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CLUSTERING IN THE FREEPORT OF RIGA

Summary: Port activities are geographically concentrated in a limited number of regions, mainly because of favourable geographic conditions. These regions attract a substantial number of port related firms. Seaports are naturally born clusters. Cluster environment stimulates competitiveness and competition inside a cluster and industry. Some competitiveness problems are at the pure level of business entities' co-operation and business integration in the Freeport of Riga. Cluster environment stimulates the integrated development of all the business entities within a cluster. Cluster concept is applied to enhance the understanding of the performance of a seaport. The objective of the paper is to find out the cluster perspective influence to the business competitiveness and the integrated development of the Freeport of Riga.

Keywords: cluster, competition, seaport.

1. Introduction

The Freeport of Riga (the biggest seaport in Latvia) is a significant part of global and regional cargo supply chains and passenger traffic network in the Baltic Sea region, providing safe and reliable services. As an integral part of the city Riga, the Freeport recognizes its social and environmental responsibilities and makes a strong contribution to the growth of Latvia's economy. The vision of the Freeport of Riga development is: to stay as the leading port of the Baltic States and a source of real prosperity for Latvia. The key words for reaching this vision are: co-operation, integration, and competitiveness.

The hypothesis of the research is: Cluster environment in Freeport of Riga may enlarge the level of the co-operation between different enterprises and induce the integrated development of enterprises in diverse industries.

The aim of the paper is to find out how cluster environment in the Freeport of Riga can stimulate companies' integrated development and competitiveness. There are several tasks to be solved to complete this aim:

– to describe the performance of big ports in Latvia and the Freeport of Riga's business and institutional situation particularly,
– to develop cluster approach proposals to increase Freeport of Riga's competitiveness.

The methods applied are as follows: monographic method, method of logical analysis and synthesis, analysis of statistical information, expert method.

2. Latvian ports performance

One of the simplest and most popular ports' definitions is the following: port is a town with a harbour that facilities for a ship/shore interface and custom facilities [Alderton 2008]. Ports, like other commercial activities, are constantly changing. During the last century, taking into account changes in the world economy, ports' functions in the world increased and developed.

Latvian ports with a history of more than eight hundred years are a significant part of global and regional cargo supply chains and passenger traffic network in the Baltic Sea region, providing safe and reliable services. Three big sea ports (the Freeport of Riga, the Freeport of Ventspils, and the Freeport of Liepaja) and seven small ports (Engure, Lielupe, Mersrags, Pavilosta, Roja, Salacgriva, Skulte) are located on the coast line of Baltic Sea and Riga Gulf and play an important role in the transport system of Latvia.

Ports have been going through evolution stages which we refer to as "generations". The generation of a port reflects whether the approach adopted by port authorities/ operators in developing their activities is likely to be reactive or proactive. Ports generations [Alderton 2008] could be characterized by developing certain activities and explaining the following evaluation:

1. Port as a traditional place for cargo loading and discharging (the first generation).

2. Port as the centre of transport, industry, and commercial activities (the second generation).

3. Port as the establishment of a wide range of logistics and value-added activities, developed in connection with international industrial and commercial businesses (the third generation).

4. Port with a high level of automation and standardisation in main activities, high technologies developed under globalization processes (the fourth generation).

Taking into account the current Latvian ports performance, governance, structure, provided services, industrial infrastructure, local and international recognition and importance, at present we can categorise them as:

– the first generation ports: Engure, Lielupe, Pāvilosta, and Roja;
– the second generation ports: Mersrags, Salacgriva, and Skulte;
– the third generation ports: Liepaja, Riga, and Ventspils.

The development of Latvian ports as a significant part of Latvia's national economy allows for their transformation to the next generation in the future.

About 98% of total Latvian cargo turnover in 2010 was generated by three export oriented big ports. The main types of cargo handled at big ports are containers, various metals, timber, coal, mineral fertilizers, chemical cargoes, oil

and food products. Latvian big ports development during some previous years is characterized in Table 1.

Table 1. Cargo by transport categories handled at the biggest see ports of Latvia

Year	Transport category	Freeport of Riga		Freeport of Ventspils		Freeport of Liepāja	
		Thousand tons	Dynamics %	Thousand tons	Dynamics %	Thousand tons	Dynamics %
2008	Dry bulk	19 333		8 593		1 861	
	General cargo	4 807		2 111		1 418	
	Liquid bulk	5 425		17 864		910	
	Total	**29 565**		**28 570**		**4 190**	
2009	Dry bulk	18 752	–3	7 808	–9.1	2 001	7.5
	General cargo	4 405	–8.4	1 462	–30.74	1 721	21.4
	Liquid bulk	6 566	21	17 369	–2.8	658	–27.8
	Total	**29 724**	**0.5**	**26 640**	**–6.8**	**4 381**	**4.6**
2010	Dry bulk	17 437	–7	8 744	12	1 905	12
	General cargo	6 453	46.5	2 007	37.4	1 922	11.1
	Liquid bulk	6 584	0.3	14 062	–19	565	–14.1
	Total	**30 475**	**2.5**	**24 815**	**–6.85**	**4 383**	**0.1**

Source: authors' own study based on Latvian CSB data.

