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Analysis of the competitiveness of Port of Ploče at the container transport market and the possibilities for improvement

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ABSTRACT

Although the primary role of the ports is to be the traffic centre within the modern globalized dynamic market conditions, the ports gravitate to the expansion in the way of the multifunctional logistics centres focusing on the commercialization of all activities and creating new value for all stakeholders. This way of orientation of the Port of Ploče is part of the development of Corridor Vc as a modern multimodal transport route. In the forthcoming period, the extension approach for modernization and expansion of port capacities will be organized and systematic, as a necessary condition for the implementation of these strategic plans. Particular emphasis in the business of the Ploče Port Authority will be on improving business organization, to form an efficient system with a well developed mechanisms and instruments for the management of the port and its sustainable development.

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1. Introduction

Port competition has a great importance to the port decision makers, because now, a port of call needs to be a node in an efficient supply chain to be competitive at the market. Each member of that efficient supply chain wants to successfully maximize profit, and the port competitive strength is greatly influenced by its organization and infrastructure. Today, a typical port is more than a port authority and a terminal operator.

The Port competition can be affected by geographical location, ports infrastructure and the standard performance of the port, hinterland transportation. But, as we mentioned before, ports are only nodes of a supply chain, so we can think as a competition between supply chains. So, if we want to analyze port competition, we should also analyze the exiting supply chains and possibilities of creating new links. A number of questions arise from that before we can consider all factors involved. For example, who are the members of a supply chain, which goods are moved using this chain, what are the means of transportation, and how long it takes to arrive at destination and etc.

Answers to these questions are very important to the shipping companies or a terminal operating company as

they make decisions which port to choose including all lists of factors that are influencing a selection of a port. There are numerous studies and surveys that cover that complex issue of port selection. There are cost, location, port operation quality, infrastructure and facilities availability, efficiency, frequency of sailings port information system, hinterland and congestion. But, at the end, it all comes down to costs. All these above mentioned factors are in direct link with final generalized cost of goods, and this is governed by the market principles of supply and demand.

So the question now is, why to choose Port of Ploče instead of 3 very well organized and well connected North Adriatic ports Trieste, Koper and Rijeka. What does the Port of Ploče offer in order to be considered as the port of call or as part of MoS corridors?

Answers to those questions are certainly toughly analysed and reviewed by top experts and then presented to be considered by owners or shippers of goods, the forwarders and the shipping companies. It is very important and significant who the port user is, who makes the choice of port and which factors have influence in this choice. This detailed analysis also have a great importance to the Port of Ploče decision makers to better plan, invest, a

make a better marketing promotion of a Port of Ploče in order to be competitive.¹

2. Competitiveness gained by geographical position and transport connections

The potential of competitiveness, market importance and further development of the port of Ploče is greatly influenced by its geographic position. It is the second important Croatian cargo port, after the Port of Rijeka, and positioned on the southern part of the Adriatic coast, has a very favourable geostrategic position. It is located in the bay which is closed from the south and west by the peninsula of Pelješac, representing thereby a natural breakwater, which gives it particularly favourable maritime features for boats docking. It has good maritime characteristics, spacious area for expansion, mainland indentation and spatiality of the environment are resources which represent a potential for effective communication with the economic hinterland. It represents a natural exit to the sea for the continental Croatia, Bosnia and Herzegovina, Montenegro, Middle and Eastern Europe.

An adequate connection of the ports with the hinterland by rail, road or inland waterways, ensures a competition and a potential cargo in certain port. This connection is essential for the home transport from the national overseas foreign trade, but especially for transit cargo for the countries in the gravitational area of the respective port. The port of Ploče is part of the branch of the Pan-European Corridor V, (Budapest – Osijek – Sarajevo – Ploče) named Vc. It is connected by road and railway for servicing the Central European area as an intermodal corridor. Along with the Vb branch, this traffic route represents a link between the north and south of the Europe, and therefore an important element within the national foreign trade cooperation and exchange, as well as foreign exchange and overseas exchange among European countries. Hinterland area of the port of Ploče are the countries of the former Yugoslavia; Bosnia and Herzegovina, Montenegro and Serbia, while the wider possible hinterland area is Hungary, Slovakia, Czech Republic and Austria.

