# CLUSTER APPROACH AS ONE OF DETERMINANTS FOR INCREASING COMPETITIVENESS OF RIGA FREEPORT

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***Abstract.*** *The cluster-based approach offers a new way of dividing and understanding an economy and competitiveness. The main objective of the present study was to reveal the influence of industrial clusters on Freeport's of Riga business competitiveness and integrated development. The cluster environment stimulates competitiveness and competition inside the cluster and the industry. One of the reasons for the current problems of Latvia's competitiveness is the low level of business entities' co-operation and business integration in the national economy of Latvia and the Freeport of Riga in particular. Companies are isolated in their approaches to increasing their competitiveness and entering the global market. In many cases it is too hard a task for a single company. Authors formulate the business entities' co-operation and integration as a gateway to an integrated development and higher competitiveness in the global market. The cluster environment stimulates the integrated development of all business entities within the cluster. The article was written using scientific, normative and legal sources and data, systemizing good practice in other branches, as well as the results on authors' systematic researches on the topic. The monographic method, method of logical analysis and synthesis, analysis of statistical information and the expert method wre applied.*

***Key words:*** *cluster approach, competition, company, development, freeport*

## Introduction

The rapid integration in the global economy, the sustained growth (8–10% of GDP per annum) of national economy in Latvia over recent years was not only a good example of successful transition economies, but has also made the country more vulnerable to contagion during the economic crisis which is now having dramatic consequences in Latvia (shrinking of GDP by about 18% in 2009 and 3% in 2010). The government, companies and economic experts are trying to analyze the mistakes of the past, to find the way out of the economic recession and build the fundament for sustainable development in the future.

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The terms "competitiveness" and "integration" are used more and more often in the context of economic performance. These concepts may be discussed on different levels: countries, regions, industries and companies. In general, the country's level of competitiveness can be measured by the Global Competitiveness Index – Latvia took only the 68th place among 131 countries in 2009. The index is significantly lower as compared with the major part of other European Union countries, including our neighbours Lithuania (53) and Estonia (35). There are many factors to be analyzed; one of them, which indicates the tendency of integrated development and co-operation, is the State of Cluster Development index which measures how prevalent are well-developed and deep clusters. This is one of the weakest points of Latvia – only 113th place in the list (The Global Competitiveness Report, 2009).

Unfortunately, due to the lack of positive historical experience, integration and co-operation among companies in Latvia are underdeveloped and in many cases term "competitor" is a synonym of "enemy" which must be weakened and destroyed. This is not a good environment for collaboration and development. Companies are isolated in their approaches to entering new markets, and in many cases these approaches could be more successful if a proper strategy is selected. It is particularly important to take into account the specific features of the national economy of Latvia: all its companies are small or medium according to the global market standards. It is essential for the companies to co-operate and integrate to be competitive, to increase their export potential and be successful in the global markets.

The Freeport of Riga is a significant part of the global and regional cargo supply chains and passenger traffic network in the Baltic Sea region, providing safe and reliable services. An integral part of the city of 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 remain 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 study: the cluster environment in the Freeport of Riga may raise the level of co-operation among different enterprises and induce an integrated development of enterprises in diverse industries.

**The aim** of the study: to find out how the cluster environment in the Freeport of Riga can stimulate an integrated development and competitiveness among companies.

There were several tasks to be solved to complete the aim:

- to describe the most important aspects of the port's evolution environment and integration;
- to describe the performance of big ports in Latvia and the Freeport of Riga business and institutional situation in particular;

- to identify the linkage among the cluster environment, integration and competitiveness;
- to develop cluster approach proposals to increase the port's competitiveness.

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

## 1. The Ports' evolution

One of the simplest and most popular definitions of a port is the following: a port is a town with a harbour and facilities for a ship/shore interface and custom facilities (Alderton, 2008). Ports, like other commercial activities, are constantly changing. The cargo-handling technology and changes in labour requirements and culture have also undergone radical developments. During the last century, taking into account changes in the world economy, ports' functions in the world have ben increased and developed.

