

# COMPARATIVE ANALYSIS OF LEADING PORTS OF LATVIA: COMPETITIVENESS OF LIEPAJA PORT

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## Abstract

*There are 10 operating ports in Latvia and 3 of them – Liepāja, Ventspils and Riga ports are regarded as the leading commercial ports. Role of port operation in the economics of region and country is essential from the point of view of employment and entrepreneurship. This is based with data on investment of operation of Latvian ports in GDP, on average it is assessed to be 5-7% annually. In the context of employment, Liepāja Port gives work to 6.9% of human resources of the city. However, concern about the competitiveness of Liepāja Port influenced by the proximity of more developed competitive ports, technical possibilities of the port and dynamics of freight turnover has occurred in recent years. There-with in framework of this article in the context of such criteria as location of ports and their technical parameters, volumes of freight, specialization and costs of ports, the operation of leading ports of Latvia is intercompared and analyzed by clarifying whether Liepāja Port is competitive among other ports of Latvia.*

*Opinions of port experts on perspectives of port development and statistical data of ports from 2011-2013 are analyzed within the framework of the article. The aim of the research is to clarify the comparative advantages of ports of Latvia. The research revealed that the provision of competitiveness of Liepāja Port is to be related with application of the available free territories, advantages of location in relation to the Scandinavian market, and the necessity to develop the cooperation among ports of Latvia to offer joint freight acquisition, distributions and unified logistics solution and strengthen the position of ports in the circumstances of international competition.*

**Key words:** *competitiveness of ports, freight turnover, port parameters.*

## Introduction

The importance of ports in structure of regional economy is reasoned both theoretically and practically pointing to the fact that they take the central place in maritime transport system and reasoning with data on investment in business, employment, development of related areas and growth of the country. For this reason, port development is a topical issue for each region where they are located. In globalization circumstances, assessing the cross border and intercontinental relations, existence of cooperation and demand that facilitates the increase of passengers and freight transport flow, the issue on port competitiveness becomes more topical observing the function of a port as a mediator, its offer and location in transport corridors. There is a question on more correct directions of development of each port where the decision-making is most frequently related with serious investment necessity cover, considering the development of ports as components of infrastructure and their long-term development. So it is important

to find out the answers to the questions: What are the competitive advantages of the particular port, how its offer is to be formed and its potential used?

There is a quite united theoretical view on a sea port - its main tasks and port structure: "They serve as a mediator between maritime transport and other types of transport." (Николаева, 2005, 204) "Ensure cargo handling to or from a ship, and storage of freight, servicing of fleet, land transport and passenger transport" (Štrauhmanis, 2003, 8). "Structure of a sea port is to be divided in two main parts: port entry and piers." (Birzietis, 2008, 52) The following principal elements of ports are also theoretically defined: "Ship channel, port roads with piers and breakwaters, cargo handling road, quays with reloading mechanisms, port fleet, port land area with land vehicles, service spaces, means of communication and passenger spaces" (trauhmanis, 2003, 8) Irrespective of the type of activity, the main elements of ports are common: "port territory, areas of water, water and land supply roads." (Смирнов, 1993, 6). Consequently, ports must be fitted with contemporary technologies: availability of navigation, hoists, warehouses, elevators and other port equipment so that they could respond appropriately to the request, serve different types of ships, store different types of freight and materials. Port territory, depth of quays, transport roads, etc., are very important. The aforementioned points that a contemporary commercial port as a service provider must be formed as a transport artery with complex structures that provide standing of ships, quick and convenient unloading and loading, freight storage and preparation for handling, and servicing of passengers and ship supply. These conditions can ensure freight turnover.

The principal services of Latvian leading ports are servicing of transit freight from Russia, Ukraine, Belorussia and other CIS country. In general ca. 70 Mio tons of freight are handled in general in Liepaja, Ventspils and Riga ports during one year, 90% of them are transit freights – ca. 30% export services are directly related with transit freights. (Analysis of Latvian ports area: competitiveness and management, 2013, 4)

Ports handle mainly: coal, wood, different petroleum products, container cargoes and agricultural products. Ports have regular ferry traffic with Sweden and Germany.

When assessing the importance of ports in economics, it must be marked that the largest Latvian ports provide a considerable number of population with employment: Riga -15000; Ventspils - 4000; Liepaja port - 1500, that is considerable result at national level.

