SWOT Analysis for the Cities of Hamburg and Rijeka
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Abstract

This paper presents SWOT and PEST analyzes city Rijeka and Hamburg. Rijeka is the principal seaport and the third-largest city in Croatia. It is located in Primorje-Gorski Kotar County on Kvarner Bay, an inlet of the Adriatic Sea and in 2011 had a population of 128,624 inhabitants. Hamburg, officially the Free and Hanseatic City of Hamburg is the second-largest city in Germany after Berlin and 7th largest city in the European Union with a population of over 1.84 million. Rijeka (Croatia) and Hamburg(Germany) are the largest sea-ports in their countries.

Keywords: Swot Cities Hamburg.

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INTRODUCTION

The aim of this paper is to compile a SWOT analysis for the city of Hamburg in the Federal Republic of Germany and the city of Rijeka in the Republic of Croatia and based on this analysis to determine the similarities and differences their development and compare their current positions [1]. These are cities that are primarily important for the economy of the country in which they are located due to their geographical location on the coast, so they have developed into important ports, but are also important university and cultural centers[2].

What a SWOT Analysis is and what it is used for

SWOT analysis includes the analysis of strengths and weaknesses and opportunities and threats for a subject of analysis. The analysis of strengths and weaknesses is the sum of internal factors while the analysis of opportunities and threats is the sum of external factors. SWOT analysis is used to analyze the current or short-term position of the subject of analysis to form strategic decisions. Strength, weakness, opportunity, and threat form in pairs four strategies:

Strengths and Opportunities: Strengths should be used to seize opportunities (maxi-maxi strategies).

Forces and threats: Forces are intended to mitigate threats (maxi-mini strategy). Weaknesses and opportunities: Opportunities should be taken advantage of by overcoming weaknesses (mini-maxi strategies). Weaknesses and threats: Overcoming weaknesses should reduce threats (mini-maxi strategy)[3].

SWOT Analysis Matrix

| SWOT analysis | External environment analysis |
|---------------|-------------------------------|
|               | Strengths                     |
|               | Weaknesses                    |
| Opportunities| SO: Using power → Using opportunities |
| Threats       | ST: Use of force → Mitigation of threats |
|               | WO: Overcoming Weaknesses → Using Opportunities |
|               | WT: Overcoming Weaknesses → Reducing threats |

Source: http://www.controllingportal.de/Fachinfo/Grundlagen/SWOT-Analyse-.html
Examining and considering strengths and weaknesses is part of analyzing the internal environment. For companies, this refers to employees, means of production, market position, etc. For the city, the analysis of strengths and weaknesses refers more to the potentials and resources that have already been successfully used or not yet used and to the weaknesses that need to be overcome[4].

Opportunity and threat analysis are an analysis of the external environment that affects the subject of analysis. The analysis should clarify how external factors affect the subject of the analysis, as well as whether and how it faces these external factors. Opportunities are positive factors, and threats are negative factors that may adversely affect the subject of analysis[5].

1. SWOT analysis of the cities of Hamburg and Rijeka

City of Hamburg

The Federal Republic of Germany is a federal state composed of 13 federal states and three cities that also have the status of federal states. Hamburg is one of them. It was founded in 810 as a Frankish stronghold.

The city of Hamburg (official German name: Freie und Hansestadt Hamburg) has 1,830,584 inhabitants, and the conurbation or metropolitan Hamburg has as many as 3,500,000 inhabitants, making it the sixth largest city in the European Union. The city is divided into seven counties with an average population of 240,000. Each district has its own parliament, which is called the district assembly in Hamburg. These district assemblies legally have the status of an administrative body with very limited competencies. The area of the city is 755 km². Hamburg is the second largest German city[6].

Hamburg lies at the confluence of the Alster and Elbe rivers, about 100 km from the confluence of the Elbe and the North Sea and is the largest seaport in Germany. The turnover of the seaport of Hamburg amounts to 104.5 million tons (2010), namely 37.8% of the total maritime traffic of Germany. Hamburg is one of the world’s leading container ports[7].

Hamburg is the road and rail hub with the most bridges in the world - 2,478 bridges, more than London, Amsterdam and Venice combined, and the city with the most canals in the world.

