

# EVALUATION OF BUSINESS CONDITIONS IMPACT ON EASTERN BALTIC MARITIME BUSINESS IN THE CONTEXT OF GLOBALIZATION

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**Annotation.** The main idea of the research is to evaluate compare the maritime business environment conditions at the eastern coast of Baltic Sea, where the competitiveness between Lithuanian, Latvian and Estonian maritime sectors increasing in the processes of globalization and it is important to have favourable conditions for development of maritime business activities in the region. Of course the more intensive business activities have positive impact on the increasing of maritime sector's competitiveness.

**Keywords:** business environment; globalization; maritime transport business.

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## INTRODUCTION

At the eastern Baltic Sea region changes of cargo traffic became very important not only for the sea ports operational factors, but also for the national economies of region countries: the changes of the cargo turnover at each sea port located in the area influence the changes of benefits to the national economies. According to the statistics, Klaipeda state seaport generates around 6.2% of country's GDP, and paid 9.26% of all taxes paid in Lithuanian governmental budget (Mickiene, Belova, & Valioniene, 2016).

Due to globalization processes the theoretical conception of seaports is changing (Belova, Mickiene, & Valioniene, 2016). The seaports at the eastern Baltic Sea region were characterized as an international transit nodes, as a links between water and land routes. In scientific researches of port and shipping economics, it is described as the modern centre of region economic development, because a big part of cargo flows are consisted of transit cargo flows, and it is very important to have sufficient structure of hinterland logistic services, which integrate separately transport sector businesses to one integrated logistic service complex. It means, that all private business companies, which are directly working with the maritime cargo flows and are linked with freight traffic at the seaports, have special business environment which is created by the law regulation of country, region, union and etc. (Mickiene et al., 2016). It is important to analyse the business environment and to find business environment factors which have the biggest influence to the changes of the results of private companies and on the base of such type research it would be possible to forecast positive or negative impact would have changes in the law regulation.

The World Bank Group prepare the business environment assessment each year, and the methodology of evaluation is clearly defined and scientifically based (Doing business methodology). The reports constantly include the assessment of business environment at 189 countries, which are being ranked in these reports and doing business index is being calculated. Because the maritime transportation is the part of transportation sector, the importance of it could be based on the macroeconomic indicators and the important matter is to determine how is significant the impact of business environment on maritime transport development, what are the business conditions of the Lithuanian, Estonian and Latvian maritime transport sectors, which are the members of European Union on the eastern coast and have to be competitive with no European union maritime sectors. The geopolitical situation at the eastern Baltic Sea region and on the development the maritime policy of Russia Federation influenced the rapidly changes in the handled cargo traffic at the region seaports, and affected their competitiveness rates. Such situation created assumptions to choose Lithuanian, Latvian and Estonian maritime sectors as a **research object** and justify the needs of continuously monitoring of situation in the region.

**The aim of the research** is to evaluate changes of the business environment conditions on the eastern coast of Baltic Sea region in the context of world trade globalization. Ant the **research objectives** are:

- to describe the impact of globalization processes on the maritime transport changes in the eastern Baltic sea region;
- to justify main sea transport sector business environment factors in each Baltic country;
- to evaluate the changes of business environment in comparison with the changes of the seaport's cargo flows.

The **empiric research** is based on the quantitative research **methodology** by applying of statistical analysis, trend forecasting methods. The whole research methodology is referred to the methodology applied in the researches which results were presented on conferences and were published, to the researches of World bank (2016), which results are published on the public worldwide in the reports of business environment's evaluation. Required statistical data was found in the Eurostat online database (2016).

## DESCRIPTION OF THE GLOBALIZATION IMPACT ON THE CHANGES IN MARITIME CARGO FLOW

Globalization – its intensive movement of goods, capital, people, information and technology among countries of the world, affecting various areas of life (Marginean, 2015). Globalization processes inexorably accelerating because of technological innovations, advanced communication measures, economic integration of countries and many more (Surugiu & Surugiu, 2015). The geographical situation of the country has the particular importance as well. Baltic region ports are like a crossroads between East and West. The modernization of ports, road and rail infrastructure, promotion of technological innovations, improvement of client's conditions – it's just a few factors which creates good conditions for the development of globalization (Macho, Gonzales & Virto, 2016). To estimate the magnitude and importance of the maritime sectors both at the national and regional levels is critical in assessing the economic performance of each country. Lithuania, Latvia and Estonia performs as one unit in competition with other countries marine sectors, on the other hand, Baltic countries compete among themselves between the distribution of cargos and all services within those cargos such as transportation, trade and etc. (Belova & Mickiene, 2015). Such a situation is a result of globalization.

