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Business Environment and Future Opportunities in Russian Railway Freight Market

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Keywords: barriers to entry, market deregulation, railway freight transport, railway undertaking, Russia

Abstract

Increasing globalization puts pressure on transport sector. Due to mergers and acquisitions, great number of production plants is transferred to low-cost countries. Therefore, the need for transport services has confronted significant increase. Contemporaneously the importance of green values has increased; countries worldwide are paying more attention to greenhouse gas emissions. The situation is especially important in transport sector. According to European Union statistics, during the last years transport sector has been the only industry which has increased the emissions. As a solution for degenerated situation is offered railway transport. It lowers the emission levels and decreases the congestions. In addition to facilitate the railway freight market's harmonization, the market was liberalized in European Union 2007. However, the Finnish-Russian border is still sheltered from competition.

This research had three main objectives. Firstly, it evaluated the Russian railway freight market's main national peculiarities. Secondly, the objective was to examine the barriers to entry and realize the market's problems and positive factors. Furthermore, research highlighted the future prospects. Research is a qualitative case study, utilizing descriptive analytical research method. Empirical data was gathered by interviewing market actors by utilizing a semi-structured theme-interview. In order to gain versatile knowledge concerning the market, sample consisted of various types of professionals, such as representatives from railway undertakings, transport university's professors and representatives from the industry. Additionally, in order to gather comprehensive picture concerning the market, few Finnish undertakings were included. The research provided novel information by utilizing first-hand data; previously the topic has been researched by concentrating on second-hand data and literature analyses.

Based on this research, the main national peculiarities in Russian railway freight market are importance of personal relations and strong linkage with politics. The main barriers to entry are features related to rolling stock (registration and acquisition), needed investments and bureaucracy. Although railway undertakings' expectations for the future are optimistic, due to ongoing Reform Programme railway undertakings found it hard to predict the future because legislation and government's decisions are unknown.

Milla Laisi: Venäjän rautatietavaramarkkinan liiketoimintaympäristö ja tulevaisuuden mahdollisuudet. Liikennevirasto, rautatieosasto. Helsinki 2010. Liikenneviraston tutkimuksia ja selvityksiä 18/2010. 67 sivua ja 10 liitettä. ISSN-L 1798-6656, ISSN 1798-6656, ISBN 978-952-255-536-6, ISSN 1798-6664 (pdf), ISBN 978-952-255-537-3 (pdf).

Avainsanat: markkinoille tulon esteet, markkinoiden avautuminen, rautatietavaraliikenne, rautatieyrittäjä, Venäjä

Tiivistelmä

Lisääntynyt globalisaatio aiheuttaa paineita kuljetussektorille. Yritysostojen myötä tuotantolaitoksia siirretään halvan työvoiman maihin, joka lisää tarvetta kuljetuksille. Samanaikaisesti vihreiden arvojen merkitys on korostunut: valtiot ympäri maailmaa kiinnittävät enemmän huomiota päästöihin. Tilanne on erityisen tärkeä kuljetussektorilla, johtuen muun muassa siitä että viime vuosina kuljetusala on ollut Euroopan Unionin alueella ainoa sektori, joka on lisännyt päästöjä. Pahenevaan tilanteeseen on tarjottu ratkaisuksi rautatieliikenteen käytön lisäämistä, sillä sen on todettu pienentävän päästötasoa sekä vähentävän ruuhkia. Helpottaakseen rautatietavaraliikenteen harmonisointia Euroopan unioni avasi rautatietavaraliikennemarkkinat 2007; Suomen ja Venäjän välinen liikenne on kuitenkin sopimuksen ulkopuolella ja rajattu kilpailulta.

Tutkimuksella oli kolme tavoitetta. Tarkoituksena oli tutkia Venäjän rautatie-tavaraliikennemarkkinan kansallisia erityispiirteitä ja markkinoille tuloon liittyviä esteitä. Lisäksi, tutkimuksen tavoitteena oli selvittää operaattoreiden tulevaisuuden odotuksia. Tutkimus on kvalitatiivinen tapaustutkimus, ja siinä käytettiin kuvailevaa tutkimustapaa. Empiirinen aineisto kerättiin haastattelemalla alan eri toimijoita. Rautatieyritysten lisäksi haastateltiin kuljetusyliopiston professoreja sekä alalla toimivia yrityksiä. Jotta Venäjän markkinasta saatiin mahdollisimman monipuolinen ja todellinen kuva, haastateltiin lisäksi muutamaa suomalaista toimijaa. Tutkimuksessa käytettiin puoli-strukturoitua teemahaastattelua. Tutkimus toi markkinoille uutta tietoa käyttämällä ensi käden tietoa; aihetta on aiemmin tutkittu toisen käden tiedon sekä kirjallisuusanalyysien kautta. Venäjän markkinaa ei ole laajalti tutkittu englanninkielisessä kirjallisuudessa, joten tutkimus pyrkii täydentämään olemassa olevaa aineistoa.

Tutkimuksessa tehtyjen havaintojen mukaan suurimpia kansallisia erityispiirteitä ovat henkilökohtaisten suhteiden merkitys sekä vahva side rautatiemarkkinan ja politiikan välillä. Merkittävimmiksi markkinoille tulon esteiksi huomioitiin kalustoon liittyvät kysymykset (rekisteröinti ja hankinta), tarvittavat investoinnit sekä byrokratia. Vaikka rautatieyritykset näkevät tulevaisuuden optimistisena, käynnissä olevan uudistusprosessin takia rautatieyritykset kokivat haastavaksi arvioida markkinan tulevaisuudennäkymiä, sillä lait sekä valtiovallan päätökset eivät ole vielä tiedossa.

Milla Lai: *Företagsomvärlden och framtidsmöjligheterna för marknaderna för godstrafik på järnväg i Ryssland*. Trafikverket, järnvägsavdelningen. Helsingfors 2010. Trafikverkets undersökningar och utredningar 18/2010. 67 sidor och 10 bilagor. ISSN-L 1798-6656, ISSN 1798-6656, ISBN 978-952-255-536-6, ISSN 1798-6664 (pdf), ISBN 978-952-255-537-3 (pdf).

Nyckelord: hinder för marknadsintroduktion, avreglering av marknaden, godstrafik på järnväg, järnvägsföretag, Ryssland

Sammandrag

Den ökade globaliseringen sätter press på transportsektorn. Som en följd av företagsköp flyttas produktionsanläggningar till länder med billig arbetskraft, vilket ökar behovet av transporter. Samtidigt poängteras betydelsen av gröna värden: länder överallt i världen fäster allt större vikt vid utsläpp. Situationen är särskilt viktig för transportsektorn, bland annat på grund av att transportsektorn under de senaste åren har varit den enda sektorn inom Europeiska unionen som har ökat utsläppen. Som en lösning på problemet har man fört fram en ökad användning av järnvägar, eftersom detta har konstaterats minska utsläppsnivåer och trafikstockningar. För att underlätta harmoniseringen av godstrafiken på järnväg öppnade Europeiska unionen marknaderna inom godstrafiken på järnväg 2007; trafiken mellan Finland och Ryssland ingår inte i avtalet utan har lämnats utanför konkurrensen.

Undersökningen hade tre mål. Avsikten var att undersöka nationella särdrag hos marknaderna inom godstrafiken på järnväg i Ryssland samt hinder för att ta sig in på marknaderna. Dessutom ville man med undersökningen ta reda på operatörernas framtids-förväntningar. Undersökningen är en kvalitativ fallstudie och där användes ett beskrivande undersökningssätt. Det empiriska materialet samlades in genom intervjuer med aktörer från olika branscher. Utöver järnvägsföretag intervjuades professorer vid transportuniversitet samt företag inom branschen. För att få en så mångsidig och verklig bild som möjligt av den ryska marknaden intervjuades också några finska aktörer. I undersökningen användes en halvstrukturerad temaintervju. Undersökningen gav ny information tack vare förstahandsinformationen; ämnet har tidigare undersökts via andrahandsuppgifter och litteraturanalyser. Den ryska marknaden har inte undersökts mera omfattande i engelskspråkig litteratur och därför strävar man efter att komplettera det material som finns med denna undersökning.

Enligt de observationer som gjordes i undersökningen består de största nationella särdragen av betydelsen av personliga relationer och ett starkt band mellan järnvägsmarknaden och politiken. De största hindren för att ta sig in på marknaderna var frågor i anknytning till materielen (registrering och anskaffning), nödvändiga investeringar och byråkrati. Även om järnvägsföretagen ser optimistiskt på framtiden anser de också att den pågående reformprocessen är en utmaning när det gäller att bedöma framtidsutsikterna för marknaden, eftersom man inte ännu känner till lagarna och statsmaktens beslut.

Милла Лайси: Бизнес-среда и перспективы российского рынка железнодорожных грузовых перевозок. Финское транспортное агентство. Департамент железных дорог, г. Хельсинки, 2010. Сборник научных трудов: Финское транспортное агентство 18/2010. 67 с., 10 прилож. ISSN-L 1798-6656, ISSN 1798-6656, ISBN 978-952-255-536-6, ISSN 1798-6664 (pdf), ISBN 978-952-255-537-3 (pdf).

Ключевые слова: барьеры входа на рынок, дерегулирование рынка, грузовой железнодорожный транспорт, железнодорожные проекты, Россия.

АННОТАЦИЯ

Рост глобализации создает давление на транспортный сектор. Благодаря процессам слияния и поглощения все большее число промышленных предприятий переводится в страны с низкими производственными издержками. Поэтому транспортный сервис столкнулся с необходимостью удовлетворения динамично возрастающих потребностей рынка. Наряду с этим происходит увеличение ценности природного капитала; страны всего мира продолжают уделять пристальное внимание эмиссии парниковых газов. Сложившаяся ситуация имеет особенно важное значение в транспортной сфере. Согласно статистике Евросоюза, за последние годы транспорт был единственной отраслью материального производства, которая увеличила объем выбросов в атмосферу. В качестве меры, предотвращающей усугубление данной проблемы, может быть предложен железнодорожный транспорт. Он способствует уменьшению уровня эмиссии газов и сокращению числа заторов на дороге. Кроме того, для облегчения унификации рынка грузового железного транспорта в Европейском Союзе была проведена его либерализация в 2007 г. Однако на финско-русской границе все еще уклоняются от конкуренции.

Исследование преследовало три основные цели. Во-первых, определить главные особенности рынка грузового железнодорожного транспорта в России. Во-вторых, изучить барьеры входа на рынок, понять проблемы и благоприятные факторы. Более того, в исследовании отмечены перспективы на будущее. В научной работе был использован качественный подход с применением описательно-аналитического метода. Эмпирические данные собраны на основе опроса участников рынка по целевым полуструктурированным интервью. Чтобы получить разносторонние знания о рынке, анализ опирался на исследование выборки, состоящей из различных специалистов: представители железнодорожных проектов, профессорский состав университетов и другие уполномоченные лица производства. Кроме того, для составления всеобъемлющей картины в опрос были включены некоторые финские проекты. Исследование позволило сформулировать новые сведения благодаря использованию данных, полученных из первоисточников. Предварительно проблема была изучена на основе сбора вторичной информации и обзора литературы.

Согласно проведенному исследованию, национальные особенности российского рынка грузового железнодорожного транспорта связаны с важностью личных взаимоотношений и прочной взаимосвязью с политикой. Основные барьеры входа на рынок определяются сообразно с подвижным составом (регистрация и приобретение), необходимостью в инвестициях и наличием бюрократии. Несмотря на то, что ожидания железнодорожных проектов от будущего оптимистичны в связи с проводимой Программой структурной реформы на железнодорожном транспорте, сложно делать прогнозы, поскольку законодательная деятельность и правительственные решения неизвестны.

Foreword

This work was accomplished at Lappeenranta University of Technology, Kouvola Research Unit. It was ordered by the Finnish Transport Agency, Rail Department. Research was conducted by Doctoral student, M.Sc. (Econ.) Milla Laisi.

Work was mentored by Professor Olli-Pekka Hilmola from Lappeenranta University of Technology, Director Miika Mäkitalo and Senior Officer Kaisa-Elina Porras from the Finnish Transport Agency, and Senior Adviser Tuomo Suvanto from the Ministry of Transport and Communications.

The research represents the viewpoints of the researcher and is as such not an official or binding policy of the Finnish Transport Agency.

Helsinki, June 2010

The Finnish Transport Agency
Rail Department

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Abbreviations

BRIC	Brazil, Russia, India, China
CIA	Central Intelligence Agency
CPI	Consumer Price Index
EBRD	European Bank for Reconstruction and Development
FFC	First Freight Company
GCI	Global Competitiveness Index
GDP	Gross-domestic product
LPI	Logistics Performance Index
RZD	the Russian Railways, Российские железные дороги
SFC	Second Freight Company
WTO	World Trade Organization

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1 Introduction

This study examines the national peculiarities of Russian railway freight market. The main focus is on understanding the country's special characteristics. Although study concentrates on Russia, Finland can not be elided due to countries' close interaction. Furthermore, study assembles information about the ongoing Reform Programme, and tries to understand the future prospects in the Russian railway freight market. The research is the Finnish Transport Agency's project related to this topic, and it is executed at Lappeenranta University of Technology's Kouvola Research Unit.

1.1 Background of the research and research gap

The field of transportation has confronted significant changes during the centuries. Globalization and its trends, mergers and acquisitions, and transferring production to low-cost countries have set pressure on transportation. Transport has a vital role in economy, transferring goods from place of production to place of consumption. Therefore, transportation is often noted to have a key role in economic activity. According to World Trade Organization's statistics (2010), in 2009 world's merchandise trade (both import and export) amounted over \$ 12 000 billion. However, the economic downturn has affected strongly on foregoing years. During 2007 and 2008 the annual percentage change in world merchandise trade was positive both in exports and imports (fluctuating around 15-16 percent), but in 2009 export declined 23 percent and import 24 percent. Among the biggest losers were Russia, which export fell 36 percent and import 34 percent. European Union (EU27) followed the worldwide trend, and faced 23 percent decline in export and 25 percent in imports. (WTO, 2010)

Total freight transport activities in the EU27 were estimated to amount 4 228 billion tonne kilometers in 2007 (including intra-EU air and sea transport but excluding transport activities between the EU and rest of the world). In 2006 the road transport had the largest share, 72.2 percent; the other transport modes' parts were respectively railway 17.1 percent, inland waterways 5.4 percent and pipelines 5.3 percent. Comparably, in USA the same figures were road 31.8 percent, rail 45.6 percent, inland waterways 8.2 percent and pipelines 14.4 percent. Furthermore, transport has a significant role in greenhouse gas emissions. According to EU (2009), transport is the only sector where emissions have increased; all other industries have been able to decline the annual figures. (European Union, 2009)

Increased demand for transport creates various complications to society. Resulting from road transports' increasing market share, many European countries have evolved actions to distribute volumes to various transport modes. While transport volumes increase, importance of ecological values has sharpened. European Union in step with other communities emphasizes friendliness to the environment. The trend has been extended to concern also transport sector. As potential choice for road transport is noted railway transport, which decreases the congestions and lowers the emission levels. Furthermore, railway offers cost-effective transport without obstructing the traffic. Among the first actions was European Directive 91/440, which was launched in

1991. Thereafter, several White Papers, directives and legislations prepared the way for European railway freight markets' deregulation, which came into force in 2007. (European Union, 2010)

Railway was among the first regulated markets in several countries. One of the trend leaders was the United States, which regulated the railway in 1887 by the Interstate Commerce Act. Same trend was continued, and country was among the first ones to deregulate the railway freight market in 1980 with the Staggers Rail Act. (Jahanshahi, 1998) Various reasons has been stated why market liberalization was a success story in the United States. According to Gomez-Ibanez (2004), transportation market was more competitive than traditionally was believed, due to the fact main cargo types (bulk cargo and containers) supported the utilization of railway. Furthermore, due to lack of large-scale waterway connections, railway was noted to be a cost-effective transport mode for heavy industries, such as mines, refineries and manufacturing plants. (Gomez-Ibanez, 2004)

European railway freight market was deregulated in the beginning of year 2007 due to legislative demands of the European Union (see for example Alexandersson and Hulten, 2005; 2008; Jahanshahi, 1998; Laisi, 2009; Mäkitalo, 2007). Few European countries deregulated the railway freight market already before the legislative demands. Among the first countries were the United Kingdom (UK), Germany and Sweden (Jahanshahi, 1998). Although the process was started in UK already in early 1980s, the partial deregulation was introduced in 1989 by privately owned terminals and rolling stock. The market was opened for free competition in 1994. (Gibb et al., 1996) Germany started the liberalization process in 1993, when the Railway Restructuring Act was introduced (Profillidis, 2004). Sweden came along the trend in 1988 by presenting the Transport Policy Act. (Jensen and Stelling, 2007) Today all these countries have numerous railway undertakings.

When entering the markets railway undertakings confront various barriers to entry. According to recent studies, the most severe market entry barriers are acquiring of rolling stock, needed investments and bureaucracy (see for example Laisi, 2009; Ludvigsen and Osland, 2009; Mortimer et al., 2009; Simola and Szekely, 2009). Countries' history and other national features create characteristics, which are typical for a certain country. For example, perceived level of access charges was noted a barrier in the United Kingdom (Brewer, 1996). The United Kingdom's liberalization process was described as a short-term failure, because Railway infrastructure company Railtrack failed to operate the market efficiently, which led to serious problems (Hilletoft et al., 2007; Szekely, 2009a). Swedish system is characterized by "old boy network", stating cooperation is really close and warm. Rather many private railway undertakings were established on the grounds of old short-lines, which incumbent decided to discharge due to their non-profitable nature. Despite, by doing some changes new operators were able to make lines profitable. (Jensen and Stelling, 2007; Laisi, 2009) The main barriers to entry in Germany are needed investments and lack of interoperability. Hungarian market confronts severe bureaucracy; additionally, the old incumbents are collaborating against new entrants. (Simola and Szekely, 2009; Szekely, 2009b) In Poland the incumbent did not sell old rolling stock to new-entrants, wherefore new operators had to acquire wagons and locomotives from countries like Romania, Czech Republic and Morocco (Laisi, 2009).

The Finnish railway freight market was deregulated only in the beginning of 2007, when the freight traffic monopoly was terminated based on the European Union

legislative demands (see for example Mäkitalo, 2007). Although few years have past, the incumbent, VR-Group Ltd., is still the only railway undertaking. Few undertakings have expressed interest towards the market; however, decrease in transport volumes consequent on the economic downturn has postponed the entry intentions. The market seems to be rather constant; however, the situation might change dramatically, if the Finnish-Russian border is deregulated. For the moment border is sheltered from competition, signifying only two railway undertakings are allowed to practice traffic: The Finnish governmentally owned VR Cargo and the Russian Railways (Российские железные дороги, RZD). Wagons are registered to Finland and Russia and therefore can be utilized in both territories. However, the locomotives are changed at the border. Hence the only actual railway undertaking operating in the Finnish market is VR Cargo. Nonetheless, the agreement is to be reformed in the next few years, which might modify the market's nature. (Iikkanen, 2007) Albeit the traffic deregulation seems rather unachievable, Finnish authorities need to make preparations and gather information of the large neighbor country, Russia. The volumes of railway transport between Finland and Russia are significant. For example, in 2009 the percentual amount of freight carryings was 34 percent. Additionally, although the economic downturn had a significant influence on passenger transport, Russian traffic forms an important share of VR's passenger kilometers. (VR, 2009) In order to be ready for possible future challenges, it is vital to understand how the Russian railway freight market works and what are the main national characteristics.

In order to strengthen the market, VR has established few joint ventures with Russian counterparts. Freight One Scandinavia was founded in November 2009 by VR and the First Freight Company; each company owns 50 percent of shares. The intention is to guarantee a versatile rolling stock fleet to all customers. Additionally, in passenger side VR has established a joint venture with the Russian Railways called Karelian Trains in 2006, whose main objective is to offer high speed trains and maintenance services between Helsinki, Finland and St. Petersburg, Russia. (Freight 1, 2010; Karelian Trains, 2010)

Russia is the world's largest country encompassing nine time zones. Country's natural resources include various products, for example natural gas, coal, timber and many minerals. Due to this characteristic, in addition to pipelines railway transport has a momentous function to Russia. According to Federal Statistics (2010), country's commercial network length is 86 000 km, which is the second largest in the world. Network is still lagging behind when comparing to pipelines' figures: In 2008, pipeline network consisted of 228 000 km, whereas commercial railway network covered 86 000 km. (Federal Statistics, 2010) Although railway network has mitigated, transport mode's importance has not decreased. On the contrary, market has confronted various changes. One of the main revolutions has been the Railway Reform Programme, which changed the whole market environment. During the Reform Programme's first stage, the market was divided into operational and governmental functions. The main objective of second stage was to establish several subsidiaries, whereas third stage concentrated on increasing competition. Due to these factors, Russian Railways do not hinder market entry of new railway undertakings; on the contrary, the company hopes many new undertakings would enter the market. This has happened: Today the market has more than 2200 railway undertakings. Only few hundreds can be counted as competitive undertakings, due to the fact generality of the actors are small operators owning dozen wagons. Actually, the wagon leasing boom started already in 2003. According to Ushkova (2007), in

2003 volume of leasing contracts was less than RUB 4 billion, whereas the amount reached RUB 30 billion in 2006.

