

PASSANGER TRAFFIC ON THE BALTIC SEA REGION IN YEARS 2000-2011

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Abstract: Our paper is concentrated at the scientific description and analysis of Baltic Sea region tourism potential. It bases on statistics of eight EU countries from the period of 2000-2009 and potential analyse of 2010-2011. It shows the influence of EU development, currency exchange rate and impact of the economic crisis of the years 2000-2009 on number of ferry tourism movement. It shows how the wrong preparation for the transport situation prevailed in the study area can reduce the competitiveness of shipping ferry.

Key words: transportation, tourism, Baltic Sea, passangers, ferries

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INTRODUCTION

Commonly encountered in the literature is the thesis about the development of passenger ferry transport on the Baltic Sea as well as the thesis talking about ferry passenger traffic in the newly acceded to the European Union countries with access to the Baltic Sea over the first decade of the twenty-first century that it experienced his undoubted prosperity. Enlargement of the European Union in 2004 by four new countries bordering to the Baltic Sea and accession to the Schengen Agreement on the 21 December 2007 with the abolition of checks at the sea border crossings from the 30th March 2008 in a short time enabled the rise this form of tourist transport. The introduction of freedom to provide services as one of the four freedoms of the Internal Market is directly influenced on development of passenger ferry market. It allowed in a short time to increase the number of passengers using that form of transport and on development of service and creating new connections.

Transports by ferries on the Baltic Sea are often increasingly popular form of travel between the ports. This is due to its high availability, which has an impact on quality and frequency of services. The Baltic Sea as an area of 386 thous. sq. km is characterized by a high density of ferry services. It is a result of a substantial number of ports on its territory and growing demand for their services.

Transportation needs of the population are stimulated by the needs for mobility and communication with the surrounding space in order to carry out specific tasks. Transportation needs of the population can be divided due to this relationship. They are:

- place of residence - place of residence (migrations);
- place of residence - place of recreation (tourism);
- place of residence - place of work, education (Nowosielski, T., 2009, p. 142).

These transport needs are characterized by varying frequency and intensity. Relationships between their homes and a place for recreation or migration processes are characterized by the Optional Protocol, since they stem from their unusual occurrence. However, the relationship of residence – place of work and education are characterized by compulsory and regularity.

Demand resulted by the supply of transport services in the shipping industry is a characteristic phenomenon for all consumer groups. It relies only on interest and availability of these services.

CHANGES IN THE NUMBER OF PASSENGERS IN TRANSPORTATION ON THE BALTIC SEA IN 2000-2009

The number of passengers which were using the ferry on the Baltic Sea has shown considerable volatility over the last ten years (Table 1). It is because of European Union enlargement to the new member states, accession to the Schengen Agreement of new countries, expansion of low-cost airlines and economic crisis whose peak falls in 2008 and whose effects are felt to this day.

Changing the number of passengers carried by ferries from ports in Germany is as follows (Figure 1). Most people transported through the ports can be seen in Germany in 2002, when they transported 33.222 thousands of passengers. At least in year 2008 – 28.945 thousands of passengers. This nearly 13% decline of volume was caused by several factors:

- the introduction of Euro as a common currency in Germany and Finland;
- EU enlargement in 2004 by increasing the availability of new roads;
- expansion of low-cost airlines, competitive in terms of travel time and costs;
- economic crisis of the years 2007-2009;
- increase the operating costs (fuel costs);

