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MASTER'S THESIS

POTENTIAL IMPACT OF THE NEW RAILWAY SILK ROUTE ON EURASIAN CARGO TRANSPORTATION: FORWARDERS' PERCEPTION

Supervisor: Professor Olli-Pekka Hilmola
Instructor: D.Sc. (Tech.) Daria Podmetina

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Author: Alena Khaslavskaya
Address: Punkkerikatu 5 A 20, 53850, Lappeenranta, Finland

ABSTRACT

Author:	Alena Khaslavskaya
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Economic downturn has affected Finnish economy, and the country has been seeking ways to improve the situation. Engagement in international trade and transportation naturally affects economies of the involved countries. The Silk Route is one of the emerging transportation initiatives aiming to connect Europe and Asia through railway link, to facilitate trade and establishment of diplomatic and business relations. Thus, engagement in the Silk Route can be beneficial for Finland. Prior studies have provided solid bases for understanding challenges and advantages of Silk Route commissioning. However, most of the studies have generic character, and none of them has focused on potential benefit for Finland. The current research investigates freight forwarders' perception of potential benefit for Finland from developing Silk Route based transportation solutions.

To complete the research, a semi-structured interview was created on the basis of extensive literature review. The themes covered in the interview were related to overall opinion towards the Silk Route initiative, potential demand, clients, types of cargo to be transported, and competition. Totally ten interviews with eight freight forwarding and carrier companies operating in Finland, Russia, Kazakhstan, and China were conducted. The interviews served to collect relevant first-hand information to answer the preliminary formulated research questions. The study has found, that there is increasing demand to transport cargo on the landbridge between China and Europe. More importantly, there have been first container trains sent from Finland to China, which proves demand and possibility to develop the transportation. Promising export cargo categories are forestry products, mining equipment, and sea food. Consolidation hub in Finland for Scandinavia would help to assure volumes for train transportation, which is the only profitable option to execute railway transportation between Finland and China. For import, bigger volumes might be expected from industrial goods. In addition, active marketing of the transportation solution would help to attract more volume to the route. Finland owns sufficient railway and ports infrastructure and has expertise in international railway transportation. Yet the industry players have low awareness about alternative possibilities of transportation market. Despite of the biggest challenge, which is a relatively small economy, there is a potential to benefit from engagement in the Silk Route initiative. The study contribution to international trade theory is the first-hand data collection, that allowed to make conclusions about perceptions and plans of the business players towards developing transportation solutions based on the Silk Route. On top of that, criteria for transportation solution choice have been identified.

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Taloudellinen taantuma on vaikuttanut Suomen talouteen ja maa on etsimässä uusia tapoja parantaa tilannetta. Maiden osallistuminen kansainväliseen kauppaan ja kuljetuksiin vaikuttaa luonnollisesti näiden talouteen. Silkkitie on yksi nousevista kuljetushankkeista. Sen tavoitteena on yhdistää Eurooppa ja Aasia rautatieyhteyden avulla, edistää kaupankäyntiä sekä parantaa diplomaattisia ja liiketoiminnallisia suhteita. Osallistuminen Silkkitiehen voi olla hyödyllistä Suomelle. Aiemmat tutkimukset antavat vahvan pohjan Silkkitien haasteiden ja hyötyjen ymmärtämiselle. Suurin osa näistä tutkimuksista on kuitenkin yleispäteviä, eikä mikään niistä ole keskittynyt Silkkitien hyötyihin Suomelle. Tämä tutkimus selvittää Silkkitiehen liittyvien kuljetusratkaisuiden potentiaalisia hyötyjä Suomelle huolitsijayritysten näkökulmasta.

Tutkimukseen liittyen tehtiin jäsennellyt haastattelukysymykset laajaan kirjallisuustutkimukseen pohjautuen. Haastatteluiden teemat liittyivät yleiseen mielipiteeseen Silkkitie-hankkeesta, potentiaaliseen kysyntään, asiakkaisiin, toimitettaviin tavaratyyppeihin, ja kilpailuun. Yhteensä tehtiin kymmenen haastattelua kahdeksalle Suomessa, Venäjällä, Kazakstanissa, ja Kiinassa toimivalle huolitsija- ja kuljetusyritykselle. Haastattelujen tarkoitus oli kerätä tärkeää ensikäden tietoa vastaamaan muodostettuihin tutkimuskysymyksiin. Tutkimus paljastaa, että on olemassa kasvava tarve kuljettaa tavaraa maitse Kiinan ja Euroopan välillä. Mikä tärkeintä, Suomesta Kiinaan on jo lähetetty ensimmäiset konttijunat, mikä todistaa että kuljetusten kehittämiseen on tarvetta ja mahdollisuuksia. Lupaavia vientikategorioita ovat metsäteollisuuden tuotteet, kaivosteknologia sekä kalat ja äyriäiset. Suomessa sijaitseva Skandinavian lähetyskeskus varmistaisi, että tavaramäärä on riittävä junakuljetuksiin, joka on ainoa taloudellinen tapa rautatiekuljetuksiin Suomen ja Kiinan välillä. Tuonnin osalta suurempia kuljetusmääriä voidaan odottaa teollisuustuotteista. Lisäksi tämän kuljetusratkaisun aktiivinen markkinointi auttaisi houkuttelemaan enemmän rahtia mainitulle reitille. Suomessa on riittävä rautatie- ja satamainfrastruktuuri sekä tietotaitoa kansainvälisistä rautatiekuljetuksista. Tästä huolimatta teollisuuden toimijoilla on vähän tietoa kuljetusmarkkinoiden vaihtoehtoisista mahdollisuuksista. Huolimatta pienehkön talouden aiheuttamasta merkittävästä haasteesta, on Suomen mahdollista hyötyä Silkkitiehankkeeseen osallistumisesta. Tutkimuksen anti kansainvälisen kaupan teoriaan on ensikäden tiedon kerääminen, joka mahdollistaa johtopäätösten tekemisen liike-elämän toimijoiden näkemyksistä ja suunnitelmista Silkkitiehen liittyvien kuljetusratkaisujen kehittämiseksi. Lisäksi tutkimuksessa on tunnistettu kriteerit kuljetusratkaisun valinnalle.

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ABBREVIATIONS

AIIB Asian Infrastructure Investment Bank

CAGE Cultural, Administrative, Geographic, and Economic distances framework

CBP Cross-Border Procedures

EAEUNION, EAEU Eurasian Economic Union

EALT Euro-Asian Transport Links

EU European Union

FDI Foreign Direct Investments

FEU Forty Feet Equivalent

FTEZ Free Trade Economic Zone

LPI Logistic Performance Index

MSR Maritime Silk Road

OBOR One Belt – One Road

OLI-framework – Ownership, Location, and Internalization framework

SPAIID State Program for Accelerated Industrial Innovative Development (Kazakhstan)

SREB Silk Road Economic Belt

TEU Twenty Feet Equivalent

TRACECA Transport Corridor Europe-Caucasus-Asia

UNECE The United Nations Economic Commission for Europe

WTO World Trade Organization

1 INTRODUCTION

The introduction contains research background information and description of the research gap. Research objective, questions and structure are also introduced in the chapter.

1.1 Research background and research gap

The current research studies freight forwarder's perception of the Silk Route initiative. Most important for the research is to understand to what extent, if at all, Finland can benefit from the Silk Route. The results may be valuable for transportation business players, academia, and wide audience interested in the related issues.

The research is conducted in the frame of the project dedicated to railway logistics in interest and with support of the Kouvola research unit of Lappeenranta University of Technology. Ministry of Transport of Finland, Finnish Transportation Agency, Chamber of Commerce, development companies of the regions as well as business community have shown an interest in development of railway-based import and export logistics in Finland. For that together with Scandinavian colleagues and colleagues from Russia, the conversation on making Finland a hub for Scandinavia and attracting more cargo flows to Finland is being held. On the other hand, the Silk Route Economic Belt project initiated by China is meant to facilitate railway connectivity between Europe and China. The initiative is referred as "the Silk Route" further in the text.

Finland is well located geographically to become one of possible points of destination (and point of departure) for the Silk Route. In addition, Finland has sufficient ports and railway infrastructure. However, despite of hard infrastructure, there are many more issues to be considered in order to make a cargo railway service running. Part of responsibility is lying on the business players' shoulders that directly provide logistics services.

The first-hand information is collected from the filed experts, who are directly engaged in international railway cargo transportation and have certain knowledge to comment on perspective and opportunities for Finland to be engaged in the Silk Route transportation. As the research collects information from forwarders of all countries on the way of the route (Finland, Russia, Kazakhstan, and China), the results may be useful to enhance overall knowledge about the market. The report also can be seen as a tool to initiate a dialogue

between forwarders in the countries of the Silk Route. In addition, there is an interest in the topic from academia standpoint. To give an example, Elsevier announced call for paper on the issue related to impact of the One Belt – One Road (OBOR) initiative (Elsevier 2016). Finally, there is also an author's personal engagement of the topic caused by prior professional experience and casual interest. The research is fully independent, and collected information is anonymous.

Literature review is to be conducted preliminary to empirical data collection to maintain a bases for further research and to strengthen the significance of the results. Further, comparison of theoretical and empirical data is to be accomplished. The main outcome of the research is expected to be an understanding of perspective of the Silk Route for Finland from forwarders' standpoint. Another possible outcome would be identifying areas that are needed to be researched more specifically in order to support business community.

The research is positioned within theory of international trade. Trade is understood as a stimuli of transportation development (Krugman 1979; Eaton & Kortum 2002). Trade unions as World Trade Organization (WTO) and Eurasian Economic Union (EAEU) are formed to facilitate international trade (WTO 2016a; EAEUNION 2016). In turn, transportation systems can be seen as tools that ensure international trade. In recent years, there has been a rising interest to improve landbridge connectivity between China and Europe to support Eurasian trade (Jun & Yanyi 2012; Fallon 2015; Fedorenko 2013; Karluk & Karaman 2014). Global trade suffered sharp decline in 2009 followed by fast recovery. Recently, the numbers slowly have been declining. Similar tendency can be noted for Chinese and Finnish trade. Trade in Finland account for 74% of GDP in 2015 compared to 87% in 2008, Chinese – for 41% in 2015 compared to 57% in 2008 and 65% in 2006 (World Bank 2016a). In turn, cargo transportation is grounded on two important bases – infrastructure and service. Countries differ in the level of infrastructure development and quality of service, and need to deliver high standard of both to meet international requirements. The level of development is well assessed by Logistic Performance Index, referred as LPI (World Bank 2016c).

Paramount component of railway transportation is infrastructure. Construction of infrastructure is seen as an essential part of strategies and projects initiated by countries and international organizations aiming to support and facilitate trade (Fedorenko 2013). Chinese

State Bank has invested over 250 billion USD in railway infrastructure in the frame of OBOR projects, and is negotiating investment of over 160 billion USD in constructing over 5000 km of railway tracks in more than 20 countries (Djankov & Miner 2016). The State Program for Accelerated Industrial Innovative Development (SPAIID) of Kazakhstan identifies modernization of railway infrastructure and building new railway tracks and terminals as strategic goals (Karluk & Karaman 2014). In addition, in frame of Transport Corridor Europe-Caucasus-Asia initiative (TRACECA) financed mainly by European Commission, numerous infrastructure projects have been identified and invested (TRACECA 2012). Finland has been discovering opportunities to facilitate connectivity with Asia by developing a Scandinavian hub with support of Ministry of Transport, Finnish Transportation Agency, and Chamber of Commerce. Region development companies as Joensuun Seudun Kehittämisyhtiö Oy and Kouvola Innovation also study the opportunities.

Second, but not less significant component of transportation, is forwarding service (Jun & Yanyi 2012; Regmi & Hanaoka 2012; Peyrouse & Raballand 2016). Bonacich and Hamilton (2011) believe that the logistic providers have one of the key roles in international cargo transportation. Similarly, Regmi and Hanaoka (2012) conclude, that the key factor of successful transportation route performance is cooperation between service providers and clients. Worth to mention, that the continental scale transportation project is of a high political interest, and has stakeholders other than forwarders, too. Governments, state railways and other influential parties affect choice and fate of transportation solutions. Diener (2015) emphasizes that the legal issues are more complicated to solve than construction of physical infrastructure.

Recently the significant attention has been drawn to the OBOR initiative financed by Asian Infrastructure Investment Bank (AIIB). The initiative encompasses over 60 countries in Eurasia and Africa and includes five separate projects dedicated to connecting China with other countries. The projects are represented by landbridge and sea connections. The landbridge corridors are respectively: (1) railway corridor from China to Europe via Kazakhstan and Russia, (2) railway corridor from China to Middle East via Central Asia, (3) link between China Southeast Asia, South Asia, and the Indian Ocean. The other part of the initiative deals with maritime transportation and are represented by (4) maritime connection between China and Europe via the South China Sea and Indian Ocean and

(5) maritime connection between China and the South Pacific Ocean via the South China Sea (Belt and Road Summit 2016). The mentioned routes are depicted on the map (Figure 1). Focus of the current study is on the project (1) among specified.

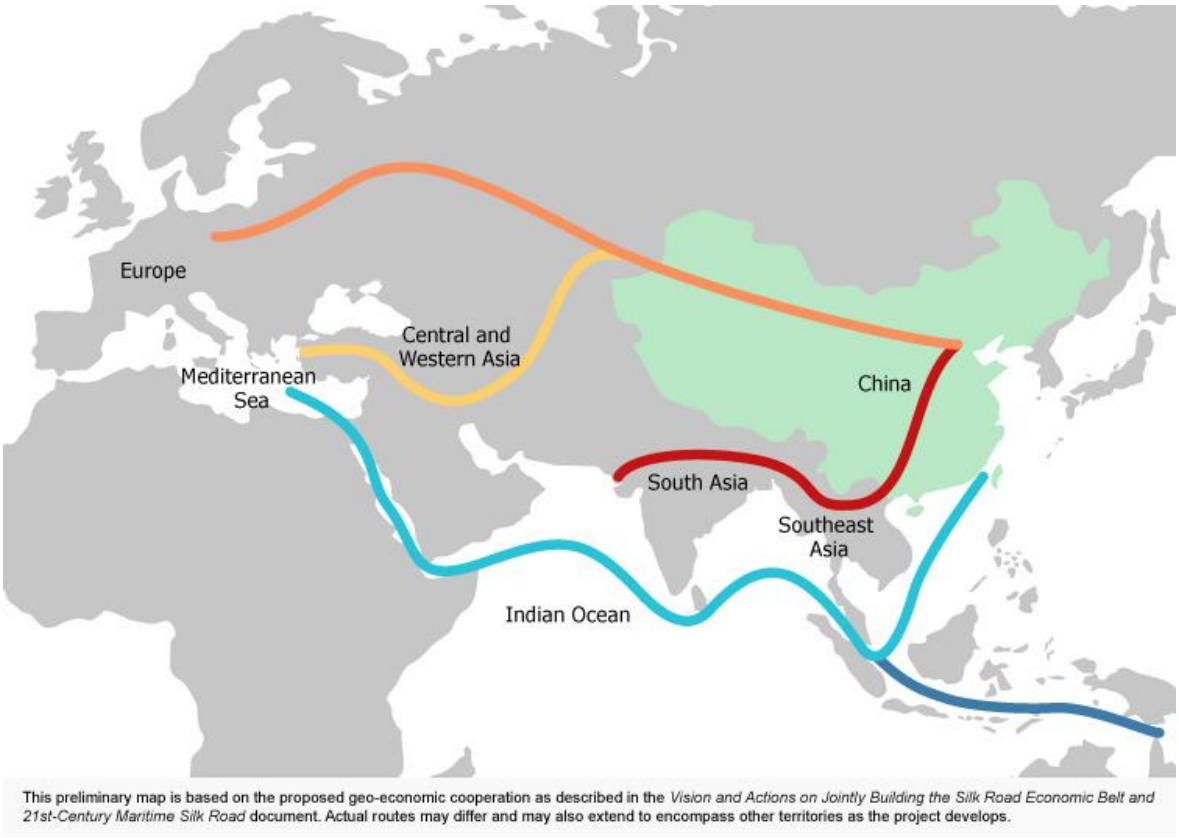

Figure 1. One Belt – One Road connections. Source: Belt and Road 2016

The transportation landbridge corridors are studied in academia in comparison one to another, or separately, often implementing time-cost assessment (Regmi & Hanaoka 2012). The researchers also study modal split and factors influencing choice towards one or another transportation solution (Regmi & Hanaoka 2012; Saeed 2013). In academia, the question of attracting more cargo to railway corridors is also raised (Hilletofth, Lorentz, Savolainen & Hilmola 2007; Wang & Meng 2007; Diener 2015). The OBOR initiative is relatively new phenomenon, it was first proclaimed in September 2013 (Karluk & Karaman 2014). The academia has many topical questions to study. In reviewed literature, reports related to forwarders' perception toward perspective of the Silk Route were not detected, especially in context of Finnish trade. Existing transportation solutions are greatly dependent on internal work of forwarders on calculating costs, maintaining networks, and bringing the product to

market. Thus, it is valuable to understand, what issues and problems the business players identify. Lack of study of forwarders' perception of the Silk Route perspective with focus on Finland's interest formed the basis of the current study. Research gap is illustrated in Table 1.

Table 1. Research gap

<table>
<tr><td colspan="3">International trade theory</td></tr>
<tr><td>Time-cost-distance evaluation (for example, Regmi & Hanaoka 2012);
Competition between modes (for example, Hilletofth et al. 2007);
Capability of seaports and landbridge (for example, Hilletofth et al. 2007);
Political, economic and ideological differences (for example, Fallon 2015; Ferodenko 2013);
Efficiency of alternative routes (for example, Verny & Grigentin 2009);
Environmental impact (for example, Regmi & Hanaoka 2012)</td><td>Silk Route Economic Belt initiative</td><td rowspan="2">Topical perception of actual service providers (Finnish perspective)</td></tr>
<tr><td colspan="2">Existing studies</td></tr>
<tr><td colspan="3">Missing approach</td></tr>
</table>

The study belongs to international trade theory, which is introduced in Chapter 3. The phenomenon of the emerging Silk Route initiative has been studied in academia from different perspectives. For example, Regmi & Hanaoka (2012) refer to time-cost-distance evaluation, Hilletofth et al. (2007) study reasons of low popularity of landbridge transportation. Fallon (2015) and Fedorenko (2013) among others pay attention to political, economic and ideological differences between Silk Route initiatives proposed by different countries and organizations. Verny and Grigentin (2009) research other possible routes to connect Europe and Asia. However, there is no identified study on current perception of freight forwarding companies actually providing or planning to provide logistic service on

the route. Moreover, there is no study focusing on Finland's interest in the Silk Route initiative.

The research does not consider any other phenomena than freight forwarders' perception of the Silk Route. In accordance with Bassett and Gazzaniga (2011), perception is defined to be a process of structuring, finding, and interpreting an information. The result of a perception is an understanding and explaining a phenomenon.

1.2 Research objective and questions

The research objective is to empirically investigate the perceived potential of the Silk Route from forwarding companies standpoint. The discussion is being led on China – the Republic of Kazakhstan (further referred as Kazakhstan) – the Russian Federation (further referred as Russia) – the Republic of Finland (further referred as Finland) railway corridor. The focus of the research is on opportunities arising for Finland.

There are different transportation modes. The most common are sea, rail, road, truck, and pipeline transportation (Jun & Yanyi 2012; Moslemi 2016), as well as different combinations of these five (Moslemi 2016). Each type of transportation serves certain customer segments and better suits to specific types of cargo. With constructing and developing a new railway corridor the current cargo flows might be affected and new ones might appear. Considering time and cost parameters (Jun & Yanyi 2012; Regmi & Hanaoka 2012; Wang & Yeo 2016; Peyrouse & Raballand 2016) as well as taking into account political, economic situation (Fallon 2015, Fedorenko 2013), type and volume of cargo, distance and geography of transportation, availability of infrastructure (Hilletofth et al. 2007; Regmi & Hanaoka 2012; Wang & Yeo, 2016), and other parameters, forwarders develop transportation solutions. The research is questioning the potential effect of the Silk Route corridor on Finland economy and trade. The research intends to collect experts' opinions towards the Silk Route initiative and based on that make conclusions about its potential.

The research is answering three questions. The first research question is formulated in order to understand general forwarders' opinion towards the Silk Route.

RQ 1. How do freight forwarders perceive the Silk Route initiative?

The experts were selected among companies that have been operating for several years in the field of international railway transportation. It is perceived, that the companies already have certain transportation solutions if operate on Eurasian direction. The qualitative study provides deep understanding of the issues and answer the research questions fully. The opinions gathered during the interviews are expected to qualitatively add to collected information from the literature and to propose other issues and challenges for further consideration.

The second question is formulated in order to understand forwarders' expectations towards competitiveness of the Silk Route. In other words, it is meant to investigate, how the existing cargo flows might be affected and whether a company can benefit from the Silk Route transportation. Based on the above reasoning, the second research question is formulated.

