Cruise Port Passenger Flow Analysis: a Cruise Port Governance Perspective

Analiza kretanja putnika u lukama za kružna putovanja: perspektiva upravljanja lukama za kružna putovanja

Goran Ćorluka
University of Split
Department of Professional Studies
E-mail: goran.corluka@oss.unist.hr

Ivan Peronja
University of Split
Faculty of Maritime Studies
E-mail: iperonja@pfst.hr

Dejan Tubić
College of Tourism and IT
Management in Virovitica
E-mail: dejan.tubic@vsmti.hr

DOI 10.17818/NM/2020/3.1
UDK 656.615:338.48(262)
Review / *Pregledni rad*
Paper accepted / *Rukopis primljen:* 8. 4. 2020.

Summary

Cruise tourism as one of the most dynamic and fastest growing segments of tourism industry is shaping tourism activities. The growth rate of global cruise tourism has constantly increased over the last years and the number of cruise passengers is expected to grow worldwide. Cruising as form of leisure tourism is the most expressed in the Caribbean, followed by the Mediterranean as cruising region with increasing cruise passenger rates. The demand for cruise tourism continues to grow and cruise ports will continue to develop an interest in advancing their cruise activities. The paper elaborates on the pattern of cruise port industry with regard to cruise port model of operation governance, two basic types of port operation, namely ports without private entry in port operation and ports with private entry in port operation. Research sample are cruise ports in the Mediterranean and adjoining seas. The main indicators of passenger flows are analysed and the intensity, structure and dynamics is identified. Descriptive statistics is used to describe the basic features of the data in the study together with summaries about the sample and the measures. Along with graphics analysis, quantitative analysis of data is performed. Port governance including private entry, especially port operators, is seen as key response to global cruise industry growth, having advantage over public port governance in diverse fields of port operation. Research results indicate that cruise ports with private entry in port operation are not geographically concentrated. Cruise ports with private entry in port operation are dominating the market, but cruise ports without private entry are catching up as their growth rate is higher. At the same time cruise ports with private entry in port operation are turning to bigger sized cruise ships increasing overall efficiency per call. Findings contribute to cruising tourism theory and practice. In practical terms the contribution of this paper is the understanding of current market position of cruise ports with regard to their model of port governance, more precisely the position of ports with private entry in cruise port operation versus cruise ports without private entry in cruise port operation.

KEY WORDS
cruising
Mediterranean and adjoining seas
port governance
private entry

Sažetak

Kruzing turizam, kao jedna od najdinamičnijih grana turizma koja se najbrže razvija, oblikuje aktivnosti u turizmu. Stopa rasta kruzing turizma na svjetskoj razini posljednjih godina neprekidno se povećava, a očekuje se daljnji porast broja putnika na kružnim putovanjima diljem svijeta. Kruzing kao oblik rekreacijskog turizma najizraženiji je na Karibima, a zatim slijedi Mediteran kao kruzing područje u kojemu se broj putnika sve više povećava. Potražnja za kruzing turizmom nastavlja rasti, a luke za kružna putovanja nastavit će razvijati zanimanje za unapređenje svojih kruzing aktivnosti. Ovaj rad istražuje organizaciju u kruzing destinacijama, s osvrtom na model upravljanja lukama za kružna putovanja, preciznije, na dva osnovna tipa rada u lukama – luke u kojima nije omogućen privatan ulazak u njihov rad i luke u kojima je omogućen privatan ulazak u rad. Istraživanje je provedeno u lukama za kružna putovanja na Mediteranu i susjednim morima. Analiziraju se glavni pokazatelji kretanja putnika te se utvrđuju intenzitet, struktura i dinamika. Osnovna obilježja prikupljenih podataka analiziraju se s pomoću deskriptivne statistike te se donose sažeci analize uzorka i mjerenja. Pored grafičke analize, napravljena je i kvantitativna analiza. Upravljanje lukama u kojima je moguć privatan ulazak u rad luke, posebice operatora, pokazalo se kao ključan odgovor na globalni rast kruzing industrije te su se iskazale prednosti u odnosu na javno upravljanje lukama u brojnim domenama rada luka. Rezultati istraživanja pokazuju da luke za kružna putovanja u kojima je omogućen privatan ulazak u njihov rad nisu zemljopisno koncentrirane. Luke za kružna putovanja s privatnim udjelom u radu prevladavaju na tržištu, ali luke za kružna putovanja gdje nije moguće sudjelovanje privatnog sektora u radu luke sustižu ih jer ih je sve više, dok se istovremeno luke za kružna putovanja s privatnim udjelom u radu okreću većim brodovima za kružna putovanja, čime im se povećava ukupna učinkovitost po ticanju. Rezultati istraživanja pridonose teoriji i praksi kruzing turizma. U praksi, doprinos ovoga rada jest u razumijevanju sadašnje situacije luka za kružna putovanja na tržištu s obzirom na njihov model upravljanja, točnije, položaj luka s omogućenim privatnim ulaskom u rad nasuprot onim lukama gdje privatan ulazak u rad nije moguć.

KLJUČNE RIJEČI
kruzing
Mediteran i susjedna mora
upravljanje lukom
privatan ulazak

1. INTRODUCTION / *Uvod*

International tourism with its constant force continues to outplace the global economy. International tourist arrivals grew by 5% in 2018 to reach the 1.4 billion mark, while export earnings generated by international tourism have grown to USD 1.7 trillion (UNWTO, 2019). Sea cruises have been instituted as a special form of tourism relatively late comparing to other special forms of tourism (Pavlić, 2013). Nowadays, cruise tourism is one of the most dynamic and fastest growing segments of tourism industry. By providing packages of ship-based on-board leisure activities and in port cities sightseeing attractions for tourists' recreational purpose, cruising has become an increasingly worldwide competitive tourism activity (Chen and Nijkamp, 2018). The cruise industry grew at a faster rate than other tourism segments. Both, demand side with cruise passengers, as well as supply side with the growing of ships in number and size, are experiencing significant expansion. The growth rate of global cruise tourism has constantly increased over the years with as high as 60,1% increase of cruise passengers in the period 2009-2018, in exact terms from 17.8 million cruise passengers in 2009 to 28.5 million cruise passengers in 2018. In 2019 the number of cruise passengers is expected to grow by 6% to a total of 30 million cruise passengers worldwide. This form of leisure tourism experience is most popular in North America and Europe, more specific, the Caribbean with a share of 32% and the Mediterranean with a share of 17% of all cruise passengers in 2019 (CLIA, 2020). The popularity of cruising tourism has recently dispersed to other regions, whereby Asia stands out. Asia is experiencing double-digit growth of rates in terms of capacity deployment in region, but as well as an important source market (CLIA, 2019). One of the causes for the uninterrupted growth and the globally expanding phenomenon of cruise tourism over the last 30 years is the continuing response of cruise lines to the desire of their customers. Cruise lines embrace innovations in the increase of the size of ships, the planning and development of new cruise ports, the development of new ship designs, on-board amenities, facilities and services, itineraries, as well as land side activities, at the same time an increased number of ports of call are used by cruise lines with the aim to provide enhanced in-port and destination experience (Pallis and Arapi, 2016; Pallis, Rodrigue and Notteboom, 2014).