The most important road connections to the Port of Ploče is the highway A1 Zagreb – Split – Ploče – (Dubrovnik), which reached the Port of Ploče in 2013 with the last build section. The Croatian highway A1 is part of the European route E-65, which is the shortest link between the Baltic and Adriatic Sea. The second important road connection is the main road E-73 which is direct link with the Hungary across Bosnia and Herzegovina and Croatia. The railway connection to the Port of Ploče is by the railway track Sarajevo – Ploče.

So the competitiveness of the Port of Ploče gained by the geographical position and the road connections are very good factors and the main strengths, which is not the case for the railway connection, that in order to be a factor for

the competitiveness for the port, urgently needs revitalization. The position of the Port of Ploče also potentiates good maritime connections with Italian and other Croatian ports on the Adriatic sea for and offer a good possibility for the improvement Short sea shipping.

3. Competitiveness of infrastructure and suprastructure

At the beginning of the 1990s, the activities started on the affirmation of the Port of Ploče as a strategic transport hub of the Pan-European Vc Corridor. Development activities were related mainly to the modernization of the existing facilities and equipment as well as to the construction of new facilities. The infrastructure is in the majority provided by public funds, while the superstructure is developed by private operators. Now, the port of Ploče has 7 wharfs with a draught up to 13 m that can provide berths for ships up to the Panamax size. Transshipment, storage and other services are done at terminals for general, liquid and bulk cargoes, timber, containers, alumina and petrol coke. The whole area of the port of Ploče is a free zone and, besides port services, there is a large range of services available in the port, so it is possible to produce, finalize, wholesale goods within the port. The total annual cargo handling capacity of the port is estimated at more than 5 million tons of general and bulk cargo.

Container terminal in Port of Ploče was introduced in 2010 with transshipment capacity for 60,000 TEU. Terminal is operated by the stevedoring company Luka Ploče Ltd. till 2055 based on the concession contract with Ploče Port Authority. The terminal is equipped with two container cranes, one STS container and a mobile crane type Liebherr. The STS container crane has maximum outreach for transshipment of ships with 17 rows of containers on deck with maximum operational lift height of 35.3 m from the waterline and spreader maximum capacity is 40 tons. Mobile container crane Liebherr is equipped with twin-lift spreader with the outreach also of 17 rows and operational lifting height is 20.7 m from the water line.

Existing container terminal presents the first phase of the development of container terminal. The plan for terminal capacity after the third phase is to have quay extension of over 400 m and over 230,000 m² with the handling capacity of 500,000 TEU. Now, the current port facilities are far less than concurrent ports of North Adriatic. As a direct cause of that, there are no direct mother vessel call to the port, only feeder services which are causing higher costs for the port users. In order to gain competitiveness of infrastructure and suprastructure further investment plans or strategic partnership with big shipping companies are needed to be realized in a near future.

4. Possible competitiveness of current supply chains and present market demand

The container traffic in the port of Ploče is a part of the regular feeder services operated by major global container

¹ This article is a result of a research performed by a postgraduate student on the MoS (Motorways of the Sea) project within the obligations of a doctoral study, subject C "Research project".

operators. Currently, there are only two feeder lines calling the port of Ploče and connecting the major Mediterranean hub ports which are particularly important for the container traffic in the port of Ploče, as this is a reference port within their itinerary. These current feeder services to the Port of Ploče are operated by shipping company MSC with the current route (Gioia Tauro – Rijeka – Ploče – Bar – Gioia Tauro), and FAS Upper Adria Feeder, operated by CMA CGM with current route Marsaxlokk – Rijeka – Koper – Ancona – Ravenna – Venice – Trieste – Koper – Split – Ploče – Marsaxlokk.

Those feeder services significantly contribute to the intensity of the container traffic in the Port of Ploče and maintain the link with the global container flows. It has to be noted that from 2012 lost the AP Moller Maersk service to the port of Ploče, Bar and Split. It is very significant and it is confirming the introduction thoughts of supply chains decisions makers.

In the period from 1999 to 2013, container traffic in the port of Ploče generally increased with a slight decrease in the few years, which started with a significant fall in 2009 due to the economic crisis. In 2008, after reaching the maximum of 34,346 TEU, it was reduced to 18,530 TEU in 2013.

