

**INTERNATIONAL TRANSIT TRANSPORT INFRASTRUCTURE PROJECT AND ECONOMIC DEVELOPMENT OF LATVIA****Aldis Bulis<sup>1</sup>, Aleksis Orlovs<sup>2</sup>, Zane Driņķe<sup>3</sup>, Roberts Škapars<sup>4</sup>***<sup>1</sup>University of Latvia, Faculty of Economics and Management, Aspazijas blvd. 5;  
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**Abstract.** Investments in new transport infrastructure contribute to improvements in competitiveness of companies and growth of national economy. This paper examines the contribution of investments in international transit transport infrastructure projects to Latvian economy using a case of terminal at Riga port. The terminal “Krievu Island” at the Riga port is under realization and completion is planned in 2015. The study has revealed that after realization of this project Latvia’s GDP will increase for 0.9–1.4 % (with comparison to the 2010 GDP volume) and the Riga Freeport will improve its competitiveness in service of coal cargoes. The methods of the research are monographic method, case study, Cost-Benefit Analysis and expert method.

**Keywords:** International transit transport, Latvia, transport infrastructure.

**1. Introduction**

Investments in new transport infrastructure (e.g. railroads, seaports, airports) achieve gains from trade, enlarge markets, promote inter-regional integration and increase productivity, contributing to improvements in competitiveness of companies and growth of national economy. Investments in port expansion aim at an improved cargo-handling process to stimulate economic activity and growth (Dekker *et al.* 2011).

International freight transit transport is transportation of goods through other/third countries which are neither senders or consumers of transported cargoes. International cargo transit transport ensures the use of transport infrastructure capacities and the development of transport infrastructure in Latvia, especially in seaports and railways. The turnover of Latvia’s seaports is made approximately 80–90 % of international cargo transit. In Latvia approximately 97 % of all transported cargo carried by railway is international cargo transit.

The objective of the study is to assess the contribution of investments in international transit transport infrastructure projects to Latvian economy using a case of terminal at Riga port. The “Krievu Island” terminal at Riga port is under realization and completion is planned in 2015. The contribution of seaports’ infrastructure development projects to Latvian economy has not been sufficiently studied. The monographic method, case study, Cost-Benefit Analysis and expert method were applied in the study.

**2. Improvements of seaport infrastructure and economic development**

Seaports are an integral part of logistics and supply chains. Nowadays seaport is a complex node that can be not only a quay for berthing ships but also a very large scale centre with many terminals and a cluster of indus-

tries and services. The main functions of seaports are to provide services to ships and services to cargo (Bichou and Gray 2005).

Investments in seaport infrastructure can increase not only the competitiveness of seaport, but also competitiveness of companies operating with and in seaport, as well as other sectors of economy. Seaport investments cover not only the internal infrastructure (e.g. berths, docks, storage areas) and superstructure (e.g. cranes, terminals), but also the infrastructure for maritime access (e.g. breakwaters, locks, buoys) and for hinterland connections (e.g. roads, railways) (Meersman 2005). Both public and private investments can be involved in development of seaport’s infrastructure. Seaports are becoming commercial entities providing services at profitable prices in a way that they recover their costs from port users.

Planning the transit infrastructure development projects it is necessary to take into account that the transit transport market situation are subject to continuous changes, as (Paulauskas, Lukauskas 2003: 120):

- cargo flows are changing, some decline, while new ones are formed,
- new transport corridors are introduced, existing terminals are renovated and new terminals are built,
- changing requirements for transport corridors,
- ships selection and optimal ship exploitation,
- shipping lines optimization.

An investment in seaport infrastructure brings direct benefits to operators that may be excluded if they do not pay for it (stevedores, carriers), and indirect benefits (identified as “macroeconomic”) to third parties that cannot be prevented from enjoying them (e.g. owners of land close to the port) (Musso *et al.* 2006). In the 21<sup>st</sup> century an important aspect in development of transport is application of green transport concept to cargo transport aimed at sustainable environmental, social and economic development (Miliauskaite 2011). Green transport is part of the

European Union transport agenda, and environmental issues (environmentally friendly, fuel efficient and safe) should be taken into account realizing development projects in seaports.