RQ 2. How does the commissioning of the Silk Route influence forwarders' business?

The question is expected to be answered in regards to criteria identified in the literature review, such as time, cost, reliability, safety, capability (Jun & Yanyi 2012; Regmi & Hanaoka 2012; Wang & Yeo 2016; Peyrouse & Raballand 2016), and other criteria. Involved countries are also different in many aspects (culture, development of economies, infrastructure, LPI). Thus, the interest is also drawn to the challenges in regards of cooperation between involved countries. The answers are expected to cover opportunities and threats from the forwarders' point of view.

The Silk Route is a continental scale project. By definition, the project is of high political, economic and social importance (Hilletofth et al. 2007; Fallon 2015; Fedorenko 2013; Rodemann & Templar 2014). Thus, it is required to understand what kind of external influences forwarders experience and how free they are in doing their business. To gain better understanding of these issues the third research question is formulated.

RQ 3. How do external factors influence forwarder' decision-making?

The research is answering the formulated questions by collecting empirical data through semi-structured interviews and comparing the results with literature review findings.

1.3 Research structure

The research is planned in accordance with recommendations given in the relevant literature (Saunders, Lewis & Thornhill 2009; Yin 2013). The report consists of introduction (Chapter 1), research methodology (Chapter 2), literature review (Chapter 3), empirical part (Chapter 4), discussion (Chapter 5) and conclusion (Chapter 6). The report is supplemented with three appendices. The research structure is presented on the Figure 2. Left part on the figure contains input data for each chapter, the right part – results of each chapter.

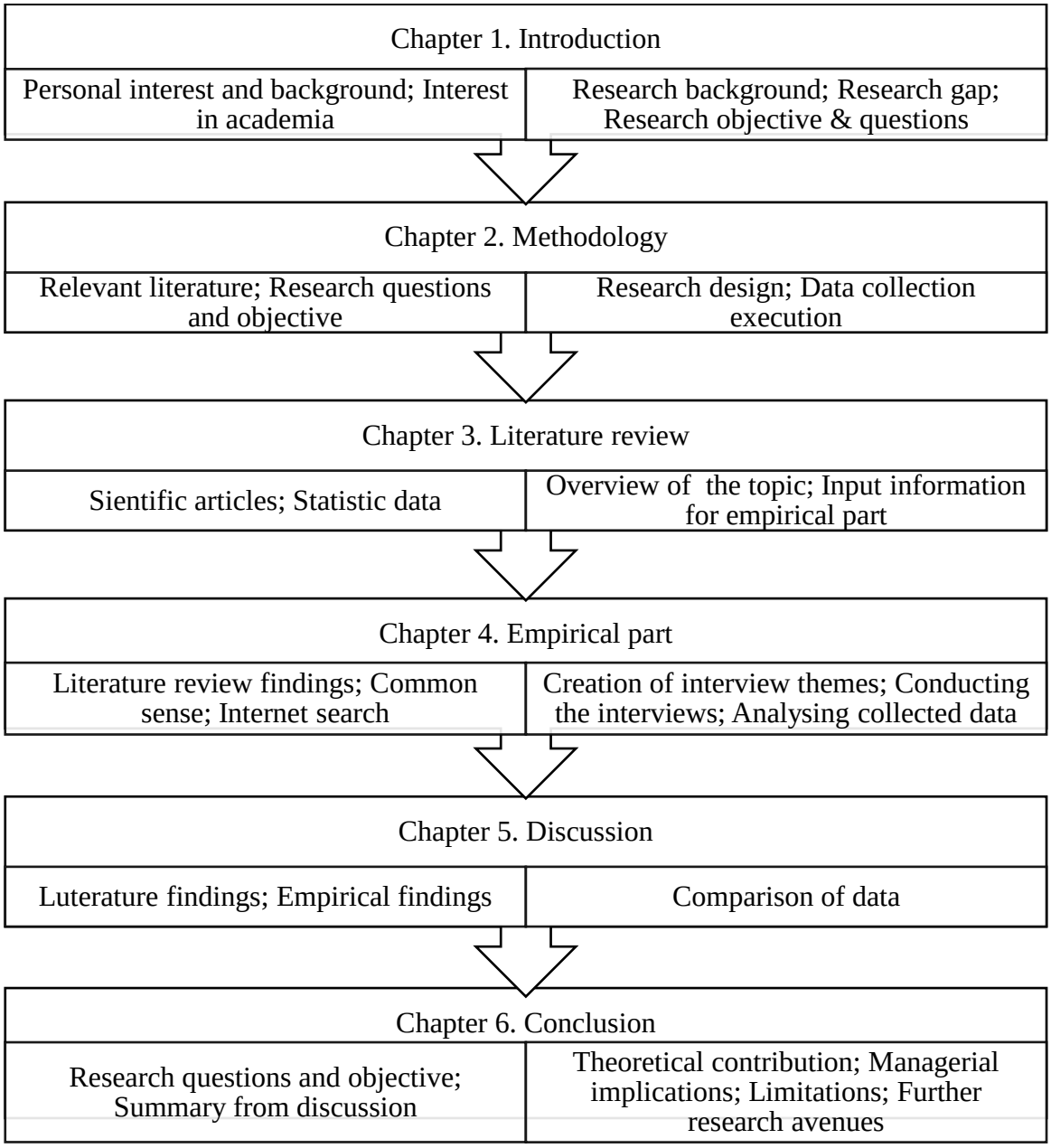

Figure 2. Research structure. Source: the Author

The research questions are formulated preliminary as the actual research is based on researcher's professional interests and experience. Research methodology is described in the Chapter 2 in order to make the research easy to follow. The chapter collects and summarizes fundamental rules of conducting business research with focus on the particular case and the most appropriate techniques. The chapter clarifies why the certain techniques (data collection technique, type of research, and other) have been chosen to the particular study. Moreover, the chapter contains detailed information of amount and type of interviewed companies and describes the way the interviews have been conducted.

Chapter 3 is dedicated to literature review on the subject. The results are utilized to prepare and conduct empirical part. Likewise, the findings from literature are later on utilized in Chapter 5 for discussion. Chapter 4 contains detailed data representation collected from the field.

In Chapter 5, the empirically collected data is analyzed with respect to literature findings. The chapter is meant to clarify, if the situation in the field corresponds to the theoretical findings. The empirical data is expected to qualitatively add to the theoretically gained data. Chapter 5 contains answers to the research questions. Chapter 6 summarizes the findings and proposals for further research opportunities in the given research area.

2 METHODOLOGY

The chapter 2 provides overview of the research methodology and detailed information about empirical data collection. The chapter is divided into two parts – 2.1 Research design, and 2.2 Data collection execution.

2.1 Research design

Research design is intended to lead a researcher from formulating research questions to set of conclusions answering the questions. In order to achieve it, a proper planning is of high importance. The preliminary developed research plan based on logic and certain techniques of collecting and analyzing data is commonly advised (Yin 2013).

The chosen research strategy is a case study. Saunders et al. (2009) define case study to be "*a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple source of evidence*". Yin (2013) suggests similar definition of case study: "*a "how" and "why" questions are being asked about a contemporary set of events over which the investigator has little or no control*". In particular case, the Silk Route is an object, which is being studied in real-life context. The objective of the research has been to add qualitatively to the findings from literature, and thus the research strategy suited well. Typically, the case study strategy is relevant for research questions starting with "how", "what", and "why" (Saunders et al. 2009; Yin 2013).

The research is cross-sectional study – study of "*a particular phenomenon at a particular time*" (Saunders et al. 2009). The time for research is limited for five month due to academic program limitations and perception of time needed to conduct the research.

The research purpose is explanatory. Main characteristic of the explanatory research type is relative flexibility. The research focus is broad in the beginning, and gets narrower by the end of the work. Explanatory case study strategy may serve to create more specific questions for further research (Saunders et al. 2009).

The current research is operating with qualitative data. Mono method is chosen for data collection technique and data analysis. According to Saunders et al. (2009), mono method

refers to usage of a one particular data collection technique, and further analysis of the collected data by defined corresponding methods. In the particular case, the data collection technique is semi-structured interview, and the collected data is analyzed by interpretation. The method is suitable to the study as the research is focused on gathering opinions from the field experts, and the chosen method supports the idea well.

As it has been mentioned above, the data collection technique of the current study is semi-structured interview. Semi-structured form of interview requires creating a list of themes to be discussed. Usually themes are complemented by a list of possible questions to guide an interviewee while the interview is being conducted. The questions and themes are advised to be formed on bases of temporary scientific literature, theoretical overview, discussions, and common sense. Semi-structured and non-structured interviews (together known as non-standardized) are typically used for case studies as they are suitable for exploring a topic (Saunders et al. 2009).

Taking into account the fact that it might be complicated to arrange all interviews to be live, some interviews might be also conducted via e-mail. This is less desirable way to conduct an interview and will be applied only if the other options are not suitable for an interviewee. Consequently, these interviews might gain more structured form. To provide brief information of the research, introductory letters are to be sent to the potential participants. Introductory letter is attached to the report as the Appendix A in original and translated versions. Interview themes together with questions can be found in Appendix B. The interview guide for e-mail interviews conducted in English and Russian languages are presented in the Appendix C.

Chosen data collection technique endangers data quality. According to Saunders et al. (2009), semi-structured type of interview may negatively affect reliability, validity and generalizability of data. Reliability issue is related to ability of other researchers to obtain same or similar results, if same study is conducted. However, Saunders et al. (2009) claim that a case study does not necessarily have to be repeatable. This is because a case study is focusing on a particular phenomenon in a certain period of time. The environment together with phenomenon are dynamic objects, and thus the objects' features and perception of them are changing over time.

To enhance level of reliability Saunders et al. (2009) suggest easy and useful tools. First, it is important beforehand to obtain certain knowledge of themes to be discussed during interviews. Literature review, search information in the Internet related to the topic, and visiting official web-pages of organizations are helpful options. The literature review was conducted by analyzing issues that are being studied in academia. The search of the articles was based on key words and executed in scientific databases (mainly Elsevier). The key words were "Silk Route", "Silk Road", "Economic Belt", "landbridge", "railway transportation", "cargo transportation", "Eurasia", "international trade", their synonyms, and other related to the topic terms. Further, when the first articles were selected, references and key words from them were utilized to continue search. Recommendations from supervisor to use particular articles also had a place. Further, when a preliminary list of potential research participants was made, search on the Internet helped to identify official webpages and to get familiar with companies' business and the latest news. It is advisable to provide an interviewee with prior information about the project, themes for discussion as well as express the will to provide additional information in advance allowing the person to get familiar with the field of study. The introductory letters were sent to the identified potential interviewees via e-mail.

Generalizability refers to the opportunity to generalize obtained results. The research strategy of case study does not imply generalizability (Saunders et al. 2009).

Sampling technique of the current research is a purposive, or judgmental. It refers to using own judgements in selecting interviewees. The sampling strategy shall be classified as a homogeneous sampling, which refers to providing a typical "cut of reality" by operating with similar in a defined way cases. The judgmental sampling technique can be successfully combined with snowballing sampling. The later one refers to identifying and contacting one of the typical and reachable case in order to use his / her network for identifying more cases.

2.2 Data collection execution

Interview questions are based on scientific literature review. The literature review while conducting has gained a structure, which covers main concern of researchers. The subparagraphs of the literature review end with tables that summarize findings and are taken as a basis for interview themes. The findings were not reviled to the interviewees before they

provided their own view (perception). Further, to support conversation and to gain more deep and focused information, some of the findings were proposed for discussion.

In academia, many constraints of the commissioning of New Silk Route are discussed. They are usually divided in two categories – physical and non-physical obstacles. Lack of infrastructure, gauge difference and bottlenecks on borders often fall into first category (Hanaoka & Regmi 2011). Political, ideological issues together with disproportion in the economic development, high complexity of operations on the route, long border crossing delays, complex legislation and regulation, lack of standardization, low-skilled labor, and low quality of forwarding service often fall into second category (Fallon 2015; Fedorenko 2013). Time, cost, reliability, security, safety, capacity (Jun & Yanyi 2012; Regmi & Hanaoka 2012; Wang & Yeo 2016; Peyrouse & Raballand 2016) flexibility (Regmi & Hanaoka 2012; Saeed 2013) as well as type, volume and value of cargo (Jun & Yanyi 2012) are discussed as main factors influencing final logistics solution. Some researchers are rather skeptical about the future of the Silk Route. For example, Diener (2015) and Raballand and Peyrouse (2016) doubt, that the clients are not willing to chose more expensive and risky landbridge transportation over secure and well-established sea transportation. In contrast, oothers believe that up to 60% of Eurasian maritime cargo flows might be overtaken by land bridge transportation (Wang & Meng 2007). Besides, pioneering block trains have been successfully sent between Europe and China (for example, joint project of DB Schenker, Trans Eurasia Logistics, and Russian Railways). The empirical data collected from the field was expected to prove or disapprove theoretical findings and qualitatively add to the findings from the reviewed literature. All the mentioned concerns towards Silk Route were covered in interview with slightly different emphasis depending on country the company mainly operates in (belongs to).

Semi-structured interviews were used to collect empirical data. In two cases, the form of data collection had to be changed to e-mail interview – the themes were therefore clarified by adding more specific questions. The themes of interviews were the following:

- background information;
- overall opinion towards “Silk Route” initiative;
- factors, influencing company’s decisions;
- potential clients and demand;

- competition;
- political interests;
- and economic interest.

With purpose to make the reporting of results more logical the order of themes was a little changed. Moreover, the information gathered for the theme "overall opinion towards "Silk Route" initiative" was divided into two parts. The interviewees were asked to discuss two issues – the current situation and potential of railway transportation via Kazakhstan, and Finland's perspective to benefit from the route. The information collected for this theme is reported last as it concludes the material and provides perspective of the Silk Route from interviewees' point of view. The theme "factors, influencing company's decisions" was disclosed slightly different, and for reporting, the results were reformulated as "influential factors for choosing a transportation solution". Themes "political interests" and "economic interest" cover both political and economic interests and influence, and are reported together in subsection "political and economic aspects". "Potential clients and demand" theme is reported as "Clients and demand" as it also discusses current situation. The theme is supplemented with description of nomenclature of goods suitable for transportation by rail between Finland and China.

The criteria to select the interviewees were the following: representatives of logistics companies engaged in container railway transportation in the regions of interest (China, Kazakhstan, Russia, and Finland), these of holding managerial position and having experience in the field of railway cargo transportation and / or international rail freight forwarding. Totally 12 companies were contacted, however only eight positive replies have been received. The list of participants is presented anonymously in Table 2.

Table 2. Brief information about interviewed companies

Data	Company	Country	Duration	Note
17.05.2016	Company 1	Russia	40 min	
17.05.2016	Company 2	Russia	24 min	Branch
19.05.2016	Company 3	Finland	40 min	Not recorded
31.05.2016	Company 4	Finland	35 min	

09.06.2016	Company 5	Russia	1 h 33 min	Branch
14.06.2016	Company 2	Russia	23 min	Headquarter
15.06.2016	Company 6	Russia	34 min	
20.06.2016	Company 7	China	–	E-mail interview
23.06.2016	Company 5	Finland	21 min	Skype interview, branch
28.06.2016	Company 8	Kazakhstan	–	E-mail interview

All the interviewees were contacted in advance via e-mail and were provided with the purpose of the research and themes to be discussed. After negotiation, time for conducting semi-structured interviews was agreed (in Finland and Russia). Kazakh and Chinese companies conveyed the wish to answer interview questions via e-mail. The interviews were conducted in May and June 2016.

3 LITERATURE REVIEW

The chapter is dedicated to observe trends in the academic literature related to Eurasian transportation with emphasis on railway transportation. The chapter is divided into two parts – 3.1 International trade, and 3.2 Eurasian transportation. In the first part, trade is discussed as a stimuli for international cargo flows, and key economic characteristics of involved countries are provided. The first part also positions the study in the international trade theory. In the second part of the chapter, different transportation modes are introduced, current and emerging routes are described in terms of competitiveness and immanent challenges.

3.1 International trade

The study contributes to international trade theory. International trade originates from ancient times. Trade flows outline transportation routes. The major routes from Asia to Europe were trailed when Europeans discovered Chinese silk and Indian spices – the routes are known respectively as the Silk Route and the Spice Route. The routes appeared to be a powerful stimulus for development of political and economic relationship among countries and civilizations, facilitated exchange of goods, cultures, knowledge and skills (Karluk and Karaman, 2014).

Evenett and Keller (1998) study two main theories of international trade – theory named after Heckscher and Ohlin, and theory of increasing of returns. Heckscher-Ohlin theory is based on the assumption that countries differ in amount and quality of resources they possess. In other words, countries with rich capital resources are likely to export capital-intensive products, and vice versa, countries with rich labor resources are likely to export labor-intensive products. Thus, more similarities between countries in terms of resources mean less active trade. Another theory is known as New Trade Theory, the author of which is Paul Krugman. Krugman (1979) states that trade exists between countries with same preferences, technology development, and production factors.

Eaton and Kortum (2002) propose ideas that relate international trade and distances between countries. These are namely: (1) decline of trade caused by increase of geographical distances, and (2) increase of cost difference caused by increase of distance. In turn, Ghemawat (2001) differentiates definitions of distance, and apart of “geographical” definition lists other “distances”. The author refers to distance in senses of cultural

differences, differences in administrative and political sense, in sense of geography, and in sense of economic development. In other words, Ghemawat (2001) bases the study on CAGE framework, which is a Cultural, Administrative, Geographic and Economic distances framework. According to the author, international trading has been increasing due to global trends of industrialization and advancement of technologies. The latter one among other sectors of technologies refers to transportation development. Additionally, establishing of international and multinational companies, internationalization and outsourcing cause a significant impact on international trade. The current research is meant to study new opportunities for selected country based on decrease of possible geographical distance due to commissioning of landbridge corridor, which is the shortest possible route between trading countries.

3.1.1 Trade as a stimulus of transportation flows

In last decades, global trends of globalization of markets, industrialization and rise of entrepreneurship boosted international business and trade (Ey megatrends report 2014). First, increasing digitization and ease of communication led to geographical distribution of production (Karluk and Karaman 2014). Companies have been constantly allocating manufacturing activities in countries with low labor costs aiming to gain location advantages, often in Asia, and particularly in China (Dunning, 1988). Asian countries, in particular China, also have low manufacturing costs. Eaton and Kortum (2002) summarize, that the Asian countries in general have cheap inputs to produce goods. The authors name such benefits as attractive taxation terms, access to new markets, human resources, and relatively low costs for building production facilities. Apart of them, there are number of other theories explaining how and why companies become international and multinational. Johanson and Vahlne (2009) introduce Uppsala model, which explains internationalization by gradual expansion to similar in cultural sense markets that are easy to approach and are located close. Dunning (1988) created paradigm, that is widely known as OLI-framework (Ownership, Location, and Internalization advantages framework), or eclectic paradigm. The reasons for internationalization are based on transaction costs analysis. Second, China is the second biggest economy around the world, and it is a huge market place to distribute goods (World Bank 2016a). Adams, Gangnes, and Shachmurove (2006) report, that Chinese export has been rapidly growing; the fastest growth has been noted for high tech products. According to authors, the traditional export (meaning textile, cloths, customer goods) has

remained significant in terms of value. In contrast, the biggest consumer markets are located in Europe and America (World Bank 2016a). Thus, nowadays the biggest production facilities are located in Asia, and at the same time Asia is a big and promising consumer market.

According to World Trade Organization (WTO) report, international trade has been growing within last 20 years, except of significant decrease in 2009 caused by world economic crisis (-22 % in terms of value). Within the same period, Europe invariably has remained the main world's export destination followed by Asia and North America. Within last decade China has become the main exporter surpassing Germany and United States in 2004 and 2007 respectively (WTO 2016). From 2012, growth of Chinese export yearly accounted for 6-7 % and reached over 2.34 billion USD in year 2014 (World Bank 2016a).

3.1.2 Economies of involved countries

The current subchapter discusses economies of China, Kazakhstan, Russia, and Finland, and their peculiarities in terms of international transportation. The level of economic development significantly differs among countries on the Eurasian landbridge. Among the 15 countries, low-middle income is characteristic for six countries, upper middle – for eight, Russia belongs to high-income group (World Bank 2016a). Moldova, Ukraine, Kyrgyzstan, Tajikistan, Kazakhstan, Armenia, Russia, China, Turkey are members of WTO, the organization "*opening markets for trade*" (WTO 2016b). Belarus, Kazakhstan and Russia in 2014 signed an agreement to create trade Eurasian Economic Union with idea to "*provide free movement of goods, services, capital and labor, pursues coordinated, harmonized and single policy*". Later in 2015, Armenia and Kyrgyzstan also joined the union (EAEUNION 2016).

