Structural analysis of cruise passenger traffic in the world and in the Republic of Croatia

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ABSTRACT

Passenger traffic in the market of cruising, according to present growth rate, in the global and regional scale is an important accelerator of growth in passenger traffic in the world, of maritime passenger transport, and thus economic growth and development. Accordingly, the main problem of this study is the analysis of passenger traffic in cruises in the world and in the Republic of Croatia. In connection with this, the basic aim of the research is the structural analysis of the defined research problem, that by the analysis of specific quantitative indicators defines the main characteristics and patterns in the performance of passenger traffic on a cruise, specifying: the world’s leading groups and companies in the cruise market, the structure of passengers on a cruise with respect of various criteria (origin, socio-demographic criteria), the leading emitting and receptive cruise regions, including the leading cruise destinations and the ports in the world and in the Republic of Croatia.

1. Introduction

Cruise industry, as a dynamic sector with a constant growth trend, is becoming increasingly relevant segment of the tourism industry. The demand for cruise tourism has been growing steadily, and consequently, in proportion to the growth in demand, the supply in cruise tourism is increasing and improving. With the introduction of many new destinations and itineraries for cruises, one of the main indicators of offer affirmation in cruise tourism is also the continuously increase of the capacity and number of orders for cruise ships.

Today cruise industry represents a sector with a large number of independent or joint multinational companies that manage a fleet of specialized ships for cruises, so-called cruisers.

In line with the growing importance of cruise tourism as well as the importance of this type of passenger transport in overall passenger traffic, the main goal in this research is to conduct a structural analysis of the transport of passengers on cruises in the world. Results of the conducted analysis indicate relevant regularities in the movement of passengers on cruises, such as: the intensity and dynamics of passenger traffic on cruises; structure of passengers on cruises according to certain conditions; mainmissive and receptive cruise areas in the world; the most significant ports within certain areas, i.e. cruise region and the like. The most significant are the basic port features for the most important cruise tourism regions of the world, and the leading groups and companies that today rule the global market of cruise tourism are being analyzed.

In order to compare the obtained knowledge about the condition and characteristics of passenger traffic on cruises on a global level with the current situation and characteristics of passenger traffic on cruises in the Republic of Croatia, characteristics of cruise tourism at the national level are specifically analyzed in the last part of the study: the intensity and structure of passengers on cruises in the Republic of Croatia, characteristics of cruise tourism at the national level are specifically analyzed in the last part of the study: the intensity and structure of passengers on cruises in the Republic of Croatia, Croatia's main areas i.e. counties by cruises and the most important ports as the most important cruise destinations in the Republic of Croatia.

2. Leading groups and companies on the cruising world market

Cruise tourism as a special form of tourism nowadays has a growing trend in the global tourism market. The capacity of cruise tourism is steadily increasing as evidenced
by data on a constant increase in the number and capacity of ships for the needs of the cruise market. Thus, in 2014 the total number of cruise ships was 296, and already by 2017 it was announced 22 new ships, i.e. a total capacity of 318 boats. [12]

Table 1 shows the leading groups for international cruises in 2014, including the territorial affiliation of groups and companies to a particular country, number, average age and capacity of ships, the number of berths and share of individual company in a total tonnage of cruise ships of listed leading companies, which is giving rise to the importance of a certain company in the global cruise market.

Following the data in the Table 1 it is clear that in the global cruise market in 2014 the company Carnival Cruise...
dominated with 102 cruise ships and a market share of 45.8% of the total gross tonnage of cruise ships in the world. After the company *Carnival Cruise*, with fewer than half of cruise ships (43 ships), follows the company *Royal Caribbean Cruise* that participates in the total tonnage of cruise ships with a market share of 23%. [5] This also speaks of a significant and dominant position of the company *Carnival Cruise* that in other words, holds almost 50% of the global cruise market.

At the same time, among the major groups for cruises, *Star Cruises, Mediterranean Shipping Cruises* and *TUI Group* can be displayed, given that these five groups represent approximately 60% of total capacity in the cruise market.

