ferry connections can be found. In addition, this flow of general cargo is an example of the changing transport geography, but in this case more as a result of increasing industrial production in the Baltic states than increasing transit trade. Pulpwood will continue to be a volatile category, strongly dependent on demand among Swedish consumers. The potential for different bulk products can be positive in the cases where a large importer can be found and if prices can be kept competitive. For the remaining two, coal and ore, the future look both insecure and bleak. For ore the future import depends on the future of the few remaining Swedish steel smelters, and especially for the ones using scrap. Both for the running of scrap smelters, as for coal, Swedish environmental awareness makes future imports uncertain. In other trade relations than with Sweden the future in the last few categories could look very different indeed.

5.5. Regional Swedish unbalances

5.5.1. Regional unbalances for total trade

The flow of goods across the Baltic Sea shows considerable regional unbalances as much larger volumes are imported than exported in some Swedish transport areas. As the content on both the export and the import side is so distinct, these regional differences can largely be explained. Apart from exports and imports in the category general cargo, the other five categories have one characteristic in common: all have large-scale producers as the origin and/or a large-scale consumers as the destination.

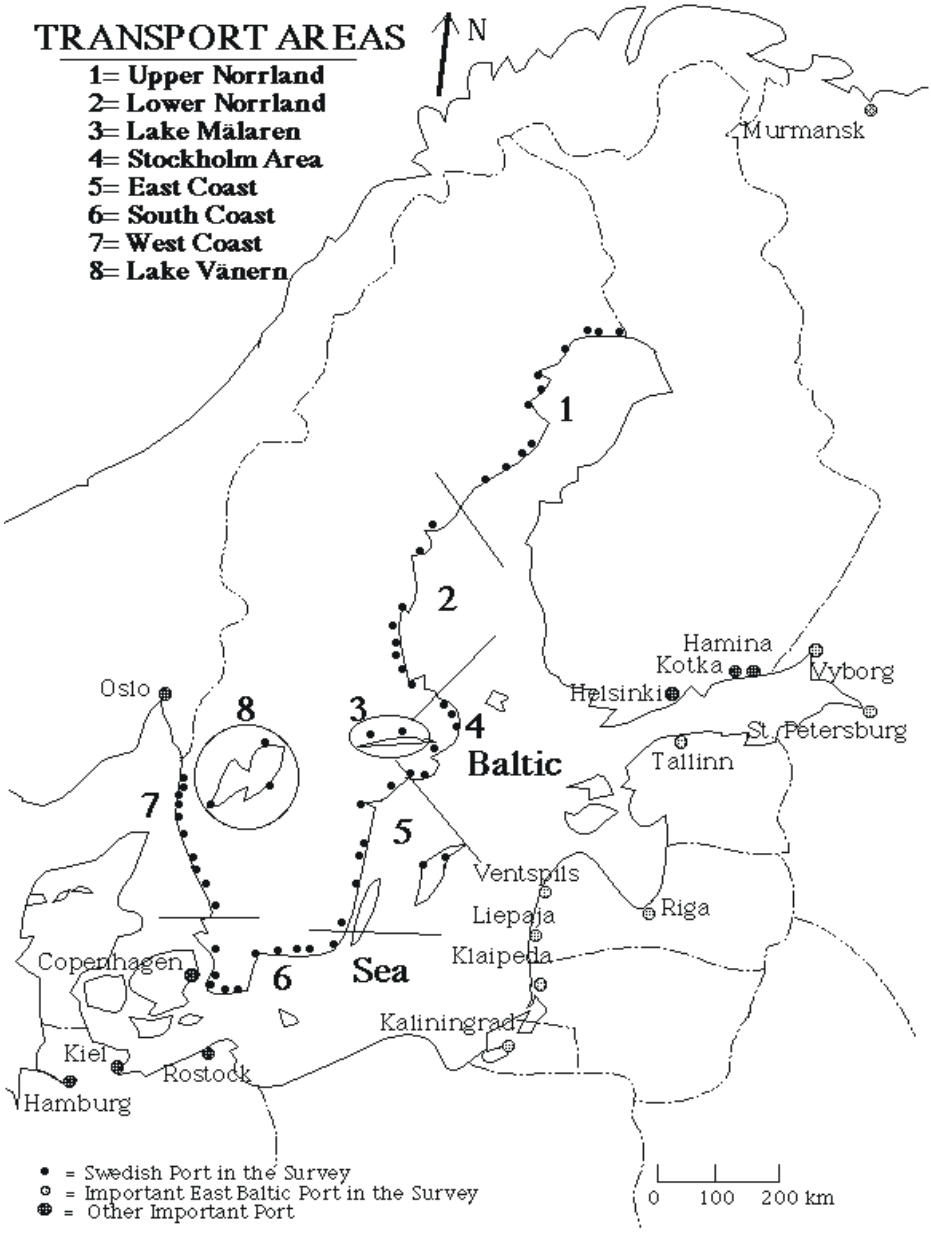

Figure 5.18. Baltic Sea with ports in survey and Swedish transport areas

Source: Author

Typical examples are coal used for heating, ores for steel-mills and products like basic chemicals in bulk for the chemical industry. In the case of the dominating Swedish import of pulpwood to the paper and pulp industry, the consumer is large scale while felling is conducted on smaller sites over large areas. One factor that all these products have in common though, is that the consumer is also a buyer on the world market. As a result of this, the FSU import to one Swedish consumer, but sometimes several, could change dramatically from one year to the next, or even one month to the next. The fluctuation becomes extra large because many of the important commodities compete against a surplus supply in the world market resulting in a buyers market for products like, acids, heating-coal and basic steel products.

A more general trend over the studied years is that both the origin of, and the destination for, the trade on the Swedish side changes only slowly (see e.g. Figure 5.20). What has been subject to major variations has been the volumes traded which has principally two explanations. One can surely be explained by the fact mentioned above, that large importers have altered their sourcing due to, e.g., fluctuations in the price on the world market for the commodity in question. The other alternative is that imports are reduced as demand for end-products like e.g. paper and pulp has been weak, which immediately leads to reduced demand for raw materials [206].

Exports

As can be seen in Figure 5.19, it is the Stockholm area that has held the largest, and what appears to be a somewhat expanding share of Swedish exports to the FSU over the period[207]. The other two areas of importance in Sweden are the West Coast area and the South Coast area. Together these three areas were the origin of around 90% of Swedish exports during 1994 - 1997.

[206] The importance of these two factors has been confirmed several times in conversations with people in the different lines of business concerned.

[207] A dramatic change has been the disappearance of the large export from the area Upper Norrland that existed in 1993. The products involved in the Upper Norrland export were varius ores, sent for refinement in the FSU, a trade that has ceased since 1993.

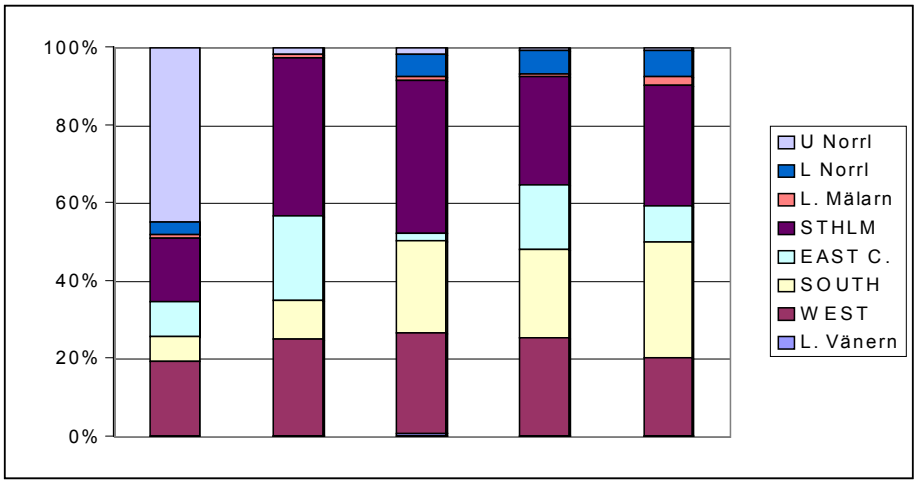

Figure 5.19. Shares of Swedish exports to the FSU / transport area 1993 –1997[208]

Source: Calculated from PS material

Imports

When imports are split according to the transport areas as in Figure 5.20, four areas stand out as the largest import destinations, Upper and Lower Norrland, the East Coast and the West Coast. Although some areas are large importers, the import are still not concentrated to just a few areas as in the case of the exports.

The relatively decreasing import of oil and oil products affects the share handled by the West Coast area, which is the only area where the import of oil is dominant. The import of pulpwood has constantly increased over the period covered and this is how the other three large import areas have earned their reputation. Two other areas, the South and Lake Mälaren have both seen their shares increase one year and than fall back again the following year. Only Lake Vänern, along with its neighbour area West, have witnessed a near continuous fall in shares.

[208] The Lower Norrland area is invisible for year 1994 while Lake Vänern area appears only at the bottom of the 1995 column.

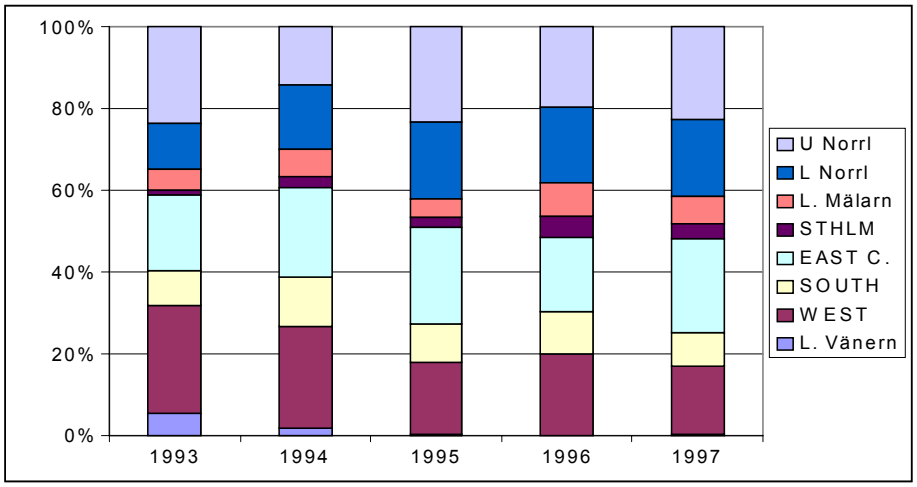

Figure 5.20. Shares of Swedish imports from the FSU / transport area 1993 – 1997

Source: Calculated from PS material

5.5.2. Changes on the export side

General Cargo

General Cargo has been the most important category in Swedish exports during the years of study. For this category, the ferry connections have been of great importance. So far the ferry connections between Sweden and the FSU have mostly originated from Stockholm (see also Figure 5.19). In what can seem to be a market with bright growth potential, several other cities have tried their luck, but, with only Åhus and Karlshamn as exceptions, all have failed. It is understandable that Stockholm has been successful in this respect. Historically, Stockholm has for long period had extensive ferry connections to the islands of Åland, Åbo and Helsinki in Finland and for a number of years with both St. Petersburg and Riga. Stockholm is not only the capital of Sweden but has, in relation to the FSU, a very suitable geographical position [209].

[209] It should be noted that a Norwegian or Dutch truck that transits Sweden and goes on a ferry to e.g. Estonia will be registered as Swedish "export" in the Port Survey. This problem also arises as regards official statistics (Rehnström and Thalenius 1995 p. 22 ff).

More then 4 times / week	**Less** than 4 times / week
Åhus - Klaipeda	Stockholm – St. Petersburg
Karlshamn - Liepaja	Stockholm - Riga
Stockholm - Tallin	Stockholm - Klaipeda
Kapellskär - Paldiski	

Figure 5.21. Pattern of regular ferry connections Sweden – FSU 1998

Source: Compiled by the author from various sources

It can be added that the area around the lake of Mälaren is in itself an important industrial area, and a huge market, with some two million people living within 150 km of the port. Together, these factors make the dominating position of Stockholm as area of origin for the Swedish export of general cargo understandable[210]. Since the cancellation of the ferries to St. Petersburg and Riga, run by the Baltic Shipping Company, the connection to Tallinn was for two years a near monopoly operator out of Stockholm to the countries of the FSU. For the area South, it is General Cargo that makes up the shares in Figure 5.19 and 5.20, which is largely due to the fact that the only direct, non-Stockholm area, connections to the FSU are based here. Two RoRo and trailer ferries operate in the South Coast area from Åhus to Klaipeda in Lithuania and one from Karlshamn to Liepaja in Latvia[211]. The content of the export in this category is very varied indeed and could be anything from cars and trucks to any kind of machine tools as well as textiles that are intended for confection in the Baltic's.

[210] An continued expansion of port capacity in the city centre has now become problematic. Due to environmental reasons, e.g. the long and narrow approach through the archipelago into the port, some activities in the port have started to move out to the small town of Nynäshamn, some 50 km to the south. A new port under construction, at Nordvik near Nyköping, is intended to handle the expected large increase in the trade with the FSU. Both the port in Nynäshamn and the port in Nordvik are under the management of the Port of Stockholm (Information material from the port of Stockholm).

[211] Beginning from the statistics covering 1995, SS no longer record if cargoes are trucked or carried by ship. This because of SS's adaptation to what is EU standard.

Despite a reasonably large export, the only group of products that have had any major restrictions on both the export and import side in its trade with the countries of the FSU during the years studied has been foodstuffs (Fredriksson 1997)

Oil
Over 75% of Swedish exports of oil-products in later years have come from the area West and of the exports from this area over 90% are oil-products. The oil-products originate from the large refineries located on the West Coast of Sweden. Three refineries are located in the biggest port of Scandinavia in Göteborg, and the biggest of the refineries at Brofjorden, approximately 150 km north of Göteborg[212]. For Sweden, the market for refined oil-products in the FSU is relatively new and during the initial years studied, it was difficult to find terminals that could receive oil. Over the past year this export traffic has, nearly exclusively, been bound for Riga.

Cereals
On the export side a large share of the volume in the late 1980's was cereals, but the export volume of cereals was considerable in both 1992 and in 1994. It takes special terminals and storage silos to handle large volumes of cereals, and the export has therefore showed a concentration to Norrköping in the East Coast area.

5.5.3. Changes on the import side

Oil and oil products
As already shown in a footnote to Table 5.2, prior to 1995, it was oil that constituted the largest of Swedish import categories. During the last 35 years the volume of oil imports has fluctuated sharply from one year to the next. The port of loading for this import has, over the last centuries, nearly exclusively been Ventspils in today's Latvia. The only alternative to Ventspils as port of loading in the Baltic Sea has been Klaipeda, but Klaipeda is far behind Ventspils in importance for the Swedish import in this category. It has long been so that tankers loaded in the Russian river-system, e.g. Yaroslavl, have taken smaller loads of oil to Sweden, but

[212] The combined production capacity of the Göteborg refineries is 7 mty and production at Brofjorden is 10 mty. Total turnover in the port of Göteborg in 1998 was 30 mt, of which about 50% oil, while a turnover of 13 mty in Brofjorden, of oil only, made it the second biggest port in Sweden.

more as an exception. Hand in hand with an increasing Russian need to export oil, and the opening up for private enterprise, other alternatives have also emerged.

