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# Comparative performance analysis of the marina and charter service industries in Croatia

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ABSTRACT

Marina and charter industry represent the two basic segments of nautical tourism sector, one of the key elements of tourism development in the countries of the Mediterranean circle. With the advent of ever more ambiguous business environment driven by global health hazards, the emergence of next technological revolution and global competition, insight into the antecedents of competitiveness of companies in the nautical tourism sector in an important topic for organizations who want to survive and grow. The goal of this paper is comparison of the fundamental features of these two interconnected industries. The marina industry, observed through the financial indicators, shows attractiveness and stability. Regardless of the marina category, the success of its operations proved to be stable even in crisis market conditions. On the other hand, the charter industry, that complements the value proposition of the marina industry, shows lower level of robustness in times of crisis. The contribution of the paper is twofold. Firstly, for the purpose of the comparison of these two industries we present their basic indicators, and argue that the dynamic connection of the charter and marina industries opens possibilities to achieve higher level of competitiveness in both businesses. Also, since the available data on both industries is scarce, the paper introduces a system of data estimates, as well as system of experiential forecasting which can be used in different markets where similar limitations can be observed.

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## 1 Introduction

The importance of nautical tourism ports industry, especially marinas, as well as the associated charter industry, has the undisputable economic value for the most Mediterranean countries. The effects of nautical tourism are multiple, but also significantly different due to differences in the types of tourist activity. Connection between these two industries proved to be especially important in the year 2020, defined by the COVID-19 pandemics. This association observed through the prism of entrepreneurial cooperation is also influenced by the relations of the state administration which defines normative framework for the development of these, well regulated industries. The role of the state towards marinas and charter, in the face of any threat, in this case COVID-19, must distinguish between two aspects: the form of assistance and the form of support. In order to adequately access development in the industry so as to foster competitiveness and formulate suitable strategic approach, we need to have a firm and robust analytical basis. This paper is focused on analysis of marina and charter industry in Croatia and tries to offer explanations on the type and form of the relationship between these industries.

This problem is worth investigating because marinas, as the best equipped nautical tourism ports, have a special significance since they serve as a prerequisite for the charter industry. Also, the importance of marinas for local and regional development requires special attention and analysis, which relates to their financial operations and development. In addition to that, answering these questions and valorizing the factors that shape them is important because of the future threats, economic and otherwise. Only by identifying analytical basis we can

hope to overcome managerial cognitive myopias, key operational risks as well as to establish adequate controlling function. Lastly, the developmental potential of specific industries within the nautical tourism sector has the potential to yield significant influence on the factors of the general development of the economy of the coastal part of Croatia (Mihanović, Peronja, Vukić, 2019; Kovačić, Favro, Mezak, 2016; Jugović, Kovačić, Hadžić, 2011).

Investigation of the performance of the marina and charter industries in Croatia, is defined by the significant privation of available data on both industries, which is why we have introduced a system of data estimates, as well as system of experiential forecasting. We argue that such systems of data acquisition and presentation can be used in different markets where similar limitations can be observed.

## 2 Determining industry borders: case of Croatia

Nautical tourism represents the totality of multifunctional activities and relationships caused by the stay of nautical tourists in nautical tourism ports or outside them, and the use of yachts, as well as other facilities related to nautical tourism for recreation, sports, leisure and other needs (Luković, Gržetić, 2007). Nautical tourism system is characterized by strong normative framework, conditioning the nautical tourism ports, as entrepreneurial entities, with a whole series of requirements that characterize their business and development (Kasum, Žanić Mikuličić, Kolić, 2018).

We argue that the term "marina business" should be used in classification of nautical tourism. In respect to the traditional classification into three basic activities (Luković, 2007), nautical tourism ports, charter and cruising, opportunities have opened a need for a change in classification according to which nautical tourism is now classified into two basic subtypes: (1) Marina business, or the operation of nautical tourism ports and charter, and (2) cruising (for discussions on different facets of these industries see for example Parker, Vural, 2016; Carvache-Franco et al., 2020; Martín, Yepes, 2021; Lazarus, Ziros, 2021; Hojnik et al., 2020).

Overview of the different industrial segments within the nautical tourism sector is given in the Exhibit 1.

In relation to the division between industries within the nautical tourism sector, important question is existence of strategic groups within specific industries, that is the question of categorization. In respect to the categorization of nautical ports, it is important to note that at the level of the European Union there is still no proposal for a single categorization of marinas. However, the discussion on categorization converges towards returning to the old categorization by system as hotels, therefore, by number of stars.