Table 1 shows the planned traffic in the Port of Ploče in the 2015, in relation to the structure of the different types of cargo. Apart from expected amount of container traffic in the 2015, the data in the table also indicate the importance of container traffic in structure of total turnover of

the Port of Ploče, in which container traffic has a share of 8.28% of total turnover.

According to the current estimation, in the Port of Ploče it is planned/expected container traffic of approximately 250,000 tons in 2015. With the dominance of bulk cargo which in total traffic of the Port of Ploče amounts 68.86%, general cargo is the second most important group of loads, with a share of 17.88% within containerized cargo represents the most important category. The presence and importance of container traffic confirms the information according to which in the total turnover of Ploče Port container traffic amounts 8.28%.

According to the data in Table 2, it can be seen that the total turnover of the container traffic of the Port of Ploče in 2014 amounts to about 87% for Bosnia and Herzegovina. The mentioned data confirms that the Port of Ploče, through the corridor Vc, is fully servicing that market, while the remaining part relates to other Central European countries in the hinterland (Serbia and Montenegro, Hungary and other Central European countries such as the Czech Republic, Slovakia). The rest of the cargo refers to the transport between the port of Ploče and the industrial towns, and to the domestic cargo intended for the hinterland.

So, currently the majority of the containers origin of the port of Ploče hinterland is Bosnia and Herzegovina. It is the same with other cargo types, therefore, it could be assumed that the main and the most important hinterland of the port of Ploče in this moment are Bosnia and Herzegovina.

Table 1 Plan of physical traffic of port of Ploče in 2015 (in tons)

Type of cargo	Traffic volume (Tons)	Share (%)
General cargo – Total		
Containers	250,000	8.28
Other products (equipment, stone blocks...)	30,000	0.99
Total –bulk cargo	540,000	17.88
Bulk cargo		
	2,080,000	68.87
Liquid cargo		
NTF	280,000	9.27
LPT	120,000	3.97
Total – liquid cargo	400,000	13.24
Total (all cargo types)	3,020,000	100

Source: Ploče Port Authority

Table 2 Container traffic of Port of Ploče by countries

Country / Year	Container traffic to Port of Ploče (%)								
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Bosnia and Herzegovina	60.73	54.23	64.56	65.40	61.81	57.52	79.54	86.74	88.35
Croatia	19.05	15.63	8.43	12.64	10.78	10.40	11.56	9.64	9.58
Italy	13.36	28.65	23.88	21.96	27.43	32.08	6.98	-	-
Slovakia	3.37	1.50	2.38	0	0	0	0	0	0
Other	3.49	-	0.75	-	-	-	1.92	3.36	2.07

Source: Ploče Port Authority

It can be very obvious that some countries that are geographically close to the Port of Ploče like Serbia, Montenegro, Hungary, are not listed in Table 2 and there cargo is services trough northern Adriatic Ports. In order to increase importance as a port for those countries a further detailed analysis and expertise is needed to explore possibilities of gaining a piece of cargo for or from those growing markets.

5. Competitiveness of offered services and prices

The price policy is also an important factor for the positioning of the port competitiveness.

The price of the port call and the use of port facilities is a collection of fees and charges paid by the ship during the stay in a port. This amount represents an obligation for ship companies. Important role in creating a port more efficient is the port authority and the port management is to minimize the cost of transshipment of goods and delay of vessels.

Modern development concept emphasizes the expansion of pack and port services. Here is expressed the role of commercial port with a pronounced effect of relation and price. Quality of service packages that port offers on the market is an indicator of the functionality of the port system. Classic transport services enriches of the number of additional services processing, sorting, distribution, labelling, assembly, ie. services that add value to the goods, or operation of the port authority. Quality of service depends on the:

1. Equipment of the port system and the quality of reception capacity of the port,
2. The efficiency of the port system; logistics, informatisation, technology, human resources,
3. Standardization, traceability, the possibility of proving and guaranteeing the quality,
4. Distribution channels, or the characteristics of the intermodal transport chain which is linked to the port.