Several ports in the Baltic states as well as in Russia are expanding their oil-handling capacity, e.g. St. Petersburg, Tallinn, Riga, Klaipeda and Kaliningrad. A complete newcomer among these actors is the new buoy-loading terminal at Butinge in Lithuania, practically on the border to Latvia that came into operation as late as in July 1999. Of these, in particular Tallinn has displayed a nearly explosive growth in the export of oil and oil products; from nothing at the start of the first oil handling in 1993 to 8 mt in 1997, of which nearly 0.5 mt was imported to Sweden. To what extent the Butinge terminal will manage to copy the success of Tallinn in the future will be interesting to see. The terminal has a pipeline connection to the Russian grid via the refinery in Mazeikiai. An advantage Butinge has over all other ports but Ventspils. The problem is that there is capacity problems to be dealt with in the pipeline system long before reaching the terminal. Still Ventspils remains the only port with a well-established pipeline connection and remains, by far, the dominating source for Swedish oil imports. It is probably so that the lack of suitable facilities has severely limited Russian exports of oil and oil products in later years, as the Russian demand for export capacity has well exceeded the capacity in the two pipelines to Ventspils which has opened up for alternative ports. This despite the fact that the export terminals on offer at these alternative locations, like in Tallinn, are only rail-supplied.

On the receiving side in Sweden the new pattern of an extended number of smaller traders as well as shipments by smaller ships has made it possible for more ports to accept direct oil deliveries of first of all oil products from the east. Still about 85% of Swedish imports in this category, which is crude oil, is nearly exclusively imported by the large refineries, e.g. in Göteborg and at Brofjorden on the Swedish west coast.

Other categories:
For the three categories, Bulk, Ores and Coal, there are individual explanation to shifts in demand. All three categories consist of bulk cargoes where demand from Swedish industry could easily be shifted to cheaper non-FSU suppliers, as the products are traded on the world market, and are being supplied under international competition.

-Bulk: Among the bulk cargoes two cargo types are clearly more important than others. These two are basic chemicals and fertilisers. Even though all ports along the Baltic coast now compete for the handling of these loads it is only Ventspils in Latvia that has devoted a larger terminal for these kinds of products. Even Klaipeda and Riga handle fertilisers at smaller terminals, while the Ventspils terminal, with a 40 000 ton automated and weather-protected storage capacity, is rated as the second biggest in the world (Ventspils Annual Report 1998)[213]. The terminal for liquid basic chemicals in Ventspils, with an extensive tank storage park and pipeline facilities to enable efficient handling and storage of e.g. different acids, is located adjacent to the oil terminal with access to the deep outer port basin. Therefor it is understandable that it is in Ventspils that larger consignments of bulk cargoes for Sweden have been loaded. In the first years of the 1990's the import of bulk rose dramatically, but has since shown a declining tendency. On the Swedish side this import of basic chemicals is mainly destined for ports like Landskrona while the import of other agri-bulk products are more evenly spread out. A number of ports, especially in the South and East areas, receive 2 – 3000 tonnes of these types of consignments.

-Ores: The import of ores has nearly ceased as the number of smelters in Sweden has declined from *"some"* to *"a few"* and because FSU suppliers, and the qualities offered, have not proved reliable enough. The import of scrap on the other hand, which is in good supply in the FSU, has varied in importance over the years. The volumes of imported scrap dipped around the middle of the 1990's, but volumes have recovered during the last years of the study. This means that there has been less and less ores, but more and more scrap being handled in the category ores. This leads to the fact that only some 4 – 5 Swedish ports are involved in this handling. Those closest to a smelter are the ones that handle the largest volumes.

-Coal: The import of coal is on a slow but steady increase. Swedish demand could be expected to rise further as nuclear power plants are due for closing within a not too distant future. It remains to be seen though, if such imports will come from the FSU. The import of coal is extremely connected to some few consumers leading to there being only three ports that handle nearly 80% of the volume imported.

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[213] Most of what is handled at all three terminals is potash fertiliser, produced by Belaruskaliy in the region of Minsk, while the Klaipeda terminal also handles fertilisers of mostly Lithuanian origin.

Pulpwood[214]

As shown in Table 5.4, Swedish large scale pulpwood imports from the FSU is a relatively new phenomenon. The reason behind the increasing import is two-fold. Production in the Swedish, and Nordic, mills has for a long time been on the rise and concentration in this line of business has meant that there are fewer but larger mills in operation. As a result of this the remaining mills are now located further away from the available supply of cheap domestic birch and aspen wood often needed in the manufacturing process.

Table 5.4. Volume of Swedish import of pulp wood 1960-1998

(1000 m^3)

Year	1960	1965	1970	1975	1980	1985	1990	1993	1995	1997	1998
Import	0	13	67	276	179	1964	1913	2089	5301	6176	7340

Source: Statistics Sweden, different years 1960 – 1998

What is unique for Sweden is that nearly all larger paper and pulp mills have a coastal or riverside location. This is a heritage from the era when timber and pulpwood were floated on the rivers from inland logging areas to the sawmills. This historical destiny has facilitated a shift to new foreign, and cheaper, suppliers of pulpwood. As a result of this, larger Swedish mills have now often invested in quayage at their own terminals that are well-equipped for the handling of in-bound ship-borne pulpwood. The appearance of a quickly expanding network of suppliers in the east also came to coincide with some years of recession in this line of business, in the late 1980's, forcing Nordic mills to become strict cost-savers.

As shown in Table 5.4, pulpwood export from the Soviet Union had started to expand before the break-up of the union, but came to expand vigorously when demand for paper products started to increase in the early 1990's. Russia was at that time the dominating source, but with Latvia as the rising star in this market. In just five years, the Latvian volume has gone up from 450 000 tons in 1993 to nearly 2.8 mt in 1997. Latvia surpassed Russia in 1995, in spite of a Russian export of 1.8 mt in

[214] Pulpwood is imported mostly in the form of 3-m logs, but also in the form of wood chips. Average import price per tonne from Russia in 1995 was around SEK 450 and at the end of 1997, SEK 400.

the same year. Even Estonia and Lithuania are important suppliers with an export to Sweden in 1997 of 1.5 mt and 450 000 tons respectively, indicating that Estonia has surpassed Russia as the second most important supplier to Sweden in this category.

In one respect, the import of pulpwood is distinct from the other categories as it originates from all kinds of ports, even minuscule ones, all along the Baltic coast and far into the Russian river-system. Still, Riga and St. Petersburg are by far the two leading FSU ports for this category and from each of the two 1.3 mt of pulpwood was imported to Sweden in 1995 and in 1997 1.3 mt and 0.9 mt respectively.

On the Swedish side, this import is the most spread out of all imports with handling in different ports ranging from less than 1000 tonnes to over 500 - 600 000 tonnes. This as a result of locational factors where the low turnover is found in ports used as second or third best alternatives while the high turnover comes terminals devoted to large pulp- paper- or sawmills. The number of locations where over 100 000 tonnes were imported in 1994 were four, and had increased to eleven by 1998, with only four (two in 1994) of these being located outside the two Norrland areas.

5.5.4. Scandinavian dependence on FSU pulp wood

As shown in previous works (Brodin, 1995, 1996, 1999), the Swedish paper and pulp industry, especially in the north of Sweden, is an important consumer of imported pulpwood from Russia and the Baltic countries. In the medium-term perspective, the forest industry in both Sweden and Finland is likely to show a slow but gradual increase in production which will probably allow for the same kind of slow but gradual increase in imports. Presently the local Scandinavian raw material base for the industry cannot compete with FSU prices, especially in the case of deciduous wood. The Scandinavian problem is not the supply of deciduous wood, but that the low price makes felling and transport in Sweden and Finland unprofitable. Therefore a large share, if not all, of future increases in demand is likely to be covered by FSU suppliers. Another fact that should not be forgotten is that much of this import is used to even-out conjunctural differences in demand for paper and pulp. Therefore, it is often so that changes in the consumption of raw material from the FSU are large and occur at rather short notice. Based on this it could be foreseen that the changes in pulpwood demand would continue to be volatile. A pattern that was clearly shown in 1996 when pulpwood

imports were considerably much lower than in 1995, only to fully recover and well surpass the 1995 level in 1997. Present volumes of import to Sweden are in the range of 6 mty, of which over 4 mty go to ports along the Swedish Bothnian coast. To northern and central regions in Finland, the same import is in the range of 2 - 3 mty and 13% of total wood consumption of the Finnish paper industry was imported from the FSU during 1998 (Komulainen and Taro 1999). In Sweden, most of this volume is presently being imported from Russian ports in the Gulf of Finland or from the Baltic countries. To Finnish plants, the import arrives mostly by rail or truck directly from Russia. With a rail gauge of 1520 mm, as in Russia, the Finnish railways are very competitive for this type of transport. Another factor that makes rail a more natural choice in Finland than in Sweden is the fact that many of the bigger paper and pulp plants in Finland have inland locations, not coastal like in Sweden. Location factors and the different rail gauge therefore gives shipping a large competitive edge over rail for the transport of pulpwood to Sweden.

5.6. Changes in the tonnage used

The transition period has opened up for local private entrepreneurs in most lines of business, including the shipping sector. One result of this has been that a considerable number of FSU river-sea ships have come to concentrate their activity to the open sea, sailing to as distant locations as Portugal. The existence of low standard, cheap and small ships has probably been very positive for the development of trade between the FSU and the West. The use of river-sea ships has also made it possible to make use of a large number of smaller ports with limited draught, which has come to spread out handling to many more FSU ports, further enhancing competition among ports.

As shown on previous pages, it is often completely different products and commodities that are being exported than imported in the Swedish trade relation with the FSU. In most of the more important of Swedish trade relations with industrial countries, trade is an exchange of more or less similar kinds of products, something that much facilitates transport. Under such circumstances there is always a fair chance of finding return loads which is rarely the case in Swedish trade with the FSU countries. A trade with a large share of basic bulk-type of goods resembling the trade pattern of many less developed countries. To begin with the export side, the two dominating categories, oil and general cargo, cannot use the same kind of ship. Swedish general cargo is mostly exported by ferry across the

Baltic Sea. For the oil volume it is only refined products that are exported, and these types of products are carried by product-tankers of a high standard, a type of tanker that will rarely be used for return loads of other cargoes than refined products and possibly liquid chemicals[215].

On the import side, the volume is not only much larger but also contains a more diversified mix of products, with the emphasis on the bulk It is here, as carriers of this large volume of bulk products, that the large stock of FSU river and river-sea ships have found their niche. Formerly, larger conventional ships, so called *"timber carriers"* of 4.000 to 8000 dwt, were often used to transport timber. Today there is only some few ships registered in the West that manage to compete successfully for these freights with FSU river-sea ships. The majority of the FSU ships used today are designed with two or three open holds with straight sides, making them suitable for most kinds of solid bulk products. A very large share of the pulpwood is shipped in these kinds of smaller vessels of river-sea vessel size. From a very large sample, the average size of shipload of pulpwood was calculated to 2150 tons in 1996. Such a low average means that nearly 3000 voyages were needed to carry the Swedish pulpwood import in 1997. In this traffic there are also some larger tugged barges being used, with a capacity of about 4000 tons each. Several of these barges have been active in this trade since the Soviet period.

The transport of coal is another example of a category where these FSU river-sea ships have nearly taken over the market. The same can also be said for the transports of ores and scrap. In addition, the shipments of other bulk products, like fertilisers, have come to be included in the river-sea segment that has out-priced most competition.

The transport of crude oil has also changed in favour of river-sea vessels, but not without a lot of protesting from the Nordic countries, especially Sweden. On a number of occasions, the extremely low quality of some of these ships has been proved when they have undergone a ship-state control inspection. Often after having been accused of causing oil spills[216].

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[215] There are normally no technical problems related to the use of a product tanker as carrier of crude oil. As tanks can be cleaned, but as cleaning carries a certain price tag, it all comes down to a question of freight rates and what ships to charter. For transports of refined products, and especially chemical, even technical aspects such as the resistance of coatings in the tanks of a vessel to e.g. corrosive substances, must be considered.

[216] It has been debated whether the increasing number of detected oil-spills is a result of increased oil traffic with smaller ships or just a result of the improved methods of surveillance.

On several occasions arrested ships have been forced to undergo considerable repairs before being allowed to leave their port of call. There have also been several cases of ship-arrests due to non-payments of fees and dues. Most spectacular though have been some cases of non-payment of wages to the sailors onboard. Some ships have stayed in Swedish ports for months while waiting for wage payments. From time to time these kinds of issues have been given wide press coverage in Sweden[217].

During the years of this study general cargo has proved to be a rapidly growing category (see Figure 5.8) and that this positive trend will probably remain unbroken in coming years has been stated by several influential experts during the years of the study (Konjunkturrådet 1995, Exportrådet 1997, 1998). These predictions have proved more or less right by development albeit the fact that none had foreseen that the trade would be as disturbed by a number of political crises as it has been. For the import of general cargo, the change in transport patterns and the tonnage used have also been most dramatic. During the first years of transition, the handling of relatively large volumes of metal ingots, that could be transported by the above mentioned kind of river-sea vessels, was not uncommon, but has largely disappeared. Now it is the truck that has taken over instead. There are several factors behind this shift. As mentioned earlier, the number of actors in the market has increased dramatically, both of goods- and transport-sellers as well as goods- and transport-buyers. With more actors active in an insecure, and some times juridically unreliable market it is understandable that the average size of lots has gone down. More buyers and sellers of smaller consignment have resulted in a larger market for smaller vessels, like the river-sea ships, and trucks. At the same time, this growth will result in the continued increase of the number of trucks needed to carry this trade, transporting the general cargo[218]. This is especially so on the export side where the higher value to weight ratio makes the higher cost of trucking more acceptable.

It has, no doubt, coincided with the intensified use of smaller FSU vessels for overseas transport in the Baltic Sea. Compulsory tank cleaning in the Baltic Sea was to be introduced for 2000-01-01, but has been postponed.

[217] Examples of this: DN 1995-02-28, Aftonbladet 1997-08-17, SvD 1998-01-28, SvD 1999-01-27.

[218] Even the administration in relation to Russia has become easier to handle with the deregulation of the entry of foreign trucks and the breaking up of the monopoly for the previously state haulier Sovtransavto. At the same time as wide-spread privatisation in the Baltic states has made trucking a highly competitive business (Transit 5-6:1999).

A special problem here has been a high degree of damage to goods during handling and storage of containers and trailers, but previously also a higher than normal rate of thefts. As long as these factors can not be kept at a satisfactory low level, which they have not been for a long time in FSU ports, many cargo owners have been given an extra incentive to pay the higher cost of a truck with driver. During the period studied, the largest of the Swedish trucking companies in this business, e.g. ASG, Svex and BTL have established themselves in the Baltic countries and the use of only trailers instead of trucks with drivers has increased rapidly[219]. With an ever-increasing number of trucks and trailers involved in carrying the trade, there will also be a continuing need for more and more space onboard ferries to cope with this increased demand to cross the Baltic Sea.

The most long-lasting of the ferry lines across the Baltic Sea to the FSU used to be run by Baltic Line, between St. Petersburg and Stockholm, and then on to the Latvian capital of Riga[220]. Another quickly expanding ferry connection is between Stockholm and the Estonian capital of Tallinn, run by Estline. A connection that was severely disturbed by the tragic disaster with the ferry "*Estonia*" in late September 1994. It took until 1997 for the line, that at the time of the accident was in a phase of strong growth, to reach its pre-accident passenger volumes. At the time, the only other ferry connection was run between the small south Swedish port of Åhus and Klaipeda. Since then, another four lines have started to operate across the Baltic Sea. First of these newcomers was Karlshamn - Liepaja, then Stockholm - Riga, Stockholm - Klaipeda and the last of the current lines started up during 1998, Kapellskär - Paldiski. During 1998, there was a closure of the Stockholm – St. Petersburg connection that a year earlier had started with Oxelösund as homeport. Of the lines that are still active, it is only the three lines out of Stockholm that take passengers while the other three take a maximum of 12 passengers (see Figure 5.21 for complete 1998 listing).

[219] BTL - formerly Bilspedition. Svex is included here because it is one on the major haulier's to the Baltic countries despite its relatively small share of the domestic Swedish market compared to BTL and ASG.