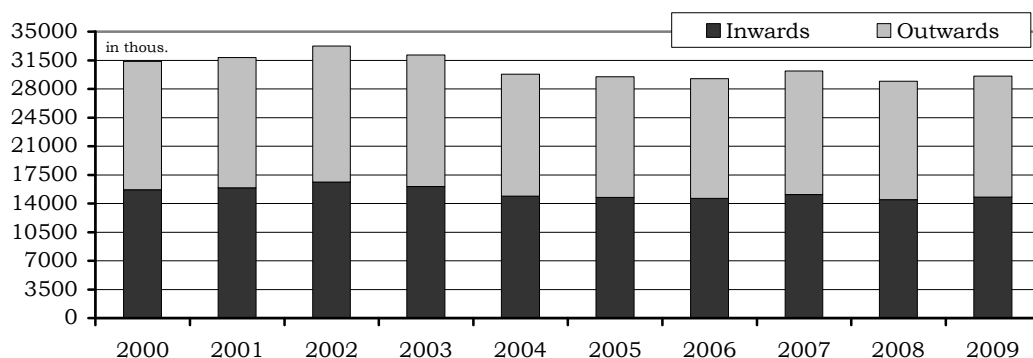


Figure 1. Changing the number of passengers carried by ferries from ports of Germany in 2000-2009

(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

The situation in the case of Polish ports is shown in Figure 2. The largest number of passengers carried by sea can be noted at the beginning of the period in 2000 when they were transported 4,465 thousands of passengers. The decline continued until 2005, when they were transported a minimum, because only 1,640 thousands of passengers (over 63% less than in 2000). Since 2005 is noticeable the gradual increase in the number of passengers.

Table 1. Ferry passenger services on the Baltic Sea in 2000-2009 by countries

(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

Years	Germany	Poand	Lithuania	Latvia	Estonia	Finland	Sweden	Denmark
	in thous.							
2000	31,378	4,465	106	32	6,192	15,964	36,573	51,830
2001	31,817	4,416	101	26	5,957	16,729	32,350	47,862
2002	33,222	3,304	107	23	6,166	16,577	32,112	48,178
2003	32,146	3,188	135	118	5,172	16,341	32,748	48,653
2004	29,815	2,031	146	130	6,452	16,806	33,318	48,555
2005	29,490	1,640	166	144	8,639	17,112	32,617	47,924
2006	29,256	1,737	190	217	8,546	16,739	32,334	48,145
2007	30,200	2,456	212	362	8,665	16,450	32,662	48,409
2008	28,945	2,647	212	437	9,190	16,975	32,745	46,657
2009	29,573	2,481	205	591	9,140	17,226	31,066	43,561

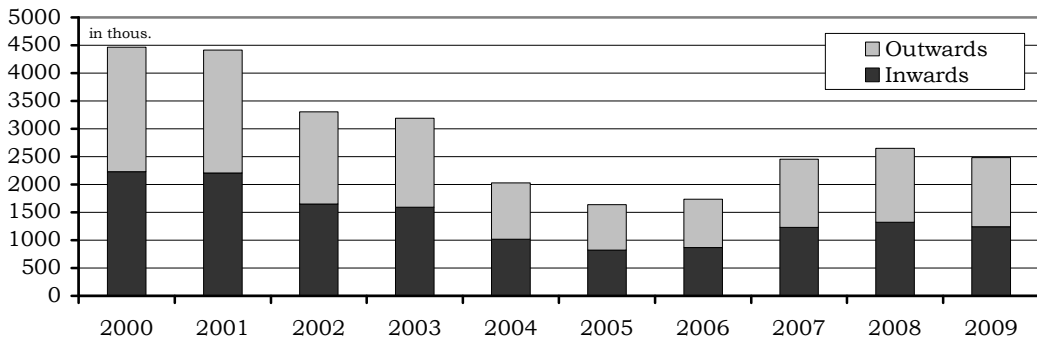


Figure 2. Changing the number of passengers carried by ferries from ports of Poland in 2000-2009

(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

This situation was caused by the following factors:

- appearance of low-cost airlines since April 2003;
- steady growth of the Euro until the spring 2004;
- accession to the EU - increasing the accessibility to the market;
- increases of fuel prices on global market;
- decline of the Euro until September 2008;
- elimination of duty-free shops on board since 2004;