All ports in Latvia differ by geographical location, total territory of port, areas of water, cargo types, volume of handled freight, number of serviced ships, management, and other factors. Path of development of Liepaja port, when compared with Riga and Ventspils ports has been a more complicated because to 1991 the port has served only war and fishing ships.

Port activity in Latvian scale is assessed regularly. It is a wide source for public discussions. Port activity analysis in Latvia from the point of view of efficiency of economic activity was first made by J. Vanags (RTU professor Dr.oec.) in 2004 in his scientific research "Assessment methodology of Latvian ports activity", paying attention to assessment methodology of efficiency of port activity and offering a port activity efficiency parameters system that can be applied "when analyzing the efficiency of port's economic, financial, management and technical activity, and port's activity in general, taking into account the resources at disposal of a port" (Vanags, 2004, 4). The scientist has marked that "parameters of port's fixed assets usage efficiency take the central place in port activity efficiency parameters system." (Vanags, 2004, 8)

A current research was started in December 2012 when Ministry of Traffic of the Republic of Latvia concluded a contract with World Bank on analysis of ports area. The aim was to analyze the activity and management of largest ports of Latvia, giving suggestions to strengthen exactly the international competitiveness of ports. In the cut of three Latvian ports – Riga, Ventspils and Liepaja – attention was paid mainly to the first two ports, assessing less detailed the positions of Liepaja port. (Analysis of Latvian ports area, 2013, 7) Experts have analyzed the freighting volumes, routes, connection with other types of transport, logistics development,

incomes, costs and investments, and port management models and port capacity as the factors of competitiveness.

When performing a theoretical analysis, the authors regard that the port elements are the base for providing port services and increase the activity volumes – technical parameters of ports and offer generation principles are the ways where to look for the competitive advantages of ports.

### **Methodology of Research**

It is possible to assess the issues related with port activity and competitiveness in each region differently which is determined by economic activity of territories, port geography, activity scale, development history, aims and political interests. Liepaja port is one of the 3 largest ports in Latvia in terms of cargo turnover. To clarify the competitive advantages and development possibilities on Liepaja port, a research was made by intercomparing and analyzing the activity of Latvian leading ports – Riga, Ventspils and Liepaja. Concerns of the previous years about the competitiveness of Liepaja port, holding it in the environment that becomes more and more complicated because of proximity of more developed competitive ports, current technical possibilities of port and freight flow dynamics underlay the research.

The aim of the research is to clarify the mutual comparative advantages of Latvia ports. The authors' answer to the question: is Liepaja port competitive among other ports of Latvia? Comparison criteria were technical parameters and location of the port, freight volumes, specialization and port expenses. The research period is from January 1<sup>st</sup> 2011 to December 31<sup>st</sup> 2013. Methodologically the research is a case study. The study scope refers to business economics, marketing and logistics. Research type is a desk research, which is based on secondary data and previously conducted research materials. The authors used qualitative research methods. For data acquisition was used analysis of documents and content analysis. The study involved analysis of ports statistical reports for years 2011, 2012 and 2013, and analysis of the port managerial staff views on port development prospects. The research doesn't reveal completely the international competition situation of ports.

### **Results of Research**

When formulating the mutual competitive advantages of Latvia leading ports, the authors perform the mutual comparison of ports in groups of three parameters:

- geographical distances of ports to target markets;
- technical parameters of ports and expenses of ports;
- cargo types, turnover and specialization.

1) Geographical distances of ports to the target markets are important in mutual competition of ports at international level.

As it can be seen in Table 1, Riga port is the closest to the largest cities on CIS countries – the closest to Minsk, Kiev and Odessa (distances equal to Klaipeda port), and to Moscow and Nizhny Novgorod (in competition with St. Petersburg port).

**Table 1. Comparison of principal geographical distances of competing ports, km.**

	Liepaja	Ventspils	Riga	Klaipeda	Tallinn	ST. Petersburg	Ust-Luga
Minsk	582	661	479	486	788	795	775
Moscow	1096	1106	918	1173	1053	705	829
Kiev	1109	1191	1009	1016	1357	1216	1205
Nizhny Novgorod	1555	1533	1344	1599	1480	1121	1346
Odessa	1581	1662	1480	1488	1827	1686	1673
Aktobe	2864	2841	2652	2908	2788	2453	2575