After the financial crisis in 1998, country's economy had ten straight years of growth with average seven percent annually. Due to economic downturn, GDP has confronted decline during the last three years. In 2007, the average GDP growth was 8.1 percent, whereas in the end of year 2008 it dropped to 5.9 percent. The most dramatic decline was realized in 2009, when average GDP decreased by 7.9 percent. (CIA, 2010; Federal Statistics, 2010; Trading Economics, 2010) Nevertheless, year 2010 indicates positive development. According to Federal Statistics (2010), during January-February 2010 the Russian foreign trade turnover amounted \$ 85.2 billion, which is 41 percent more than in the first two months in 2009. In the beginning of year 2010, the trade balance remained positive \$ 31.7 billion, whereas the same figure for first two months in 2009 was \$ 12.5 billion. (Federal Statistics, 2010)

Russia has often been influenced by various deregulation trends. In the United States, deregulation was vertically integrated, stating operators owned also infrastructure (Hilmola and Szekely, 2006). Situation is totally different in Europe; according to legislative demands of the European Union, infrastructure is separated from operating bodies, wherefore infrastructure is handled by an own organization (Laisi, 2009). Japan can be placed between earlier examples: Infrastructure and freight operations are separated, whereas passenger transport utilizes vertical integration (Szekely and Hilmola, 2007). In Russia the governmentally owned railway undertaking, the Russian Railways, is responsible for the infrastructure. Though private railway undertakings can offer transport services via own, rented or leased wagons, basically the traction market is still under RZD's monopoly. Situation might change in near future. Already today some undertakings are using own locomotives in certain areas; the longer tractions are still provided by RZD.

Although numerous studies have scrutinized Western countries (see for example Hilmola et al., 2007; Ludvigsen and Osland, 2009; Mortimer et al., 2009), there exists a lack of studies investigating the Russian market in English. Various publications, articles and research reports are available in Russian. The few researches done in English are mainly concentrating on railway market's future prospects building on literature analyses and second-hand statistics. Due to changing environment and increasing cooperation between the European railway undertakings and Russian Railways, there is a vital need to increase the knowledge concerning our neighbor country. Additionally, there exists a lack of studies concentrating on market actors' point of views, which provides the research gap for this study.

1.2 Objectives of the research and research problem

The objective of the study is to examine the national peculiarities of the Russian railway freight market. This study familiarizes with the available literature concerning this engrossing market and brings it to empirical level by scrutinizing professionals' viewpoints operating in the Russian market. The purpose is to find out, what are the national characteristics and clarify divergences and congruencies between Russia

and other countries. The purpose is also to define the barriers to entry and difficulties the railway undertakings have confronted while operating in the market.

Research endeavors to deliver new insights and demystify Russian railway freight market, which largely has been scrutinized in Russian literature. The intention is to gather novel actor-level information by interviewing diverse professionals from Russian railway freight market. Due to the fact the field of research is widely studied in Russian books and articles, there exists a lack of English data concerning the market. Secondly, earlier studies have concentrated on literature and industry analyses, eliding the actor level standpoints. This study tries to tackle the gap.

By developing the research's objective, research questions are developed. Four sub-questions follow the research question, with an objective to support the research purposes.

The main research question of the study is:

What are the national peculiarities in the Russian railway freight market?

The sub-questions are:

- 1) What are the discrepancies with other countries, especially European Union member countries?
- 2) What are the barriers to entry and problems the operators are confronting while operating in the market?
- 3) What kind of positive matters are visible in the Russian railway freight market?
- 4) How the operators see the future?

1.3 Delimitations

Although railway industry is rather widely studied, research works have mainly concentrated on deregulation. This study augments the existing works by providing further information concerning the partly opened railway freight market. Research is limited to focus only on railway freight market, passenger traffic is excluded from this study. Due to the fact deregulation is extensively studied and described in earlier studies of the Finnish Rail Administration, this work concentrates on Russian market.

Study's empirical part is limited into one country, Russia. However, in order to garner diverse viewpoints, few Finnish undertakings were included in the sample. As Finland has the longest borderline with Russia from the European Union member countries, few Finnish companies have entered the Russian market. Due to close cooperation, Finnish representatives are well aware of Russian market's peculiarities and therefore proffer presentable viewpoints to this study.

Because Russia is really large country, geographically was concentrated on Western areas, namely St. Petersburg and Moscow. Furthermore headquarters of large

companies are located in these two metropolises, wherefore this does not circumscribe the sample too heavily. Due to the fact that market has over 2200 operators, focused sample was chosen. As great majority of operators own dozen wagons and operate only on one factory or mine, this study concentrated on larger scale undertakings. Naturally, the small scale operators might have different opinion than the larger ones. In seven cases only one person was interviewed per railway undertaking, which can be noted as delimitation. All interviewees were in managerial position and males. Additionally, Russian language created delimitations. Though interpreter was present when needed and all information was translated, due to matter of form some thematic entities might have been misunderstood. As research's main intention is to study the railway freight market as an aggregate, companies' all technicalities are not inspected.

1.4 Definitions of the key concepts

Barriers to entry

According to Bain (1956), barrier to entry is anything that allows incumbent company to earn higher profits without a threat of entry. Porter (1980) continues, and states market entry barriers are obstacles which hinder the entry process of new entrants. In railway freight transport this means problems and challenges, which impede new railway undertakings of entering the market. Barriers to entry can be for example money and knowledge based (capital and knowhow requirements).

Deregulation

In this research deregulation refers to opening the market for competition, decontrolling the monopolistic market structure. After market is deregulated, new railway undertakings can enter the market. Synonyms for market deregulation are for example open up the market, market liberalization and opening the railway network. This study concentrates on Russian railway freight market.

National peculiarity

National peculiarity refers to special characteristics, which distinguish country from the other countries. These specific factors might create competitive advantages, or can impede competition. In railway freight transport, recent studies have noted as national peculiarities for example "old boy network", strong intramodal competition and bureaucratic problems.

Railway freight transport

Railway freight transport stands for transporting goods on tracks. Basically, railway transport can be bisected to freight and passenger transports. The other railway traffic alternatives, metro and tramway, are utilized by passenger transportation. This study concentrates only on freight transport.

Railway undertaking

Railway undertaking refers to privately owned company, who possess rolling stock and practices railway transport as its main business. Synonyms for railway undertaking are for example railway company, railway operator and railway enterprise.

1.5 Research methodology

Basically there exist two types of research methods, quantitative and qualitative. The main discrepancy can be stated for example as follows: Quantitative research seeks causal determination, prediction, and generalization of findings, whereas qualitative research's main intention is to seek understanding and extrapolation (Hoepfl, 1997). Quantitative research concentrates on numerical data, whereas qualitative research's aim is to understand words (Eisenhardt, 1989). Qualitative research method has several supporters (see for example Jarratt, 1996; Strauss, 1987; Strauss and Corbin, 1990). As one of the main tasks of qualitative research is often stated to understand the phenomena behind something what is yet not well known (Jarratt, 1996); furthermore, Hirsjärvi et al. (2004) noted in qualitative research the main intention is to understand the research subject.

According to Hirsjärvi et al. (2004), there exist three traditional research strategies: 1) Experimental research, which measures one variable's influence on another variable; 2) Survey research, which collects data in standardized model from a group of people; and 3) Case study, which gathers detailed, intensive data concerning a certain subject. In the field of logistics, case study research has become widely used. Eisenhardt (1989) has argued the case study method is practicable when researching novel topic areas. According to Häkkinen and Hilmola (2005), case studies in logistics have mainly concentrated on descriptive research objectives. Often case study is thought to concentrate only on one case company; however, this is not the whole truth. According to Eisenhardt (1989), in order to gather enough extensive data base, case amount between four and ten is applicable.

In research, often is referred to two broad methods of reasoning: Inductive and deductive approaches (Burney, 2008). Deductive reasoning approaches topic from general to specified data, whereas inductive approach is mainly utilized to generate new knowledge for present theories (Brown and Eisenhardt, 1997; Burney, 2008; Hilmola, 2003). According to Häkkinen and Hilmola (2005), inductive approach is utilized commonly in case studies. Hilmola (2003) has noted popularly case study researches combine deductive or inductive approaches. Due to these circumstances, for this research was chosen a qualitative research method. Study utilizes case study method: Due to lack of first hand empirical data in the research field, by interviewing professionals from Russian railway freight market it was possible to gather genuine actor-level data. Research consists of 11 interviews: Altogether were met 15 persons representing these companies. Hence can be stated the data base is extensive enough, in order to assure the level of knowledge. Because study's objective is to generate new findings and confirm existing ones, research utilizes inductive approach. Because the study belongs to the field of logistics and its main intention is to describe current situation, research is descriptive analytical (Routio, 2007).

1.6 Structure of the research

In Chapter 1 was reviewed the topic of the research. It introduced the background and stated the objectives. First chapter defined the key concepts and described the delimitations and research methodology. The research questions were developed; ensuing chapters evaluate the results. Chapter 2 demonstrated Russia: Country's key figures were presented and current economic downturn and future prospects were discussed. Chapter concentrated on Russian railway freight market: Before presenting on railway freight market, chapter evaluated the overall transport sector. The Russian Railways and its affiliated companies were introduced, and private railway undertakings were presented. Besides Chapter described the Reform Programme.

Following Chapter 3 reviewed the research environment. Approach for research was explicated, followed by exposition of data collection methods. Empirical data was examined in Chapter 4. The research topics were scrutinized separately: the concentration was given to national peculiarities, railway undertakings' core competencies, market's overall situation and future prospects. Chapter 5 engrossed in outcomes and discussed the entities behind the empirical results. Chapter 6 gathered the main findings and summarized the research results. Ultimate chapter proposed suggestions for further research.

2 Russia

2.1 Recent economic development in Russian Market

Russia is the world's largest country with 17 million square kilometers (which is approximately 1.8 times the size of the United States). Country has a wide range of natural resources, including natural gas, coal, timber and many strategic minerals; Russia is the world's second largest oil producer after Saudi-Arabia. After the financial crisis in 1998, country's economy had ten straight years of growth with average of seven percent annually. However, current economic downturn has also affected on Russian GDP (see figure 1).

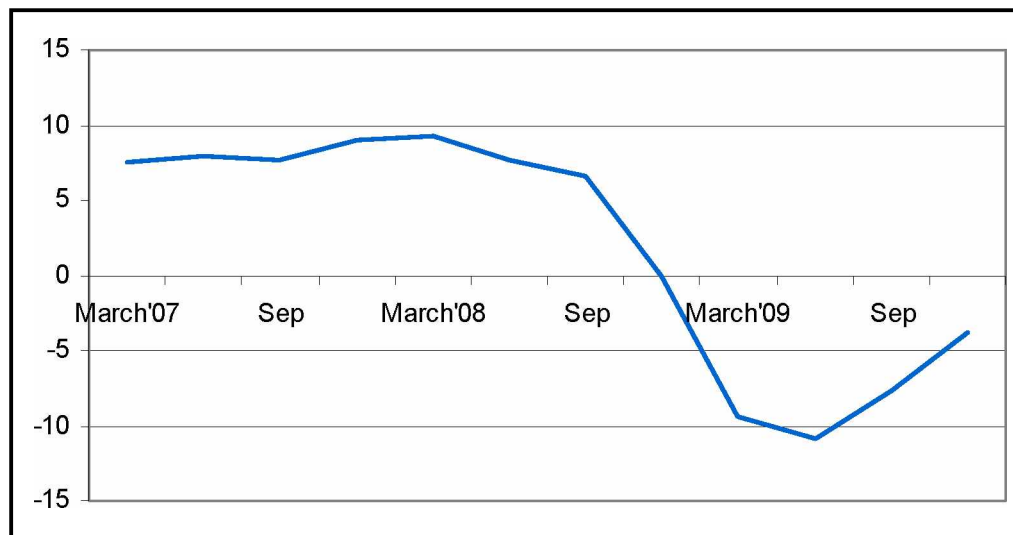


Figure 1. Russian GDP development 2007-2009, adjusted by inflation (Federal Statistics, 2010; Trading Economics, 2010)

Figure 1 illustrates the annual GDP development in Russia 2007-2009. The positive trend continued during year 2007, but in March 2008 started unstable period. In March 2008 GDP was 9.3 percent; after one year, figure fell to -9.4 percent. The rock-bottom was attained in June 2009, when GDP decreased to -10.4 percent. However, since the trend has been ascending. In December 2009 GDP was -3.8 percent. (Federal Statistics, 2010; Trading Economics, 2010) When the influence of currency rates is noted, the decline in GDP is more considerable: For example, when compared with Euros, the fall in 2009 was 24 percent.

Consumer Price Index (CPI) is a factor that estimates the weighted average prices of consumer goods and services purchased by the households (Investopedia, 2010). As a common way to measure inflation is utilized the percent change in CPI.

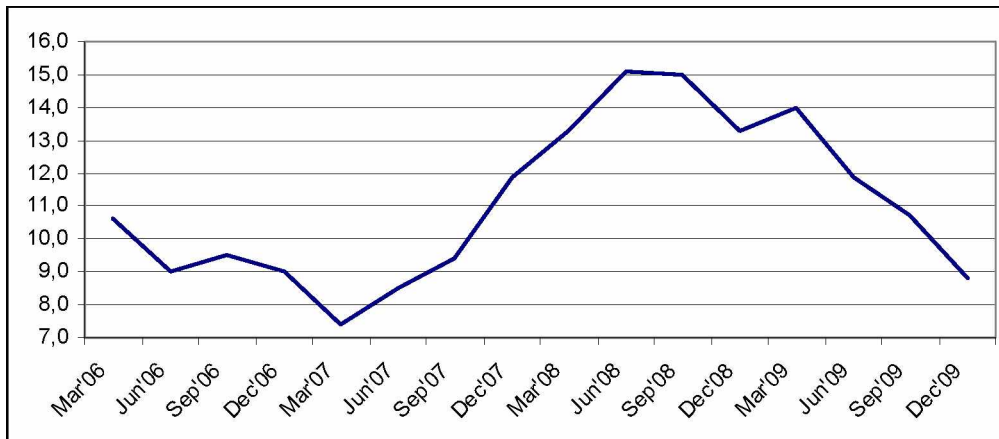


Figure 2. Consumer Price Index (as % of corresponding period of previous year) (Bank of Russia, 2010)

Figure 2 describes the CPI in Russia between March 2006 and December 2009. Figures are presented in percent change of corresponding period of previous year.

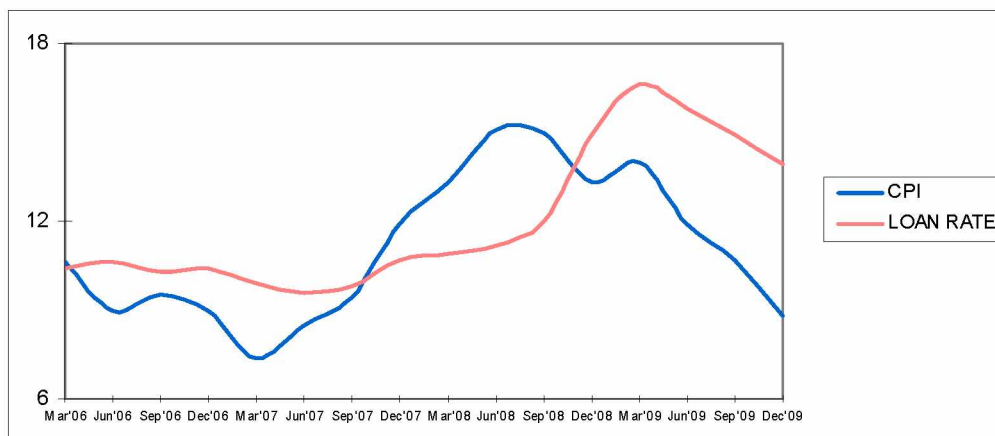


Figure 3. CPI and loan interest rate in Russia 2006-2009 (Bank of Russia, 2010)

Figure 3 illustrates the development of CPI and loan interest rate in Russia between 2006 and 2009. Loan rate is an average weighted rate on ruble loans to non-financial institutions with a maturity of up to one year. (Bank of Russia, 2010) Often high inflation signifies high interest rate; by increasing the interest rates, the inflation can be deadened. (Kajanoja, 2007) The influence is also visible in figure 3. By increasing the loan rate CPI has dropped; loan rate has followed in few months. According to Trade Politics (2010), quick increase of liquidity has affected on rates' decrease.

During the last year Russia has sustained severe economic downturn, like the other nations worldwide. When comparing the transport figures for first half years of 2008 and 2009, monthly loading fell by 25-30 percent. The largest declines were noted in overland border points; for example, exports through the Russian-Finnish border decreased by total 46.1 percent; wood cargoes 69.2 percent, building materials 60.6 percent and fertilizers 71.1 percent. (Ovcharova, 2009) According to Vtorushina (2009), during the first quarter in 2009 the general fall was 28.3 percent; RZD's and their affiliated companies' share dropped 38.6 percent, while private railway undertakings suffered only 11.6 percent's decrease. The same trend continued in half

a year comparison. Market's experts state the reason behind is the better service level provided by the private railway undertakings and their more flexible nature. (Kamalov, 2009; Vtorushina, 2009) This was also stated by Globaltrans, the largest private railway undertaking in Russian market. While the railway freight market faced 12 percent's fall in 2009, the group's traffic rose three percent to 80.9 billion tonne-kilometers. (Wright, 2010)

The downturn was also noted in the Global Competitiveness Index (GCI), where Russia dropped 12 places and ranks 63rd in 2009-2010 figures. Interestingly, other BRIC countries, Brazil, India and China were able to increase the rankings to 29th (China), 49th (India) and 56th (Brazil). Furthermore, Russia was rated as one of the countries most likely to be negatively affected by the global crisis. (Schwab, 2009)

Russian market is often noted as traditional. However, during the last decade the country has confronted significant changes. Internationalization has entered the market, including railway industry. The initial public offering of Globaltrans, country's second biggest railway freight operator, took place in spring 2008. It was a success and company is listed on the London Stock Exchange (Grantham, 2008; Stupachenko, 2009c). Although some international railway undertakings are offering services in Russian market, internationalization has increased also in the financial side. The European Bank for Reconstruction and Development (EBRD) is an international financial institution that supports projects in 29 countries from central Asia to central Europe. Mainly EBRD offers financial support to private sector; Bank encourages entrepreneurship and facilitates transition towards open and democratic market economies. Russia is one of the focal places of investment activity: At the moment EBRD has in Russia 527 projects. The largest recipient is corporate sector (36 percent); other receivers are financial sector (31 percent), energy (17 percent) and transport (17 percent). (EBRD, 2010; EBRD Russia, 2010) All transport modes are presented; in railway sector, EBRD is financing several targets (see table 1).

Table 1. EBRD Financing targets in Russian railway sector (EBRD Projects, 2010)

Company	Transition impact	EBRD finance
RZD	Restructure freight operations into separate companies Establish an effective independent regulator	Up to \$ 500 million
Trancontainer	Finance acquisition of flatcars	Up to \$ 100 million
First Freight Company	Renewal of wagon fleet	RUB 11.5 billion
Huolintakeskus	Expansion of rolling stock fleet	RUB 554.4 million
BTS	Acquisition of tank wagons	Up to € 40 million

Table 1 illustrates the impact of EBRD in the Russian railway freight sector. The bank has mainly financed the renewal of wagon fleet, which was noted as one of the main Achilles heel's in railway industry. Additionally, Russian Railways has received financing for restructuring the market. In addition to companies presented in table 1, one more company belonged to scope of EBRD. Inpromleasing (IPL) provides leasing services to major Russian private railway operators. (EBRD, 2010; EBRD Russia, 2010)

However, country's authorities have launched numerous ways to soften the crisis. The forecasts for the basic macroeconomic indicators of Russia suggest country has prospects to survive from crisis with minimal macroeconomic shocks, which might facilitate the rise from the crisis. However, it must be kept in mind the positive

forecast is very unstable, and the fluctuations of the exogenous parameters, which enable positive situation, indicates to be remarkably narrow. (Drobyshevskaya and Zhavoronkov, 2009; Ovcharova, 2009)

However, the downturn seems to facilitate in Russia. According to Federal Statistics (2010), during the first two months in 2010 the Russian foreign trade turnover amounted \$ 85.2 billion, consisting of export \$ 58.5 billion and import \$ 26.8 billion. The trade balance remained positive \$ 31.7 billion. If comparing to January-February 2009, changes are significant: Trade turnover increased 41 percent, export 60.2 percent and import 11.7 percent. During the first two months in 2009, trade balance was \$ 12.5 billion (Federal Statistics, 2010) The same trend was noted in the largest private operator's, Globaltrans, amount of traffic: According to Wright (2010), during the first quarter in 2010 traffic volumes had been 15 percent up on the same period of 2009.

All these factors strengthen Russia's position as one of the economic superpowers in the world. Due to Russia's significant natural resources, the amount of freight export is expected to grow in the future (RZD Partner Intl, 20/2009). According to Lukov (2009), RZD's intention is to attract freight to the railway. Therefore, RZD does not fear competition. On the contrary, strengthening the railway network ensures significant improvement in transport provision in many regions. (Railway Gazette Intl, 07/2009b; Vtorushina, 2009)

In addition to Reform Programme, Russia has developed two special development programs. The Federal Target Programme "*Russian Transport System Development in 2010-2015*" is signed by Mr. Putin, and its main intention is to construct new lines and develop the overall railway sector. Furthermore, "*Development Strategy of the Railway Transport in the Russian Federation till 2030*" elaborates the market even further, and therefore strengthen the market environment for future challenges. (Minutes, 2009; Ryshkov, 2010)

2.2 Russian Railway Freight Market

According to Haywood (1969), Nicholas I led Russia to railway age. However, the beginning of railway era started already in 1700s, when first tramway was built by and for the mining industry. The first railway locomotives in Russia were made by E.A. Cherepanov and his son M.E. Cherepanov in 1833-1835. Outside the mining and metallurgical industries, the first railway was built to connect St. Petersburg and Tsarskoye Selo. (Fink, 1991; Haywood, 1969) Already in 1917 railway was politically and economically the most important industry in Russia. Railway was the lifeline of Russian army, sometimes the only transport possibility between the cities and the backbone of delivering raw materials and industrial goods. (Rosenberg, 1981)

Russia has the second longest railway network in the world, after the United States (CIA, 2010; Federal Statistics, 2010). Although country has total 933 000 kilometers of roads, aside the Trans-Siberian Railway the east-west land transport is under-developed (CIA, 2010; Lotspeich, 2006). Table 2 presents the lengths of road and railway networks in China, Russia and USA.

