Cruise Shipping in the Adriatic-Ionian Region and its Potential

Kružna putovanja u Jadransko-jonskoj regiji i njihov potencijal

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DOI 10.17818/NM/2016/2.3
UDK 656.61(497.5:4)
Review / *Pregledni rad*
Paper accepted / *Rukopis primljen:* 27. 11. 2015.

Summary

Continuing – and constant - growth in world maritime traffic, and the increasing number of cruise ships in the Adriatic-Ionian region, was the motive for this study. Maritime passenger transport represents important part of tourism. This paper deals with maritime passenger transport, more specifically, maritime cruise traffic. Based on the data gathered through the EA SEA-WAY project, we have prepared an overview of the state of cruise ship traffic in the Adriatic-Ionian region, identified key passenger ports holding the largest traffic shares and indicated a possible development scenario of the cruise traffic within the region.

KEY WORDS

Maritime passenger transport
Cruise traffic
Adriatic-Ionian region

Sažetak

Kontinuiran i stalni rast svjetskog pomorskog prometa te sve veći broj brodova na kružnim putovanjima u Jadransko-jonskoj regiji bio je povod za provedbu ovog istraživanja. Pomorski putnički promet predstavlja važan dio turizma. Ovaj rad bavi se pomorskim putničkim prometom, točnije prometom na kružnim putovanjima. Na temelju podataka prikupljenih kroz EA SEA-WAY project pripremili smo pregled stanja u prometu na kružnim putovanjima u Jadransko-jonskoj regiji, identificirali ključne putničke luke s najvećim udjelom prometa i prikazali mogući scenarij razvoja prometa na kružnim puovanjima u regiji.

KLJUČNE RIJEČI

pomorski putnički promet
promet kružnih putovanja
Jadransko-jonska regija

1. INTRODUCTION / *Uvod*

Recently, maritime passenger transport became one of the most important modes of passenger transport in Europe. We can attribute this to its positive ecological and economic impact and to important stimulating actions taken by the European Union. In 2013, the total number of passengers passing through EU-28 ports reached 400 million, which was a 0.5% increase over the previous year. Although cruise shipping represented only 3.4% of the passengers in EU-28 ports, in 2013 this segment of passenger shipping became a very important component of the maritime and tourism sector of the small number of ports and countries where it is concentrated (Eurostat, 2015). In 2013 there were 21.3 million cruise passengers, most of them coming from the USA (51%), while 30% of them originated from European countries [1]. More than 80% of the total number of cruise passengers embarking and disembarking in European ports did so in Italy, Spain, the United Kingdom and Germany.

Within the cruise sector, the Mediterranean has been improving its role year after year, and it is now the second most important world market with a 21.7% share of passengers in 2013, after the Caribbean (34.4%). The Mediterranean region can be divided into four sub-regions, the western Mediterranean, the eastern Mediterranean, the Adriatic and the Black Sea [2]. The western Mediterranean ports registered the largest number of cruise passengers (18.83 million), while the Adriatic sub-region now ranks second after recording a constant increase in cruise passenger visits. In 2013, the number of cruise passengers in the Adriatic increased by 6.2% to reach 5.12 million passengers and a 22.3% market share [3]. The most important ports of the sub-region were located in Italy and Croatia, which together accounted for almost 80% of all cruise passengers, followed by Greece, and only after that, by smaller countries, like Montenegro and Slovenia. However, recently those lesser known ports have become very attractive and their role (presence) in the itineraries calling on Adriatic ports is increasing on a yearly basis [4]. This might be the trigger for improvement of ports' current capacities and their connectivity to the main tourist sites in the near future.

This paper presents an overview of the largest passenger ports in the Adriatic – Ionian region, analyses their market share and projects their development in the future.