Globalization is much more than growing trade and foreign direct investments. The internationalization of technology and the growing flows of services are parts of the globalization changes which influenced the transformation of seaport concept. In the terms of time and area, the main function of maritime transport is to connect production and consumption areas, ensure logistic chain continuity. Sea port and fleet are the main elements of maritime transport sector and the whole national, regional and worldwide transport system. In the view of cargo flow, seaport is the connection links between hinterland, air and pipeline (Macho et al., 2016). In the global logistic supply chain seaports becoming the main connecting element in all international transits (Belova & Mickiene, 2015). Nowadays, the definition of seaport is described as a transport component, which has a complex of buildings and facilities, supplies vessels located in the port, ensures fast and convenient transfer of goods and passengers from land-based types of maritime transport or vice versa - from maritime transport to the other types of transport (Surugiu et al., 2015). In the matter of lowest cargo transportation and handling costs, businesses and industrial companies are establishing closer to the ports to offer additional services of seaport transport. Therefore it is very important that the number of companies and activities would be sufficient to ensure optimal cargo transportation (Belova & Mickiene, 2015). The seaport conception transformation in the context of globalization is from the centre of cargo handling to the logistics and distribution centre, strongly related with hinterland services (Mickiene et al., 2016).

In the terms of the global trading system, Baltic Sea region, which operates in Lithuanian, Latvian and Estonian ports, is the main sea route connecting Asia and Eastern Europe by land routes to Western Europe's land transport infrastructure (Belova et al., 2016). Lithuanian, Latvian and Estonian maritime sectors serves the main cargo flows, including intense transit cargo flows, in the Eastern Baltic region. Therefore, it is quite natural that the cargo flows and the economic impact of the region's economy depends on business environment conditions. Globalization is also deeper and wider, with a growing number of countries actively participating at the process. Every country tries to be competitive and to offer a wide variety of maritime transport services to get more profit than competitors in the region (Viederytė, 2014).

In summary it can be stated that the globalization had strong influence for the changes of world cargo logistics chain, also it has impacted the changes in the business environment from the viewpoint of strengthening regulation of transport sector in national and regional level, and the main changes in maritime sector were concept of seaport transformation, which presented the changing of environment because of increasing of hinterland and maritime sectors integration.

## JUSTIFICATION OF MAIN ELEMENTS OF MARITIME BUSINESS ENVIRONMENT

On the base of analysis of globalization processes impact on transformation of maritime business sectors, including regional seaports it could be seen that situation of world trade market globalization leads to investments to the infrastructure, and lastly, national governments undertake the regulation of the infrastructure and cargo transportation processes with the expectation of profitable investments. It means, that with the regulation processes the taxation is going together and on the base of institutional economics theory, the regulation leads not only the complex collection of specialized rules but also the collection of sanctions with the financial effect (Notteboom, Langen & Jacobs, 2013). It can be done through the taxation system, environmental protection, public services, including operation of taxation. As a result, certain system of factors affecting maritime business, including maritime transport business, is formed.

The definition of business environment means all of the internal and external factors that affect how the company (in our case seaports) functions (Požėlaitė & Jonuškienė, 2009). The term of business environment connotes external forces, factors and institutions that are beyond the control of the business and they affect the functioning of a business enterprise (figure 1). These include customers, competitors, suppliers, government, social, political, legal and technological factors and many more (Blažys and others, 2016). Business environment is dynamic, it keeps on changing and those changes are unpredictable and even not significant internal or external fluctuation of any factor can rapidly change the situation of the business environment and the business company could feel some instability in the market. The interaction between business and it's environment helps business to achieve all the challenges successfully, it enables the business to identify the areas for growth and expansion and in the same way favourable business conditions have strong impact on the effectiveness of taxation system in the national economics and it is means the positive influence to the national budget (Notteboom et al., 2013). And the maritime business as the part of national business systems is dependent on the business environment changes.