China

China is the biggest exporter of goods. Characteristic for the country is the uneven development of the regions (Yang & McCarthy 2013). In the end of 1970's Deng Xiaoping proclaimed the reform of China, and indicated that it was necessary first to develop the coastal zone in the south and in the east of the country. After development of those regions, he suggested to pay attention to interior and western provinces. On the one hand, the reforms provided superior support to the coastal regions, which demonstrated significant growth

within next two decades with GDP growing annually by 10 %. On the other hand, the reform resulted in huge disproportion in the economic development of the western and eastern regions of China. This, in turn, made more complicated for less developed of the regions to actively participate in international trade (Sárvári & Szeidovitz 2016). In 2014, Chinese GDP reached 10354.8 billion USD. In 2015, the growth slowed down and declined to 6.9 %. At the same time, manufacturing accounted for 30.1 % of GDP in China (in year 2013), while the world manufacturing was on the level of 14.71 % of GDP (World Bank 2016a).

According to OECD observation, in the last two decades of previous century 88 % of Foreign Direct Investments (FDI) were attracted to eastern China, at the same time only 9 and 3 percent were invested in central and western regions respectively. To help the situation, in 1999 Jiang Zemin, being president, proposed a new long-term strategy of development, which is known as Great Western Development Strategy, or Xibu Da Kaifa. Objectives of the strategy were preventing brain drain from western China, creating new work places, and developing infrastructure (Lai 2002). By Western China in this case are commonly understood western region (Shaanxi, Gansu, Qinghai, Ningxia, Xinjiang, Sichuan, Chongqing, Guizhou, Yunnan, and Tibet) and central provinces (Jilin, Heilongjiang, Shanxi, Inner Mongolia, Anhui, Jianxi, Henan, Hubei, and Hunan). At the same time, manufacturing in China has been moving inland, to the provinces in the central and western parts that are geographically predisposed for rail transportation via Kazakhstan. For example, in 2010 in Chengdu a plant worth two billion USD was constructed to assemble tablets, laptops and other electronic products. It was planned to overtake up to 50 % of production that had been executed in coastal factories (KPMG 2011).

Percent of exported goods and services accounted for 22 %of GDP in year 2015 with slow but constant decrease within last years. Same trend is noted for import of goods and services – it reached 18 % of GDP in year 2015 declining by 1-2 % yearly within recent years (World Bank 2016e). According to World Economic Situation and Prospects (2016), in 2015 import to China experienced sharp decline (more than 3 % according to World Bank data). At the same time, China has been the first main import destination for 29 economies, and the decline had affected world trade.

China is dependent on imported raw materials, especially oil. According to World Economic Situation and Prospects (2016), the country consumes almost half of world metal. As per World Bank (2016e) information, import of fuel to China experienced sharp decline in 2015 and leveled down to 12.7 % of merchandise imports compared to 17.2 % year earlier. Further, in 2015 total import of coal and steel has declined; import of copper ores has remained growing, though the growth itself has slowed down (World Economic Situation and Prospects 2016). At the same time, the oil export in 2014 accounted to 92.6 % of total export in Azerbaijan, 76.6 % in Kazakhstan, and 69.9 % in Russia (World Bank 2016e).

China remains the second biggest trading partner for European Union after United States (World Bank 2016a). Share of China imports reached 18 % in 2014 compared to 12.6 % in 2004, and exports share accounted to 9.7 % in 2014 compared to 5.1 % in 2004. China trade share corresponds to 14 % of total extra-EU trade of goods in 2014 compared to 9 % in 2004. After 2009 drop, trade between partners has recovered and reached its maximum in 2015 accounted for 350.4 billion euro. It has grown by 171.2 % compared to 129.2 billion euro in 2004. Export has been growing constantly since 2004 and reached 170.5 billion euro in 2015. EU trade deficit has been a characteristic during the whole period and accounts for -179.9 billion euro in 2015 (Eurostat 2016).

Kazakhstan

Kazakhstan is a country in Central Asia. It has the biggest economy among Central Asian countries – Tajikistan, Turkmenistan, Kyrgyzstan, and Uzbekistan. Kazakhstan GDP is the highest in the regions of Central Asia (217.9 billion USD for 2014), and is comparable to the total GDP of all other Central Asian countries. GDP has been growing fast, and in 2014 almost doubled compared to 2009 (115.3 billion USD). However, in 2014 it declined by 6% compared to previous year (Trading Economics 2016a). Political situation is very stable, and the country has rich gas and oil reserves. Kazakhstan has been attractive for FDI (over 160 billion USD since 1993), and has good potential to develop economy (Fedorenko 2013). However, FDI has declined within last years rapidly, and accounted slightly above 19 billion USD in 2015 with 35 % decline compared to 2014 (Trading Economics 2016a).

Kazakhstan is a landlocked country, which means that the country has no access to open seas. The consequence of being landlocked is high dependency of overall economic growth

on transport infrastructure development (Panova 2016). In turn, landbridge transportation (rail and road transportation) is an expensive alternative to waterway transportation. The available open seaports are located only on territories of neighboring countries, which leads to relatively high component of transportation cost in final product's cost. For example, distance from Almaty to Shanghai equals to 5 370 km, and can be accomplished either by rail or by truck (Viohl 2015). Currently percent of transportation costs related to final product cost in Kazakhstan is approximately twice higher than in other industrialized countries – 8-11 % compared to 4-4.5 %. (Yang & McCarthy 2013).

Collapse of Soviet Union affected Kazakhstan economy strongly. The effect is seen from different perspectives. In terms of transportation, the country had to start cross-border transportation in contrast to borderless transportation available during the Soviet time. This led to increase of costs and slowed down the country's ability to keep and improve sufficient level of transportation system. Historically the Kazakh railway has been oriented towards current state of Russia, and transportation system remained less developed within the country. To change the situation for better, Kazakh state strategy of development SPAIID with horizon up to 2030 has been published (Karluk & Karaman 2014). One of the issues proclaimed by the strategy is the investment in infrastructure for multimodal transportation aiming to lower cost for domestic transportation, passengers' travelling and transit transportation. The strategy identifies main strategic goals of infrastructure development as *modernization of* existing railway corridors, constructing new strategic railway links (Almaty – Khorgos, Zhezhazgan – Saksaulskaya and Shalkar – Beineu), facilitating development of container-based intermodal sector in Khorgos, Almaty, Karagany, and stimulating development of air transportation facilities in airport of Almaty and Karagandy. The strategy implies constructing over 1200 km of rail tracks, and electrifying over 4000 km of existing tracks (Yang & McCarthy 2013). In terms of resources, Kazakhstan is one of the leading producer of oil, gas, and coal. Separation from Soviet Union made the country the sole owner of the resources. However, oil deposits of over 10.1 billion barrels of oil require investments (Dorian 2006). Senik-Leygonie and Hughes (1992) name the industries related to oil and gas production to be the most profitable and the most developed for the moment of the Soviet Union collapse.

Russia

Russia has the biggest economy among CIS countries and GDP accounted to 1.326 trillion USD for 2015 which shows sharp decline compared to the level of 2014 of 2.031 trillion USD) (World Bank 2016e). However, the change according to Federal State Statistics Service (2016) is different (as provided in Russian rubles), and reports level of GDP of 80412.5 million rubles in year 2015 with growth of 3.2 % if compared to the previous year. Export of goods and services has shown growth in 2015 (reached 29.5 % of GDP) compared to the previous year level of 27.5 % of GDP. Import has remained steady since 2013 on the level of 21 % of GDP (World Bank 2016e).

Finland

Finland trade balance is in deficit. In accordance with Tulli (2016), export in Finland started to decline again in year 2013 after sharp fall in 2009 and rapid recovery afterwards. In year 2015, the total export accounted for 53 828 million Euro. As per import, the tendency was similar. Sharp decline in 2009 followed by recovery, and further decline since 2012. For the year of 2015, import has reached 54 256 million Euro.

The Finnish biggest export include the categories of equipment and cars as well as forestry products (including paper and cardboards). The biggest import categories are food products, oil and petroleum products, chemicals, transport and machinery equipment, iron, steel, textile and fabrics, as it is reported by Trading Economics. The main trading partner for Finland are neighboring Sweden and Russia, also Germany, China and USA (Trading Economics). Export from Finland in 2015 accounted to 103 706 billion USD, which is still 19 % lower than pre-crises level in 2009. It has been slowly recovering after drop in 2010 from 128 765 billion USD to 91.99 billion USD (World Bank 2016a).

The discussed topics in the current subparagraph are the basis for interview themes “Political interest”, and “Economic interest”.

3.2 Eurasian transportation

Cargo transportation is a support for trade flows. In line with increase of international business and trade, there has been a growing interest drawn to improvement of transportation connection between Asia and Europe (Hilletofth et al. 2007; Hanaoka & Regmi 2011;

Fedorenko 2013; Diener 2015; Panova 2016). In this regards many projects have been started. All the initiatives compress two important topics – developing of infrastructure and improvement of logistics services in the scale of Eurasian continent. Researchers outline two major challenges – overcoming physical and non-physical obstacles in order to improve efficiency of logistic solutions (Fedorenko 2013; Fallon 2015; Karluk & Karaman 2014; Diener 2015; Sárvári & Szeidovitz 2016;). It is reported, that hard infrastructure can be constructed, but to assure its functionality the major changes in legislation, policies, and standards have to be done (Diener 2015).

In regards to the topic, researchers study either issues related to existing solutions or to potential of emerging solutions. For example, Hilletofth et al. (2007) investigate reasons of low attractiveness of Eurasian railway transportation; Panova (2016) brings up the question of investments in Trans-Siberian railroad infrastructure in order to improve competitiveness, and Wang and Yeo (2016) focus on comparison of railway corridors and factors influencing the choice towards one or another. In contrast, Verny and Grigentin (2009) investigate feasibility of the Northern Sea Route, and Rodemann and Templar (2014), Karluk and Karaman (2014), Xu (2014), and Sárvári and Szeidovitz (2016) study potential of future development of Eurasian landbridge.

3.2.1 Modal split

Freight transportation is executed by road, rail, air, sea modes of transport and pipeline. All transport modes have different characteristics in regards of time, cost and capacity (Jun & Yanyi 2012). Vast majority of dry cargo is transported containerized (Tavasszy, Minderhoud, Perrin & Notteboom 2011). Raballand and Peyrouse (2016) report, that the choice between modes is mainly dependent on time, service, and price. The transportation modes also differ in level of reliability, safety and capability (Wang & Yeo 2016). It also depends on type of the cargo. Thus, different modes have different target customers and specific advantages and disadvantages.

Freight forwarders are intermediaries between cargo owners and a carrier. A forwarder has to have ability to transport goods either by its own means or by contractor’s facilities (Saeed 2013). Saeed (2013) also emphasizes that modal choice is a forwarder’s responsibility. Jun and Yanyi (2012) disagree on this opinion and state, that a consignor is

the party making decision towards one or another transportation mode based on own subjective reasons and experience.

Multimodal transportation

The transportation is often executed by multiple modes, in other words, often has a multimodal character. Intermodal transportation is a cooperation of truck, train, air, and vessels (Yang & McCarthy 2013). It is a cost-efficient type of transportation that is being accomplished by two or more transportation modes in order to move cargo from origin point to destination point without transshipment (Southworth & Peterson 2000). According to Moslemi (2016), the most popular intermodal combinations are rail-truck followed by truck-water and with a big backlog by truck-air and air-water. Intermodal transportation is executed in standardized containers. Tavaszzy et al. (2011) explain container transportation growth by continuous growth of world population, economic growth, mass-individualization of consumption, specialization of products, decreasing trade barriers, and sufficient infrastructure (hubs, corridors). However, authors report that the economic downturn has affected containerization of transportation, and has made less certain its further potential to grow.

Maritime transportation

In 2013, the majority of extra-EU-28 trade was served by sea transportation (75.3 %). Sea transportation was followed by pipeline (9.9 %), road (6.4 %), rail (3.8 %), inland waterways (0.9 %), and air (0.8 %) (Pocketbook 2015). Choice of mode directly exerts influence on economy, promptness, convenience, accuracy and safety of cargo. It indirectly affects operating costs of the forwarding company by effecting haulage time and quality of goods (Jun & Yanyi 2012). Jun and Yanyi (2012) claim, that in vast majority of cases decisions on choosing a transportation mode are made based on freight, time, and risk preferences. Still, the leading influential factor is "*lowest total cost*". "*Time, volume, reliability, and service level*" are rarely considered to be of the same importance as cost of transportation. From the other perspective, the authors highlight the fact that type of cargo normally is the basis of a transportation mode choice (Jun & Yanyi 2012).

Maritime transportation is utilized for long distance transportation of big volumes of low-valued cargo. Modern container vessels can fit at once more than 13 000 TEU. According to

Panova (2016), the biggest freight forwarders order Ultra Large Container Vessels with capacity of 20 150 TEU to start operations in year of 2017. Inland waterways are used for consolidating goods from hinterland to deep sea ports (Viohl 2015). Saeed (2013) names disadvantages of the maritime transportation to be low speed and low flexibility. The other authors highlight high level of service and security, especially the opportunity to avoid delays and corruption on transit territories, as advantages. Further, the maritime transportation can assure time of delivery, but landbridge transportation might be unexpectedly and unpredictably delayed (Raballand & Peyrouse 2016).

Railway transportation

Eurasian railway transportation is executed in form of block trains with capacity of around 90 TEU, and it has medium cost/time ratio (Rodemann & Templar 2014). Rail transportation is suitable for long distances, but it is much dependent on infrastructure that is expensive to build and maintain (Viohl 2015). Average speed of block trains is much higher than sea transportation, and reaches 1000-1200 km per day (Hilletofth et al. 2007). In recent years, number of fast block trains have been put into operation. DB Schenker together with TEL and RZD provide four block trains weekly from Duisburg to China and three trains weekly from Hamburg to China (TEL 2016). Chinese, Mongolian, Kazakh, Russian, Belarusian, Polish and German operators are involved to operate the train. The distance varies between 10-12 thousand km and is accomplished within 16-19 days (DB Schenker 2016).

Air transportation

Air transportation is used for small volumes of high-valued and time-sensitive cargo (Panova 2016). Viohl (2015) states that air transportation is used often together with other modes of transport to provide door-to-door express delivery. Even though the transportation via air is expensive, it might save costs due to reduction of "*warehousing, inventory and reordering costs*" (Mitra & Leon 2014). Total market share of air and sea-air transportation between China and Europe is above 80 % in monetary regard, and sea transportation occupies 96-98 % of total transportation in volume regard (Rodemann & Templar 2014; Panova 2016). The main competition for landbridge transportation are sea, air and sea-air transportation (Moslemi 2016). On the other hand, transportation via railroad is significantly cheaper solution than air transportation and comparable with later in terms of time (Rodemann & Templar 2014).

Road transportation

Road transportation is suitable for smaller volumes and short and medium distances. However, it is also possible to use trucks for long distances when the other transportation modes are not available (for example, landlocked countries with undeveloped railway and / or inland waterway network). Trucks are seen to be a good solution for high value goods. In addition, transportation by road is more flexible than, for example, by railway. On the other hand, it is often the case that a forwarder cannot optimize logistics and secure a return loading. Thus, often the cost of empty return is included in transportation cost. Further, road transportation is dependent on road infrastructure and traffic, in other words, trucks can be unpredictably delayed. Moreover, road transportation has significant environmental impact (Viohl 2015).

The factors, influencing modal choice are summarized in Table 3. The findings are the basis for interview themes "Factors, influencing company's decision", "Potential clients / demand", and "Competition".

Table 3. Factors, influencing modal choice

Time, cost and capacity, also level of reliability, safety, capability, total time and security (Wang & Yeo 2016).
"*Least total cost*". "*Time, volume, reliability and service level*" are rarely considered to be of the same importance (Jun & Yanyi 2012).
Mode choice is forwarder's responsibility (Saeed 2013).
Choice of mode directly exerts influence on economy, promptness, convenience, accuracy and safety of cargo and indirectly affects operating costs of the forwarding company by effecting haulage time and quality of goods (Jun & Yanyi 2012).
Vast majority of cases making decision between transportation modes are made based on freight, time, and risk preferences (Jun & Yanyi 2012).
Consignor is the party making decision towards one or another transportation mode based on own subjective reasons and experience (Jun & Yanyi 2012).
Time-cost-distance, reliability, flexibility, infrastructure development, quality of service, environmental impact, customer clearance, cross-bordering procedures, and mutual relations between stakeholders (Regmi & Hanaoka 2012).
Changing tariffs, and poorly predictable currency (Hilletofth et al. 2007).
Reliability and predictability (Peyrouse & Raballand 2016).
Time, service, and price (Peyrouse & Raballand, 2016).

The researchers identify multiple factors influencing choice of a transportation mode. However, the leading factors remain time and cost of transportation. Other factors are related

to environmental impact, political and economy reasons, issues related to security and safety, volume and type of transported cargo, level of service, predictability, and hard infrastructure. Some authors state that the choice is a forwarder's responsibility, the others understand it to be choice of a consigner.

3.2.2 Eurasian transportation network

The United Nations Economic Commission for Europe (UNECE) in frame of the Euro-Asian Transport Links (EALT) project identified main rail and road links of Eurasian land bridge. According to UNECE, there are nine railway corridors and the same amount of road links. These corridors form a net-like system stretching from the West to the East and from the North to the South and pass through 15 countries connecting Europe with China and other Asian countries. The corridors pass the Republic of Belarus, the Republic of Moldova, Ukraine, the Republic of Uzbekistan, Turkmenistan, the Kyrgyz Republic, the Republic of Tajikistan, Kazakhstan, the Republic of Armenia, the Republic of Azerbaijan, Russia, China, Georgia, the Islamic Republic of Iran, and the Republic of Turkey. The railway net is also extended to the Islamic Republic of Pakistan, the Islamic Republic of Afghanistan, and Mongolia. In geographical terms, the corridors cover the greater part of the Eurasian continent (Viohl 2015).

Countries differ a lot from each other. Efficiency of transportation is indicated by LPI, which is calculated periodically by World Bank. LPI is calculated based on six criteria:

- efficiency of customs;
- quality of infrastructure;
- easiness of arranging competitively priced shipments;
- quality of logistics services;
- ability to track and trace consignments;
- frequency with which shipments reach consignees within scheduled or expected delivery times.

The World Bank report from 2014 proves that the countries involved in Eurasian landbridge transportation are very uneven in relation to logistics performance. China scored 3.53 that places the country on 28 position. Finland scored 3.62, which is respectively 24 position.

Kazakhstan (2.70 at place 88) and Russia (2.69 at place 90) are located significantly lower (World Bank 2016c).

Qi and Wang (1991) define landbridge to be a *"transportation from one seaport to another by railway across continents".* A landbridge is formed from corridors that are shorter railway sections (Rodemann & Templar 2014). A transport corridor is defined as a route suitable for cargo and passengers' transportation, and connecting different countries (Regmi & Hanaoka 2012). There are two main landbridges between Europe and Asia. They are namely the North American, and the Eurasian landbridges (Qi & Wang 1991; Hilletofth et al. 2007). Qi and Wang (1991) point out that the obvious advantages of Eurasian landbridge over the North American are shorter distance and time, however, Hilletofth et al. (2007) emphasize that the later one provides significantly more efficient services.

The corridors of Eurasian landbridge are the northern corridor, the central corridor, the southern corridor, the Europe – Caucasus – Asia, and the north-south corridors (Hilletofth et al. 2007). Trans-Siberian railroad is located on the territory of Russia and connects Vladivostok to Moscow; the adjacent sections originate from China, Mongolia and Kazakhstan in Asian part; on the other side the route continues to Europe via Belarus and Ukraine (Rodemann & Templar 2014). Trans-Siberian railway route remains attractive for transit transportation. According to UNECE, the road requires one gauge change and has high level of electrification. Volume of containerized transit cargo transported by Trans-Siberian railway in 2013 was 343 145 TEU (+13.1% compared to year 2012) (Bessonov, 2013). Prognosis predicts the volume to increase up to 941 600 TEU per year by 2020 (Bessonov 2013). To make the route more attractive transportation tariff regulation was adopted.

Nevertheless, the vast majority of cargo is transported by deep sea. The ancient Silk Route remained the most important trade route until 1488, when the sea route to China was discovered (Sárvári & Szeidovitz 2016). Since 1513, when the first marine traders went ashore in China, and with further development of maritime transportation the Silk Road has gradually lost its competitiveness and importance.

The biggest deep sea ports are located in China. According to World Shipping (2016), ports of Shanghai, Shenzhen, Ningbo-Zhoushan, Qingdao, Guangzhou and Tianjin occupy top-10 of the biggest deep sea ports. For example, in 2013 port of Shanghai handled almost three times more than the biggest European port of Rotterdam (World Shipping 2016). According to Viohl (2015), Chinese deep sea ports have also shown the fastest growth within last decade. For example, port of Ningbo increased capacity by 565 % between 2003 and 2012, while port of Rotterdam grown only by 167 % within the same period (and even has shown decline in recent years).