In order to underline the leading cruise tourism market and orientation of companies towards certain markets, the Table 2 shows the two leading groups, *Carnival Cruise* and *Royal Caribbean Cruise*, their market orientation, the number of ships and market share of each company.

According to the data in the Table 2 it can be seen that the largest number of companies is oriented to the North American market. According to a market orientation and participation of these two leading groups on specific cruise markets, it is possible to bring the conclusions on the important cruise markets in the world in general, which are, independently of the group that covers a specific market, certainly: the North American market, the British market, the European market within which German, Spanish and French market are highlighted.

These most significant companies and other major companies in the cruise market, according to growing interest and demand for this type of tourism, respond by offering new specialized cruise ships, which are becoming more luxurious and their activities more diverse, providing to passengers as moving destinations a variety of entertainment options, tourism and recreation (golf courses, skating rinks, cinemas, different pools, climbing rocks, ...)

3. Analysis of the passengers structure on the cruises world market

Cruises are complex service that at the same time represent a tourist service and maritime and transport service. The focus of both services is the traveler as the customer with all his requirements and expectations in accordance with their travel themes. Passengers on a cruise are primarily specific by the intent of travel, which includes tourism and entertainment during the trip, i.e. during the entire stay on board. It is by this that passengers on the cruise market and their expectations and requirements differ greatly from other passengers, but also from stationary tourists. Passengers usually spend one day in the port and large part goes on organized trips to nearby attractions, and some decide for trips in their own engagement.

Passengers on a cruise are very different from the typical tourists, and thus the tourists in liner shipping, according to the following characteristics: age of age, nationality, consumer power (ability) and the spending structure. [11] Accordingly, in analyzing the passenger traffic of cruises analysis of the structure of passengers according the above criteria i.e. the characteristics is significant.

Structure of passengers by age is shown in Figure 1. The data presented show that in the cruise market mostly encompasses cruise passengers aged 40–49 years (26%) and passengers 60 or older (26%). They are followed by passengers aged 50–59 years (22%), and passengers 30–39 (18%). The smallest share is travelers aged 25–29 years, only 7%. It can also be concluded that 74% of passengers are older than 40 and the average age on a cruise is 49.

Except by age, travelers can be segmented according to their country of origin or nationality. Figure 2 shows the structure of passengers on a cruise according to the region of origin.

Data on the structure of passengers on cruises according the origin (Figure 2) confirm already presented findings (Table 2) according to which most of the world’s lead-
ing cruise companies is oriented on the North American market.

In fact, the Figure 2 shows that passengers native to North America dominate with as much as 58.6% on cruises, with the most frequent travelers from the United States. They are followed by passengers originating from the European region with 25.9% (Germany, United Kingdom, Ireland, Italy, France and Spain) as well as travelers from Asia, Australia, New Zealand, South America with a total of 15.5%, while the lowest share with only 0.25% are passengers originating from Africa.

Data on the structure of passenger traffic on cruises according to passengers nationality in 2014 are shown in Table 3 and they also confirm the dominance of the North American market, given that in 2014 the largest number of passengers, even 11,327 million was originally from the US, which is incomparably large number of passengers in relation to the number of passengers from other countries.

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Number of passengers (in mill.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>11,327</td>
</tr>
<tr>
<td>Germany</td>
<td>1,771</td>
</tr>
<tr>
<td>GB/Ireland</td>
<td>1,644</td>
</tr>
<tr>
<td>AU/NZ</td>
<td>1,0</td>
</tr>
<tr>
<td>Italy</td>
<td>0,842</td>
</tr>
<tr>
<td>Canada</td>
<td>0,714</td>
</tr>
<tr>
<td>China</td>
<td>0,697</td>
</tr>
<tr>
<td>France</td>
<td>0,593</td>
</tr>
<tr>
<td>Brazil</td>
<td>0,483</td>
</tr>
<tr>
<td>Spain</td>
<td>0,454</td>
</tr>
</tbody>
</table>

Source: www.cruising.org (April 28th, 2015)

In addition to the segmentation of the nationality and age, CLIA (Cruise Line International Association), according to the profile of passengers in 2014 on cruises, employed people dominated (72%) and to a lesser extent, retirees (21%). Also, according to the level of education highly educated dominated (69%). The average length of cruise was 7.3 days, and they are usually travelling in pairs (53%) or in groups of 5 or more people (20%).