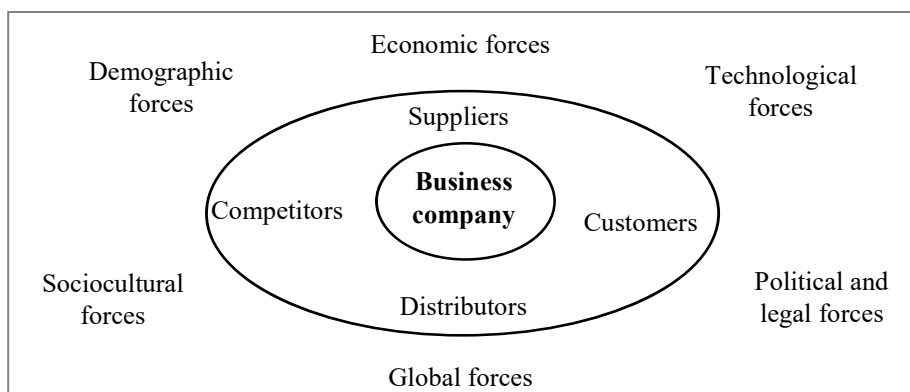


Figure 1. **Forces in the business environment** (source: Požėlaitė & Jonuškienė, 2009)

Maritime transport is a part of the entire business sample, therefore the business enterprises are equally affected by the business environment conditions. In terms of the business environment, The World Bank Group constantly carries out and publicizes the assessment reports (World bank, 2016) which makes it possible to rank the world's business environment from the most favourable business environment to the least favourable due to a special evaluation methodology (Doing business methodology). All factors in this assessment methodology which affects the business environment for ease of doing business is divided into 10 groups: starting a business conditions, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency (figure 2). For each group of factor each country is ranked by the position occupied. Business environment for ease of doing business position is calculated in the terms of global ranking. It should be noted that each group has a lower-level factors which values that group.

The maritime sector is a very specific business sector because it has strong regulation under different regulation documents such as national law, IMO conventions, EU directives, and it means that combined and inter sectorial regulation exists, so the business environment is sensitive for changes under these conditions and the factors of starting business, paying taxes and getting credit were selected as most sensitive (Blažys and others, 2016).

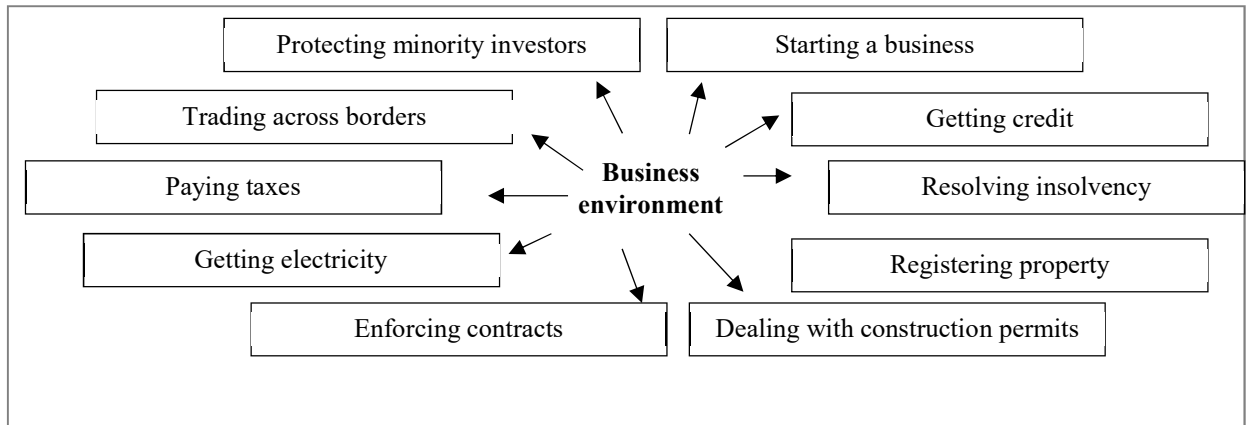


Figure 2. **Business environment and its components** (source: World bank, 2016).

From the other viewpoint of cargo flows' directions, the eastern Baltic Sea region is dependent on the international cargo flows because the Baltic sea roots connect Asia with Western Europe and it means that producers and consumers connection is going through the hinterland of countries of the eastern Baltic. So based on this assumptions the factors of import, export duration and price have been selected.