The cruising industry is signifying an extremely successful business model, at the same time the cruise sector is also facing several significant challenges, such as exceptionally competitive commercial environment and concerns about over-capacity and destination ability to cater for larger cruise ships (Weeden, Lester and Thyne, 2011). Therefore, destinations find themselves on the niche between further cruise tourism expansion and protection of local environment minimizing costs of being sustainable within cruising activities. The aim of research paper is to provide insight into the pattern of cruise port industry with regard to cruise port model of operation governance, two basic types of port operation, namely ports without private entry in port operation and ports with private entry in port operation. Paper findings should be fundamental knowledge for further decision-making in cruise port operation governance.

2. LITERATURE REVIEW / *Pregled literature*

Despite its significant growth and arising implications, cruise tourism is among the tourism phenomena that have not received much attention in tourism related literature (Hung et al., 2019; Vega-Munoz eta al., 2019; Castillo-Manzano, Fageda and Gonzalez-Laxe, 2014). Related research is mainly market oriented and focuses on port operations and revenue optimization management (Tsamboulas, Moraiti and Koulopoulou, 2013). Key topics within cruising industry research are customer experience, cruise management, employment management and destination management (Hung et al., 2018). Within customer research based topics most papers were focused on customer satisfaction (Ramanathana and Ramanathan, 2016; Lynn and Kwortnik, 2015; Huang and Hsu, 2010), consumer behaviour (Hyun and Han, 2015; Jaakson 2004) and customer loyalty (Hosany and Witham, 2010; Gabe et al., 2006). Cruise management topics are mostly based on revenue management (Li, 2014) and branding (Hwang and Han, 2014). Employment management was mostly analysed from the perspective of job satisfaction (Larsen et al. 2012). Destination management topics are primary based on visitor management (Scherrer et al. 2011), economic impacts (Guerrero, Selva and Medina, 2008; Brida and Zapata, 2001) and social effects (Rodrigue and Notteboom, 2013; Bishope, 2010).

The port industry with its capital-intensive nature and long payback period of port investments traditionally determines high financial needs for operating the business (Satta, 2017). The industry expansion changed the structure, strategies and operational frameworks of cruise ports. The orientation is towards bigger ships and modern diversified cruise product meeting contemporary consumer needs. Cruise ports strive to respond to the changing market circumstances (Pallis et al., 2017). Pallis, Arapi and Papachristou (2019) researched models of cruise port governance focusing on the configuration of cruise port strategies and structures in the case of the Mediterranean and adjoining seas. The authors highlighted that governments and port authorities have implemented reforms and have taken restructuring actions with the aim to adjust to the necessities of modern cruising in order to ensure that cruise ports achieve set objectives and outperform set standards. The cruise port organization was reorganized through the application of sophistic strategies involving port professionals and linked port service providers and stakeholders, as well as included port ownership with the involvement of cruise port operators in services provision (Pallis et al., 2019). The changing industry conditions challenge cruise ports to necessitate the adaptation of the port offering, especially its infrastructure, whereby with private equity, as financial source or know-how partner is becoming a more and more frequently applied strategy. The above has contributed to the growing importance of private cruise port operators. With their resources, operators strive to maximize the number of calls and the number of passengers as soon as possible. Under the term "private entry" are included all actors that have assumed responsibility to operate a cruise port, irrespective of the nature of the company/ entity (i.e. other than public port authority itself). Pallis et al. (2017) provided a comprehensive typology of cruise port private entry. The author identified the following main cruise port private entries: cruise lines; pure cruise terminal operators; international terminal operators (ITO); port company; real estate and infrastructure managers; shipping agency, travel operator and logistic company; chamber of commerce; shipping company; conglomerate; banks, insurance companies and PE funds. The interest of private investors to invest in cruise tourism ports is manifested in the desire for horizontal and vertical integration. Most often investors are international cruise companies and cruise terminal operators. The entry strategy is aimed at controlling costs, improving service quality, reliability in the service process and bargaining power with the local government. So far, private investment in cruise ports has its spatial and temporal characteristics. Operators' investments are cyclical and spatially concentrated in ports located in large markets characterized by a trend of demand growth and low political and institutional risk (Pallis et al., 2017). Thus, investors are looking for a positive economic climate that provides them with the basic assumptions of development, the ability to operate without institutional barriers, and a growing market from which they will absorb the maximum possible share.

Examining the Mediterranean and adjoining seas, as the second biggest cruise region, in the period of 1997-2016 Pallis et al. (2018) recorded in research 155 private entries in 71 cruise facilities located in 46 Mediterranean cruise ports of 14 countries. The authors highlight that the private entries, involving operation management or ownership of cruise port terminals, were performed by 66 different operators, containing 16 International Cruise Terminal Operators (ICTO). Global Ports Holding (GPH) is the leading cruise operator covering 8 countries and 14 locations with a strategic intention to grow in the Caribbean and Asia. The company stands out with superior growth profile, strong profitability, visible and resilient cash flow generation and high cash conversion (Global Ports Holding, 2017).