Market situation of maritime passenger transport on Lithuania is presented in Figure 3. The lowest number of passengers carried by sea can be observed in 2001 (53 thousands) and the highest in 2007 (104 thousands). The 96% increase of the number of passengers was apparent from:

- accession to the European Union in 2004;
- stabilize the exchange rate of the Lithuanian litas against to Euro (accession to ERM II in June 2004.)
- stabilizing the growth of traffic related to the beginning of the economic crisis;

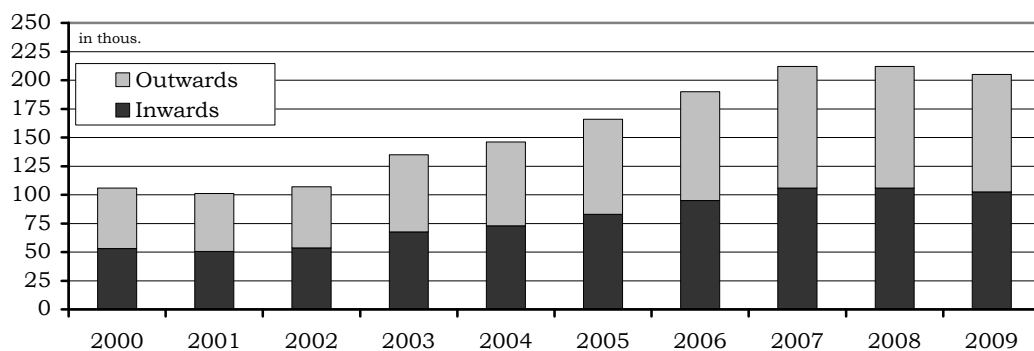


Figure 3. Changing the number of passengers carried by ferries from ports of Lithuania in 2000-2009

(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

Changes in the volume of passengers through the ports of Latvia are shown in Figure 4. In the case of Latvia can be observed creating a network of transport passengers from the beginning. In 2001 transportation carriers organized by the Latvian port disappeared. There were only a transit connections in which the port in Riga had only a landing functions. Since 2002 can be observed appearance of new connections and more pronounced increase in the number of passengers. It reaches its maximum in 2009 when was transported 591 thousands of passengers. This forced the carrier to double the number of offered courses to one per day.

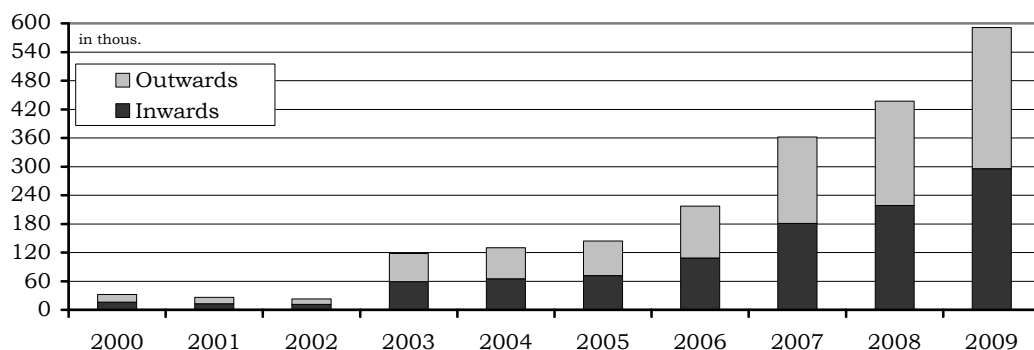


Fig. 4. Changing the number of passengers carried by ferries from ports of Latvia in 2000-2009

(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

The numbers of passengers carried by ferries from ports in Estonia are shown in Figure 5. It can be noted an increase in the number of passengers. The least people were transported in 2003 when it was 5,172 thousands of passengers. While the greatest number was in 2008 – 9,190 thousands of people. The more than 77% increase in passengers number is explained by:

- accession to European Union in 2004;
- stabilize the exchange rate of the Estonian crown by accession to the ERM II in June 2004;