Source: table made by the authors according to the ports reports data

According to the opinion of the authors, this circumstance is the advantage of Riga port when compared with other ports in the Baltic States. Yet, it must be marked that due to the location Liepaja and Ventspils ports are regarded principally as transit ports in East – West direction in the Latvian transport and logistics area, but the meaning of Riga port would be to distribute the international cargos in inland. Current activity of Riga port, due to its technological solutions and business directions, testifies of the attempts to implement the activity of a transit port by creating competition to the other both large ports of Latvia. At international level, Klaipeda port (Lithuania) is also to be regarded as transit port by creating competition circumstances for Liepaja, Ventspils and Riga ports. Due to the geographical location, Liepaja port has the most complicated development perspective in international competition. It is to be explained with the fact that Liepaja port (with smaller capacity and volumes), being between Vetspils and Klaipeda (Lithuania), feels most directly the power of competition. It is intensified by the active operation of Riga port in Latvia, increasing continuously its capacity and purposefully competing with ports of Russia. The main advantages of Liepaja port are the geographical distances to the West, in relation to the Scandinavian countries (e.g. Stockholm - 216 nautical miles, Copenhagen - 325 nautical miles).

## 2) Technical parameters of ports and expenses of courts

The authors have comparatively assessed the territories, water areas and free industrial areas of Latvian leading ports, and the parameters of quays (see Table 2).

**Table 2. Comparison of technical parameters of three largest ports of Latvia.**

	Liepaja port	Ventspils port	Riga port
Total area of port, ha	1182	2451	6348
Water area of port, ha	810	242,6	4386
Free industrial areas, ha	2000	700	445
Number of quays	80	53	no data
Total length of quays, km	10	11,12	18,2
Max. depth of quays, m	11,7	17,5	16,0
Max. draught of ships, m	10,8	15	14,5

Source: table made by the authors according to the ports reports data

According to comparison of data in Table 2, it can be seen that Riga port in terms of territory (6348 ha) and water area (4386ha) is the largest port in Latvia. But in terms of its free industrial areas (445ha) development potential it is smaller than the other both ports of Latvia. It determines the necessity to plan further development of the port within the framework of the existing territory. Although Ventspils port has the smallest water area (242.6 ha), the main competitive advantage in terms of technical parameters is the depth of piers (17.5m) and maximum draft of ships (15m). In Ventspils the deepest piers are for liquid cargos, but in Riga – bulk cargo piers (similarly as in Ventspils port – 16 meters). In Liepaja port it is possible to serve ships with draft up to 10.8 m which is the lowest. The port has also the smallest length of piers – 8.2 km, Ventspils port – 11.12 km (the second smallest parameter), that according to the opinion of authors is close to the maximum possible length of piers. It's because the port is located in the territory of the city that reduces the development possibilities of the port and creation of new piers. Liepaja already loses Ventspils port in terms of number of piers. Now Riga port has the biggest total length of piers – 18.2 km. In general Liepaja port lags behind other two leading ports of Latvia in terms of technical parameters, but its main advantage is seen exactly in the perspective of free territory (2000 ha) which could increase capacity of port activities. In terms of technical possibilities, Liepaja port is the only one that has three port gates that can facilitate intensive ship traffic. One of the largest advantages of Liepaja port is the variety of terminals (in terms of amount – 80) – universal piers where different cargo types can be handled. Technical provision of Liepaja is similar to that of Ventspils, but worse than of Riga Port.

The largest incomes of ports of Latvia are port charges that are collected from the shops services in the port. According to the summary of publically available port charges of the leading ports of Latvia, in Table 3 we can see that these charges differ in each port.

Riga port has a set of charges that summarizes several port charges, including services of pilots, towboats and linesmen thus making these expenses “*not transparent*”. In terms of price factor, tonnage charge of Liepaja port (0.25EUR/BT for all types of ships) is lower than in Ventspils port (0.3 EUR/BT for all types of ships and 0.35 EUR/BT for tankers), and it is regarded as a competitive. In addition, channel charge in Liepaja port for ro-ro and container ships is lower than in Riga and Ventspils ports, but the charge for small ships in Liepaja port is higher than in Riga port, but equal to Ventspils port. (see Table 3)

**Table 3. Port channel charges, EUR/ BT.**

	Liepaja port	Ventspils port	Riga port
Container ships	0,2	0,21	0,38
Passenger ship	0,13	0,21	0,12
Cruise ship	no data	0,21	0,1
<b>Ro-ro ship</b>	<b>0,13</b>	<b>0,21</b>	<b>0,19</b>
Refrigerator ship	0,25	0,21	0,19
Tankers	0,25	0,22	no data
<b>Other ships</b>	<b>0,25</b>	<b>0,21</b>	<b>0,22</b>
<b>Charge of small ships</b>	<b>0,06</b>	<b>0,06</b>	<b>0,04</b>

Source: table made by the authors according to the ports reports data

When assessing the whole range of port services provided to one ship, the costs for services received in a port smooth out. If pilot services in one port are lower than in another port, the towboat services might be higher, etc. When performing a comparison, it must be marked that not only the setting of port charges, but also the discount policy implemented in ports differ. When assessing the diversity of discounts, the authors regard that price and discounts policy is the tool of ports mutual competition and ports' management pay a sufficiently considerable significance to it.