The cruise industry has still a long way to grow with a predicted capacity increase of 30% over the next six years with new big ships offering products and services appealing to a broader demographic population, whereby the development of cruise ports is going to be a major part and precondition in this expansion. Port operators are seen as key to global cruise industry growth. Port governance including private entry, especially port operators, has advantage over public port governance in diverse fields of port operation. International cruise port operators see themselves as the preferred partner for all stakeholders. In the B2B component as preferred partner for cruise lines due to being a professional counterparty, having a solution orientated approach, continuous innovation and investment in infrastructure modernization, operational excellence and sizable port network with critical mass. In the B2C element with augmented passenger experience owing to continuous passenger research, making ports "a point of interest", replicating best-in-class airport experience and owning the experience in the city. In the B2G part as cooperative partner to governments because of generating values to destinations, unique position as industry consolidator, tracking records as a dependent and professional partner (Global Ports Holding, 2017). Pallis et al. (2017) findings suggest that a new competitive environment and new market trajectories are rapidly reshaping the cruising industry, while the entering of private operators in the sector is accelerating the liberalization and internationalization processes in cruise port operations. Vaio, Medda and Trujillo (2011) indicated that private entry in the ownership or management structure of cruise ports could improve cruise port operation performance.

The increasing need for efficient cruise port operation will question the ideal model of port governance. The questioning will concentrate on whether to continue to operate cruise terminal by public authorities or to activate private operators in cruise port operation. The assumption is that private entry in cruise port operation is contributing to its efficiency and multiplying operational effects. Due to the lack of scientific research this assumption cannot be taken as granted and cannot be generalized. Overall, there is a general lack of research dealing with cruise port governance.

Based on the aforementioned assumption and insights the aim of this paper is to provide understanding of the profile of cruise ports with private entry, as a starting point for further analysis. In research, a comparative analysis of port governance models is focused on approach, cooperation of ports without and with private entry in port operation, followed by research questions that will be answered in the empirical part of paper:

RQ1. Are cruise ports with private entry in port operation geographically concentrated?

RQ2. Are cruise ports with private entry in port operation outperforming cruise ports without private entry in port operation by cruise calls and cruise passengers?

RQ3. Do cruise ports with private entry in port operation have a primary market position in respect to passenger flows?

RQ4. Are cruise ports with private entry in port operation dominantly ports of large cruisers, having a greater number of cruise passengers per call?

RQ5. Do cruise ports with private entry in port operation have a greater growth rate of cruise passengers, cruise calls and cruise passengers per call?

The research is aimed to widen the knowledge about the fundamental differences between cruise activities with regard to port operation governance. In the centre of research attention is the intensity, structure and dynamics of cruise passengers and cruise calls in cruise ports in the Mediterranean and adjoining seas. The purpose of this paper is to contribute to cruising tourism theory and practice by examining the difference between the profile of cruise ports regarding port operation governance, more precisely, the difference of cruise port profile regarding cruise activities between ports without private entry in port operations and port with private entry in port operations.

3. METHODOLOGY / *Metodologija*

Research sample includes cruise ports in the Mediterranean and adjoining seas. The research focus on this cruising area is justified considering the fact that Europe is ranked second among the most popular world cruise destinations, after North America, while the Mediterranean and adjoining seas stand out as the leading European cruising region and second cruising destination in the world after the Caribbean islands. While some areas are suitable for cruising throughout the year, such as the Caribbean and Southeast Asia, the Mediterranean and adjoining seas have shown seasonality which is a strong limiting factor in the development of cruising in that area. Despite the seasonality factor, as limitation to cruise during and around the summer season, the number of cruise passengers on the Mediterranean and adjoining seas is continuously growing. The advantages of the Mediterranean as a cruise destination are reflected in its strategic position between Europe, Africa and Asia, the Greek, Roman, Egyptian culture and history, cultural heritage, natural landscape, the contrast between modern and ancient cities and variety of products on cruising itineraries (Stojanović et al., 2014; Soriani et al., 2009).

The analysis is based on data on cruise calls and cruise passengers recorded by members of the MedCruise Association (Association of Mediterranean Cruise Ports). The MedCruise Association covers the Mediterranean and its adjoining seas, bringing together more than 100 ports in twenty countries, in four regions (Western Mediterranean, Eastern Mediterranean, Adriatic Sea and Black Sea), on three continents (Europe, Africa and Asia). The MedCruise Association's traffic data represents, on an annual basis, a sample of about 80% of cruise calls and 78% of cruise passengers on the Mediterranean and adjoining seas, therefore the sample is representative and applied analysis can generate insights in cruise activities in the Mediterranean and its adjoining seas.

Data on cruise passengers and cruise calls is acquired for 83 cruise ports. Data is obtained for the period 2009-2018 from MedCruise Association annual statistical report *Cruise Activities in MedCrusie ports*.

Table 1 Distribution of research sample by region

Tablica 1. Podjela uzorka po području

WEST MED			ADRIATIC SEA
Alicante	Genoa	North Sardinian	Ancona
Azores	Gibraltar	Ports	Bari
Balearic Islands	Gioia Tauro	Palamós	Brindisi
Barcelona	Huelva	Palermo	Corfu
Bastia/North	La Spezia	Portimao	Dubrovnik
Corsica	Lisbon	Portoferraio	Koper
Cagliari	Livorno	Portofino	Kotor
Canarian Ports	Madeira Ports	Savona	Ravenna
Cartagena	Málaga	Sète	Rijeka
Castellón	Marseille	Tangier	Sibenik
Ceuta	Messina	Tarragona	Split
Civitavecchia	Monaco	Tenerife Ports	Taranto
Costa Brava	Motril-Granada	Toulon-Var-	Trieste
Cruise Ports	Naples	Provence	Venice
French Riviera		Tunisian Ports	Zadar
Ports		Valencia	
		Valletta	
EAST MED			**BLACK SEA**
Alanya	Kavala		Batumi
Antalya	Kusadasi		Constantza
Ashdod	Mersin		Odessa
Bodrum	Patras		Sevastopol
Cyprus Ports	Piraeus		Sinop
Egyptian Ports	Souda/Chania		Sochi
Heraklion	Thessaloniki		Trabzon
Igoumenitsa	Volos		Varna
Istanbul			

Source MedCruise: Cruise Activities in MedCruise Ports, 2017 Statistics, A MedCruise Report, MedCruise – The Association of Mediterranean Cruise Ports, 2018, Piraeus, Greece

Out of the 83 analysed ports of the Mediterranean and adjoining seas, 43 operate without private entry in port operation, while 40 operate with private entry in port operation.