Table 2. Length of road and railway network in China, Russia and USA (CIA, 2010)

Country	Road network	Railway network
China	3 583 715 km	77 834 km
Russia	933 000 km	87 157 km
USA	6 465 799 km	226 427 km

According to CIA's the World Factbook (2010), the United States has the longest networks both in road and railway. Russia has the second longest railway network, but country ranks only eighth in road network's comparison. China has the second place in road and third place in railway networks' length. When calculating the percentual ratios, Russia's railway network's length compared to road is 9.3 percent, while China and the United States are lagging behind (US 3.5 percent and China 2.2 percent).

Another interesting country comparison can be done by utilizing data from World Bank's Logistics Performance Index. The Logistics Performance Index (LPI) is a benchmarking tool which identifies countries' challenges and opportunities on trade logistics performance (Arvis et al., 2007; Arvis et al., 2010; Worldbank, 2010). Data builds on the information gathered through web-based questionnaire by nearly 1000 logistics professionals' from 130 countries. LPI consists of qualitative and quantitative data and therefore helps to understand the status of logistics functions in these countries. (World Bank, 2010) According to Logistics Performance Index (World Bank, 2010), Russia is lagging behind in overall figures: Russia's result is 2.61 (94. place), whereas China ranks 3.49 (27. place) and the United States 3.86 (15. place). However, on the positive side Russia has developed when comparing 2007 and 2010 figures (see figure 4).

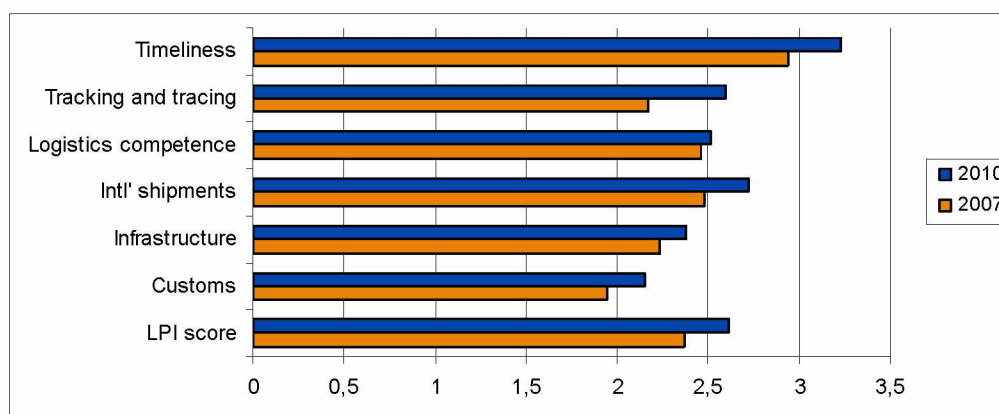


Figure 4. Comparison of LPI scores in Russia in 2007 and 2010 (Arvis et al., 2007; Arvis et al., 2010; Ojala & Lorentz, 2010)

The Global Competitiveness Report (Schwab, 2009) distributes more detailed data by dividing different transport modes. Railway infrastructure is the only indicator having competitive advantage. It ranks 33rd, whereas road and port infrastructure are lagging behind: Both are noted to have competitive disadvantage, and they rank 118th (road) and 87th (port).

Due to railway network's scope, it offers various possibilities for freight transportation. For example, by using the Trans-Siberian Railway, the distance from Japan to Helsinki decreases by an impressive 58 percent (Hilletoft et al., 2007). In addition to saving of time, Trans-Siberian decreases the transport distance (see table 3).

Table 3. Comparing Trans-Siberian Railway and sea transport (DVTGroup, 2007)

Route	Distance	Time
Nahodka - Vostochny - Buslovskaya	9 887 km	12 days
Tianjin - Zabaikalsk - Buslovskaya	8 256 km	15 days
Pusan - Hamburg	25 585 km	28 days
Shanghai - Hamburg	20 064 km	24 days

Table 3 describes the discrepancies between railway and sea transport. Utilizing Trans-Siberian Railway decreases the transport distance to less than 10 000 km, whereas sea transport exceeds 20 000 km. Delivery times doubles. Additionally, today shipping lines are cutting costs by reducing vessels' speed. This even increases the delivery times from above mentioned. (Truck Industry, 2010) It must be kept in mind the sea transport to large harbors of Central Europe takes more than 25 days; additionally, the feeder service from Central Europe to Scandinavian countries, for example Finland, takes five to seven days. Buslovskaya is located next to Finnish border, wherefore if everything goes smoothly, the transport from Buslovskaya to terminals take only few days. Therefore, Trans-Siberian Railway enables quick transporting both to European part of Russia, as well as Finland.

Although railway is noted as the backbone of the country, there exists another important transport mode: Pipelines. According to Federal Statistics (2010), in 2008 railway comprised 42.7 percent of the country's total freight turnover. If pipelines are excluded, figure increases to 85.2 percent. Figure 5 presents the situation in 1992-2008.

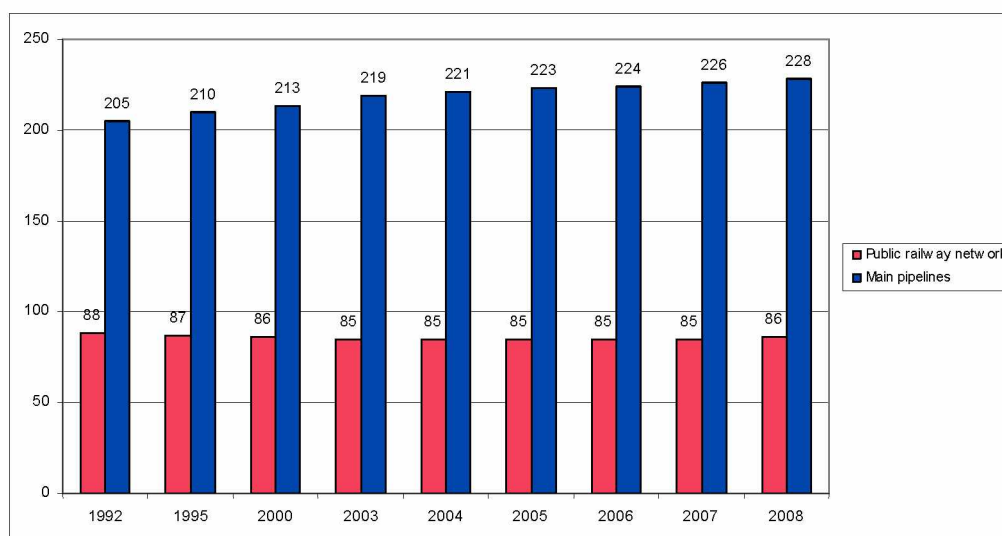


Figure 5. Comparison of public railway network and main pipelines in Russia, thousand kilometers (Federal Statistics, 2010)

Figure 5 illustrates the progress in two main transport modes. Period starts from year 1992 and leads to 2008. During the period pipeline network has increased from 205 000 kilometers to 228 000 kilometers, which states 11.2 percent increase. Railway network has stayed at the same level: During 16 years, network length has decreased 2 000 km (2.3 percent). The difference to other transport modes is remarkable: Figure 6 compares all modes of transport.

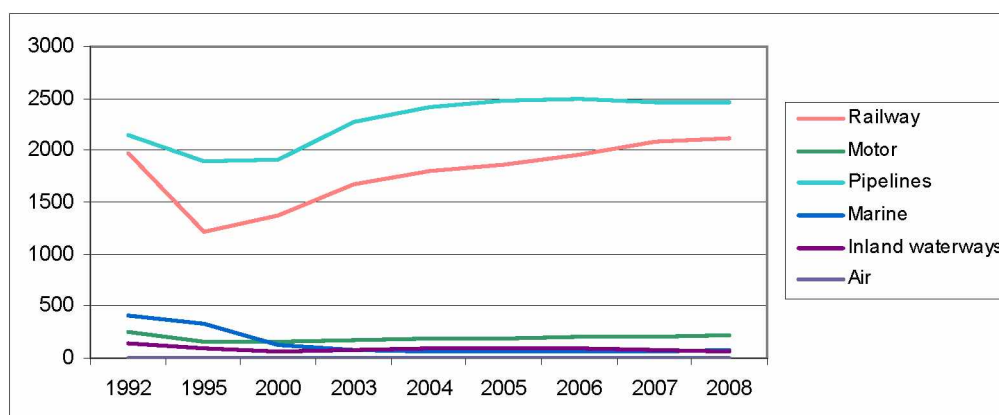


Figure 6. Freight turnover by transport mode (billion tonne kilometers) (Federal Statistics, 2010)

Due to the fact four smaller transport modes (motor, marine, inland waterway and air) have rather small shares, table 4 specifies the figures.

Table 4. Freight turnover by transport mode (billion tonne kilometers) (Federal Statistics, 2010)

	1992	1995	2000	2003	2004	2005	2006	2007	2008
Railway	1967	1214	1373	1669	1802	1858	1951	2090	2116
Motor	257	156	153	173	182	194	199	206	216
Pipelines	2146	1899	1916	2273	2413	2474	2499	2465	2464
Marine	405	326	122	85	66	60	62	65	85
Inland waterways	136	91	71	81	92	87	87	86	64
Air	1,8	1,6	2,5	2,7	3,0	2,8	2,9	3,4	3,7
Total	4913	3688	3638	4284	4558	4676	4801	4915	4949

As figure 6 and table 4 describe, when evaluating the freight turnover, pipelines grab the largest share. Another large mode is railway; other transport modes are far behind. Striking is that railway has increased the amounts throughout the period, whereas pipeline's share has slightly decreased. When comparing situation with BRIC countries (Brazil, Russia, India and China), Russia's size unfold clearly (see figure 7).

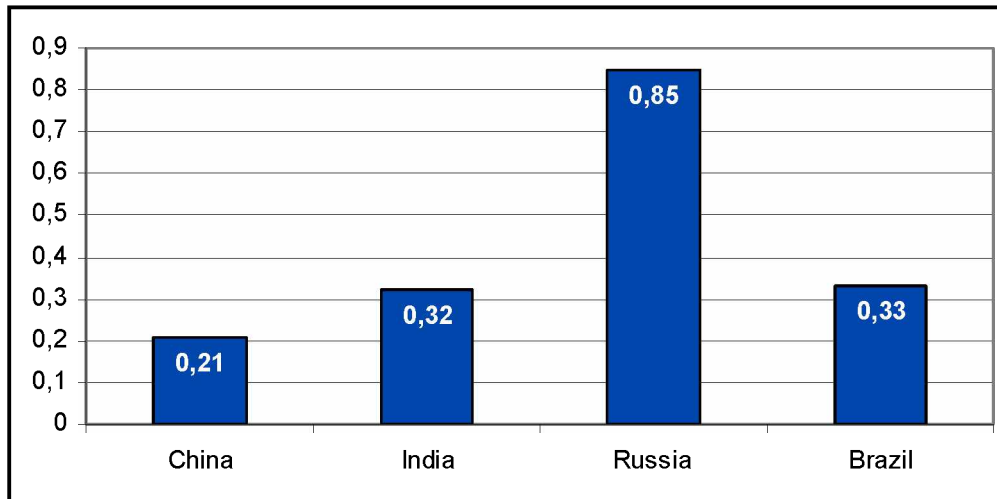


Figure 7. Share of railway freight transport in BRIC countries, excluding pipeline (Globaltrans, 2010)

Russia's large share of railway freight transport can be explained by market's geography, size (large volumes are transported over long distances by railway) and limitations of other transport networks. The use of road or air transport is not economically efficient due to large volumes of bulk cargoes (for example coal, metals, ores and oil products). Moreover, the Russian road network is insufficient in terms of coverage and capacity. (Globaltrans,2010)

Russia has extensive selection of natural resources. As described above, bulk cargoes are mainly transported by railway. Table 5 describes the percentual shares of all transported raw materials.

Table 5. *Products transported by railway in Russia 1995-2008, percentual share (Federal Statistics, 2010)*

Product	1995	2000	2005	2006	2007
Coal	23,9	23,2	21,9	22,0	21,3
Coke	0,8	1,0	0,9	0,9	0,9
Petroleum products	14,6	14,8	17,2	17,5	17,3
Metal ores	10,2	10,8	10,0	10,3	10,1
Ferrous metals (incl. scrap)	6,4	7,8	7,9	8,3	8,2
Fertilizers	3,1	3,4	3,4	3,3	3,4
Construction materials	23,5	22,0	22,7	22,1	22,3
Cement	2,6	2,1	2,7	2,9	3,1
Timber	4,7	4,6	5,1	4,9	4,9
Cereals and flower	2,7	2,0	1,8	1,8	2,0
Others	7,5	8,3	6,4	6,0	6,5

As table 5 illustrates, the main products transported by railway are coal, petroleum products, construction materials and metal ores. Data is presented from 12 years; regardless, volumes have stayed at the same level.

Albeit railway already today plays a vital role in Russian transport market, Russian Railways (RZD) has plans to strengthen the share even more. In October 2007 RZD introduced a national strategy for long-term railway development, which continues till year 2030. One of the main intentions is to construct 20 700 kilometers new railway line and upgrade 13 800 kilometers for heavy axle loads (Lukov, 2009; Railway Gazette Intl', 07/2009b). According to President of RZD, Vladimir Yakunin, one of the steps is to develop further capacity of the Trans-Siberian Railway by building over 400 kilometers of new lines to by pass the major railway junctions (RZD, 2010a). He stated:

"The new lines will mean that as early as 2012, we will ensure a real opportunity to deliver container freight from Russia's Far East region to our western borders in just 7 days. And by 2015, it will take just 7 days to reach Brest on the Belarusian-Polish border. This will have a real impact on the competitiveness of the Baltic railways."

The mainstream development objectives for Russian railway market are to fulfill the needs of niche markets by utilizing high technology innovations and manufacture specialized wagons. In addition, according to the strategy, rolling stocks' cost parameters need to be upgraded. Therefore, one of the main targets is to design and manufacture diesel locomotives with improved economic and environmental safety parameters. (Belousov et al., 2008)

In order to utilize a wagon in Russian market, it needs to be registered and approved for transport. Under the Russian Transport Ministry (Министерство транспорта Российской Федерации) operates The Russian Railway Agency (Федеральное агентство железнодорожного транспорта (Росжелдор)), which has a certain certification centre. This centre is responsible for wagon registrations. (Roszeldor, 2010; Transport Ministry, 2010)

Russian railway freight market has extensive wagon fleet. According to Globaltrans (2010), in the end of 2008 the Russian rolling stock fleet covered approximately 1 million railway freight wagons. The wagon types are represented in figure 8 below.

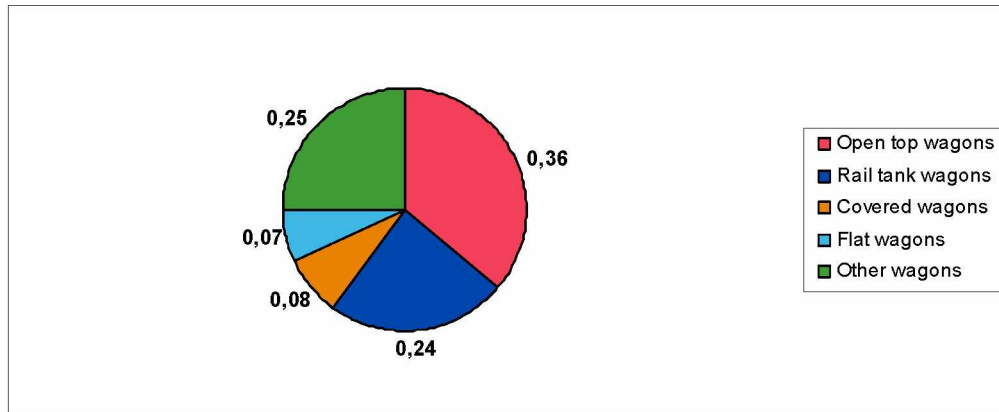


Figure 8. Structure of rolling stock fleet in Russia, by type of rail wagons (Globaltrans, 2010)

Figure 8 illustrates the types of utilized railway freight wagons and those percentual shares, including both governmentally owned and privately possessed wagons, altogether approximately million units. The most common railway freight wagon is open top wagon (also called Gondola), which can be used to carry a wide variety of cargoes. Tank wagons are the second largest group; wagons are used to carry liquid and gaseous commodities, for example oil. Covered wagons are utilized when transporting cargoes such as grain, cement and fertilizers. Flat wagons are open flat deck wagons, which are mainly used while transporting machinery, ISO containers or other extra large / cumbersome loads. (Globaltrans, 2010) Russia utilizes the normative lifetime system for wagons, stating after the fleet has attained certain normative age, it will be discharged from use. In Finland wagon fleet is discharged based on the technical condition, normative lifetime is not utilized. (Ivanova et al., 2008) According to recent study (Ivanova et al., 2008), the average age for wagons in use in 2004 varied between 19 and 25 years. However, concurrently the normative lifetime of wagons was 22 to 32 years. Therefore can be noted, that the Russian wagon fleet is facing strong modulations today and in near future. (Ivanova et al., 2008)

Although the governmentally owned railway undertakings own the major part of the fleet, the private railway undertakings' share is increasing annually. According to Ushkova (2007), Russian railway undertakings prefer to acquire rolling stock due to lack of available wagons. The trend has been visible in the market. Table 6 describes the situation.

Table 6. *Share of private fleet from the overall fleet of railway freight wagons in Russia, thousand wagons (2003-2008) (Globaltrans, 2010)*

Year	Wagons	%
2003	230	27 %
2004	242	28 %
2005	280	31 %
2006	300	32 %
2007	353	36 %
2008	391	39 %

The private railway freight wagon fleet has increased annually since 2003. In the beginning the development was rather slow, but in 2006 the growth accelerated. One explanation might be the Reform Programme, which third stage started in 2006 (see next Chapter). The market has large amount of operators: nevertheless, market share is dominated by few large undertakings. According to Globaltrans (2010), in the end of year 2008 the top 10 railway freight undertakings account for approximately 40 percent of total private fleet, while in top 20 the same share is 53 percent. Kamalov (2009) stated there exist 13 railway undertakings that possess over 5000 wagons; furthermore, 65 railway undertakings own 1000-5000 wagons, 61 undertakings' fleet size is 500-1000. Additionally, 245 railway undertakings have 100 to 500 wagons, and other undertakings own less than 100 wagons. (Kamalov, 2009) According to Vtorushina (2009), the share of public fleet reached 40 percent in fall 2009. At the same time, private railway undertakings had same 40 percent, and RZD's affiliated companies 20 percent.

In addition to the foregoing topics, tariff system creates an interesting entity. It is discussed in Appendix 1.

2.3 Reform Programme

During last decades the Russian railway market has confronted significant structural changes (see for example Cheviakhova et al., 2004). In order to support railway, in 2001 the Ministry of Railways launched comprehensive three-stage Railway Structural Reform Programme, which was developed in cooperation with the government and published on May 18, 2001 as Decree No. 384. The programme's intention was to set out strategic priorities for the railway industry up to year 2010 and beyond. Main targets for development were efficiency and profitability of railway services in Russia. Investors were encouraged to make investments due to enlarging need for rolling stocks' modernization. (RZD, 2010)

First Stage

Reform's first phase took place in 2001–2002, and it divided railway market into governmental and operational functions. The actions and targets are described in figure 9.



Figure 9. First phase in Railway Structural Reform Programme (RZD, 2010b)

The actions include establishment of Russian Railways, rearranging the accounting and managing procedures and allowing private railway undertakings to enter the market. The targets are to separate governmental and operational functions, separate the management and accounting units and to prepare the ground for further actions in the reform process. In order to separate the governmental and operational functions, reorganizing was needed. This is demonstrated in figure 10.

Before		After
Russian Railways Ministry	<ul style="list-style-type: none"> • Conducting state policy in the sector • Development of regulatory framework and oversight of proper implementation • Licensing, certification and standardization of rail transportation 	Ministry of Transport & Communication
	<ul style="list-style-type: none"> • Operation and maintenance of the infrastructure, rendering infrastructure access to shippers • Operation of locomotives and rendering locomotive traction service • Cargo transport • Long-distance passenger transport • Local passenger transport • Operation dispatch offices • Building repair of infrastructure, carriages and locomotives • R & D • Other 	RZD

Figure 10. Redistribution of JSC RZD economic activities (RZD, 2010b)

Like illustrated in figure 10, responsibilities were divided by the functions. All governmentally important tasks, like licensing and certification, were transferred to Ministry of Transport and Communication, whereas all operative tasks were delivered to RZD. Ministry of Railways was transformed to the Federal Railway Transport Agency, and the operational functions were transferred to the Russian Railways (Rossiiskie Zheleznnye Dorogi, RZD). Although the actions were started during the first stage, Joint-Stock Company Russian Railways was completed only in October 2003 when company was formed. Figure 10 demonstrates how functions were divided from Russian Railways Ministry into Ministry of Transport & Communication and RZD.