[220] The company was a subsidiary of the Baltic Shipping Company based in St. Petersburg that was forced into bankruptcy in 1997.

Apart from these regular ferry services, there are another 18 connections from Swedish ports to the FSU serviced by Ro-Ro and smaller container / feeder lines. These are run on a once-weekly basis, or more irregular, connecting larger Swedish ports with the ports of the FSU studied here (List of Sailing's, in SSG, 11:1999)[221].

5.7. Transit volumes of Russian cargoes in Baltic ports

As shown already in Figure 5.1 and Table 5.1 there are considerable deviations in the value figures reported as foreign trade by the FSU group of countries. On the volume side the situation is, if possible, even more problematic and the origin of goods volumes are practically impossible to obtain. This is also a field, *"Russian transit trade volumes"* where competition among the ports in the Baltic states is the most fierce. The larger of the ports make public a total volume of transit trade in their annual reports, but it is the company itself that calculates the figure. These flows, and the influence they have on foreign trade flows in the FSU area, have therefore been estimated here. What has been done, using the figures from the Port Survey, is to estimate the share of Russian cargoes in the Swedish foreign trade transiting in the ports of the Baltic states.

To calculate the Russian volume of transit in Baltic ports, first of all, the share of transit cargo for each of the six different categories of cargo needs to be estimated. These estimations are based on the information supplied by the different Baltic ports involved. As a large share of the volumes handled is transit cargo, this becomes a very interesting operation. The calculations presented here have been based on the volumes handled during 1995 and 1997.

On the Swedish **EXPORT** side the following estimates have been made:
For General Cargo it has been estimated that 75% of the volume was transit cargoes *"en route"* to Russia from Sweden in 1995 and 60% in 1997. Volumes that were only handled in the Baltic States and had Russia, or other CIS states, as their final destination.

[221] The figure 18 could be questioned as some lines call at several Swedish ports before crossing the Baltic Sea and several of the lines do weekly sailings while some have a two-week frequency in their sailing's.

For Oil it has been estimated that 50% of the volume was transit in 1995, and 30% in 1997.

No other categories on the export side show a volume that is large enough to be worthwhile to calculate.

On the Swedish **IMPORT** side the following estimations have been made:
For General Cargo, it has been estimated that 75% of the volume was transit cargoes *"en route"* from Russia to Sweden in 1995 and 50% in 1997.
For Ore, it has been estimated that 100% of the volume was transit in 1995 but 50% in 1997[222]. For the remaining four categories, the share of transit cargo, relative to the total volume handled, has remained constant over the period studied.
For Pulpwood, it has been estimated that 15% was transit both years
For Bulk, it has been estimated that 90% was transit both years
For Coal, it has been estimated that 100% was transit both years
For Oil, it has been estimated that 100% was transit both years

Based on the turnover figures in the PS for 1995 and 1997, the calculated volumes of Russian cargoes that for each of the six categories transit ports in the Baltic states, en-route to and from Sweden would then come out as in Table 5.5.

These estimations indicate that the share of transit in 1995 of total exports from Sweden, corresponded to 60% (231 / 380) of what were destined to ports in the Baltic States. On the import side in 1995, the same figure was 41% (2375 / 5781) transit cargoes, of the total imports to Sweden from ports in the Baltic States. In relation to total Russian trade with Sweden, from only Russian ports, the total transit figure for 1995 corresponds to 49% (2606 /(2606 + 2685)) of the volume that was shipped directly.

[222] This dramatic change in the transit share of ores is due to the fact that ores in 1997 consists in reality of scrap to a much larger extent than in 1995 and exported scrap can often be sourced locally in the Baltic states which ores cannot.

Table 5.5. Estimated Russian transit in Baltic ports; to / from Sweden

EXPORTS:	1995	IMPORTS:		EXPORTS:	1997	IMPORTS:	
General Cargo	172	G. C.	149	General Cargo	258	G. C.	146
Oil	59	PW	535	Oil	68	PW	900
		Bulk	399			Bulk	348
		Ore	13			Ore	151
		Coal	187			Coal	287
		Oil	1 092			Oil	1 784
Total :	**231**	**Total :**	**2375**	**Total :**	**326**	**Total :**	**3616**
EXP + IMP:	**2606**			**EXP + IMP:**	**3942**		

Source: Authors calculations. Based on statistical material from PS and FSU ports

These figures indicate that 49% of the total Swedish trade volume with Russia in 1995, did transit in different ports of the Baltic States. For exports to and imports from Russia the share of transit was 74% (231 /(231 + 83)) and 47% (2375 /(2375 + 2602)) respectively.

The same calculations as above, but for 1997, indicate that the share of transit in Swedish exports corresponded to 51% (326 / 636) of total exports to ports in the Baltic States. It is interesting to see that despite the fact that the actual transit volume that transit ports in the Baltic States has gone up by 45% in just two years its share of the total volume from Sweden handled in these ports of cargoes has gone down. On the import side in 1997 the same figure was 51% (3616 / 7096) transit cargoes of total imports from ports in the Baltic States, or the same as for exports. A figure that indicates that a rising share of Swedish cargoes from Baltic ports is just transiting. In relation to total Russian trade with Sweden, from only Russian ports, the total transit figure for 1997 corresponds to 184% (3616 / 1961) of the volume that was shipped directly. These figures indicate that 66% (3942 /(3942 + 2055)), of the total Swedish trade volume with Russia in 1997, did transit in different ports of the Baltic States. For exports and imports, the same figures were 78% (326 /(326 + 94))and 65% (3616 /(3616 + 1961)) respectively.

These calculations indicate a rising Russian dependence on ports in the Baltic States for its foreign trade with Sweden. Especially so for Russian exports, where the much- needed foreign currency is supposed to be earned. A handling where most of the auxiliary costs now must be paid to, what in Moscow is called, *"the near abroad"*. Again, this indicates that there should be room for the expansion of Russian port capacity especially as the dependence on foreign ports, from what has been shown here, has increased in later years.

5.8. Lessons from the empirical example

After the initial descriptive chapters, the purpose of the empirical focus given in this chapter has been an attempt to show the real face of the actual flow of cargoes. For practical reasons Sweden has been used as example, but Sweden is probably a country that can serve well as a model for how trade between the FSU area and countries in the West has developed during the years of transition.

Volumes handled in ports have been used here, instead of the conventional denominator value, to be able to also follow the flow of cargo through entrepôt countries; here the Baltic states. By way of this Port Survey it has also been possible to show that the Baltic states increase their share of FSU trade with Sweden on Russia's behalf, especially so in the case of Latvia. It can also be shown that Russian dependence on ports in the Baltic states has increased over the years studied, with direct implications on the discussion in chapter 3 about the expansion of Russian port capacity.

6. FUTURE PROSPECTS

In this the penultimate chapter, it is time to find and tie together loose ends from previous chapters, converting them into a logical synthesis. Therefore, this chapter recaptures the most important of earlier discussions, but with a setting in the present and near future. By the end of this chapter, the ground should be prepared for the final chapter where the conclusions are drawn.

6.1. General situation

The aim of this study is to describe the influence that factors like geopolitical environment, transport geography and port competition have had on developments in the port sector of the eastern Baltic Sea fringe. Being the single most influential country in this region, it is the development in Russia that has been focused on in most parts of this survey. Also, in this last descriptive chapter, Russia continues to receive most of the attention, as it is in the Russian development that most of the answers to previous questions can be found. Starting with the political and economical situation.

Political stability is often argued as being one of the most important foundations upon which to build future economic prosperity for a country. Financial market behaviour has, parallel to this tendency, started to emerge as a first-hand indicator of the local level of not only economic, but also of political stability. In this respects the Russian financial market in 1999 seems to have accepted the present political situation as dramatically improving, allowing the index (RTS) of the Moscow stock exchange to rise by 120% over the first seven months of 1999. Although from a low level. On the other hand, Russia in 1999 is also a country defended by a severely cash-bound army, troubled by ethnic conflicts, burdened by apparently unsolvable wage arrears and internal payment crises resulting in a rapid social disarmament in society and increasing inequalities among population stratas.

One of the results of the August 1998 crises, and the free fall of the Rouble, has been a 75% fall in purchasing power for the Rouble relative to other currencies, taking average wages to a level below USD 100/month. Setbacks that have forced not only the federal government but also Oblasts and companies to default on interest payments on international

loans. Actions that have worsened an already poor credit rating and further weakened an already damaged international confidence that can take a long time to restore.

To maintain a positive development for the future, it is important that one of Russia's major economic problems during the last few years, inflation, is, for the second time during the years of transition, approaching an acceptable level. Russian attractiveness for FDI's have so far, both in relation to the size of the country and size of the population, continued to be limited compared to most other transition countries, though. The concentration of FDI's in Russia upon service and the financial sectors with a high degree of concentration to Moscow and St. Petersburg, however, is a possible negative trend.

One of few positive signs is Russian foreign trade was in both 1997 and 1998, two more years when total Russian exports well exceeded imports. Exports in 1998 (1997) were valued at USD 74 (85) billions while total imports came to USD 60 (64) billions, resulting in surpluses of USD 14.4 billions and 19.8 billions respectively (Complete list in Table 3.1). Best of all though for the Russian economy is that the world price of oil since the spring of 1999 has more than doubled. An increase that, for the time being, will take some of the pressure off the Putin government, and perhaps open up for a positive involvement in the economy from the governments side. That is if incomes are not used to cover campaign costs during the two upcoming elections; Duma in December 1999, and for President, scheduled for early June 2000.

6.2. Transport

In the West, adaptability of manufacturers to changing demand and quicker model changes, preferably adapting product specifications to customer demands, have often shortened production runs considerably. Because of this, consignment sizes in non-bulk transport have gone down, resulting in an increased market for truck transport and a decline for rail transport. Responsiveness to customer demands within the transport sector is therefore continuously increasing and also will force ports to adapt accordingly. A development that has hardly been initiated in the FSU area. An adaptation that will most probably be forced upon the transport sector, once domestic production starts to pick up from years of recession, and in the process generate further strain on the port sector.

6.2.1. Effects on transport of the economic development

With the positive and negative aspects from previous chapters in mind, it is still very probable that the Russian economy will slowly start to develop positively in the near future. Still it is not likely that the volumes transported will reach anything near the volumes handled during Soviet times, because the curve with continuos increasing volumes of bulk goods transported, has been broken. A large share of the previous decrease in transport work was caused by a sharply falling transport volume between the countries of the CIS and CMEA countries, such as e.g. between Kazakhstan and Russia and between Poland and Russia. A positive economic development will under normal circumstances lead to increased trade, resulting in an increasing trend in volumes of exports and imports. This expected increase will take place with a not as strong emphasis on bulk cargoes and with a slightly different mix of countries than before the break-up of the FSU. Russia, having the size of a continent rather than just a country and with its own set of domestic raw material resources cannot be compared to any European country, or group of countries in these respects.

One of the factors that used to, and still today, distinguishes the Russian transport sector from the transport sectors in most other countries is the heavy transport dependence on, and utilisation of, the railways. From a transport point of view, the slow change in modal distribution, from rail to road, is not surprising. Established transport patterns are slow to change and Russia is no exception in this respect.

The share of road transport in Russia is still below 15% while the same figure in the Nordic countries, measured in tonkm, is between 45% to 55% (Nordisk Infrastruktur 1997). One explanation could be that the Russian transport sector has so far remained a largely domestic line of business that has attracted a relatively limited share of FDI's. Stronger foreign influence would probably have accelerated a transformation. If the modal distribution figure could be presented for different types of products, it would most probably show that even in Russia, products like fast moving consumer goods have more or less similar transport patterns as in the west. What is different in Russia is that the volume of cargo in this segment still remains small in relation to the total volume transported. Therefore today, and in the foreseeable future, the major tonkm generator of the Russian transport sector will continue to be long-distance haulage of raw materials in block-trains and crude oil in pipelines, i.e. the same

procedure as both 10 and 20 years ago. At the same time, it is most probable that the importance of distance will continue to increase in the near future. As a consequence of rising domestic energy prices and decreasing state subsidies, transport prices will be raised and future prices will probably better reflect the true costs of inputs and distance. Due to the size of the country, long transport distance will continue to burden the economy and as indicated by Holt (1993), Russia will remain a special case from a transport point of view and as a result of this:

> *"...Russia's size, scale and poor access to sea transport makes it unlikely that the relationship of transport demand to GDP will decline enough to match that of other large countries such as Canada and the United States "*
> *(Holt 1993, p. 29)*

As understood from the above, Russia will also in the future need to have a high capacity and well-working transport sector. It is still striking that when discussing future economic development with Russian counterparts, and the future of the transport sector in particular, how strong the domestic urge is for Soviet period solutions. What is most often argued for is large new-investments in infrastructure. However with the present state of infrastructure, the few available financial resources should instead be concentrated on pressing cases of restructuring, maintenance and training/education of staff rather than spending money on new investments or expansion.

6.2.2. The Russian choice

To meet future changes, the Russian transport industry must initiate a serious debate about possible ways of increasing efficiency in the transport sector. In later years, the debate in Western Europe has been heated-up concerning these issues. Many have argued for deregulation and privatisations as being the best way to attend such problems (EBRD 1996). What has been argued for by policy makers and planners has not always been an easy-to-swallow medicine for politicians.

Even in Russia, where decision-making is not as open as in the west, steps are being taken to open up for increased competition, first of all by way of privatisation, rather than by de-regulation. These are not the only fields within the transport sector where influence from the West has an impact, though. Because of an ever-stronger influence from the West, factors like reliability, predictability and speed will become more important in the

Russian transport industry. This will, likewise, result in a continued downgrading of the importance of maintaining present capacity to move large volumes at a low cost according to pre-set plans.

Another phenomenon that will become ever more important in the Russian transport sector is competition for traffic, not only by low tonkm quotations, but also by providing reliable and efficient services and e.g. logistic services beyond just pure transport services. A process where the importance of the ports, as an interface between land and sea, will be further enhance if the management in ports are open-minded and fortunate enough to seize the right opportunities.

6.3. The Russian insiders

The Russian insiders are all the ports on Russian territory, ports over which the Russian state still exerts control, directly or indirectly. This is the group of ports where a combination of domestic development, geographic position and historic legacy has hampered their possibility to adapt to changes as quickly as the changing environment in which they work demand.

6.3.1. A Russian port system in transition

In the same way as the political system of the relatively newly-formed Russian state has had problems in finding a suitable shape, the formation of independent companies operating in the ports has also been characterised by irregular steps forward and backward. As in the political process, the steps forward have been more frequent then the ones backward, resulting in an irregular and unpredictable development. Complicated further by the fact that to date, local regulations in the different Oblasts do not give a level playing field.

The local administrator of this process has been the port authority together with local privatisation agencies. Due to the fact that larger ports have been considered to be of national strategic interest the process of port privatisations has been even more complicated than an already complicated privatisation process. Port Authorities have in most ports come to sign long-term, often ten-year, lease contracts with the former port administration, that has been converted into a JSC with management, staff and the state as principal owners. In the process, these JSCs (often

called "JSC *Sea Commercial Port of Any-Town*") have become a near monopolist in the port for the handling of sea cargoes. (With St. Petersburg as an example of the other extreme, but still with one dominant handler (see also 3.8.3)). To have a Port Authority administrating the port facilities is common and many responsibilities are the same as in the West. Still, in many respects, Russian Port Authorities have much to learn from their European sister organisations. Responsibilities are often unclear and a number of vested interests at different levels can be distinguished, even between the operators in the port and the Port Authority. Such indistinctnesses not only slows the operations of the port, but also slows the speed of change in the port's way of operation.