### EVALUATION OF MARITIME CARGO FLOWS DYNAMIC IN THE BALTIC STATES

One of the key indicators that evaluates the efficiency of the port in the best way - the maritime cargo flows, which are operated at the seaport. In 2004 Lithuanian, Latvian and Estonian ports rates of handling cargo flows were very different: Lithuanian maritime transport sector has operated a minimum amount of goods, reaching 25.84 million tons. Estonian seaports have been processing with over 19 million tons, while the Latvian maritime sector occupied the leading position with the annual rate of 53.73 million tons (figure 3).

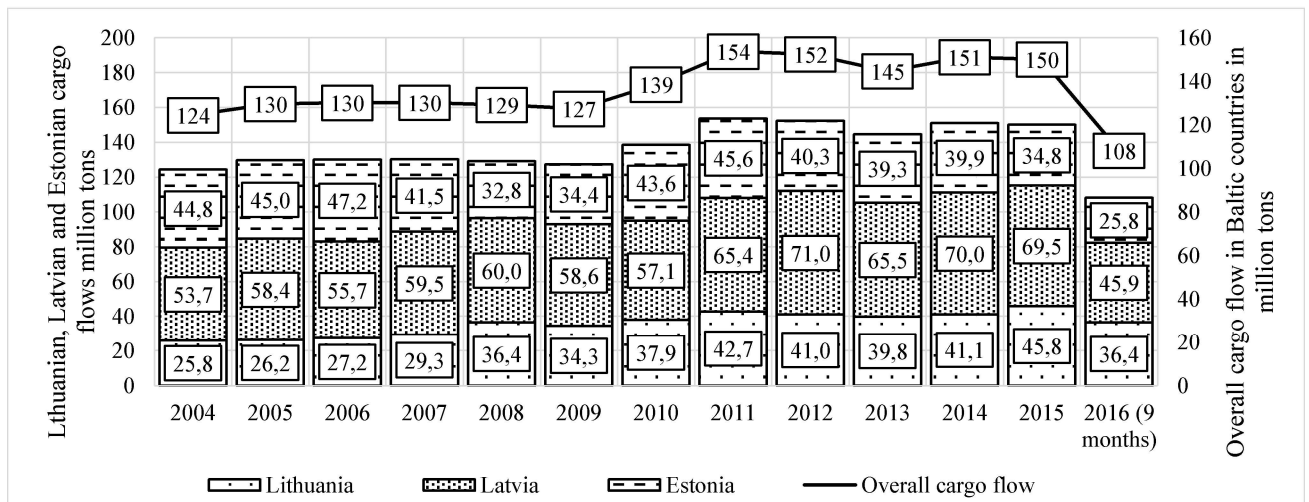


Figure 3. **Cargo Flow in Lithuania, Latvia and Estonia** (source: Eurostat online database, 2016)

During the global economic crisis period, Lithuanian and Latvian seaports' total annual turnover has increased steadily, while Estonia has remained roughly stable. Most of the loss were suffered by the Estonian seaports - that led to the economic crisis and worse political relations with Russia. In 2008 Estonian seaports' annual turnover were 32.81 million tons, and it was 15 million tons less than in 2006<sup>th</sup>. It should be noted that the negative effects of the economic crisis have been felt in all tested seaports, but the strongest influence were fixed in Estonian maritime sector (figure 3). In 2011 years Lithuanian maritime sector handed 42.7 million tons of cargo and the Latvian seaports total turnover of the period in 2010-2012 increased by 14 million tons. Although the general term, trends show that over the 11 year period, the Estonian ports' handling decreased from 36% to 23% of total amount of all three maritime sectors. Latvian ports' cargo

handling indicator sought 43%. During the period Latvian part in whole cargo flow increased by 46%, and Lithuanian maritime sector in terms of the overall eastern Baltic Sea port cargo flows had increased from 21% to 31% (figure 3).

In summarize it can be said, that the dynamics of cargo flow on the eastern Baltic sea were not very intensive and almost stable (variance less than 18%) and the competitiveness of Latvian, Lithuanian and Estonian maritime sector were increased because it was fixed that cargo flows were distributed by different proportions between these seaports.