Statistical analysis is directed to numerical expression of cruise port calls and passenger flows. Collected data was analysed and descriptive statistics performed. *Descriptive statistics* is *used* to describe the basic features of the data in the study together with summaries about the sample and the measures. Along with graphics analysis, quantitative analysis of data is made. By comparing two observed datasets, ports without and with private entry in port operation, comparative analysis is applied in order to evaluate the research questions. Further, a t-test as a type of inferential statistic is used for hypotheses testing to determine if there is a significant difference between the means of cruise calls, cruise passenger flows and cruise passengers per call indicators between ports without and with private entry in port operation. Further, cumulative annual growth rate (CAGR) for cruise calls, cruise passenger flows and cruise passengers per call was calculated. Cumulative growth is a term used to describe a percentage of increase over a set period by determining the starting value, determining the ending value and determining the period. Cumulative growth can be used to measure growth in the past and, thereby, to plan further activities.

4. RESEARCH RESULTS / *Rezultati istraživanja*

The Mediterranean and adjoining seas as a cruising region is divided in four regions: Western Mediterranean, Eastern Mediterranean, Adriatic Sea and Black Sea. Table 2 shows the distribution of ports without and with private entry in port operation within the regions.

Figure 1 Mapping of cruise ports in the Mediterranean and adjoining seas with regard to port governance

Slika 1. Prikaz luka za kružna putovanja na Mediteranu i susjednim morima s obzirom na upravljanje lukama

Source: Authors based on data from Pallis, A. A., Parola, F., Satta, G. and Notteboom, T. E. (2017), Private entry in cruise terminal operations in the Mediterranean Sea, Maritime Economics & Logistics, Volume. 20, Issue 1, pp. 1-28 (Note: Port of Zadar – has from 2018 private entry in port operation; Port of Dubrovnik – although a pre-contract with a private investor was signed in 2015 the cooperation was not established.)

Table 2 Distribution of cruise ports with regard to port governance within cruising regions in the Mediterranean and adjoining seas

Tablica 2. Prikaz luka za kružna putovanja s obzirom na upravljanje lukama u kruzing područjima na Mediteranu i susjednim morima

Region	Ports without private entry	Ports with private entry
West Mediterranean	23	19
East Mediterranean	9	8
Adriatic sea	8	7
Black sea	3	6
Total	43	40

Source: Authors' research

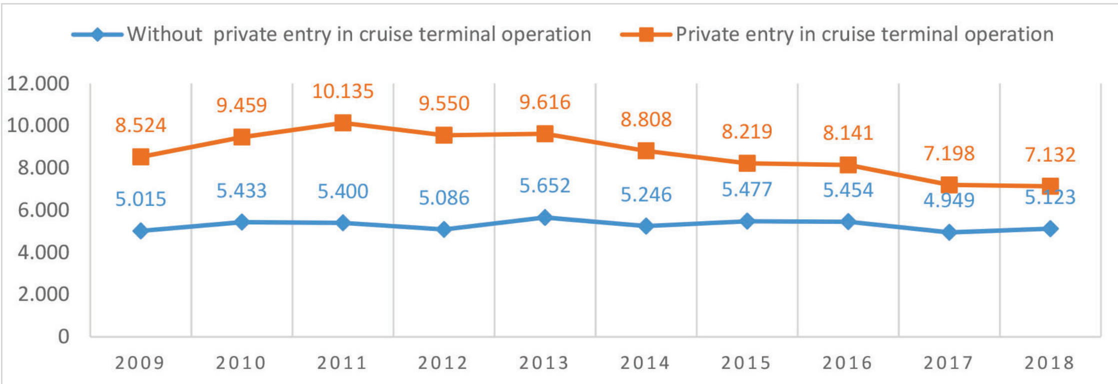
Cruise ports with regard to port governance are geographically dispersed. There is no region with a dominant share of a specific type of port governance. The dominant area of both observed types of port governance is the West Mediterranean as a result of a general domination of that territory in cruising activities. Therefore, with regard to RQ1 it can be concluded that cruise ports with private entry in port operation are not geographically concentrated.

Further analysis was made on cruise calls and cruise passenger flows. The aim was to find out whether cruise ports with private entry in port operation outperform cruise ports without private entry in port operation by cruise calls and cruise passengers.

Cruise ports with private entry in port operation are outperforming cruise ports without private entry in port operation regarding cruise ship calls during the observed period. Despite the fact that cruise ship calls in ports with private entry in port operation are continuously decreasing since year 2011, the number of cruise ship calls in ports without private entry in port operation is more or less constant. The share of cruise ports with private entry in port operation in total cruise calls in 2018 was 58,2%, while the share in 2011 was 65,2%. The cause of the significant drop of cruise calls in ports with private entry in port operation is the adoption of ports to contemporary market needs. Namely, since the beginning of the century cruise ships are becoming bigger in size, therefore less cruise calls contribute to more cruise passengers as presented in Figure 2.

The long-term trend shows the superiority of cruise ports with private entry in port operation in opposition to ports without private entry in port operation. The share of cruise ports with private entry in port operation in total cruise passenger flows in 2018 was 67%, while the share was 71,4% in 2011. Based on the aforementioned the answer to RQ2 is that cruise ports with private entry in port operation are outperforming cruise ports without private entry in port operation by cruise calls and cruise passengers in the Mediterranean and adjoining seas.

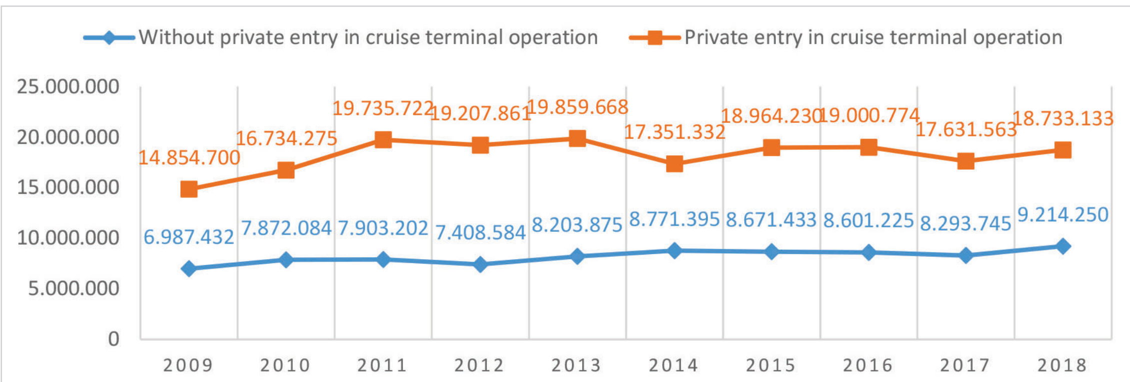
Following the previous statement, it is questioned whether cruise ports with private entry in port operation have a primary market position in respect to passenger flows. With the purpose to provide insights into the market position of cruise ports with private entry in port operation Table 3 and Table 4 were construed.