A Russian Port Authority is the organisation to which the operators in the ports pay a fee for leasing a part of the port as well as for other types of infrastructure and equipment the operator makes use of. Apart from supervising port operators, the Port Authority is responsible for the setting and collection of port dues as well as payments for deliveries and services rendered to ships calling at the port. As landlord in the harbour it should also hold a number of other responsibilities that are common in the West like:

- economic forecasting for the operation of the port
- planning and development of the whole harbour area
- marketing and promotion of the port
- construction works and infrastructural improvements in the harbour area
- co-operation and contacts with state-, regional-, local administrations

From what can be understood when visiting different ports and interviewing major actors, the co-operation between the different organisations operating in the ports is still slow and contradictory. Positive examples, where development has more or less followed the proposed points given above, could be several of the ports in the Baltic Sates, like in Ventspils. Here the Port Authority has been very active in the restructuring process of the port and is spending most of its large earnings on restructuring and new-buildings[223]. A way of action that ought to be copied by many of its Russian competitors.

[223] Other sources in competing ports instead say "too much, and more than what the port can afford".

Such initiatives would probably make future prospects look much brighter in several Russian ports. From what can be understood in the ports it could be concluded that what is often hoped for is to become sole handler, i.e. monopolist, for one or the other type of product. It must be remembered though, that the starting point from which to initiate the above mentioned changes was far from market-economic:

> *"In the centrally controlled economic system of the Soviet type the ports could easily fall into a state of stagnation. All port activities were executed by monopolistic type of state enterprises"*
> *(Cwiklinski et al 1997 p.5)*

To convert these former monopolist and centrally administrated companies into market and customer-oriented organisations takes time and old patterns have proved remarkably resistant to change (Ranger interview 1998-11-18). As discussed also in other chapters, ports are just one link in a transport chain and today the same factors as in the West influence Russian port users when they choose between the logistic alternatives offered:

- cost of transportation
- duration of transportation
- quality of transport and distribution service
- security and reliability of the whole transport chain involved

To adapt port organisations to this kind of thinking has proved to take longer than was previously believed and as competition grows stronger, in the near future, the speed of reorganisation and adaptation will be increasingly important.

Transformation and adaptation are often painful processes and to find a new line of business that could fill the gap when something is trailing could be an easy way to come around such problems. With export development in raw materials trailing during later years, the hope is often directed to oil and containers, and many have hopes but few are chosen. The slow speed of adaptation demonstrated in the Russian port sector must be attended to, in one way or the other. What is at risk is that near future radical changes in the sector could leave an unnecessarily number stranded. Structural changes in the Russian trade pattern must be due when a positive development has been restored in the Russian society. These changes can take time to find a breeding ground in Russia, but both

during late 1997 and early 1998 as well as during the first half of 1999, many indicators have surprisingly quickly come to point in a positive direction (see Table 3.1 and oil price in Figure 3.1). It is hopefully only a question of time until the same prerequisites will be available so that a sustainable economic growth can be reassumed. After the curves have turned upwards again, the low prices of raw material export will probably prove hard to justify. Following this, structural problems for the ports involved can arise and the ones who have done their home work properly will be in a much better position to reap the profits in both turnover and pure money terms.

6.3.2. Existing Russian ports in the Baltic Sea

The focus in this survey has been set on Russia, ports and the Baltic Sea, but ports that fulfil just these three criteria's are few. In reality, it is only ports in the Gulf of Finland and Kaliningrad that fulfil the criteria's and that group consists of only four ports.

A grey cloud that rests over the Russian port sector is increased competition from foreign and among domestic ports. This is e.g. manifested by the continued increase in co-operation across and the smoother passing of land borders. The easier this passage becomes, the more the sometimes marginal advantage of using Russian instead of foreign ports will erode. This is a process that receives strong EU support and will make foreign ports more attractive, and simultaneously, increase competition for Russian domestic ports[224].

In this process of adaptation to the rules of market forces for the transport sector from the old system of centralism, some top officials obviously remain convinced that the previous system had many advantages. Discussing Russian transport corridors and the new ports in the Gulf of Finland, the then Vice-Governor of the Leningrad Oblast, Yury Sokolov, opted for:

> *"... an optimal transport system for the Russian federation and stop this unhealthy competition"(SPT 1997-12-22)*[225]

[224]Over a five-year term this effect will not only relate to Finland, but also include Estonia, and possibly one or two more of the Baltic states, that are due to start EU membership negotiations shortly.

[225] Sokolov later became Governor in the Oblast when Gustov resigned to work for the Federal Government in Moscow in September 1998, but new elections in the Oblast are due for late 1999.

This could be seen in contrast to a statement by the Russian Deputy Prime Minister, at the time, Vladimir Bulgak, when speaking about the same port projects at a meeting of local government and port officials[226]. He instead stressed the need to:

"... nail down the profitability of the venture and do not push projects in the name of patriotism" (SPT 1998-02-02)

... and in continuation he added:

"Forget about the words 'the State' 'the Fatherland' and think about your pocket" (SPT 1998-02-02)

After all, it is highly probable that the thinking of Mr Bulgak better represents the future Russian attitude in the transport sector than the clearly nostalgic statement by Mr Sokolov. If so, competition has come to stay and each actor should prepare for the future accordingly, but the statement of Solokov shows a not uncommon resistance to the kind of chances that the transition has brought about. In a short-term perspective though, all major changes that are likely to occur in the Russian port sector will take place in the Gulf of Finland. Simultaneously there will also be changes taking place in neighbouring Finland and the Baltic States that will strongly affect Russian ports.

The Leningrad Oblast will be the main Russian venue for these changes in the port sector, but it is an Oblast that lacks most forms of infrastructure needed in relation to ports. On the other hand, the Oblast has access to seashores, which is what the city of St. Petersburg lacks. A city which instead possesses what is perhaps most important of all in this respect, the infrastructure that is needed to reach and run a port[227]. If projects are to be realised or not could be debated, but to take a standpoint like the current (mid 1999) General Director of the port in St. Petersburg, Bilichenko, can seem a little too optimistic from the position of an existing port:

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[226] Bulgak was later to end his term in the Kiriyenko Government during the March 1998 crises and is expected be one of the candidates for the post of Governor in Leningrad Oblast in late 1999.

[227] The re-unification of the two Oblasts (separated in 1931), that looked distant at the time of writing could well be back on the agenda again as both Oblasts elect Governors in late 1999.

"It is simply not realistic to think of anyone competing with us in the next 15 years"(Business in Russia, Sept. 1996 p.102)

International financial institutions have so far only been lending money to Russian port projects with the aim of developing already existing ports, like in Novorossiysk and St. Petersburg. However, this has not been done without governmental guarantees. Other port projects under development, as well as intended projects, have so far been forced to find the necessary funding from domestic or private international financial sources. Processes that have proved much more difficult, and conflict generating, than the initiators had ever expected. Existing commercial ports have the possibility of generating their own incomes that can be re-invested, e.g. through its Port Authority, to support development projects. An income-generating facility that the ports under construction do not possess. Another advantage for existing ports is that they possess fixed assets to put up as collateral making it possible for them to borrow on security, which new projects, for natural reasons, can not.

A frequent argument in discussions, but also in books and journals, is the Russian need for new infrastructure that would save a lot of money for Russia. However, nowhere can any calculations be found, so nothing can be said about the price tags that have been set to different factors and what costs that have been included. It would be of great interest to know if such calculations include only transport-related costs and if e.g. *"lost"* taxes and intended dues and fees have been included. This is the official version and it could be argued, as by Hayter, that much Russian capacity is, and especially has not been, used as efficiently as could be wished (see 3.8.2). Had it not been so, then the present transit pattern would probably have looked very differently indeed. It could also be argued that the persisting pattern is the result of logic decision making on more or less market economic grounds by cargo owners, i.e. under prevailing conditions.
In the Kaliningrad Oblast, that is sometimes presented as an alternative region for port expansion, the administrative situation has not been favourable though, as e.g. the local free-zone initiatives have continuously come to be put on a go-slow for years (Brodin 1994:b, Brodin 1999). Of many large scale FDI´s in the Oblast, only the Daewoo car assembly plant has matured, but none in the port sector. Military interests in the most favourable port location in the Oblast, the Baltijsk naval base, leaves the port sector only second best alternatives that are less attractive. The Oblast is no exemption to the Russian pattern with a lot of proposed plans

in circulation. During visits to the Oblast, information concerning four different large-scale port development projects have been encountered, but all remain firmly anchored on the drawing boards. Under the reigning geopolitical, political and transport geographical situation, the future of the port sector in the Oblast looks disheartening.

The success of all existing as well as future port structures depends, in the end, on how large a share of the incurred costs must to be pushed on to the end users, and how quickly. As previously shown, Russian forwarders in particular have been proved to show a considerable cost awareness (MTC 1997:a). A quotation that really speaks for itself, as an indication of the future of the Russian cargo transit situation, comes from the oil company Barneft General Director, Ampir Syrtylanov, who strongly supports this thesis of cost awareness:

"I don't care whose terminal it is, just how much it costs"
(Business in Russia, September 1997 p.102)

6.3.3. Ports in the Russian North West

What is often argued for in the Russian North West is that a positive economic development resulting in increased trade and future development of oil and gas resources is imminent. From a port perspective the offshore extraction of oil and gas would generate more activity than would onshore exploration. Apart from irregular consignments of cargo to on-shore fields, the positive effects from offshore explorations would only be felt by the ports near the exploration areas. Regarding the generation of new transport volumes by oil exploration, the statement by Wood and Martin gives little consolation for those who are optimistic about the oil and gas industry as generators of transport:

"Even if they [the field operators] were to import a considerable proportion of their requirements, this would constitute a negligible [sic] volume of freight traffic" (Wood and Martin 1996 p. 13)

The results from the arguments brought forward, in this and previous chapters, concerning the competitive situation in the Russian port sector will probably lead to the likely deterioration of future competitive position of both Murmansk and Arkhangelsk.

Murmansk
Murmansk will continue to be competitive for some categories of cargoes though, as bulk cargoes produced on the Kola Peninsula aimed for export in a more or less unrefined form will, of course, continue to use the local port. It is for long-distance cargoes that the port will fail to be competitive, a fact that has also been concluded by the writers of other studies:

> *"Also [sic] the transit cargo flows of the Murmansk port will not increase because of the long railway transportation distance"(MTC 1995 p. 40)*

What could secure a prosperous future for the port is an expansion of the mineral extraction on the Kola Peninsula. Something that has long been discussed, but few concrete signs of this has been seen. Such an expansion is not unlikely, but looks 5 - 7 years distant (Parfenov interview 1998-03-24). Murmansk will probably continue to be used especially for alumina, on the import side. Again, the future of the alumina handling depends more on the future development of the Russian aluminium sector than on how well the port performs. The port will also maintain a competitive position for spot loads of different kinds of goods in bulk, export as well as import, especially so during winter months. Even after the possible expansion of port capacity in the Gulf of Finland Murmansk will remain the first choice Russian reserve alternative. Murmansk is operates under ice-free conditions all the year round, which will not be the case for any of its domestic competitors.

Arkhangelsk
With a constantly decreasing population in the Russian Far North follows a slowly decreasing demand for transhipments of goods and supplies. A kind of handling that has been important for the turnover of the port in Arkhangelsk. Another important type of cargo has been the export of wood, first of all sawn wood, but also other forms of processed wood. The whole woodworking sector has been marked by contraction since the beginning of the transition period. During this period, as so often during times of crises, the *"every-man-for-himself"* attitude among the industries in the region has been emphasised. Bankruptcies among several wood-working industries have stopped operations, which has not improved the situation. Lack of public funding has also resulted in the Severnaya Dvina river becoming ever more shallow through sedimentation, and that depth has only been increased at the outer terminal. This hampers the delivery of wood by river ships and the rafting of wood from up-river areas, but also restricts handling in the port. As the port can only accept shallow

draft ships, there could well be a niche for minor import or export shipments of bulk cargoes, alternatively shipments to/from minor foreign ports. Being the port with the longest history of all Russian ports and being one of few ports it will maintain its strategic interest for federal circles. Despite this, any major improvements of infrastructure and turnover looks less probable.

6.4. The foreign outsiders

6.4.1. Ports in the Baltic states

In this survey, the Russian ports portray a position as insiders in contrast to the group that will be dealt with here; the outsiders, i.e. ports in the Baltic states and in Finland. This is also the group of ports where the adaptability to changes has proved to be quickest and where the positive effects of increased competition can be demonstrated.

The final result of this struggle for *"the survival of the fittest"* between the different ports in the Baltic state could well be that nearly all will be saved from surrendering. In a long term perspective it is perhaps this *"free competition"* among the ports in the Baltic states that will keep them so alert, and cost-efficient for cargo owners to use. Therefore, there will also be a sufficiently large cargo flow using the ports to keep up turnover volumes[228]. Despite the fact that there are a number of factors that complicate the situation, this environment could still be looked upon as ideal, and completely in line with the most important of the factors in the writings of Porter (1998) to maintain long term competitiveness; *"rivalry"*. The bonus generated by efficiency and rivalry could well be that the Russian threat to expand its own port capacity, could largely remain just a threat, a too risky venture. A positive sign is that there are already a number of private operators active in the different ports, and some terminals are partly or fully owned by foreign companies. Combined with the domestic environment they work in, the port sector in the Baltic States is far ahead of its Russian competitors in efficiency and gives them a high likelihood of survival.

[228] If so, in line with the quotation from Korhonen in section 4.3.

6.4.2. Finland's future position

In many respects, Finland holds an important position in the transit trade as a long established trade partner to Russia, member of the EU since 1995, the only EU country bordering Russia and important member of the Barents Council. During the coming Finnish presidency of the European Union, during the second half of 1999, the question of new links to Russia will be strongly promoted. From the Finnish side it is hoped that financing for several of the long-discussed rail and road connections will finally be settled, e.g. the railway between Ledmozero and Kochkoma (see chapters 4.4 and 4.5). Such a development would probably greatly increase transit volumes of Russian cargo in Finnish ports. This would also strengthen the position of Finnish ports in relation to the Baltic ports, but even more so against the two ports in the Russian North West.

Another important matter in this respect, especially for Finland, is to facilitate border-crossing procedures. Much has been written, and much money has already been invested in this field. Investments seem to be a minor problem in the case of border crossings on the main lines such as *"Crete corridor no 9"* between Helsinki and St. Petersburg[229]. USD 50 million have been spent between 1995 and 1999 On road and railway upgrading for customs and immigration (National Board of Customs Finland et.al. 1995). How this has been manifested in the form of new and larger border stations, on both sides of the border, can clearly be seen by any interested passing traveller. Such measures are of course vital in facilitating trade in general, but for Russian ports, this coin has two sides. If located in what is the periphery, such as ports in Murmansk or Arkhangelsk, or the proposed group of ports, it can more or less be taken for granted that this process is not positive for the development of future goods turnover. For Finnish ports that seeing the other side of the coin, this is of course only good news.

6.4.3. Sweden's future position

As understood from previous chapters there are limited possibilities to find a return load for a vessel or a truck that carries products in the Swedish - FSU trade. The prevailing unbalance is likely to remain, but the

[229] The name *"Crete corridor ..."* comes from the fact that the final decision to support 13 different, transport corridors eastward from the EU was taken at a EMTC meeting on the Greek island of Crete in 1993.

unbalance will shrink in years of low demand for pulpwood, as was the case during 1996. Already today, several of the larger Swedish paper and pulp producers have established their own affiliates in both Russia and the Baltic countries. This trend will most likely lead to this form of raw material sourcing becoming more established in the future. Now, when firm links have been established, it is time to seriously consider the logistic alternatives when building a transport chain for the future. Even today, the handling of cargo arriving with the smaller river-sea vessels is more complicated and expensive to handle than when it is handled by a modern vessel of a more optimal size. General cargo will continue to expand its volume, as will the number of ferry services, their capacity, frequency the quality of their services. This expansion will come as a result of the continued incorporation of Russia, and especially the Baltic states, into the international system of division of labour, this time based on market economic thinking.