However, well defined industry borders do not necessary relate to the normative framework. Because of this discrepancy the analysis of the operations of the basic subjects of the Croatian marina business is significantly hampered. An inconsistent source that ex officio observe is present in the case of marinas, as well as charters. The main problem lies in the deteriorating classification of activities, i.e. the National Classification of Activities (NKD) or the Unified Classification of Activities (JKD). That is, the five-digit NKD from 2002 contained a classification from which all three basic subtypes of nautical tourism could be distinguished, as follows: (1) Section 61 – Water transport (cruising), (2) Section 71 – Renting of machinery and equipment without handlers and items for personal and household use; subgroup 1.22 – Charter of yachts, (3)

<table>
<tr><th colspan="5">NAUTICAL TOURISM INDUSTRY</th></tr>
<tr><th>1. SECONDARY activities</th><th colspan="3">BASIC TYPES AND SUBSYPES OF NAUTICAL TOURISM</th><th>2. SUPPLEMENTARY activities</th></tr>
<tr><td rowspan="3">- Diving tourism ,,<br>- Surfing,<br>- Rafting,<br>- submarine<br>- Rowing,<br>- Fishing tourism,<br>- Robinson tourism,<br>- Lighthouse tourism,<br>- And others.</td><td colspan="2">Doing business at the port of n.t. and port-related activities</td><td colspan="2">Cruising</td><td rowspan="3">- Dry dock<br>- Shipbuilding of mega yachts,<br>- Production of small vessels<br>- Production of equipment for n.t.<br>- Skipper services<br>- Information services,<br>- Sailing schools,<br>- Research institutes and educational centres,<br>- And other services</td></tr>
<tr><td>Nautical tourism ports:</td><td>Charter</td><td>Little shippers (local cruising)</td><td>Ports for receiving large cruisers</td></tr>
<tr><td>• Anchorage<br>• Mooring<br>• Marinas, by category</td><td>• Motor boats with and without skipper<br>• Sailing boats with and without skipper</td><td>• Day trips<br>• Multi-day excursions with accommodation service</td><td>a) Large city ports:<br>• Cruise Europe members<br>• Non-members<br>b) Other small local ports</td></tr>
<tr><td colspan="5">BASIC FIELD OF RESEARCH</td></tr>
</table>

**Exhibit 1** Segments of nautical tourism sector

Source: Piplica, D., Hruska, D., Lukovic, T. *Comparative analysis of relation between entrepreneurs and the state: case of development of nautical tourism in Germany and Croatia*, Economic and Social Development: Book of Proceedings; Varazdin: 88-96. Varazdin: Varazdin Development and Entrepreneurship Agency, (Jan 22, 2021), p. 90.

Section 92 – Recreational, cultural and sporting activities; subgroup – 92.62.1 Activities of marinas (marina operations – nautical tourism port).

After the 2002 NKD, all subsequent classifications eliminated the possibility of recognizing the operation of marinas, or even nautical tourism ports in general, because, for example, marinas are now in the group "Other entertainment and recreational activities", and charter is in the group "Renting and leasing (Nleasing) of watercraft". That is, according to the latest amended version of the NKD (OG 102/2007), marinas are in two groups within the group "R-arts, entertainment and recreation", classified under R.93.2 "Entertainment and recreational activities" and subgroups 93.29 "Sports and other entertainment and recreational activities". Given the other subjects from other industries, it is impossible to obtain precise data on marinas. Also, the document of the Central Bureau of Statistics of the Republic of Croatia named "Nautical Tourism, Capacities and Operations of Nautical Tourism Ports in 2019" deals with nautical tourism ports, but financial data for marinas cannot be found there.

As far as charters are concerned, the situation is similar. From the reports of the Ministry of the Sea, Transport and Infrastructure in the Republic of Croatia, basic physical data on charter operations can be obtained, but also not financial results. The same can be said for the data from the Croatian Chamber of Commerce, where data on the financial operations of charters cannot be obtained with certainty, because it is positioned within a group "Renting and leasing of water transport equipment", which again is a wider term than charter.

Given the unavailability of consolidated data, this research will rely, in part, on data from the Central Bureau of Statistics (CBS), as well as on the list of marinas of the Ministry of the Sea, Transport and Infrastructure of the Republic of Croatia, and on research conducted at the Faculty of Tourism and Hospitality Management in Opatija, entitled "Benchmarking marina" (Janković, Vlašić, 2018).

## 3 Performance analysis of the marina industry in Croatia – previous research and current trends

According to the Central Bureau of Statistics of the Republic of Croatia and the Press Release on Nautical Tourism Ports "Nautical Tourism, Capacities and Operations of Nautical Tourism Ports in 2019", Croatia has 167 nautical tourism ports, of which 78 are marinas, including 17 dry marinas. It should be noted that a list of as many as 86 marinas can be found in the archives of the Ministry of the Sea, Transport and Infrastructure, which introduces additional confusion and problems with research. In order to deal with this information ambiguity, we have conducted data estimates, and are proposing a system of experiential forecasting.