Since the Second World War, ports have been going through evolutionary stages referred 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. Port generations (Alderton, 2008) could be characterized by the development of certain activities:

1. Port as a traditional place for cargo loading and discharging (the first generation, until the 1960s). Usually, there were no direct connections between trade and logistics activities, they were separated. No common strategy of ports' performance was developed. The cooperation among ports local communities and governmental institutions was usually weak. A port was considered an "independent kingdom".
2. Port as a centre of transport, industry and commercial activities (the second generation, until the 1970s). Different commercial and industrial services, directly not connected to cargo loading and discharging, were offered. An appropriate industrial infrastructure was developed. The port development policy and strategy were worked out. An integrated cooperation among industrial, logistics and commercial business in ports took place. Relationships among a port, local community and governmental institutions were developed.
3. Port as an establishment of a wide range of logistics and value-added activities developed in conjunction with international industrial and commercial businesses (the third generation, until the 1990s). All activities were highly integrated, and the governance of a port had part in the daily work and development of a port. There was created the value added of the basic activities by supplementary services (custom, logistics, etc.) and industrial products. The environment protection problems started to be solved. This generation of ports would be sufficient if the

world economic growth pattern could be forecast with certainty. Unfortunately, this is not the case, and the external environment today offers constant changes which are reflected in the high levels of market uncertainty.

4. Port with a high level of automation and standardisation in main activities, high technologies developed under globalization processes (the fourth generation, from the 1990s). Companies, agencies and other entities performing in a port are more open for co-operation and integration. The high quality of provided services and qualified employees, the high level of competitiveness are the main features of this generation of ports. To cope with market uncertainty, Paixão and Marlow (2003) have suggested that ports should adopt a new logistics approach, agility, which have already been employed in other industries.

In practice, such a strict classification is relative and rather difficult to use, because ports are in the process of development and the borders between the generations have been trespassed.

## 2. Performance of Latvian ports

Latvian ports 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. There are three big sea ports (Free port of Riga, Free port of Ventspils and Free port of Liepaja) and seven small ports (Engure, Lielupe, Mersrags, Pavilosta, Roja, Salacgriva, Skulte) on the coast of the Baltic Sea, an the Gulf of Riga and plays an important role in the transport system of Latvia.

Big Latvian ports are members of the Baltic Ports Organization (BPO). The BPO includes significant ports in the nine countries on all sides of the Baltic Sea. The main objective of the BPO is to improve the competitiveness of maritime transport in the Baltic region by increasing the efficiency of ports, marketing the Baltic region as the strategic logistics centre, improving the infrastructure of the ports. About 98% of the total Latvian cargo turnover in 2010 was made up 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. The development of big Latvian ports is characterized in Table 1.

Figures in the table show not only the overall development of the ports, but also the influence of economic crisis on the ports' performance.

The other Latvian ports are small in size. Their total cargo turnover has increased three times over the last five years; this increase plays an important role in the regional development: new working places are created, the industrial infrastructure and economic growth are supported. Commercial cargo commodities are handled in Skulte, Mersrags, Salacgriva and Roja, but Engure, Pavilosta and Lielupe are known as fisheries and sailboat ports. During the economic crisis, the total cargo turnover in small ports showed no

TABLE 1. **Cargo by transport categories handled at the biggest sea ports of Latvia**