4. Analysis of leading regions and destinations on the cruises world market

Cruising destinations are determined by the cruise companies which include a specific geographical area to travel planner or itinerary. Geographical location and climatic conditions are the key factors for selecting the cruise destination.

The geographical distribution of the leading cruise destinations indicates the intensity and distribution of cruise tourism in the world. [2] The most important cruising areas, as where the leading cruise destinations are located today, can be divided into the following regions:
- North and Central America,
- Europe,
- Asia and Pacific
- South America.

Figure 3 shows the destinations on the cruise market according the regions and the percentage of visits to certain regions in 2014.

The graph shows that the most visited cruise destination in 2014 was the Caribbean, with the percentage of attendance of 37.6%. Then follows the Mediterranean (18.6%), North Europe, Australia and other.

So, while by the analysis of the passengers structure according to their origin as well as the analysis of the market of leading cruise companies it is possible to conclude that the North American, UK and European region are the main source markets, the main receptive areas at the cruise market, judging by the attendance of individual destinations, are the Caribbean, the Mediterranean and Northern Europe.

Accordingly, hereinafter basic features and characteristics of the major areas and destinations in the world cruise market are stated, and the most important companies and the most important ports in certain destinations are listed.

4.1. North America

North America area represents the largest emitting area on the cruise market, considering the highest number of passengers who are native to this area.

Within this area exists the Caribbean as a leading destination i.e. the most receptive area for cruises, and Alaska, the West Coast, Hawaii and the East Coast, as well as other North American. Since the largest share of passengers on cruise ships are from the North American region, the great interest of passengers for the Caribbean
is understandable because of the proximity and sense of security. The itineraries of the area include the Bahamas and Bermuda.

The most important departure ports (homeports) for the Caribbean region are Miami, Port Everglades, Houston, Galveston, Puerto Rico and Bridgetown. Port of Miami is the largest port in the world for cruise with a turnover of almost 4.8 million passengers in 2014. [6] The leading companies in this area are the North American companies Carnival and Royal Caribbean, and Star Cruises Group with a smaller share.

Alaska along the Caribbean is one of the main receptive regions in North America. Cruise season in Alaska is limited by weather conditions, so it is of short duration, from May to late September. In addition, it is an ecological area with particular limitations of emissions of gases that limit the fleet navigating the area. Vancouver and Seattle are the most important homeports.

### 4.2. Europe

After North America, Europe represents the most important destination for cruises. The area is divided into Northern Europe and the Mediterranean.

**Northern Europe** encompasses the area that includes the Baltic, Great Britain, Ireland, Iceland, Arctic, Norwegian Fjords and part of Western Europe. The characteristics of the area are highly developed, advanced infrastructure and large capacities, and pronounced seasonality due to weather areas.

The most important homeports are: Southampton, Copenhagen, Dover, Kiel and Amsterdam. The ports of call include St. Petersburg, Tallinn, Stockholm and Helsinki. The most important are those in the Baltic, which is the most interesting destination of North European region. [2] In this area the most frequent companies are: Costa Cruises, Cunard Line, AIDA Cruises, P & O Cruises, Celebrity Cruises, TUI Cruises.

The **Mediterranean** is, after the Caribbean, the second largest world cruise market, which accounts for 23% of annual cruise capacity. [7] As a cruise destination it offers a variety of cultures, people, languages, rich history and many different itineraries. Cruising tourism in this area is of seasonal character, although this period is extended due to the favorable weather conditions from spring to autumn and mild winter. In a few years the development of cruise tourism throughout the year is expected. [8]

Mediterranean area can be divided into east and west market which is separated by the Apennine peninsula, and includes peripheral parts such as the Black and the Red Sea and the Atlantic islands. [2] Eastern Mediterranean includes Croatia, Italy, Greece, Turkey, Egypt, Malta, Cyprus, Israel and the Aegean, the Red and the Black Sea. Western Mediterranean includes Spain, France, Italy, Tunisia, Algeria, Gibraltar, Madeira and the Canary Islands. Homeports in this area are in Venice and Piraeus, i.e. Barcelona, Cittavecchia, Savona and Genoa. The objectives of ports in the Mediterranean are increasing capacity, the ability to prolong detention of ships and better connection of ports with the city center.