For cargo categories other than pulpwood and general cargo, it is only in the case of oil that major changes could be expected in relation to volumes and types of vessels used. From an environmental point of view there are large improvements that could be obtained by restricting the use of second rate, often 20 years old and badly maintained, river-sea tankers. The much-increased use of river-sea tankers in the Baltic Sea has come to coincide with the detection of an ever-increasing number of smaller oil-spills at sea. Together with the arrests in Swedish ports of these kinds of tankers with severe defects of all kinds, from hull to management, has lead to a much stricter Swedish surveillance and regular port state controls of such vessels have taken place. Expansion of oil-export terminals, e.g. in Tallinn, to handle larger ships will probably offset much of this problem by itself in some years time, through an increased use of larger and more economical ships.

7. CONCLUSIONS

7.1. Introduction

In previous parts of this study a number of factors related to the development of the Russian transport sector with an emphasis on ports have been presented. The aim of this study has been to describe how the changing geopolitical environment in the FSU has created a new transport geography, and thereby resulted in new patterns of foreign trade routes and port competition on the Baltic Sea fringe.

In order to fulfil the given aims, the study has been carried out in three steps:

The first step described and set into perspective the geopolitical situation that reigned before the initiation of the transition process. Processes that made possible the geopolitical and transport-geographical changes in the Baltic Sea area, focused upon in this study.

The second step gave the background of the current development, including a description of the Russian port sector, and related sectors and regions in the FSU.

The third step included an in-depth analysis of the development and changes in Swedish seaborne trade with the countries of the FSU during the years 1992 – 1997, from both a geographical as well as a volume perspective.

7.2. The geopolitical approach

One of the reasons behind Russian discomfort over *"lost"* infrastructure and land that has been put in focus here, is the emotionally motivated feeling that countries apprehend a need, or a historically motivated desire, to exert control over territories that are considered to be of great importance. This desire to execute control certainly includes some of the most important transport arteries leading to and from a country as big and historically influential as Russia. The old tsarist Russian ambition of having direct access to the Baltic Sea came true through Peter the Great in the first years of the 18th century and the desire to maintain this contact has remained strong. In later years the country's leadership has often

given the impression of being a leadership working more to reinforce personal positions than for the best of the country, making an impression that *"anything can soon happen* " ever present. The sudden, and unexpected dismissals of four Prime Ministers in less than 15 months and a social situation that is deteriorating, is in itself proof enough of inherited instability[230]. A number of strong arguments could, of course, be found that indicate a number of different alternative developments. Some arguments are supported by more facts than others. However, all theories could be seen as just alternative forms of speculations, but the ideas of the famous geopolitical writer Peter Taylor (1993) also supports unconventional thoughts by stating:

" ...that, of course, is the nature of any geopolitical Transition
- the absurd becomes the obvious" (Taylor 1993, p. 80)

It is true though, that the existence of the Baltic states has come to re-create for the countries in western Europe, a new form of "*cordon sanitaíre"* that presumably the West, after all, see good reasons to keep in place. The strongest argument for an independent and secure future for the Baltic States is perhaps to be found in their present position as *"buffer-nations"*. A fact that was argued for in the early writings of Kjellén more than 80 years ago when he stated:

"...buffer-politics contain a life insurance for small states
in an era of large powers"
(Kjellén, 1917, s. 72; authors translation)[231]

The problematic question of Russian control over transport arteries could be attended to by the Baltic States themselves. Seen from the same geopolitical transport perspective that has been used here, a backdoor has opened up, forced in place by the adaptation of market liberalisation. A door that could help the Baltic states out of this awkward situation, namely infrastructure privatisation. In times of privatisation it would be possible, and perhaps even advisable, for the Baltic States to offer Russia directly, or indirectly through Russian companies, fair stakes in railway- pipeline- as well as port companies. These non-majority stakes, could be sold at only a slight discount to secure future Russian influence. Such an

[230] A power that, apart from a formal president and his rank of ministers, cannot even be properly defined, and has been constantly volatile since the dissolution of the USSR in 1991 until mid 1999.
[231] In Swedish *".. att buffertpolitiken innehåller en lifförsäking för småstater i stormakternas tidehvarf".*

act would serve two purposes. It would first of all give the big neighbour back, at least partly, the feeling of control over its transport arteries, but it would also help to secure the flow of cargo to the ports. Transit trade is, and will in the foreseeable future continue to be, very important for the economic well-being of the Baltic States. Therefore, it must be seen as a very worthwhile investment in both national security and the economic well being of the countries to offer some infrastructure ownership to its largest users, i.e. Russian companies. An ownership that could serve as an acceptable excuse for aggressive Russian politicians to accept the large-scale future use of foreign ports. If such an act can enhance, or perhaps even help to secure, the long-term well-being of the Baltic states and boost friendlier relations to Russia, it looks a relatively low price to pay. What is hard to set a price tag on in this case would be the cost of such a step measured in the loss of national pride that the seller could feel.

In its present geographical shape, Russia has a very limited number of possibilities as to where it could steer its seaborne foreign trade (see Figure 2.5). Earlier, not only the restrictions in capacity among existing Russian transport routes have been shown, but also the difficulties in extending capacity by way of building new Russian ports. Parallel to this are ongoing expansion projects among ports in the Baltic states. A situation that looks destined to aggravate an already high Russian dependence on foreign ports. A development that in a negative scenario, also under reigning conditions, could be used to fuel increased tensions.

7.3. Transport geography and economics

The uncertainty about the general development in Russian society has been considerable since the beginning of the perestroika period in the late 1980's. In the socio-economic sphere, large stratas of the population have seen their money incomes shrink and many have now come to live on wages around or below an already very meagre subsistence level. Even near future economic development for Russia looks insecure, if measured in GDP terms, which has been indicated by a number of domestic as well as foreign institutes. Despite this, a number of larger foreign industrial investments have been made, but FDIs remains on a proportionally low level in Russia compared to other transition countries, and especially so in the transport sector. The negative tendency has at least not continued its negative trend but flattened out during the first half of 1999. The short

Russian transition history has taught us that changes for the worse, but also for the better, can be as sudden as they are unexpected.

As seen previously during the transition period, few positive development effects will in the near future manage to spread outside the large city regions, especially Moscow and St. Petersburg. Surrounding regions will absorb most of what is left of domestic investment resources, and little will be left for the transport and port sector. From central Russian authorities it has been emphasised that no direct state support can be given to the building of new port structures, as was indicated during the first years of the 1990's. Still, the verbal support from the government for expansion in the port sector has been strong, and the projected cargo volumes to be handled by the intended Gulf of Finland ports could be an impressive 40 mt by 2004 if all plans materialise. If plans can be converted into ports, a dramatic increase on the supply side can be expected. In a first step, capacity is projected to increase by over 100% of present capacity by the end of 2004 and, within only five more years, yet another 50% capacity increase will take place. Such an increase is not likely to be met by a similar increase in cargo volumes for most kind of cargoes. Crude oil exports could be the only exception, but that is only if all the needed pipelines can be financed. To finance these pipelines a continued and stable high oil price will be needed, which has not been the case for more than a few years at a time over the last 30 years.

The Russian arguments for this expansion in the Gulf of Finland are based on the fact that a lot of money is *"lost"* to foreign countries because Russian export cargoes are now transited in foreign ports. At the same time, it has proved nearly impossible to increase efficiency in existing domestic ports. The chosen solution to this problem, that is said to be of national importance, is a Soviet period solution, i.e. to venture into building new and expensive infrastructure. In relation to all these new Russian port projects, a somewhat rhetoric question needs to be asked. What will be domestic and what will be foreign in the Russian port sector when the capital needed to build, the contractor that organise the construction work, most of the equipment and most of the long term financing will be foreign ? The original reason behind all these projects was, after all, to break away from foreign dependence. It is not much more than the location, the work force and a feeling of sovereignty that will be genuinely Russian. The ports are to be constructed with the sole purpose of avoiding the foreign handling of Russian cargoes, but can such an aim ever be achieved with such a strong field of competing ports being

located nearby, although in foreign countries ? If Russia is not to revert to Soviet time practices.

The position of Finland remains insecure. If the procedures at border crossings could be speeded up and financing for the long discussed Ledmozero - Kochkoma railway could be arranged, then the situation becomes complex, at the same time as such a step would further enhance the competitive position for Finnish ports in relation to both Russian and Baltic ports.

It must, from a Russian horizon, be remembered that the ports in the Baltic countries are expanding, but are operating existing facilities and have had time and possibility to adjust to, and practise, market behaviour longer and better than their Russian counterparts. All ports, existing and new, will from the beginning of the next millennium have great difficulty in finding enough cargoes to make their expansion plans viable. To run a port in any location will probably prove difficult, and for ports off the main flow of cargoes, like in Murmansk and Arkhangelsk, the competitive position will be depleted, at the same time as any major changes for Russian ports in the Black Sea will probably not take place. Here changes will instead be seen in neighbouring countries like Georgia, due to the large Caspian Sea oil findings.

7.4. Russian foreign trade – the Swedish example

For the cargo turnover in all the different ports being studied here, cabotage handling is small business. What is important is foreign trade that constitutes the by far largest share. The flow of foreign trade cargoes over the borders, as well as ports, is at the same time a measure of economic integration between countries. Current ways of recording foreign trade show a number of drawbacks as has been shown in this study. In this respect, irregularities are plain to see when both using the primary sources like the port survey and when based on official secondary statistical sources like IMF. The port survey, covering the handling in Swedish ports of cargo to and from the FSU as an empirical example, shows the kind of irregularities that can occur when entrepôt nations, here represented by the Baltic states, increase their volumes of trade on behalf of their neighbours. These insecurities severely limit the possibilities to correctly establish the demand and volume of Russian foreign trade with not only Sweden, but most probably with countries of

the West in general. What this shows, for this trade relation, is again that the present form of trade statistics do not tell the full story. It takes special knowledge to reveal what exactly is the problem and just the existence of entrepôt nations is likely to further complicate an already multi-dimentional picture. The empirical work presented here yet again emphasises this, and should at the same time be seen as a contribution to the continuous work to develop a better methodology for the studies of foreign trade in general, but transit trade in particular.

7.5. Synthesis of geopolitics and transport geography

By using a relatively small number of ports in the Baltic Sea, invaluable nodes in the Russian transport geography, it is hoped that the unavoidable interrelationship between geopolitics and transport geography in the region has been made fully understandable to the reader. That the two fields of study have become as interrelated, enhances the difficulty of carrying out analysis of questions within this field of research. The relatively quick adaptation by the ports in the Baltic states to more efficient ways of operation has made the two questions clash. Seen from a Russian geopolitical position, these ports should have been stripped of most of their turnover, but due to the new influence from the market this has not happened. At the same time, the building of new port capacity, that from a Russian transport geographical point of view would have been a logical development, has not happened either. The complexity of the present Russian transport geographical situation was demonstrated in Figure 2.6 and years of economic recession in Russia have not made possible all the grand plans that do exist. As a result of this, it has not been possible for Russia to break out from this new transport containment. A fact that is clearly shown by the large transit volumes that are being handled in foreign countries, forming a strong link between transport geography and geopolitics.

7.6. Final remarks

The historic legacy makes the problems faced by the Baltic States very different to the problems of long established states in Western Europe that hold a similar position. Despite this, the similarities with e.g. the Netherlands are not only a one of size in relation to its large neighbours, but also a small country handling large volumes of transit trade by means

of a port sector with a capacity substantially exceeding domestic needs. Another similarity is also its great importance to a very large hinterland, which in this case is nearly equal to the whole of Europe. This position has been achieved through foreseeing local actions to organise cargo-handling so efficiently that it has not proved viable for the big neighbouring countries to hold back, or make any serious attempts to redirect, the flow of cargo. This same level of efficiency is something to aim at even for the Baltic States. If the different Baltic ports, preferably in co-operation with their domestic railway companies, could reach a level of productivity similar to standard European ports, it would in itself keep up the flow of transit cargoes. It would also erode the whole basis of the Russian ambitions to increase domestic port capacity, or to use the words of North:

"Duplication of facilities seems foolish when all the states are in financial difficulties"
(North 1997 p. 223)

In this way, pure efficiency, as a result of the present fierce competition between the ports could well become the factor that will help secure a prosperous future for these coastal Baltic port cities and the countries they work in. Such a development would, at the same time, prove Porter (1998 p.13) right concerning the Baltic states; and then it is up to Russia to strive towards the same level of ambition:

"Productivity, not the export of natural resources, determines the prosperity of any state or nation"

7.7. Future research

Nodes in a system, here in the form of ports, are even vulnerable to international processes (see Figure 2.3 and Figure 2.4) both as a group and possibly even more so individually. This situation is in itself complex enough to make studies impossible without considerable simplifications by way of leaving out a number of possibly important factors. However simplifications and limitations are necessary to make any study comprehensible. In the continuation of this work, it would probably prove very rewarding to carry out a deeper study on just a few of the Baltic state ports included here from a number of angles. Including aspects such as their function in a European network of ports, possible strengthening of

their position, improvements in physical infrastructure, the type of and origin of cargo handled, their volumes handled, relations to neighbouring FSU competitors, and also former- present- and potential-users. Such knowledge is needed to widen the understanding, not only about international economic integration and about how this transit trade is performed in reality, but also to help cast light over what could be seen as hinterland and foreland in relation to the ports in the eastern part of the Baltic Sea.

Many of the fields mentioned have been covered in other geographical areas of the world, but very little has so far been done in this region. Deeper studies along these lines could therefore become especially rewarding, and could also make way for meaningful comparative studies in a number of directions and geographical areas.