Transportation via Suez-Canal has the biggest capacity on the way from Europe to Asia. The total amount of transported cargo in 2015 accounts for 822 916 thousand tons with monetary equivalent of 5 175.6 million USD. After decline in 2009, the growth has been steady. Over 41.2 million TEU were transported in 2015 with insignificant decline from the previous year (-0.02 %), and big improvement compared to 2008 (+14.97 %) (Suez Canal Traffic Statistics 2016). China – Europe maritime transportation via Suez Canal is the least expensive though the most time-consuming. Deep sea transportation is lagging far behind in terms of transportation time. Hilletofth et al. (2007) calculated that the speed of maritime transportation is anyway "*few tens of a percentage*" behind landbridge transportation. At the same time, maritime transportation has a strong cost advantage over railways. For example, according to Sladkowski and Ciesla (2015), the price difference of FEU transportation from Shanghai to Warsaw is three times higher, if accomplished by rail (for 2011 it was appx. 7500 USD vs. 2185-3001 USD/FEU). Panova (2016) states that tariffs for transportation by Trans-Siberian railroad are in general twice higher than via Suez-Canal. Some researchers see the threat for East China ports by emerging landbridge. It is identified in the research that the volume might be decreased down to 67.3 % (or even down to 42.99 % and 34.04 % in other scenarios) compared to current level of 95 % once the infrastructure is complete and taken into operation. The competitive disadvantage of ports are seen in long time (and higher cost) needed for container handling and lack of efficient and well-located hinterland terminals (Wang & Meng 2007).

3.2.3 Challenges of Eurasian railway transportation

Hilletofth et al. (2007) report, that back to nineties, the Northern corridor connected Europe via Russia to China, had a volume of 11 % of all goods transported in this direction.

However, according to different sources, currently only 1-2 % of total trade between China and Europe is executed via all railway corridors (Panova 2016). Many researchers have been investigating reasons and opportunities to increase the volume. Wang and Yeo (2016) have identified main factors that are being considered by logistics companies in order to choose logistics solutions – these are accordingly total cost, reliability, transportation capability, total time and security. Other researchers have paid more attention to competition between different transportation modes, for example, landbridge connection is compared to deep sea transportation in reports by Hilletofth et al. (2007) and Rodemann and Templar (2014). Regmi and Hanaoka (2012) summarized literature related to assessment of transport corridors. According to the authors, there is a big variety of methods to be adopted. However, mainly assessment of transport corridors are tied to time-cost-distance evaluation. Other researchers consider different characteristics for evaluation. Among those are reliability (Wang & Yeo 2016; Jun & Yanyi 2012; Regmi & Hanaoka 2012; Peyrouse & Raballand 2016), flexibility, infrastructure development, and quality of service (Regmi & Hanaoka 2012). The authors also discuss environmental impact, infrastructure development, customer clearance, cross-bordering procedures, and mutual relations between stakeholders as influential factors on efficiency of a transport corridor (Regmi & Hanaoka 2012).

Hilletofth et al. (2007) brought up the question why the amount of containerized cargo transported by transcontinental bridges is so insignificant compared to sea transportation. Authors conclude that the major reasons are "*low competitiveness, unpredictable variation in transport time and poor service quality of harbor and railway transport*". Apart of these authors investigated that there is poor rail connection between Russia and Asia that might be intensified by insufficient amount of needed fleets. Hilletofth et al. (2007) also question the capability of seaports and landbridge to handle cargo flows arriving on container ships. In addition, the decision-making is negatively affected by unpredictably changing tariffs. Moreover, in order to enhance competition, achieve efficiency and cost reduction it is needed to overcome political, economic and ideological differences (Fallon 2015). Similar ideas have been suggested by Rodemann and Templar (2014). Further, Rodemann and Templar (2014) emphasize "*differences of railway systems in terms of infrastructure, equipment and management*". The authors point out that the time for customers with law volume of cargo is long, since they need to wait until the train is filled. Rodemann and

Templar (2014) see potential for landbridges in transporting high value goods (electronics, and automobiles), and hazardous cargo. Rodemann and Templar (2014) claim, that railway transportation might attract more volume by continuing cost reduction and reduction of lead time. Moreover, since the landbridge transportation implies cooperation between many countries, the cooperation between governments and state railways is on the high importance (Fedorenko 2013). In addition, for the moment major transport corridors from Europe to Asia pass through Russia that makes the country the highly influential party (Fallon 2015). Rodemann and Templar (2014) believe that the situation might change with investments in the transport corridor bypassing Russia. The authors conclude that China will intercept key role on this route, while Russia will lose the influence, and EU will stay at the "consultancy" position. Verny and Grigentin (2009) concluded, that Northern Sea Route is viable alternative and together with Trans-Siberian railroad might become "second-tier" after Suez-canal transportation with regards of cost and time. However, its development and operability strongly depend on unpredictable climate change.

To enhance attractiveness of railway transportation some major steps are to be done. Hanaoka and Regmi (2011) conclude, that sufficient amount and quality of rolling stock has to be available, the tracks need to be electrified, modern technology in order to improve speed and communication are advised to be implemented. The authors notice that the parts of the routes with single track have a higher priority for passenger trains and affect cargo transportation time negatively (for example, Kuitin – Alashankou, China). Moreover, cross-border procedures (CBP) are advised to be better organized to avoid undesirable delays, and inland depots and dry ports are to be developed. As per CBP, the authors note that there are many parties involved in the process, thus, for example, establishment of "*single corridor management authority*" might increase CBP. The researchers suggest private parties and governmant to actively participate in management of CBP. Certainly, there is a good possibility to enhance performance by using modern technologies for communication, for example, for "*paperless trade*" and tracking of goods.

Regmi and Hanaoka (2012) summarize the factors leading to increase of time and costs with regards to service. Among these, the researchers name delays caused by CBP, transshipment, and periodicity of trains. Insufficient amount of fleets and wagons or delayed supply of them also are identified by researchers (Hilletofth et al. 2007; Hanaoka & Regmi 2011). Regmi and Hanaoka (2011) also note security inspection of goods and rolling stock,

differences in rules of CBP and working hours as causes for cost and time increase. Lack of competition, poor service in Russia, changing tariffs together with unstable and poorly predictable currency complicate the decision-making processes and decrease attractiveness (Hilletofth et al. 2007).

Challenges of Eurasian transportation are summarized in Table 4. The findings are partially contributed to create interview themes of "Competition", and "Overall opinion towards "Silk Route" initiatives".

Table 4. Challanges of Eurasian transportation

Trans-Siberian railway route remains attractive and has high level of electrification, though it implies transshipment (Bessonov 2013).
Maritime transportation has low speed and low flexibility (Saeed 2013).
The competitive disadvantage of ports are seen in long lead time (and higher cost) needed for container handling, and lack of efficient and well-located hinterland terminals (Wang & Meng 2007).
Poor rail connection between Russia and Asia intensified by insufficient amount of fleets (Hilletofth et al. 2007).
The Northern Sea Route is viable alternative for Eurasian transportation, though is highly dependent on uncontrollable weather condition (Verny & Grigentin 2009).
Occasional security inspection of goods and rolling stock, differences in rules of CBP and working hours are causes for cost and time increase (Regmi & Hanaoka 2011).
Low competitiveness, unpredictable variation in transport time, and poor service quality of harbors and railway transport (Hilletofth et al. 2007).
Insufficient amount of needed fleets (Hilletofth et al. 2007).
Oil prices, capacity of ports and inland infrastructure to proceed the volumes, and countries' regulations for transportation service (Tavasszy et al. 2011).

Different transportation solutions suit better different demand. As for railway connection, Trans-Siberian railway is seen to have capacity to transport bigger volumes (Panova 2016). However, other researchers report, that poor connectivity with Chinese railway network negatively affect Trans-Siberian railway attractiveness (Hilletofth et al. 2007). Still, with decrease of costs and transportation time, amount of cargo transported by rail can be increased. Tavasszy et al. (2011) state, that transportation flows (and trade) are dependent on oil prices, capacity of ports and inland infrastructure to proceed the volumes, and countries' regulations for transportation service. At the same time, the authors believe that Eurasian landbridge connection together with enhancing capacity of water channels (Panama, and Suez Canal) will increase and reshape international trade. The transportation

via Suez Canal has been and is likely to be the cheapest alternative (Verny & Grigentin 2009; Tavasszy et al. 2011; Bulis & Skapars, 2014). Landbridge transportation is a viable alternative with potential to increase speed of transportation. The Northern Sea Route is seen to be a viable solution. However, it depends on the uncontrollable weather condition (Verny & Grigentin 2009).

3.2.4 Silk Route Initiatives

With growing market integration and globalization a new modern transcontinental transportation system with corresponding level of service is in high demand for Eurasian continent (Panova 2016). The interest is expressed by many countries. Regmi and Hanaoka (2012) emphasize that transit railway infrastructure is highly important for landlocked countries, as it serves them to gain access to open seas. Further, the commissioning of the Silk Route will serve to diminish income unequally among the involved countries (Karluk & Karaman 2014). The idea is repeated by Fallon (2015), who states, that constructing of the Silk Route is a way to establish basis for new types of international cooperation. According to Fallon (2015), the project positively influences world development and wealth. In contrast, Regmi and Hanaoka (2012) spit out the opinion, that transport corridors are constructed in political interests, but not based on economic reasons. Skeptical opinion is also expressed by Peyrouse and Raballand (2016), who state that the Silk Route initiative is more concerned about decreasing distance, but not about assuring sufficient level of transportation reliability and predictability. The authors assure that distance is considered to be less important factor than reliability and predictability of transportation.

Pattern of mutual interest in cooperation between Central Asia and China is also discussed in the literature. China has invested heavily in the development of energy sectors in the Central Asia with long-term goal to secure favorable oil prices and ease access to raw materials. At the same time, Central Asian countries show increasing interest in economic collaboration with China (Contessi 2016, Sárvári & Szeidovitz 2016). Contessi (2016) assumes that the “oldest” initiative dates back to 1992, and it is the Asian Land Transport Infrastructure Development (ALTID). The ALTID initiative had three main aims. The first project was connecting Asia to Europe by constructing highways net with total length of 141 271 km. The TAR project was meant to connect railways of Europe and Asia and to

provide better access to sea ports for landlocked countries (Rana 2012). According to Contessi (2016), the other notable initiatives are significantly younger.

Fedorenko (2013) provides comprehensive overview of the main initiatives to revive Silk Route, which would satisfy the emerging need. According to author, the most of the initiatives converge on building and upgrading infrastructure and simplifying and standardizing cross-bordering procedures. In addition, most of initiators proclaim to decrease transportation cost and lead-time by utilizing the latest technologies and constructing modern high-speed routes with related infrastructure. However, the countries have different visions. The most notable initiatives are the Belt and Road initiative and TRACECA. Rodemann and Templar (2014) summarize, that there is lack of common approach between initiatives is followed by lack of cooperation in terms of development, financing and cooperation. These, in turn, cause political tension.

Taking into account the scale of China and its export-oriented economy, development of infrastructure in the western provinces became a crucial issue. Xi Jinping in September 2013 announced an initiative to "revitalize" Silk Road with aim to "*expand its [China's] economic and political influence in the region*". Xi Jinping announced five key areas of development and these are: (1) strengthen policy communication, (2) improvement of road connection, (3) trade facilitation, (4) strengthen monetary cooperation and (5) improving people-to-people cooperation (Karluk & Karaman 2014). One of the biggest initiatives that rose from the Great Western Development Strategy is OBOR project (Fallon 2015; Sárvári & Szeidovitz 2016). Moreover, Callaghan and Hubbard (2016) specify that China being affected by financial crises, which led to trade decline, and is seeking ways to improve the situation. According to the author, the Silk Route initiative can help China to perform as good as it potentially can. Ferdinand (2016) names the aim to improve relationships with Europe besides the other proclaimed goals. The critics of the initiative have the idea of threat for stable development and sovereignty (Diener 2015).

OBOR includes two projects – land bridge "Silk Road Economic Belt" (SREB) and sea route "Maritime Silk Road" (MSR), each of them contains more subprojects. SREB is intended to connect China's coast regions to west provinces, pass through Central Asia, West Asia and Middle East to Europe (the Baltic Sea). MSR is planned to be complementary sea route

(Sárvári & Szeidovitz 2016). To support infrastructure projects of OBOR, the Asian Infrastructure Investment Bank was established in 2014. For the moment of establishment, 57 countries submitted documents to join the bank in role of "funding members" (Fallon 2015). Citing World Economic Forum, Fallon (2015) reports that the required investments for infrastructure development reach up to 8 trillion US Dollars with horizon to year of 2020.

The scale of Chinese ambitions is grandiose. According to Pantucci and Chen (2015), the Belt and Road projects are supposed to encompass countries "*representing 55 percent of world GNP, 70 percent of global population, and 75 % of known energy reserves*". The Western Development Strategy implies long-term plans. First, it serves to attract foreign investments to western provinces and thus to diminish disproportion in the development of the western and eastern regions of China. Second, even though China proclaimed a shift from export-oriented economy towards more balanced economic model, it is likely to stay highly dependent on export in the near future. Thus, the development of the route will ease connectivity with Europe.

Following the strategy of developing western provinces China is constructing 18 large logistics distribution centers. In the western part (Xinjiang) there is a large distribution center in Urumqi, which is used only for domestic purposes. The second biggest bordering station in Alashankou also has a dry port nearby, which has a capacity to handle in average 20 trains per day. To develop economy of the region there is a Free Trade Economic Zone (FTEZ) organized to facilitate international trade. In Khorgos that is located within the FTEZ, a new dry port is being constructed. The current volume of the dry port is 10000-20000 TEU, the planned volume is 1 million TEU. The dry port is connected by newly constructed railway links to Yining and Jinghe from Chinese side, the railway connection to Almaty is planned (Hanaoka & Regmi 2011). Callaghan and Hubbard (2016) summarize the positive outcomes of commissioning the Silk Route for China. The author names increase of the market, facilitating tourism and cultural exchange, and development of regions. More skeptical is Ferdinand (2016), who forecasts that all the decision and plans made now will be left for execution of next generation and government that might be less tolerant to risk-taking. The author also says that in order to achieve the aims of the projects, all participants need to be motivated. The researcher suggests the idea, that other countries might not share the vision

of China and definition of "*win-win cooperation*", and China cannot implement the project all alone.

However, some researchers see difficulties and challenges in making reality from OBOR projects. For example, Pantucci and Chen (2015) agree with Xu (2014) on the opinion, that the investments in infrastructure in China and Central Asian developing countries might have inadmissibly low returns. Authors also emphasize that return of investments approach mainly is not taken into account by researchers and other interested parties, while discussing the Silk Road initiative (Pantucci & Chen, 2015). Contressi (2016) tackles the problem from another side and questions viability and transparency of such a massive initiative in terms of financial investments. Djankov and Miner (2016) point out three main challenges that they believe are characteristic for OBOR project. These are namely implementation difficulties; high complexity of investments decisions and associated risks, and decision-making in context of high diversity of political and economic interests of world community. Callaghan and Hubbard (2016) and Raballand and Peyrouse (2016) also highlight difficulties. The most important are historical inconsistency to support similar projects in terms of providing sufficient platform for cooperation and coordination, and dependency on many involved countries that certainly need financial support to meet requirements. Hilletofth et al. (2007) and Raballand and Peyrouse (2016) see a threat of uncontrollable increase of transportation tariffs on transit territories. Thus, if a transit tariff rises, the overall transportation costs increase as well.

Another known initiative is so-called TRACECA. Europe has strong interest in revitalizing the Silk Route. In 1998 in Baku 12 countries signed the "Basic Multilateral Agreement on International Transport for Development of the Europe – the Caucasus – Asia Corridor" aiming to fully utilize their geopolitical and economic potentials (Azerbaijan, Armenia, Bulgaria, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Romania, Tajikistan, Turkey, Ukraine and Uzbekistan.). Iran joined the agreement in 2009 (TRACECA, 2012). TRACECA is an ongoing project of building land bridge between Asia and Europe financed by European Commission and countries-participants (The Silk Road of 21st century 2016). The strategy proclaims the main goal as "*improvement and harmonization of the legal basis, border crossing procedures, tariff policy, institutional strengthening, senior staff capacity development, as well as the improvement of transport infrastructure*" (TRACECA 2012).

The initiative includes several projects aiming to enhance regional economies. It is focused on marine transport, air routes, roads and rails, transport infrastructure and transport security. Europe and China share idea "*to promote peace, prosperity and sustainable development*". Additionally, Europe is aiming to receive Chinese investments especially for Central and Eastern Europe countries (Sárvári & Szeidovitz, 2016). The TRACECA strategy implies Multi-Criteria Assessment Framework as a tool to choose among proposed infrastructure project. Criteria are identified to be "*political, social, economic, financial, environmental and technical factors*". Main economical requirement is that "*the project must not exhibit a high risk of poor Benefit-to-Cost ratio*". The project has high complexity due to large scale and diversity among engaged countries (culture, and development of infrastructure to name the few). The main challenge is formulated in strategy as moving "*from fragmentation to harmonization and integration*" (TRACECA 2012).

Considerable interest in the revival of the Silk Road contributes to emerge of peripheral projects aiming to improve other sectors of economy (mostly energy and mining). To name a few, European project INOGATE aims to support energy policy of the Silk Road countries, or Viking Railroad, that aims to connect Baltic Sea to Black Sea by rail (Fedorenko 2013).

The opinions towards perspective of the emerging initiatives are outlined in Table 5. The subparagraph becomes a basis for interview theme "Overall opinion towards "Silk Route" initiatives".

Table 5. Perception of the Silk Route initiatives

Historically proven incapability to support similar projects in terms of providing sufficient platform for cooperation and coordination, and dependency on many involved countries that certainly need financial support (Callaghan & Hubbard 2016).
Manufacturing in China has been moving inland, to the provinces in the central and western parts that are geographically predisposed for railway transportation via Kazakhstan (KPMG 2011).
There is lack of common approach between initiatives that is followed by lack of cooperation in terms of development, financing, and cooperation (Rodemann & Templar 2014).
"*Differences of railway systems in terms of infrastructure, equipment, and management*" (Rodemann & Templar 2014).
Long awaiting time for law volume of cargo until the train is filled (Rodemann & Templar 2014).

The cooperation between governments and state railways is on the high importance (Rodemann & Templar 2014).
China has invested heavily in the development of energy sectors in the Central Asia with long-term goal to secure favorable oil prices and ease access to raw materials (Contessi 2016; Sárvári & Szeidovitz, 2016).
Major transport corridors from Europe to Asia pass through Russia that makes the country the highly influential party (Rodemann & Templar 2014).
Railway transportation might attract more volume by continuing cost reduction and lean time (Rodemann & Templar 2014).
Sufficient amount and quality of rolling stock has to be available, the tracks need to be electrified, modern technology in order to improve speed and communication are advised to be implemented. CBP are advised to be better organized to avoid undesirable delays; inland depots and dry ports are to be developed (Hanaoka & Regmi 2011).
Establishment of a "single corridor management authority" might improve CBP (Hanaoka and Regmi, 2011).
Private parties and government shall actively participate in management of CBP (Hanaoka & Regmi 2011).
There is a good possibility to enhance performance by utilizing modern technologies for communication, for example, for "paperless trade" and tracking the goods (Hanaoka & Regmi 2011).
"*From fragmentation to harmonization and integration*" (TRACECA 2012).
Commissioning of the Silk Route will serve to diminish income inequality among the involved countries (Karluk & Karaman 2014).
Constructing of the Silk Route is a way to establish basis for new types of international cooperation (Fallon 2015).
The project positively influences world development and wealth (Fallon 2015).
Transport corridors are constructed in political interests, but not based on economic reasons (Hanaoka & Regmi 2011).
The most of the initiatives converge on building and upgrading infrastructure, and simplifying and standardizing cross-bordering procedures (Fedorenko 2013).
Decrease transportation cost and lead-time by utilizing the latest technologies and constructing modern high-speed routes with related infrastructure (Fedorenko 2013).
The development of the route will ease connectivity with Europe (Fallon 2015).
Investments in infrastructure in China and Central Asian developing countries might have inadmissibly low returns (Xu 2014; Pantucci & Chen 2015).
Viability and transparency of such a massive initiative in terms of financial investments are questionable (Contressi 2016).
Implementation difficulties, high complexity of investments decisions and associated risks, and decision-making in context of high diversity of political and economic interests of world community (Djankov & Miner 2016).
There is a potential for transporting high value goods (electronics, automobiles), and hazardous cargo (Rodemann & Templar 2014).
Transport component of final costs in Kazakhstan is at least twice higher than the normal level in industrialized countries (Yang & McCarthy 2013).
There are delays reported on cross-bordering station between China and Kazakstan (Alashankou – Dostyk) (Regmi & Hanaoka 2012).
Transportation through Kazakhstan is bureaucratized (Yang & McCarthy 2013).
Threat for stable development and sovereignty of involved countries (Diener 2015).