Data on marinas, for this research, will be taken from the Central Bureau of Statistics of the Republic of Croatia Press release (2020), according to which there are 78 marinas in Croatia in 2019, of which 17 are dry marinas, i.e. 61 sea marinas. In the same document, there is no number of berths of marinas, but in the study "Benchmarking marinas" there is data on berths obtained from the CBS, according to which marinas in 2019 have 17,421 berths. Considering that there are also dry marinas, which according to the criteria of the profession do not belong to marinas, it is necessary to clear this data by a special calculation. Also, given the ownership of marinas, we propose that it is smart to look separately at ACI, as a state-owned marina, from private commercial marinas. Accordingly, it is necessary to define financial performance indicators, which are not shown in government statistics.

In order to understand the relations between physical and financial indicators in the sector of nautical tourism we have conducted eight in depth interviews with the industry experts. The experts have us insight into the relations between marinas in the sea and dry marinas, their capacity, financial performance, employment and relation with bordering industries.

In respect to these sources of information we can define levels of several key determinants of the marina industry. Firstly, if it is known that the ratio of sea marinas and dry marinas is 78% of marinas in the sea to 22% of dry marinas, and the price ratio is approximately 2:1 in favor of sea marinas. In respect to that relation, we determine that in the domain of income, a ratio of approximately 90% of marine revenue and 10% of dry marine revenue can be assumed.

In terms of berths, dry marinas on average have more than half the berths on land compared to see marinas, meaning that 17 dry marinas have a maximum of 10% (so up to 1,740 dry berths). Furthermore, if anchorages, moorings and landfills we have 758 berths, or only 4.2% of all berths, and as their berth prices are about 30% of the marina berth price, then their revenue share is about 1.5%.

Further on, the estimate of the number of employees in marinas can be conducted in respect to the relative differences of berths. Since out of total number of berths the 95.8% are marina berths, we can approximate that out of 1,901 employees in nautical tourism ports, 1,822 workers are employed in marinas.

We have used a correction coefficient (in %) of 0.98522 so that we can approximate the structure of the total revenues of nautical tourism ports: (1) Marine: 90 × 0.98522 = 88.67%, (2) Dry marinas: 10 × 0.98522 = 9.8522%, (3) All others: 1.5 × 0.98522 = 1.4778%. From these calculations we can define the structure of income by type, as follows: (1) Marinas in the sea = 108,591,602 EUR, (2) Dry marinas = 12,065,595 EUR, (3) Other = 1,809,803 EUR.

Based on the conducted calculation, a number of important data necessary for the planning and implementation of

**Table 1** Approximation of results and key size indicators of marinas

| Indicator | | Value |
|---|---|---|
| See marinas | Number of marinas | 61 |
| Dry marinas | Number of marinas | 17 |
| Total marinas | Number of marinas | 78 |
| Berths in see marinas | Number of berths | 15.681 |
| Berths in dry marinas | Number of berths | 1.740 |
| Berths in all marinas | Number of berths | 17.421 |
| Employees see marinas | Number of employees | 1.658 |
| Employees dry marinas | Number of employees | 164 |
| Employees all marinas | Number of employees | 1.822 |
| Income of see marinas | Income in 000 € | 108.591 |
| Income of dry marinas | Income in 000 € | 12.066 |
| Income all marinas | Income in 000 € | 120.657 |

Source: Authors

this research were obtained. It should be noted here that, given the approximation suggested by the experts and applied on the available official data and partly on the basis of professional experience, an error of a maximum of ± 5% is possible. The results are shown in the Table 1.

In respect to the financial performance of marinas in Croatia it is important to divide the marinas owned by the Republic of Croatia (ACI group) from privately owned marinas. In looking at these differences we would be focusing on size of marinas, and in respect to the accordance with the concession grantor, which can be wither the central government (in cases over 200 berths) or the county authority (up to 200 berths). It is important to note that for the purpose of analyzing the ownership of marinas, we have taken the data provided by the Ministry of the Sea, Transport and Infrastructure and not the one of Central Bureau of Statistics.