Abbreviations

ASG	Since 1998 adopted as name of the company. Formerly acronym for Aktiebolaget Svenska Godscentraler (Swedish Warehouses Ltd)
bn	Billion (1000 millions = 1 000 000 000)
Bofit	Bank of Finland Institute for Countries in Transition
BTL	Bilspediton Transport och Logistik
CEEC	Central and East European Countries
CIS	Commonwealth of Independent States (FSU, excl. the three Baltic)
CMEA	Council for Mutual Economic Assistance (also called COMECON)
DKK	Danish Crowns
EDI	Electronic Data Interchange
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECMT	European Conference of Ministers of Transport
EES	European Economic Space
EU	European Union
FDI	Foreign Direct Investments
Feport	Federation of European Private Port Operators
FIM	Finnish Marks
FMT	Federal Ministry of Transport - Germany
FSU	Former Soviet Union
GATT	General Agreement on Tariffs and Trade (see also WTO)
GC	General Cargo
IBRD	International Bank for Reconstruction and Development
IIASA	International Institute for Applied System Analysis (Laxenburg Au.)
ILO	International Labour Organisation
INSROP	International Northern Sea Route Program
ISO	International Standardisation Organisation
JSC	Joint Stock Companies
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
mbd	Million barrels per day
mt	Million tonnes
MTC	Ministry of Transport and Communications of Finland
MTI	Ministry of Trade and Industry of Finland

mty	Million tonnes per year
NATO	North Atlantic Treaty Organisation
nm	Nautical Miles (1852 m)
NSR	Northern Sea Route (in other works also called *"North-East Passage"*)
NUPI	Norwegian Institute of International Affairs
NUTEK	Närings- och teknikutvecklingsverket (Swedish National Board for Industrial and Technical Development)
OBIP	Russian acronym for: Consortium of Banks Investing in Ports
OECD	Organisation of Economic Co-operation and Development
P&O	Peninsular and Oriental Shipping Company
PIANC	Permanent International Association of Navigation Congresses
PS	Port Survey (-s): conducted by the author during 1991 - 1998
PW	Pulpwood
RF	Russian Federation
RFE/RL	Radio Free Europe / Radio Liberty (based in Prague)
Riisnp	Russian International Institute of Social and Nationalities Problems
RUB	New Russian Rouble (SIS abbreviation from 1998-01-01)
SCB	See SS
SEK	Swedish Crowns
SINTEF	Sentret for Internationlell TEknisk Forskning
SITC	Standard of International Trade Classification
SNS	Studieförbundet Näringsliv och Samhälle
SS	Statistics Sweden (in Swedish = Statistiska Centralbyrån - SCB)
SSAG	Svenska Sällskapet för Antropologi och Geografi
SVEX	Since 1972 the name of the logistics company (ex. Svenssons Express)
TACIS	Since 1996 adopted as name. Formerly acronym for the EU program administrating support program for the CIS (i.e. ex. the Baltic states)
TEU	Twenty Foot Equivalent Unit (accounting unit for containers)
USD	United States Dollars
VER	Voluntary Export Restrain
VR	Valtion Rautatiet (Finnish State Railways)
WTO	World Trade Organisation (continuation of GATT from 1998-01-01)
VLCC	Very Large Crude Carriers (> 200.000 dwt)
WWW	World Wide Web (i.e. the Internet)

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Ludzisa, A.	Director of information, Latvian National Railways In Riga 1998-10-18
Nilssen, I.	Consultant, SINTEF Telephone, Trondheim 1998-01-07
Parfenov, A.	General Director, Lenmorniiproekt St. Petersburg 1998-01-24 + letters and faxes
Pashovkin, A.	Head of Foreign Relations, Northern Shipping Company In Arkhangelsk 1998-02-18
Pettersson, U.	Head of Traffic, Port of Luleå Telephone, 1999-05-11
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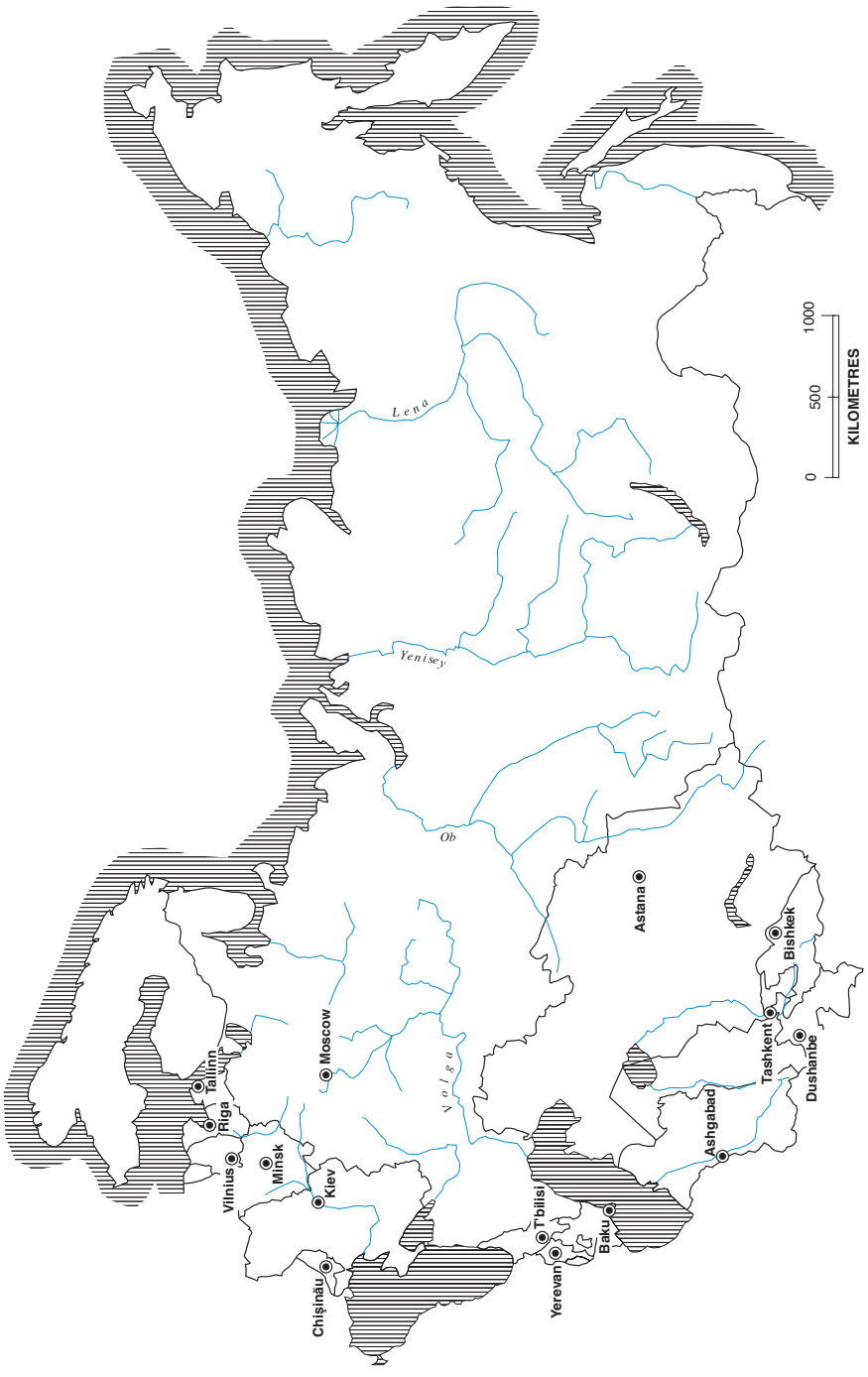
Table of Content for Appendix



Russia and neighbouring countries

Conversion factors for oil and gas volumes:

FROM		TO	Multiply by
Crude oil:			
Barrels	->	metric tonnes	= 0.137
Metric Tonnes	->	Barrels	= 7.33
Barrels / day	->	metric tonnes/ year	= 49.8
Natural gas:			
Billion cubic feet	->	Billion cubic meter	= Divide by 0.028
Billion cubic meter	->	Billion cubic feet	= Multiply by 35.3

Source: BP Amoco Statistical Review of World Energy 1999

Turnover in Larger Russian Ports 1996 (1000-ton)

	HANDLING		TRADE			
	Dry cargo	Liquid***	Export**	Import**	Cabotage*	Total
(Baltic Sea)						
Vyborg	1 138	-	1 031	63	44	1 138
Vysotsk	907	-	907	-	-	907
St. Petersburg	8 322	1366	6 106	2 216	-	9 689
Kaliningrad	2 660	60	2 287	433	-	2 720
(North West)						
Murmansk	5 764	-	3 891	1 050	822	5 764
Arkhangelsk	647	-	252	89	305	647
(Black Sea)						
Tuapse	2 997	10 556	13 434	116	3	13 553
Novorossiysk	8 705	43 789	49 931	2 443	120	52 494
(Far East)						
Vostochnyj	9 549	-	8 443	368	738	9 549
Nahodka	5 976	-	5 500	78	398	5 976
Vladivostok	4 195	-	3 385	421	389	4 195
Vanino	4 531	-	2 236	377	1 918	4 531
Total 12 above	55 391	55 771	97 403	7 654	4 737	111 163
Total all ports	76 900	65 600	120 900	10 800	10 800	142 500

*** = Nearly exclusively export.
** = Excluding liquid bulk.
* = Cabotage handling is recorded both as goods loaded and unloaded.

Source: Morskie Porti no. 1 1997 p.13

Value of Total Swedish Trade with the Former Soviet Union 1993 - 1998																		
											(SEK M)							
	1993			**1994**			**1995**			**1996**				**1997**		**1998**		
Country	Import	Export		Import	Export		Import*	Export		Import*	Export		Import*	Export		Import*	Export	
Russia	3 392	2 588		5 562	3 439		5 294	4 746		5 937	4 855		6 939	6 968		5 255	6 050	
Estonia	746	815		1 280	1 520		1 663	1 687		1 967	1 762		3 060	3 108		3 765	3 535	
Latvia	809	565		1 767	869		2 138	1 304		1 188	1 391		1 315	1 893		1 926	1 992	
Lithuania	410	283		623	552		594	842		480	974		677	1 346		796	1 819	
Sub. tot.	5 357	4 251	9 608	9 232	6 380	15 612	9689	8579	18268	9572	8982	18554	11991	13315	25306	11742	13396	25138
Ukraine	13,6	152,5		44,0	258,0		27,0	282,6		55,3	441,0		61,0	877,7		111,0	1069,5	
Belorussia	20,7	46,5		37,0	80,0		39,9	123,8		85,0	117,1		47,1	142,2		74,0	204,4	
Armenia	0,0	36,1		0,2	14,0		0,0	0,1		0,0	5,0		0,0	3,6		0,0	1,8	
Azerbaijan	0,5	7,1		1,0	12,0		0,2	4,5		0,0	52,6		0,0	31,8		0,0	73,0	
Georgia	2,6	3,9		0,6	7,0		0,1	7,5		0,0	2,8		0,0	13,5		0,2	29,7	
Moldavia	0,5	2,0		0,5	6,0		1,1	25,7		2,5	27,6		0,2	10,1		1,3	34,9	
Kazakhstan	63,7	114,4		56,0	114,0		36,4	133,9		17,3	81,3		48,0	107,1		50,1	147,7	
Kyrgyzstan	6,5	0,9		2,0	25,0		0,0	4,7		0,0	32,8		0,0	103,2		1,4	37,5	
Tajikistan	0,4	6,9		0,8	13,0		0,4	0,1		1,8	8,9		0,3	0,8		0,0	0,8	
Turkmenista	0,0	0,0		47,0	7,0		107,8	0,8		2,4	28,1		0,1	2,7		22,5	18,4	
Uzbekistan	2,0	7,0		2,0	13,0		1,8	21,8		1,5	101,1		3,5	113,1		36,2	63,3	
Sub. tot.	110,5	377,3	487,8	191,1	549,1	740,2	214,7	605,5	820,2	165,8	898,3	1064,1	160,2	1405,8	1566,0	296,7	1681,0	1977,7
TOTAL	5468	4628	**10096**	9423	6929	**16352**	9904	9185	**19088**	9738	9880	**19618**	12151	14721	**26872**	12039	15077	**27116**
Source: SS Foreign Trade Statistics 1993 - 1998							(* = For 1995-98 the value given is "country of origin" for each country)											

FROM: Alf Brodin Department of Human and Economic Geography
School of Economics and Commercial Law
Göteborg University, Sweden

Cargo to and from the Eastern Baltic in Swedish Ports

My name is Alf Brodin and I am doing research for a doctor's degree in Economic Geography at the School of Economics and Commercial Law in Gothenburg, Sweden. As a part of a larger project about Russian shipping and Swedish - Russian seaborne trade, I am trying at this stage to obtain information about freight to and from the area of the former Soviet Union on the Baltic Sea for 1998, e.i. as in previous years, from you.

For the seventh year running I am conducting a survey in Swedish ports to obtain information about their handling of cargoes destined to and from the former Soviet Union. This is then compared to the official trade statistics and the two figures have each year showed great divergences. I also ask for the same type of information in some selected Baltic Sea ports, among them your port. Therefore I am writing to you in X-port as one of these ports. Hopefully the conclusions drawn, based on the whole material from all ports, will be available in the form of a report in the autumn of 1999.

What I would like you to inform me about is the volume of cargo that you handled in your port during 1998 in relation to Sweden. If you can do, or have, a split on types of cargo like, general-cargo, bulk and so on, or in a classification that you yourself use, this would be much appreciated. It would also be of great interest to me if you would include figures about your total cargo turnover for 1998, split on import/export and transit. Have there been any major changes compared to 1997 in your handling, in the total turnover and/or for any special type of cargoes ? Especially in relation to Russia.

To make my survey as complete as possible I am dependent on the information that you can send me and would therefore like to thank you in advance for your co-operation. If you have any further questions feel free to contact me by E-mail, phone, Fax or letter.

Alf Brodin

Larger Swedish Ports with Border Codes

Upper Norrland (Övre Norrland)	
Haparanda	10
Karlsborg	102
Luleå	11
Piteå	12
Skellefteå	13
Umeå	14
Domsjö	151
Husum	152
Köpmansholmen	153
Örnsköldsvik	154
Härnösand	16
Utansjö	167
Väja	168
Sundsvall	18-19

Stockholm Area (Stockholmsområdet)	
Hargshamn	262
Stockholm	27-28
Kapellskär	282
Nynäshamn	29
Södertälje	35

East Coast (Östkusten)	
Oxelösund	36
Norrköping	37
Västervik	38
Oskarshamn	39
Mönsterås	391
Kalmar	40
Visby/Gotland	42-43
Slite	246

Lake Vänern (Vänern)	
Vänersborg/Trollhättan	68
Lidköping	69
Karlstad	70
Kristinehamn	73

Lower Norrland (Nedre Norrland)	
Hudiksvall	20
Skärsnäs	202
Söderhamn	21
Vallvik	213
Gävle	22-23
Norrsundet	231
Skutskär	232
Norrtälje	26

Lake Mälaren (Mälardalen)	
Västerås	31
Köping	32

South Sweden (Sydsverige)	
Karlskrona	47
Karlshamn	48
Åhus	49
Sölvesborg	50
Ystad	52
Trelleborg	53
Malmö	54-55
Landskrona	56
Helsingborg	57-58

West Coast (Västkusten)	
Göteborg	59-60
Wallhamn	611
Halmstad	62
Falkenberg	63
Varberg	64
Uddevalla	65
Lysekil	66
Brofjorden	663
Strömstad	67

IMPORT		Cargoes to and from the Eastern Baltics in Swedish Ports During 1998									
										(1000 ton)	
State number of metric tons IMPORTED from each port											
			Russia			RUS TOT					
	St. Petersb.	Vyborg	Kalining.	White Sea	Other/					**IMPORT**	
Group					unknown						
General											
Paper Wood							("Paper Wood" - avser massaved och träflis)				
Bulk											
Ore											
Coal											
Oil											
Total											
	Estonia		EST TOT		**Latvia**			LET TOT	**Lithuania**		LIT TOT
	Tallinn	Other/		Riga	Ventspils	Liepaja	Other/		Klaipeda	Other/	
Group		unknown					unknown			unknown	
General											
Paper Wood											
Bulk											
Ore											
Coal											
Oil											
Total											

EXPORT						TOTAL - all transport areas - 1997												
	Russia						Estonia			Latvia					Lithuania			
UN	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	Total
G C						0			0		2			2			0	
PW						0			0					0			0	
Bulk						0			0	4,1				4,1			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						0			0					6,1			0	6,1
LN	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0	3		3					0			0	
PW						0			0					0			0	
Bulk			7,1			7,1			0	9,2			8,1	17,3			0	
Ore	2,9					2,9	2,1		2,1					0			0	
Coal						0			0					0			0	
Oil						0			0	11,4				11,4			0	
						10			5,1					28,7			0	43,8
MAL	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0			0	1,7		2,9		4,6			0	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						0			0					4,6			0	4,6
STH	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C					3,5	3,5	170		170	16,6				16,6	6,8		6,8	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0	6,6				6,6			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						3,5			170					23,2			6,8	204
EAST	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C	67					67	8,2		8,2	0,2	0,4	0,1		0,7	5,4		5,4	
PW						0			0		0,1			0,1			0	
Bulk	2,5					2,5	3,3	1,2	4,5	4,2				4,2	0,5		0,5	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0	28,8				28,8			0	
						69,5			12,7					33,8			5,9	122
SOUT	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C	1,7					1,7			0			68		68	72		72	
PW						0			0					0			0	
Bulk	7				2,5	9,5	4,1		4,1			10,2		10,2			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						11,2			4,1					78,2			72	166
WEST	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C					0,2	0,2		0,1	0,1					0			0	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0	9		9	173		2,7		176			0	
						0,2			9,1					176			0	185
VAN	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0			0					0			0	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						0			0					0			0	0
Area	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C	68,7	0	0	0	3,7	72,4	181	0,1	181	18,5	2,4	71	0	91,9	84,2	0	84,2	430
PW	0	0	0	0	0	0	0	0	0	0	0,1	0	0	0,1	0	0	0	0,1
Bulk	9,5	0	7,1	0	2,5	19,1	7,4	1,2	8,6	17,5	0	10,2	8,1	35,8	0,5	0	0,5	64
Ore	2,9	0	0	0	0	2,9	2,1	0	2,1	6,6	0	0	0	6,6	0	0	0	11,6
Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil	0	0	0	0	0	0	9	0	9	213	0	2,7	0	216	0	0	0	225
					Tot:	94,4		Tot:	201				Tot:	350		Tot:	84,7	730