Potential to create a hub in Latvia for consolidation cargo from Scandinavia (Bulis & Skapars 2014).
Facilitating tourism and cultural exchange, and development of regions (Callaghan & Hubbard 2016).
Other countries (than China) might not share the vision of China and definition of "*win-win cooperation*" (Ferdinand 2016).
Threat of uncontrollable increase of transportation tariffs on transit territories leading to overall cost rise (Hilletofth et al. 2007; Raballand & Peyrouse 2016).

The researchers highlight importance of the Silk Route revitalization initiatives (Fallon 2015). It is mainly related to improving transportation connectivity among involved countries (Fedorenko 2013). Further, transportation links assure development of economies, exchange of knowledge and cultures. However, there are multiple challenges identified. First, researchers point out, that projects of continental scale are challenging to manage and require well-developed platform for cooperation, coordination and investment. Here the researchers refer to historical incapability to support the similar projects in a sufficient way (Callaghan & Hubbard 2016). Some authors doubt the transparency of investments and predict low (or no) returns (Xu 2014; Pantucci & Chen 2015; Contressi 2016). It has been also emphasized, that there are many initiatives that originate from different countries and are financed by different sources, but not aligned and coordinated. Furthermore, some researchers report difficulties in business with Kazakhstan The named challenges are related to high costs and bureaucracy (Regmi & Hanaoka 2012; Yang & McCarthy 2013).

Nevertheless, the perspective of the initiative is also positively outlined in other reports. Authors state that there is a lot of work to be done in terms of constructing and developing infrastructure, establishing business relationships and attracting traffic, but the researchers see a potential in geographical and economic sense.

The possible theoretical contribution of the study can be a prove of criteria important for selecting a certain transportation solution. Moreover, there is a possibility to identify criteria that have not been found from the related literature. As the focus of study is on Finland's engagement in the Silk Route, there is a chance that the forwarders might report country-specific criteria that have been missed in more generic studies. In accordance with the theories, geographical distance is one of the factors influencing (enhancing) international trade. As it is specified by Eaton and Kortum (2002), the shorter a distance is the more active international trade can be. On the other hand, as a railway transportation relies on hard

infrastructure, a geographical distance has to be calculated based on available infrastructure. Thus, the actual research is about alternative transportation solution, which so to say "shortens" the distance between countries. In line with the theories, the research investigates different aspects related to shortening of transportation route between countries and possibilities arising from it. The theoretical contribution may be reported as a comparison of the influential factors on transportation choice identified from topical academic reports with empirically collected data.

4 EMPIRICAL PART: INTERVIEW FINDINGS

The case study strategy implies an empirical study of a case in the real time (Yin 2013). The phenomenon studied in the particular case study is the Silk Route, which is current and emerging. To follow the case study research strategy, an empirical investigation has been conducted. The results of the investigation are summarized in the chapter. The narration is divided into subparagraphs in accordance with interview themes.

4.1 Background information

Totally ten interviews with eight companies were conducted. Four companies represented Russia, two companies represented Finland, and one company represented each China and Kazakhstan. All the contacted persons are experts in the field of cargo transportation and have relevant practical experience and knowledge related to Eurasian railway transportation. The held positions of the interviewees are either of deputy general director, director, deputy director, director / head of department, and general / key manager. The interviewed companies are engaged in forwarding or carrier businesses and provide (or used to provide) international container transportation. Mainly the companies are specialized only in railway transpiration. However, the bigger companies have a wide network of subcontractors, and with the help of latter are able to provide diverse and wide range of transportation services. In other words, the companies are providers of the cargo transportation service. Part of them has railway operations on the way between China and Europe; the others consider possibilities to enter market, or have no current interest in the discussed transportation route. However, being the part of the international transportation market, the companies have knowledge and grounded opinions of the current situation and potential of the Silk Route transportation. Thus, the research participants are relevant source of information to support the study and find answers for the research questions.

4.2 Influential factors for choosing a transportation solution

The companies were asked to share ideas about determinative factors that influence clients' and companies' choice of transportation mode and route. Interviewees have been amazingly coherent answering "time and money" for the question of determinant factors for clients. The further conversations revealed other factors as level of service, security, reliability, loyalty, and green issues. It was reported, that it is hard to consider and keep on attractive level more than two factors at once, and usually "time and money" come first. The question

was asked within the context of Finnish – China transportation. Quotes of the interviewees are presented in Table 6.

Table 6. Factors, influencing transportation solution choice

Finland's geographical location negatively affects an opportunity to become a transit corridor for Europe and similarly for Scandinavia. It is both difficult and expensive.
Finland is an expensive alternative for transit, if compared to other Baltic ports.
It is also possible to consolidate goods from Scandinavia, but this is challenging. This "challenge" is related more to volume rather than to cost.
The idea (of Joensuu initiative – author's remark) is to make it known (within Scandinavia – author's remark) that there is such a route, such a possibility – and this is a good start.
Statistically the rate of strikes in Finland is higher than in Baltic States and Russia. The strikes negatively affect client's loyalty.
Chinese consigners are very strict regarding transportation time and thus railway transportation is rather attractive.
Issues related to ecology and environment are not raised by neither company nor clients.
Theft is flourishing. Trains are protected by private security. Train transportation is better preserved and more reliable service.
Railway transport is a priori "greener" than other modes. There is a concern about ecology, but the other characteristics of transportation as cost and transit time cannot be left aside.
You hardly ever hear "time", "money" and "service" in the same sentence. One or two of these factors appear at the same time as maximum.
Weather also affects the demand. In June, since the rains began, the company transported considerably less amount of paper. There was a big risk that the paper could become damped.
In 2012, there was a strike in Finnish ports, which has strongly affected transportation business. It led to braking commitments.
Cost, time and reliability are the factors that clients consider when choosing a service. They want to be sure that it is really operating. Ecology of transportation may be considered, but it has not been raised in the discussions.
The most important for client is the minimization of transportation time and increase of money turnover.
Main concerns of clients are prices and security.
Clients choose railway transpiration among others modes with respect to reliability. By reliability the safety of cargo and predictability of its regular arrival are understood.
There is a concern about ecology, but the other characteristics of transportation as cost and transit time cannot be left aside. All love nature, yet do not interfere with the money.
It might be powerful to regulate "green aspects" by legislation, for example, by introduction of specific environmental taxes.
The clients might choose the "greener" transportation just based on this aspect, it can happen in Finland. Closer to East – less likely. Maybe it comes in the future.

The interviewees identified determinative factors of transportation mode and route choice to be geography of transportation, cargo volume, costs, money turnover, transit time, promotion, service quality, reliability (safety of cargo and regularity of arrivals), security,

and ecology. More specifically to context, the interviews named rate of strikes, promotion (marketing), and support from influential parties.

The biggest scale of transportation decision is to choose a geography, in other words, the transit territories. It has been mentioned by an interviewee, that the less countries are engaged in transportation the cheaper the solution is, because less amount of tariffs to be paid. Aside of being the cheapest transportation due to large volume, sea is also a neutral territory. Therefore, the first question to answer is ***whether to transport from/via Finland or not***. The companies named geographical location of Finland and high costs of services to be inherent characteristics that are difficult to tackle. These are seen as disadvantages, when considering the attractiveness of Finland in the Eurasian transportation. Finland is located in North European peninsula, which means that the country is not optimal geographically for further distribution of goods designated to Europe. More locally, there are ideas and initiatives to make Finland a consolidating hub for Scandinavia. In this light, the geographical location is competitive, though the interviewees agreed on the opinion that it is challenging. This "challenging" refers mainly to low volumes of cargo.

Rail cargo transportation for this long distance only makes sense when a container train is formed. Otherwise, the benefits of speed and tariff are lost. Problem of low volume takes a lead over difficulties to organize the logistics and high costs of operations. In addition, shipping cargo from or to Norway or Sweden via Finland is simply more expensive than direct transportation via deep sea. Even though the whole Scandinavia is rather small player in terms of volumes, consolidation of goods might change the situation for railway transportation business. At the same time, the initiative is being facilitated by business players and is supported by authorities in Scandinavian countries. The discussion on attracting cargo to Finland for consolidation is being carried out on the level of Ministry of Transport, Finnish Transportation Agency, Chamber of Commerce, their colleagues in Sweden and Norway, and Finnish and Russian customs. Mainly interviewees have agreed that location of Finland is favorable for creating a Scandinavian hub.

Apart of geographical location, high costs make the country less attractive compared to the Baltic States and St. Petersburg. In addition, respondents mentioned rate of strikes in Finland, which is statistically high, as unfavorable factor for any kind of transportation

accomplished with participation of Finland. The given example was the precedent occurred in 2012, when the strikes in ports led to braking commitments. It has been reported, that retail in Finland has fallen down significantly afterwards, because clients have switched to alternative transportation solutions via ports of Baltics and St. Petersburg. At the same time, respondents reported high quality of service in Finland to be a positive distinctive feature.

The next level to consider is ***a transportation modal choice***. Transportation between Finland and China can be accomplished by sea, rail or air. The aspects discussed with interviewees were the characteristics of different transportation modes that are valuable for clients and influence their decisions. Time and money turnover are seen as the most important factors. Trains are favorable choice for certain clients as they ensure faster money turnover. However, higher speed also costs more. Security and reliability of railway transportation were mentioned by respondents as a positive characteristic of railway transportation. By those the interviewees mean, that the clients want to be sure on arrival time of the cargo in order to plan their own businesses and projects. It has been reported by a respondent, that Finnish clients used to be more concerned about security and reliability than about costs; however, the situation has changed since the overall financial downturn.

"Green" aspects of transportation appear to be treated very differently between companies. Roughly a half of the respondents have reported that the clients are not concerned about "green" aspect of transportation. The other half emphasized, that a "green" aspect of transportation is only one among many other factors that influence a choice of transportation solutions, and usually "time and money" go first. Those respondents believe that nowadays the "green" aspect does not have bigger weight than costs and speed of transportation. For example, if road transportation costs 10-15% less than "greener" alternative, the decision is likely to be made towards less expensive solution. However, European Commission has ran two rounds of Marco Polo program that have been supporting "green" transportation (executed in years 2003-2006 and 2007-2013). The Marco Polo initiative has an aim to support European companies willing to shift freight cargo from roads to "greener" modes in order to reduce emissions, and railway transportation by definition is "green". According to one of the interviewees, it might have been more powerful to regulate "green" aspects by legislation, for example, by introduction of taxes. In addition, the concerns about environment are seen to be more "European", however, an interviewee conveyed a hope that

the East will catch up in the future, and both companies and clients will be more interested in the well-being of nature.

4.3 Clients and demand

It has been reported, that in Finland international rail container flow has been increasing within last two years. A company reported stable increase of container trains sent via Kazakhstan. Within last year, 815 trains were sent to Europe; in five months of the current year, the amount of trains almost doubled, if compared to the same period of the previous year. It shows a demand for such a service. Quotes related to demand and clients are presented in Table 7.

Table 7. Demand and clients of Eurasian railway transportation

There is great amount of inquiries, but the volume is small and unstable. For example, 10 FEU can be sent only as a "single dispatch", and container train cannot be formed. In simple words, demand in Finland is low for such kind of service (container trains – author's remark).
The bigger projects are dealing with industrial goods rather than with consumer goods. This is why it is possible (container train service – author's remark).
It can be said, that there is an increase in demand for container transportation between Asia and Finland. Unfortunately, there is a mismatch between destination point and loading point. The main challenge is that the potential load is located in different provinces and those are close to the sea. However, there is a new inland hub in China – Zhengzhou international hub development and construction – and there is some interest from them to ship back.
The service is in demand among Chinese consignors (China – Europe container train service – author's remark). The balance is about 2:1 – two loaded trains from China to Europe and one on the way back.
Not noticeable for us, that there is a shift of manufacturing towards the center of China.
The train that we operate has received the right to live, because the consumer has appeared in the central region of China. It is geographically convenient to complete this transportation via Kazakhstan.
From China to Finland it might be advantageous to send goods by rail, if there is enough volume for a container train that is at least 40 FEU. However, this is difficult to consolidate at once.
In simple words, demand in Finland is low for such kind of service.
It can be seen that there is moving of manufacturing inland – an example is Zhengzhou international hub servicing inland located industries.
We have checked within 1.5 year the possibility to load containers from Finland through Kazakhstan to China. We have plenty of inquires, but they are not enough for full trains – mainly single containers or few of them.
The majority of container freight on the route China – Europe – China is represented by trains from Dostyk – Brest, and in the opposite direction. Taking into account that the

logistics solution is attractive for all the transit countries, as well as political commitment at the government level, the volume is increasing every year.

Some of the interviewed companies have had an experience in operating container trains between Finland and China, while the others are engaged in Eurasian trains sent on different directions (via Mongolia or Kazakhstan to Belarus, domestic trains within Russia). Almost all of the respondents indicated a steady flow of inquiries from clients for cargo rail transportation in Eurasian direction; the same was reported in more particular case of transportation between Finland and China. However, it is not always possible to satisfy the demand. The main issue is the lack of sufficient loads.

Cargo volumes in Finland are generally not sufficient for the formation of container trains. This means that there is no possibility to provide fast rail service at an attractive price. Railway transportation of low volume can only be accomplished as a single dispatch, which is not profitable. Even further – it is already comparable with deep sea transportation in terms of time. For example, even the biggest retailers in Finland can only assure volumes not bigger than 10 FEU. To form a container train at least 80 TEU, or 40 FEU, are required to be loaded.

Another mentioned issue was a mismatch between destination point of incoming cargo and loading point of possible backloads. China has a big (but undeveloped) inland part, and unfortunately, often the loading point is located nearby seashore, which likely determines the transportation to be maritime. However, an interviewee mentioned the newly constructed inland international hub in Zhengzhou, China (international hub development and construction) that has a potential backload. This is a noticeable result of Chinese policy of shifting manufacturing inland. In contrast, some other interviewees reported, that the shift is not visible for them yet. These companies stressed, that they have the same interests as their clients, and the later have no any changes in their interests and inquiries. It has been separately specified that Chinese consigners have an interest in Eurasian train transportation as there are strict for transportation time, and assess the cargo train transportation to be reliable in this sense.

It has been reported, that due to political commitment the volumes of cargo transported via Kazakhstan have been increasing yearly. The transit countries are interested to stimulate

transportation on the route. As per interviewee, in five months of this year (2016) 231 container trains were sent on the route Dostyk – Brest, which is 125 trains more than during the same period of the last year; on the way back 110 trains were sent, which is 84 trains more, respectively. Moreover, from May 2015 the project of industrial goods transportation from Finland to Western China was started. Totally, seven container trains have been sent on the route Joensuu – Korla or Joensuu – Akesu, five of them during year 2016.

To summarize, there is constant and growing demand to transport cargo on the Eurasian landbridge. Moreover, there have been trains in both direction between Europe and China. In particular, a small amount of trains has been sent between China and Finland. The main advantage is seen in high speed of transportation, however, it might be hard to compete in terms of costs of transportation.

4.3.1 Nomenclature

Further, the nomenclature of possible cargo was discussed in more details. Nomenclature of the goods defines the possibility to form container trains. Not all types of cargo are suitable for transportation in trains on Eurasian land bridge. Furthermore, not all clients are willing to pay extra money for faster transportation. Based on the interviews certain cargo types were identified. In Table 8 the quotes from interviews related to types of cargo suitable for container train transportation are introduced.

Table 8. Cargo to be transported on the Eurasian landbridge

Kazakhstan buys a lot of paper especially now (in summer time) for the production of textbooks and other materials for schools and educational institutions. There is a state program that promotes learning. Educational institutions may receive subsidies from the state that are among others are meant for purchasing of high-quality paper from Finland to print textbooks.
Recently, the ministry in Kazakhstan drew attention to the more modern methods of education, and demand has shifted towards e-learning tools produced in China.
The company works with “big” clients that own their terminals, or with consolidators from different smaller companies / terminals. The clients of the company themselves promote the service among final costumers.
The service is fully oriented to non-hazardous cargo.
Now there is an interest to transport to China (paper, lumber, and raw materials for processing, as Russian purchasing power has fallen).

There is a train from Finland via Russia and Kazakhstan to central China with pulp. The client has a sufficiently large and continuous volume originated from inland regions of Finland and the destination point also was located in Central China.
Some consumers switched, as the Finnish paper is traded in euros, and it is not profitable, when the euro is so expensive and unstable. It is more cost-effective to buy Chinese paper.
The main goods that are being transported are consumer goods, or shampoos, soaps etc. The bigger projects are dealing with industrial goods rather than with consumer goods.
There used to be a flow of medical equipment from the United States (in year 2013), which was transshipped in Finland and then forwarded by railway to Kazakhstan and eventually to China. Previously it had been transported through the Baltic countries and St. Petersburg, but it turned out that it was cheaper to send through Helsinki.
From China there are mainly consumer goods: clothing, and toys. Finnish economy purchases Chinese products, and the quality of the products produced in China is high enough for Finnish standards.
A Finnish company produces mine equipment, mine crushers, that are needed in Northern China, as there are mines and mining.
Semi-industrial goods (for export) might be attracted for container transportation service. Import to Finland – these are consumer goods, in China they are of course less expensive.
Customers interested in cargo transportation from China by rail to Europe are located in inland cities in China. These are high-valued products, electronics, high-quality textile, and porcelain. From Finland to China: frozen seafood, cosmetics, cars, foods, and high-quality clothes from EU to China are preferably dispatched by railway.
From China there are flows of consumer goods and machinery.
Forestry industry is mainly interested in this kind of transportation (container train service from Finland to China – author's remark), they have bigger volumes. Then there are companies making machinery.
Railway transport is more suitable for the particular goods, often more expensive ones, or seasonal (for example. clothing collection).

The interviews have shown that the service is fully oriented to non-hazardous cargo. Train service suits well expensive, seasonal and short-lasting products. The cargo suitable for railway transportation to China or Kazakhstan falls into categories of paper and forestry products, lumber, raw materials, machinery, semi-industrial and industrial goods, and frozen seafood. It was reported, that there used to be a flow of medical equipment from the United States transported via port of Helsinki designed to Asian countries. The company is not aware, if the flow has stopped or the client has found more suitable transportation solution. The possible load for container trains going opposite direction falls into categories of consumer goods, high-valued products, electronics, high-quality textiles and porcelain. An interviewee also expressed the idea, that Chinese mining industry might be interested in mine equipment and mine crushers from Finland, since mines are located in the northern China, which makes the railway transportation geographically convenient.

Interviewees agreed on the opinion, that the traditional export from Finland are paper products. One company informed that Kazakhstan has launched a state program that has provided financial support for educational organizations for purchasing high-quality products. Among other subsidies, this program has facilitated purchasing of Finnish paper. This flow has a seasonal character of the demand as it depends on weather condition. Fluctuation of currency and the fact, that the traditional textbooks have been steadily substituted with modern educational tools (tablets, e-books, and similar electronics products) also decreases demand. The other project of transportation paper products to China was described. Pulp became popular in Western China, since there were plants opened to process it. Earlier this cargo was delivered to China from Finland by sea to the port of Ningbo, and then through the whole country by rail in gondola cars.

To sum up, it has been noted that the discussed service is well-suited to certain nomenclature of goods. As per export from Finland, these are forestry industry products and machinery. There has been noted a potential for sea food transportation. In the other direction the variety of suitable goods is bigger: These are both industry and customer goods. In general, railway transportation suits better for non-hazardous, expensive and project goods.

4.3.2 Cargo train transportation

After discussing possible nomenclature of goods, different options to form trains have been discussed. Some of interviewees informed, that they have train services on Eurasian landbridge, in particular, there are trains between Finland and China. The main points from the interviews related to current train services are introduced in Table 9 below.

Table 9. Eurasian cargo train transportation

Now there is a container train. It is sent from Helsinki half empty. Further, the train is loaded in St. Petersburg, Moscow, and then it goes to China. In China it is disband, and single containers are sent further to their destination points.
Now we have requests from clients, whether it is possible to get a place in the container train (Finland to China – author's remark). However, the train is fully loaded, so this is not possible. Volumes are not at all enough to form a train, though there are options to form a train that has all the privileges of a container train, but is only half-loaded. Then we have to make advertising that there is a functioning container train, which has vacant places for client's containers. This kind of project might live.
Other forwarding agents also organize container trains that run in one direction, and then their counterparties or subsidiaries organize a return journey to somewhere. The company's train runs once per week.