| Year | Transport category | Freeport of Riga | | Freeport of Ventspils | | Freeport of Liepāja | |
|---|---|---|---|---|---|---|---|
| | | Thousand tons | Dynamics % | Thousand tons | Dynamics % | Thousand tons | Dynamics % |
| 2004 | Dry bulk | 12 270 | | 9 204 | | 1 129 | |
| | General cargo | 5 409 | | 889 | | 2 481 | |
| | Liquid bulk | 4 478 | | 17 714 | | 863 | |
| | **Total** | **22 157** | | **27 809** | | **4 474** | |
| 2005 | Dry bulk | 14 766 | 13.8% | 10 690 | 16% | 1 651 | 46.2% |
| | General cargo | 6 205 | 14.9% | 1 075 | 21% | 2 189 | -11.8% |
| | Liquid bulk | 3 458 | -22.8% | 18 096 | 2.2% | 667 | -23% |
| | **Total** | **24 429** | **10.5%** | **29 862** | **7%** | **4 508** | **0.8%** |
| 2006 | Dry bulk | 15 348 | 4.4% | 8 602 | -19.5% | 1 652 | 0% |
| | General cargo | 5 087 | -18.1% | 2 470 | 43.5% | 1 383 | -36.8% |
| | Liquid bulk | 4 933 | 43% | 17 989 | -0.6% | 965 | 44.6% |
| | **Total** | **25 357** | **3.9%** | **29 062** | **-2.7%** | **4 000** | **-11.3%** |
| 2007 | Dry bulk | 15 485 | 0.9% | 8 504 | -1.1% | 1 880 | 13.8% |
| | General cargo | 5 624 | 10.8% | 2 513 | 1.8% | 1 339 | -3.1% |
| | Liquid bulk | 4 823 | -2.2% | 20 018 | 11.2% | 818 | -15.2% |
| | **Total** | **25 932** | **2.3%** | **31 037** | **6.8%** | **4 038** | **0.9%** |
| 2008 | Dry bulk | 19 333 | 24.7% | 8 593 | 1% | 1 861 | -1% |
| | General cargo | 4 807 | -14.5% | 2 111 | -16% | 1 418 | 5.9% |
| | Liquid bulk | 5 425 | 12.5% | 17 864 | -10.8% | 910 | 11.2% |
| | **Total** | **29 565** | **14%** | **28 570** | **-8%** | **4 190** | **3.7%** |
| 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%** |

great changes, 1325,8 thousand tons in 2008, 1234,2 thousand tons in 2009 and 1484,5 thousand tons in 2010).

The Latvian ports' performance, governance, structure, provided services, industrial infrastructure, local and international recognition and importance at present characterize 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.

## 3. Facts about the Freeport of Riga

An integral part of the city, the Freeport of Riga recognizes its social and environmental responsibilities and makes a strong contribution to the growth of Latvia's economy. According to provisional calculations, the operation of the Freeport of Riga provides approximately 3 to 3.3% from 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 the port enterprises, pay state taxes in the amount of 350–420 million euro per year. The operation of the port has a multiple influence, and its current average income is 14 euro for each reloaded ton of cargo.

The major ports in the Eastern Region of the Baltic Sea, which can be considered as the potential competitors of the Freeport of Riga are Gdansk, Gdynia (Poland), Hamina, Helsinki, Kotka (Finland), Kaliningrad, Primorsk, St. Petersburg, Ustluga (Russia), Klaipeda (Lithuania), Liepaja, Ventspils (Latvia) and Tallinn (Estonia). In terms of total throughput, Primorsk and St. Petersburg are the prime ports in the East Baltic Sea region, followed by Klaipeda, Riga, Tallinn and Ventspils. The share of the Baltic ports in the total sea bound cargo volume of the region in 2008 was as follows: Riga 23%, Klaipeda 23%, Tallin 22%, Ventspils 22%, Butinge 7% and Liepaja 3% (Freeport of Riga; Handbook 2008). However, each port has its own profile. For example, Primorsk handles only liquid bulk cargo, while St. Petersburg is currently focused mainly on dry bulk and containerized cargoes. All the ports, with the exception of Primorsk and Butinge, handle unitized cargoes such as containers, RoRo or both, and dry bulk. Passenger terminals exist in Gdynia, Gdansk, Tallinn, Helsinki, Klaipeda, Ventspils, St. Petersburg and Riga; all of them receive cruise calls and / or accommodate RoRo ferry lines.

The Freeport of Riga lies on the both banks of the River Daugava, covering 15 kilometres in length; the land area of the port is 1 962 ha, the water area being 4 386 ha, the total length of berths and the maximum permissible vessel draft by the berth 12.2 meters. The port is open for navigation all year round.