In the Mediterranean region operate all the major cruise operators, and the most represented are the following companies: MSC Cruises and Costa Cruises, CDF – Croisiere de France, Pullmantour, Ibero Cruceros and Celebrity Cruises.

### 4.3. South America

Area of South America is specific in that the seasons are in contradiction to the competing ports in North America. Therefore cruising season in the area lasts from October to April. At this area 4 itineraries are important: reposition, around Cape Horn, cruising in the Amazon and Antarctica. The most significant homeports in this area are Buenos Aires, Ushuaia, Rio de Janeiro, Santos, Valparaiso and Manaus.

### 4.4. Asia and Pacific

Area of Asia and Pacific represents a large but untapped market of potential cruises. The main reason for low demand for this area in the market of cruises is a great distance from the North American and European markets, which constitute a major tourist generating and receptive areas. Cruise season in Asia runs from October to April.

Cruises in Asia and Pacific can be divided by itineraries into: Southeast Asia, South Pacific, Far East and Transpacific. The most common cruise companies in the Asia-Pacific region are Star Cruises and P & O Cruises Australia.

### 5. Analysis of the cruises market in the Republic of Croatia

The vision of the development of cruise tourism in the Republic of Croatia is its placement as one of the most popular and famous cruise destinations in the Mediterranean. Currently, the international cruise tourism includes twenty ports on the Croatian Adriatic.

Cruising tourism in the Republic of Croatia is primarily focused on ships to medium size, while those of large capacity dock only in certain major ports.

Most of the cruise tourism traffic still takes place from May to October, although there is the possibility of year-round cruising tourism due to the favorable climatic conditions and mild winters. In fact, development of this kind of tourism outside the main tourist season would have a positive impact on the extension of the season and increase of the total economic impacts for the Republic of Croatia from tourism.

### 5.1. Analysis of passenger traffic on the cruises market in the Republic of Croatia

The Republic of Croatia is the second country on the Adriatic Sea by cruise traffic, right after Italy. According to
the Adriatic Sea Tourism Report [1] in 2014, a total of 1.1 million passengers were on cruises, which is 24.9% of the total passenger traffic in the Adriatic.

In 2014 there were 1,247 dockings of cruise ships, which is 44% of the total number of ships that docked in the Adriatic. [10] The ships on cruises in the territorial waters of the Republic of Croatia in 2014 realized a total of around 1,500 stays with an average of two days stay at the ship.

According to Central Bureau of Statistics, in the period from January to December 2014, 705 cruises of foreign ships in the Republic of Croatia were realized. Compared to the same period in 2013, the number of trips in 2014 decreased by 14.9%, and, accordingly, the number of passengers on cruise ships decreased by 17.5%. The total number of passengers’ sojourns in the same period decreased by 6.3%. [16]

The above chart shows that since 2009 the number of passengers continues to increase until 2013 when the highest passenger traffic has been recorded. Then, in 2014, parallel with the decline in the number of trips, number of passengers decreases.

Passengers on a cruise significantly differ from stationary tourists by age, nationality and consumer power. According to the already mentioned distribution of passengers on a cruise, the cruise market in the Republic of Croatia was dominated by passengers from North America. This information contrasts with data on the number of tourists in Croatia, according to which the majority of tourists were from mainland Europe, and more specifically from Germany, Slovenia, Austria and Italy.

5.2. Analysis of the leading areas of the cruises market in the Republic of Croatia

Croatian coast because of many cultural, historical and natural heritages is very attractive to boaters, and more recently to cruise companies and their passengers. Croatian ports have the capacity and capability to accept large and small cruise ships and can meet their requirements for docking on the coast or at anchor.

The following graph shows the number of cruise ships that docked in each county. Based on this one can highlight the importance of certain areas, i.e. counties of cruise tourism in the Republic of Croatia.