2. ADRIATIC CRUISE SECTOR / *Sektor kružnih putovanja na Jadranu*

The Adriatic sub-region is the second most important in the Mediterranean, immediately after the western Mediterranean. The number of passengers carried by cruisers in the Adriatic Sea was constantly increasing in the five-year period from 2009 to 2013. In 2009, the number of passenger visits reached 3.7 million, while in 2013 it reached 5.2 million, an increase of almost 40%. The number of cruise calls in the Adriatic ports also increased over this period. In 2009, there were 2,919 cruise ship calls, while in 2013 this number was 3,219, a growth of 10.28% [4].

In 2013, the number of passengers in Adriatic ports increased by 6.2% in comparison to 2012, although the number of calls in the region decreased by 0.5% in the same year. These numbers represent a share of 19% of the total passenger visits to the Mediterranean region in 2013 and 22.3% of the cruise calls that took place in the Mediterranean ports [3]. Thus, in 2013 Adriatic ports received fewer ships than in 2012; nevertheless, this fact did not adversely affect the total number of passengers carried. This means that carriers are deciding to use bigger ships, especially in larger ports. According to the traffic forecasts, there is a real possibility that such trends will continue into the future. Therefore, ports will have to, where necessary, optimize their existing port facilities so as to be able to receive larger ships.

Two countries that have a leading role in the Adriatic cruise market are Italy and Croatia, accounting in 2013 for approximately 80% of total cruise passengers.

Italy registered the highest number (2,702,789) of tourists on cruises in the Adriatic Sea in 2013, which represents a 51.79% market share. Croatia was next with a 26.47% share and 1,381,572 tourists, and Greece was third, with a 14.36% share. Slovenia had 1.29% of share, which is expected, taking into account that it has just one port [4].

Figure 1 presents traffic shares regarding passenger movements and cruise calls of ten major cruise ports in the Adriatic. Venice and Dubrovnik, ranked first and second, together recorded half of all passenger movements of the Adriatic region (Venice 34.8%, Dubrovnik 20.8%). Within the three northern Adriatic ports included, the largest shares were reached by the port of Ravenna, followed by Koper and Trieste.

According to the Adriatic Sea Tourism Report, in the next year the number of cruise passengers and cruise ship calls to the major Adriatic ports is expected to decrease. The ports with the highest number of passenger movements should remain the same; nevertheless, a small drop is expected. Traffic in Venice is expected to decrease by 7%, which is mainly attributable to restrictions regarding the acceptance of larger ships, which were adopted in 2013. Meanwhile, Dubrovnik and Corfu are forecasted to have a 17% and 15% decrease, respectively. The

Table 1 Cruise traffic by country, absolute values and shares percentage, 2013
Tablica 1. Promet kružnih putovanja po zemljama, apsolutne vrijednosti i postotak udjela, 2013.

Ports	2013		Share of total (%)		2012		Variation on 2012 (%)	
Country	Pax. mov	Calls	Pax. mov	Calls	Pax. mov	Calls	Pax. mov	Calls
Italy	2,702,789	912	51.8	28.6	2,691,415	1,074	0.4	-15.1
Croatia	1,381,572	1,332	26.5	41.7	1,326,955	1,365	4.1	-2.4
Greece	749,301	494	14.3	15,5	657,591	489	13.9	1.0
Montenegro	317,746	387	6.1	12.1	246,623	343	28.8	12.8
Slovenia	67,588	66	1.3	2.1	65,616	56	3	17.9
Albania	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a	n.a.
Bosnia-Herzegovina	0	0	0	0	0	0	0	0
Total 2013	5,218,996	3,191	100	100	4,988,200	3,327	4.6	-4.1

Source: Adriatic Sea Tourism Report 2014 [4]