The loading capacity (assessed) at the terminals of the Freeport of Riga makes 45 million tons per annum. In 2010, the volume of the transshipped cargoes reached 30.5 million tons – the highest index during all the 806 years of the Riga port activities. The number of vessels in 2009 amounted to 3 953. 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 35 shipping agents successfully operate at the Freeport of Riga. The Law on the Freeport of Riga defines the 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 the free economic zone regime. Licensed business companies have the possibility to apply direct tax relief for the investment in their fixed assets in use for at least five years **(**Freeport of Riga Development Programme, 2009).

## 4. Cluster-based approach as a possibility of the port development and higher competitiveness

Macro-economic tendencies show that the Freeport of Riga is located in a region of dynamically growing countries. On the one hand, it opens good perspectives for an increase of cargo volume; on the other hand, the region is characterized by a high competitiveness and an unstable political climate. Like in the rest of the world, a decrease of the growth rate can be observed in this region along the economic recession. In the present global crisis, it is facing a particularly steep decline for a number of reasons, and the current recession is expected to significantly impact the economic growth also in the coming years.

The tendency of co-operation among the Freeport of Riga and other big ports of Latvia – Ventspils, Liepaja and small ports – is very weak. Co-operation between different ports of Latvia may increase their competitiveness in the global market and allow to compete more successfully with other ports of the Baltic Sea Region. Increasing the further sustainable development and competitiveness are the key issues for the Freeport of Riga, which require new methods to solve them. One of such methods is the cluster-based approach.

The cluster initiative offers a comprehensive assessment of a cluster's markets, products, linkages, externalities, and synergies to help identify regulatory and business constraints, find new and wider market opportunities. Strategic initiatives may vary in different cases, but often they focus on improving market information, workforce development, supply chain, common quality standards, branding, integration and processes. The cluster initiative around the world shows the crucial element of initiative development to be the creation of a platform for a meaningful dialogue within the cluster, to develop business strategies, and with the public sector to discuss policy changes and a possible financial support (Cluster Policy in Europe, 2008). "Co-operation" and "competition" are the key words to describe the cluster environment (Kassalis, 2010). The effect off clusters on the survival and performance of new firms has been discussed by Wennberg and Lindquist (2008). Ketels and Memedovic (2008) summarise the concept of cluster, focusing on the main theoretical framework and empirical findings, and discuss the key pillars of the cluster-based economic policy approach.

The significance of cluster approach is emphasized by the European Union. The EU Council has set formation of clusters as one of the top priorities to support innovations and competitiveness (Council of the EU, 2006). Latvia has followed the EU initiatives, and cluster development is included in the national level economy strategy. The cluster support program was developed involving governmental support and the EU funds, but due to budget shortage it was cancelled. Experts from the Ministry of Economics of Latvia suppose that the cancelled cluster program can be partly substituted by the Com-

petence Centre Development program (total volume 42 MM LVL) which is planned to launch in the first quarter of 2010 (Burka A., 2009). Indeed, the goal of this program is very close to the cluster support initiative – to support co-operation between research institutions and business entities, thus increasing the competitiveness of the companies by stimulating collaboration within the scope of industrial researches, development of new products and technologies. This initiative might open the possibilities for a new cluster development in the future.

The concept of cluster is frequently applied, but hardly to seaports, in spite of the fact that seaports are clear examples of clustering. Haezendonck (2001) was the first scholar to use the term 'port cluster' and to draw on cluster theories. She defines a port cluster as "a 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). E. Haezendonck analyzes the performance of a port cluster using an adapted version of Porter's diamond framework (Porter, 1990). She identifies 14 factors that influence the competitiveness of seaports, including internal competition, internal cooperation, client relationships in the cluster, the presence of related and supporting industries and the behaviour of (different levels of) the government.

The cluster approach has been recently used to analyze ports. A good example of a port cluster case study is the Antwerp's port cluster which is annually reported by Bank of Belgium. In this study, a *cluster population* of about 1000 firms, including logistics and industrial firms, is identified. The development of the value added of this cluster is calculated.