Table 2 shows the structure according to the concessionaire of marinas. This information is important because of the size of the marinas. That is, small marinas (up to 200 berths) are micro-entities according to the criteria of entrepreneurship, medium-sized marinas (200 to 400 berths) are small entrepreneurial projects, and large marinas (over 400 berths) are medium-sized entrepreneurial entities, which is also interesting for this research. Therefore, there are no large entrepreneurs in Croatian marinas, i.e. there are no entrepreneurs/marinas who according to the criteria of entrepreneurship and SME (Benchmarking marinas 2019) have an annual income of more than 30 million Kuna or have total assets of more than 150 million Kuna, provided they have more of 250 employees.

That is, in order to set the basic financial size of marina and charter operations, in accordance with the criteria of entrepreneurship, it is necessary to adjust the criteria that are at least somewhat close to the legal criteria of entrepreneurial classification of economic entities into micro, small, medium and large. Therefore, the results of the research on the sample "Benchmarking, December 2019" will be analyzed.

From the Table 2 it can be seen that the smaller marinas, i.e. marinas with up to 200 berths, which are in the domain of the county concession, dominate with over 50%, which is similar to the Table 3, where marinas with up to 250 berths are represented with 57.6%. As for berths, large marinas, although there are only 18.2%, dominate with 44.7% of all berths. Medium and small marinas together have 55.3% of berths. Therefore, both sources are very close to the real state of the marina structure by size, which is necessary due to the final classification according to the SME criteria.

From the perspective of state owned marinas, ACI has 22 marinas with 5,882 berths, of which 5,266 berths in the sea or 237.5 berths on average per marina and 616 dry

**Table 2** List of three groups of marinas according to the criteria of ownership and concession

| | Industry segment | | Number of marinas | % of marinas | Ownership |
|---|---|---|---|---|---|
| 1 | State ownership (ACI) | - | 22 | 25,6 | State |
| 2 | Marinas–local concession | Below 200 berths | 46 | 53,5 | Private |
| 3 | Marinas – state concession | Over 200 berths | 18 | 20,9 | Private |
| 4 | Total | - | 86 | 100,0 | - |

Source: Ministry of the Sea, Transport and Infrastructure of the Republic of Croatia

**Table 3** Marinas by size, according to the sample of "Benchmarking, December 2019."

| Criteria | Number of marinas | Marinas % | Berths | Berths % |
|---|---|---|---|---|
| Small < 250 berths | 19 | 57,6 | 3.673 | 29,3 |
| Middle 250 – 450 berths | 8 | 24,2 | 3.262 | 26,0 |
| Big > 450 berths | 6 | 18,2 | 5.600 | 44,7 |
| Total | 33 | 100,0 | 12.535 | 100,0 |

Source: Benchmarking, December 2019, Opatija

berths or an average of 44 dry berths in 14 marinas that have dry berths, or 28 dry berths in all 22 marinas. The total average of all berths for 22 marinas, at sea and on land, averages 264.2 berths.

According to the first size criterion set by "Benchmarking", ACI has a marina: 14 small (63.7%), 5 medium size (22.7%), and 3 large ones (13.6%). According to the second criterion, the concession grantor, ACI has: 9 marinas with the central government concession and 13 marinas with the county authority concession, which means that there were 40.9% of large marinas, which have over 200 berths, and 59.1% of small marina, under 200 berths.

Given the needs of the research, three groups of marinas will be formed according to size, namely the first group of up to 200 berths, the second group of 200 to 400 berths and the third group of over 400 berths. In this way, groups of marinas close to the entrepreneurial classification criteria will be formed.

Depending on the category, marinas with three and four anchors are located in a group marked as marinas of the second category.

Table 4 shows that private marinas have a slightly better structure, in terms of first category marinas, while the third category in ACI, as in private marinas, is very similar. Since berths directly affect the income of marinas, it is advisable to analyze the structure of ACI marinas and private marinas according to the number of berths. Unfortunately, this research in the group of private marinas does not have the structure of marinas by size and category, but only by category.

From the analysis of the structure of ACI marinas, considering the number of marinas and berth capacities, it can be concluded that the second category of marinas, considering berths, is dominant and similar to the number of private marinas. Given the size of marinas, a group of large marinas with over 400 berths, of which only 4 (18.2%), with as much as 33.7% participate in the structure of berths and cover the first and second category of marinas. At the same time, a large number of small and medium-sized marinas, of which 81.8% have a smaller number of berths (66.3%). This legality in the case of ACIs, given that in this example ACIs are a sufficiently large sample for approximation, was transferred to private marinas and the assessment of the structure of private marinas was approached.