Graph 1 Cruise calls in cruise ports with regard to port governance

Grafikon 1. Ticanja brodova za kružna putovanja s obzirom na tip upravljanja lukom

Source: Authors



Graph 2 Cruise passenger flows in cruise ports with regard to port governance

Grafikon 2. Kretanja putnika u lukama za kružna putovanja s obzirom na upravljanje lukom

Source: Authors' research

Table 3 Classification of ports in the Mediterranean and adjoining seas with respect to cruise passenger traffic (2009-2017)
Tablica 3. Klasifikacija luka na Mediteranu i susjednim morima s obzirom na promet putnika na kružnim putovanjima (2009. – 2017.)

Ports with a primary role > 4.000.000 passengers (total 2009-2017)	Ports with a secondary role 1.000.000 – 4.000.000 passengers (total 2009-2017)	Ports with a tertiary role < 1.000.000 passengers (total 2009-2017)
Balearic Islands, **Barcelona, Bari, Civitavecchia**, Krf, Dubrovnik, **French Riviera Ports, Genoa, Lisbon, Livorno,** Madeira Ports, **Malaga, Marseille, Naples,** Palermo, **Piraeus, Savona,** Tenerife Ports, **Valletta, Venice**	Cagliari, Cartagena, Cyprus Ports, Gibraltar, Heraklion, **Istanbul, Kotor, Kusadasi, La Spezia, Messina,** Monaco, North Sardinian Ports, Split, **Toulon-Var,** Provence, Tunisian Ports, **Valencia**	**Alanya, Alicante**, Ancona, **Antalya**, Ahshod, Azores, Bastia/North Corsica, **Batumi, Bodrum**, Brindisi, **Burgas**, Canarian Ports, Castellon, Cueta, Constanza, **Costa Brava Cruise Ports**, Egyptian Ports, Gioia Tauro, Huevla, Igoumenitsa, Kavala, **Koper, Mersin**, Motril-Granada, Odessa, Palmos, Patras, Portimao, **Portoferraio, Portofino, Ravenna, Rijeka**, Sete, **Sevastopol,** Šibenik, **Sinop, Sochi**, Souda/Chania, Tangier, Taranto, Tarragona, Thessaloniki, **Trabzon, Trieste**, Varna, Volos, Zadar

*bold highlighted are ports with private entry in port operation

Source: Author's research based on data collected from MedCruise publications by the Association of Mediterranean Cruise Ports (available at http://www.medcruise.com/publications) (viewed 10/02/2020)

Sample analysis for the period 2009-2017 contributed to the identification of three categories of cruise ports with respect to passenger traffic. The three categories are ports with a primary role with over 4.000.000 passengers during the observed period, ports with a secondary role reaching from 1.000.000 to 4.000.000 passengers and ports with a tertiary role having under 1.000.000 passengers during the observed period. Research results indicate that fourteen out of twenty ports with primary role in passenger flows in the period 2009-2018 are ports with private entry in port operation. Namely, Barcelona, Bari, Civitavecchia, French Riviera Ports, Genoa, Lisbon, Livorno, Malaga Marseille, Naples, Piraeus, Savona, Valletta and Venice are all ports with more the 4 million cruise passengers in the observed period and ports with private entry in port operation.

The domination of cruise ports with private entry in port operation on the Mediterranean and adjoining seas is even more obvious in respect to findings presented in Table 4. To be specific, four out of top five passenger cruise ports with highest traffic are cruise ports with private entry in port operation. Further eight out of top ten cruise ports regarding cruise passenger flows are cruise ports with private entry in port operation. To express it in percentage, in 2017, 43,9% of overall cruise passenger flows were obtained by eight ports with private entry in port operation in the overall top ten cruise ports regarding passenger traffic share of the major cruise ports in the Mediterranean and adjoining seas achieving together a share of 55,7% of all cruise passenger flows in the region. As presented in Table 3 and Table 4 the findings to RQ3 show that cruise ports with private entry in port operation have a primary market position in respect to passenger flows.

The cruising industry is marked by continuous slowing down of the number of cruise ship calls per year, even though cruise passenger movements per year are increasing, which is caused by the increase in the size of cruise ships. The year 2017 was the third successive year with an average number of passengers exceeding 2.000, resulting in a remarkable growth of 50,5%

Table 4 Cruise passenger traffic share of the major cruise ports in the Mediterranean and adjoining seas (2009-2017)
Tablica 4. Udio putnika na kružnim putovanjima u prometu glavnih luka za kružna putovanja

Rang Luka	2017	2016	2015	2014	2013	2012	2011	2010	2009
1 Barcelona	10,5%	9,9%	9,3%	9,1%	9,4%	9,9%	9,6%	9,6%	9,0%
2 Civitavecchia	8,5%	8,7%	8,3%	8,3%	9,1%	8,3%	7,9%	9,3%	9,0%
3 Balearic Islands	8,2%	7,2%	7,3%	6,1%	5,6%	5,7%	6,3%	5,8%	5,0%
4 Marseille	5,8%	5,9%	5,3%	5,1%	4,3%	2,9%	2,8%	2,9%	3,3%
5 Venecija	5,5%	5,9%	5,8%	6,7%	6,6%	6,5%	6,6%	6,5%	6,7%
Total Top 5	38,5%	37,6%	36,0%	35,3%	35,0%	33,2%	33,2%	34,2%	33,1%
6 Piraeus	3,7%	3,3%	3,4%	3,3%	2,9%	5,6%	4,7%	5,4%	4,5%
7 Tenerife Ports	3,6%	4,8%	4,7%	4,3%	4,2%	2,7%	3,0%	3,0%	3,3%
8 Napoli	3,6%	3,8%	3,1%	3,2%	3,8%	5,3%	4,6%	4,7%	4,9%
9 Genoa	3,3%	3,4%	3,6%	3,9%	3,4%	3,1%	3,5%	2,9%	3,0%
10 Savona	3,0%	2,5%	2,5%	2,0%	1,7%	3,2%	3,2%	3,4%	3,0%
Total Top 10	55,7%	55,4%	53,3%	52,0%	51,0%	53,0%	52,1%	53,5%	51,8%

*bold highlighted are ports with private entry in port operation

Source: Author's research based on data collected from MedCruise publications by the Association of Mediterranean Cruise Ports (available at http://www.medcruise.com/publications) (viewed 2/10/2020)

Table 5 Classification of cruise ports in the Mediterranean and adjoining seas by number of passengers per call (2009-2018)
Tablica 5. Klasifikacija luka za kružna putovanja na Mediteranu i susjednim morima prema broju putnika po ticanju (2009. – 2018.)