- high attractiveness of the port in Helsinki because of the short duration of transport;
- increasingly strong economic links between Estonia and Finland;

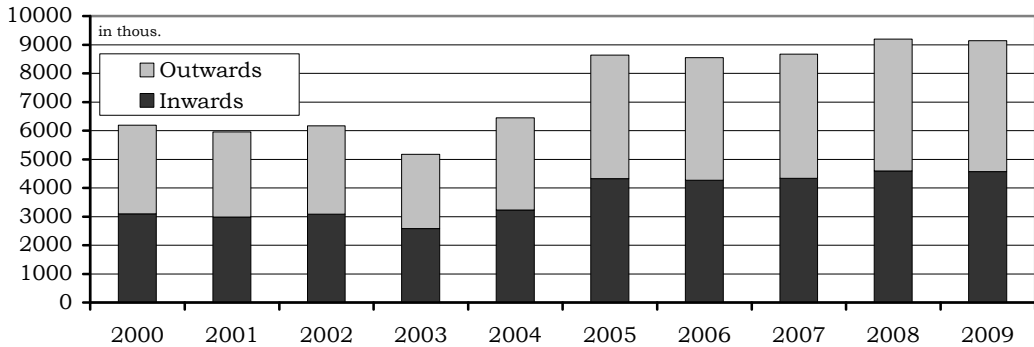


Figure 5. Changing the number of passengers carried by ferries from ports of Estonia in 2000-2009

(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

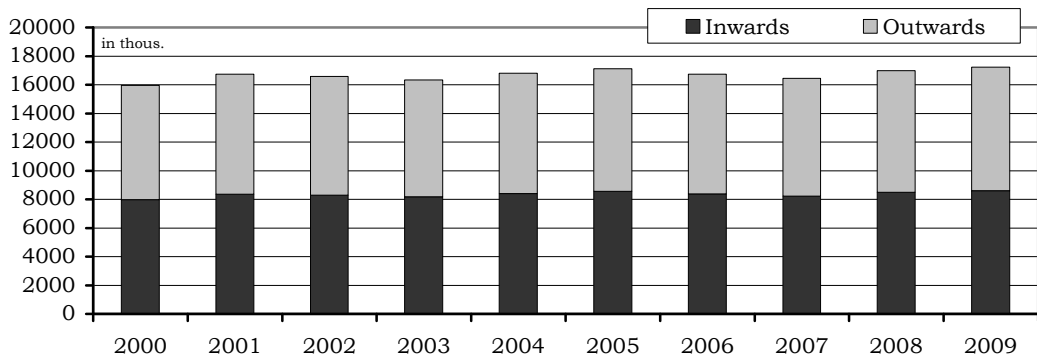


Figure 6. Changing the number of passengers carried by ferries from ports of Finland in 2000-2009

(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

Change in the number of passengers carried by ferries in Finland are shown in Figure 6. The least people were transported on the beginning of the period in 2000 and it was amounted to 15,964 thousands of passengers. The most was in the 2009 – 17,226 thousands of passengers. An increase of nearly 8% (1,262 thousands of passengers) is explained by:

- enlargement of the EU in 2004;
- opening of the borders under the Schengen Agreement with four new countries of the Baltic Sea;
- development of connections between Helsinki and Tallin;

Changes in the number of passengers operated by the Swedish ports are shown in Figure 7. During this period can be noted a decrease in the activity of passengers using this mode of transport. Most of them benefited in year 2000 - 36,573 thousands of people and the least was in a year 2009 - 31,066 thousands. This 15% decrease was caused by:

- opening of the Øresundsbron bridge in 2000 as an alternative route of travel;

- remains outside the Euro zone decreased tourist attractiveness of Sweden;
- significant increase of the Euro compared to the Swedish crown in 2000 and 2009;
- a slight increase in traffic in 2004 due to enlargement of the European Union;