IMPORT						TOTAL - all transport areas - 1997												
	Russia						Estonia			Latvia					Lithuania			
UN	St.P.	Vybor	Kalin	Whit	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Othe	Total	Total
G C						0,0			0,0					0,0			0,0	
PW	405,0	6,8	62,1		37,7	511,6	50,2	245,0	295,2	742,0	158,0	22,2	135,0	1057,2	85,2		85,2	
Bulk						0,0	0,5	2,3	2,8		3,9			3,9			0,0	
Ore	4,7	2,9	26,0			33,6		58,4	58,4	5,5				5,5	0,5		0,5	
Coal						0,0			0,0					0,0			0,0	
Oil						0,0	3,5		3,5					0,0			0,0	
						545,2			359,9					1067			85,7	2057
LN	St.P.	Vybor	Kalin	Whit	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Othe	Total	
G C						0,0	2,7		2,7				6,0	6,0			0,0	
PW	309,0	2,6			102,0	413,6	105,0	346,0	451,0	104,0			567,0	671,0	77,0	11,4	88,4	
Bulk						0,0			0,0					0,0			0,0	
Ore	4,9					4,9	52,0		52,0	5,0				5,0	4,2		4,2	
Coal						0,0			0,0					0,0			0,0	
Oil						0,0	17,8		17,8					0,0			0,0	
						418,5			523,5					682			92,6	1717
MAI	St.P.	Vybor	Kalin	Whit	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Othe	Total	
G C	2,2		3,2			5,4	9,0		9,0					0,0	1,6		1,6	
PW	61,4				15,6	77,0	8,4	161,0	169,4	27,2	8,0	17,0		52,2	34,4		34,4	
Bulk			3,7			3,7	1,0		1,0		80,0			80,0	15,8		15,8	
Ore	1,2	5,1				6,3	2,6	80,5	83,1	2,7	1,6			4,3	5,0		5,0	
Coal	3,0	19,4			7,9	30,3			0,0					0,0			0,0	
Oil						0,0			0,0					0,0			0,0	
						122,7			262,5					136,5			56,8	579
STH	St.P.	Vybor	Kalin	Whit	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Othe	Total	
G C					3,4	3,4	125,7	0,5	126,2	7,7				7,7	1,8		1,8	
PW						0,0			0,0					0,0			0,0	
Bulk						0,0	1,5	41,0	42,5		2,0		1,8	3,8	1,8		1,8	
Ore						0,0			0,0					0,0			0,0	
Coal						0,0			0,0					0,0			0,0	
Oil						0,0	149,4		149,4					0,0			0,0	
						3,4			318,1					11,5			3,6	337
EAS	St.P.	Vybor	Kalin	Whit	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Othe	Total	
G C	25,0	2,1	1,4			28,5	1,5		1,5		1,9			1,9	5,9		5,9	
PW	114,0	55,7	45,9		160,0	375,6	74,8	331,0	405,8	392,0	95,0	225,0	75,9	787,9	84,0		84,0	
Bulk	13,3		2,6			15,9	2,9		2,9					0,0	9,5		9,5	
Ore						0,0			0,0					0,0			0,0	
Coal	74,7	119,0	13,8			207,5	48,7		48,7					0,0			0,0	
Oil						0,0	83,0	15,5	98,5	16,7				16,7	7,4		7,4	
						627,5			557,4					806,5			107	2098
SOU	St.P.	Vybor	Kalin	Whit	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Othe	Total	
G C	0,1					0,1	5,3	26,1	31,4			26,4		26,4	30,5		30,5	
PW	4,9	16,4			19,8	41,1	69,1	7,7	76,8	43,9	9,3	85,4	50,3	188,9	10,5		10,5	
Bulk			8,4		9,0	17,4		4,6	4,6		73,2		3,0	76,2	42,8		42,8	
Ore						0,0	2,8		2,8					0,0			0,0	
Coal						0,0			0,0					0,0			0,0	
Oil	22,6					22,6	51,1		51,1	44,3	0,1			44,4	49,6		49,6	
						81,2			166,7					335,9			133	717
WES	St.P.	Vybor	Kalin	Whit	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Othe	Total	
G C			1,5			1,5			0,0					0,0			0,0	
PW	17,5	1,1			4,6	23,2	7,6	82,6	90,2	9,7	2,5	2,0		14,2			0,0	
Bulk						0,0		2,3	2,3					0,0	39,4		39,4	
Ore	20,0					20,0	16,9		16,9					0,0			0,0	
Coal						0,0			0,0					0,0			0,0	
Oil			54,3	53,7	4,6	112,6	176,0		176,0	24,6	981,0			1005,6	28,4		28,4	
						157,3			285,4					1020			67,8	1530
VAN	St.P.	Vybor	Kalin	Whit	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Othe	Total	
G C						0,0			0,0					0,0			0,0	
PW	2,1					2,1			0,0					0,0			0,0	
Bulk			3,0			3,0			0,0					0,0	17,5		17,5	
Ore						0,0			0,0					0,0			0,0	
Coal						0,0			0,0					0,0			0,0	
Oil						0,0			0,0					0,0			0,0	
						5,1			0					0			17,5	22,6
Area	St.P.	Vybor	Kalin	Whit	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Othe	Total	
G C	27	2	6	0	3	39	144	27	171	8	2	26	6	42	40	0	40	292
PW	914	83	108	0	340	1444	315	1173	1488	1319	273	352	828	2771	291	11	303	6007
Bulk	13	0	18	0	9	40	6	50	56	0	159	0	5	164	127	0	127	387
Ore	31	8	26	0	0	65	74	139	213	13	2	0	0	15	10	0	10	303
Coal	78	138	14	0	8	238	49	0	49	0	0	0	0	0	0	0	0	287
Oil	23	0	54	54	5	135	481	16	496	86	981	0	0	1067	85	0	85	1784
Tot:	1086	231	226	54	365	1961	1069	1405	2474	1425	1417	378	839	4059	553	11	564	9057

EXPORT						TOTAL - all transport areas - 1996												
	Russia						Estonia			Latvia					Lithuania			
UN	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	Total
G C						0			0					0			0	
PW						0			0					0			0	
Bulk						0	0,9		0,9	0,9				0,9	0,3		0,3	
Ore						0	2,5		2,5					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						0			3,4					0,9			0,3	4,6
LN	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0			0					0			0	
PW						0			0					0			0	
Bulk						0			0	18,5				18,5	3		3	
Ore	3					3			0					0			0	
Coal						0			0					0			0	
Oil						0			0	12,8				12,8			0	
						3			0					31,3			3	37,3
MAL	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0			0	2,7		1,7		4,4			0	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil	8,3					8,3			0					0			0	
						8,3			0					4,4			0	12,7
STH	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0	154		154	0,4				0,4			0	
PW						0			0	0,4				0,4			0	
Bulk						0		1	1					0	22		22	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						0			155					0,8			22	178
EAST	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C	2,6					2,6	9,1	2,2	11,3	1,6			0,1	1,7	3,5		3,5	
PW						0			0					0			0	
Bulk	24,8					24,8	4,1		4,1	1				1			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0	2,7				2,7			0	
						27,4			15,4					5,4			3,5	51,7
SOUT	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0			0			52,9		52,9	48,3		48,3	
PW						0			0					0			0	
Bulk						0			0	25		4,1	3	32,1	26,6		26,6	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0	6		6		4,6			4,6			0	
						0			6					89,6			74,9	171
WEST	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0			0					0			0	
PW						0			0					0			0	
Bulk	5					5			0	2				2			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0	14,9	3	17,9	90,1				90,1			0	
						5			17,9					92,1			0	115
VAN	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0			0					0			0	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						0			0					0			0	0
Area	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C	2,6	0	0	0	0	2,6	163	2,2	165	4,7	0	54,6	0,1	59,4	51,8	0	51,8	279
PW	0	0	0	0	0	0	0	0	0	0,4	0	0	0	0,4	0	0	0	0,4
Bulk	29,8	0	0	0	0	29,8	5	1	6	47,4	0	4,1	3	54,5	51,9	0	51,9	142
Ore	3	0	0	0	0	3	2,5	0	2,5	0	0	0	0	0	0	0	0	5,5
Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil	8,3	0	0	0	0	8,3	20,9	3	23,9	106	4,6	0	0	110	0	0	0	142
					Tot:	43,7		Tot:	198				Tot:	225		Tot:	104	570

IMPORT						TOTAL - all transport areas - 1996												
	Russia						Estonia			Latvia					Lithuania			
UN	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	Total
G C						0		0,9	0,9					0	3,2		3,2	
PW	223		33,2		287	543	85,6	81,2	167	262	32,1	29,9	104	428	36,7		36,7	
Bulk						0	0,2		0,2	1,5				1,5			0	
Ore	1,9		14,7			16,6		32,1	32,1	4,4				4,4			0	
Coal						0			0					0			0	
Oil	13,4					13,4	45,8		45,8		5,4			5,4			0	
						573			246					439			39,9	1298
LN	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0			0					0			0	
PW	345	3,1	12,8		19	380	183	88,2	271	340	56,5	73,9	3	473	81,1		81,1	
Bulk			6			6			0		2,1			2,1			0	
Ore						0			0					0			0	
Coal		3,2				3,2			0					0			0	
Oil						0			0					0			0	
						389			271					476			81,1	1217
MAL	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C	3,2		3,8			7	3,1		3,1					0			0	
PW	69				15,5	84,5	29,4	80,3	110	40	1,4	15		56,4	23,3		23,3	
Bulk		2,8	5,1			7,9	1		1		107			107	9,8		9,8	
Ore						0	5,3	40	45,3					0	7,3		7,3	
Coal	10,6	21				31,6			0					0			0	
Oil						0	17,7		17,7		15,2			15,2			0	
						131			177					179			40,4	527
STH	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C						0	124		124	0,2				0,2			0	
PW						0			0					0			0	
Bulk						0	9	45	54		2			2			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0	123		123		37,6			37,6			0	
						0			301					39,8			0	341
EAST	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C	1,1		5,3			6,4	1,1	2,6	3,7		0,2	0,3		0,5	3,6		3,6	
PW	126	5,7	14,2		53,2	199	43,9	154	198	128	63,9	191	19,6	403	15,4		15,4	
Bulk	3,3	5,4	4,6		4,7	18	14,3	8,3	22,6					0	10,9		10,9	
Ore	8,6		4,2			12,8			0		2,5			2,5			0	
Coal	105	62,3	21,3		8,6	197	32,3		32,3					0			0	
Oil	8,2					8,2	71,8		71,8					0			0	
						442			328					406			29,9	1205
SOUT	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C	0,3	1,1				1,4	0,3	1,1	1,4	1		13		14	23,5		23,5	
PW	45,3	10,3	10,2			65,8	55,6	28,4	84	52,3	9,7	80	2,4	144	7		7	
Bulk			6,4			6,4	5	3	8		53,5		1	54,5	43		43	
Ore						0	4,7		4,7					0			0	
Coal						0			0					0			0	
Oil	55,4					55,4	53,7		53,7		29,6			29,6	72,8		72,8	
						129			152					243			146	670
WEST	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C			2,6			2,6	1,7	0,7	2,4					0	7,5		7,5	
PW	2	2,6				4,6	2,5	2,2	4,7	2,5	2,6			5,1	1,1		1,1	
Bulk						0			0					0	37,1		37,1	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil	19,7					19,7	144		144	15	985			1000	80,6		80,6	
						26,9			151					1005			126	1309
VAN	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C			2,8			2,8			0					0	5,5		5,5	
PW						0			0					0			0	
Bulk		2				2			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0	1,2		1,2	
						4,8			0					0			6,7	11,5
Area	St.P.	Vybor	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Vents	Liepaj	Other	Total	Klaipe	Other	Total	
G C	4,6	1,1	14,5	0	0	20,2	130	5,3	135	1,2	0,2	13,3	0	14,7	43,3	0	43,3	214
PW	810	21,7	70,4	0	375	1277	400	434	834	825	166	390	129	1510	165	0	165	3786
Bulk	3,3	10,2	22,1	0	4,7	40,3	29,5	56,3	85,8	1,5	165	0	1	167	101	0	101	394
Ore	10,5	0	18,9	0	0	29,4	10	72,1	82,1	4,4	2,5	0	0	6,9	7,3	0	7,3	126
Coal	116	86,5	21,3	0	8,6	232	32,3	0	32,3	0	0	0	0	0	0	0	0	264
Oil	96,7	0	0	0	0	96,7	456	0	456	15	1073	0	0	1088	155	0	155	1795
					Tot:	1696		Tot:	1626				Tot:	2786		Tot:	471	6579

EXPORT						TOTAL - all transport areas - 1995												
	Russia						Estonia			Latvia					Lithuania			
UN	St.P.	Vybo	Kalinin	White	Other	Total	Tallin	Other	Total	Riga	Ventspil	Liepaja	Other	Total	Klaipeda	Other	Total	Total
G C						0			0					0			0	
PW						0			0					0			0	
Bulk						0		1,2	1,2					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0	1,7		1,7	5,3				5,3			0	
						0			2,9					5,3			0	8,2
LN	St.P.	Vybo	Kalinin	White	Other	Total	Tallin	Other	Total	Riga	Ventspil	Liepaja	Other	Total	Klaipeda	Other	Total	
G C	7					7			0					0			0	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0	19,8				19,8			0	
						7			0					19,8			0	26,8
MAL	St.P.	Vybo	Kalinin	White	Other	Total	Tallin	Other	Total	Riga	Ventspil	Liepaja	Other	Total	Klaipeda	Other	Total	
G C						0			0	4				4			0	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						0			0					4			0	4
STHL	St.P.	Vybo	Kalinin	White	Other	Total	Tallin	Other	Total	Riga	Ventspil	Liepaja	Other	Total	Klaipeda	Other	Total	
G C	13,9					13,9	153,2		153,2	14,4				14,4			0	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						13,9			153,2					14,4			0	181,5
EAST	St.P.	Vybo	Kalinin	White	Other	Total	Tallin	Other	Total	Riga	Ventspil	Liepaja	Other	Total	Klaipeda	Other	Total	
G C	6					6	1,1		1,1	0,2	0,1			0,3	3		3	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						6			1,1					0,3			3	10,4
SOUT	St.P.	Vybo	Kalinin	White	Other	Total	Tallin	Other	Total	Riga	Ventspil	Liepaja	Other	Total	Klaipeda	Other	Total	
G C	54					54			0	3				3	35		35	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0	17				17			0	
						54			0					20			35	109
WEST	St.P.	Vybo	Kalinin	White	Other	Total	Tallin	Other	Total	Riga	Ventspil	Liepaja	Other	Total	Klaipeda	Other	Total	
G C	2					2	10		10	0,3				0,3	3,3		3,3	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0	103,4				103,4			0	
						2			10					103,7			3,3	119
VANE	St.P.	Vybo	Kalinin	White	Other	Total	Tallin	Other	Total	Riga	Ventspil	Liepaja	Other	Total	Klaipeda	Other	Total	
G C						0			0					0	3		3	
PW						0			0					0			0	
Bulk						0			0					0			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0			0					0			0	
						0			0					0			3	3
Area	St.P.	Vybo	Kalinin	White	Other	Total	Tallin	Other	Total	Riga	Ventspil	Liepaja	Other	Total	Klaipeda	Other	Total	
G C	82,9	0	0	0	0	82,9	164,3	0	164,3	21,9	0,1	0	0	22	44,3	0	44,3	313,5
PW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk	0	0	0	0	0	0	0	1,2	1,2	0	0	0	0	0	0	0	0	1,2
Ore	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil	0	0	0	0	0	0	1,7	0	1,7	145,5	0	0	0	145,5	0	0	0	147,2
					Tot:	82,9		Tot:	167,2				Tot:	167,5		Tot:	44,3	461,9