Ports of large cruisers > 2.000 passengers per call (Average 2009-2017)	Ports of middle size cruisers 1.000 – 2.000 passengers per call (Average 2009-2017)	Ports of small cruisers <1.000 passengers per call (Average 2009-2019)
Antalya, Balearic Islands, **Barcelona, Bari,** Cagliari, **Civitavecchia, Genoa, La Spezia, Marseille, Napoli**, Palermo, **Savona**, Tunisian Ports, **Valencia, Venice**	**Alicante**, Ancona, Ahshod, Brindisi, **Burgas**, Canarian Ports, Cartagena, Krf, Dubrovnik, French Riviera Ports, Gibraltar, Heraklion, **Istanbul, Koper, Kusadasi,** Lisbon, Livorno, Madeira Ports, Malaga, Marsille, **Messina**, Monaco, North Sardinian Ports, Piraeus, **Ravenna**, Souda/ Chania, Tangier, Tenerife Ports, **Toulon-Var**, Provence, **Trieste**, Valletta	**Alanya**, Bastia/North Corsica, **Batumi**, Bodrum, Castellon, Cueta, Constanza, **Costa Brava Cruise Ports**, Cyprus Ports, Egyptian Ports, Gioia Tauro, Huevla, Igoumenitsa, Kavala, **Kotor, Mersin**, Motril-Granada, Odessa, Palmos, Patras, Portimao, **Portoferraio, Portofino, Rijeka**, Sete, **Sevastopol**, Šibenik, **Sinop, Sochi**, Split, Taranto, Tarragona, Thessaloniki, **Trabzon**, Varna, Volos, Zadar

*bold highlighted are ports with private entry in port operation

Source: Author's research based on data collected from MedCruise publications by the Association of Mediterranean Cruise Ports (available at http://www.medcruise.com/publications) (viewed 2/10/2020)

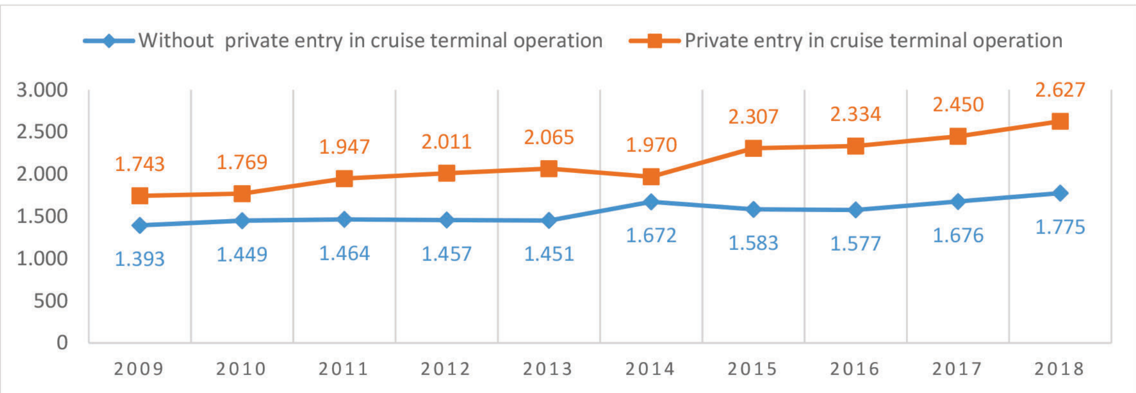
over the last decade. The cruising industry trends indicate the orientation of cruising companies to economy of scale, due to efficiency of operation, as well as meeting demand needs with an overall customer experience on board with a diversified offer of leisure time activities. The cruise ship industry is requesting cruise ports to adjust to the changed market circumstances and offer port services for bigger sized ships. The assumption is that cruise ports with private entry in port operation are more flexible and market orientated meeting market needs.

Table 5 presents the classification of cruise ports in the Mediterranean and adjoining seas by number of passengers per call for the period 2009-2018. Cruise ports are classified in three categories, namely ports of large cruisers with a passenger capacity over 2.000, ports of middle-sized cruisers with a passenger capacity from 1.000 to 2.000 and ports of small sized cruisers with a passenger capacity under 1.000. The study results show that eleven out of fifteen ports placed in the category ports of large cruisers are ports with private entry in port operation. These ports are Antalya, Barcelona, Bari, Civitavecchia, Genoa, La Spezia, Marseille, Napoli, Savona, Valencia and Venice.

Figure 3 illustrates movement of the average number of passenger per call in cruise ports over the research period regarding the type of port governance. Findings indicate that cruise ports with private entry in port operations have permanently from 2009 to 2018 a higher average number of cruise passengers per call. Ports with private entry in port operation reach an average number of 2.627 cruise passengers per call, at the same time the average number of cruise passengers per call in ports without private entry in port operation is 1.775, which is a difference of 48% in average cruise passengers per call.