The analysis of cargo handling structure create possibilities to evaluate Lithuanian specialized seaport terminal allows the efficient execution of the loading operation and split its cargo quite proportional, in order to avoid unnecessary risks if certain types of goods allowed to move through seaport (figure 4, c). Lithuanian maritime sector is not dependent on the type of cargo so the handling situation during period has positive dynamics, including the negative external conditions in the region by the viewpoint of Russian Federation, which has strong expansion of its maritime sector in the region. The different situation in Estonian maritime market (figure 4, a), because the biggest part, 48%, of handled cargo is consisted of oil products which is the main cargo in the Ust-Luga seaport of Russian Federation. In this context it could be said, that Estonian maritime sector is not competitive in the oil products handling, so it is very important the favourable business conditions for this sector for the implementation the changes of maritime sector regional development policies. Latvian maritime sector (figure 4 b) is also dependent on the handling of oil products, but the situation is better and growing dynamics were fixed because handling of oil products in whole cargo structure fluctuate only about 26% and another competitive part of handled products is coal handling (30%) and this type of cargo creates the assumptions for the enough high competitiveness.

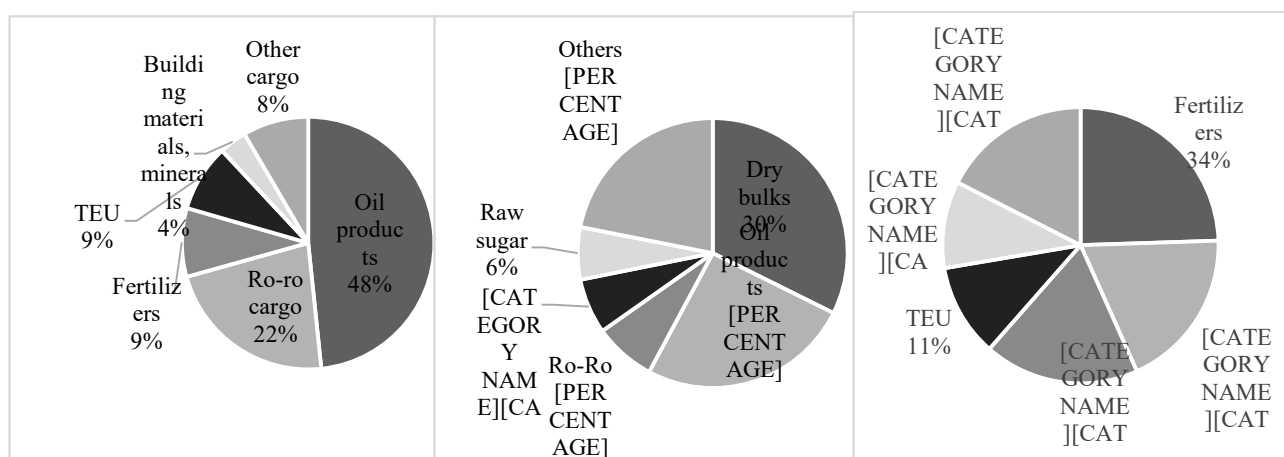


Figure 4. Handling structure in Baltic countries: a) seaports of Estonia; b) seaports of Latvia; c) seaports of Lithuania

In summarize it can be resumed that the structure of handled cargo in maritime sector creates preconditions for the business environment evaluation. Estonian maritime sector has the strongest dependence on the changes of oil cargo flows in the Baltic sea and in the context of globalization should orient their maritime transport policy to the short shipping sector (ro-ro cargo and containers, TEU), because the tendency is increasing of short sea shipping tendencies in the region (Belova et al., 2016). Latvian maritime sector is based on the handling of coal in Riga seaport (included in the 22% of other types of cargo in figure 4 b) and fertilizers in another seaports and the dependence on the oil cargoes is not very significant so the Latvian maritime has increasing tendencies and the regional development with orientation to the coal, fertilizers handling and the increasing the short sea shipping possibilities in the regional development policy, should compensate the loses from the oil handling sector. Lithuanian maritime sector is not significant dependent on the oil handling market and is oriented to the short shipping cargos handling.