Thus, Table 6 shows the structure of ACI marinas by size and category, which, given their size, are generally uniformly structured. The analysis of the structure of ACI marinas, considering the categorization, shows the dominance of middle category marinas, i.e. marinas with three and four anchors or, according to the previous categorization, four-star marinas, which have 58.6% of berths of all ACI marinas. Marinas of the third category, with 27.5% of berths, are ahead of marinas of the first category, 14.2%. The ACI analysis was performed based on the known ACI data published on the website. Since it is not possible to obtain the necessary data for private marinas, the analysis of "Benchmarking December 2019" was used for the research, and according to this research, the structure of private marinas was set according to size. At the same time, the structure of private marinas, according to the categorization, was taken over from ACI, because there are

**Table 4** ACI marinas and private marinas, by size (number of berths in total), with adjusted entrepreneurial criteria

| Category | ACI marinas | | | Total ACI marinas | | Private marinas | |
|---|---|---|---|---|---|---|---|
| | Below 200 | 200-400 | Over 400 | Number | Structure | Number | % |
| 1 | - | 1 | 1 | **2** | **9,00** | 6 | 15,4 |
| 2 | 5 | 4 | 3 | **12** | **54,6** | 18 | 46,2 |
| 3 | 6 | 2 | - | **8** | **36,4** | 15 | 38,4 |
| **∑** | **11** | **7** | **4** | **22** | **100,0** | **39** | **100,0** |
| **∑ %** | **50,0** | **31,8** | **18,2** | | | | |

Source: Authors

**Table 5** ACI marinas and private marinas, by size (number of berths in total), with adjusted entrepreneurial criteria, and by categories

| Category | ACI berths | | | | | Private marinas | |
|---|---|---|---|---|---|---|---|
| | Number | | | Total | Structure % | | |
| | Below 200 | 200-400 | Over 400 | | | Number | % |
| 1 | | 318 | 515 | **833** | **14,2** | 6 | 15,38 |
| 2 | 875 | 1.086 | 1.468 | **3.429** | **58,3** | 18 | 46,15 |
| 3 | 933 | 687 | - | **1.620** | **27,5** | 15 | 38,46 |
| **∑** | **1.808** | **2.091** | **1.983** | **5.882** | **100,0** | **39** | **100,0** |
| **∑ %** | **30,8** | **35,5** | **33,7** | | | | |

Source: Authors

**Table 6** ACI marinas and private marinas, by size (approximate number of berths in total), with adjusted entrepreneurial criteria, and by categories

| Kat. | ACI berths | | | | |
|---|---|---|---|---|---|
| | Number | | | | Structure % |
| | Below 200 | 200-400 | Over 400 | Σ | |
| 1 | - | 318 | 515 | **833** | **14,2** |
| 2 | 875 | 1.086 | 1.468 | **3.429** | **58,3** |
| 3 | 933 | 687 | - | **1.620** | **27,5** |
| **Σ** | **1.808** | **2.091** | **1.983** | **5.882** | **100,0** |
| **Σ%** | **30,8** | **35,5** | **33,7** | | |

| Private marinas berths | | | | |
|---|---|---|---|---|
| Approximation | | | | Structure % |
| Below 200 | 200-400 | Over 400 | Σ | |
| - | 588 | 1.176 | **1.764** | **11,3** |
| 3.528 | 2.038 | 3.529 | **9.095** | **58,6** |
| 3.528 | 1.294 | - | **4.822** | **30,7** |
| **7.056** | **3.920** | **4.705** | **15.681** | **100,0** |
| **45,0** | **25,0** | **30,0** | | |

Source: Authors

no other sources. In this way, by approximating the size of marinas, the structure of private marinas by categories and size was set.

Based on the data for 2019, ACI's earnings before corporate income tax were HRK 39 million, while according to the financial reports for two private marinas, Frapa Marina and Punat Marina, in the same period, they generated around HRK 30 million with less than 1,500 berths. Thus, ACI made a profit of HRK 6.6 thousand per berth, while the marinas Frapa and Punat made a profit of HRK 20,000 per berth, or three times as much.

Given the size of marinas, the structure of private marinas can be set according to the criteria of entrepreneurship, dominated by small marinas with 45% berths, which are marked as micro entrepreneurial projects, while small and medium projects have 25% and 30% berths, respectively together 55% of berths. This raises the question of the success of business and financial results of marinas, marinas and charters, i.e. marinas and entities associated with marinas.

Finally, it should be noted that the number of marinas will increase significantly in 2021, as the numerous moorings allocated by port authorities according to their power, but not according to the former "Ordinance on the classification and categorization of nautical tourism ports" (NN 72/2008), in 2021 will become marinas. The reason for this is the new rulebook on nautical tourism ports, which, as nautical tourism ports, recognizes only marinas, while all others, i.e. ports, are now under category of "other facilities".