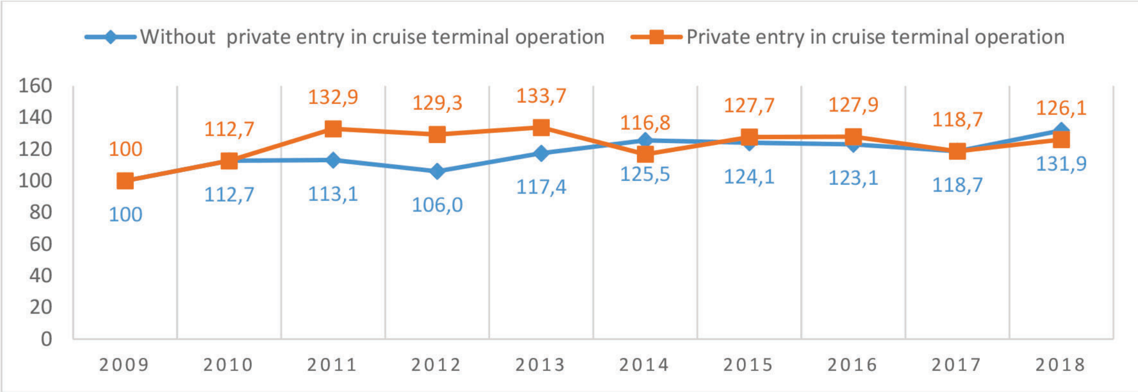
Concerning the research results in Table 5 and Figure 3 the answer to RQ4 is that cruise ports with private entry in port operation are dominantly ports of large cruisers and have a greater number of cruise passengers per call.

The cruising industry remained stable as cruising activities have been growing for the last two decades recording admirable growth rates despite of economic cycles and uncertain political climates. The middle term reflection of cruising activities indicates annual variations in cruising activities. In order to facilitate the monitoring of cruise activity trends three indexes were established, aiming to give a clear picture of the evolution of cruise passenger flows (GRIpax), cruise calls (GRIcalls) and cruise passenger per call (GRIpax/call) respectively to the type of port governance.



Graph 3 Cruise passengers per call in cruise ports with regard to port governance
Grafikon 3. Putnici na kružnim putovanjima po ticanju s obzirom na tip upravljanja lukom

Source: Author's research

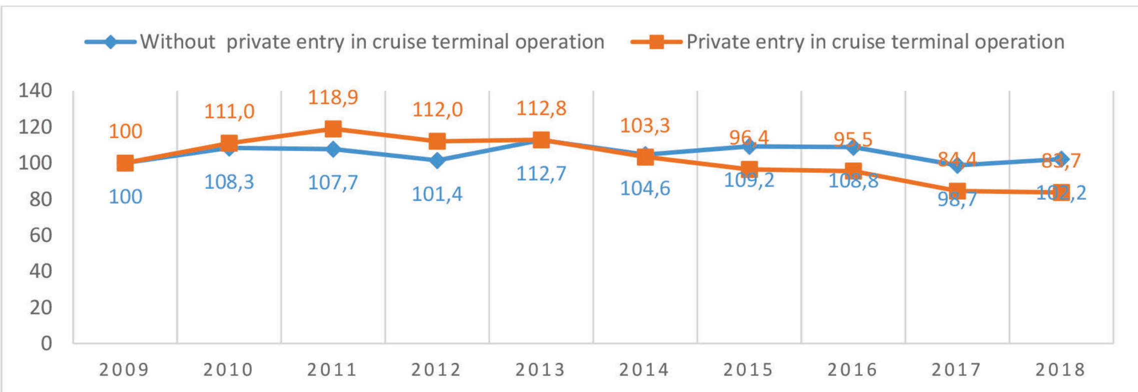


Graph 4 Cruise passengers index in cruise ports with regard to port governance
Grafikon 4. Indeks putnika na kružnim putovanjima u lukama s obzirom na tip upravljanja lukom
Source: Authors' research

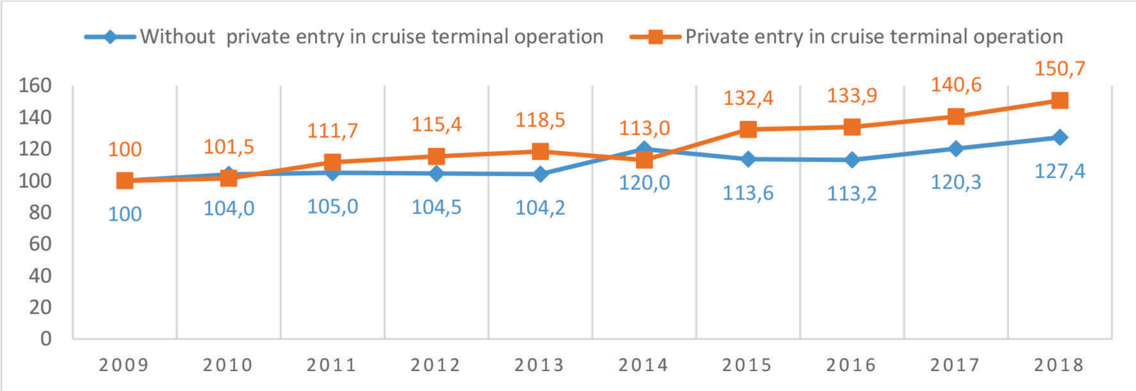
GRIpax (Figure 4) is index that monitors the annual trend of cruise port passenger flows in ports without and with private entry in port operation. The index has 2009 as the base year (GRIpax=100). The evolution of cruise passenger flows since the base year is presented respecting the type of port governance. The imbalanced nature of both types of port governance is illustrated. No clear trend, single or comparative, as well as outperformance of one type of port governance can be identified. There is no statistically significant difference in the annual growth rate of cruise passengers between the two types of port operation ($p>0.1$). The cumulative growth rate for the period 2009-2018 of cruise passengers in cruise ports without private entry in port operation in the observed period is CAGR=3,1%, while the cumulative growth rate of cruise passengers in cruise ports with private entry in port operation is CAGR=2,6%.

GRIcall (Figure 5) is index that monitors the annual trend of cruise port ship calls in ports without and with private entry in port operation. The index has 2009 as the base year (GRIcall=100). The evolution of cruise calls since the base year is presented respecting the type of port governance. The illustrated evolution of both types of port governance is associated with the change in size of deployed cruise ships in the last five years. The trend is more expressed in cruise ports with private entry. Cruise passenger numbers are growing, but at the same time number of cruise ships is declining. There is no statistically significant difference in the annual growth rate of cruise ship calls between the two types of port operation ($p>0.1$). The cumulative growth rate for the period 2009-2018 of cruise ship calls in cruise ports without private entry in port operation in the observed period is CAGR=0,2%, while the cumulative growth rate of cruise ship calls cruise in ports with private entry in port operation is CAGR=-2%.