Analysis of business environment found out that the environment indicator changes have an impact on maritime transport cargo flows, some of them have a positive effect on cargo flows, others, unfortunately, can have a negative impact on the port cargo flows. During the whole period, Lithuania's maritime freight traffic changes was largely influenced by the following business environment indicators which are analysed each year in the reports of the World Bank (2016): business start procedures, export price, export and import duration (figure 5). During the period of 2007-2015, amount of number the procedures of starting a business was increased because the procedure was more detailed on the base of transformation it to the electronic

infrastructure. And the results of correlation established this fact: this changes had a positive impact Lithuanian maritime cargo flows ( $r=0.8$ ;  $t_r=4.00 > t_{sij}=2.26$ ;  $p<0.05$ ). In 2007-2008 years the price of export rose from 704 to 870 US dollars for 1 container and the same price remained till 2015 years and the positive impact on the handling indicators means that export price is not critical factor for the maritime sector activities during analysed period. Duration of export procedures in Lithuania ( $r=0.6$ ;  $t_r=2.56 > t_{sij}=2.26$ ;  $p<0.05$ ) range form 9-10 days and the changes of export duration is not significant key factor for the maritime business, but the duration of import is the flow of goods, however, the duration of import ( $r=-0.9$ ;  $t_r=6.19 > t_{sij}=2.26$ ;  $p<0.05$ ) had a negative impact on cargo flows, and increasing the number of import procedures decreasing the maritime handling (figure 5).

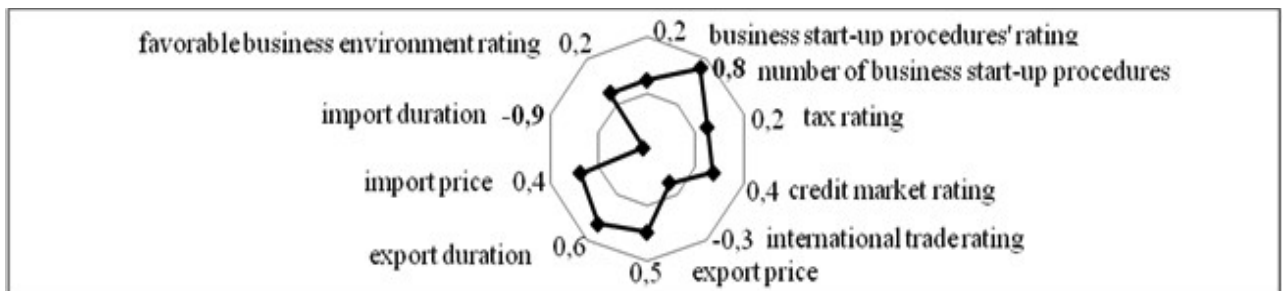


Figure 5. Business environment impact on changes of maritime cargo flows in Lithuania

Latvian maritime cargo flows changes were influenced most by these business environment factors (figure 6): business start procedures, tax burden rating ( $r=0.6$ ;  $t_r=2.56 > t_{sij}=2.26$ ;  $p<0.05$ ), international trade index, import duration ( $r=-0.9$ ;  $t_r=6.19 > t_{sij}=2.26$ ;  $p<0.05$ ), business start procedures, tax burden rating ( $r=0.6$ ;  $t_r=2.56 > t_{sij}=2.26$ ;  $p<0.05$ ), and export price ( $r=-0.6$ ;  $t_r=2.56 > t_{sij}=2.26$ ;  $p<0.05$ ). When the business start procedures were increasing, the positive effect was observed in the maritime transport of cargo flow and it means that the increasing of quality of business starting procedures have positive impact on Latvian maritime business environment. The import procedures duration has the significant and negative impact on the cargo flows dynamics at Latvian maritime sector and it means that increasing the number of import procedures could influence the decreasing of imported cargos into the country (figure 6).

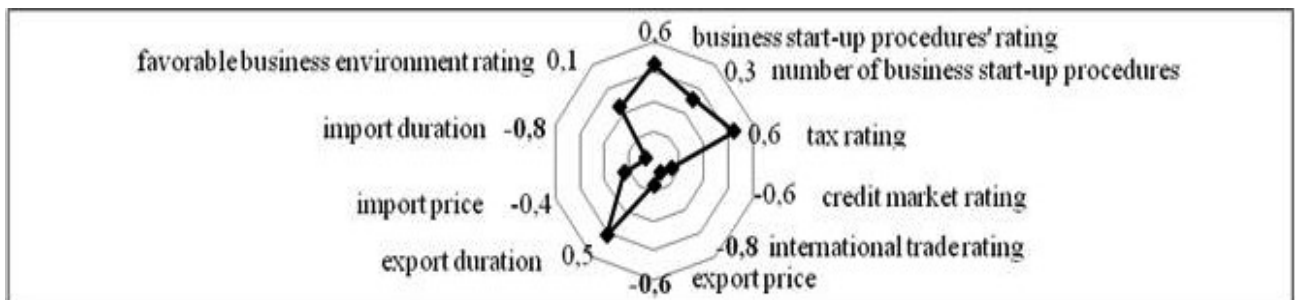


Figure 6. Business environment impact on changes of maritime cargo flows in Latvia

During the analysis of the Estonian maritime cargo flow changes can be seen that in this region the maritime business environment has weakest influence of external factors (figure 7). From the viewpoint of stability it could be explained as positive characteristic of Estonian maritime business sector, but in the context of cargo flows decreasing in could be explained on the base of total business environment indicator (figure 7).