## 4 Performance analysis of the charter industry in Croatia

National classification of economic segments classifies charter within the group (N7734) "Renting and leasing of water transport equipment". According to the data of the Ministry of the Sea, Transport and Infrastructure in the Republic of Croatia, 2,762 charter companies are registered in Croatia, of which 930 are active. Furthermore,

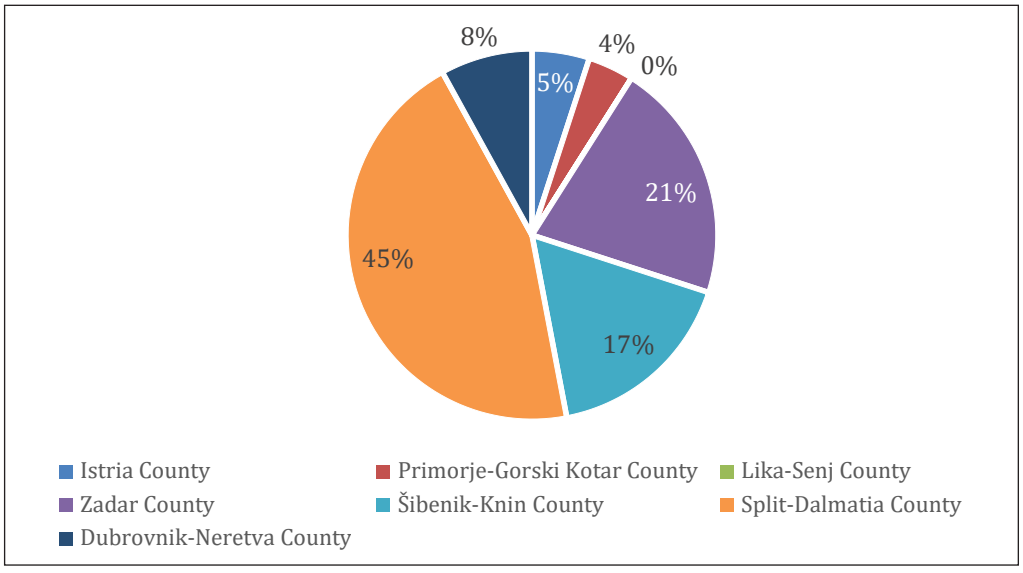


**Exhibit 2** Shares of counties in total overnight stays in nautical charter 2018

Source: Croatian National Tourist Board, "Croatian Nautical Tourism" – nautical charter – 2016 – 2018, Zagreb 2019, p. 7.

according to the Croatian Chamber of Commerce, charter companies in Croatia rent 1,956 boats, 2,166 sailing yachts and 256 motor yachts.

According to the data of the Croatian National Tourist Board on the number of overnight stays by individual nautical destinations within the Republic of Croatia, the most represented is the Split-Dalmatia County with 45% of overnight stays (Exhibit 2).

According to the same sources of information the total fleet of all yachts in Croatia numbers 126,033 boats and 3,118 yachts. Charter boaters and tourists spend more than three million nights in Croatia. According to the Tomas-nautical survey from 2019, the average daily consumption of "charters" is 183 euro, while a hotel guest spends 75 euro per day.

## 5 Comparison of marina and charter industry performance

The comparative analysis of the operations of the entities of the observed sector is based on the data of the Croatian Chamber of Commerce, related to the charter (N7734) "Renting and leasing of water transport vehicles", as well as on data on marinas from official sources and partly on the basis of approximation from a small sample of private marinas. The fact of financial strength, i.e., the results of the charter, on the one hand, and the business conditionality of the existence of marinas, indicates the need to analyze this relationship as well as the relationship of the state to charter companies and marinas.

From Table 7 it can be concluded that the charters income, on the whole, is twice as high as the marina in-

**Table 7** Basic comparative business indicators of Croatian marinas and charters in 2019 according to the SME methodology and the experiential SME method (in 000)