### 3) Cargo types, turnover and specialization

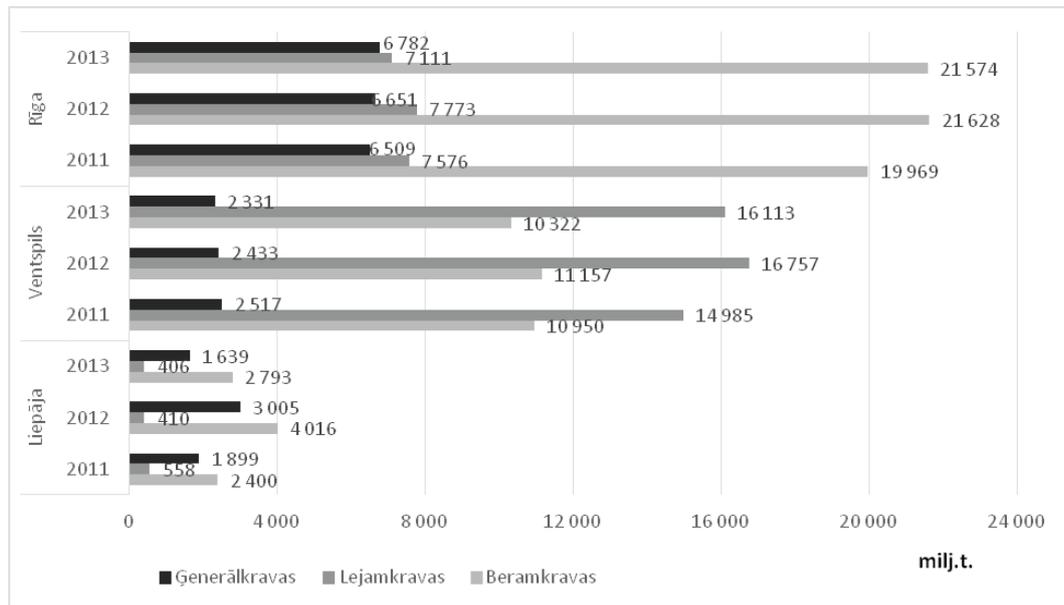
When assessing the last years' dynamic of cargo turnover between Latvian ports (incl. in their international competition), it can be seen that cargo turnover has increased only in ports of Russia, but in other ports of Latvia, Lithuania and Estonia the cargo turnover has considerably dropped in 2013 when compared with 2012 (see Table 4).

**Table 4. Ports' turnover in 2012 and 2013, Mio t and % (Ozols, 2014).**

	2011	2012	2013	2013/2012,%
Liepaja	4 856,80	7431,4	4838,2	-34,9
Ventspils	28 451,70	30346,1	28765,8	-5,2
Riga	34 053,60	36051,9	35466,7	-1,6
Klaipeda		35242,7	33408,3	-5,2
Tallinn		29476,1	28247	-4,2
Ust-Luga		46786,1	62640,4	+33,9
S. Petersburg		57814,4	57972,1	+0,3
Primorsk		74768,7	63821,9	-14,6

According to the opinion of the authors, this trend can increase in the coming years because Russia plans investing considerable additional resources in development of its ports and increase of competitiveness.

When assessing the proximity of Klaipeda port (Lithuania) to Liepaja port, its turnover (to ~34 Mio t annually) is marked more as equal to the volumes handled by both other Latvian ports (Riga and Ventspils) leaving Liepaja in the position "*far behind*" (Liepaja port handles 8-9 times less volumes of freight). Types and volumes of handled cargos show the marks of cargo specialization in the activity of Latvian ports. As it can be seen in Figure 1, cargo turnover dynamics of all Latvian ports during a period of three years confirms that Riga port has the largest total cargo turnover in all types of cargos. Riga preserves the leadership in the segment of bulk cargos – in 2013 21 573.70 Mio t (dominating cargos – coal 14 041.80 Mio t.).