### 3. The case of “Krievu Island” project

All existing international transport modes and networks in Latvia operate in environment of international competition, and mainly compete with the other Baltic States (Lithuania and Estonia), Finland and Russia. In Latvia transit transport services export is formed by road haulage, railway transport, sea transport, air transport and pipeline transport. Latvian transit services consists of seaports, railways, road transport, warehousing and customs brokerage, logistics centers, as well as shipping agents, forwarding agents and petroleum and petroleum product pipeline operator services (Figure 1). Both the public and the private sector invest in development and modernization of transport infrastructure in Latvia. The private sector focuses on the modernization of seaports and logistics infrastructure. The country’s largest investments in transport infrastructure are used primarily for development of transit transport directions, where the European Union structural funds and national budget are used.

Transport experts’ survey conducted by authors (5 experts where interviewed) shows that currently there are number of development projects at the Riga Freeport area to be realised within years 2010–2020. The total investment portfolio is 1.1 bln EUR, from which the Riga Freeport investments are 300 mln EUR and private investments are 757 mln EUR. The largest investments are projected to: Liquefied natural gas terminal in Daugavgriva, Oil Terminal in Bolderaja, Container Terminal on Kundzinsala, various bulk terminals on Krievu Island and Kundzinsala. Currently in active investment phase are 3 projects:

– Riga Bulk Terminal project on Kundzinsala with projected investment of 24 million EUR with planned cargo handling capacity of 2.8 million tons per year. Pro-

ject is under realisation and finish is planned in 2013.

– NKK project – container terminal on Kundzinsala with projected investment of 200 million EUR with planned cargo handling capacity of 0.4 mln t. per year in heated warehouse and up to 216 000 TEU per year. Project is under realisation and finish is planned in 2015.

– Riga Fertilizer Terminal project in Kundzinsala with projected investment of 45 million EUR with planned cargo handling capacity of 2 million tons per year. Project is under realisation and finish is planned in 2014.

– “Krievu Island” various multifunctional terminals project on Krievu Island with projected investment of 269 million EUR with planned cargo handling capacity of 22 million tons per year. The project will be developed in two phases: (a) the first phase concerns the construction of 4 dry bulk cargo berths and will be completed by 2013 (hereinafter the first phase); (b) the second phase concerns three additional berths, for the handling of general cargo, which will be constructed by 2015 (hereinafter the second phase). Project is under realisation and finish is planned in 2015.

As “Krievu Island” project at Riga Freeport is the largest one, which is in realisation phase, then authors choose it for conducting the case study to assess the contribution of investments in international transit transport infrastructure projects to Latvian economy.

There is no reliable public source on information about “Krievu Island” project and development of international transit projects in general, therefore authors chose the expert method in order to obtain information about the project. In June-August 2012 authors have conducted 5 interviews with stakeholders: executives of Riga port stevedore companies, experts of the Ministry of Transport of the Republic of Latvia, macroeconomics expert of one Commercial Bank. This information was necessary for conducting the assessment of “Krievu Island” project and its impact on Latvian economy and competitiveness of Riga port.