| **CHARTER** | | | | | |
|---|---|---|---|---|---|
| | **Micro** | **Small** | **Medium** | **Big** | **Total** |
| Long-term assets (000 kn) | 2.214.073 | 668.993 | 394.046 | | **3.277.112** |
| Long-term assets (%) | 67,56 | 20,41 | 12,03 | | **100,0** |
| Profit/Loss (000 kn) | -99.698 | 13.364 | 7.044 | | **-79.290** |
| Total income (000 kn) | 890.446 | 917.252 | 577.241 | | **2.384.939** |
| Total income (000 €) | 118.726 | 122.300 | 76.965 | | **317.992** |
| Total income (%) | 37,34 | 38,46 | 24,20 | | **100,0** |
| Number of employees | 757 | 686 | 387 | | **1.830** |
| Employees (%) | 41,37 | 37,49 | 21,14 | | **100,0** |
| Number of companies | 1.399 | 55 | 7 | | **1.461** |
| **MARINAS** | | | | | |
| | **Micro** | **Small** | **Medium** | **Big** | **Total** |
| Long-term assets (000 kn)***** | 675.000 | 375.000 | 450.000 | | **1.500.000** |
| Long-term assets (%) | 45.0 | 25,0 | 30,0 | | **100,0** |
| Total income (000 kn) **** | 238.630 | 211.750 | 364.050 | | **814.430** |
| Total income (000 €) **** | 31.817 | 28.233 | 48.541 | | **108.591** |
| Total income (%) **** | 29,3 | 26,0 | 44,7 | | **100,0** |
| Number of employees *** | 534 | 474 | 814 | | **1.822** |
| Employees (%) *** | 29,3 | 26,0 | 44,7 | | **100,0** |
| Number of berths (according to the sample)** | 7.056 | 3.920 | 4.705 | | **15.681** |
| Structure of number of berths** | 40 | 30 | 30 | | **100,0** |
| Number of marinas* | 35 | 16 | 10 | | **61** |
| Structure of number of marinas* | 57,6 | 24,2 | 18,2 | | **100,0** |

Remark:

* estimate according to the sample from "Benchmarking December 2019" and the number of marinas in the sample, and there were 33 marinas in the sample.

** estimate according to the sample from "Benchmarking December 2019" and the number of berths of ACI and private marinas, and the average was approximated, and it was calculated that marinas without dry marinas have 15,681 berths.

*** assessment according to the sample from "Benchmarking December 2019", but according to the structure of berths, because the assumption is that there is a strong correlation between berths and employees.

**** estimate according to the sample from "Benchmarking December 2019" and the number of berths in the sample, and there were 17,421 berths. The second assumption is the average price of berths among marinas of all categories, which is especially true when it comes to annual berths, which in many marinas is dominant in the revenue structure, which means that the impact of prices can be ignored.

***** estimate based on a small sample of private marinas.

Source: Authors

come, while the long-term charter assets are only one time higher than the marina assets, but by reducing it to a unit of measure this difference is reduced. That is, it means that HRK 1 million of the charter's fixed assets produces a higher income than the marina's 1 million fixed assets. Thus, HRK 1 million of marina revenue is generated with HRK 1.8 million of fixed assets, while HRK 1 million of charter revenue is generated with HRK 1.4 million of fixed assets, therefore, the charter is in a slightly more favorable position. However, the difference is not large, and the analysis contains estimated values, so it could be concluded that the results of marinas and charters are not too different, when comparing revenues and fixed assets. If, further, the revenues are compared, according to the criterion of company size, then it is evident that small companies, i.e. micro-large entrepreneurs, are 8% higher in the charter industry, which also engage 67.56% of fixed assets of the charter. This group of "micro" achieves a negative business result, of HRK 99,698 thousand, which is so large that the total charter group has a negative result of as much as HRK 79,290 thousand loss.

Analysis of other comparative indicators indicates certain differences between marinas and charters. For example, there is HRK 1.8 million in fixed assets and HRK 1.3 million in revenue per 1 charter employee. At marinas, HRK 0.8 million of fixed assets and HRK 0.447 million of revenue per employee.

Furthermore, the analysis of the group of charters, according to the size of the company in terms of employees, shows that one charter company employs 1.2 employees, as well as that one charter company operates with only 3 yachts on average. Nevertheless, the analysis according to the size of charter companies shows that small, and especially medium-sized companies, have significantly better business indicators than the group average indicator. For example, 7 medium-sized charter companies employ an average of 55 employees and generate 1.5 million revenues per year per employee, while micro companies generate 1.2 million revenues per employee, but through 1,399 companies. Furthermore, 7 medium-sized companies with 1 thousand Kuna of fixed assets generate 1.5 thousand revenues, while micro companies with 1 thousand Kuna of fixed assets generate 0.4 thousand revenues and operate at a loss. Therefore, observed according to the SME criteria, the Croatian charter is dominated by 7 medium-sized companies, and 55 small companies operate successfully with them, while micro companies have problems with business. This problem of the size of the charter company was noticed at the very beginning of ACI's business, which had its first charter fleet, in the Croatian part of the Adriatic, but soon gave up the charter business.

In marinas, the situation is more favorable, at least in terms of negative business results. That is, one employee in marinas receives an average of HRK 447 thousand in revenue, of which micro-companies/marinas generate HRK 441 thousand, small companies HRK 447 thousand, and medium-sized companies also generate HRK 447 thousand in revenue. Thus, in the case of marinas, the business indicators are, given the size of the marina, uniform.