Second Stage

Second stage took place in 2003–2005 and the main actions included establishment of multiple subsidiaries and phasing out cross-subsidies from freight operations to passenger services (Pittman, 2007; RZD, 2010). Actually, an integral part of Russia's railway reform process was to separate freight and passenger operations. However, it has been problematic to achieve, due to high degree of subsidizing; high freight rates and profits have supported the loss-making passenger services. (Broadman, 2000; Railway Gazette Intl', 2006) Before restructuring all railway functions (traction, infrastructure, long-distance and local passenger traffic, cargo traffic, R&D and repairing and construction work) were under Russian Railways. After the changes, Russian Railways became a separated unit. Additionally, other functions were divided into four groups: Federal passenger company, local passenger companies, special holding companies or subsidiaries, and subsidiaries. Under Russian Railways belonged infrastructure, locomotives and at least 50 percent of total number of

wagons. Concerning freight transport, Russian Railways wanted to keep its position as major player in the field of freight transport. However, few transport branches were separated: Transit, intermodal and refrigerated transport was organized as subsidiaries. Additionally, it was noted number of privately owned wagons and locomotives should be increased, as well as number of alternative cargo transport companies. (RZD, 2010c)

Third Stage

The main objective of phase three (2006-2010 and beyond) was to increase competition (Pittman, 2007; RZD, 2010; RZD, 2010d). Government's intention was to fulfill these expectations by partially privatizing the Russian Railways. Sometimes when restructuring and privatization is performed, activities are separated only in organizational sense; single parent company still owns the companies. In order to encourage competition in such a market environment, it locates the infrastructure owner to allow entry of third party operators under the conditions regulated by the government. In such a situation, infrastructure company might discriminate the new entrants. Especially, this is noted in transition and developing economies, mainly because the regulatory bodies may lack resources and enforcement power to prevent such an occasion to happen. Such a situation is customary in economies like Russia, where principles of conforming to law are emergent and tenuous. In that case, vertical integration is seen as a proper solution; transactions are rather done within-firm than between-firm. (Pittman, 2007) Russia has utilized within-firm model. The phase started in 2007 when First Freight Company (FFC, also called First Cargo Company) was established. Second step will be taken in 2010, when Second Freight Company (SFC) will be formed. According to recent information, RZD will sign 217 000 wagons to SFC. When the volume of private rolling stock is added, the entire park of SFC is predicted to reach 265 000 – 283 000 wagons in the next few years. In the future, the volume of FFC's park is estimated to be 266 000 wagons. (Kamalov, 2009; Stupachanko, 2009b; Ushkova, 2009)

Although economic downturn has influenced on Russian railway freight market, railway transport reform has had a positive impact (Drobyshevskaya and Zhavoronkov, 2009). Labor productivity has increased by 44 percent and speed of train services have shown 3 percent increase. Additionally, export has arisen by 40 percent (Railway Gazette Intl', 2009). Working cost of transportation was reduced by 14 percent. In future, RZD hopes to see Russia as a transcontinental land bridge. After all the reforms, RZD is looking forward to near-trebling of transit traffic, 23 percent increase in the average speed of freight trains and 3.5 times faster container services. The intention is to lower transportation costs for manufacturers by increasing speed and reliability. This improves Russian products' cost-effectiveness and increases the competitiveness. (Railway Gazette Intl', 07/2009b)

2.4 Russian Railways and subsidiaries

Russian Railways (Российские железные дороги, РЖД) is the state-owned railway undertaking in Russia. Company was established in 2003 due to restructuring of Russian railway market. After the process was complete, all operational functions were transferred to RZD. Today RZD is one of the giant's in railway market: Company employs more than one million people, handles over 85 000 kilometers' network and

carries annually over 1.1 billion tonnes of freight, covering all Russian nine time zones (CNN, 2010; RZD, 2010). When pipeline transport is included, RZD is responsible for 43 percent of Russia's total freight traffic. When pipeline is excluded, figure mounts to 83 percent. Company influences heavily on Russia's economy by being the major contributor. Additionally, it is Russia's one of the most profitable companies –in 2008, the net income was over \$ 2.6 billion. When calculating all enterprises and subsidiaries under RZD company, figures are extraordinary: RZD comprises of 987 enterprises and 57 subsidiaries. (RZD, 2010)

Due to transferring operational responsibility to subsidiaries, RZD can be said to concentrate on traction market. Today RZD has 11 100 locomotives, which are designed for freight transport. Before the recession, forecasts for years 2007-2015 estimated 16 percent increase in freight traffic. This could not be handled, due to insufficient rolling stock fleet. RZD's one of the main priorities is to renew the locomotive fleet. According to the Strategy for Railway Development, RZD needs 23 400 locomotives by 2030; this means 258.1 billion rubles investments during 2010-2030. Hence the government hopes the private operators start to acquire rolling stock (Grantham, 2008; Lukov, 2009; RZD, 2010). Need for change is noted also in RZD. Earlier locomotives were purchased on the basis of capital cost; in future, life-cycle costs will be taken into account. This should improve quality and reliability (Lukov, 2009). Despite, as RZD still has the monopoly in traction market, some changes are needed (Pittman, 2007; RZD, 2010).

Although RZD basically has monopoly in Russian traction market, few operators have own locomotives. Globaltrans, one of the largest private operators, owns 18 locomotives, which are used to operate services down to 500 km in areas, which do not interfere with RZD. Longer distances are hauled by RZD. The own locomotives are utilized while training Globaltrans' crew. Company intends to be ready for rapid expansion when the traction market is liberalized. The size of Russia creates problems for possible locomotive operators. Locomotives might end up thousands of kilometers from home, which produce problems for small operators who lack depots or freight orders around the country. Owning locomotives requires stable routes and clientele. Particularly, reducing the empty runs is one of the important questions. (Grantham, 2008)

Table 7. Ownership of few Russian Railways (RZD) subsidiaries (PGK, 2010; RailTransAuto, 2010; Refservice, 2010; TransContainer, 2008)

Subsidiary	Established	Owner
RailTransAuto	2007	RZD 51 %, Trans Group 49 %
RefService	2005-2006	RZD 100 % except one share
TransContainer	2006	RZD 85 %, 3 other companies 15 %
First Freight Company	2007	RZD 100 % except one share

The intention in Railway Structural Reform Programme's second stage was to establish several subsidiaries. The various transport functions are divided between railway undertakings: One undertaking is responsible for container transport, whereas for example refrigerated transport and vehicle transport are taken care by other undertakings. The implementation is well presented in table 7, which introduces the four largest subsidiaries operating in the field of transport. RailTransAuto is

concentrated on transporting vehicles by train and Refservice has taken over the transport services for perishable cargo. TransContainer is the largest rail freight container operator, it manages 60 000 ISO containers and over 24 000 specialized flatcars. TransContainer is the second largest operator of rail-side container terminals in Russia, providing services in 47 railway stations. Customer relations are assured by 140 sales offices in Russia. Additionally, company's international network covers 12 countries; via these representative offices and agent companies TransContainer is able to offer freight forwarding and logistics services in several countries, such as Japan, Korea, Germany and Finland. Great part of RZD's freight wagons were transferred to First Freight Company. In the beginning of 2010, company owned 230 000 freight wagons and employed 3 500 people. However, during year 2010 company expects the figure to increase to 251 000 wagons. FFC sales network covers 14 offices in Russia and three representative offices abroad (Ukraine, Finland and Azerbaijan). Moreover, FFC has four subsidiaries. (PGK, 2010; RailTransAuto, 2010; Refservice, 2010; Transcontainer, 2010)

Second Freight Company (SFC) will be established soon. A landmark decision concerning the creation of SFC was made at the Board of Russian Railways in May 2009. RZD considers the possibility of involving other owners in SFC; for example, leasing companies, railway undertakings and freight owners with their own rolling stock. At the initial stage the companies could have 25 percent + 1 share in the capital. (RZD, 2010e)

The overall number of subsidiaries is really large (57), which can be explicated by the sphere of operations: In addition to passenger and freight railway undertakings, subsidiaries include companies from various fields related to railways. For example, JSC NIIAS is concentrating on applications of global navigation satellite technologies, especially in creation of integrated traffic safety systems and ELTEZA is specialized on the production and installation of signaling systems (Elteza, 2010; NIIAS, 2010; RZD, 2010e).

Interesting detail is the subsidiaries' ownership. For example NIIAS is 100 percent owned by RZD, but in railway undertakings situation is slightly different. RZD is the major owner of all four large companies represented above in table 7, but in every case some other parties are also included. The situation is clearest in RailTransAuto: RZD owns 51 percent of shares, while another owner, TransGroup has 49 percent of shares. TransGroup is operating extensively in transport market in Russia and CIS countries; it is concentrating on both passenger and freight operations. Additionally, company offers logistics services and is involved in management of sea terminals in Russia. (TransGroup, 2010)

TransContainer's shareholder capital structure is a bit more versatile: RZD has 85 percent of shares, while other shareholders are European Bank for Reconstruction and Development (9.25 percent), Moore Capital (2.5 percent), GLG Partners (2.5 percent) and Troika Dialog Investments Limited (0.75 percent). JSC Baminvest has one share. Ownership structure changed in February 2008, when RZD sold 15 percent of the shares to four investments banks. Earlier RZD had 100 percent ownership minus one share -similar situation than Refservice and First Freight Company has today. (OJSC TransContainer, 2008)

In the case of Refservice and First Freight Company, RZD is 100 percent shareholder except for one share, which in both companies is owned by Baminvest. Baminvest is a non-commercial organization, which was founded in 1997 by the Railway Ministry. (Chereshnev and Kochetova, 2002)

According to RZD President Yakunin, same trend will be pursued in future: Once Second Freight Company will be established during year 2010, it will be owned by 100 percent by RZD (RZD Partner, 2010).

2.5 Private operators

Russian railway freight market has several actors: Today, there are more than 2200 private railway undertakings (Grantham, 2008; Kamalov, 2009; Railway Gazette Intl', 07/2009a). Figure 11 illustrates the market structure.

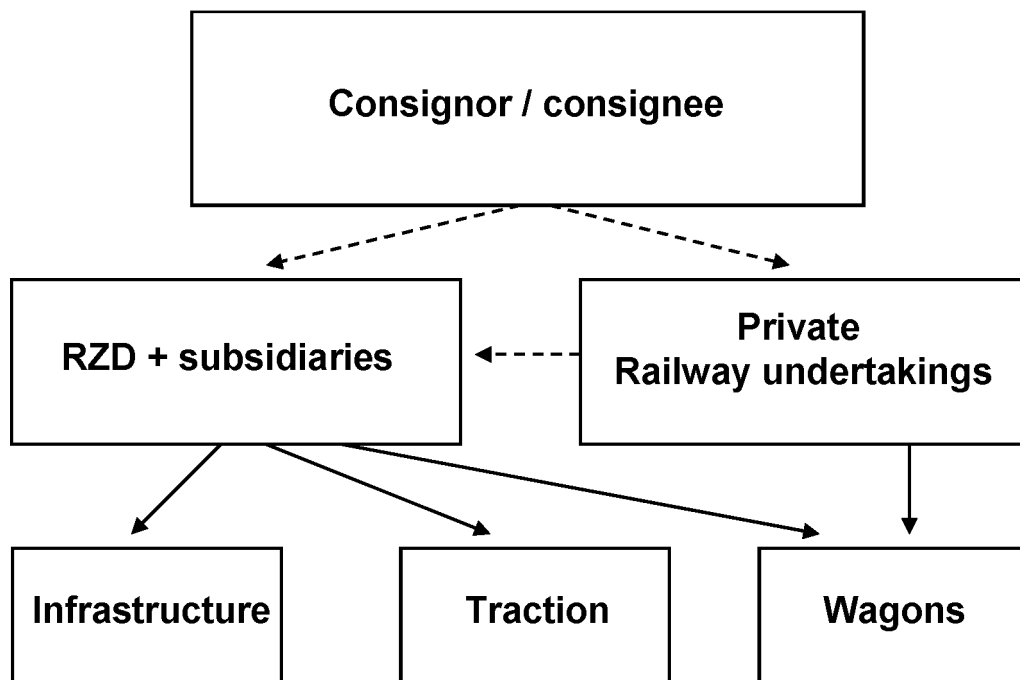


Figure 11. Interaction between actors in Russian railway freight market (Adapted from Ivanova, 2007)

Figure 11 describes the important components of railway freight market: Infrastructure, traction and wagons. Basically, user of railway transport service (consignor / consignee) has two options: Either to buy service from governmentally owned RZD or one of its subsidiaries or turn to one of the privately owned railway undertakings. In first case, RZD offers the full package: It is the sole owner of infrastructure, it offers almost all traction services in Russia and it has the largest wagon fleet. In latter case, private railway undertaking is responsible for transport. It offers own wagon fleet, but needs to have contract with RZD in order to purchase traction service and access to infrastructure. Although the difference is rather big -in both cases RZD is involved-, consignee / consignor does not see the difference between the two options. (Ivanova, 2007)

Private railway undertaking is a company that has an agreement with RZD on traction services as well as access to infrastructure, and provides freight transportation to customers by using own or rented wagon fleet. Basically, there are two main groups of private railway undertakings: Companies belonging to raw material companies and factories and independent railway undertakings. The great amount of private undertakings belongs to first group. They are subsidiaries of large scale raw material producers', such as Lukoil (Lukoil –Trans) and SUEK (Tugnui Terminal Operation and Transport Administration). Often these railway undertakings own and operate dozen wagons, and they transport only their parent company's freight. (Ivanova, 2007; Lukoil, 2010; SUEK, 2010) Latter group, independent railway undertakings consists of companies such as Eurosib, Transgarant, EKE and Huolintakeskus. Ivanova (2007) conjectures the number of such railway undertakings who offer services to all possible customers is around 80 companies.

RZD has stated that their and their subsidiaries' intentions are not to hinder the competitors' actions. On the contrary, RZD hopes this encourages the private operators to consolidate. As a result of competition, customers are expected to get increased flexibility and improved service quality. (Railway Gazette Intl', 07/2009a) The private railway undertakings' wagon fleet is increasing annually: According to RZD Partner (1/2010), in the end of year 2008 Ministry of Transport forecasted the number of freight wagons purchased by the private railway undertakings could exceed 50 000 units. Due to economic downturn, purchased units appeared to be around 10 000 wagons.

3 Research environment and data gathering

3.1 Research approach

Russian railway freight market structure differs from customary. Albeit RZD is the only undertaking offering tractions –except for few private undertakings, which take care of their own tractions in certain areas and short distances–, market has over 2200 operating railway undertakings. These companies are concentrated on wagon leasing services. Great part of them own dozen wagons and are transporting only certain mine's or factory's products.

In order to gain a more thorough understanding of this engrossing railway freight market, semi-structured theme interview was chosen as an interview type. Because a deep comprehension in this scarcely studied area was needed, qualitative research method was selected. In accordance with Eisenhardt (1989), qualitative case analysis is a recommend way to gather information when researching novel topics. Qualitative study's main objective is to understand the research subject, which was the main intention in this study (Hirsjärvi et al., 2004). Due to lack of earlier first-hand data in the field of study, by interviewing experts operating in various fields in the market a versatile, genuine data was gathered. The target was to compare the gathered information with earlier second hand data, and explore whether the primary data confirms the results. By interviewing experts we were able to discuss about topics, which are not earlier committed to paper in English, for example relationships with the Russian Railways.

Although it is widely recommend to start with a test-interview in order to check themes' adequacy and interview's duration (see for example Hirsjärvi et al., 2004), in this research test-interview was not utilized. Basically similar research was conducted less than a year ago, wherefore it was possible to use the same questionnaire with few minor corrections and insertions. Additionally, expert panel checked the form and confirmed it was well-grounded. Research reliability was guaranteed by recording all interviews so researcher was able to re-check the tape in case of ambiguities.

Russian railway freight market has numerous operators, over 2200 railway undertakings. Rough estimation is that there are around 80 railway undertakings, which needs to be reckoned with (Ivanova, 2007). Due to extensive size of the market a diverse interviewee base was chosen as a sample. Although research concentrated on Russian market, in order to gather a versatile and veracious data, few Finnish companies operating and or doing business in Russia were included. Due to these circumstances, a contact letter was sent via e-mail to approximately 20 undertakings (see appendix ten), which were noted as the main actors in this field. Contact letter included introduction e-mail and information letter, which presented the research. Finnish companies were contacted with a Finnish letter (see appendix six), to Russian undertakings were sent English and Russian letters (see appendix four and five). A reminder e-mail was sent three days after the original contact to railway undertakings which had not commented the participation. After one week, a phone call round was made in order to make sure all e-mails had caught up the correct person. If the person in charge had not seen the information letter, it was e-mailed again. This ensured the railway undertakings had time to familiarize with the research.

All interviews were agreed by e-mail, except one which was arranged by phone call. Once the interview time was agreed, the questionnaire (appendices seven and eight) was sent to person in charge in order to give some time to prepare for the interview.

3.2 Collecting the data

In order to gather as extensive information as possible, various actors from railway freight market were included in the research. All persons selected for the interviews were professionals; company representatives' were either managers or specialists. Additionally, two transport university's professors were included, in order to have academic opinion concerning the market's situation. All interviewees had a long history in railway industry, which ascertained the knowledge level was high. Altogether were interviewed 15 persons from 11 companies, including four Finnish companies doing business or having close cooperation with Russia, three Russian railway undertakings, three representatives from industries which use railway transport in Russia and professors from one university. All interviews were conducted in the interviewees' offices except three: Two were done in hotels and one in cafeteria. All interviews were done during normal office hours. Five interviews were done in Finnish and three in English; in three interviews the main language was Russian wherefore interpreter was present. In all cases which required interpreter, the person who interpreted had several years' experience in railway logistics, which ensured the context did not change during the process.

Interviewees were informed beforehand the meeting takes one to two hours. Duration stayed inside the given timeframe; due to tight schedule, few interviews lasted even shorter time. Before starting the interviews, research's background was carefully presented and interviewees' role was clarified. All interviews except one were recorded: Due to strong background noises, recording came to naught. Appendix two describes the time, date and duration of the interviews. The list of interviewees is in Appendix nine. Although a short memo was written while every interview, afterwards recordings were checked and transcribed. Word to word transcription was noted unnecessary, wherefore only the main topics and some quotations were collected.

The summaries were sent to interviewees for revision. Hereby all participants had a chance to check the collected information and make possible changes. Naturally, this eliminated the possible human errors, which might have developed due to language barriers. After all interviewees were met, results were gathered by confirming the anonymity. Available data was carefully evaluated. Few companies gave additional information via e-mail, which enabled us to gather data concerning the main research themes from all respondents.

4 Empirical part

For this research were interviewed altogether 15 persons representing 11 undertakings. Additionally, one railway undertaking sent information via e-mail. Standpoints of all 12 undertakings' are demonstrated in Appendix three. All thematic entities, divided into sub-groups according to themes, are described and discussed more deeply later on this chapter.

4.1 National peculiarities and barriers to entry

According to earlier studies, although countries' railway freight markets have some congruencies, there exist several national peculiarities. The United Kingdom's liberalization process was described as short-term failure. Railway infrastructure company Railtrack failed to operate the market efficiently, which led to serious problems. (Hilletoft et al., 2007; Szekely, 2009a) In Sweden several railway operators entered the market via short lines, which were discharged by the incumbent due to their unprofitable nature. Regardless, by doing some changes new operators were able to make lines profitable. However, it must be noted that port of Gothenburg has played an important role in environmentally friendly transport during the last five years. (Jensen and Stelling, 2007; Laisi, 2009) In Poland the incumbent did not sell old rolling stock to new entrants, wherefore new operators had to acquire wagons and locomotives from countries like Romania, Czech Republic and Morocco (Laisi, 2009). In Hungary, the old incumbents are collaborating against new entrants (Szekely, 2009b). National peculiarities noted in Russia are presented in figure 12.

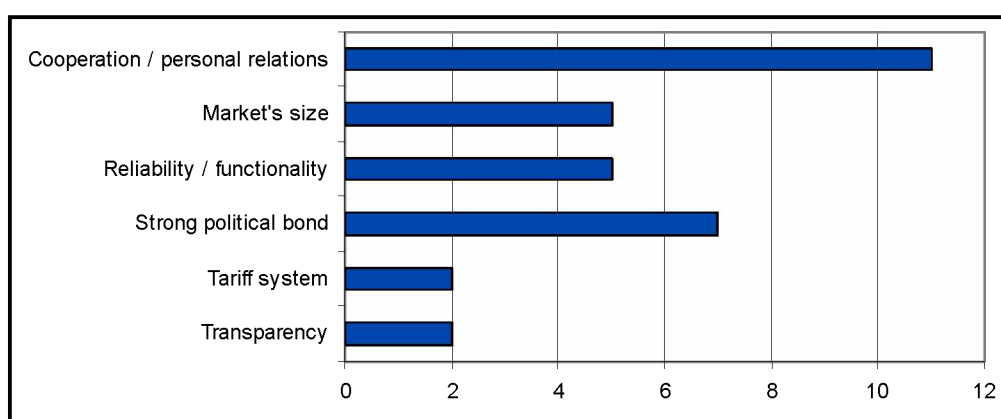


Figure 12. Russian national peculiarities

Figure 12 illustrates the main national peculiarities in the Russian railway freight market. Horizontal axis describes the number of answers; in the research participated representatives from 12 railway undertakings, wherefore 12 is the possible maximum value. As the main peculiarity unfolded cooperation and especially the importance of personal relations; representatives from 11 railway undertakings observed it as the main market peculiarity. Pursuant to interviewees, lack of direct contacts with dispatchers and head of the stations creates problems and questions, which need to be solved before cargo will be transported. In contrast to Western countries, in Russia

are noted companies' needs and people's own needs. Matters are dealt via personal relations, not by market economy means. In addition to partners and other market actors, cooperation needs to be active also towards authorities. Relations and partnership are extremely important when entering the market: without a Russian partner involved the entry process is seen cumbersome and full of surprises. Market's strong linkage with politics, market's size and reliability/ functionality were also stated as factors special to Russian railway freight market. Although the network is extensive, its functionality is high-class. The development was observed by several interviewees. Number of complaints has decreased substantially during the last three years. Tariff system and transparency were also noted as peculiarities. Transparency refers to certain kind of openness: All market actors are aware of market situation. Additionally, there is a lot of information available for example in Internet.