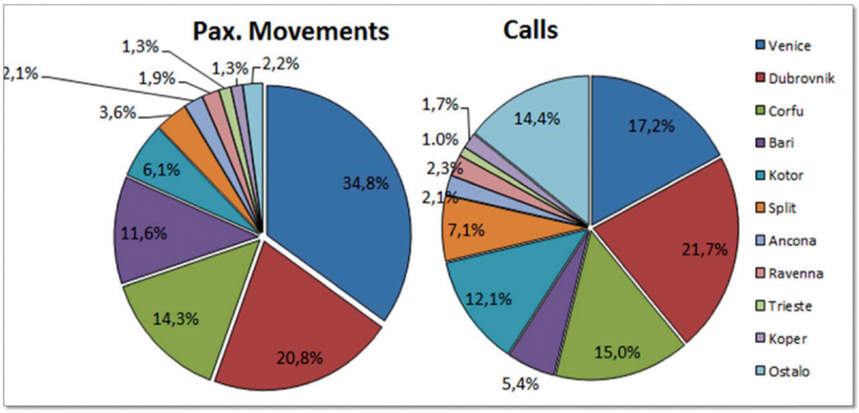

Figure 1 Traffic share of the first 10 cruise destinations among adriatic ports (2013)
Slika 1. Udio prvih 10 destinacija za kružna putovanja među jadranskim lukama (2013.)

Source: adapted from the Adriatic Sea Tourism Report 2014 [4] main reason for this situation is found in passenger distribution changes; that is, the increase of passenger movements towards the ports that until now were less visited. Smaller ports will therefore have more opportunities to attract passengers from larger ports. As Venice is considered the biggest attraction in the Adriatic, small ports will have major opportunities to attract passengers and large cruise ships if they have good terminal facilities in the proximity of Venice, as from those locations inland trips to the city of Venice can easily be organized.

Despite the fact that the larger ports expect a smaller drop in passenger number next year, our predictions for the whole Adriatic and Mediterranean region are quite positive till 2016 (Fig. 2). The best fitting function turned out to be a power function and our forecast is based on the available data for the five-year period from 2009 to 2013. Figure 2 shows that the region's growth has so far been consistent (a little higher annual growth has recently been registered in the Adriatic), with a drop in cruise passenger numbers in both regions in 2011. The predictions for the next three-year period show growth in both regions; the Adriatic should thus receive 5.7 million passengers in 2016, while the Mediterranean should account for approximately 29 million passengers. The available time series is too short to calculate reliable confidence intervals (e.g., for the Adriatic region the 50% confidence would mean an interval from 3.2 to 5.8 million passengers, while a 75% confidence would spread the interval from 2.3 to 6.7 million). Other functions suggest the cruise passenger traffic in the Adriatic to range from 5.5 to 6.3 million, and for the entire Mediterranean region to range from 28 to 29 million if no unexpected distresses occur.

This suggests that between 2013 and 2016 a slightly higher traffic growth will be registered in the Adriatic Sea (Adriatic + 11%; Mediterranean + 7%), consequently meaning that the importance of the Adriatic region within the Mediterranean will grow. In fact, it is forecasted to reach a share from 19 to 22.5% in 2016.

For further analysis of the Adriatic region, nine Adriatic cruise ports that were included in the EA SEA-WAY project were selected, together with the port of Venice, as the main Adriatic cruise port.

3. CRUISE PORTS CLASSIFICATION IN THE ADRIATIC IONIAN REGION / *Klasifikacija luka za kružna putovanja u Jadransko-jonskoj regiji*

According to J.Corres [5] and B. Lekakou [6] cruise ports can be divided into three classes with attendant subclasses. Classification includes Hub Ports (class I, II and III), hybrid ports (class A, B and C) and destination ports (class 1, 2 and 3). Authors designed this classification to provide the indication of the category and relative importance of the port from the perspective of the cruise. However, the categorization is not fixed but more of an arbitrary determined role of the port with regards to the prevailing political and economic conditions at the time of the classification.