Equipped, organized and efficient port system, with adequate range, quality and prices of services is a very important factor of competitiveness for the port of Ploče. However, a full integration of the port into efficient logistics and transport chains is crucial. It is therefore necessary to provide efficient, operational and cost-effective transport service all over the gravitational area, widening the market from Bosnia and Herzegovina to Serbia, the countries of Central and Eastern Europe, Italy.

6. Possibilities for improvement of the competitiveness of Port of Ploče

The requirements of the modern business environment which is moderated ports in the direction of distribution centres with a wide range of services has imposed the increasingly prominent market principles and commercialization of port space by emphasizing the following

factors of competitiveness as a indispensable condition for the positioning of the ports in the market:

1. Favourable geographical position,
2. Technologically modern port,
3. Organized and efficient port system,
4. Range of services,
5. The quality and price of services,
6. Quality of transport connections with the hinterland and the organization of intermodal transport

In accordance with the purpose of operating the port authority as a port management, this institution has a marketing strategy that refers to the port system. The goal of the marketing strategy is a long-term consideration of the optimal features and orientations in terms of all stakeholders within the system. The modern concept of social marketing promotes sustainable development and the creation of modern potential success. One of the missions of the Port Authority in the coming period is the creation of marketing strategies for Port of Ploče, which will be most important for all participants of the port system, especially the port operators/licenseses.

By supporting the requirements in terms of interdisciplinary which arising from globalized business conditions, and are reflected through the need for placement of offers in the form of service packages, classic 4P marketing mix (product, price, promotion, distribution) are supplemented by new elements; processes, people, environment, thus supporting the theory of the integrated operation of the system as a condition of success. The subject of marketing strategies developed by the Port Authority is not the result of the business process of this institution, but the basic process of the port of Ploče; provision of services in the market of transport and distribution of goods. The characteristics of this product represent one of the fundamental questions of the development potential and orientation port.

Besides facilities, a very important component of the project is enhancing marketing of the port and positioning it at the market. This includes a better organisation and coordination within the port as well as enhancing logistics in the gravitation area. The accent has to be put on providing a quality train transport service on overall logistics chains, as well as increasing competitiveness of all other elements.

7. Guidelines for the further development

The development strategy of Port of Ploče clearly suggests the expansion of the existing gravitational area of the port of Ploče on Serbia and the Central and Eastern Europe countries. A particular effort should be on improving the flow of container traffic which would evaluate the investment of public and private sector in the finishing the construction of container terminal till phase 3. In the port of Ploče, the feeder service currently provides the major world container shipping companies and the usage of whole capacity in the near future. There are some

factors that are unfavourable and directly influence the competitiveness and positioning of the Port of Ploče at the current market. The possibility of operating the only feeder vessels, and smaller ships, unfavourable transit time for transshipment of the containers compared to the North Adriatic competing ports with mother vessels calls, a low level of traffic turnover preventing stronger competition and lower prices, a relatively small container potential within the Bosnia and Herzegovina's economy that is dominating as the origin of the container traffic of the port of Ploče. The important influence of the road and the railway infrastructure revitalisation must be considered, evaluating the existing poor quality of the facilities through Bosnia and Herzegovina. It should be recommended, that in near future, an extended analysis and good marketing plan of port is conducted. According to the outputs of the analysis a dedicated presentations should be prepared for the global companies, including plans and investments for deployment of additional port services for containers.

8. Conclusion

The potential of Port of Ploče for developing container traffic is mainly due to its physical characteristics, favourable geostrategic position, port infrastructure and equipment. Still, the competitiveness of the port is presently very low, which induces a very poor level of the container market demand. Potential market demand can be increased by improving factors of competitiveness, prime of which are the transport connections with the hinterland and organization of intermodal chains. This includes logistic and infrastructure aspect of rail and road traffic route. In the global dynamic modern environment, the traffic function of the port has changed over time and now ports have become the centres of the national and international trade. In addition to being strategic points in the process of transport, they have become a sales and distribution centre. Additional facilities, equipment, range of services, price policy and the quality of services have become factors of competitiveness.

Successful modern ports cooperate with strategic partners, like shipping companies or global corporations, in order to be competitive, and that is what the the Port of Ploče decision makers should be aiming for.

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