The first step in constructing a cluster is to identify its economic specialization. In the case of seaports, the core specialization is *the arrival of goods and ships*. All activities related to the arrival of goods and ships are included in the port cluster. The importance of favourable geographical conditions, such as the presence of a navigable river and deepwater shelters and the structure of the seabed, combined with the economies of scale of port facilities, explain the concentration of the arrival of ships and goods in a limited number of ports (instead of a "scattered" distribution of terminals along the coast). All economic activities required to enable the loading and unloading of cargoes 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 drivers of agglomeration in cities.

Based on the vision and mission, to increase the competitiveness of the Freeport of Riga, the strategic objectives and strategic initiatives should be defined. The SWOT (Strength, Weaknesses, Opportunities, Threats) Matrix is the outcome of the analysis of a freeport's competitiveness in its overall business context, including geographical, regulatory, financial, environmental, reputational and other aspects. Essential competitiveness

determinants such as location, tariff policy, financial management, general management issues, infrastructure development, navigation safety, development of port terminals, safety and security, environmental protection, port as a socially responsible entity, marketing strategy are the main topics for evaluating the port's strengths and weaknesses. The valuation of possibilities and threats covers the following topics: infrastructure development, navigation safety, development of port terminals, port safety and security, environment protection, port as a socially responsible entity, and marketing strategy.

The SWOT Matrix identifies the factors, both internal and external, that have or may have a positive or negative impact on the realization of its strategic targets. The internal aspects include advantages, strengths and weaknesses arising from the port's internal resources. The external aspects cover the opportunities and threats emerging from the outside. Tables "Strengths and weaknesses of the port of Riga" and "Possibilities and threats of the port of Riga" are presented in the Freeport of Riga Development Programme 2009–2018 (2009). A successful strategy builds upon a thorough SWOT analysis and aims at:

- making use of the strengths to exploit the possibilities;
- overcoming weaknesses by using the advantages of the available possibilities;
- using the strengths to overcome or avoid the threats;
- making efforts to minimize the weaknesses and threats.

Considering the vision and mission statement and the SWOT analysis of the Freeport of Riga for each of the above areas, strategic objectives have been defined and targets have been set for monitoring permanent improvement.

The port cluster consists of all economic activities related to the arrival of goods and ships. Five broad groups of port cluster activities are identified: cargo handling, transport, logistics, manufacturing, and trading. Transport activities are part of the port cluster, since a port is part of the transport chain. Most cargoes are transported further by inland means such as roads, railways and inland waterways.

All current Latvian transport corridors are included into the TEN-T Nordic Axis network and are located in a close vicinity of the Central Axis with the nearest largest logistic centre in Moscow, easing freight transportation from the North of Europe to Central Europe and further on to Central Asia and the Caucasus. Motorways of the sea connect Riga with all TEN-T network ports. Distances by sea from the biggest ports of Central Europe – Rotterdam, Antwerp, Hamburg – to the ports of the eastern part of the Baltic Sea coastline are the shortest, providing an advantage with regard to transportation costs and transit time. In terms of distance, routes through Riga are the shortest, providing the possibility of transport cost reduction on rail and road from the Eastern Baltic Sea coast to the biggest cities of the Russian Federation, Belarus, Ukraine and other countries which are the important and growing consumer markets. Riga is integrated into the uniform transport network of the EU, making Riga one of the most advantageous and efficient hub ports as regards freight transhipment in the Baltic Sea region.

The variables for the performance of the cluster are devided into two groups: governance variables and structure variables (de Langen, 2003). The first group includes all variables directly related to the behaviour of organizations in the cluster, and the second group includes all variables for which this is not the case.

Four 'structure variables' are identified:

1. Agglomeration and dispersion forces: cluster linkages – relations between different actors in the cluster. Relations can be based on transactions, exchange of knowledge and information, and on joint projects. The components of the port cluster are cargo handling, transport, logistics, manufacturing, and trade.
2. Internal and external competition: internal competition among firms that are located in the same port (cluster), and external competition among firms in different ports; switching costs are costs associated with switching to an alternative supplier.
3. Cluster barriers: entry barriers – barriers that prevent firms from entering the cluster; start-up barriers – barriers that prevent individuals from starting a new firm; exit barriers – barriers that prevent firms from leaving the cluster; sticky labour – labour force not willing to enrol in a job outside the port region or port industry.
4. Cluster heterogeneity: diversity of economic activities – the presence of firms active in different markets, diversity of firms' size – the presence of small, medium-sized and large firms. Diversity of the international scope – the presence of foreign firms, local firms, and headquarters of internationally operating firms.