In this reference hub port serves as a homeport, meaning that it has the entire infrastructure required for embarkation or disembarkation of passengers and a place where passengers begin or end their journeys. On the other hand a destination port is a port which serves only as a port of call, a port where a ship only visits for a short period of time (often just for a few hours), but doesn´t provide services related to embarking/disembarking. Passengers at these ports don´t begin or end their journeys. The hybrid port is considered a hub port and a destination port at the same time. These ports usually have perfect conditions for embarking and disembarking including great hinterland connections by road, rail and particularly air.

As ports in different areas of the world offer different attractions, passenger interest is divided among four distinct categories, historical interest, religious interest, cultural interest and destinations of uniqueness or entertainment [5]. Many of the Adriatic ports offer a combination of these interests, making them attractive for different types of passengers aboard cruise ships.

Although Rodrigue and Nottebaum [7] claim that the cruise industry sells itineraries and not destinations, it is absurd to make that claim categorically, especially in the Adriatic, where both Venice and Dubrovnik are primary destinations, often the main draw of an itinerary, and quite often a singular and final destination.

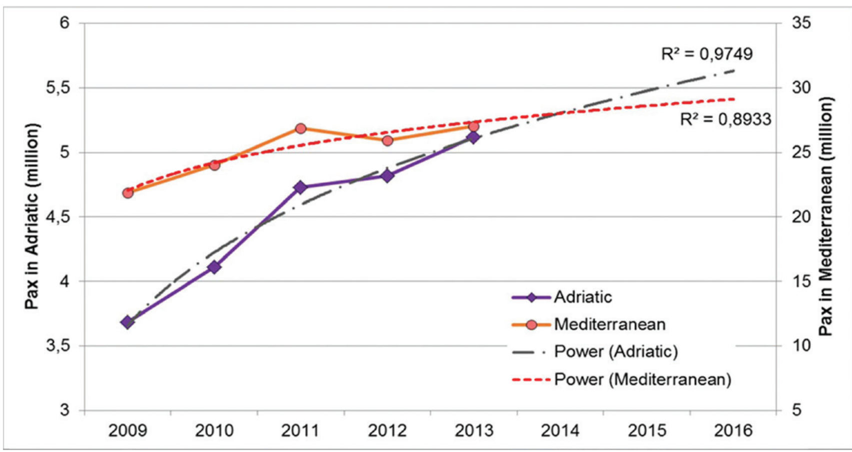

Figure 2 Cruise passenger forecast for the mediterranean and adriatic regions

Slika 2. Prognoza za putnički promet za Mediteran i jadransko područje

Source: own calculations

4. SELECTED CRUISE PORTS CLASSIFICATION IN THE ADRIATIC-IONIAN REGION / *Klasifikacija odabranih luka za kružna putovanja u Jadransko-jonskoj regiji*

Figure 3 clearly shows the two ports that receive the most passengers (Venice and Dubrovnik), which also top of the list in number of calls (Venice 548 and Dubrovnik 843 respectively). Although Dubrovnik has more calls, the ships tend to be smaller, thus carrying fewer passengers. Most likely, due to exceptional air and rail connections, Venice is classified as Hybrid A, while we can consider Dubrovnik as destination port class 1 (Fig. 4), as the homeport operations are still too few to be considered as hybrid port.

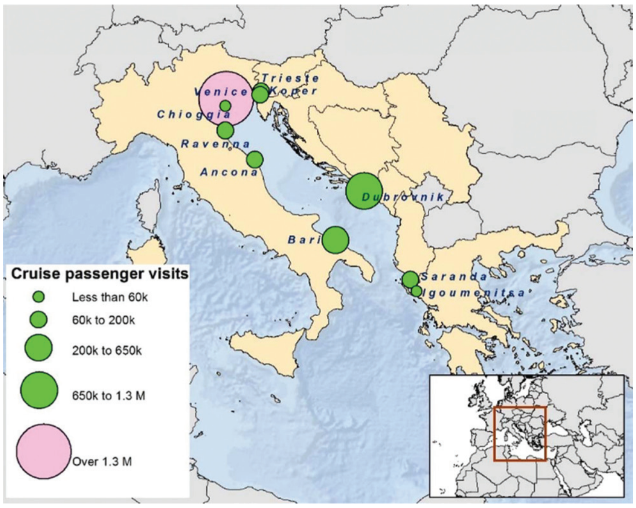

Figure 3 Cruise passenger visits, adriatic-ionian region, 2013
Slika 3. Posjeti putnika na kružnim putovanjima, Jadransko-jonska regija, 2013.