The climate in Hamburg is humidly temperate all year round. An average of 714 mm of rain falls during the year, and 52 days a year Hamburg is shrouded in thick fog. There can also be very strong storms in the winter months.

The industry related to production for the needs of the port (shipbuilding, mechanical engineering, metallurgy, processing industry of imported raw materials - oil refinery, processing of cereals, asbestos, oilseeds, fish, jute, etc.) has been modernized in recent times; in addition to shipbuilding and mechanical engineering, the leading industries are the aircraft industry (Lufthansa, Airbus), electrical, chemical, pharmaceutical, optical, information and food industries[8].

The fairs and congresses in Hamburg are of great importance. Hamburg is also a commercial and financial center with many banks, stock exchanges and insurance companies (Hamburger Feuerkasse, founded in 1676, is the oldest insurance company in the world). Tourism plays a major role with more than 5 million tourists and 9.5 million overnight stays per year. In 2015, UNESCO added Hamburg’s historic Speicherstadt and Kontorhaus districts to its list of World Heritage Sites in Europe[9].

City of Rijeka

The city of Rijeka was established in the area of the Roman settlement of Tarsatica and with 128,624 (2011) inhabitants is the third largest city in Croatia. It is also the main center of the Primorje-Gorski Kotar County. In the area of the City of Rijeka, 34 local committees have been established in order to establish an organized form of direct participation of citizens in decision-making on local affairs that affect the life and work of citizens on a daily basis[10].

The area of the City of Rijeka is 44 km². In addition to Rijeka, the urban agglomeration of Rijeka includes 3 more cities and 6 municipalities and has 188,797 inhabitants on an area of 414 km². Rijeka, both as a port and as a business and tourist destination, has a strategic position in the Republic of Croatia.

Rijeka is located in the northernmost part of the Kvarner Bay and next to Koper and Trieste is one of the 3 most important northern Adriatic ports. They are the closest exit to the sea for the continental countries of their hinterland (Hungary, Austria, Slovakia and the Czech Republic). The majority of port traffic of Croatian seaports refers to the port of Rijeka, which realizes over 50% of the total traffic of all Croatian ports. The best results in the port of Rijeka in the period from 2000 to 2011 were achieved by the container terminal, where, after modernization at the end of 2002, the traffic increased significantly. The turnover of the seaport of Rijeka amounted to 652 778 t (2018)[11].

The river has a moderately warm humid climate. The average air temperature in the city is 13.8 °C. On average, 1500 mm of rain falls annually. In the colder part of the year, the Rijeka bora is known, whose speed occasionally reaches hurricane values.
In Rijeka, small entrepreneurs make up the majority of entrepreneurs, and the most significant increase in revenues is in the provision of accommodation and food preparation and serving, and in the sector of professional scientific and technical activities.

The classic tourist offer in Rijeka is increasingly supplemented by new facilities related to the autochthonous cultural and natural heritage, as well as numerous events. In recent years, the growth of accommodation in hostels has also stood out. The city is very active in attracting cruise companies through the development of a new tourist offer based on industrial and cultural heritage. Carnival events take place according to traditional customs, and Halabaj bell ringers and their procession have the property of a cultural intangible asset and are on the UNESCO list of intangible heritage of the world. The Rijeka Carnival has traditionally been held for 32 years.

Taking into account the strategic factors described above for the purposes of SWOT analysis, I analyzed the most important segments: geo-traffic position, natural resources and communal and transport infrastructure, social and economic activities, demographic picture and innovation and technology.

Table-1: Swot analysis: geoprometic position, natural resources, municipal and traffic infrastructure of the cities of hamburg and rijeka