The service (regular container service on the route China – Mongolia – Russia – Belorussia – author's remark) was started with one central Chinese province and currently there is negotiation with other provinces and terminals to link them to Europe via Mongolia.
A train might have a few consignors, but even if a train combines three consignors, it creates a high risk of delay. In other words, if a one has problems with the documents the whole train will be delayed. This would be unacceptable for other clients.
There are not too many single or double containers going now, the transportation is mainly train based. Railway becomes usable when we have big loads.
The basic idea of container trains is to have load in both directions. The company has loads for one train every quarter.
There is a container service from China to Moscow with good rates (fast and relatively cheap for railway), which allows to align the cost of transportation in Finland.
There is one container train that goes from Finland to China once per month. It is not a round trip, the train returns to Russia.
The company knows that there are full trains going from China through Kazakhstan to Europe, so the cargo flows are already there.
The company provides regular container service on the route China – Mongolia – Russia – Belorussia. From the June 2015, around 50 container trains have been sent.
The company has launched air transportation (China – Europe – author's remark), however, there is no demand. It is possible to serve, if a client wishes to.
All of these traffic flows (via Zabaikalsk, Mongolia and Kazakhstan – author's remark) are active, and interesting; there are constant requests from customers. Most popular transportation is via Vladivostok. Generally even the transportation bypasses railway by sea (cheaper). If the railway – mainly through Nakhodka with sea freight. If only railway – then through Zabaikalsk.
The company specializes mainly in domestic traffic. Few years ago, the company had a container trains from Poland to Ukraine, and then the containers were distributed in different directions: Ukraine, Kazakhstan, and Russia (Siberia, Moscow).
There is a flow from Finland to China, but the main issue is that there is no backflow. The other department is responsible for return flows, and the projects are not sufficiently coordinated.

The amount of trains and service execution differ between companies, however, there are two common solutions – dispatching a fully loaded train and dispatching a partly loaded train with additional loading on the way. The companies send the trains either regularly or based on accumulation of cargo. It has been observed by some interviewees, that regular shipments are more favorable for clients, since they can plan their projects and production accordingly. Moreover, the more trains are sent the more loyal the clients are – if they are late for one train, they are not willing to wait much time before the next one comes.

One of the companies reported, that per each train sent from China to Europe, they send one train in other direction. Another company reported, that the trains are sent only from Europe to China, where the cargo is distributed, and empty (or loaded) containers are returned to the

territory of Russia by cargo consignee. An interviewee shared the information, that it is quite common practice to send the trains only in one direction. Another company shared, that they provide an attractive service from China to Moscow in terms of speed and cost, which might align expensive section of railway transportation further to Finland. In addition, the company operating a train from Finland to China expressed the idea, that since there are quite many inquiries to book a place for a few containers in the train, there might be a possibility to start another half-empty train and actively promote it. The company knows that there is a demand, and that the project might gain its clients. However, work with many clients will increase the risk of delays and dissatisfaction of the clients. Still, there has been an example of such a service on the way from Riga to Tashkent. The train had loads of one FEU per each 80-foot platform, that in addition to constant flow allowed to have 30 vacant places for smaller clients. The train even had no permanent schedule, and was sent once enough cargo had been accumulated.

Other interviews were coherent in preference to work with a terminal or a hub that would consolidate cargo and deal with smaller consignors. In addition, an interviewee emphasized that certain type of goods are more interesting for the container train service than others, and these are industrial and semi-industrial goods. These types of goods are more likely to insure bigger volumes and regular shipments. Another interviewee confirmed that the demand is on place, and many big players are interested in Eurasian rail transportation. Among those the interested parties are large Chinese companies, company's customers in China and Europe, factories, Chinese provinces, large European companies-contract holders, and companies-intermediaries.

In short, the desirable situation is to have loads for a full train in both directions. However, in reality it is not easy to achieve. Thus, the companies are seeking for alternative solutions. Among specified, a one-way train and a half-empty train were discussed. There are precedents of sending a train only in one direction with responsibility of consignees to return containers to Russia or somewhere else. This is one of the most frequent issues mentioned in the interviews – no options for backloads. Differently, other respondents have mentioned the options to send half-empty trains and afterwards to market the transportation solution actively. Taking into account the fact, that there has been always some requests to transport a few containers, there is a high chance that a half-empty train soon will gain the full load.

4.4 Competition

Modal competition has been discussed as well as competition between forwarders. It was generally admitted that it is very hard to compete with sea transportation, due to cost difference and geographical reasons. However, speed is seen as a competitive advantage that the clients are ready to pay for. The details related to competition are collected in Table 10.

Table 10. Competition on Eurasian direction

The major amount of cargo flows between China and Finland are logically completed via marine transportation.
Of course, mainly containers go by sea today. The fact is very simple – it is about 40% of the price of rail transportation. Therefore, railway option is having more than double price. Good thing about railways is that trains are timetabled, reliable, and it take less time.
The sea transportation costs are as low as they are. It is tough to compete. It can be win with time factor. If the time is not very important for shipper – it is very tough to win.
It is nearly impossible to compete with sea transportation in terms of price. Speed is seen to be a characteristic that a client is ready to pay for.
A high quality of service and high speed (14 days) also helped to switch the client from marine shipping to train transportation.
There is a competition with road transportation, as truckers are trying to survive and are ready to offer very low rates. Now there is competition even at distances of 2000-3000 km (for example, Finland – Central Asia).
There is a trend that customers increasingly favour road transport. Earlier normal length of transportation by road was up to 400 km, and now it is up to 2000 km. Businesses are willing to pay extra for the convenience. Delivery and distribution completed in one unit.
Railway transportation is mainly train based. Railway becomes usable when we have big loads.
Railway transportation cost is naturally higher, though container (and money) turnover is higher. In other words, within the same period it is possible to make 1.5-2 round trips with loaded return trains.
Railway transportation in means of container trains is “fantastically fast”.
Transportation through Kazakhstan is difficult to accomplish for smaller forwarders, because bigger players are obviously interested in this route.
Service in Finland is reliable, but this is not enough. It is worth noting that ports of St. Petersburg have invested in a lot in machinery and infrastructure, and have been brought to European level that led to high competitiveness.

The biggest volumes are transported by sea, because “it is as cheap as it is”. As for competition with sea transportation – interviewees have not reported direct competition; however, as per responses, some flows might and must be overtaken. The facts are that sea transportation is at least twice cheaper than railway transportation, and both Finland and China have long and developed shorelines with international ports. These facts do not

stimulate flourishing of Finnish – Chinese railway transportation, as reported by majority of interviewees. The only factors of speed and high quality of services were named by the companies to be the possible reasons for clients to prefer railway transportation. If a customer is concerned about time and high quality of services (for example, high-valued or seasonal goods), then the competition can be won. One of the interviewees suggested to look for another factor that would help to compete with sea transportation, however, in tough economic situation it is not easy to think about one.

Further, the growing competition with road transportation for long distances was observed among companies. Interviewees assume that trucking was affected more significantly than railway transportation by the crisis and the sanctions policy. This is because dairy goods, for example, are mostly transported by road. That is why truckers are ready to offer very low prices. Further, truckers are free to decide on prices, while rail pricing depends on tariffs and is less flexible. If previously the road transportation was used for distances of 400 km, nowadays the transportation of 2000-3000 km can be accomplished by trucks. These distances do not reach to China, but to Kazakhstan and Central Asian countries. Even though the price increases, the clients are ready to pay extra for delivery and distribution as a one service. Further, trucks can be ordered simply as a taxi, which means that the road transportation is more customer oriented and flexible if compared to railway transportation.

A smaller company expressed lower interest in Silk Route initiative as for their opinion the bigger players are obviously engaged with this route and are not letting smaller competitors to come to the market. Finnish companies noted the competition from Russian side. At the same time, it has been mentioned that there are not many companies on the market at all capable to provide international landbridge container transportation service.

It has been mentioned, that the competition between ports also has a place to be. Ports of St. Petersburg recently have invested in their development and are currently taken to European level of service with competitive prices. Ports of Baltic States are being actively promoted and remain a cheap alternative. However, ports of Finland have a competitive advantage as they are ice-free during wintertime. The advantage is possibly going diminished because of climate change

In short, there is no direct competition between transportation modes reported. However, some loads that are being transported by sea can be and should be overtaken by railway transportation. There has been an example of such precedent in paper products transportation. Air transportation percentage is insignificantly low, and so is the demand. Interestingly, that truck transportation occurs to be a competitor for railway transportation for longer distances than previously. Mainly the clients are choosing trucks due to lower prices and convenience of transportation and delivery in one set. As per competition between forwarders themselves, it has place to be, and nowadays only the bigger companies can execute transportation on the Silk Route. The smaller ones currently have difficulties to enter the market.

4.5 Political and economic issues

Transportation business depends a lot of well-being of its clients. Political situation of the recent years certainly affected many businesses negatively, and overall volumes of transported cargo have fallen down. Interviewees have not reported negative effect on their businesses, though. No influence can be explained by the nomenclature of cargo transported in containers, which was not imposed by sanctions, as reported by interviewees. More details are introduced in Table 11.

Table 11. Political and economic issues

The intense political situation certainly affected the volumes, while not directly reflected in the company's activities. “It is just a time, when the fittest survive”.
When it comes to container transportation – no influence. Container volume has been going up for the past two years. Reason for that is active marketing of commercial companies (freight forwarders).
Volume fell in 2015, especially import. The company was not particularly affected.
Before the EU sanctions, the company had transported a huge amount of goods, in particular medical equipment from the United States. The goods were consolidated in the ports’ areas (Helsinki, and HaminaKotka).
Because of currency fluctuations, plants cannot predict their production. They do not know, how much they could buy from Finland. We are in the intermediate world in which all are interconnected. Businesses cannot provide/guarantee amount. The crisis has affected businesses, many were forced to cut staff and many were bankrupted.
The purchasers do not have enough capital to buy the products. Purchasing power has gone down, and the shipments have decreased accordingly.
During the first year of sanctions consumers tried to stay with Finnish companies (paper industry – author’s remark). The companies in turn was offering discounts, for example, they would pay for loading and unloading, and the client would only pay for

transportation. It was a decent discount. In the second year of sanctions the currency lost value (ruble and tenge), and it became uninteresting to continue business.
When it comes to China – one should look at the location as well. If the destination is close to seas – politically and diplomatically it is very challenging, when it is inland – there is a possibility.
It is significant to develop and revive the economy development between China and EU.
Advantages of transportation through Kazakhstan are in a very favorable position of the country in geographic and geopolitical terms.

Companies mainly reported that the influence of sanctions was insignificant. However, the companies mentioned that the services they had offered was changed and some assets were reoriented within last years. One of the companies introduced China-Europe train transportation as saw potential for it in prevalent situation. In other case, the loss of medical equipment cargo transported via Helsinki was explained by sanctions as a most probable reason. The company did not research further, whether the flow has stopped or the consignor has switched to another transportation solution. Apart of it, information about changes on paper market was provided. A company has noticed that the clients tried to stay with Finnish paper companies in the first year of sanctions, knowing the quality of the product. However, after one year of sanctions, the clients became "blind" to quality as it started to be completely unprofitable (due to high price in local currency) to purchase Finnish paper. The clients had to switch for Chinese production.

It has been noted by interviewees, that the Silk Route is on high political interest in China and Kazakhstan, and the countries have been promoted the corridor. The national support definitely plays an important role in development and putting into operation the route. China has reported the state influence on railway tariffs. By other players the railway tariffs in China are assessed to be high. Moreover, it has been mentioned, that tariff policy is not transparent in China, similar to Kazakh situation. One of the companies shared the perception, that better request receives better rate. Further, the tariffs are changing relatively quick, which makes planning and negotiation with clients more complicated and uncertain.

One of the companies provided the fact, that paper industry in Russia is having difficult times due to politic of Europe. The production is going down, and the companies do not get proper state support. Thus, the representative concluded that there is a threat for being closed down. Ironically, the situation might positively affect Finnish-Russian railway transportation.

Naturally, the project of such a scale has a political color. The companies have not reported much political influence, vice versa, the support have been mentioned many times. The economic downturn has affected production; the container business was not affected much as per respondents information. On the other hand, since Finland and China both have long and developed seashore, it has been mentioned that politically it might be complicated to try to overtake flows that have been served by deep sea transportation modes ever.

4.6 Opinions towards the Silk Route initiative

The interviewees were asked about their attitude towards the Silk Route and their thought about perspective and challenges of the initiative. The information gathered naturally falls into two segments – issues related to transportation via Kazakhstan, and opportunities that Finland might utilize from emerging Silk Route. Thus, the reporting is also divided into two parts. In the end of the subparagraph the Russian standpoint is briefly presented.

4.6.1 Kazakhstan's perspective

Kazakhstan has a very favorable position in geographic and geopolitical terms. Kazakhstan is located on the way from China to Europe, and based on it becomes a natural transit territory for Eurasian railway transportation. However, it is not the only option to accomplish this railway transportation task. The interviewees have not described the route to be outstanding transportation solution, and expressed their thoughts that are briefly outlined in Table 12.

Table 3 Kazakhstan's perspective towards Silk Route initiative

The initiative of course has to do with location of Kazakhstan. It is logical route.
There is no big difference between Silk Route and other corridors going the same direction. The advantage and viability of the Silk Route is based on geography. The issue is that this initiative is "on the table" now and people are putting emphasis on this route. There is nothing very special about the Silk Route compared to other corridors.
Work with Kazakhstan is highly bureaucratized.
Kazakhstan itself has been marketing this route – not only for transit flows, but also to some local Kazakhstan import. Strength is certainly the time. Then it also becomes less expensive in terms of money.
Transshipment might be called one of the weaknesses of the route. However, they do it and it can be done.
There is currently no high priority plans to start operations via Kazakhstan in the company.

Company understands, that the corridors through Kazakhstan are “a priori” promising/perspective as the tariff conditions provided by administrations of railways of Kazakhstan, Russia and Belorussia are competitive, and the corridor is faster (shorter).
No queries related to Khorgas. Nobody knows about them. We have interest exactly the same as the clients have.
It is very difficult to organize transportation through Kazakhstan.
In Kazakhstan, they do not provide the conditions to receive clear unambiguous transport solutions, sometimes we have to wait a month or more, and often the request is denied. If they have a certain customer, apparently, they simply do not allow anyone else to provide same service.
It sounds very simple, and it is actually very simple, – when it comes to container train service – no matter if it is Silk Route or whatever else – it comes to finding the shippers, producers, and getting them on board.
It is a young initiative; there were some railway shipping even to Finland. Nowadays it is normal business; the main challenge is to get more goods and regular shipping. There is no big difference between Silk Route and other corridors going the same direction.
The company sees potential in the development of rail transport in the direction of China – Central Asia, as there is a place for round trips. In Kazakhstan there is the same problem as in Russia – the national currency, which is subject of poor forecasting.
A container train is not an option through Dostyk, as on the Trans-Siberian railway the trains “fly” in 7-10 days from Finland to Zabaikalsk, plus it needs another 10 days in China to Shanghai (including cross-border operations). As far as I know, this part of China (western) is underdeveloped. We are not aware of condition of tracks, infrastructure in terms of receiving and departure tracks, and traction of locomotives, it is probable that not all tracks are electrified.
Transportation through Kazakhstan is expensive, as there is a need to pay the tariff for Kazakhstan. Customers generally tied to the price.
Silk Road can be a promising route, if the transportation is organized in the form of container trains with a discount on the tariff. The problem caused by changing the track should not occur, companies do organize a similar transportation.
The cargo flows via Kazakhstan to EU will be increased, but the company is not sure about Finland – China flows.
Many new logistics companies have been settled down for block train. The documentation, communications, and requests are different between KZ and other countries.
We have many customers, who want to send cargo through Kazakhstan (for example, in Urumqi), but we encounter difficulties with provision of containers. The idea to maintain relationships has occurred (meaning JSC “UTLC”), but due to the problems with infrastructure owners and difficulties in negotiations it almost failed.
Main thing for us to shift transportation to the corridors via Kazakhstan is to have clear and transparent tariff through Kazakhstan.
China has the money, and they can revive this project.
In Kazakhstan, the main issue is legislation. There are many cars (wagons and platforms) owned by Kazakhstan (150 thousand). They may issue an order on the impossibility of loading other cars except Kazakh (including containers and vehicles). That is, in Kazakhstan there are difficulties with these rules. Customs Union makes it easier.

Interviewees agreed on the opinion, that the Silk Route is very logical due to geographical layout. However, the companies used “nothing special”, “no matter”, “people are putting emphasis on this route” and “no high priority plans to start operations” expressions while describing their attitudes. It has been repeated in some interviews, that the route is just one of the possible corridors connecting China and Europe, which has own inherited advantages and disadvantages, and is being actively promoted by China and Kazakhstan. It was pointed out, that Kazakhstan has strong interest in marketing the route as apart of transit transportation there is an interest in import. The others expressed more positive opinions having as reasons geography, shorter transit time and faster money turnover; the route was named “competitive”.

It has been mentioned, that work with Kazakhstan in regards of getting permits and documentation approvals takes very long time, however, it is not seen to be a big hurdle – one just has to be ready for it. The other respondents enlightened the problem as difficulties with legislation – Kazakhstan fosters domestic businesses and support them with legislation. It is, first, not always clear for outside players and, second, disrupts of doing business to take place. Words “bureaucratized” and “difficult” were used, while describing business cooperation with Kazakhstan.

Out of the other issues, the national currency as a subject of poor forecasting was mentioned. Further, companies have reported a need to wait a long time in order to receive transportation solutions. In addition, the requests are often declined after long awaiting time, or are not clear and transparent. Transshipment on the China – Kazakhstan border was not emphasized as a significant obstacle, since it has been always done on other routes with minor problems. It is just the reality, which is meant to be dealt with and is possible to deal with without any significant influence on the whole service and total transit time. However, it was named as a relative disadvantage. In addition, it has been reported that success of transportation solution is a hard work of all involved parties, and each transit territory if interested as receives a transit tariffs. However, since involved countries are different in terms of legislation, infrastructure, cultures, it is a challenge to manage an international transportation, and it requires time. One of the companies reported that Kazakhstan has different standards for issuing transportation documentation, communication, requests, and

further the country has even different cargo coding system that add additional difficulties for cooperation.

Some of the respondents were skeptical about the perspective of the route. They expressed low awareness about the whole project and its current state. The possibility to start operations has not been investigated by them, and there is no knowledge about condition of infrastructure in Northern and Western China. There were no inquires via Khorgos, the new inland terminal close to China–Kazakhstan border, reported, that also shows low or no interest from clients side. In addition, some challenges are still to be dealt with. For example, Kazakhstan is lacking automation of the railway management systems, and the other issue is related to information security. However, the initiative is invested from China and there was an opinion that with proper investments the project will bring its benefits.

Among the other opinions there was one about low potential competitiveness of the Silk Route compared to Trans-Siberian transportation. First of all, the doubt was expressed that the transshipment terminal is not well-developed on the border between China and Kazakhstan. Khorgos at the same time was not mentioned as a viable functioning alternative. Further doubts were related to insufficient railway infrastructure on the Chinese side. In other words, the concern was about level of electrification, amount of tracks, infrastructure of tracks, traction of locomotives, infrastructure of receiving and departure tracks. Further, the service on Trans-Siberian railway has been developed for years, and it allowed to achieve high speed and certain schedule. Moreover, the link has good connection to the Far East sea ports, and direct connection to Chinese railways without any transit territories on the way. Most importantly, the company managed to assure competitive prices for transportation from bordering station with China (Zabaikalsk / Manzouli) and from the Far East ports all the way to Moscow. This might allow to prolong the transportation to Europe (Finland in particular) for overall competitive price.

Separately is has been mentioned, that if a transportation service based on Silk Route infrastructure will pass through Moscow, that it might gain more popularity as Moscow is an important point of destination, consolidation, and further distribution. Further, the company expressed a fear that in such a case the volumes transported on the Trans-Siberian

railway might decline. Currently, there has not been a decline reported caused by active development of the Silk Route based transportation solutions.

To conclude, an interviewee summarized, that no matter which corridor it is, the proactive work on finding the customers and getting them on board is the most important side of transportation. Another company concluded that with mutual support the route has a potential to develop. The required to be undertaken and developed are the following: to gain governmental support, effective coordination between all participants of the transportation process, optimization of tariffs for services with engagement of railway level administrations, development of service for container trains (reduction of transit time and negotiating special tariff conditions), introduction of innovative technologies and the automation of the transportation process.

To conclude, Kazakhstan has favorable geopolitical location, and the railway corridor via the country has a perspective. Worth to mention, that the country benefits from being transit territory, and as well from developing economic and business relations with China and Europe. The route has been marketed, has attracted own clients, and the flow of good has been growing. Still, there are many issues. Mainly, the difficulties to cooperate with Kazakhstan in terms of legislation and tariffs have been mentioned. Moreover, the route has a gauge change. Respondents also reported, that the infrastructure is not sufficient, there are difficulties to receive sufficient amount of fleets, and moreover, communication with Kazakh companies is sometime delayed. In the end, the tariffs policy is not transparent and ambiguous.