Source: adapted from the MedCruise, 2014

Venice and Dubrovnik are both world-renowned destinations, UNESCO World heritage sites and thus major tourist attractions. The rest of the cruise ports included in this study are: the Albanian port of Sarande, the Greek port of Igoumenitsa, the Italian ports, Ancona, Bari, Chioggia, Ravenna, and Trieste, and the Slovenian port of Koper.

Basic data on selected ports and their classification is presented in Table 2.

According to Lekakou [6], the main factor categories, by significance or gravity, were identified as: port services to cruise ships, natural port characteristics, port services to passengers, port infrastructure, attractive touristic areas and activities, port service cost, port efficiency, port management, provision of intermodal transport, political conditions and regulatory framework, city amenities and proximity to markets for cruise passengers.

The top five criteria influencing the selection of a homeport for a cruise ship company are presented in table 3.

Table 3 Top five home port selection criteria
Tablica 3. Top pet kriterija za odabir matične luke

	Selection Criterion	Gravity
1	Availability of an international airport	4.77
2	Safe and secure environment	4.59
3	Air connections	4.55
4	Reliable air transport	4.5
5	Capacity for handling a large number of passengers simultaneously	4.45

Source: adapted from Lekakou et al. [6]

Availability of an international airport, air connections and reliability of air transport are three of the top five criteria for homeport selection, so in this aspect Venice benefits as a popular start and end cruise point. Not only does it have two international airports in the near vicinity, two more airports are available within less than an hour's drive. Combined with the world-renowned tourist attractions it seems to be an ideal homeport selection, although the future of cruise ships in the Venice lagoon is uncertain, given opposition from environmentalists and cultural heritage advocates. For ports nearby - that is, in the northern Adriatic - it may well be worth considering the possibilities of making themselves attractive as home ports that prominently serve Venice as well as other stops.

Table 2 Characteristics of the selected Adriatic ports, 2013
Tablica 2. Značajke odabranih jadranskih luka, 2013.

Country	Port	Port classification	No. of cruise passengers	Pass. terminals	Area (m2)	NO. of berths	Max. ship Length (m)	Max. ship Width (m)	Max. ship Draught (m)
Albania	Sarande	Dest. – cl.3	65702	1	16000	3	150	30	9
Croatia	Dubrovnik	Dest. – cl.1	1136503	1	164090	7	300	unlimited	11
Greece	Igoumenitsa	Dest. – cl.3	4650	1	53700	12	225	n.a.	10.5
	Ancona	Dest. – cl.3	109492	1	2400	8	250	n.a.	10.5
	Bari	Dest. – cl.2	604781	2	n.a.	n.a.	n.a.	n.a.	11.5
Italy	Chioggia	Dest. – cl.3	18300	1	45000	5	210	7	8.5
	Ravenna	Dest. – cl.3	97041	2	127600	3	330	37	10
	Trieste	Hyb. – cl. B	70244	3	n.a.	5	400	n.a.	12
	Venice	Hyb. – cl. A	1815823	1	47267	12	340	n.a.	8.7
Slovenia	Koper	Dest. – cl.3	65434	1	12000	3	360	unlimited	10