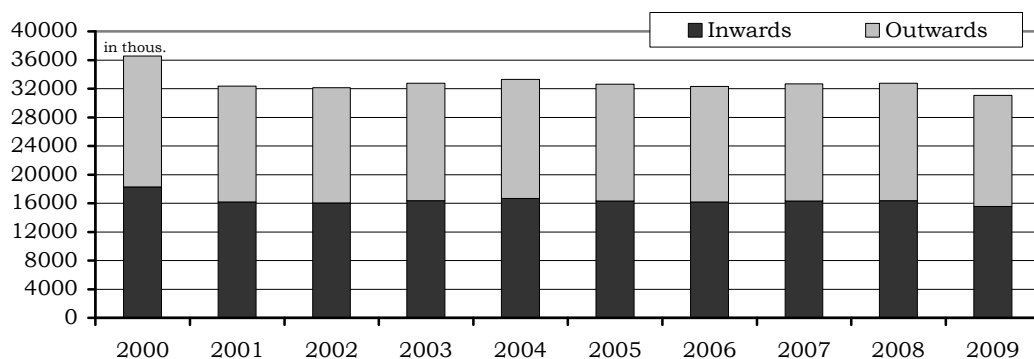


Figure 7. Changing the number of passengers carried by ferries from ports of Sweden in 2000-2009

(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

Changes in the number of passengers operated by the ports in Denmark is shown in Figure 8. As in the case of Swedish ports can be noted a decrease in the number of people using marine passenger shipping.

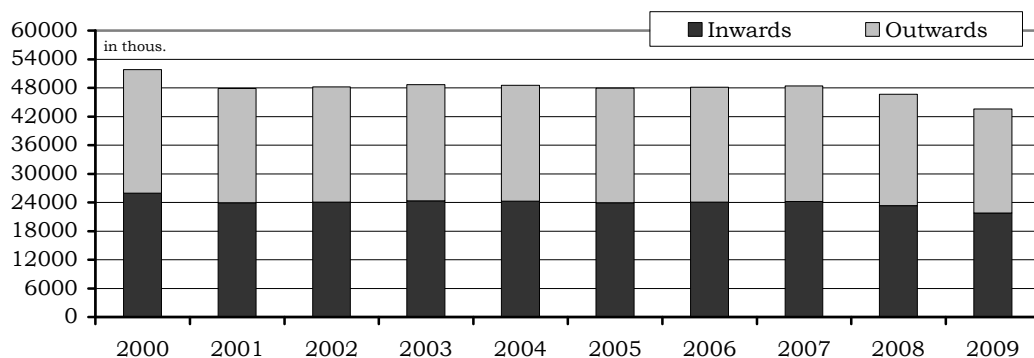


Figure 8. Changing the number of passengers carried by ferries from ports of Denmark in 2000-2009

(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

The most people used its services during the period of the year 2000 – 51,830 thousands of passengers and at least in year 2009 – 43,561 thousands of passengers. This nearly 16% decrease can be explained by:

- opening of the Øresundsbron bridge in 2000 as an alternative route of travel;
- remains outside the euro zone decreased tourist attractiveness of Denmark;
- economic crisis of the years 2007-2009;

It is interestingly shown the distribution of the number of trips *per capita* of the Baltic Sea countries (Table 2).

Among the countries of the Baltic Sea the lowest value of the index number of trips per one inhabitant was characterized by Lithuania and Poland

which takes values of 0.06 and 0.07 respectively. The highest rate with much higher than other countries values is characterized by Denmark – 7.90. Such disparities in examined phenomenon can be explained by:

- insular nature of Denmark;
- development of ferry passengers in Lithuania and Poland is related to the accession to the EU;

Table 2. The number of trips per capita in 2009 by countries
(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

Country	The number of operations per 1 inhabitant
Germany	0.36
Poland	0.07
Lithuania	0.06
Latria	0.26
Estonia	6.82
Finland	3.23
Sweden	3.36
Denmark	7.90

The second largest number of trips per capita is in Estonia. This is due to geographical and cultural closeness to Finland where many Estonians took the job. Connections made between Helsinki and Tallin takes places six times per day with achieving of high-speed ferries. The availability of a neighboring country is very high. The subsequent places takes Sweden and Finland. The measured rate for both countries are very similar. This situation is caused by a similar geographical circumstances. In the case of both countries ferry trips is often the only chance to get into the country in the south of the Baltic Sea and further south.