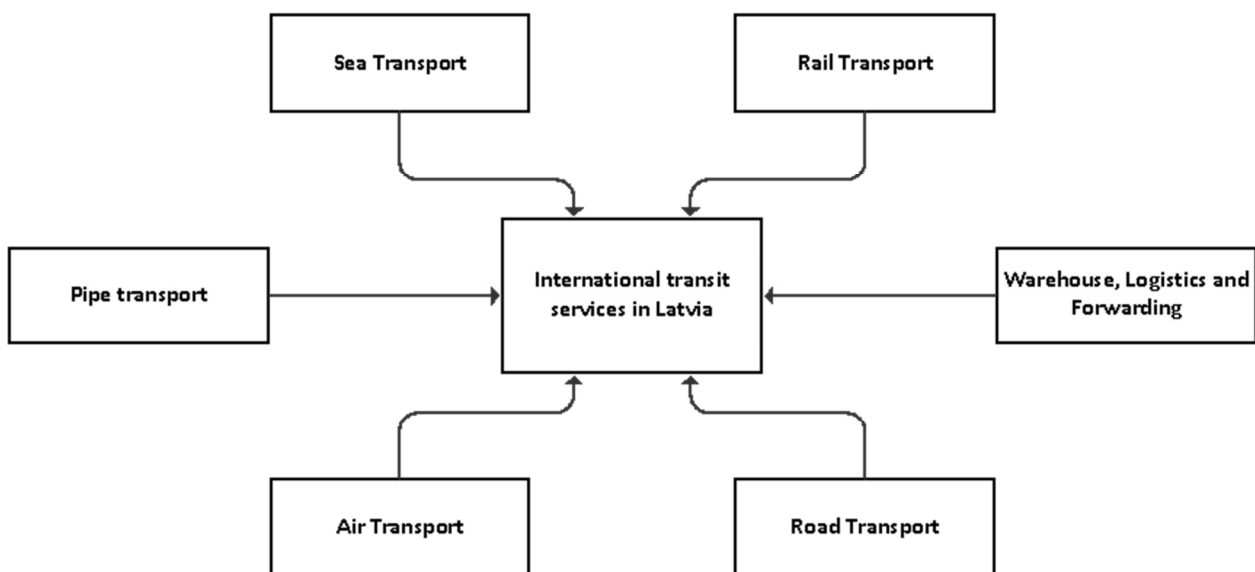


Fig. 1. International transit services in Latvia (authors’ construction)

(Source of data: The Official Website of the Ministry of Transport of the Republic of Latvia. Available <http://www.sam.gov.lv/satmin/content/?cat=112> (accessed 08.08.2012.)

The Riga Freeport (RFP) is currently one of the leading ports on the Baltic Sea with cargo handling capacity of 45 mln tons, (34 mln t. handled in 2011). In terms of total throughput, Primorsk and St. Petersburg are the primary ports in the East Baltic Sea region, followed by Tallinn, Riga, Klaipeda, and Ventspils. In terms of dry bulk and general cargo handling, Riga Freeport's main competitors are Hamina, Helsinki, Kotka (Finland), Kaliningrad, St. Petersburg, Ust-Luga (Russia), Tallinn (Estonia), Ventspils and Liepaja (Latvia). Klaipeda (Lithuania), Gdansk, Gdynia (Poland). Of these Riga, St. Petersburg, Klaipeda, Ventspils and most recently Ust-Luga ports are the largest in terms of dry bulk cargo turnover. The key facts about the RFP are stated below:

- Territory – 6.348 ha,
- Warehouses – 180 000 m<sup>2</sup>,
- Open storage area – 1 797 000 m<sup>2</sup>,
- Cold storage – 13 000 t,
- Liquid cargo reservoirs – 350 000 m<sup>2</sup>,
- Total berth length – 13.8 km,
- Maximum depth – 16 m,
- Maximum gauge – 14.7 m,
- Employees number – 5 200 (in addition created jobs for 15 000 employees in supporting sectors like railway, transportation, logistics, etc.),
- 33 stevedores,
- 28 sea agents,
- 37 companies providing warehouse services,
- 16 companies providing custom clearance services,
- 12 cargo transportation companies,
- 7 companies providing value added services (cargo wrapping, packaging, labelling, breaking, screening, tracking, monitoring, weighing and utilisation operations).

The first phase of “Krievu Island” project is jointly financed by the Riga Freeport and the European Union – in total 149 million EUR, private investments will conclude 120 million EUR. The key facts on “Krievu Island” project are stated below:

- Territory – 56 ha,
- Cargo handling capacity – 17–22 million tons per year,
- 4 berth with total length 1 180 m,
- The RFP investment 149 m EUR, private investment 120 mln EUR,
- The largest planned operations – handling of coal cargoes.

The realisation of the project will bring positive and negative effects (Table 1). Among the negative effects are possible traffic congestions on the left bank of river Daugava, therefore new roads and infrastructure should be planned with reserve. With the implementation of project air pollution on the left bank of river Daugava will become actual problem for inhabitants, nevertheless of the implementation of the new conveyer type loading system.