In addition to elements presented in figure 12, several factors were noted once. In order to highlight the market actors' opinions, all these are collected to table 8.

Table 8. Peculiarities mentioned only once by the interviewees

Mentioned peculiarity
Large number of railway undertakings
Rolling Stocks' owner structure
Relocation of rolling stock
Size of train of wagons
Certain destinations are only reached by railway
Market personified to few persons
Safety issues
Unexpected market
Problems are only discussed with big clients
FIN transit, RU more stable situation
RU divided, FIN 1 person
Contract policy
Corruption
Strong support from government
Bureaucracy

Altogether 15 factors were mentioned once; basically, several of these touch the topics described in figure 12. For example, relocation of rolling stock relates to country's size: Due to long distances, rolling stock is expensive and time consuming to relocate. Safety issues relate to the fact that sometimes railway transport has confronted situations, where parts of shipment transported by rail have been stolen. However, currently situation is remarked to be in good hands, due to the fact the local security FSB (Федеральная служба безопасности) is the power behind the scenes. Unexpected market describes market's changeability: Everything might change overnight, future is always open. Railway undertakings rather have few reliable and good partners, than great amount of contracts with numerous companies. The

discrepancy in Finnish and Russian markets' balance is explained by the fact that in Finland railway transport is mainly concentrated on transit traffic, whereas in Russia 50 percent is export, 40 percent is national traffic and only 10 percent is transit. It was also noted that since few years, Russia has adopted the idea that responsibilities should be divided between several persons. In Finland development has been vice versa: Today there is often only one person responsible for various matters. Furthermore, bureaucracy was stated as a market peculiarity, although it does not concern only the railway transport, but is part of Russian lifestyle.

Barriers to entry

According to earlier studies (Brewer, 1996; Laisi, 2009; Ludvigsen & Osland, 2009; Mortimer et al., 2009; Mäkitalo, 2007; Steer Davies Gleave, 2003) the main barriers to entry are acquiring of rolling stock, needed investments and bureaucracy. However, studies have noticed that there exist discrepancies between the countries. Brewer (1996) noted perceived level of access charges was seen as a barrier in UK; in Finland (Mäkitalo, 2007) and Sweden (Steer Davies Gleave, 2003) studies revealed the difficulty of accessing the services creates a great market entry barrier. Mäkitalo (2007) noticed in Finland the actions of the market dominating railway undertaking might complicate the entry process. Additionally, Simola and Szekely (2009) stated in addition to barriers mentioned above, competition is seen as a barrier: In Germany competition is a barrier due to high number of railway undertakings. Furthermore, in Hungary competition is unfair which creates barriers to entry. The main barriers to entry in Russian railway freight market are described in figure 13.

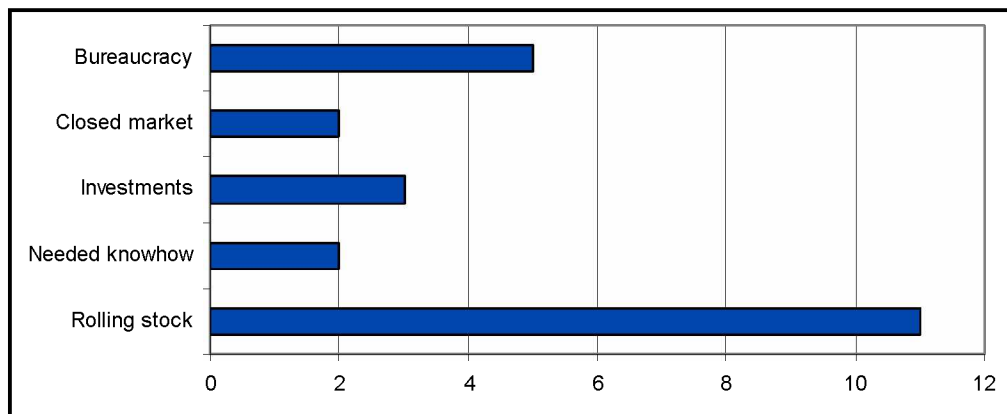


Figure 13. Barriers to entry

Alike in earlier studies, rolling stock is noted as the main entry barrier. However, from 11 interviewees two specified the reason was rolling stock registration; one enlarged on rolling stock certification. As other main barriers were noted bureaucracy, needed investments, knowhow and market's closed nature. Knowledgeable personnel were esteemed important especially when dealing with bureaucracy. According to two interviewees Russian railway freight market's closed nature creates a barrier: Especially for international companies it might be extremely difficult to enter the market, if they do not have any help from Russians. Reason behind is that railway market is strategically important industry. International companies might find it impossible to buy needed services, for example many wagon repair companies are owned by RZD and they have no time-slots to repair other undertakings' wagons. In

addition to figure's results, altogether two items were noted once. One respondent stated finding a customer is a barrier. One respondent noted tonnages as a barrier to entry; operators need to have massive tonnages in order to be reckoned with.

4.2 Railway undertakings' core competencies

Personnel's knowhow

According to Marr et al. (2004), knowledge is the resource that creates the basis of company's capabilities. Furthermore, employees' knowledge is one of the key assets in knowledge organizations (Conklin, 2001). This was also noted in the research (see figure 14).

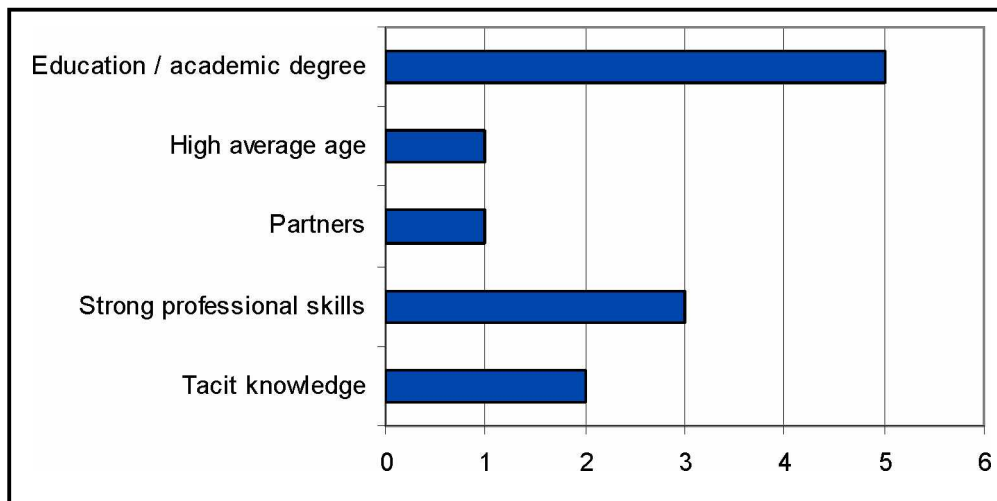


Figure 14. Employees' knowhow

When discussing with interviewees about the knowhow level, all respondents stated knowhow level of employees' is good. Skills were unfolded in various ways: Five organizations noted the fact personnel have strong educational background/academic degree as the basis for good knowledge level. Overall strong professional skills were stated three times. The importance of tacit knowledge was noted twice. Furthermore, personnel's high average age was noticed as a strong basis of knowledge: Employees' have decades of experience from the market, wherefore knowhow is really strong. Key people have been working for RZD, which ensures good relationships with people who still work for the Russian Railways. Thereby, they can speak the same language and possible questions are settled fast and smoothly. Additionally, one respondent stated partners as an important knowledge base.

Rolling stock and tractions

As stated earlier, without rolling stock is almost impossible to enter the market. It was also noted as the main market entry barrier. Although railway undertakings own wagons, renting and leasing are commonplace. This was also revealed in the research (see figure 15).

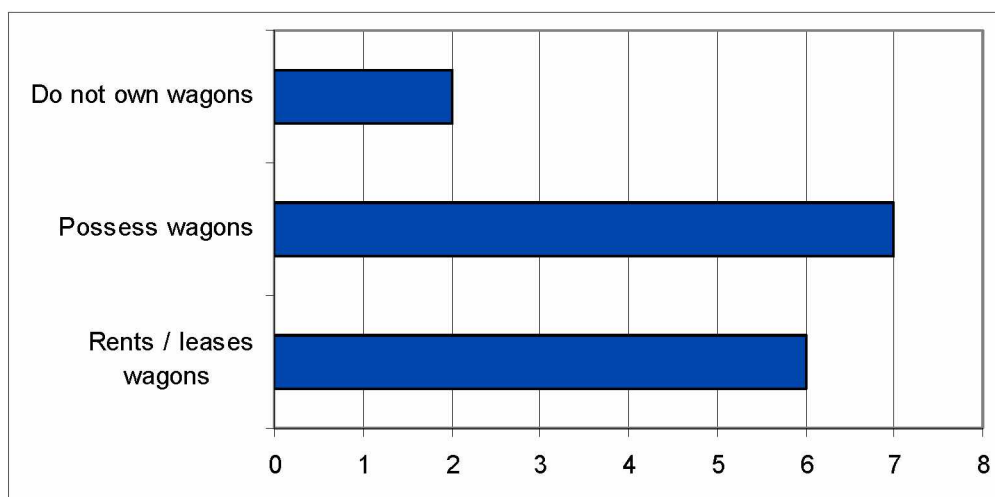


Figure 15. *Russian railway undertakings' rolling stock ownership*

Although the interviewees represented altogether 12 companies or organizations, in figure 15 the maximum value is 10. This is due to the fact four interviewees basically represented two companies (both Russian and Finnish counterparts were included to the research). According to this study, two companies do not own wagons, due to the nature of their business. Seven undertakings out from 10 possess wagons; furthermore, six are renting and/or leasing wagons from other undertakings. Several undertakings are utilizing mixed rolling stock, meaning they are operating long term leased wagons, own wagons and short term rented wagons. In order to fulfill distinct customer needs and strengthen the market position, undertakings have invested in different types of wagons. The figures can be explained by the fact that governmentally owned undertakings have no need to rent / lease wagons from other undertakings. Furthermore, the Finnish national railway undertaking does not utilize Finnish wagons in Russia; due to close cooperation with the Russian Railways, only Russian wagons are used. Because the governmentally owned undertakings have rather extensive wagon fleet, it could be questioned, why private undertakings want to possess wagons. Reason lies in extent of wagon fleet, normal wagons are available at the market but there is a lack of special wagons. However, railway undertakings stated it is rather easy to acquire rolling stock. All railway undertakings are utilizing both old and new wagons; the aging has been noted as a problem. In order to improve the wagon fleets' status, in reform program was noted the need to update the fleet. This was also adduced by the interviewees. Extensive wagon fleet is out of date, due to the fact half of Russian park was produced in 1980s. Because average life time of a wagon is 30 years, numerous wagons need to be replaced in few years. RZD has remarked the problem: they have realized the great need to buy new wagons, but due to shortage of investments private operators were requested to invest in wagon fleet. This has now happened, which has improved the market situation. In order to be able to utilize a wagon in the market, it needs to be registered. Therefore, the overall knowledge level about the fleet of wagons is high, including information such as when unit was repaired, who repaired it, when it was registered and so on.

In Russian railway freight market the Russian Railways basically has a monopoly in traction market. Interviewed railway undertakings' representatives were rather satisfied with the situation: Delivery might take weeks, but the market is functioning

well. System has improved during the last years, mainly due to good IT systems. It enables traction plans to be inserted and approved electronically.

Customer relations

Russian customers are a demanding clientele. According to several interviewees, they demand more and better service than foreigners. In Russia the normal 8-16 office hours are not accepted. Customers demand to receive service 24/7 (24 hours in seven days a week). According to interviewees, there exist various customer needs: Some want to buy only the transport, while others might demand the whole transport package, including warehousing etc. Although door-to-door services are requested today more often than few years ago, interestingly requested amounts have increased during the crisis. Therefore, contract lengths vary considerably. Some want to have ad hoc services, while others prefer contracts for years. Interviewees stated they serve all customers demanding services; however, few interviewees noted the private railway undertakings have an easier situation, as they can choose the clientele. Customer service was noted important function; few interviewees stated their intention is to improve its status.

4.3 Railway market

Infrastructure

While the Russian railway network is the second longest in the world (Federal Statistics, 2010), railway undertakings were fairly satisfied with its condition. Aging of tracks was noted a problem; however, placed investments are expected to improve the situation soon. Railway is stated to function well, also in hard winter conditions. Therefore, overall the satisfaction level is high and railway undertakings do not see infrastructure to hinder transporting: its condition was esteemed among the best ones in the world, largely due to high level of electrified and doubled tracks.

Market transparency

Although reliability and functionality were noted as positive matters in the market, transparency still divides the standpoints. According to few representatives the market is transparent: As an example was stated the tariff system, which is more or less open information. However, some dissenting opinions were noted. The network and areas around it are more or less open for all railway undertakings; regardless, certain places might be more or less closed. In those cases, wagons might stand months without a proper reason, only because the station is ear-marked for certain railway undertaking. This leads to the fact although competition is officially free, practically this is not the case. Additionally, sometimes the rigid system might create problems. Institutions' actions were found bureaucratic, cumbersome and uncommunicative. Regardless, information is widely available in Internet.

Tariff system

Russian railway freight market does not utilize market prices, but price level is decided by the state. The freight levels confront annually (sometimes even twice a

year) an increase, which share depends on the year. Due to its importance, tariffs and pricing system was discussed with all interviewees. Naturally, during economic downturn the tariffs and prices are extremely important; coverage was stated to be around few percent, whereas profits are done via large volumes. Although tariff increases were impugned, it was regarded to follow the inflation. The system was also described understandable, due to its long history. Even then, double tariff system was remarked one of the market's peculiarities. This reflects the fact that tariffs vary depending on place of departure and arrival. For example, international and national transport is priced differently, as well as there is transit tariff, tariff to harbors, and so on. Additionally, system has value tariff, stating raw materials are cheaper to transport than end products.

Furthermore, one of the main differences between Finland and Russia was remarked the discrepancies in the pricing system. In Finland prices are negotiable, whereas in Russia all are defined. Thereby Finnish VR was remarked more customer friendly than RZD. Another interesting aggregate is the way of payment. In Russia all services are charged in advance, whereas in Finland transport is paid afterwards.

Cooperation

According to interviewees, one of the market's peculiarities is the importance of relationships. The same trend was also unfolded when discussing the cooperation. All interviewees noted the cooperation is important aspect.

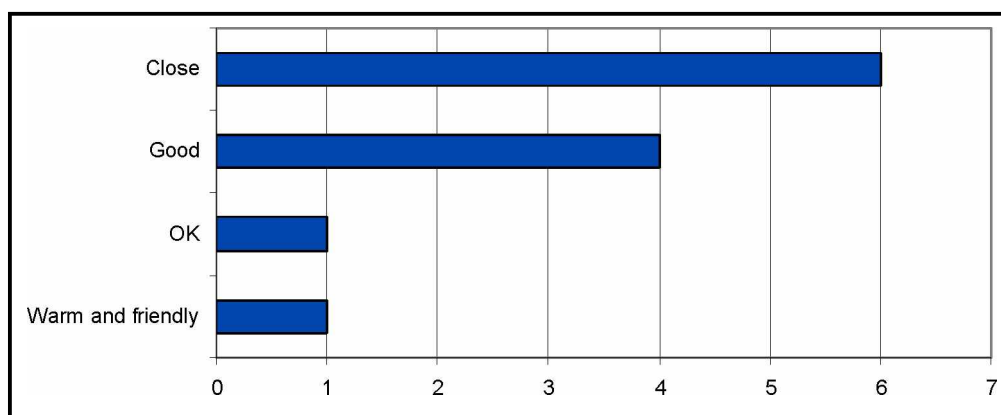


Figure 16. Cooperation in Russian railway freight market

As illustrated in figure 16, mainly words close and good were used. One interviewee described cooperation OK, while another one told it is warm and friendly. Some company representatives are meeting on a weekly basis, which strengthen the cooperation. Despite the fact, strong governmental control was found to hinder the cooperation.

Competition

According to recent studies (see for example Laisi, 2009; Simola and Szekely, 2009), various railway freight markets confront severe competition between the transport modes as well as inside the market. Figure 17 describes the situation in Russia.

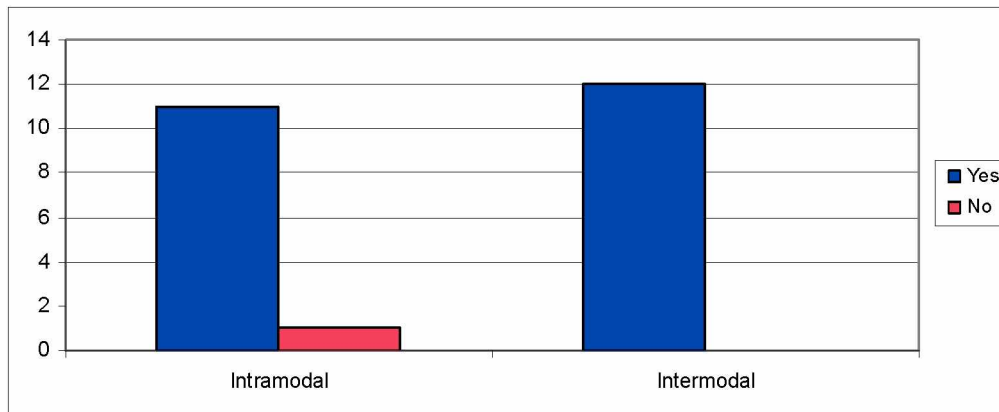


Figure 17. *Intramodal and intermodal competition in Russian railway freight market*

Due to the fact interviewees represented 12 undertakings, it can be stated the market faces strong intramodal and intermodal competition. All 12 undertakings' representatives recognized that there exists intermodal competition; one respondent stated when distance exceeds 1000 km, competition does not exist. Nonetheless, several interviewees stated the market has achieved balance. The same trend is noted in intramodal competition: 11 interviewees stated there exists competition; one described competition especially strong between large undertakings. Furthermore, one interviewee noted although competition is still ongoing, there is less competition than before, due to economic downturn. Interestingly, one representative saw situation a bit better: According to his view, competition is not hard, due to the fact it is according to the theory. The railway freight market can be divided into four levels:

1. governmentally owned companies, possessing over 100 000 wagons
2. significantly large railway undertakings, possessing over 10 000 wagons
3. small private undertakings, possessing 1000-4000 wagons
4. small undertakings possessing dozen wagons.

Albeit market structure is fractured into four, the competition is between the first three groups.

Market's problems and positive matters

All interviewees noted market has various problems and positive sides. Basically, several elements are aforementioned in peculiarities and market entry barriers, which strengthen the context.

Table 9. Market's problems

PROBLEMS
Rolling stocks' intensive standards
Shortage of rolling stock
Lack of suitable wagons
Development of wagons
Tariff system
Low price level
Decrease in amount of lines
Reform process
"Red tape" situations; bureaucracy
Problems are discussed only with large clients
Amount of contracts with RZD
Inside RZD various reforms
Problems in cooperation with RZD, when lack of personal relations
RZD and ministries cooperation deficient and weak
Shipments' unforeseeable nature
Network's size (no possibility to invest enough)
Injustice in accessing resources
Lack of terminal and distribution services
Lack of cooperation
Personnel's attitude
FIN / RU trade imbalance
Intermodality
Empty runs

According to interviewees, market has various problems (see table 9). Rolling stock is mentioned in various contexts: For example, lack of suitable wagons, wagons' development and overall the shortage of rolling stock was noted as great problems. Negotiations are often started, but infrequently the finish line is crossed. Besides, rolling stock's intensive registration standards were appraised cumbersome. Tariff system and market's bureaucracy were remarked problematic. Ongoing economic crisis was also noted: Due to hard situation, several companies have decreased the prices, which have caused problems. Basically companies are utilizing loans from banks to buy and produce goods. Due to the crisis banks were not willing to give loans, which led to a domino effect: customers did not have money to purchase, producers were not able to produce goods and railway undertakings did not have freight to transport. Furthermore, due to lack of shipments and their unforeseeable nature some service lines were dispensed with. This created problems especially to private undertakings, which operate only on one line. Though cooperation with the Russian Railways (RZD) was mainly noted positive, several problems were also unfolded: For example, interviewees noted the amount of contracts with RZD is

considerable, which creates ambiguity. It was stated RZD pays attention only to important clients, which creates problems to companies having smaller volumes. RZD was noted to have problems overall with cooperation: Several interviewees stated cooperation is hard without personal contacts to RZD. In addition, few commented the cooperation between RZD and ministries, authorities and customs is weak and deficient; however, improvement has happened in recent years. Although the network's size was found great, its extent creates also problems: According to interviewees, it is not possible to invest enough due to its large size. Injustice in accessing resources and lack of terminal and distribution services were also stated problems. Additionally, intermodality was seen troublesome, due to lack of cooperation between supply chain partners. Empty runs were remarked as one of the major problems. While transporting cargo, undertakings are earning something. After cargo is delivered, the units need to be returned, empty or not. Earlier when RZD owned the wagons this was not seen a problem. In future, if all costs occurring when transporting empty containers will be put to cargo owners' shoulders, market will confront severe problems.