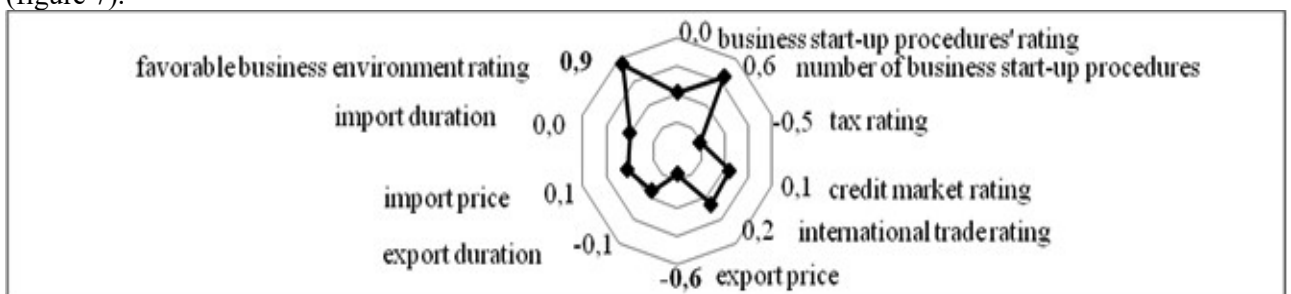


Figure 7. Business environment impact on changes of maritime cargo flows in Estonia

If the favourable business environment rating is increasing, the cargo flows and handling results in the Estonian seaports increasing too, but on the base of analysis of cargo flows it was established that Estonian maritime cargo have negative decreasing dynamics, so it possible to assume that the business conditions are not enough for maritime sector, especially in the case of export prices increasing, because export prices ( $r=-0.6$ ;  $t_r=2.56 > t_{Sij}=2.26$ ;  $p<0.05$ ) are key influence factor for the maritime business environment.

In summarize it can be assumed that maritime business environment has significant fluctuation in the cases of business procedures dynamics, international trade prices and procedures' duration dynamics. It means that the maritime sector working in the same conditions and compete for the same type of cargo, which is sensitive to the changes in the import and export prices and duration of import and export procedures. And while the Latvian and Estonian sectors are sensitive to the changes of export prices, the Lithuanian maritime sector is more sensitive to the changes of import prices and it create possibility to assume that the import has strong increasing at last years in Lithuanian maritime sector, moreover the regional development of short shipping maritime activities at Lithuanian maritime sector has positive growing dynamics and it could be seen on the structure on handled cargos. The Latvian business environment is less favourable for maritime sector, but the Estonian maritime sector has to change the strategic policy to the regional development, because the decreasing of cargo flows explain the negative influence of business environment and losing of competitiveness in the market because of strong expansion of neighbour maritime sectors in the region.

## CONCLUSIONS

1. The impact of globalization on maritime sector should be described by the changes of business environment, law regulation, maritime and hinterland roots optimization and in the result the conception of seaport transformed and seaport could be analysed as the integration of the maritime and hinterland services into a seaport logistical services distribution centre. Such assumptions created possibilities to analyse maritime business environment as the relation between cargo flows and the indicators of sectors' rating in the World Bank group reports.

2. Estonian business environment at 2016<sup>th</sup> has the highest level of doing business rating, equalled to 11, Latvian rating was lower, and equal to 12, and Lithuania's business environment rating has the lowest level, equal to 21, and all ratings had increasing dynamics during period from 2005<sup>th</sup> until 2016<sup>th</sup>. On the base of scientific literature analysis, the short sea shipping sector is most increasing maritime sector in the Baltic region, because of the globalization and relationship between Asian producers and European consumers were established on the hinterland and maritime connections at the eastern Baltic Sea. Another reason for this type of changes were influenced of increased intensiveness of developing and expansion of neighbour maritime sectors in the Baltic Sea.