**Figure 1: Amount of cargoes handled in Latvian ports in 2011- 2013, Mio t.**

Source: figure made by the authors according to the ports reports data

Rīga port has also the largest volume of handled general cargoes - 6 781.60 Mio t (with the largest type of handled cargoes – container cargoes 3 908.80 Mio t). But the leader in liquid cargoes is Ventspils port - 16 112.90 Mio t. Types and volumes of cargoes handled at Liepāja port testify that the emphasis is mainly put on bulk cargoes and ro-ro cargoes. The structure of cargoes handled at ports testifies that in group of bulk cargoes in 2012-2013 Liepāja port is the only one where crop and related products are handled. However, since 2014 an initiative is observed to introduce this group of cargo in Ventspils port. Cement also belongs to bulk cargoes – considering the cement handling terminal created in the territory of Liepāja Port that is the most progressive in Latvia, the volume of products in this group has a considerable meaning in port development. In context of future perspectives, metal cargo types are also important. In segment of general cargoes, specifically container cargoes will certainly develop in future as one of the most advantageous and compact types of cargoes both in inland and maritime shipments. Rīga and Ventspils ports have specialized container terminals.

**Table 5. Number of containers (TEU) handled in 2011, 2012 and 2013.**

	Liepājas osta	Ventspils osta	Rīgas osta
2011	2 966	0,00	302 973
2012	4 120	360,00	362 297
2013	4 525	54,00	381 099

Source: table made by the authors according to the ports reports data

Attempts to carry container cargoes in Liepāja port are positive. However, it is possible to achieve a comparative competitiveness with Rīga port in Latvia and at international competitiveness with Klaipėda port (Lithuania), only obtaining important investment from the

concerned businesspersons. To create a container cargo terminal, a considerably wide territory adjacent to port is required where to place the containers anticipated for handling. Liepaja port has a free territory amounting to 5 ha where it is possible to create the largest container terminal in the Baltic States. Business initiative and investments of 200 – 250 Mio EUR are required for such construction. But the municipality and Liepaja SEZ could only ensure the arrangement of access roads.

## Discussion

The research results of the performance comparison among leading Latvian ports Liepaja, Ventspils and Riga were discussed with the leading specialists of the aforementioned ports (G.Beļskis, I.Koliņš u.c.). It has given approval for the majority of the authors findings made within research. When analyzing the opinions of top management of Liepaja, Ventspils and Riga ports on the competitive advantages of these ports, common advantages of these ports are the geographical location on the world map and the neighboring countries that do not have direct exit to open waters. Representative of all ports acknowledged the political situation in the world and complicated relations with Russia as one of the problems hindering the development of ports.

Comparative results of the study and a summary of views shows - Klaipeda port is named as the main competitor for Liepaja port, Riga port – for Ventspils, but the rapidly developing Russian ports – for Riga port. Jānis Kalniņš, a senior customer manager of “Nordea” bank large companies department admits: “The most important medium-term challenge for ports of Latvia is the port infrastructure investment program implemented by Russia in Finnish Bay the aim of which is to increase materially the capacity of Ust-Lung port. Ust-Lung already handles considerable amounts of coal cargos exported from Russia thus reducing the dependence of Russian strategic export cargos from Baltic transit corridor. To raise the competitiveness, transit companies and ports administrations must continue the work at diversification of cargos to be handled and improvement of service quality and efficiency. Cargo owners should be involved in the designs of new terminals as strategic partners thus ensuring their interest in usage of the terminal.” (Kalniņš, 2014)

The leading specialists of the Liepaja port I.Koliņš and G.Beļskis consider that “ports don’t differ specially among themselves because all they work in one market. Lower port rates for individual cargo groups can be offered only depending on cargo types.” The leading specialists of the aforementioned ports admitted that “port charges can be reduced, but is it an end in itself and according to the local standards – port charges are already sufficiently low and port rate policy has minimum influence on port development.”

When thinking about accented cargos in future, Liepaja port wants to continue its operation specifically in the field of dry cargo servicing, but Riga port wishes to handle more and more container cargos. Ventspils port works now to attract different cargos and modernize its piers. This confirms the results of studies where only a partial leading Latvian port activity specialization in freight forwarding.

Experts I.Koliņš and G.Beļskis acknowledged that one of the planned works for port development is deepening the ports so that larger vessels could arrive in the ports, and construction of new quays and reconstruction of the existing quays is needed.