Table 10. Positive findings of the market

POSITIVE FINDINGS
Market's size
Transparent tariff system
Knowhow
Good relationships with authorities and other undertakings
Government's support to railways
Educated personnel
Market is full of possibilities
Large volumes
Cost efficiency
Profit decreased, service level increased
Volumes decreased, speed increased → no congestions!
Network's condition
Possibility to transport countrywide
Data systems
Reliability
Functionality

Market was seen troublesome; however, several positive factors were unfolded (see table 10). Market's size was noted a positive matter: It enables several possibilities to railway undertakings. Furthermore, large market stands for great volumes. Although railway network is really extensive, it was remarked to be in good condition. This enables transporting countrywide, which was also stated few times. Though tariff system was recognized cumbersome, it was also noted to be transparent, unlike in Finland. Market's knowhow level and overall good relationships with authorities and other undertakings were noted good, which facilitates the daily processes. One interviewee was especially satisfied with the market's functionality. He estimated the

price increases are clear and easy to predict, and customs clearance and cooperation with authorities is well-defined, explicable and functional. Additionally, government's strong support to railways was stated a positive factor. As with all trades, economic downturn has created problems also to railway industry. The situation is rather dramatic in Russia; however, several positive sides were noted regardless of the situation. While amount of cargoes and therefore the profits have declined, customer service level has sharpened. Due to reduction in volumes speed has increased and congestions have disappeared. One positive factor which was mentioned was data systems: RZD has updated and reorganized the whole data system, which enables all functions to be done via Internet. This naturally eases the daily work. Furthermore, railway industry's reliability and functionality were stated several times. Although delivery might take long time, transports are taken care like promised.

4.4 Future

As noted in previous chapters, Russian railway freight market is confronting various changes. Reform process, establishing of new subsidiaries and throughout changing market environment is challenging; furthermore, the economic situation should not be forgotten. Table 11 gathers the interviewees' thoughts concerning the future.

Table 11. *Future prospects*

FUTURE PROSPECTS
Hard to estimate; changes are expected
Market offers several possibilities to railway undertakings
Unknown; depends on laws and contracts
Market's gradual change
Low price level in road transport is problem!
Establishment of logistics centres
Reform's continuity uncertain
Russian railways is highly needed!
If FIN / RU border is opened, several Russian companies will enter Finnish market
What kind of framework is given to private railway undertakings?
Will cost efficiency increase?
How reform continues?

Table 11 aggregates the comments concerning the future prospects. Basically future was seen positive, partly due to Sochi Olympic Games which is expected to increase the logistics flows. Although market was noted to offer several possibilities to railway undertakings, at the same time it was stated to be hard to estimate. Its surprising nature unfolded numerously and various questions were raised based on this assumption. Will cost-efficiency increase? Will the market confront a situation where price level is reasonable, also from buyers' point of view? On one hand few interviewees noted market is changing gradually, on the other hand, situation was stated unknown, due to laws' and contracts' influence. Due to reform's earlier occurrences its continuity was evaluated uncertain. Furthermore, road transport's low price level was estimated cumbersome, because it has a direct influence on railway

market's share. Several interviewees noted Russian Railways is highly needed, and overall people were rather satisfied with the accomplished improvements. Railway market in Russia was even esteemed to function as smoothly as airfreight in other countries. The railways importance to Russia was unfolded in various comments. *"Small government inside the government"*, *"State in state"* and *"Country in country"* was uttered frequently. Additionally, few interviewees noted if Finnish-Russian border is opened for competition, several Russian railway undertakings will enter the Finnish market.

As preceding factors reveal, reform and its functions are the factors which provoke questions. As expected, railway undertakings were well aware of the market situation and RZD's future plans concerning rolling stock and subsidiaries. According to few discussions state is trying to merge railway undertakings, in order to strengthen the market's economic situation. Overall railway undertakings were not satisfied with the situation, mainly because RZD is thought to give unmet promises. When reform started, government requested companies to invest in wagons and supported the clause by promising reductions in traction rates. Additionally, RZD promised the market will have open competition. Actually reform turned out so that Russian Railways formed own subsidiaries, which are so powerful that they rule the market. RZD is stating there is no more monopoly, because numerous private undertakings are operating in the market. This confuses the private undertakings and creates ambivalence among the market actors.

When discussing the future and European Union's harmonization process, most of the interviewees stated European Union has no influence on Russian railway freight market. On the contrary, international norms' harmonization was recognized cumbersome and expensive. Therefore, many Russians think they know what will happen with European Union's harmonization plans.

5 Discussion

Russian railway freight market has several national peculiarities. As the main special characteristic was unfolded cooperation and importance of personal relations: 11 railway undertakings' representatives stated the factor as an important subject. Another interesting standpoint is that industry has a strong linkage with politics. Railway is the country's backbone, and it is noted to be important both economically and politically. This can be explained by the fact that country has several areas, which can be reached only by using railway. Due to close political linkage industry receives strong financial support from the government; however, it must be kept in mind that in Russia is utilized the integrated infrastructure model, where one railway undertaking, the governmentally owned operator, is also responsible for the infrastructure. Therefore, the Russian Railways is taking care of the infrastructure. Due to the fact Russian railway network is the second largest in the world, the needed financial investments are significant. The size of the country was also noted a peculiarity: Country's large size offers extensive railway network. Although the network is huge, 86 000 km, market's reliability and functionality were mentioned as special characteristics. This can be easily understood: Although the weather conditions are brutal in Siberia (-50 degrees Celsius, lots of snow and ice), railway industry functions without any problems. The updated information technology programs enable to provide to customers real time data for example concerning cargo location and estimated time of arrival. As minor peculiarities were stated tariff system and transparency; both of the topics were frequently discussed in the interviews. Tariff system bisected the opinions: Some noted the tariff system is great, due to its transparent nature. Because railway undertakings know the certain price factors, it is rather simple to calculate what competitors are offering. Therefore, competition is seen fair and objective. Some stated due to tariff system's transient nature, it is hard to make long term contracts with clients. Western system, including secrecy regulations, enables more competitive market structure. Market economy is not utilized in Russia; state determines the tariff levels, which are basically nonnegotiable. Naturally, the fact tariff system has various modifications (own tariff to ports, inland transport, international transport etc.) creates tension between the parties. Russia has harmonized and is harmonizing the system; country has copied Western styles also to other economically important sectors, wherefore tariff system might face changes in the future. Moreover, the market is surprisingly transparent: Information is shared openly and for example lot of data is available online. Data is mainly in Russian, which might create a barrier to international counterparts.

In addition to these factors, numerous other subjects were noted as national peculiarities. Though majority of nearly 2300 railway undertakings are small companies possessing dozen wagons, the number of competitive private undertakings increases annually. Albeit the economic downturn hit the industry rather hard, private railway undertakings did not face as big losses as the Russian Railways and its affiliated companies. This has been explained by better customer service level: Private undertakings' customer base expects and gets better service. Additionally, often private railway undertakings are niche operators, concentrating on certain clientele and cargoes. Hence the worldwide descent did not have as severe influence on their business. Various matters concerning the market and wagon fleet were unfolded. Railway market was noted unexpected, which partly leads back to country's way of action: Like few interviewees noted, Russia is Russia and it cannot be

compared with anything else. Also the fact that bureaucracy was considered a peculiarity has roots in the history. In Russia people are used to endless paperwork. All matters having something to do with authorities require numerous documents, stamps and signatures. This is commonplace, and not only railway industry's problem.

Russian railway freight market's main barriers to entry are rolling stock related matters, bureaucracy and needed investments. Although the same factors were unfolded in previous researches, some national influences can be recognized. Rolling stock acquisition was stated hard, partly due to its capital intensive nature. According to this study also wagons' registration is a market entry barrier. In order to get a license to utilize a wagon in railway transport, it needs to be registered and approved by the Roszeldor, the Russian Railway Transport Agency. The requirements are strict, which ensures a reliable market. If wagon fleet would be poorly managed and maintained, it would impede the sector's functionality. Additionally, due to accurate registration, for example it is possible to locate all wagons and follow their movements. Bureaucracy was observed both a peculiarity and market entry barrier: Especially it might hinder the market entry of foreign undertakings. Without a local representative involved in entry process, rules and regulations are hard to understand and internalize. Albeit there is a lot of information available, everything is in Russian, which might create a barrier to foreigners. Although country is internationalizing, without Russian language skills it is rather difficult to work on the market. Closed market as a barrier refers to this: Without needed language proficiency, market knowhow and knowledge about the cultural habits, it is rather hard to enter the market and deal with the locals. Needed investments were seen as a barrier, which reflects to market's high cost level.

Interestingly, the educational level in Russian railway undertakings is really high. Education/academic degree was esteemed as the main factor, when approaching personnel's knowhow. This is an interesting feature, because in Western countries the personnel typically do not have such a strong educational background. For example, academic degrees are rather rare among traffic coordinators or other "ground level" employees. People holding academic degree are managers or in such a position. Strong professional skills are noted worldwide, also in Russia. Due to railway industry's particularity among other transport modes, the professional skills have strong significance. Especially employees who have gained experience from the national railway undertaking are highly appreciated. Many employees working today in private railway undertakings have history from the Russian Railways, which ensures the high knowledge level. Especially the personal relationships and knowhow about the company's business culture are noted important factors. Private undertakings' employees are able to "talk same language" with the old colleagues. This partly refers to tacit knowledge: As in all logistics sectors, railway has a lot of functions and factors which are learnt by doing; those are hard to explain or put into words. This was unfolded also in Russia: According to this research, tacit knowledge is perceived an important knowhow feature.

One of the national peculiarities in Russia is the wagon fleet owner structure. Private railway undertakings are allowed to own, rent and lease wagons, and offer railway transport services to customers. Traction services are only offered by the Russian Railways. This research reveals that generally several railway undertakings operating in the market owns, leases and rents wagons. Own wagons are mainly used to fulfill the stable customer needs. Due to limited number of wagons, ad hoc shipments are

mainly handled by utilizing rented or leased wagons. In addition, shipments' destination affects on wagons' usage. If shipment is ordered to a destination where railway undertaking do not need wagons, either rented or leased wagons are used or the shipment is forwarded to another railway undertaking (for example, if a private undertaking mainly operating in West-Russia receives a delivery order to Vladivostok, doubtlessly it will utilize some other than own wagons). In addition to limited stock of wagons, empty runs are a big item of expenditure, wherefore those are highly eschewed. Although only the Russian Railways offers the traction services, railway undertakings did not see it as a problem. Traction services are taken care of as promised, and services are available when needed. Additionally, the improvements in IT section, for example electronic order system, have increased the satisfaction level. Because market has not faced competition in this sector, it is hard to estimate whether the comments would be the same if competing services would be available.

Russian clientele is considered demanding and hard to satisfy. The typical eight to four working hours do not work in Russia. Customers expect service is available 24 hours a day, 7 days a week. All information is regarded as important: Even if no information is available, customers urge to receive it. The market environment has confronted changes during the last years. Door-to-door services are requested more often than before. Customers are interested in buying whole package offering all functions from transport to warehousing. Personal relations were noticed as an important factor also with customers: If customer is lost, it is hard to get them back. Interestingly, Russian service sector is historically considered as an example of inoperative market. However, situation has changed, while country has adopted Western lifestyle. Nevertheless, railway undertakings might confront challenges, if the amount of international customers increases. Although personnel are highly educated, generally the language skills are poor. The generality of employees cannot speak English, which impedes the possibility to interact with foreign clients. Therefore, in addition to professional skills, employees should improve their language proficiency.

Although the Russian railway network is the second longest in the world (86 000 km), railway undertakings are satisfied with its condition. Aging of tracks causes some problems every now and then, but basically network is in good condition. Infrastructure is owned and managed by the Russian Railways, who invests heavily on its improving. Generally there are certain areas which are considered as the major investment targets. At the moment, in addition to Sochi area, Kaliningrad is receiving funding.

Market transparency divides standpoints. As an example of transparency was mentioned the tariff system, which provides open information to all parties. Some drawbacks were also reported. According to the study, some terminals and stations might be reserved for certain undertakings' usage. Authorities' actions were noted bureaucratic, cumbersome and uncommunicative. On the contrary, a lot of information is available online, which supports explicitness. Therefore can be stated, that although market still faces problems with transparency, development has happened and information is easier to find than before.

Tariff system is one of the special characteristic in Russian railway freight market. Market prices are not utilized, but price level is decided by the state. Though this research observed system includes several problems and drawbacks, some positive factors were unfolded. According to the study, the tariff system provides open

information to all market's participants and therefore increases the transparency. Albeit the system was stated understandable, several weak points were unfolded. This research states the fact tariff system changes annually (sometimes even twice a year) hampers the cooperation and possibility to consummate long-term contracts with customers. Because tariff system has several variations (double tariff system, transit tariff, tariff to harbors etc.), it is hard to follow. The tariff mechanism is extremely inflexible. The system is open and information is available for all market actors. However, discounts raised questions. Discounts are said to be based on the large volumes, but it is widely believed the Russian Railways affiliated companies receive larger discounts than the competitors.

Importance of relationships was unfolded as one of the main peculiarities earlier in this research. Same trend continues when evaluating the cooperation. Cooperation between market actors is close, good and warm. This can be partly explained by the common past: Several private undertakings' employees have started their career at the Russian Railways. People might have a common history from universities, which are concentrated on railway transport (for example MIIT in Moscow and PSTU in St. Petersburg). Because railway undertakings rent and lease wagons from other undertakings, they have cooperation on common basis. Although the relationships are close and cooperation is good, market confronts competition.

Based on this research, both intermodal and intramodal competition does exist in Russian railway market. Intermodal competition was stated severe in shorter distances: When transport distance exceeds 1000 km, competition diminishes. The fact Russia transports plenty of bulk products supports railway as a transport mode. Intramodal competition is also present, due to increasing number of active railway undertakings. Many undertakings are niche operators, which facilitate the situation. Additionally, the economic downturn has attenuated the amount of competition. This might be due to mergers and acquisitions: The Russian state announced a declaration that railway undertakings should merge in order to strengthen the market's competitiveness.

Russian railway freight market has various problems. According to this research, several pertains rolling stock. As the main drawbacks was unfolded lack of suitable and overall shortage of wagons. While various wagon prototypes have been developed, the plans are rarely finished. Though large number of wagons is modernized, the aging fleet creates problems. Majority of wagons is purchased in 1980s, wherefore the time of usage is ending within few years. Although the Russian Railways has requested private undertakings to purchase wagons, heavy investments are needed in order to fulfill the growing demand. Additionally, tariff system and low price level in road transport were noted to create problems. Bureaucracy is also a problem and red tape situations are commonplace. The Russian Railways has improved its service level via new IT systems, but nonetheless holding still has some unsettled issues. Inside the Russian Railways is recognized several reforms, which create misunderstandings. Private undertakings stated due to bureaucracy, companies have several contracts with RZD, because various functions need to have own documents. Additionally, problems are only discussed with important clients. RZD is interested in cooperation with major clients, which impedes the cooperation with customers having smaller transport volumes. The importance of personal relationships is emphasized on Russian Railways: lack of personal relationships with dispatchers and other professionals might hinder the transport possibilities. The cooperation with authorities is not fruitful: On the contrary, cooperation is seen

deficient and weak. In addition to all above mentioned factors, empty runs are remarked a severe problem. Due to country's size and network's length, occasionally wagons are transported to other side of the country. If return shipment is not available, the wagon's utilization rate decreases and costs increase. Therefore, railway undertakings are choosing carefully the shipments they handle by own fleet.

Albeit market confronts severe problems, research revealed some positive matters. Firstly, market's size and the transport possibilities are positive factors. Because the network is in good condition, it enables transporting countrywide. Government's strong financial support to railway industry is highly appreciated. Employees' knowhow level is high, which ensures good relationships with authorities and other undertakings. Though economic downturn has decreased the profits, service level has increased. As stated earlier in this research, if customer is lost, it is really hard to get them back. Research results revealed the crisis has diminished the amount of competition. It can be stated railway undertakings want to keep their existing customers. Due to decrease in volumes, the speed has increased and congestions have disappeared. Reliability and functionality were mentioned often and it was said that although market has various problems, the functionality and reliability are exalted.

Russian railway freight market is confronting several changes. Based on Reform Programme, operations were divided into operational and governmental functions and several subsidiaries were established. Additionally, market's competitive nature has been supported by stating initiatives which facilitate the market entry. Many reforms have been accomplished and the work towards better and sustainable future has been started. However, several concerns exist. Transport market's price level is seen problematic. If railway tariff follows the earlier trend, in the beginning of year 2011, at the latest, the prices will increase. If road transport continues the low level pricing, railway transport has hard time to compete with road in short distances. Several logistics centers having tracks to premises are planned to be established, which would support the intermodal transport and therefore provide new possibilities to railway transport. Reform's continuity is seen uncertain. Although the formation of Second Freight Company was announced in May 2009, market is still waiting the actual starting point. First Freight Company modified the market structure, and same will happen with Second Freight Company. Various market actors feel government deceived them. Earlier government promised to allocate reductions if railway undertakings would buy own wagons, but this has not happened. Railway undertakings have various questions without answers: No one knows what to expect in following months and years, which creates tension to the market.

6 Conclusion

6.1 Summary and main findings

This study has provided insights into the Russian railway freight market's special characteristics. The purpose of the study was to research the national peculiarities and unfold the barriers to entry. Research's intention was to reflect the current situation to future prospects and appraise the possible market changes. The national peculiarities and barriers to entry were identified; additionally, current market situation was carefully scrutinized.

In accordance with the European Union legislative demands, Finland deregulated the railway freight market in 1st January 2007. The regulations did not concern Finnish–Russian border. Cross-border traffic is sheltered from competition, signifying only two railway undertakings, the Finnish governmentally owned VR Cargo and the Russian Railways (Российские железные дороги) are allowed to practice traffic. Although wagons are registered to both countries, the fact locomotives are changed at the border signifies the only actual railway undertaking operating in Finnish network is VR Cargo. The agreement is under discussion in the next years, which might modify the market's structure. Therefore, it is vital to gather information and familiarize with the neighbor country's national characteristics, in order to be ready for possible changes in the future.

Study's empirical data was gathered by semi-structured theme-interviews. Research was a qualitative case study analysis, concentrating on descriptive analytical approach. Because the research concentrated on novel topics and the data needed for unfolding the market situation were qualitative by nature, qualitative research method was chosen as a research type. Overall 15 persons representing 11 undertakings were interviewed. One railway undertaking provided information in written form. In order to cover all aspects of the versatile market, among interviewed organizations were railway undertakings, representatives from transport university and delegates from industries which utilize railway transport in Russia. In order to increase the knowledge level concerning the market peculiarities, few Finnish undertakings operating in Russian market were interviewed. Thereby the sample consisted of one transport university, three industry representatives and eight relevant railway undertakings.

Although railway freight market and especially deregulation process has grabbed researchers' interest worldwide, Russian market has confronted little interest in English literature. Market is scrutinized and evaluated in various Russian research reports, articles and books, but the information available in English is rather limited. This provides an interesting research gap. Previous studies have concentrated on second-hand data and literature analyses. First-hand data gathered via interviewing market actors can be seen as attenuating the existing empirical gap.

Russian railway freight market has various national peculiarities. Types of main industries, history, working culture and country's location have outstanding influences on characteristics. As the major national peculiarity transpired cooperation and importance of personal relations; the factor has a direct link with culture and

country's history, because overall in Russia the business culture is divergent from Western countries. Another consequential peculiarity is strong linkage with politics, which can be interrelated with the history. Railway is strategically one of the most important industries, wherefore the state is highly interested in railway sector's operations. The Russian Railways is governmentally owned holding, and due to the fact company is the major contributor to Russian economy even highlights its significance. As other national peculiarities were unfolded market's size, reliability/ functionality, tariff system and transparency. Extensive network enables strong market environment, which strengthens market's competitiveness and competence. Reliability and functionality refers to market conditions: Although the size of the market is immense and weather conditions vary, market functions well and as expected. Tariff system does not follow the market prices, the annual price level is decided by the state. The discrepancy to Western countries and market economy is fairly massive, which enlarges the peculiarity. Due to history and business culture which was dominated decades ago, transparency still creates controversies. Railway freight market is stated to be open and information availability is highly appreciated, which denote transparency. On the contrary some terminals and stations are available only for certain railway undertakings, which hinder the competition and therefore attenuate the transparency. Research concludes the Russian railway freight market has several national peculiarities: As the main special characteristics were unfolded cooperation/ importance of personal relations and strong political bond.