3. The strongest negative impact of analysed changes were fixed in the Estonian maritime sector, where best level of business environment was not important for maritime business and cannot eliminate the negative influence of external market. While the Latvian and Estonian sectors are sensitive to the changes of export prices, the Lithuanian maritime sector is more sensitive to the changes of import prices and it create possibility to assume that the import has strong increasing at last years in Lithuanian maritime sector, moreover the regional development of short shipping maritime activities at Lithuanian maritime sector has positive growing dynamics and it could be seen on the structure on handled cargos.

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### **Summary**

#### **Evaluation of business conditions impact on Eastern Baltic maritime business in the context of globalization**

The main idea of the research is to evaluate the influence of business environment on the changes of the cargo handling at the seaports of the eastern Baltic influenced by the globalization processes. At the eastern Baltic Sea region changes of cargo traffic became very important not only for the sea ports' operational factors, but also for the national economies of region countries: changes of the cargo turnover at each sea port located in the area influences the changes of benefits to the national economies. According to the statistics, Klaipeda state seaport generates around 6.2% of country's GDP, and paid 9.26% of all taxes paid in Lithuanian governmental budget.

Due to globalization processes the theoretical conception of seaports is changing. The seaports at the eastern Baltic Sea region were characterized as an international transit nodes, as a links between water and land routes. In scientific researches of port and shipping economics, it is described as the modern centre of region economic development, because a big part of cargo flows are consisted of transit cargo flows, and it is very important to have sufficient structure of hinterland logistic services, which integrate separately transport sector businesses to one integrated logistic service complex. It means, that all private business companies, which are directly working with the maritime cargo flows and are linked with freight traffic at the seaports, have special business environment which is created by the law regulation of country, region, union and etc. It is important to analyse the business environment and to find business environment factors which have the biggest influence to the changes of the results of private companies and on the base of such type research it would be possible to forecast positive or negative impact would have changes in the law regulation.

Geopolitical situation at the eastern Baltic Sea region and the development the maritime policy of Russia federation influenced the rapidly changes in the handled cargo traffic at the region seaports, and affected their competitiveness rates. Such situation created assumptions to choose Lithuanian, Latvian and Estonian maritime sectors as a research object. The aim of the research is to evaluate changes of the business environment conditions on the eastern coast of Baltic Sea region in the context of world trade globalization. The research objectives are: to describe the impact of globalization processes on the maritime transport changes in the eastern Baltic sea region; to justify main sea transport sector business environment factors in each Baltic country; to evaluate the changes of business environment in comparison with the changes of the seaport's cargo flows. The empiric research is based on the quantitative research methodology by applying of statistical analysis, forecasting, also to the researches of World bank group (2016), which results are published on the public worldwide in the reports of business environment's evaluation. Data required for the statistical analysis were taken at official Lithuanian statistics department and Eurostat databases.

Research results showed, that the biggest influence for cargo flows' formation at Lithuania's maritime sector had these changes in business environment: the number of business' starting procedures, export price, export procedures duration, import procedures duration. Cargo flows in the Latvian maritime sector were influenced by the number of business starting procedures, taxes rating, international trade rating, export price, export procedures duration, import procedures duration. Cargo flows in the Estonian seaports were affected by the number of business starting procedures, export price. The research found out that the Estonian maritime transport sector are sensitive for the business



environment changes, but sensitiveness has the lowest intensity. Also the results showed that the biggest negative impact on changes of freight at Estonian maritime transport sector had the changes of export price: while the export prices were increased the freight at the Estonian maritime sector had decreasing tendency. It can be concluded that Estonian maritime sector is not strongly dependent on the changes of business environment because it has the geographically dependent cargo flows through Estonian seaports. Latvian maritime sector is the most sensitive to business environment changes: negative effect have the increasing import procedures duration, the decreasing of international marketing rating, the increasing of import and export prices. On the base of these results it can be concluded that Latvian maritime sector is strongly dependent on the changes in the area of taxes regulation on the maritime level and also on the national policy level. Lithuanian maritime transport sector has lowest dependence on the changes of the business environment, but strongest impact was established by these indicators: the negative impact has the increasing of import procedures' duration and positive impact has the shortening of the business starting procedures, which could be explained by the strong computerization level at Lithuanian seaport management level and also at the governmental level, because a lot of business procedures could be made by the usage of electronic information systems.