| Geotraffic location, natural resources, utility and transport infrastructure | HAMBURG | RIJEKA |
|---------------------------------------------------------------------------|---------|--------|
| STRENGTHS                                                                 | WEAKNESSES | STRENGTHS | WEAKNESSES |
| + position on the important transport corridors Hamburg - northern countries and Hamburg - Central Europe | - underutilized potential of renewable energy sources | + located in a well-protected, deep bay, at the beginning of the Vb corridor, one of the most important pan-European traffic routes | - lack of appropriate transport policy, maritime passenger traffic in the port of Rijeka has been neglected for the last 50 years |
| + excellent road infrastructure | - poor availability of housing at reasonable prices | + the shortest connection by land and sea of Central and Central Eastern Europe with overseas destinations | - there is no systematic improvement of transport infrastructure by renovation, upgrading and construction of new infrastructure facilities |
| + good connection with railway infrastructure | + a project to deepen the shore to accommodate ships with higher draft | - many laws and regulations that restrict development |
| + within the metropolitan region Hamburg has a platform for cooperation with neighboring districts | + the surroundings of Rijeka are well covered by public transport, which facilitates daily migrations | - disproportion in transport capacities according to different types of traffic (from the port of Rijeka only 25% of containers are transported by rail because wagons are missing) |
| + the sea and inland waterway of the Elba river | + Kvarner Health Tourism Cluster | - dominance of road traffic |
| + the first German city to introduce a ban on diesel vehicles on certain roads | | - most of the port of Rijeka is located almost in the center of Rijeka, which leads to a lack of quality flat spaces along the coast |
| | | - lack of a legal framework for sustainable management and protection of soil and land |
| | | - lack of environmentally friendly and innovative solutions in public urban transport |
| OPPORTUNITIES                                                                 | THREATS                                                                 | OPPORTUNITIES                                                                 | THREATS                                                                 |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| + use the presence of many international shipping companies (top 20 global liner shipping companies) for local marketing and service orientation | - adaptation after the introduction of stricter regulations for the purpose of environmental protection | + By signing certain bilateral and multilateral agreements, Croatia has committed itself to introducing and developing intermodal transport | - lack of space to expand the port |
| + stable legal and political relations in the country                          | - water and maritime safety reform                                        | + development of railway and road connections with the hinterland, better integration into international transport corridors | - In container traffic, Rijeka lags behind Koper and Trieste             |
| + the possibility of saving energy by modernizing the production process       | - high costs associated with registration in the German ship register    | + construction of a high-speed city railway                                    | - The demand for apartments in the city area is constantly higher than the supply |
| + 1st in Germany in the number of start-ups                                    | + investing in snow machines on Platak                                      |                                                                             | - Lack of legal framework for sustainable management and protection of space |
| + clusters of excellence at the university                                     |                                                                             |                                                                             | - Insufficient use of the potential of renewable energy sources           |
| + encouraging the contribution of innovative ideas of citizens                |                                                                             |                                                                             | - residents of the area use all services from the City of Rijeka (social, health and educational infrastructure) |
| + Innovative IT systems contribute to the optimization of many processes       |                                                                             |                                                                             |                                                                          |

**Table-2: Swot analysis: innovations and technologies in the cities of hamburg and rijeka**

| INNOVATIONS AND TECHNOLOGIES | HAMBURG | RIJEKA |
|-----------------------------|---------|--------|
| STRENGTHS | WEAKNESSES | STRENGTHS | WEAKNESSES |
| + one of the most dynamic research cities in Europe (finalist for iCapital 2018 due to the connection of science, business, and management) | - lack of cooperation between scientific research institutions, the economy and innovators on specific projects, products, and services | + connecting economy and science | - funding problems |
| + 1st in Germany in the number of start-ups | + activities related to start-ups | - lack of innovation support systems | |
| + clusters of excellence at the university | | | |
| + encouraging the contribution of innovative ideas of citizens | | | |
| + Innovative IT systems contribute to the optimization of many processes | | | |
CONCLUSION

Considering some key factors characteristic of the cities of Hamburg and Rijeka, the question arises whether these two cities are comparable at all? Hamburg, one of the largest and most developed cities in the economically and economically strongest country in Europe, and Rijeka, 17 times smaller, with 14 times less population, are important ports in the country which, although among the countries with a long history of maritime industry, is not on the list of leading countries neither by number of ships nor by share in world freight shipping. The current state of intermodal transport in the Republic of Croatia is very bad. The root cause is poor implementation of transport policy, which for many years has put road transport in the forefront, while other modes of transport have been neglected. The railway system and the inland waterway system in Croatia are completely neglected. Although the northern Adriatic ports have a shorter sea route between Europe and the Middle East compared to the North Sea or Baltic ports (such as Rotterdam, Antwerp or Hamburg), due to the lack of a proper development strategy and the lack of an appropriate transport policy, market[12].