Source: adapted from EA SEA WAY project report

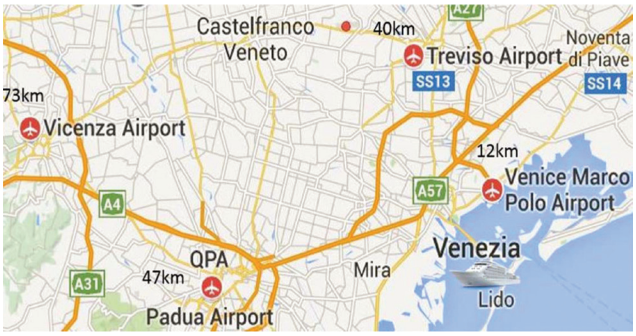

Figure 4 Airports In the vicinity of Venice and their distance by main roads
Slika 4. Zračne luke u blizini Venecije i njihova udaljenost vozeći se glavnim cestama
Source: adapted from Google Maps

One alternative to the port of Venice is the port of Trieste, which is already gaining importance. The local cultural attractions and the proximity to its local airport, and especially to Venice, are reasons for its continuous development as a hybrid port (Fig.5).

Figure 5 Airports in the vicinity of Trieste and their distance by main roads
Slika 5. Zračne luke u blizini Trsta i njihova udaljenost vozeći se glavnim cestama
Source: adapted from Google Maps

The last port on the list is the port of Dubrovnik, which only recently (in 2015) became a homeport for Thomson Cruises. The port of Dubrovnik is the second most visited destination of the Adriatic-Ionian region and its status could develop from a port of call into a hybrid port. It is offering a great historical tourist destination as well as the opportunity for embarking and disembarking of the passengers.

Figure 6 Airports in the Vicinity of Dubrovnik and Their Distance by Main Roads
Slika 6. Zračne luke u blizini Dubrovnika i njihova udaljenost vozeći se glavnim cestama
Source: adapted from Google Maps

To determine the competitive position of aforementioned passenger ports, (including ports of call, and not only the hybrid ports presented in previous paragraph), we used a rather simplistic approach with "port portfolio analysis". It is usually used as a tool in strategic positioning analysis and offers a graphical representation of results within a "growth-share" matrix [8] for a certain timeframe.

The results in the matrix are based on annual growth rate data gathered from port websites and calculated average market share. Each of the matrix quadrants represent a port's role in the cruise market for the observed time span, based on their average market share and average annual growth, and the quadrants were determined by the average of all port's annual growth (12.1%) and average market share (10%). The ports have recorded rather large fluctuations of passengers in recent years; therefore, it is unlikely that the time span we used for observations is sufficient. Some of the analysed ports are in the early stages of their cruise destination development and their cruise lines were established just a few years ago (e.g., Igoumenitsa, with almost no market share and is thus not visible in the matrix). Similarly, in the port of Ravenna, the cruise terminal was built in 2010 and within two years received cruise passenger traffic of more than 150,000 passengers, declining over the next two years to what seems will be a stable 100,000 passengers yearly.

Data in the matrix (Fig.7) shows the majority of the ports have a rather small market share (figures by the ports represent market share among selected ports) in comparison to the three ports with the most traffic; however, it is important to note that the research was limited to the ports included within EA SEA-WAY project. If we would include all the cruise ports in the Adriatic, the situation as to the market share would change to some rather small degree. Yet with that in mind, there are some unexpected results. The port of Koper has a very high potential, although its placement in the matrix seems a bit high in average annual growth. We attribute this to the fact that the port of Koper cruise terminal was established in 2005 and in 2011 reached its peak with 108,729 passengers. Since then, figures have levelled to cca 60,000 passengers per year, which would change the position in the matrix and bring it much lower, to about a 25% average over the last 4 years. On the other hand, the port of Trieste also shows high potential and since its development indicates further development as a hub/hybrid port, it is showing tendencies to increase the market share and perhaps move its matrix position to 'star performer'. The port of Venice has moved deep into the ˝Mature leader˝ quadrant with almost 50% market share among selected ports. A similar study [8] among Mediterranean ports placed the port of Venice in the ˝star performer˝ quadrant for the period (2006-2011), and suggested its pendant move to Mature leader quadrant. The port of Dubrovnik is a star performer among the selected ports. Its large market share, substantial average growth and the fact that it recently became a homeport, suggests that it will continue its trend of increasing passenger figures and further increase its market share. None the less, it is imperative to consider whether the city of Dubrovnik will be able to accommodate the increasing wave of oncoming cruisers. On several occasions, the city has already faced a collapse when multiple cruisers called to port of Dubrovnik at the same time and city's attractions (and the city of Dubrovnik itself) were overcrowded to the extent that the crowd had to wait in lines for hours, just to enter the city.