Despite the generally ruling belief about the development of the freight volume in passenger transport on the Baltic Sea statistics shows the completely opposite phenomenon (Table 3).

Table 3. Change the number of trips per one inhabitant
of the Baltic Sea countries in 2000-2009

(Source: own work based on Eurostat: <http://ec.europa.eu/eurostat>)

Years	No. of passangers (in. thous)	Population (in thous.)	The number of operations per 1 inhabitant
2000	146,540	147,054	0.996505
2001	139,258	147,535	0.943898
2002	139,689	147,297	0.948349
2003	138,501	147,436	0.939397
2004	137,253	147,433	0.930952
2005	137,732	147,413	0.934327
2006	137,164	147,369	0.930752
2007	139,416	147,285	0.946573
2008	137,808	147,271	0.935744
2009	133,843	147,182	0.909371

Over the reporting period is noted a decrease in the total number of passengers using the services of ferry in the study area of 12,697 thousands of passengers with the population growth of 128 thousands of people. It was a result of a decline in the mobility of passengers from 0.996505 to 0.909371. The

almost 9% decline in freight volume on such a large market which is the Baltic Sea region may provide about inadequate transportation offer to the changing trends in services.

FERRY CONNECTIONS OF THE BALTIC SEA IN 2011

On the Baltic Sea in early 2011 worked 30 ferry passenger carriers. The largest of them (realizing connections on at least two routes) are: Tallink, Scandlines, Finnlines, Polferries, Stena Line, Unity Line, Viking Line, Destination Gotland, DFDS Lisco, BornholmerFaergen and TT Line. They carry together a 90 passenger connections between the 38 ports on the Baltic Sea region (Table 4).

Table 4. Passenger ferry services carried by the largest carriers on the Baltic Sea in 2011

Source: own work based on diffused materials

Shipping company	Routes
Polferries	Gdańsk-Nynäshamn
	Świnoujście-Ystad
	Świnoujście-Copenhagen
Tallink	Sassnitz-Ronne
	Tallin-Helsinki
	Tallin- Stockholm
	Turku-Stockholm /Kapellskär
Finnlines	Helsinki-Stockholm
	Riga-Stockholm
	Helsinki-Travemünde
	Travemünde-Malmö
	Naantali-Kapellskär
Scandlines	Lübeck-St.Petersburg
	Gdynia-Helsinki
	Gdynia-Rostock
	Puttgarden-Rødbyhavn
Stena Line	Rostock-Gedser
	Sassnitz-Trelleborg
	Rostock-Trelleborg
	Gdynia-Karlskrona
	Frederikshavn-Göteborg
Unity Line	Frederikshavn-Oslo
	Grenaa-Varberg
	Göteborg-Kiel
Viking Line	Świnoujście-Ystad
	Świnoujście-Trelleborg
	Helsinki-Mariehamn-Stockholm
	Turku-Mariehamn/Långnäs-Stockholm
Destination Gotland	Stockholm -Mariehamn
	Helsinki-Tallin
	Mariehamn-Kapellskär
DFDS Lisco	Nynäshamn-Visby
	Oskarshamn-Visby
	Grankullavik-Visby
BornholmerFaergen	Klaipeda -Kiel
	Klaipeda -Sassnitz
	Klaipeda -Karlshamn
TT Line	Ronne-Ystad
	Ronne-Koge
TT Line	Ronne-Sassnitz
	Travemünde-Trelleborg
TT Line	Rostock-Trelleborg

ports to the ports of South Baltic region. This is caused by specific geographical and geopolitical situation on the Baltic Sea region. Land transportation are possible only by Russia or by crossing the Øresundsbron bridge between Swedish Skåne and Danish Zealand. All other options are by ships or by aircraft.