According to the data in the Figure 5, most foreign cruise ships recorded the first entry in the territorial waters of the Republic of Croatia in the county Dubrovnik-Neretva (68.1%) and the county of Split-Dalmatia (19.3%). These two Croatian counties therefore register 87.4% of the ships arrived in the cruise in the Republic of Croatia. The remaining ships were registered in Zadar county (4.7%), the County of Istria (3.1%), the county of Šibenik-Knin (3.0%) and the county of Primorje-Gorski Kotar (1.8%). [16]

According to the significance of the county of Dubrovnik-Neretva and the county of Split-Dalmatia, the main cruise ports in the Republic of Croatia are: Dubrovnik, Split, Korčula and Zadar, while other famous Croatian cruise destinations are: Rovinj, Opatija, Cres, Mali Lošinj, Trogir, Hvar and Vis.

Dubrovnik, as the most important Croatian cruise destination, is one of the major destinations in the Mediterranean. This is evidenced by data according to which the port of Dubrovnik is in sixth place in representation in the guidebooks for the Mediterranean, and is included in 78 of such itineraries. In 2014 the port of Dubrovnik had 499 arrivals of cruise ships with a total of 806,187 passengers. [17]
According to Central Bureau of Statistics [16], arrivals of cruise ships and visits of cruise passengers to the port of Dubrovnik are still of highly seasonal character, since during the winter only 12.6% of the total arrivals of cruise ships in the harbor is achieved.

6. Conclusion

The development of cruise tourism, as a special form of tourism, in recent years marked the growth dynamics. Considering that in addition to visiting various destinations and cultures also includes time spent on board, the interest of passengers for this kind of travel is extremely high. According to trends in the demand for cruises, cruise tourism offers continuously improves, introducing new itineraries, including new destinations and increasing construction and equipped cruise ships. Geographic position, weather conditions, natural beauty and historical and cultural attractions in a particular area have important role in selecting the destination and forming the itineraries. Supply popularity is determined by supply and demand, and proximity, the duration of travel and the accessibility of prices greatly contribute to the popularity.

Conducted structural analysis of cruise market in the world and in the Republic of Croatia points to concrete and significant conclusions regarding this specific phenomenon within the tourism and maritime and transport services.

Thus, in the global market of cruises the company Carnival Cruise distinguishes in 2014. The largest number of companies is focused on the North American market, which also represents the main emitting area of cruise tourism, given the Caribbean as the most visited cruise destination in 2014 and the main receptive region of cruise tourism. Analysis of the structure of the passengers on the global cruise market suggests that the most represented passengers are aged 40-49 years (26%) and passengers 60 or older (26%), dominated by passengers originating from North America (58.6%), where the most frequent travelers are from the United States.

Mediterranean, which is after the Caribbean the second largest world cruise market (23% of the annual cruise capacity), places Eastern Mediterranean, and thus the Adriatic and the Republic of Croatia in the market of cruise travel. Thus, the Republic of Croatia, after Italy, is currently the second country on the Adriatic by cruise turnover with 1,247 dockings in 2014 (44% of the total number of ships that docked in the Adriatic Sea). Dubrovnik and Split particularly emphasize, and thus the port of Dubrovnik, Split, Korčula and Zadar as the major cruise ports in the Republic of Croatia.

Cruising tourism in the Republic of Croatia is an important segment of tourism that can contribute to economic and social development of the destination. To achieve it, the cooperation of local communities and businesses is required, and investment in infrastructure and port capacity and significant promotion of the destination. Tourism, including cruise tourism in the Republic of Croatia, despite favorable weather conditions throughout the year, is still of extremely seasonal character. Therefore it is necessary to work on the distribution of capacity, and defining target groups for the development of tourism in the pre and post season. In addition, special attention should be paid to the sustainable development of tourism. Planning of traffic and visits must be in accordance with the carrying capacities of destination to avoid negative effects such as congestion of cities and disrupting their appearance and preservation, all for the purpose of sustainable development of cruise tourism as an important accelerator of economic development of the Republic of Croatia.
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This article is a result of a research performed by a post-
graduate student on the MoS (Motorways of the Sea)
project within the obligations of a doctoral study, Subject
C – “Research project”. 