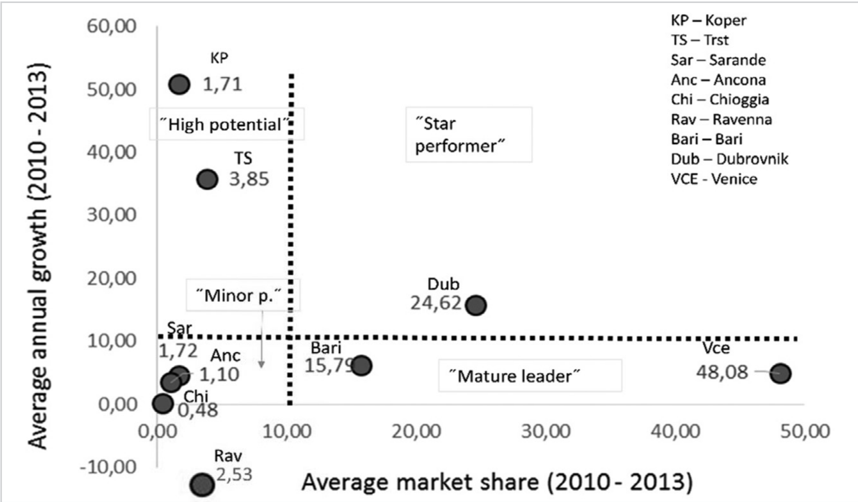

Figure 7 Port portfolio analysis
Slika 7. Analiza lučkog portfelja

Source: own calculations

The port of Bari is well situated in the mature leader quadrant with a steady market share and levelled passenger figures. Similarly situated in the minor performer quadrant is the Port of Ancona with very steady passenger numbers. Other ports (Port of Saranda, Chioggia and Igoumenitsa) are in the developing stages and are now set in the minor performer quadrant.

5. CONCLUSION / *Zaključak*

This paper has presented an overview of the state of the cruising industry in the Adriatic-Ionian region through regional traffic analysis and portfolio analysis of selected regional ports. Selected performance indicators, have enabled us to identify the key passenger ports holding the largest market shares. It is evident that two major cruise ports, Venice and Dubrovnik, are also the top generators of cruise demand in the Adriatic-Ionian region, holding over 50% of the entire cruise market share. The majority, if not all, cruise itineraries to the north Adriatic include at least one of these two ports as their destination. The combination of port portfolio analysis and traffic growth analysis indicates further growth of cruise shipping in the region, and the port portfolio analysis reveals their positions in the ˝mature leaders˝ quadrant. According to traffic trends, they will only reaffirm their position as leading ports in the region. Among other selected ports, only those of Trieste and Koper stand out in the ˝high potential˝ quadrant and given the fact that the port of Trieste recently became a homeport, we can expect it to move towards a higher market share, unlike the port of Koper, which appears to have rather stable passenger figures.

In the conclusion, it is imperative to emphasize the fact that the time span of the data used for this research may be inadequate, since only the years from 2009 to 2013 were analysed. Some of the selected ports did not have cruise traffic at that stage or were in the developing stages of establishing regular lines in the cruise itineraries. Therefore, it is necessary to follow the trends in the upcoming years and eventually re-evaluate the market positions of the ports in an expanding cruising market.

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