4.6.2 Finland's perspective

Finland is geographically located "on the other end" of the Silk Route. Interviewees have conveyed ideas how to gain more competitive position to Finland in terms of Eurasian rail cargo transportation. The summary of the interviews is presented in Table 13.

Table 43. Finland's perspective towards Silk Route initiative

If Finland can be considered as a destination country for Scandinavia, there might be a question to think about. The question is, if Chinese manufacturers have an interest in Scandinavia.

There is even not enough demand to load trains from whole Europe to China and further they do not see opportunities to find enough volume of cargo within “small” Finland.
It is likely that active PR and participation in forums and conferences would help. Information flows of any quality are important.
Finland’s geographical location negatively influences an opportunity to become a transit corridor for Europe and similarly Scandinavia. It is both difficult and expensive.
The local development company in Joensuu together with local Chamber of Commerce and other players have formed an alliance and they try to affect Finnish and Scandinavian cargo owners and shippers to get more goods to this route. One of the ideas is to make Finland a consolidation hub for Scandinavia. It is difficult, but possible.
Commercial companies need to be taking contacts with bigger Finnish companies producing metal, paper, pulp, and whatever else Finland is producing, having a dialogue with them, asking how much more the production and therewith sales or shipments could be, using “sales approach” to these companies (potential clients).
Another thing is that Finland and China are working in such industries that are represented in both countries. China might buy this equipment from Finland, for example, if China turned down the prices of local alternatives.
With proper approach and “smoothly running” service (and competitive tariff, if compared to other routes), the route has a perspective. It should be understood that all of these issues make sense only for those customers, who are interested in delivery time. In Finland, these customers are from forestry industry, or cargo transshipped from Europe to Central Asia. In Finland there is pulp, paper production, and a number of medium-sized plants (hydrogen peroxide, and metallurgy), but the volumes are small.
Finnish Railways has a strange policy: Rates on main directions are normal, but to send one container from some remote place is very expensive.
The Silk Route initiative can be beneficial for Finland. There are possibilities not only for Finland, but also for Scandinavia for traffic to and from China. The Finland can be a hub of Scandinavia.
To increase the traffic between China and Finland, first the market research is needed. Than a company, which is doing this business, needs to maintain a good network with all the parties involved. Finland does have facilities for this traffic and knowledge and all needed things. Basic information is not complete at the moment.
Finnish railways and ports are quite developed for today's volumes, and there exist powerful terminals in major cities as well as regional centers. Is Finland interested in the promotion of China-made products?
The situation might be changed, if the service for train formation through ports of Finland will be cheaper.
The main issue, again, is that to make the service going the bigger shippers are needed, since the service is meant for bigger volume. It is very challenging to work with many shippers at the same time.
Finland is a hub for rail traffic in Scandinavia, but the problems I have already mentioned (expensive compared to the Baltic States and St. Petersburg and lost trust).
The challenge is that there is only one big shipper. It is needed to have another big one, or few smaller and active ones, to make the business going.

According to respondents, right geography of transportation is one the most important input speaking about the discussed route. For example, rail transport is well suited for the

transportation of goods from Central Finland to Central Asia or Central and Northern provinces of China (inland areas remote from seas). A company noted that based on that, for example, mining equipment production in Finland and mining industry in northern China might stimulate trade.

Finland has been considered as a destination for Scandinavia and, vice versa, as a hub for Scandinavian goods. This idea is described by "difficult", "expensive", and "possible" vocabulary and is being supported by business and governmental players. The "difficulty" refers mainly to low volumes.

Among the issues, the interviewees named relatively high probability of strikes and relatively small amount of information "buzz", or low visibility. An interviewee gave an example, that information about port of Riga constantly flashes in the news, but there is not much information about Finnish ports. Play according to common rules might influence the competitiveness in a positive way. In other words, active promotion is needed. The other company claimed, that Finnish railways have "restrictive" policy for consolidation of cargo – tariffs for transportation single containers within the country from remote areas are very high. In addition, the companies reported that the basic market information is in demand. As for an interviewee knowledge, nothing much has been done in this direction yet, and the market research would be of high value. In line with that, it has been suggested for business players to initiate a dialogue with bigger Finnish industries in order to understand the volumes and potential growths.

Finally, sales approach to Finnish manufacturers of fuel, metal, paper, pulp, and other production were suggested as a viable tool to understand potential volumes and needs that would change shippers' opinion towards rail transportation and possibly attract them. In the end, simple idea of proactive cooperation with potential shippers and producers was mentioned as a golden rule on the way to success.

Among desirable changes to be done were lowering the service prices, establishing bigger shippers (consolidators-intermediaries dealing with smaller cargo owners), maintaining a reliable lasting network by business players in order to be able to accomplish Eurasian

railway transportation. An interviewee has confirmed, that Finland is ready for facilitating railway transportation to / from China in sense of having sufficient facilities and knowledge.

To summarize, Finland is interested in engagement in the Silk Route initiative. Finland is able to provide good service and has an experience in international transportation. However, the main (and strong) difficulty is low volume of possible goods to transport. Though, the low awareness about industry production capacity among forwarding companies has been reported. Further, the opportunity to become a hub for Scandinavian countries has been specified many times, which is not easy to execute. Complicated is to compete with relatively cheap alternatives that can be found in the Baltic States. Advantage is still seen in better connection to Scandinavian countries (apart of sea connection, there is also rail and road connection). Market research of production facilities and active PR and marketing might attract more international attention and stimulate potential of the route for Finland. In addition, the tariffs are high, that is seen as a competitive disadvantage if compared to Baltic States, for example. In the end, it has been reported that there is an increasing demand for Eurasian landbridge transportation. In fact, there are already cases of container trains sent from Finland via Kazakhstan to China. The promising cargo nomenclature are forestry products, mining equipment, and sea food.

4.6.3 Russian perspective

Worth to mention, that Russian players expressed rather neutral opinion towards the initiative. Russian companies perceive initiative to be insignificantly different from other landbridge corridors (via Zabaikalsk directly, via Mongolia, or even view the Far East ports). Companies operate on the certain routes managing extensive network of subcontractors, which has been established within years. As it was reported, it is neither easy nor fast to develop a new corridor, and as long as part of transportation is executed on the territory of Russia, the companies receive their benefit.

It has been reported, that the main player on the Silk Route is JSC ”UTLC”, jointly established by administrations of Kazakh, Belarus, and Russian railways. To get access to operations some companies initiated business relationships with JSC ”UTLC”, but have not provided any further comments on current situation. According to a company’s information, JSC ”UTLC” has the major share of container trains sent on Eurasian direction.

JSC “UTLC” has sent a 500th container train on the route between China and Europe on 23 of July year 2016. The train was sent from Chongqing (China) to Duisburg (Germany) (UTLC 2016).

5 DISCUSSION

The chapter is dedicated to summarize and discuss the findings from the academic literature and business field. The results are discussed in regards to the questions set in the introduction part. The research questions are answered in reverse order, because second and third questions are supporting the first (main) question.

The SREB project on improving landbridge connectivity between Europe and China (part of OBOR) has been gaining popularity among business players and researchers since it was proclaimed in year 2013 (Karluk & Karaman 2014). The project has been seen as a perspective and interesting for multiple parties (Fedorenko 2013; Yang & McCarthy 2013; Karluk & Karaman 2014; Fallon 2015; Contessi 2016; Sárvári & Szeidovitz 2016). On the largest scale, the countries on the way are interested in improving international cooperation, trade, and own economies. On the smaller scale, business players (service providers), and consignors and consignees (clients) have been discovering opportunities emerging from the Silk Route (Bonacich & Hamilton 2011; Regmi & Hanaoka 2012).

5.1 Influence on forwarders' decisions

First, the large-scale issues are discussed (economic and political influence). Next, the factors influencing business (demand, competition, pricing, timing, flexibility, capacity, security, ecological impact) are elucidated.

The scale of the initiatives imply high political interest. As Rodemann and Templar (2014) reported, a number of initiatives aim to facilitate development of Eurasian railway connectivity. However, lack of common coordination increases political tension (Diener 2015). In addition, initiatives themselves have gained political coloring. Fallon (2015) reported interest to minimize Russian influence on Eurasian connection and improve Afghanistan position. Similar ideas are summarized by Fedorenko (2013). Chinese interest in assuring good prices for resources available in Kazakhstan and Central Asia are reported in the literature (Sárvári & Szeidovitz 2016). Inability to make reality of the plans is also meet in the literature (Diener 2015). In turn, Kazakhstan is marketing the route itself as it benefits from transit transportation. Further, certain goods are destined to Kazakhstan itself. Being landlocked, the country gets value by developing the internal transportation system.

According to the information, reported by the research participants, their businesses have not been directly influenced by political changes within recent years in Europe. It has to be mentioned, that political situation in Europe have affected production businesses in Europe and Russia. The business players reported, that as purchasing power went down businesses had to cut some positions; the others went bankrupt. Through it, the transportation business has gained its influence in terms of decreased volume and had to search for new opportunities.

Respondents reported that for China and EU it is important to revive the route. It is perceived by the business players, that China has resources to invest in the project and is able to give it life. According to Fallon (2015), eight trillion US Dollars are planned to be invested in infrastructure development before year 2020 (OBOR project). To support the investments, the AIIB was established and gained 57 applications from other countries to join.

Forwarders consider many factors when planning to develop one or another transportation solution. Primarily, it is demand. If there is no demand, there is no reason to develop a business solution. In the context of the Silk Route transportation, demand needs to be sufficient for constant container train transportation, otherwise the price competition will be lost. China has proclaimed a plan to shift manufacturing inland as the development of the regions is uneven. In central part of the country the assembling plants are being constructed (for example, in Chengdu) (KPMG 2011). The increase in demand (or constant flow of the requests) have been reported, however, the respondents mainly informed, that the shift of production inland is not noticeable for them. One of the companies mentioned, that a new inland hub in Zhengzhou (China) is interested in transportation cargo to Europe, and particularly to Finland.

Mainly researchers agree on the opinion that total cost and time are the first characteristics to be considered (Jun & Yunji 2012; Regmi & Hanaoka 2012; Wang & Yeo 2016; Raballand & Peyrouse 2016). Second, there are certain types of cargo that are more likely to be transported by rail than by other modes. The business players see the biggest potential for transporting time-sensitive, seasonal and project goods. Semi-industrial and industrial categories were named at the ones capable to assure sufficient and constant cargo flows. Worth to mention, that the geography of transportation plays the key role (if not the most

important). The most reasonable transportation shall be originated from (or destined to) Western China. Eastern China has a long shoreline and developed infrastructure in regards of sea transportation. Interestingly, that Rodemann and Templar (2014) discuss potential for hazardous cargo transportation. This opinion has not found support among interviewees. The business players disagree with the opinion and name many obstacles. Hazardous cargo requires complex procedures of ensuring safety and transportation legality.

Other factors are listed in different selections by researchers. For example, Wang and Yeo (2016) name capacity, safety, reliability and security to be next influential factors of modal choice. The same ideas appeared during interviews. Train transportation is named to be more secure and safe than, for example, road transportation. Trains are generally guarded by private security services. Security was positioned as the second important factor after costs by an interviewee. Jun and Yanji (2012) add service level to the list of factors. However, the business players reported, that it is normally complicated to provide "all in one" – good time, price and service. Jun and Yanji (2012) leave a space for personal subjective preferences and knowledge to choose a way of transportation. Regmi and Hanaoka (2012) agree on it, and emphasize importance of personal and professional networks between stakeholders. It has been mentioned by business players, that having extensive network helps in negotiation and decision-making acceleration. Personal acquaintance generally is seen as a factor positively affecting business cooperation. Attending forums and conferences was mentioned as a good strategy to grow the network. Hilletofth et al. (2007) discussed changing tariffs and currency fluctuation as factors increasing uncertainty. However, the tariffs policy was reported as favorable as the countries on the Silk Route try to facilitate transportation and negotiate competitive prices. On the other hand, due to currency depreciation, some clients decided to prefer cheaper products (the example of switching from Finnish paper to produced in China has been given). Regmi and Hanaoka (2012) also include flexibility, and environmental impact. The business players had to admit, that unfortunately in reality the concerns about the environment is not considered to be a first priority when money is involved. The ecology issues seem to be taken into account more in Europe than in Asia. However, some of the companies reported that among all the clients there are exceptional cases that do treat environmental impact as the most important factor. These companies position themselves as "green" companies and might choose the transportation solution (almost) entirely based on its "greenness".

However, these cases are rare. Some of the companies' representatives suggested to regulate environmental aspects by legislation. The hope that the issue will have more influence on business solutions in the future has been expressed.

The other important issue to be mentioned here is competition. Direct competition between different transportation modes has not been reported. The majority of goods between China and Finland are transported by the sea. It is explained by the fact, that both China and Finland have long shoreline. Further, and most importantly, is that maritime transportation is approximately 60 % cheaper than railway transportation. In such a situation it is complicated to make a valuable offer to a client that would make him or her to pay significantly higher price.

The researchers have conducted studies to calculate possibilities to overtake maritime flows (Hilletofth et al. 2007; Wang & Meng 2007). Speed is seen to be the main distinctive feature that a client might be willing to pay for. There is certain market segment that is interested to switch for more reliable and fast railway transportation. There are the cases when a one flow is overtaken by another transportation mode or solution. The cases of attracting new clients to railway, previously transported goods by sea, has been reported. For example, pulp production from Finland prior to container train had been delivered by the sea. Vice versa, it is likely that the medical equipment flow originated from USA and destined to Central Asia and China has been overtaken by sea transportation. Recently, more popularity has been gained by truck transportation. Clients are willing to pay extra for delivery and distribution in one set. If prior the normal distance to transport goods by truck was 400 km, currently it is common to send cargo in trucks for up to 3000 km. In geographical scale it means, that transportation between Finland and Kazakhstan can be accomplished by road. Even though the road transportation is flexible, it is one of the least ecological mode of transport. Again. often trucks are able to provide low prices, and awaiting time is minimum. It makes the solution convenient.

It is important to mention, that intermodal transportation, or cooperation between different modes of transport, is more efficient than competition. As it has been mentioned, Moslemi (2016) informs that rail-truck and truck-water transportation pairs are the most popular combinations.

5.2 Forwarders' perception of the Silk Route

As the main distinctive feature of the discussed route is transportation via Kazakhstan, and the interest of the research is concentrated on Finland, the discussion is led separately.

5.2.1 Transportation via Kazakhstan

Transportation on the Silk Route implies transit through the territory of Kazakhstan. Researchers and business players are coherent in the opinion that the main advantage of the route is high possible speed. However, there are many challenges and difficulties identified that slow down development of the corridor, or switching to transportation via Kazakhstan. As it is noted by Yang and McCarthy (2013), cost per each container transported in Kazakhstan is higher than average cost in industrialized countries. Some experts from the field agreed, that Eurasian transportation via Kazakhstan is expensive. In addition, due to necessity to pass more transit territories (if compared to China – Russia – Finland transportation) and consequently to pay tariffs on each transit territory on the way the overall costs increase. On the other hand, transportation time via Kazakhstan might be the shortest due to favorable geographical location. This means that in the same period a container can make more round trips, thus to bring more money to the owner (faster money turnover). It was also reported that administrations of the state railways in Kazakhstan, Russia (and Belarus) provide competitive tariffs. However, the business players are not aware of the Kazakh tariffs transparency, and report that clear tariff policy would definitely improve cooperation perspectives.

The other issues, mentioned by the experts refer to the difficulties with platforms supply and legislation. The two specified issues are interconnected, as Kazakhstan owns many rolling stock units and issue regulations (restrictions) for usage of foreign units. It is complicated for foreign business players to understand, follow and respond quickly. Experts also agree with opinion, expressed by Yang and McCarthy (2013), that business cooperation with Kazakhstan is highly bureaucratized. Often in the literature transshipment is mentioned as a disadvantage of the corridor, however, among experts it was not seen as a major problem. Historically the route has had a change of gauge and it is just a peculiarity of the route. It is named as a disadvantage, however, from experts' standpoint transshipment does not affect the transportation time significantly. In anyway, avoiding transshipment would mean constructing new tracks, which is to any extent a huge investment project. To the point,

Hanaoka and Regmi (2011) believe, that utilization of new technologies would significantly improve CBP. Moreover, the authors also suggest establishing single authority to manage the CBP that would decrease "paperwork" and accelerate the process.

Overall, the opinions are divided. Some researchers and experts tend to see the Silk Route as a perspective initiative with potential to grow and improve Eurasian connectivity. Companies with bigger volumes and assets have started sending container trains on the route. The attempt to establish an international company has been undertaken (meaning JSC "UTLC"). The smaller companies yet have no opportunity to enter the market as the bigger ones show interest in conducting operations on the route. The other researchers and experts are more skeptical, and believe that there is nothing special about the Silk Route compared to other corridors. Moreover, the initiative is a long-term plan that has to be executed in the changing economic and political future and has to be run by the next generation. Ferdinand (2016) expressed the fear, that it might become low priority and might not be enthusiastically supported by other countries. Moreover, Callaghan and Hubbard (2016) emphasize that the economies of involved countries differ much, in other words, some participants require financial support. In addition, scale of investments brings a treat of transparency. Wang and Meng (2007) reported that the Silk Route might overtake up to 60 % of the goods currently transported by deep sea, however, all the interviewed experts expressed doubt regarding the statement. The clients in most cases are tied to price, thus, it is hard to believe that the Silk Route might increase landbridge transportation in 30-60 times compared to current 1-2% of total Eurasian transportation.

In addition, the interviewees mentioned, that the Suez Canal has been recently opened after reconstruction and the biggest deep sea transportation companies have been ordered vessels with capacity up to 20 150 TEU (Panova 2016). Even further, some of the experts are not ready to shift their flows to the route from own developed logistics solutions. However, if the demand grows and promise to be constant, the companies are willing to consider development of the business solution on the Silk Route.

5.2.2 Finland's perspective

Finnish economy suffered from global financial crises in 2009 and has been recovering slowly. The crises has directly or indirectly affected many businesses. Finland has been

investigating opportunities to improve international trade by attracting cargo to the railway corridor, connecting Finland and China via Russia and Kazakhstan. During the interviews, Finland has been multiple times called “small economy” or “small player” in terms of international trade. Even the biggest Finnish companies do not supply enough volumes to fill requirements for competitive railway train transportation. To improve the situation, an opportunity to consolidate goods from Finland and Scandinavia in a hub was mentioned by business players repeatedly. Still, even aggregated economies of the Scandinavian countries are rather small. However, Finland has an initiative to make this possibility known among Scandinavia, which is supported on the level of Ministry of Transport, Finnish Transportation Agency, Chamber of Commerce, and similar authorities in Sweden and Norway.

Two possibilities have been discussed – direct work with small consignors, and uniting the small ones in a hub. Cooperation directly with small consignors increases workload, costs and risks, and has been assessed by research participants as not a favorable way of doing business. However, some of the business participants mentioned, that taking the risk of sending half-empty trains from Finland to China might bring fruitful results. This is because there are such clients known that would like to join a project, but would not like to initiate and work out the project. In other words, the respondents assume that supply might give a rise to demand, or even satisfy the existing demand, which is spread in small parts. Many respondents have proven this idea by reporting constant flow of inquiries from medium or small values of goods. The others doubt the possibility to build a hub, because Finland is an expensive alternative to the Baltics. Furthermore, consolidation of goods from Scandinavia would require expensive delivery to Finland. Alternatively, the Scandinavian countries can transport (and do transport) goods internationally by sea, which is simply cheaper. The question of interest in Scandinavian countries from Chinese side is not well-answered in the companies, too.

In regards of goods to be transported, Finland is known from paper production, or forestry industry. Indeed, the existing container railway flow from Finland to China transport paper industry products. The project has appeared due to interest of a Chinese client in purchasing Finnish products and logical geographical location. The interest in high quality paper was reported in Kazakhstan as well. Kazakhstan purchases paper especially prior to a new school

year to produce new schoolbooks and other printed materials. However, with new technologies as electronic educational tools (e-books, tablets, etc.) the demand is being decreased. In also has been reported, that a Chinese company built a warehouse in the Baltic States to store paper production. In the first year of sanctions the clients were willing to stay with high quality of products (meaning Finnish production), but in the second year they had to switch to alternatives. Finnish paper products became unaffordable. The other types of cargo mentioned by business players fall into categories of industrial, semi-industrial goods, and machinery. Mining equipment was given as an example, and Northern China might be an interested region in purchasing it. Some time ago, there was a flow of medical equipment transported from USA to the port of Helsinki. Further it was loaded to a train and destined to Central Asia and China. Chinese participant named frozen seafood, high-quality textile and dresses, and cosmetics to be possible cargo for railway transportation to China. Generally, the possible goods were characterized as expensive and seasonal. In all, the respondents mainly reported, that the companies have just the same interests as the clients do. It has not been reported, that the companies are actively seeking for the clients and offer alternative solutions. In the literature, however, both opinions can been found – a choice of the transportation solution is a freight forwarder responsibility (Saeed 2013) or a consignor duty (Jun & Yanyi 2012).