Four 'governance' variables are identified:

1. Co-ordination of activities and trust in the port cluster: different mechanisms, such as markets, inter-firm alliances, associations and public-private organizations, are used to co-ordinate the activities.
2. Leader firms: firms that have a superior ability to coordinate the activities.
3. Knowledge intermediaries: firms or associations that possess, gather and 'distribute' knowledge and information.
4. Collective action problems, infrastructure and regimes: the collective action problem implies that even through cooperation among a large group of firms would be beneficial for all members of the group, cooperation does not develop spontaneously, because individual firms are even better off when they 'free-ride'. The infrastructure for collective action is an organizational infrastructure that facilitates coordination and cooperation, and regimes are the ways in which firms deal with the collective action problem issues.

Thus, (branches of) transport firms are located in ports and are so strongly related to the arrival of goods and services that they are included in the port cluster. This applies to all firms involved in freight transport. Logistics activities, such as storage, re-packing

and assembling, are included in the port cluster, because goods are stored in ports. This necessity of storage is a reason for locating logistics activities (such as blending and repacking) in seaports. The second reason is that by locating in a port, transport costs can be reduced. Both reasons explain the presence of logistics activities in ports and show that these activities are strongly related to the arrival of goods and ships to seaports. Thus, all logistics activities are included in the port cluster. The Freeport of Riga has a plan to extend the borderline of the territory and build a new logistic centre.

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

## Conclusions

Summarizing the influence of the cluster environment on the integrated development and competitiveness level of the companies, some conclusions can be drawn to understand how cooperation within the cluster may help.

1. The structure, activities and development level of big Latvian ports are the main evidence for implementing cluster approach to increase their international competitiveness.
2. The cluster environment increases the competitiveness of companies within the cluster by stimulating cooperation, interaction, competition, innovation and increasing efficiency. Favourable conditions for the companies' integrated development are created within the cluster, and examples of companies' horizontal and vertical integration can be found in the cluster models. Integrated co-operation among the leading, related and support enterprises, deepening value chains to produce more value added production are the key factors of being competitive in the global market. The economic power of a company can increase in the cluster environment.
3. Clusters can create tangible economic benefits:
    - Companies can operate with a higher level of efficiency, drawing on more specialized assets and suppliers with shorter reaction times than they would be able to do in isolation.
    - Companies and research institutions can achieve higher levels of innovation. A close interaction with customers and other companies offers more new ideas and compels to innovate while the cluster environment lowers the cost of experimenting.
    - The level of business formation tends to be higher in clusters. The level of trust increases within the cluster, at same time reducing the costs of failure, as entrepreneurs can fall back on local employment opportunities in many other companies in the same field.

4. As theoretical conceptions and good experience in foreign countries show, it is useful to implement clusters' approach for successfully realizing such ambitious developmental programmes as those elaborated in the Freeport of Riga. Taking into account the Freeport's mission and development vision, recognizing the existing internal and external problems, it is recommended to create three levels of clusters in a certain time scale:
   - an industrial business cluster inside the Freeport of Riga;
   - a territorial cluster for the Riga region in which the Freeport is one of the most important members;
   - a national (or maybe international regional) transport cluster, into which the Freeport of Riga is included as a member.
5. A successful introduction of the clusters approach in the Freeport of Riga should provide and increase the following possibilities for the port's policy makers and management: to strengthen agglomeration economies and reduce diseconomies, to create internal competition, to reduce the cluster entry and exit barriers, to increase the heterogeneity of the cluster population, to increase trust, the role of intermediaries and improve collective action regimes inside the cluster.

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