IMPORT						TOTAL - all transport areas - 1995												
	Russia						Estonia			Latvia					Lithuania			
UN	St.P.	Vyb	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Ventsp	Liepaja	Other	Total	Klaipeda	Othe	Total	Total
G C						0,0	1,1	8,7	9,8					0	1,7		1,7	
PW	604,5	2,0	78,2	10,9	228,0	924	37,3	83,4	120,7	551,6	63,9	57,6	91,5	764,6	84,7	3	87,7	
Bulk						0,0		3,6	3,6					0			0	
Ore						0,0			0					0			0	
Coal						0,0			0					0			0	
Oil				2,3		2,3	48,4		48,4					0			0	
						926			182,5					764,6			89,4	1962,4
LN	St.P.	Vyb	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Ventsp	Liepaja	Other	Total	Klaipeda	Othe	Total	
G C	2					2			0					0			0	
PW	406,4		44,6			451	106,8	398	504,8	237,5	93,5	36,8	2	369,8	177		177	
Bulk	3,3	2	5,9			11,2	18,6		18,6	9	5,1	0,9		15			0	
Ore						0			0					0			0	
Coal	6,1		3			9,1	3		3					0			0	
Oil						0	12,4		12,4					0			0	
						473,3			538,8					384,8			177	1573,9
MAL	St.P.	Vyb	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Ventsp	Liepaja	Other	Total	Klaipeda	Othe	Total	
G C	4,5	1,5	3,8			9,8	2		2		2			2	3		3	
PW	76		6		3	85	11	9	20	53	6		15	74	27		27	
Bulk			3			3	4		4	3	79			82	27		27	
Ore						0			0					0	4		4	
Coal	6					6	12		12				3	3			0	
Oil						0	5		5					0			0	
						103,8			43					161			61	368,8
STHL	St.P.	Vyb	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Ventsp	Liepaja	Other	Total	Klaipeda	Othe	Total	
G C	5,4		0,7			6,1	123,4		123,4	9,3				9,3			0	
PW	0,3					0,3			0	0,8				0,8			0	
Bulk		4				4		65	65		1			1			0	
Ore						0			0					0			0	
Coal						0			0					0			0	
Oil						0	7		7		1			1			0	
						10,4			195,4					12,1			0	217,9
EAST	St.P.	Vyb	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Ventsp	Liepaja	Other	Total	Klaipeda	Othe	Total	
G C	5	0,8				5,8			0		3,8	0,6		4,4			0	
PW	151,8		50,9		51,2	253,9	89,1	106	194,8	420,9	68	272,9	188,7	950,5	124,7		124,7	
Bulk	2,4	1,3	18,4			22,1	5,6	13,9	19,5					0	8		8	
Ore			8,7			8,7		2,8	2,8					0			0	
Coal	108,9	19	8,7		3	139,4	152,6	2,9	155,5	3				3			0	
Oil	20,6		2,6			23,2	46		46		20,6			20,6			0	
						453,1			418,6					978,5			132,7	1982,9
SOUT	St.P.	Vyb	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Ventsp	Liepaja	Other	Total	Klaipeda	Othe	Total	
G C	200		40,1			240,1			0		0,6		0,8	1,4	30,8		30,8	
PW	36,6		3,3		5,7	45,6	20,6	14,2	34,8	17		52,2	11,1	80,3	11,1		11,1	
Bulk	7,7		9,8			17,5	3		3		157,3	0,5	7,2	165	4,9		4,9	
Ore						0			0					0			0	
Coal		8,4				8,4	6		6					0			0	
Oil	59,3		5,3			64,6	21		21	1	25,7	8,1		34,8			0	
						376,2			64,8					281,5			46,8	769,3
WEST	St.P.	Vyb	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Ventsp	Liepaja	Other	Total	Klaipeda	Othe	Total	
G C	2,3		1,6	0,4	8	12,3	2,4		2,4	2,6				2,6	3		3	
PW	22,2		2,6		12,4	37,2	8,4	2,4	10,8	21				21			0	
Bulk						0			0			0,8	17	17,8	3		3	
Ore		6			6,8	12,8			0					0			0	
Coal			11,4			11,4			0					0			0	
Oil	117,2		28,8	17,8		163,8	189,6		189,6		911,7			911,7	67,2		67,2	
						237,5			202,8					953,1			73,2	1466,6
VAN	St.P.	Vyb	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Ventsp	Liepaja	Other	Total	Klaipeda	Othe	Total	
G C						0			0					0	3,2		3,2	
PW	3,3		1		6,8	11,1			0					0			0	
Bulk	2,6		4,8			7,4			0					0	5,5		5,5	
Ore		3,7				3,7			0	5,7				5,7			0	
Coal						0	4,8		4,8					0			0	
Oil						0			0					0			0	
						22,2			4,8					5,7			8,7	41,4
Area	St.P.	Vyb	Kalini	White	Other	Total	Tallin	Other	Total	Riga	Ventsp	Liepaja	Other	Total	Klaipeda	Othe	Total	
G C	219,2	2,3	46,2	0,4	8,0	276,1	128,9	8,7	137,6	11,9	6,4	0,6	0,8	19,7	41,7	0	41,7	475,1
PW	1301	2	187	10,9	307,1	1808	273,2	613	885,8	1302	231,4	419,5	308,3	2261,0	424,5	3	427,5	5382
Bulk	16	7,3	41,9	0	0	65,2	31,2	82,5	113,7	12,0	242,4	2,2	24,2	280,8	48,4	0	48,4	508,1
Ore	0	9,7	8,7	0	6,8	25,2	0	2,8	2,8	5,7	0	0	0	5,7	4,0	0	4,0	37,7
Coal	121	27	23,1	0	3,0	174	178,4	2,9	181,3	3,0	0	0	3,0	6,0	0	0	0,0	361,6
Oil	197,1	0	36,7	20,1	0	254	329,4	0	329,4	1,0	959,0	8,1	0	968,1	67,2	0	67,2	1618,6
					Tot:	**2602**		Tot:	**1651**				Tot:	**3541**		Tot:	**588,8**	**8383**

					Total Export and Import / Port and Category 1994													
EXPO	Russia						Estonia			Latvia					Lithuania			
	St.P.	Vyborg	Kalinin	White S	Other	Total	Tallin	Other	Total	Riga	Ventspils	Liepaja	Other	Total	Klaipeda	Other	Total	Total
General	82,9	0	0	0	0	82,9	164,3	0	164,3	21,9	0,1	0	0	22	44,3	0	44,3	313,5
Pulpw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk	0	0	0	0	0	0	0	1,2	1,2	0	0	0	0	0	0	0	0	1,2
Ore	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil	0	0	0	0	0	0	1,7	0	1,7	145,5	0	0	0	145,5	0	0	0	147,2
	82,9					82,9	166	1,2	167,2	167,4	0,1			167,5	44,3		44,3	461,9
Share %	17,9					17,9	35,9		36,2	36,2				36,3	9,6		9,6	
IMPO																		
	St.P.	Vyborg	Kalinin	White S	Other	Total	Tallin	Other	Total	Riga	Ventspils	Liepaja	Other	Total	Klaipeda	Other	Total	
General	219,2	2,3	46,2	0,4	8	276,1	128,9	8,7	137,6	11,9	6,4	0,6	0,8	19,7	41,7	0	41,7	475,1
Pulpw	1301,1	2	186,6	10,9	307,1	1807,7	273,2	613,6	886,8	1301,8	231,4	419,5	308,3	2261,0	424,5	3	427,5	5383,0
Bulk	16	7,3	41,9	0	0	65,2	31,2	82,5	113,7	12	242,4	2,2	24,2	280,8	48,4	0	48,4	508,1
Ore	0	9,7	8,7	0	6,8	25,2	0	2,8	2,8	5,7	0	0	0	5,7	4	0	4,0	37,7
Coal	121	27,2	23,1	0	3	174,3	178,4	2,9	181,3	3	0	0	3	6,0	0	0	0,0	361,6
Oil	197,1	0	36,7	20,1	0	253,9	329,4	0	329,4	36,6	923,3	8,1	0	968,0	67,2	0	67,2	1618,5
	1854,4	48,5	343,2	31,4	324,9	2602,4	941,1	710,5	1651,6	1371	1403,5	430,4	336,3	3541,2	585,8	3	588,8	8384,0
Share %	22,1	0,6	4,1	0,4	3,9	31,0	11,2	8,5	19,7	16,4	16,7	5,1	4,0	42,2	7,0	0,0	7,0	
imp+exp	1937,3	48,5	343,2	31,4	324,9	2685,3	1107,1	711,7	1818,8	1538,4	1403,6	430,4	336,3	3708,7	630,1	3	633,1	8845,9

					Total Export and Import / Port and Area 1994													
EXPO	Russia						Estonia			Latvia					Lithuania			
	St.P.	Vyborg	Kalinin	White S	Other	Total	Tallin	Other	Total	Riga	Ventspils	Liepaja	Other	Total	Klaipeda	Other	Total	Total
U N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
L N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mälaren	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
STHLM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	174
East C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93
South C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
West C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106
Vänern	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	27	0	9	0	21	57	175	0	175	142	0	5	23	170	26	0	26	428
Share %	6,3					13,3	40,9		40,9	33,2				39,7	6,1		6,1	
IMPO																		
	St.P.	Vyborg	Kalinin	White S	Other	Total	Tallin	Other	Total	Riga	Ventspils	Liepaja	Other	Total	Klaipeda	Other	Total	
U N	313	24	60	2	30	429	100	46	146	227	55	9	2	293	59	0	59	927
L N	251	15	84	6	56	412	172	105	277	119	38	31	30	218	92	0	92	999
Mälaren	104	4	42	0	0	150	53	6	59	28	138	4	0	170	62	0	62	441
STHLM	23	0	0	0	3	26	126	11	137	9	6	0	0	15	0	0	0	178
East C	222	0	135	0	154	511	97	28	125	207	55	276	64	602	162	0	162	1400
South C	156	5	32	0	24	217	34	43	77	26	266	40	59	391	90	0	90	775
West C	29	0	66	0	124	219	38	0	38	15	1049	7	16	1087	258	0	258	1602
Vänern	7	49	7	0	0	63	6	0	6	25	6	0	0	31	13	0	13	113
	1105	97	426	8	391	2027	626	239	865	656	1613	367	171	2807	736	0	736	6435
Share %	17,2	1,5	6,6	0,1	6,1	31,5	9,7	3,7	13,4	10,2	25,1	5,7	2,7	43,6	11,4	0,0	11,4	
imp+exp	1132	97	435	8	412	2084	801	239	1040	798	1613	372	194	2977	762	0	762	6863

					Total Export and Import / Port and Category 1993													
EXPO	Russia						Estonia			Latvia					Lithuania			
	St.P.	Vyborg	Kalinin	White S	Other	Total	Tallin	Other	Total	Riga	Ventspils	Liepaja	Other	Total	Klaipeda	Other	Total	Total
General	12	0	0	0	4	16	8	0	8	5	1	0	0	6	5	0	5	35
Pulpw	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk	0	0	0	0	0	0	6	0	6	1	0	0	0	1	0	0	0	7
Ore	5	0	5	0	0	10	33	0	33	0	0	0	0	0	0	0	0	43
Coal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil	0	0	0	0	0	0	31	0	31	22	0	0	0	22	5	0	5	58
	17	0	5	0	4	26	78	0	78	28	1	0	0	29	10	0	10	143
Share %	11,9					18,2	54,5		54,5	19,6				20,3	7,0		7,0	
IMPO																		
	St.P.	Vyborg	Kalinin	White S	Other	Total	Tallin	Other	Total	Riga	Ventspils	Liepaja	Other	Total	Klaipeda	Other	Total	
General	55	1	43	0	3	102	8	4	12	20	13	0	1	34	13	4	17	165
Pulpw	727	50	29	3	90	899	219	158	377	233	89	42	36	400	184	57	241	1917
Bulk	59	0	13	3	27	102	19	11	30	56	220	2	1	279	123	0	123	534
Ore	4	32	0	0	0	36	57	0	57	30	4	0	0	34	0	0	0	127
Coal	23	5	63	0	8	99	261	0	261	22	0	0	0	22	0	0	0	382
Oil	107	0	0	0	94	201	124	0	124	2	724	0	0	726	290	0	290	1341
	975	88	148	6	222	1439	688	173	861	363	1050	44	38	1495	610	61	671	4466
Share %	21,8	2,0	3,3	0,1	5,0	32,2	15,4	3,9	19,3	8,1	23,5	1,0	0,9	33,5	13,7	1,4	15,0	
imp+exp	992	88	153	6	226	1465	766	173	939	391	1051	44	38	1524	620	61	681	4609

					Total Export and Import / Port and Area 1993													
EXPO	Russia						Estonia			Latvia					Lithuania			
	St.P.	Vyborg	Kalinin	White S	Other	Total	Tallin	Other	Total	Riga	Ventspils	Liepaja	Other	Total	Klaipeda	Other	Total	Total
U N	5	0	5	0	0	10	38	0	38	13	0	0	0	13	5	0	5	66
L N	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	5
Mälaren	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STHLM	8	0	0	0	2	10	12	0	12	2	0	0	0	2	0	0	0	24
East C	5	0	0	0	0	5	1	0	1	3	0	0	0	3	3	0	3	12
South C	0	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	9
West C	0	0	0	0	2	2	16	0	16	10	0	0	0	10	0	0	0	28
Vänern	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	18	0	5	0	4	27	78	0	78	28	0	0	0	28	11	0	11	144
Share %	12,5					18,8	54,2		54,2	19,4				19,4	7,6		7,6	
IMPO																		
	St.P.	Vyborg	Kalinin	White S	Other	Total	Tallin	Other	Total	Riga	Ventspils	Liepaja	Other	Total	Klaipeda	Other	Total	
U N	412	31	0	0	38	481	227	30	257	162	59	3	0	224	91	0	91	1053
L N	154	9	10	3	17	193	83	98	181	35	18	0	27	80	39	7	46	500
Mälaren	23	5	7	0	0	35	38	0	38	11	123	0	1	135	20	0	20	228
STHLM	2	0	0	0	0	2	9	9	18	1	42	0	0	43	0	0	0	63
East C	137	14	52	0	76	279	233	30	263	111	29	31	8	179	48	52	100	821
South C	110	0	55	3	32	200	16	6	22	9	87	9	2	107	51	2	53	382
West C	74	0	6	0	56	136	11	2	13	3	683	0	0	686	333	0	333	1168
Vänern	62	32	17	0	0	111	69	0	69	30	11	2	0	43	28	0	28	251
	974	91	147	6	219	1437	686	175	861	362	1052	45	38	1497	610	61	671	4466
Share %	21,8	2,0	3,3	0,1	4,9	32,2	15,4	3,9	19,3	8,1	23,6	1,0	0,9	33,5	13,7	1,4	15,0	
imp+exp	992	91	152	6	223	1464	764	175	939	390	1052	45	38	1525	621	61	682	4610