The business players have discussed a few options to organize train connection between Finland and China. The most favorable one is sending the trains regularly in both directions according to a known schedule. However, the major issue is loads. It is not promising to have enough loads from the Finnish side and regular ones from the Chinese side. Moreover, to assure full load is complicated due to small economy, to work with multiple small consignors is risky. To establish a hub seems to be a viable option. The other alternative was described as sending half-empty trains with hope to gain new potential clients on board already after the train is operating. This option has a few strong withdraws. First, it is expensive (either for a company or for clients) to have a place in a half-empty train. Second, the risk of not gaining the clients even if the train is functioning still takes place. The other mentioned alternative was to send trains only one direction. This option has the same issues as the previously discussed ones.

Some companies have shown more interest in the route, the others less. The discussion is mainly based on the interest from the clients' side. However, even if the flows are already there, the competition with existing solutions is quite tough. Transportation via the ports of Far East is competitive as it has cheap freight and high speed on the railway part. The general perception is that the route is perspective to connect China to Brest (Belarus) and further to other European countries. The Chinese side reported doubts to increase volume between China and Finland (Scandinavia) by rail. In contrast, Finnish side expressed readiness to offer own service and proactive interest in development cooperation.

6 CONCLUSION

The research was focused on forwarders opinions towards Silk Route. The main interest was concentrated on Finland. Part dedicated to literature review has shown, that there is a particular interest towards the topic in academia. Researchers study broader questions of competition between continental route and maritime transportation, influential factors on the choice of transportation solutions, economic and political influence. The general picture is that the initiative is perceived rather positive, but the amount of work to be done to make to actually implement into reality is hard to assess. The skepticism and critics also have got their place.

The interviews were planed the way that the collected information will be sufficient to answer the research questions. The main research question, RQ 1 "How do freight forwarders perceive the Silk Route initiative?", is answered mainly based on empirical investigation and information collected to answer the other questions. To answer, RQ 2 "How does the commissioning of the Silk Route influence forwarders' business?", and RQ 3 "How do external factors influence forwarder' decision-making?", the literature review helped to gather information regarding the possible factors influencing choice towards different transportation options. To collect empirical data regarding the issues the interview questions were formulated the way that an interviewee was first led to think of the possible factors, then to discuss the preliminary identified factors and the ones they had come up with, and in the end to provide own opinion towards significance of each factor.

The fundamental basis of the Silk Route are infrastructure and service. The major issues derived from the review are historical inconsistency to coordinate the project. The vision differ between countries and between other players. The Chinese ambitious are grandiose, but when it comes to execution, especially in the context of differently developed countries with different possibilities and visions, threats occur. The project involves high investments, that are, first, are doubted to bring returns, and second, give ground for corruption and misuse.

On the smaller scale, the business players investigate opportunities to operate on the route. There are container trains that are operating on the route already. Mainly the connection is between China and Belarus (further to Europe). In China, many companies have been settled

to serve the business. There is also a train connecting China and Finland. Finland has shown proactive interest in engagement in this transportation. The other players are not focused so much on the discussed route, and among interviewed companies the interest can be described as deliberate. However, the interest to learn more about opportunities and potential demand was expressed by almost all the participants.

The main challenge to tackle is the competition with convenient and cheap deep sea transportation. The main advantage of the route is seen to be a high potential speed. However, to give a play new colors the business players suggested to find other than speed distinctive feature to attract clients to landbridge transportation, though, it is not spontaneously possible to find one. Some of the participant shared the opinion, that the basic market information is not complete and marketing is not active. Good level of service, active PR and marketing might be the closest options.

6.1 Theoretical contribution

The research is a case study that by definition cannot provide generalizable results. The main contribution to academia is the empirical data collection regarding forwarders perception towards the Silk Route, and its interpretation. The results can be summarized and presented in the form of an article. This way the results can gain a proper form, and with review and recommendations from authorized persons, the research can become a theoretical contribution of full value.

In addition, the expected theoretical contribution of the study was a comparison of the factors influencing decision towards one or another transportation solution. Furthermore, since the study is country-specific, the expected result was to identify criteria that are not mentioned in the generic literature, but the field specialists are concerned about. The results are shown in Table 14.

Table 14. Comparison of theoretically and empirically identified criteria of transportation solution choice

Source of data	Identified factors
Academic literature	Time (for example, Wang & Yeo 2016; Jun & Yanyi 2012; Regmi & Hanaoka 2012; Peyrouse & Raballand 2016);

	Cost/price (for example, Wang & Yeo 2016; Jun & Yanyi 2012; Regmi & Hanaoka 2012; Peyrouse & Raballand 2016); Capacity (for example, Wang & Yeo 2016); Reliability (for example, Wang & Yeo 2016; Jun & Yanyi 2012; Regmi & Hanaoka 2012; Peyrouse & Raballand 2016); Safety (for example, Wang & Yeo 2016); Capability (for example, Wang & Yeo 2016); Security (for example, Wang & Yeo 2016); Volume (for example, Jun & Yanyi 2012); Level of service (for example, Jun & Yanyi 2012; Regmi & Hanaoka 2012; Peyrouse & Raballand 2016); Type of cargo (for example, Jun & Yanyi 2012); Risks (for example, Jun & Yanyi 2012); Distance/geography (for example, Regmi & Hanaoka 2012); Flexibility (for example, Regmi & Hanaoka 2012); Level of infrastructure development (for example, Regmi & Hanaoka 2012); Environmental impact (for example, Regmi & Hanaoka 2012); Cross-border procedures (for example, Regmi & Hanaoka 2012); Mutual relations between stakeholders (for example, Regmi & Hanaoka 2012); Tariffs (for example, Hilletofth et al. 2007); Currency fluctuation (for example, Hilletofth et al. 2007); Predictability (for example, Peyrouse & Raballand 2016)
Empirical investigation	PR & marketing; Rate of strikes

During the empirical investigation, the factors influencing transportation solution choice were discussed with business representatives. The discussion was planned in such a way that the interviewees were not provided with options, but instead were asked to share their ideas on the subject. The research has shown, that all factors mentioned in the preliminary studied literature in some way have been also covered during the empirical investigation. In addition to it, two more factors have been identified: (1) PR & marketing, and (2) rate of strikes. The

first criterion has been discussed as a way to attract clients to a transportation route. It has been noted, that consignors simply are not aware about the possibilities of transportation market. Further, decision to transport cargo on a certain way maybe made based on ease to find information. For example, if a cargo is supposed to be transported via ports of Baltic Sea, according to respondents, the Baltic States' ports have better visibility than ports of Finland. The second criterion refers to a possibility of a strike in a country on the way of transportation. The factor has been summarized from a several interviews, who have referred to a concrete example of strikes among workers engaged in transportation business. The precedent of a strike has led to breaking commitments and as a consequence some clients refused the service. There is currently no available information if potential clients consider the discussed factor, and take it into consideration when decide on transportation solution for their business. As a result, the two identified criteria shall be investigated more thoroughly to include them into the list of factors, influencing transportation solution choice.

6.2 Managerial implications

The research contains overview of the topics discussed in the academic literature in regards of the Silk Route initiatives. Upon it, the research contains excerpts from the in-depth interviews with the Eurasian railway transportation experts. Most importantly for the managerial perspective, the research provides topical analysis of the perceptions and plans of the business players towards developing transportation solutions based on the Silk Route initiative. Finnish representatives have shown proactive interest in integration to Eurasian railway transportation, and have noted the potential in the Silk Route and readiness to offer own facilities and expertise. However, the respondents from Russia, Kazakhstan and China have shown low awareness about possibilities to cooperate with Finland. Even further, the Finnish players reported not complete information about possibilities of Finnish industry players. Still, the majority of the participants have proven the constant or growing interest from the clients' side. Thus, the research can be seen as a stimuli to initiate a dialog between business players in different countries to cooperate with the aim to develop transportation solutions. The dialogue should be held with participation of the research community to provide diverse opinions and ideas.

Further, the research has opened up the question of possibility to consolidate cargo flows in Finland from Scandinavian countries. Even though the proposal is being discussed on the

high level in the countries of Scandinavia and Russia, there is no cooperation reported with the research units and universities. Further, there is low awareness about the phenomenon in the countries of Kazakhstan and China. The interviewed specialists have agreed that the cooperation with universities and research units might bring new insights and ideas to identify and solve accompanying challenges. Academia has shown the interest to contribute to the topic by opening call for papers. Together with business community, the researches on the topic might gain more valuable and reliable patterns. The initiative to start cooperation shall originate from research units or businesses themselves. The research contributed to share the possibility with the participating companies.

Further, together with participants of the research it was possible to identify, that the players in general do not possess complete market information and would be willing to know more about Finnish (and Scandinavian) industry players' volumes suitable for Eurasian railway transportation. Vice versa, it has been concluded that forwarders believe, that the industry players do not possess full and actual information about possibilities of transportation market.

6.3 Limitations

The research is limited to study forwarders' perception towards Silk Route initiative, and the research does not study any other phenomena. The research collects and interpret opinions that are personal judgements and assessments of selected individuals. This means that the extracted ideas and statements from the interviews have gained subjective character. However, amount of interviews and repetition of the ideas among interviewees allow making certain conclusions.

During the research, representatives of four countries were interviewed. Total amount of the respondents was 10. The number is not enough to generalize results; however, the conclusions according to the aim of the study can be made.

Language of the research is English, though the materials used during the research were available in English, Russian, and (rarely) in Finnish languages. This fact might bring inaccuracies to the research. Steps to limit the inaccuracies were undertaken. Interview was available in two languages (English and Russian). For the majority of the respondents

Russian language was first or second native language, or the level of Russian language proficiency is perceived as fluent while conducting interviews, or beforehand e-mail or phone communication. The interviewing person is native Russian speaker, too. The interviews with other interviewees were conducted in English (with Finnish and Chinese respondents). The level of English language proficiency is perceived as fluent. To avoid misunderstandings the interview questions were translated few times from Russian to English and back by different people, and the result was compared with the original version. However, since more than one language is involved, the chance of misunderstanding or incorrect translation of collected information still may occur. To minimize it, the majority of interview transcripts were sent to the interviewees afterwards, and later on corrected according to recommendations, or just accepted to be correct, if no comments given.

Further, the type of study implies skills to interpret qualitative information. It means that the subjective conclusions might have appeared during the results. However, the research has consulted academic reports and was conducted under supervision of the professor. This is a guarantor of the required quality of the research execution.

It is viable, that much more than 10 business players are involved and interested in the commissioning of the Silk Route. There are certain companies that are engaged the most in the railway container transportation business on the route, but unfortunately could not be reached. The opportunity to cooperate with those companies would improve the quality of the research.

6.4 Further research avenues

Most importantly, during the current research it has been reported by a few business players, that the basic market information is not complete. It was advised to undertake extensive field study aiming to collect current topical information about potential volumes and opinions of possible transportation solutions from Finnish industrial companies.

On the other hand, it is concluded from the research, that the main problem of Finnish integration to the Silk Route is low volumes of cargo in the country. However, it is not possible to make a conclusion with same certainty about any other reason. The qualitative study of Finnish transportation companies in terms of quality requirements, price policy,

flexibility, cultural and national peculiarities would provide better understanding of the issues related to the integration to the Silk Route.

The further research might be focused more on integrated approach and consider clients and service provider perceptions together. It further could investigate potential impact of the change on the economies and cultures of the involved countries, in particular – Finland.

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APPENDICES

Appendix A. Introductory letter

The letter originally was written in English language, and then translated to Russian language. Below the both versions are presented.

POTENTIAL IMPACT OF THE NEW RAILWAY SILK ROUTE ON EURASIAN CARGO TRANSPORTATION: FORWARDERS' PERCEPTION

Goal & background

The goal of research is to understand potential impact of the new railway "Silk Route" commissioning on Eurasian cargo flows from forwarders' perspective. In the literature, "Silk Route" refers to projects aiming to connect China with Europe through Central Asian countries. Particular interest of this research is on transportation flows between China and Finland through Russia. The emphasis is on emerging routes through Kazakhstan instead of traditional one through Trans-Siberian railway.

Research condition

The research is being undertaken and funded by Lappeenranta University of Technology (Finland). Research is independent; interviews are anonymous. Interview questions are based on scientific literature review that revealed number of obstacles of the Silk Route commissioning; researchers also differ a lot in their opinions towards perspective of the new transportation routes. Aim of the interviews is to prove / disprove literature findings and to qualitatively add to them. The interview may be held in English (preferably) or Russian languages. With permission of interviewee, the interview may be recorded. The research results will be executed in English language in form of Master's Thesis and published in open access (www.doria.fi).

Contact information

Alena Khaslavskaya
Research Assistant at LUT School of Business and Management
Global Management of Innovation and Technology Master's Program
Alena.Khaslavskaya@lut.fi

(Translation)

ПОТЕНЦИАЛЬНОЕ ВЛИЯНИЕ НОВОГО «ШЁЛКОВОГО ПУТИ» НА ЕВРАЗИЙСКИЕ ГРУЗОПЕРЕВОЗКИ: ВОСПРИЯТИЕ ЭКСПЕДИТОРОВ

Цель

Цель исследования – изучить восприятие экспедиторами потенциала нового «Шёлкового пути» в контексте евразийских грузоперевозок. Под «Шёлковым путём» понимаются проекты по строительству и введению в эксплуатацию железнодорожного коридора, соединяющего Китай с Европой через страны Средней Азии. Интерес исследования сосредоточен на грузопотоках между Китаем и Финляндией, а именно на маршрутах через Казахстан и Россию.

Условия проведения исследования

Исследование проводится и финансируется Лаппеэнрантским технологическим университетом (ЛТУ) (Финляндия). Исследование независимое, интервью анонимное. Вопросы интервью составлены на основе обзора научной литературы, который выявил ряд сложностей на пути введения в эксплуатацию «Шёлкового пути». Исследователи также расходятся во мнениях касательно перспективности нового транспортного маршрута. Целью проведения интервью является подтверждение или опровержение теоретически собранной информации. Интервью может быть проведено на английском (предпочтительно) или русском языках. Результаты исследования будут представлены на английском языке в формате магистерской диссертации и опубликованы в свободном доступе на электронном ресурсе www.doria.fi.

Контактная информация

Алёна Хаславская
Младший научный сотрудник школы бизнеса и менеджмента ЛТУ
Программа «Глобальные инновации и технологический менеджмент»
Alena.Khaslavskaya@lut.fi

Appendix B. Interview themes & questions

Interview themes[1]

Background information	
Overall opinion towards "Silk Route" initiatives	• Interest in / access to the route; • Strengthen / weaknesses of the route
Factors, influencing company's decision	• External influence on company's decisions; • Inherent factors, influencing choice of transportation solutions: cost, reliability, capacity, time, security, and other
Potential clients / demand	• What kind of clients might be interested? • What kind of cargo could / would be transported?
Competition	• Would the route be competitive (vs. deep sea, air, existing railway transportation)? • Do you see threats for your business caused by competition from other forwarders on the route?
Political interest	• How does political situation influence the company's business? • How does EU effect on Eurasian cargo flows and development of transportation business?
Economic interest	• Would the commissioning of the "Silk Route" be beneficial for your company? Why? • Would the route ensure growth of your business? • Would the route serve to overcome the economic downturn?

[1] Please note that the interview is semi-structured and therefore the themes may be discussed in more details than introduced in the table

(Translation)

Темы для обсуждения во время интервью[1]

Информация о компании	
Общее мнение о «Шёлковом пути»	• Доступ к маршруту; • Сильные / слабые стороны маршрута
Факторы, влияющие на принятие решений в компании	• Общая информация о транспортном секторе в стране; • Внешнее влияние на принятие решений компании; • Присущие факторы грузоперевозок, влияющие на выбор транспортных решений: стоимость, надежность, производительность (вместимость), время, безопасность, др.
Потенциальные клиенты / спрос	• Потенциальные клиенты • Типы груза, грузопотоки
Конкуренция	• Будет ли маршрут конкурентоспособен (по отношению к морским перевозкам, авиаперевозкам, существующим железнодорожным маршрутам)? • Видите ли вы угрозы для вашего бизнеса, вызванные конкуренцией со стороны других экспедиторов?
Политические аспекты	• Каким образом политическая ситуация влияет на бизнес компании (Европейский союз (ЕС), санкции и т.д.)? • Каким образом ЕС влияет на евразийские грузопотоки и развитие транспортного бизнеса?
Экономические аспекты	• Будет ли ввод в эксплуатацию «Шёлкового пути» выгодным для вашей компании? Каким образом? • Может ли маршрут обеспечить рост вашего бизнеса? • Повлияет ли маршрут на преодоление экономического спада?

[1] Пожалуйста, обратите внимание, что в таблице представлены темы интервью, а не список окончательных вопросов

Appendix C. Guideline for e-mail interviews

Totally two interviews were conducted via e-mail. The companies interviewed by e-mail are representatives of different countries that is why the Russian version is not an exact translation of the original English guide. Nevertheless, the both interviews covers the same topics. The companies were asked to develop the theme, but not necessarily to answer every question separately.

Eurasian railway transportation via Kazakhstan
Please describe container cargo flows between China-Europe and Europe-China via Kazakhstan. How, in your opinion, the cargo flows through Kazakhstan can be increased? How can be increased railway transportation Finland-China and Finland-Central Asia (both ways)?
What are the challenges your company is experiencing in the process of international railway transportation via Kazakhstan? Do you face difficulties in cooperation with Kazakhstan? What kind of?
Does the state / government influence on the activities of your company? Does State Railways have a big influence on your company's business? Other stakeholders? What is the influence (related to tariffs, routes, modes of transportation, etc.)?
Do you think the initiative One Belt - One Road (particularly New Eurasia Land Bridge Economic Corridor) has a lot of potential (http://beltandroad.hktdc.com)? Would it be profitable for your company? Please, explain.

Clients / demand
What customers are interested in cargo transportation from China by rail to Europe? What kind of cargo? Geographical location? In particular, from China to Finland and Finland to China?

Is there a demand for such route (railway route from/to China to/from Europe via Kazakhstan)? Has the demand changed (increased / decreased)? Can you feel that the manufacturing is shifting from coastal zone to inland? Does it affect your business?
What are the factors of transportation (time, cost, safety, other) that are important to the customer?

Competition
Is there competition between railway transportation and other modes of transport? What are the competitive advantages of railway transportation to other types of transport? Can the cargo that is currently transported by sea be switched to railway through Kazakhstan? Please, explain.
What are the competitive advantages / disadvantages of the Eurasian railway transport via Kazakhstan in comparison with railway transportation through Mongolia or directly through Russia?

Other
Does the European Union politic and overall economic downturn influenced your company's business? How?
Would you like to add anything to the mentioned above?

Thank you for your responsiveness and cooperation!

Вопросы интервью

Евразийские контейнерные перевозки через Казахстан	• Опишите, пожалуйста, контейнерные грузопотоки Китай-Европа и Европа-Китай через Казахстан. За счёт чего, по Вашему мнению, грузопоток через Казахстан может быть увеличен? Каким образом могут быть увеличены ж/д перевозки в/из Финляндии в сообщении с Китаем и Средней Азией? • Какие трудности Ваша компания испытывает в процессе международного сотрудничества с экспедиторами и клиентами? Как Вы считаете, с какими сложностями экспедиторы других стран сталкиваются при взаимодействии с Казахстаном? • Оказывает ли государство влияние на деятельность Вашей компании? Государственные железные дороги? Другие заинтересованные стороны? Каким образом? • Считаете ли Вы инициативу One Belt – One Road (New Eurasia Land Bridge Economic Corridor) перспективной (http://beltandroad.hktdc.com/en/)? Выгодной для Вашей компании?
Клиенты / Спрос	• Какие клиенты заинтересованы в перевозках грузов из Китая по ж/д в Европу? В частности в Финляндию? В обратном направлении? • Есть ли спрос на такие перевозки? Есть увеличение спроса? • Какие факторы осуществления перевозок важны для клиента?
Конкуренция	• Есть ли конкуренция с другими видами транспорта? Каковы конкурентные преимущества ж/д перевозок перед перевозками другими видами транспорта? Могут ли грузы, которые на текущий момент транспортируются морем, быть переключены на перевозки по ж/д через Казахстан? Каким образом?

	• Каковы конкурентные преимущества евразийских перевозок по ж/д через Казахстан по сравнению с ж/д перевозками через Монголию или напрямую через Россию?
Другое	• Сказалась ли политика Европейского Союза и общий экономический спад на деятельности компании? Каким образом? • Хотите ли Вы добавить что-либо к вышеизложенному?

Благодарю за отзывчивость и сотрудничество!