Figures in Table 1 show not only the overall development of ports, but also the economic crisis influence on ports' performance, as it is shown by the negative dynamics of transport by categories in 2009 and 2010.

Other Latvian ports are small by size. Total cargo turnover has increased three times during last five years in these ports, which plays an important role in regional development: new working places are created, industrial infrastructure and economic growth is supported. Commercial cargo commodities are handled in Skulte, Mersrags, Salacgriva, and Roja, but Engure, Pavilosta, and Lielupe are known as fisheries and sail-boats ports. During the economic crisis, total cargo turnover in small ports stayed without great changes: 1325.8 thousand tons (2008), 1234.2 thousand tons (2009), and 1484.5 thousand tons (2010).

3. Facts and figures about the Freeport of Riga

According to provisional calculations, the operation of the Freeport of Riga provides approximately 3 to 3.3% of the gross domestic product of Latvia. The port is not just a "spender" of tax payers' money, but it is the major tax payer: the Freeport Authority together with port enterprises pay state taxes in the amount of 350-420 million EUR per year. The operation of the port has a multiple influence and currently the income

on average is 14 EUR for each reloaded ton of cargo. The share of the Baltic ports in total sea bound cargo volume of the region in 2008 is the following: Riga (23%), Klaipeda (23%), Tallin (22%), Ventspils (22%), Butinge (7%), and Liepaja (3%) [*Freeport of Riga. Handbook* 2008].

The Freeport of Riga lies on the both banks of the River Daugava covering 15 kilometres in length. The land of the port is 1962 ha, port water area is 4386 ha, the total length of berths, maximum permissible vessel draft by the berth is 12.2 meters. The port is open for navigation all year round.

Loading capacity (assessed) at the terminals of the Freeport of Riga accounts for 45 million tons per annum. In 2010 the volume of the transhipped cargoes reached 30.5 million tons – it is the highest index during all 806 years of Riga port activities. The main types of cargo handled at the Freeport are coal, timber, containers, mineral fertilizers, chemical cargoes, petrol, and food products.

Thirty-two stevedore companies and thirty-five shipping agents successfully operate in the Freeport of Riga. The Law on the Freeport of Riga defines general principles of the Freeport of Riga activities and the procedure of the free zone regime application: fulfilling certain requirements business companies can conclude an agreement on activities under free economic zone regime. Licensed business companies have opportunity to apply direct tax relief for the investment in their fixed assets that are used for at least five years **[***Freeport of Riga Development...* 2009].

There is a very weak tendency to co-operate between the Freeport of Riga and other big ports in Latvia – Ventspils, Liepaja, and small ports. The co-operation between different ports in Latvia may increase competitiveness on the global market and therefore the ports can compete more successfully with other ports in the Baltic Sea region. Further sustainable development and competitiveness increasing are the key questions for the Freeport of Riga and require new methods to reach it. One of them is the cluster based approach.

4. Cluster based approach – opportunity for the Freeport of Riga development and competitiveness

A cluster initiative offers a comprehensive assessment of cluster's markets, products, linkages, externalities, and synergies to help identify regulatory and business constraints, find new and wider market opportunities [*Cluster Policy...* 2008]. The Council of the European Union has set forming clusters as one of the top priorities to support innovations and competitiveness [Council of the EU 2006]. Latvia has followed EU initiatives and cluster development is included in the national level economy strategy. Cluster support program was developed involving government support and EU funds, but, unfortunately, due to budget shortage, it was cancelled. A. Burka, expert from the Ministry of Economics of Latvia, has an opinion that the cancelled cluster program partly can be substituted by Competence

Centre Development Program (total volume 42 MM LVL) [Burka 2009, personal communication]. This initiative might be an opportunity for new cluster development in the future.

The cluster concept is frequently applied, but hardly to seaports, in spite of the fact that seaports are clear examples of clustering. Haezendonck [2001] is the first scholar who uses the term "port cluster" and draws from cluster theories. She defines a port cluster as "the set of interdependent firms engaged in port related activities, located within the same port region and possibly with similar strategies leading to competitive advantage and characterized by a joint competitive position vis-à-vis the environment external to the cluster" [Haezendonck 2001, p. 136]. Haezendonck analyzes the performance of a port cluster with an adapted version of Porter's diamond framework [Porter 1990].

The first step to construct a cluster is to identify the economic specialization of the cluster. In the case of seaports, the core specialization is the arrival of goods and ships. All the activities related to the arrival of goods and ships are included in the port cluster. All the economic activities that are required to enable loading and unloading cargo and ships are included in the port cluster. These activities include: terminal handling, pilot, and towage. The arrival of ships and goods attracts related economic activities and therefore ports may be seen as drivers of agglomeration in cities.