So, at first glance incomparable. However, certain parallels can be drawn, and some similar problems can be identified, but also strengths and opportunities, and Rijeka could "in small" take over some models from Hamburg to improve its position. The most significant strengths for both cities are favorable geographical location and global competitiveness of traffic routes.

Just as Hamburg, especially small and medium-sized enterprises operating there, needs to prepare for Brexit by looking for other markets (for example to strengthen trade with the Scandinavian countries and Europe), to deal with supply chain analysis, to establish plans for rough Brexit and, to deal with administrative adjustments (acquiring special knowledge about customs clearance, supplementing existing contracts with appropriate clauses, etc.), Rijeka needs to find ways to improve its position as a port and get closer to its main competitors Koper and Trieste. In this area, in particular, it can use some elements identified as the strengths of the city of Hamburg, and using the mini-maxi strategy from this analysis to take advantage of opportunities (especially the financing of projects from EU funds) to overcome weaknesses:

- better and more rational view of the geo-traffic position and its importance for the transport connection of Croatia with other countries
- constant modernization of port infrastructure and equipment in accordance with the latest trends
- considering the possibility of simultaneous quality development of the port of Rijeka and the city of Rijeka
- formation of urban agglomerations
- finding opportunities to finance entrepreneurial projects related to the development of science and technology supported by the University

As much as there are differences in the use of the geo-traffic position, there are similarities in the demographic picture. Both cities have a favorable age structure of the population, the working age population predominates (Hamburg 60%, Rijeka 58%), while in Rijeka the share of the elderly population is slightly higher (Rijeka 27.4%, Hamburg 23.9% with a tendency to grow). The average age of the population is also similar (in Hamburg 42.3 years, and in Rijeka 44.5) and coincides with the average age of the population in the EU (according to Eurostat data for 2013, in 28 Member States the average age of the population is 43 years ). Hamburg is also the "youngest" city in the Federal Republic of Germany. The reasons are the immigration of young people, migrants and students and the high birth rate. Life expectancy is slightly higher in Rijeka (Rijeka 82, and Hamburg 80.7 years) as well as population density (Rijeka 2923 inhabitants / km2, Hamburg 2431 inhabitants / km2). The presented demographic data testify to the quality of life in both

| OPPORTUNITIES | THREATS | OPPORTUNITIES | THREATS |
|---------------|---------|---------------|---------|
| + The shipping industry should rely on technical innovation and innovative business to further strengthen and expand its market position | - strong market competition | + encouraging the development of industry and the transport system based on new technologies | - Consequences of the long-term economic crisis |
| + Reducing maintenance costs by using IC technologies | + University - development of science and technology | + expansion of start-up incubators | - strong market competition |
| + Reliable resource planning using intelligent planning tools | + connecting innovators with companies and investors to commercialize innovations as quickly as possible | + establishment of competence centers | |

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cities, which is characterized by a developed system of social and health care and related services. Multiethnicity and multiculturalism are important forces for both cities[13].

In both cities, the strength of the tourism sector and the potential of cultural heritage, recognized by UNESCO, which can be used in the function of tourism, and various nominations are especially emphasized. Hamburg was the finalist city for the title of European Capital of Innovation for 2018, and in 2017, the G20 Summit was held in Hamburg. Rijeka was chosen as the European Capital of Culture in 2020 for the "Port of Diversity" program. In Rijeka, tourism based on health and rehabilitation institutions is particularly developing, and according to a survey conducted by the Hostelworld portal, Hamburg is the best city in terms of attitudes towards tourists, the best place to meet new people and it is estimated that Hamburg is very easy to navigate due to well-organized public transport and the proximity of key destinations. Unexpectedly for most, although it is located further south and has a warmer climate than Hamburg, Rijeka has an average of twice as much rainfall as Hamburg, so it is especially necessary to develop other forms of tourism in addition to the classic offer of beaches and sun[14].

And finally, what Hamburg does not have, and Rijeka has is a high hill in the immediate vicinity. Namely, the highest hill in the vicinity of Hamburg is Hamburger Berge, only 116.1 m high, while Rijeka has Platak, a sports and recreational mountain center, with the Snježnik peak 1506 m high, from which sailing boats in the Kvarner Bay can be seen enjoying winter joys. But due to lack of investment, it is currently enjoyed mainly by the local population[15].

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