PERSPECTIVES OF DEVELOPMENT OF PASSENGER TRANSPORT ON THE BALTIC SEA

For the further development of shipping passenger ferry services on the Baltic Sea is becoming necessary to compete with stronger alternative kinds of transport. Below attempts to identify the key opportunities and threats for further development of ferry transport:

- one of the opportunities that should be used with an attempt to increase the availability of passenger transport services is to develop low-cost ferry. As in the case of low-cost airlines it will allow to reduce the costs of operating the ferry and will increase the attractiveness of this form of shipping through a price reduction;
- remains an important development of traditional ferry lines. They compete with other modes of transport may take place at several levels. One possibility is to raise the standard of services through the introduction of a richer transport offer and upgrading of fleet;
- advantage of liner shipping is their massive. It allows to reduce costs and thus increase the attractiveness of the offer;
- another possibility is to increase effort to promote connections and actively promote the target regions of their connections;
- based on the experiences can be observed the impact of exchange rate changes to volume of traffic. This is more reasonable to the introduction of Euro as soon as possible in all countries of the Baltic Sea in order to eliminate the impact of currency fluctuations and to facilitate the flow of money.

On the way to more effective development of the ferry for several years faced such obstacles as:

- development of low-cost airlines and alternative road connection through the Danish straits. Despite the many positive effects for transport in Europe these alternative types of transport contributed significantly to ferry connections system. Experience shows that the rapid growth of low-cost airlines limited the demand to ferry services. Despite the increasing mobility of Skåne and Zealand by the construction of the Øresundsbron bridge limited the ferry services to the relationship. Further development of low-cost airline connections may in the long term reduce the development of shipping;
- it is real to formation a cooperation in the field of transit passenger and freight services through the Leningrad Oblast which is characterized by a highly developed transport network. This will result in a significant way to reduce the ferry movement on the Baltic Sea;
- long travel time between ports may adversely affect to attractiveness of the transport offer. In an era of globalization and constant rush customers increasingly expect to shorten the journey time. Failure to comply with this demand may in the long term effect let to restrict the movements;
- important are changes in fuel prices. It has growing influence on variable costs in the implementation connections and transport price increases. It causes an overall reduction in mobility of the population of the Baltic States.

CONCLUSIONS

On the Baltic Sea region is 11 larger ferry fleet owners. They realize connections between 38 ports in ten countries, including eight in the European Union. Generally accepted theory of the development of shipping services to the Baltic Sea ferry seems to be wrong. If we take into account the development of maritime transport services in different countries can be seen an increase while discussing the overall passenger traffic on the Baltic Sea is visible the significant decrease of 9% over ten years. The largest percentage increase in volumes appeared in the former socialist republics. That was due to creating a new market for transport services (Latvia) or cultural links as was in the case of Estonia. However, this does not compensate for declines in volumes which takes place in Germany, Poland, Sweden and Denmark. In case of Denmark a significant effect on the decrease in passenger traffic was the opening of the bridge connection between Zealand and Scania. Despite the marked decline in traffic in Sweden and Denmark due to the construction of the bridge they remain the leading countries to the Baltic Sea carrying passenger operations which focused almost 66% of the market movement. The presented analysis follows that the passenger transport sector on the Baltic Sea is shrinking. To prevent it from that happening would have to look for alternatives in the transport sector. One of the more promising solutions is to create low-cost carriers whose target would be a massive and less rich customer. Another relationship which occurs is between the volume of traffic and foreign exchange rates. For example, Polish and Sweden proved that the fluctuations directly affect on volume of traffic. It is important to introduce a common currency in all studied countries in order to standardize and systematize the volume of customers by facilitating their decision-making.

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