This confirms highlighted in the study importance of technical parameters in determining the port’s competitive advantage. Comparative advantage is for Riga and Ventspils ports, however, the authors found that all the leading Latvian ports equally invest and implement projects in this field. When characterizing the development possibilities of leading ports in Latvia, F. de Jong – expert of Netherlands ports and business external logistics – marked during the negotiation: “In development of each port it is important to achieve that it is an economically

active area and “*intersection of possibilities*” – place where multimodal transport and manifold logistics possibilities cross. Not only the port, but also the surrounding territory – economic activity in it – is important for the development. Success of port activity is determined by three factors – access to sea, port territory and inland. Market needs the connecting function and port fulfils the so called “*gates*” function in the management of materials flow.” Expert has pointed that first port must be developed and only then companies that want to be in the port. For each port it is important to be aware of its USP - **unique selling proposition**, why businessmen should choose this particular port: price, quality, duty or jams, policy. Development of ports is determined largely by its administration and property right.

The study results confirm that so far the leading Latvian ports mostly rely on developing technical parameters such as port area and the large ships servicing options. Therefore, all the ports, including the port of Liepaja purposefully invest in infrastructure. However, improvements in port operations management, port capacity utilization and logistics solutions are very important for the future competitiveness of the port. This should be a separate study topic in the future.

## Conclusions

There is intense competition among the three leading ports of Latvian that is intensified by operation of Klaipeda port and Russian ports – considerable drop is observed in volumes of Latvian ports activity during the last three years. Riga port is brought forward in competition of the three ports that is superior over Liepaja and Ventspils ports in terms of handled cargos. Competitive advantages of Riga and Ventspils ports against Liepaja port are the technical parameters – large capacity cargo ships can be serviced in the water area of ports. Common trend is planning of development and attempts to invest in port deepening.

In competition the ports maintain equal price policy, ensuring equal price level for port services and using a discount system in price competition. Price reduction can be achieved only on the account of reduction of expenses that is not purposeful when thinking about the regaining of investments and further necessity for general development of a port.

Cooperation and specialization of freight forwarding is important for the development of Latvia’s ports. Tight specialization of ports activities in specific cargos has to be observed.

Liepaja port as a trading port among the leading Latvian ports has gone its difficult path of development since the early days of the establishment of the port served as a military and fishing port. Therefore, in this study, it was important to understand the competitive advantages of its developments. As its main advantage the study identified geographical position towards Western destinations, free territories for future industry and business development and for now competitive port tariffs compared to other main ports of Latvia. Discussion among the specialists confirms that the development of the economy in the region is essential for the development of the port. Since Liepaja port has free areas, it has the potential and competitive advantage, in the same time improving port management, logistics, and business communications.

The obtained leading Latvian port activity comparative results are important because it views in detail Liepaja port competitiveness. So far, researches have been covering only the two largest Latvia’s ports. Scope for further researches could be not only the Liepaja port operations, capacity utilization and management issues in the scale of Latvia, but also its competitiveness internationally.

## Recommendations

1. Each port has to get the status of “main – dominating port” in any of the cargo groups, by defining its target markets following the port geography and distance distribution. Advantage of Liepaja port is availability to Scandinavian ports that determines the orientation of local export or Eastern countries transit in this market. Liepaja can dominate, e.g. in bulk cargo – cement, agricultural products and wood and metal cargo types.

2. Mutual cooperation is needed among port administrations and political wish to cooperate in acquisition of large markets in circumstances of international competition, to form definite port cooperation models per definite target markets and dominating cargo groups contrary to the current attempts to compete fiercely about them. In long-term lack of such cooperation strategy on the most suitable transport corridors can lead to situation when Latvian ports are overcome again, with other international neighboring transit ports capturing the initiative.

3. Two positions are important for port development: transport and handling possibilities, and knowledge and information – quality of logistics services, simplicity in business transactions, incl. development and usage of unified information system in ports and international business interconnections. Mutual cooperation among the companies located in ports is also to be developed making the port selection possibilities to shunt one’s cargo more flexible, but ports less intercompeting. Liepaja port is to be positioned as an active economic territory. Internationally recognized competing ports are analyzed, but Liepaja is less recognized due to the small volumes of operation. In context of Liepaja, information shall be moved directly transporting product from EU. Competitiveness of Liepaja port can be facilitated also by achieving increase of export potential of businessmen present inland – businessmen in Liepaja and its region must increase their market internationally and in transactions thus showing interests on necessity of transportation of new cargos.

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