Basing on the vision and mission, and to increase the competitiveness of Freeport of Riga, strategic objectives and strategic initiatives should be defined. The SWOT (Strength, Weaknesses, Opportunities, Threats) Matrix is the outcome of the analysis of Freeport's competitiveness in its overall business context, including geographical, regulatory, financial, environmental, reputation, and other aspects. Essential competitiveness determinants – such as location, tariff policy, financial management, general management issues, infrastructure development, navigation safety, the development of port terminals, part safety and security, environmental protection, port as socially responsible entity, marketing strategy – are the main topics for port's strengths and weaknesses valuation. Opportunities and threats valuation cover the following topics: infrastructure development, navigation safety, the development of port terminals, port safety and security, environment protection, port as socially responsible entity, and marketing strategy.

Five broad groups of port cluster activities are identified: cargo handling activities, transport activities, logistics activities, manufacturing activities, and trading activities. Transport activities are part of a port cluster, since a port is a part in a transport chain. Most cargo is transported further by means of inland modes, such as road, rail, and inland waterway.

The variables for the performance of cluster are divided into two groups: governance variables and structure variables [de Langen 2003]. The first group includes all the variables that are directly related to the behaviour of organizations in a cluster, the second group includes all the variables for which this is not the case. Four "structure variables" could be identified:

1. Agglomeration and dispersion forces: cluster linkages – relations between different actors in the cluster. The components of a port cluster: cargo handling, transport, logistics, manufacturing, and trade.

2. Internal and external competition: internal competition – the competition between firms that are both located in the same port (cluster); external competition – the competition between firms in different ports.

3. Cluster barriers: entry barriers – the barriers that prevent firms from entering a cluster; start-up barriers – the barriers that prevent individuals from starting a new firm; exit barriers – the barriers that prevent firms from leaving a cluster.

4. Cluster heterogeneity: the diversity of economic activities – the presence of firms active in different markets; the diversity of firms' size – the presence of small, medium-sized, and large firms.

Four "governance" variables are identified:

1. Co-ordination of activities and trust in the port cluster.

2. Leader firms: firms that have a superior ability to co-ordinate activities.

3. Knowledge intermediaries: firms or associations that possess, gather, and "distribute" knowledge and information.

4. Collective action' problems, infrastructure, and regimes.

Thus, transport firms are located in ports and they are strongly related to the arrival of goods and services that they are included in the port cluster. This applies to all the firms involved in freight transport. Logistics activities, such as storage, re-packing, and assembling, are included in a port cluster, because goods are stored in ports. This necessity of storage is a reason for locating logistics activities (such as blending and re-packing) in seaports. Thus, all logistics activities are included in the port cluster. The Freeport of Riga has a plan to extend borderline of the territory and build new logistic centre.

A specific kind of manufacturing firms is related to the arrival of goods and ships in seaports: those firms get their raw materials from the port and are located in the port in order to reduce transport and logistics costs. Although a specific set of trading activities could be included in the port cluster as well. Trading and storage (in a port) are closely linked. Commodity trade is, for some commodities, still related to storage and cargo handling.

5. Conclusions

1. Structure, activities, and development level of the Freeport of Riga are the main evidence for implementing the cluster approach to increase international competitiveness. The cluster environment increases the competitiveness of companies within a cluster by stimulating collaboration, interaction, competition, innovation, and increasing efficiency. The economic power of a company can increase in the cluster environment.

2. Successful implementation of the clusters approach in the Freeport of Riga can create tangible economic benefits:
– companies can operate with a higher level of efficiency;
– companies and research institutions can achieve higher levels of innovation;
– the level of trust is increasing within the cluster, at same time, reducing the costs of failure.

3. Taking into account Freeport's mission and development vision, recognized existent internal and external problems, it is recommended to create three-level clusters in certain time scale:
– the industrial business cluster inside the Freeport of Riga;
– the territorial cluster for Riga region, where the Freeport is included as one of the most important members;
– the national (or may be international regional) transport cluster, where the Freeport of Riga is included as a member.

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KLASTRY GOSPODARCZE NA PRZYKŁADZIE PORTU MORSKIEGO W RYDZE

Streszczenie: Działalności portów morskich koncentruje się wokół ograniczonej liczby regionów, głównie ze względu na korzystne warunki geograficzne. Regiony te przyciągają znaczną liczbę przedsiębiorstw związanych z portami morskimi, stanowiącymi naturalną kolebkę klastrów. Środowisko klastrów pobudza konkurencyjność oraz rywalizację wewnątrz powiązanych firm oraz przemysłu. Niektóre problemy konkurencyjności stanowią prawdziwe stopnie współpracy podmiotów gospodarczych oraz integracje gospodarcze wokół Freeport w Rydze. Środowisko klastrów stymuluje również zintegrowany rozwój wszystkich podmiotów gospodarczych w ramach klastra. Koncepcja klastra jest zatem stosowana w celu zrozumienia działania portu. Celem pracy jest przedstawienie punktu widzenia dotyczącego wpływu klastrów na konkurencyjność Freeport w Rydze oraz rozwoju działalności i integracji gospodarczej.