On the other hand there are a bigger number of positive effects from the completion of “Krievu Island” project. One of the strong projected pros is that after the completion of the project Riga Freeport will attract 8–13 million tons cargoes additionally, what, according to calculation of Ministry of Transport of the Republic of

Latvia (14 EUR per ton) (Ministry of Transport of the Republic of Latvia, 2006: 11), will bring additionally from 114 000 000 EUR to 185 000 000 EUR to Latvian economy (0.9–1.4 % of GDP in comparison with the 2010 GDP volume). The projection stage of the project will create 500 new workplaces, the development and construction stage will require already 2 000 employees, and operational stage will create additional 500 workplaces. With the realisation of project new supply roads and railways will be constructed and public supply road reconstructed, thus releasing the logistics not only for the project, but for various businesses operating on the left bank of river Daugava. New water supply, sewerage and telecommunications networks established increasing the level of life of inhabitants and competitiveness of businesses operating on the left bank of river Daugava.

**Table 1.** Costs and benefits from realization of the “Krievu Island” project (authors' construction)

Costs	Benefits
Possible traffic congestions on the left bank of river Daugava	Latvian GDP increases for 0.9–1.4 % (with comparison to the 2010 GDP volume)
	New workplaces created: –Construction stage – 2000 employees –Operational stage – 500 employees
Air pollution on the left bank of river Daugava	New supply roads and railways constructed
	Public supply roads – reconstructed
	Water supply, sewerage and telecommunications networks established
	The RFP income increases due to the additional ships incoming
	New warehouse services and logistics companies will appear
	New conveyer type technologies for Coal cargoes handling implemented
	Decrease of loading ships (Panamax) from 3–4 days to 1–2 days
	Minimisation of the impact of air pollution, noise (by handling Coal cargoes) in the Centre of the Riga city
	Decrease in traffic congestions on the right bank of river Daugava
	Existing Andrejostas port area will be released for future urban development and Riga inhabitants will get access to the river
	The Riga Freeport will maintain the competitiveness of the Baltic Sea Region
Development of the island territory will allow Freeport expand infrastructure and activities in the future	

With realisation of project the Riga Freeport will increase its revenues due to the additional ships coming to the new terminal. Possibilities for new warehouse services and logistics companies will appear. With the realisation of the project, new conveyer type technologies for coal cargoes handling will be implemented, enabling the stevedores to load ships more quickly (from 3–4 days currently to 1–2 days), thus increasing the competitiveness of the Riga Freeport in the Baltic Sea region. Also development of the island territory will allow the Freeport to expand infrastructure and activities in the future. With realisation of project air pollution and noise (by handling coal cargoes) in the Centre of the Riga city will be decreased and inhabitants and tourists will get access to the river, thus

improving the level of life of Riga centre inhabitants and creating favourable environment for tourists.

The direct impact of the project realisation (within 2012–2015) will include the investments in the infrastructure the RFP + private = 269 mln EUR, creation up to 2 500 new work places. After the project is finished and new terminal will start to operate the direct impact on Latvian economy is assessed as 0.9–1.4 % in comparison with GDP volume in 2010 prices (from 114 000 000 EUR to 185 000 000 EUR to Latvian economy). Indirect effect – the impact to other industries, like construction industry, transportation, logistics and warehousing, finance and utilities industries, is considerably larger and authors need to conduct more detailed research in the future for assessment of its impact on the Latvian economy.

#### 4. Conclusions

1. The contribution of seaport's infrastructure projects to Latvian economy has not been sufficiently studied in scientific studies. The direct benefits and indirect benefits can be assessed studying these projects.

2. The “Krievu Island” project at the Riga Freeport is the largest one at the Riga Freeport, which is in realisation phase. The “Krievu Island” project (in operational phase) will bring additionally from 114 000 000 EUR to 185 000 000 EUR to Latvian economy or increase of GDP for 0.9–1.4 %. New workplaces will be created: in construction stage – up to 2000 employees and in operational stage – up to 500 employees, as well as new infrastructure and roads will be developed. Existing Andrejostas port area will be released for future urban development and Riga inhabitants will get access to the river.

3. The “Krievu Island” project in Riga port can be classified as international cargo transit development project because senders of cargos planned for transshipment will be companies in Russia and consumers will be mainly in Western Europe countries (more than 90 %).

4. With conveyor type coal loading technology implementation, the Riga Freeport will maintain the competitiveness in the Baltic Sea region. New technology will allow faster processing of coal cargoes and “Krievu Island” proximity to the bank of river Daugava will allow servicing larger ships.

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