Railway freight market deregulation has grabbed researchers' interest worldwide. Majority of the studies evaluates the barriers to entry or other specific aggregates, but national peculiarities have not been often unfolded. Actually, all studies investigating certain sector reveal special characteristics, but in order to be able to discern national peculiarities, research field must be acquainted. Nonetheless, according to earlier studies (see for example Laisi, 2009; Simola and Szekely, 2009), various peculiarities exist. Swedish system is characterized by "old boy network", stating cooperation is really close and warm. Rather many private railway undertakings were established on the grounds of old short-lines, which incumbent decided to discharge due to their non-profitable nature. However, by doing some changes new operators were able to make lines profitable. (Jensen and Stelling, 2007; Laisi, 2009) German market's peculiarity is the high level of competition: Country has almost 300 railway undertakings, wherefore the competitive environment varies from other countries. In Hungary old incumbents are collaborating against new entrants. (Simola and Szekely, 2009; Szekely, 2009b) In Poland the incumbent did not sell old rolling stock to new entrants, wherefore new operators had to acquire rolling stock from countries like Romania, Czech Republic and Morocco (Laisi, 2009). According to this research, there exist various discrepancies between European Union member states and Russia. Although other countries esteem cooperation and it is noted important, its momentous nature is vital in Russia. Furthermore, strong political bond has not been noted in any other researches, which strengthen it as a Russian peculiarity.

According to various studies, the main market entry barriers are acquiring of rolling stock, needed investments and bureaucracy (see for example Laisi, 2009; Ludvigsen and Osland, 2009; Mortimer et al., 2009; Simola and Szekely, 2009). This research fortifies the previous studies and states the same factors were recognized as barriers to entry in Russia. Rolling stock was significantly largest barrier, following by needed investments. According to this research wagon registration process is inflexible, which hinders the market entry. Rolling stock had a great share when discussing the

market's problems. Main constraints were unfolded lack of suitable wagons, wagons' development and overall the shortage of rolling stock. Besides, rolling stock's intensive registration standards were appraised cumbersome. In addition to rolling stock, other problems were unfolded. Tariff system and market's bureaucracy were founded problematic. Ongoing economic crisis was also perceived. Due to hard situation, several companies have decreased the prices which have caused problems. The cooperation with the Russian Railways was mainly applauded; some problems were also stated. Their interest towards major clients impedes many private undertakings' actions. Without having personal contacts, cooperation with the Russian Railways was recognized troublesome. As one of the major problems were stated empty runs. Therefore, according to this study the Russian railway freight market's main barriers to entry are matters related to rolling stock (registration and acquiring), needed investments and bureaucracy. As problems were unfolded empty runs, rolling stock related factors and challenging market environment.

Russian railway freight market is noticed to have various problems. Positive sides are also visible. Market's size provides various possibilities to railway undertakings and ensures the large volumes. Although railway network is extensive (second longest in the world), it is in good condition. Tariff system was stated cumbersome; despite, its transparency and openness to all market actors was commended. Strong educational background and professionalism, as well as high knowhow level, were discerned to elaborate the market. Strong and close cooperation with other market actors increases the solidarity. Government's strong financial support to railways was stated important. Interestingly, whilst the economic downturn has affected on Russian railway freight market, it has created various positive features. While cargo volumes and profits have declined, customer service level has increased. Reductions in volumes have increased the delivery time and congestions have disappeared. Additionally, the Russian Railways new IT systems were recognized effective and customer friendly. This research extrapolates the main positive features in Russian railway freight market are country's large size and therefore great volume possibilities, network's unexceptionable condition and strong cooperation between market actors.

During the last years, the Russian railway freight market has confronted various changes. Reform Programme's commencement in 2001 created totally new market environment. Basically the process has proceeded well, although few drawbacks are discerned. Private undertakings feel the made promises are not fulfilled, which creates dissension and obliviousness. Market's future is seen full of possibilities. At the same time the amount of questions is immense. Reform's continuity was evaluated uncertain, and the Russian Railways future actions concerning their affiliated companies are seen troublesome. According to this study the freight wagon usage prices will increase in future, wherefore the Russian Railways should be more market oriented, also in freight rates. This would ensure the increment in railway volumes. Russia has own business culture, which has a great influence on future. Railway is said to be "country in country" or "state in state", which delineates the situation rather well. In Western countries future can be predicted from previous actions, but in Russia future is impossible to appraise. Therefore, Russian railway freight market's future is imponderable. Although sector is noted to be full of possibilities, government's further decisions have a great influence on market's tomorrow.

6.2 Limitations and suggestions for future research

Certain limitations should be kept in mind when interpreting the results. Firstly, research findings contemplate only one country, Russia. Albeit findings conform with earlier findings, every country has own characteristics which might affect on end results. Although research sample consisted of various types of organizations and market actors, their sentiment might not represent the whole market's thoughts. All interviewed professionals were located in St. Petersburg or Moscow, no Siberian or other organizations from distant location were included. This might affect on certain factors. Though from four organizations were met more than one representative, the majority of the standpoints are given by one person. Due to the fact all interviewees were males and managers or in such a position, this might have an effect on the results. Secondly, research is concentrated on railway freight market, passenger traffic is excluded from this study. Thirdly, because study's main objective was to study railway freight market as an aggregate, research concentrated on market based view instead of resource-based view. Although resource-based view was basically noted to investigate incorrect factors concerning this certain research, some minor factors were concerned while accumulating information.

Research's reliability was confirmed by recording all interviews. This ensured the information was available for further re-checks if something seemed unclear. Because the research was theme-interview where only the main themes are scripted, interviewer's way to act might have an impact on the results. Because the results confirmed the earlier studies based on literature analyses, we can conclude the research's reliability is good. Additionally, careful description of the analyzing process increases the reliability. Validity was confirmed by utilizing the same questionnaire base than in previous study. Therefore we can state the research's validity is good.

Because research concentrated on market based view, repeating study utilizing resource-based view could unfold new insights. Furthermore, including various types of market actors (wagon producers, all types of railway undertakings) to the research could provide interesting perspective to Russian railway freight market.

Although research results confirm the previous findings and therefore can be considered reliable, a more extensive research concentrating on the same market area could unfold more information. Additionally, research could include comments from various actors inside a railway undertaking. Traffic coordinator might have a totally different opinion for example concerning the customers' demands than managers.

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Railway Traffic Deregulation in Russia

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Goals of the tariff reform

The tariff policy in the field of railway transport is one of the most important tasks in economic life of the country. Basically, the tariffs are not only payments and gathering, taken for transportations and transport services, but also rules of their calculation.

At the present stage Russia tariff system have to be reformed. And a great amount of discussion is held on pages of RZD-Partner magazine and at meetings at JSC RZD. Some goals of this reform are:

- Simplification of tariff system, maintenance of transparency and understanding for users and for executors of transportation process.
- Realization of uniform system of formation of the profit depending on a capital intensity and laboriousness of transportations and services.
- Realization of transition at formation of tariffs and calculation of tariff rates from present priorities (wagon and distance) to new priorities (delivery and time of delivery)
- Differentiation of a tariff levels with taking into account objective conditions and factors.
- To enter as the basic concept "delivery" and to strengthen the tariff importance of parameter "time of delivery".

Principles of Formation of Railway Rates in Russia

Nowadays formation of a tariff in Russia uses two approaches: cost-based pricing providing a covering of operational expenses, investment costs, and marketing principle, taking into account "solvency" of transport consumers.

Let's consider each of these methods separately.

Cost-based pricing means, that the basis of the tariff are the cost of transportation of cargoes. Tariff is calculated under the formula mainly:

$$(1) \Pi = A + B \times L,$$

Where,

A - a payment for start-final operations, rubles

B - the rate for movement operations, established in view of loading the car, distance of transportation, rubles.

L - average "zone" distance, km

The following operations and services are in a tariff part of start-final operations:

- The notice on arrival of cargoes
- Operating repair of empty cars of the park of RZD by preparation them for loading
- Maintenance and service of wagons
- Maintenance and service of containers of the RZD-park
- Examination of wagons of the RZD-park in the technical and commercial attitude
- Preparation tank-wagons for loading
- Preparing for departure and distribution of cargoes, registration of transportation documents
- Shunting work for forming of trains of various categories
- Technological operations with containers.

or profit of transportations the tariff includes the certain profit level which is incorporated in rates for operations.

The marketing approach means differentiation of tariffs depending on several factors:

1. Solvency of a client.

All cargoes are broken into 3 tariff classes (75 groups):

- 1 class - mass cargoes and raw material
- 2 class - mineral oil, food
- 3 class - goods.

For each class the correction factor is established.

2. Type of wagons

Tariffs are calculated separately for the universal, specialized cars, and also transporters.

3. Wagons and containers property

All wagons are divided into general park (RZD-owned wagons) and park of private operators. This condition allows to develop institute of operator as division of the tariff on wagons (15%) and infrastructural (85 %) shares, that stimulates development of a competition, and consignors of goods can choose between services of RZD and independent operators.

4. a category of deliveries

Categories of deliveries depending on a unit of account used for the given deliveries payments. Car deliveries mean that a payment collected for

transportation of the car. Prominent feature *of fine* sending is that the payment is raised for weight of sending. The payment for transportation *of a rail rolling stock* is defined on the basis of run of each axis of a rolling stock.

5. Sphere of application

“*Blanket*” tariffs operate for the cargoes transported on territory of Russia. *Exclusive* tariffs are applied for the big volumes and stability of transportations in the certain direction and for the given distance, for cargoes transportation in a steady empty direction, for cargoes in so-called “consignor block-trains”. Reduced rates are established for some periods of time: for example, seasonal transportation of a crop. Special group of tariffs are contractual which represent group of tariffs with fixed extra charges to “blanket” tariffs.

Considering the principles described above and basing on methodology of market pricing with reference to working legal and economic conditions, tariff is calculated under the formula:

$$(2) \Pi = W \times Q \times L \times k_{\text{попр}} \times k_{\text{инд}},$$

Where,

W - the rate, rubles for 10 ton-kms

Q - Weight of a cargo, kg

L - Distance, km

$k_{\text{попр}}$ - correction factor

$k_{\text{инд}}$ - the factor of indexation which is taking into account solvency of manufacturers, a direction of transportation, and also export orientation of industries.

The Normative Documents Regulating a Tariff Policy in Russia

Depending on a kind of the transportation (internal, international, transit) the payment for rail transportation inside country is estimated in conformity with “Price-list 10-01” or for export-import and transit transportations with “Tariff policy of railways of the state-participants of the CIS-countries”.

International Transportations of Cargo by Railways

In the interstate message the tariff is adjusted by system of tariff manuals:

1. Tariff manual № 1 (the Price-list 10-01 “Tariffs for transportations and the services of an infrastructure which are carried out by the Russian railways”),
2. Tariff manual №2 (Rules of application of rates of a payment for using of wagons and containers of the Federal railway transportation)
3. Tariff manual №3 (Rules of application of gathering for the additional operations connected to transportation of cargoes on the Federal railway transportation).

The tariff manual № 2 defines a payment for using cars and containers, and also the order of calculation and the size of such kinds of gathering, as gathering for default of the application, gathering for application of special conditions of transportation, gathering for realization of technical study and consultation and other gathering.

The tariff manual № 3 defines rules of application of gathering for the additional operations connected to transportation of cargoes on a federal railway transportation.

The tariff manual № 1 is the basic document at calculation payments and consists of 2 parts: the first part is devoted to rules of application of tariffs, and the second contains calculation tables of payments for transportation.

The first part includes three units and some appendices. Section 2 of a tariff manual adjusts the transportation with participation of several railroads and multimodal transportations with participation of other types of transport where the following procedures of payments are described:

1. On the Tariff Manual № 4 the tariff distance is defined
2. The kind of deliveries, type and a ownership of the car, the container, the locomotive are established.
3. Position for cargo, a tariff class of a cargo are defined.
4. Number of the tariff circuit and correction factors are defined
5. Under calculation tables the payment is defined.

In other cases the payment is estimated as the sum of a payment for use of an infrastructure and locomotives RZD and payments for use of cars of the general park, increased on correction factor.

Tariff circuits are divided into big groups for next cargoes:

1. Cargoes in universal wagons
2. Cargoes in own or rented universal containers.
3. Empty own or rented universal containers
4. Cargoes in specialized containers
5. Bulky cargoes
6. Dangerous cargoes
7. Small deliveries
8. A rolling stock on the axes.

In addition to section 2 of the Tariff Manual №1 in the appendix №6 gathering and payments are established:

The Payment for travel of a conductor in cargo or in the separate wagon depending on distance

Gathering for the declared value of the cargo.

The Payment for transportation in the accelerated container train.

The payment for transportation on the Russian railways export and import cargoes in the direct international transportations, in the indirect international transportation through boundary transfer stations of the Russian Federation (except for transit) is defined by section 3 "Price-list 10-01", which contains payments rates (are accepted in roubles and rates of additional gathering, rules of calculation transportation payments are incorporated into tariff circuits 116-133).

Correction factors are applied to the given rates:

- Factor on transportation of mass cargoes
- Factor depending on a kind of the message, a direction, range
- Factor depending on directions and conditions of transportation

Changes in section 2 and 3 Tariff Manuals № 1, brought by indexation of tariffs, allow to react to a situation developing in the transport market in due time.

International Transportations of Cargoes through the Territory of Russia

The procedure of payments of tariff rates on transportations of cargoes in the international transportation is described in the Tariff Policy of Railways of CIS-countries (TP) on the basis of, which International railway transit tariff (ИРТТ) and Uniform transit tariff (УТТ) are developed.

TP was signed between administrations of railways with a view of the coordinated application of tariffs and definition of principles of their formation within the limits of countries - participants. TP affirms for each Statute year at tariff conferences not less than for 2 months prior to the beginning of one year. TP includes some sections. Section 1 defines sphere of action and a rule of application. Section 2 defines the procedure of payments of rates for transit transportations from the third countries in the third countries. Section 3 defines the procedure of payments of rates for transportations of cargoes in/from the countries of the CIS and the Estonian Republic in/from the third countries, and also between stations of railways - participants of the Tariff agreement. Also in TP enters the section devoted to additional gathering.

TP defines application of base rates of a payment for transportations on the basis of rates of transit tariffs:

- Uniform transit tariff (ETT) – by transportation cargoes transit to China, Vietnam, Mongolia (and from these countries).
- International transit tariff (MTT) – in other cases.

Additional factors and the indexes are applied to the rates of transit tariffs depending on range of transportations, weights of deliveries, ownership of car, carrying capacity of the container, number of cars in refrigerator section, belonging of a cargo to mass directions of transportation.

TP provides application of the following additional gathering:

- Gathering for an overload of a cargo in cars of other track
- Gathering for rearrangement of cars on carriages of other track
- Gathering for customs inspection of a cargo along the line
- Gathering for a ferry of a cargo
- Other kinds of additional gathering

Charge of payments in TP is carried out in US dollars. At recalculation of rates of payments the factor of recalculation of the Swiss francs in US dollars which appears on-line the administrative Office of the Tariff policy not less than for one month prior to the beginning of Statute year is applied.

Basic Conclusions

Addressing to the Russian system of railway tariffs, it is possible to find out imperfection: a level of tariff rates is high, and their parities on the basic structural sections of tariffs does not correspond to real expenses.

For elimination of these disadvantages it is necessary to reconsider the main normative document "Price-list 10-01", in particular to reconsider existing division of cargoes into classes. A basis for revision change of structure and a direction of freight

traffics should be. Today 60 % of cargoes are a raw material. Thus, it is possible to lower risk of unprofitable transportations of mass cargoes of the first class (a wood, oil, coal). As it is necessary to reconsider existing dependence of the tariff on distance of transportation: the concept “the is farther distance, the more favorably transportation works only for users of services of a railway transportation and does not reflect interrelation the income - charge of the railway that does not give an opportunity to receive profit so, and to invest in reconstruction of a rolling stock and an infrastructure. More favorable tariffs for transportations of

cargoes for a long distance stimulate occurrence of irrational transportations (for example, counter transportations of an empty rolling stock).

It is possible to allocate a number of decisions of these problems:

1. To strengthen the importance of factors “time of delivery”, “the size of delivery” and a regularity of deliveries.
2. To change methods of definition of cost of services of an infrastructure, wagons and locomotive components.
3. To carry out differentiation of cost of start-final operations depending on conditions of their performance.
4. To remove ineffective tariff mechanisms (tariff classes)
5. To take into account objective distinctions in operating conditions (regional factors, factors of a regularity, and feature of routes).
6. To involve a time principle of definition of tariffs.
7. Allocation of regional and main tariffs and mechanisms of their differentiation.

Due to these measures we will receive flexible, stable system of regulation of the tariffs, distinguished by a high degree of forecasting.

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Future aims and tasks of Russian railways

Future aims and tasks of Russian railways are described in next several documents:

- 1) Program of structural reform at railway transport in Russia. Программа структурной реформы на железнодорожном транспорте в Российской Федерации (утверждена постановлением Правительства Российской Федерации № 384 от 18 мая 2001 г.);
- 2) Aim model of railway transport service market. Целевая модель рынка железнодорожных транспортных услуг (одобрена 16 мая 2007 г. на заседании Правительственной комиссии по вопросам развития промышленности, технологий и транспорта);
- 3) Strategy of railway transport development in Russia till 2030. Стратегия развития железнодорожного транспорта в Российской Федерации до 2030 года (утверждена распоряжением Правительства Российской Федерации от 17 июня 2008 г. № 877-р);
- 4) Transport strategy of Russian Federation to 2030. Транспортная стратегия Российской Федерации на период до 2030 года (утверждена распоряжением Правительства Российской Федерации от 22 ноября 2008 г. №1734-р).

Future prospects

Railway is the leading type of transport in Russia. In foreseeable future there is no alternative to railway transport when transporting large and stable volumes of bulk cargoes to medium and long distances, due to its economically efficient and environmentally safe nature. Furthermore, railway has a strong meaning for passenger transport. The railway transport's ongoing structural transformation radically changes the mechanisms and processes. JSC RZD is in the process of structural reform, which affects on all levels of management and all areas of activities. Affiliated companies have changed the management system in order to meet market's requirements, while ensuring the consistency of management and security operations of JSC RZD. Such large scale changes in the leading (and largest) railway company are unique not only in domestic, but also in international extent. Reform influences not only railway but all transport modes; furthermore, reform influences on scientific basis of railway operations with determination of new aims, objectives and strategies of transport by building new structure of whole transport market –and also

the main railway company, JSC RZD. The reform is unique not only practically; moreover, it requires scientific contribution in order to ensure the progress of new railway structure, adequate to modern conditions of global transport market.

The objective of innovative development of JSC RZD is to achieve the parameters of economic efficiency, ecological and functional safety and stability in the domestic railway transport; this is also defined in the Transport Strategy of the Russian Federation and the development strategy of JSC RZD. Development strategy of railway transport and achievement of conceptual goals of JSC RZD are connected with successful decision of the following tasks:

- Increase the efficiency of RZD and achieve high market capitalization of the holding on the basis of newest management tools and approaches, technologies and equipment of the transportation process, and the creation of fundamentally new forms of integrated customer service
- Achieve the level of productivity corresponding to the world's best indicators in railway transport, including effective personnel management policy
- To ensure sound interaction with other modes of transport based on logistics principles in organizing railway transport's role
- Providing transport access points resources and industrial growth, as well as work places, recreation, medical care, education and national cultural values for the Russian citizens
- Align the quality level of transport services and traffic safety in conformity with the requirements of the population and the economy, and the best international standards
- Provide deep integration into the global transport system
- Maintain high level of readiness concerning the emergency situations, that meet the requirements of defense and safety of the country
- Increase the investment attractiveness of railway transport
- Reduce transport emissions and the load to environment

Due to these circumstances, by implementing high labor standards the labor productivity will increase and JSC RZD will attract knowledgeable employees.