GRIpax/call (Figure 6) is index that monitors the annual trend of average cruise port passengers per cruise call in ports without and with private entry in port operation. The index has 2009 as the base year (GRIpax/call=100). The evolution of cruise passengers per cruise call since the base year is presented respecting the type of port governance. The figure points out continuous growth of passengers per call in both types of port governance, whereby the growth rate of ports with private entry in port operation is higher compared to ports without private entry in port operation. Ports with private entry in port operation have a growth rate of cruise passengers per cruise call of 50,7% in 2018 compared to 2009, while ports without private entry in port operation have in the same period a growth rate of cruise passengers per cruise call of 27,4%. There is no statisticalyl significant difference in the annual growth rate of cruise passengers per call between the two types of port operation ($p=0.1$). The cumulative growth rate for the period 2009-2018 of cruise passengers per call in cruise ports without private entry in port operation in the observed period is CAGR=2,7%, while



Graph 5 Cruise call index in cruise ports with regard to port governance
Grafikon 5. Indeks ticanja luka za kružna putovanja s obzirom na tip upravljanja lukom
Source: Authors' research



Graph 6 Cruise passengers per call index in cruise ports with regard to port governance
Grafikon 6. Putnici na kružnim putovanjima prema indeksu ticanja luka s obzirom na tip upravljanja lukom
Source. Authors' research

the cumulative growth rate of cruise passengers per call in ports with private entry in port operation is CAGR=4,7%.

Accordingly, cruise ports without private entry in port operation are outperforming ports with private entry in port operation in the observed period 2009-2018 in both points of view, the annual growth rate with the basis year 2009 and the cumulative annual growth rate. Ports with private entry in port operation experience a declining trend in cruise ship calls. Both types of port governance encounter increasing growth rates in passenger per call, thereby are ports with private entry in port operation surpassing ports without private entry in port operation by annual growth rate with the basis year 2009 and the cumulative annual growth rate. Respectively the answer to the RQ5 is that cruise ports with private entry in port operation do not have a greater growth rate of cruise passengers and cruise calls but do have a greater growth rate of cruise passengers per call.

4. DISCUSSION / *Rasprava*

The cruising industry is shaping the tourism market. After experiencing rapid growth rates in the 2000s, the growth of the industry stagnates in the 2010s, we can say the industry took a break before the next growth explosion. The cruising industry is expected to continue to grow, but the growth will be determined by new market trends that will regulate market relations. The development of cruise ports is going to be a major part and precondition in expansion of cruising industry. The ideal model of port governance will be questioned as the need for efficiency of cruise port operation will increase. Deciding to operate cruise terminal by public authorities or to activate private operators in cruise port operation will be decisive. Port governance including private entry, especially port operators, is seen as key response to global cruise industry growth, having advantage over public port governance in diverse fields of port operation. Private port operators contribute to partnership relations with cruise lines due to increased interest in the efficiency of operations, having a solution orientated approach, orientation towards innovation and investment in infrastructure modernization, operational excellence and sizable port network. Further, private port operators are caring service providers with consumer focused business approach. Finally, private port operators are seen as cooperative partner to governments because of generating multiple values to destinations. The general assumption is that private entry is contributing to the efficiency of port operations. On the other hand, destinations find themselves on the niche between further cruise tourism expansion or limitation and protection of local environment and economy. The cruise industry, besides being an extremely successful tourism business model, is connected with concerns about over-capacity and destination ability to cater for larger cruise ships, the economic effect of this form of tourism is as well uncertain. The aforementioned will impact the choice of port governance type.

The research paper was aimed to provide findings and insights into the market profile of cruise ports with regard to port governance, as a lack of theoretical background was found in the literature. The Mediterranean and its adjoining seas were chosen as research area as a diverse and growing cruising region and due to the importance on the international cruise market. The main indicators: cruise calls, cruise passengers and average cruise passengers per call were analysed to identify by a comparative analysis the intensity, structure and dynamics of cruising activities in cruise ports in the Mediterranean and adjoining seas. The comparative analysis was made with regard to the two observed types of port governance, namely ports without private entry in port operation and ports with private entry in port operation. Based on research results it can be concluded that ports with private entry are dispersed all over four cruising regions on the Mediterranean and adjoining seas, there is no geographical concentration of the entering of private capital in port operation. Further, ports with private entry in port operation are dominating the cruise market by cruise calls and passenger flows. Despite the fact that the gap in cruise calls and cruise passengers between ports with and without private entry in port operation decreased in the last decade, the difference between the market share in favour of ports with private entry in port operation is still enormous. Additionally, cruise ports with private entry in port operation in the Mediterranean and adjoining seas are ports with a primary market role with a great share in overall regional cruise flows. Moreover, cruise ports with private entry in port operation are cruise ports of large cruisers, having a greater number of cruise passengers per call because of their flexibility in adopting market changes. Namely, bigger sized cruising ships mark the cruising industry. Cruising companies turn to economy of scale, due to efficiency of operation, in addition to meet demand needs with a diversified offer creating on board overall customer experience. With the aim to identify cruise activity trends three indexes were established, pointing to give a clear picture of the evolution of cruise passengers (GRIpax), cruise calls (GRIcalls) and average cruise passengers per call (GRIpax/call) respectively to the type of port governance. Growth rate trends regarding cruise passengers and cruise calls are in favour of cruise ports without private entry in port operation, while the growth rate trend of the average passenger per call is in favour of cruise ports with private entry. Namely, cruise ports with private entry in port operation are dominating the market share, but cruise ports without private entry are catching up as their growth rate is higher, at the same time cruise ports with private entry in port operation are tuning to bigger sized cruise ships increasing overall efficiency per call.

4. CONCLUSION / *Zaključak*

The paper is a contribution to cruise tourism theory and practice. Research efforts widen the knowledge in the field of cruise port governance and the market pattern of observed types of cruise port operation, to be specific cruise ports without private entry and with private entry in port operation. This study may assist to consider future research topics and advanced theoretical contribution to cruise research in the field of cruise management and destination management with the decomposition to port governance. Future research should consider a larger data set with extended sample and period of observation. Beside the theoretical contribution, the paper generates findings to the cruise port industry in both practical and policy terms. To the knowledge of the authors, this was the first attempt to indicate a profile of cruise ports with regard to port governance. The cruising industry is rapidly growing and demanding, cruise ports stand out as a major precondition for future activities, therefore, decisions about the type of port governance will be essential. For that reason, research findings are relevant for the future development of cruise port management.

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