Time, date and duration of interviews

	Time and date	Duration (minutes)
Person 1 + 2	4.11.2009 at 13.00	126
Person 3	11.11.2009 at 12.15	51
Person 4 + 5	22.12.2009 at 14.00	94
Person 6 + 7	22.12.2009 at 16.00	102
Person 8	11.1.2010 at 15.30	around 90, not recorded
Person 9	12.1.2010 at 9.00	106
Person 10	15.1.2010 at 10.00	105
Person 11	27.1.2010 at 13.00	46
Person 12	28.1.2010 at 16.00	47
Person 13 + 14	29.1.2010 at 11.00	49
Person 15	25.2.2010 at 9.00	88

Main Results

	Company A	Company B	Company C	Company D
Peculiarities	RU amount and influence Tariff's complexity Importance of cooperation Market size, variety of products Rolling stocks' ownership structure Certain destinations only by railway	Market personified to few persons Close linkage with politics	Cooperation Political background Market's size Safety issues Functionality & reliability	Reliability Cooperation Cooperation important Unexpected market
Market entry barriers	Needed knowhow Rolling stock registration Tonnages	Rolling stock registration	Rolling stock Bureaucracy Needed investments	Rolling stock
Problems	Shipments' unforeseeable nature Shortage of rolling stock FIN / RU trade imbalance	Reform process Inside RZD various reforms Amount of contracts with RZD	Infrastructure could be in better condition	Lack of suitable wagons Development of wagons
Positive matters	Market's size	Market is full of possibilities	Knowhow Educated personnel Good relationships with authorities	Large volumes Reliability
Knowhow	Good; tacit knowhow! Education important	Good; academic degree	Good!	Good partners
Cooperation	Close	OK	Close	Good
Future	Hard to estimate; changes are expected	Several possibilities to companies	What kind of framework is given to private RU?	Will cost efficiency increase?
Intramodal competition	Yes	Yes	Yes	Yes
Intermodal competition	Yes	Yes	Yes	Yes

Main Results

	Company E	Company F	Company G	Company H
Peculiarities	Exiguous cooperation Importance of relationships Problems are discussed only with big clients FIN transit, RU more stable Strong political control	Market's functionality & size Relocation of rolling stock Personal relationships Openness, transparency	Transparency Cooperation Strong support	Reliability Importance of relationships FIN payment afterwards, RU beforehand Political & economical importance
Market entry barriers	Rolling stock	Required capital (financial and knowhow)	Rolling stock	Closed market (intl' undertakings) Rolling stock certification
Problems	Network's size, no possibility to invest enough	Injustice in accessing the resources	Low price level Decrease in amount of lines	Tariff system Lack of terminal & distribution services
Positive matters	Government's support to railways	Transparent tariff system	Possibility to transport countrywide	Functionality / reliability
Knowhow	Good	University + railway degrees High average age	Good!	Tacit knowledge Education Strong professional skills
Cooperation	Close	Close, good	Warm and friendly	Close
Future	Unknown; depends on laws and contracts	Market's gradual change	Low price level in road transport is problem	Establishment of logistics centres Natural gas locomotive
Intramodal competition	Strong between large companies	Not hard; according to theory	Yes; less than before	Yes
Intermodal competition	1000+ km no, otherwise yes	Significant	Yes	Yes

Main Results

	Company I	Company J	Company K	Company L
Peculiarities	Size Contract policy FIN payment afterwards, RU beforehand Relationships	Reliability Personal relationships Close linkage with politics Market's size Size of train of wagons	Direct connections RU divided, FIN one person Tariff system Strong political bond Networking	Close linkage with politics Cooperation Corruption
Market entry barriers	Rolling stock Investments Bureaucracy	Rolling stock Bureaucracy	Rolling stock Bureaucracy	Rolling stock; now easier Finding customer Bureaucracy
Problems	Several "red tape" situations Lack of cooperation	Lack of wagons	Direct contacts → cooperation with RZD	Personnel's attitude Bureaucracy
Positive matters	Several business possibilities	Reliability Functionality	Market size	Cost efficiency Profit decreased, customer service increased
Knowhow	Really skilled personnel	Good	High education level	Specialized personnel
Cooperation	Good	Important, good	Close	Good
Future	Reform's continuity uncertain	Russian railways is highly needed	How reform continues?	Ambiguous how reform continues?
Intramodal comp.	Yes	Yes	Yes	Yes
Intermodal comp.	Yes	Yes	Yes	Yes

Tuesday, January 12, 2010
Kouvola, Finland

Dear recipient

Research project "Russian railway freight market's competition situation in the near future"

Due to European Union legislative requirements the railway freight traffic was deregulated in the beginning of the year 2007. Since, new railway undertakings have had a possibility to apply for licenses to European Union member countries. Despite of market liberalization, in Finland the only operator is governmental VR (except for paper industry's internal transfers). One of Finland's national peculiarities is a long border with Russia, which affects on Russia's big role as Finland's trading partner and direction of logistics flows. The railway freight traffic's deregulation does not concern the transit traffic, which continues to be under governmental operators' monopoly.

The European Union aims to transfer transport from road to sea and railway via various projects. Similarly, the Russian government has shown willingness towards changes, for example by restricting container deliveries by road. Therefore, understanding the Russian railway freight transport market is a key for success and challenges. One of the peculiarities in the market has been owning and leasing wagons, which has been a growing area of business in Russia since 1995. Today several European undertakings have share in the business. Piecemeal and even small-scale changes in Russian price system can change the wagon proprietary significantly (in oil and chemistry products over 60 % are owned by private undertakings, in other freight groups the figures are smaller, alike discounts to private undertakings' tractions).

Research is done jointly with Lappeenranta University of Technology, Kouvola Unit, Finland and the Finnish Rail Administration. The main intention is to chart current situation in the Russian railway freight traffic, concentrating on the Russian railway freight markets peculiarities. Research is conducted by interviewing undertakings operating in the Finnish and Russian market, mainly concentrating on wagon leaseholders. Furthermore, the future challenges and possibilities are investigated, mainly through transport policy and legislation (by interviewing industry's experts, for example professors). The academic advisor is Prof. Olli-Pekka Hilmola from Lappeenranta University of Technology, Kouvola Unit as well as Director Miika Mäkitalo from Finnish Rail Administration. Additionally, into the research is attached Lappeenranta University of Technology, Kouvola Unit's own academic interests, concentrating on railway freight deregulation.

The interviews will be conducted during January 2010. The interview takes one to two hours. I would appreciate to receive Your confirmation of interest via e-mail to address milla.laisi@lut.fi. Thereafter we can arrange a meeting for an interview.

Sincerely Yours,



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Вторник, 12 январь 2010
Коуволла, Финляндия

Уважаемый Получатель

Исследовательский проект «Конкурентная ситуация на Российском рынке железнодорожных грузоперевозок в ближайшем будущем».

В соответствии с вступившим в силу в 2007 году законодательством Европейского Союза произошла отмена государственного регулирования железнодорожных грузоперевозок. В связи с чем, новые участники рынка получили возможность приобретать лицензии на осуществление деятельности в странах Евросоюза. Несмотря на либерализацию рынка, единственным оператором в Финляндии по-прежнему остается государственный концерн VR (за исключением внутренних перевозок компаний целлюлозно-бумажной промышленности).

Одна из особенностей Финляндии – протяженная граница с Россией, что сделало традиционным сотрудничество в сфере логистики. Особенно примечательно, что отмена регулирования не коснулась транзитных перевозок, все еще находящихся в монополии государства. Следовательно, понимание механизмов деятельности Российского рынка железнодорожных грузоперевозок является ключом к успеху в будущей конкурентной борьбе. Приобретение в собственность и так называемый лизинг вагонов является растущей сферой деятельности в России уже с 1995 года. На настоящий момент некоторые Европейские операторы уже участвуют в этом бизнесе. Постепенные и пусть даже небольшие изменения в Российской ценовой политике на этом рынке способны значительно поменять структуру собственности вагонов (в нефтяной и химических отраслях более 60% находятся в собственности частных операторов, в других товарных группах эти показатели ниже, также как меньше и размер скидок на использование локомотивов частным операторам).

Исследование проводится совместно Лаппеенрантским Технологическим Университетом, Исследовательским Центром г. Коуволла, Финляндия и Администрацией Железных Дорог Финляндии. Основная цель – определить сегодняшнюю ситуацию в сфере железнодорожных грузоперевозок в России, обращая особое внимание на специфику рынка грузоперевозок. Исследование проводится посредством интервьюирования операторов на рынках Финляндии и России, с основным фокусом на арендаторов подвижного состава. Более того, изучаются будущие вызовы и возможности посредством анализа транспортной политики и законодательства (для этого будут проведены интервью с экспертами в данной отрасли). Академическим руководителем исследования является Профессор, Др. Олли-Пэкса Хилмола, из Лаппеенрантского Технологического Университета, Исследовательского Центра г. Коуволла и Др. Миика Мякитало,

руководитель Администрации Железных Дорог Финляндии. Кроме того, данное исследование проводится в соответствии с собственными академическими интересами в области либерализации железнодорожных грузоперевозок Исследовательского Центра г.Коуволла, Лаппеенрантского Технологического Университета.

Интервью будут проводиться в январе 2010 года. Продолжительности интервью планируется в диапазоне 1-2 часов. Мы будем очень признательны, если Вы сможете принять участие в интервью и сообщите о своей заинтересованности по электронной почте milla.laisi@lut.fi. После чего мы сможем договориться о встрече для проведения интервью.

С уважением,



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Perjantai, Tammikuu 22, 2010
Kouvola, Suomi

Arvoisa vastaanottaja

Tutkimusprojekti ”Venäjän rautatierahtimarkkinoiden kilpailutilanne lähitulevaisuudessa”

Euroopan Unionin rautatierahtiliikenne vapautettiin vuoden 2007 alusta, jonka jälkeen uudet toimijat ovat voineet hakea toimilupia EU-jäsenmaihin. Huolimatta kilpailun vapautumisesta, Suomessa rautatierahtia operoi vain valtionyhtiö VR (lukuun ottamatta metsäyhtiöiden joidenkin tehtaiden sisäisiä raaka-aine- ja lopputuotesiirtoja). Suomen erityisenä tunnuspiirteenä on pitkä raja Venäjän kanssa, mikä näkyy myös Venäjän suurena roolina Suomen kauppakumppanina ja logistiikan virtojen suuntana. Unionin rahtiliikenteen vapautuminen ei koske maiden välistä yhdysliikennettä, vaan tämä jatkuu valtiollisten yritysten yksinoikeutena. Euroopan Unioni useiden hankkeiden muodossa pyrkii siirtämään kuljetuksia kumipyöriltä meri- ja rautateille. Myös Venäjän johto on ilmaissut halukkuutensa muuttaa tämänhetkistä tilannetta esimerkiksi rajoittamalla konttien toimituksia maanteitse. Tästä johtuen Venäjän rautatierahtimarkkinan ymmärtäminen on avain tulevaisuuden mahdollisuuksiin ja haasteisiin. Yksi Venäjän markkinan erityispiirteistä on ollut vaunujen omistaminen ja nk. leasing-toiminta, joka on ollut kasvava liiketoiminta-alue 90-luvun puolivälistä lähtien. Nykyisin useat eurooppalaisetkin yritykset ovat mukana tässä liiketoiminnassa. Asteittaisetkin ja pienet muutokset Venäjän omissa hintajärjestelmissä rautatierahtimarkkinoilla voivat muuttaa vaunukannan omistusta merkittävästi (öljy ja kemiantuotteissa jo yli 60 % on yksityisten organisaatioiden omistamia, muissa rahtiryhmissä luvut paljon pienempiä, kuten myös rahtialennukset yksityisomisteisille vaunuvedoille).

Tutkimus tehdään yhteistyössä Lappeenrannan teknillisen yliopiston Kouvolan yksikön sekä Ratahallintokeskuksen kanssa. Tutkimuksen tavoitteena on kartoittaa Venäjän rautatierahtiliikenteen tämän päivän tilannetta, pääpainon ollessa Venäjän rautatierahtimarkkinan ominaispiirteissä. Tutkimus toteutetaan haastatteleamalla markkinoilla toimivia yrityksiä sekä Suomesta että Venäjältä, pääasiallisena lähtökohtana nk. vaununvuokraajat. Lisäksi tutkimuksessa selvitetään tulevaisuuden mahdollisuuksia sekä haasteita, lähinnä kuljetuspolitiikan ja -lainsäädännön kautta (haastatellen toimialan asiantuntijoita, esim. alan professoreita). Työn akateemisena ohjaajana toimii professori, Olli-Pekka Hilmola Lappeenrannan teknillisen yliopiston Kouvolan yksiköstä sekä liikennejohtaja Miika Mäkitalo Ratahallintokeskuksesta. Tutkimusprojektiin liitetään myös Lappeenrannan teknillisen yliopiston Kouvolan yksikön omia akateemisia tutkimusintressejä, jotka liittyvät rautatierahtimarkkinoiden vapautumiseen.

Haastattelut toteutetaan tammi - helmikuussa 2010. Haastattelu kestää tunnista kahteen tuntiin. Olisimme kiitollisia jos voisitte vahvistaa kiinnostuksenne tutkimustamme kohtaan sähköpostitse osoitteeseen milla.laisi@lut.fi. Tämän jälkeen voimme sopia tarkemmasta haastatteluajankohdasta.

Yhteistyöterveisin,



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THE SEMI-STRUCTURED QUESTIONNAIRE

COMPANY BACKGROUND

- History
- Organizational chart
- The knowledge of Russian railway freight market and issues related to market entry before actually entering the markets

ENTERING THE MARKETS

- Before entering the markets
 - Why company decided to start operations in Russia?
 - What kind of preliminary preparations were made?
 - Where you gathered information concerning the market entry?
 - Did you have rolling stock / other needed infrastructure (warehouses, terminals)? How you organized it?
 - Where you purchased rolling stock?
 - new / second-hand
 - How many units your company owned in the beginning?
 - Where you gathered the personnel?
 - Previous experience in railway operations
 - Company's qualifications for staff members
 - Training
 - Did you have collaboration with other freight operators, especially with governmentally owned companies?
 - How other actors in the market took your market entry?
 - How the governmental institutions took your market entry? (For example matters related to needed documents, licenses etc.)
- Entering the markets
 - What kind of expectations you had before entering the markets? Did the expectations come true?
 - How you entered the markets? Were certain strategies used?
 - What kind of problems or difficulties you faced when entering the markets?
 - Especially the role of governmental organizations in safety certificate and operating license + rolling stock approval + capacity allocation
 - Kindly describe the main market entry barriers
 - What kind of positive matters you faced when entering the markets?

Appendix 7 / 2 (3)

- Resources, employees' skills and certificates requested by governmental authorities
- Did you have collaboration with other freight operators, especially with governmentally owned companies?
- Kindly describe cooperation with
 - TransContainer
 - First Cargo Company
 - Overall with RZD
- Did your company have a ready clientele?
- The situation today
 - Kindly name the company's strengths and weaknesses
 - What are the main problems you are facing?
 - Has the Russian market's pricing policy changed during the years?
 - Has the cooperation with customers changed during the years? If yes, how?
 - Do you offer services only to certain customers or are all companies accepted?
 - Do customers ask for door-to-door services?
 - Do you have collaboration with other freight operators?
 - Kindly describe cooperation with
 - TransContainer
 - First Cargo Company
 - Overall with RZD
- Future
 - Do you think some improvements are needed? If yes, what kind of improvements?
 - Innovations
 - Future prospects; collaboration with other freight operators, especially with governmentally owned companies?

INFRASTRUCTURE

- Cost distribution / access charge
- Kindly describe the Russian railway network (condition, extent, functionality)

RUSSIAN RAILWAY FREIGHT MARKET

- Kindly describe the Russian railway freight market
 - Main differences to Finland
 - National peculiarities
 - Major surprises
- Did the European Union railway freight market deregulation affect the Russian market?
- Cooperation with
 - First Cargo Company / Transcontainer / RZD
- How smoothly tractions are organized?
- Russian railway freight market's transparency / objectivity
 - functionality of
 - ministry
 - infrastructure
 - market requisite
 - government (needed documents)
- Competition
 - Intramodal competition
 - Intermodal competition
 - Amount of operators in Russian railway freight market
 - Is someone dominating the market?
 - Do companies use marketing as competitive weapon?
 - Do companies launch new products / services?
 - What do you think about Second Cargo Company's decision to enter the market? Will it change the competitive combination? If yes, how?
- Changes in the tariff system during the years
 - Has the price structure changed? If yes, how?
- Customer relationships
 - Customers' demands
 - Contract lengths
 - Cooperation's extent
 - Is customer service seen important?
 - Customers' knowledge about the market and its structure
 - Environmental questions
- Railway freight market's future in Russia

EUROPEAN UNION

- Has the European Union affected on your business? If yes, how?
- What kind of possibilities / problems EU creates to the market?

KYSYMYSLOMAKE –VERA (yritykset)

1. Yrityksen tausta

- Historia
- Organisaatiokaavio
- Tietotaito Venäjän markkinoista ennen markkinalle tuloa

2. Markkinoille tuleminen

- Ennen markkinalle tuloa
 - Miksi yritys aloitti Venäjän toiminnot?
 - Minkälaisia ennakkovalmisteluita tehtiin?
 - Mistä keräsitte tietoa markkinasta?
 - Omistiko yrityksenne kalustoa / terminaaleja, varastoja?
 - Mistä kalusto hankittiin?
 - Uutta / käytettyä
 - Määrät
 - Henkilökunnan tausta
 - Kokemus markkinasta
 - Koulutus
 - Yrityksenne vaatimukset henkilöstölle
 - Oliko yrityksellänne yhteistyötä muiden alalla toimivien yritysten kanssa?
 - Miten markkinoiden muut toimijat suhtautuivat markkinoille tuloonne?
 - Miten valtion elimet mielestänne suhtautuivat markkinoille tuloonne? (Esim. asiat liittyen lisensseihin, tarvittaviin dokumentteihin jne.)
- Markkinalle tulo
 - Minkälaisia odotuksia teillä oli ennen markkinalle tuloa? Täyttyivätkö odotukset?
 - Käytittekö tietynlaista markkinoille tulostrategiaa? Jos kyllä, mitä?
 - Minkälaisia ongelmia / vaikeuksia kohtasitte?
 - Kalusto, vaadittavat todistukset
 - Kuvailekaa suurimmat markkinoille tulon esteet
 - Minkälaisia positiivisia asioita kohtasitte toiminnan alussa?
 -
 - Oliko yrityksellänne yhteistyötä muiden alalla toimivien yritysten kanssa?
 - Kuvailekaa yhteistyötä
 - TransContainerin kanssa
 - First Cargo Companyn kanssa

- Kokonaisuudessaan RZD:n kanssa
 - Oliko yrityksellänne asiakkaat valmiina?
- Tilanne tänään
 - Yrityksen vahvuudet ja heikkoudet
 - Pääongelmat
 - Onko markkinan hinnoittelurakenne muuttunut vuosien saatossa?
 - Onko yhteistyö asiakkaiden kanssa muuttunut vuosien aikana? Jos kyllä, miten?
 - Oletteko erikoistuneet tiettyjen asiakkaiden kuljetuksiin vai tarjoatteko palveluita kaikille niitä tarvitseville?
 - Vaativatko asiakkaat kokonaisratkaisuja? (esim. door-to-door – kuljetukset)
 - Onko yrityksellänne yhteistyötä muiden alalla toimivien yritysten kanssa?
 - Kuvailkaa tämän päivän yhteistyötä
 - TransContainerin kanssa
 - First Cargo Companyn kanssa
 - Kokonaisuudessaan RZD:n kanssa
- Tulevaisuuden näkymät
 - Miten yrityksenne voisi parantaa palveluitaan / toimintojaan?
 - Innovaatiot
 - Uskotteko että yhteistyö valtion omistamien yritysten kanssa muuttuu? Jos kyllä, miten?

3. *Infrastrukturi*

- Kulurakenne (radankäyttömaksut yms.)
- Kuvailkaa Venäjän rataverkkoa (kunto, laajuus, toimivuus)

4. *Venäjän rautatierahtimarkkinat*

- Kuvailkaa Venäjän rautatierahtimarkkinaa
 - Pääerot Suomeen
 - Erityispiirteet
 - Suurimmat yllätykset
- Oliko Euroopan maiden markkinoiden vapautumisella vaikutusta Venäjän markkinaan?
- Yhteistyö First Cargo Companyn / Transcontainerin / RZD:n kanssa
 - Onko teillä ollut ongelmia saada vetoja järjestymään haluamallanne tavalla?
- Rautatierahtimarkkinan läpinäkyvyys / oikeudenmukaisuus
- Miten voitte kuvailla seuraavien toimielinten toimintaa Venäjällä?
 - Ministeriöt
 - Valtio (tarvittavat dokumentit, lisenssit yms.)
- Kilpailu
 - Markkinan sisäinen kilpailu
 - Kuljetusmuotojen välinen kilpailu
 - Kilpailevien yritysten lukumäärä Venäjällä

- Dominoiko joku / jotkut markkinaa?
 - Käytetäänkö markkinointia kilpailukeinona?
 - Esittelevätkö yritykset uusia tuotteita / palveluita?
 - Miten koette Second Cargo Companyn pyrkimykset tulla markkinoille?
 - Tuleeko muuttamaan kilpailuasetelmaa? Jos kyllä, miten?
- Tariffijärjestelmän muutokset vuosien saatossa
 - Onko hintarakenne muuttunut? Jos kyllä, miten?
- Asiakassuhteet
 - Asiakkaiden vaatimukset
 - Sopimusten pituus
 - Yhteistyön laajuus
 - Koetaanko asiakaspalvelu tärkeäksi?
 - Asiakkaiden tietotaito markkinasta ja sen rakenteesta
 - Ympäristökysymykset?
- Alan tulevaisuus

5. *Euroopan unioni*

- Onko EU:lla ollut vaikutusta toimintaan? Jos kyllä, miten?
- Minkälaisia mahdollisuuksia / ongelmia EU mielestänne luo markkinoille?

Interviewees

Chernichkin, Vladimir
Gladilin, Vyacheslav
Ivanov, Mikhail
Kazakov, Alexander
Kervinen, Jorma
Korovyakovsky, Eugene
Laakkonen, Anssi
Minkkinen, Päivi
Multaharju, Sirpa
Oikarinen, Erkki
Poltavtsev, Artur
Rybin, Petr
Salonen, Alpo
Simushkov, Andrey
Alexey

Transcontainer
Huolintakeskus
Eurosib
UPM Kymmene Russia
Huolintakeskus
PSTU, Russia
EKE-Yhtiöt
VR
Nurminen Cargo
UPM Kymmene
Nurminen Cargo
PSTU, Russia
Lahti Energia
Russian Railways
Russian Railways

Interpreters

Korovyakovsky, Eugene
Simushkov, Andrey

PSTU, Russia
Russian Railways

Contacted undertakings and organizations

Undertaking / organization	Location	Webpage
Baltica Trans	St. Petersburg	http://baltica-trans.ru
EKE Group	Moscow	www.eke.com
Eurosib	St. Petersburg	www.eurosib.biz/eng/index.html
Globaltrans	St. Petersburg	www.globaltrans.ru
Huolintakeskus	St. Petersburg	www.nurminenlogistics.com
Lahti Energia	Lahti	www.lahtienergia.fi
MIIT	Moscow	www.miit.ru
Nurminen Cargo	Imatra	www.nurminenlogistics.com
Oteko	Moscow	www.oteko.com
PSTU	St. Petersburg	www.pgups.ru
Stora Enso	Helsinki	www.storaenso.com
Transcontainer	St. Petersburg	www.trcont.ru
Transgarant	Moscow	www.transgarant.ru
UPM Kymmene	Lahti	www.upm.fi
UPM Kymmene Russia	St. Petersburg	www.upm.fi
VR	Helsinki	www.vr.fi
RZD	St. Petersburg	www.rzd.ru

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