In conclusion, the indicators of marina and charter operations do not show a significantly more favorable or unfavorable representation of marina operations than charters. The same can be concluded for the charter micro entities who do not operate much worse than small and medium, which is not the case with marinas. Of course in accessing the attractiveness of the marina and charter industries in Croatia we should also take in consideration specific risks that were tested in the 2020 season labeled by the COVID-19 pandemic. Although up to this date there is no exact data for 2020, the initial analyzes show that the marinas coped quite well with the threat, while the charter achieved poor business results.

## 6 Conclusion

The research conducted in this article has shown a strong connection between marina and charter industries. The business models of marinas and charters are connected, because without the existence of marinas there would be no charter, and vice versa – charter very significantly complements the offer of marinas.

From the perspective of fixed assets, revenues, and employees, marinas and charter companies show lot of similarities, but a deeper analysis shows significant differences as well. In the case of marinas, the analysis and comparison of the state-owned marina chain (ACI), compared to private marinas, confirms the significantly better performance of private marinas. This conclusion rightly raises the question of the fate of the state owned marinas. Furthermore, larger marinas, i.e. medium-sized business entities, are generally larger category marinas, although small and medium-category marinas are dominant in the offer of Croatian berth capacities.

From the perspective of the entrepreneurial development, as well as from the aspect of local development of the coastal part of Croatia, it is necessary to make a number of changes that would result in increasing the supply capacity, as formally envisaged by the previous national Nautical Tourism Development Strategy. In order for faster and better development of marina business, marina and charter entities, it is necessary to strengthen their joint approach towards the development of normative framework, which has been lacking so far. Currently, development of marina industry is slow, due to the existing model of concession for maritime property, are retained only on the existing locations. At the same time, the charter is developed according to the market model that supports larger companies at the expense of smaller ones. A few larger charter companies dominate the charter business in all business aspects, while a group of micro small charter companies, which dominate in terms of fixed assets, operate at a loss. In the conditions of Croatian charter business, the charter is becoming market sensitive, which,

according to the first indications, was confirmed by the nautical seasons of 2020 and 2021, which were defined by the circumstances of the COVID-19 pandemic. In all of this, marinas show greater resilience to impending risks, as opposed to charters.

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## References

[1] ACI, Marine – Adriatic Croatia InternationalClub, aci-marinas.com, last visited 27. 01. 2021.

[2] ADAC, Marina führer Deutschland, Europa, Travel House Media, Berlin, Germany, 2010.

[3] Benchmarking marina, Fakultet za menadžment u turizmu i ugostiteljstvu Opatija, Sveučilište u Rijeci, Biograd, 2020.

[4] Carvache-Franco, W., Carvache-Franco, M., Carvache-Franco, O. and Hernández-Lara, A.B. (2020). Motivation and segmentation of the demand for coastal and marine destinations, *Tourism Management Perspectives*, Vol. 34, p. 100661.

[5] Hojnik, J., Biloslavo, R., Cicero, L., Cagnina, M. R. (2020). Sustainability indicators for the yachting industry: Empirical conceptualization, *Journal of Cleaner Production*, Volume 249, 119368.

[6] Horak, S., Marušić, Z.& Sever, I. (2018). *Stavovi i potrošnja nautičara u Hrvatskoj – Tomas-nautika 2017*, Institut za turizam Zagreb, Zagreb.

[7] Hrvatska gospodarska komora – rezultati pretrage statistike djelatnosti, za 2019. (N7734) "Iznajmljivanje i davanje u zakup (Nleasing) plovnih prijevoznih sredstava".

[8] Hrvatska turistička zajednica, "Nautički turizam Hrvatske" – nautički charter – 2016. – 2018. godina, Zagreb 2019, p. 6.

[9] Jankovic, S. & Vlašić, D. (2018). Developing a benchmarking methodology for marina business. *Tourism in Marine Environments, 13*, 141–154.

[10] Jugović, A., Kovačić, M. & Hadžić, A. (2011). Sustainable Development Model For Nautical Tourism Ports. *Tourism and Hospitality Management*, 17(2), pp. 175–186.

[11] Kasum, J., Žanić Mikuličić, J. & Kolić, V. (2018). "Safety Issues, Security and Risk Management in Nautical Tourism", *Transactions on Maritime Science*. Split, Croatia, 7(2), pp. 184–188. doi: 10.7225/toms.v07.n02.008.

[12] Kovačić, M., Favro, S. & Mezak, V. (2016). Construction of Nautical Tourism Ports as an Incentive to Local Development, *Environmental Engineering & Management Journal*, 15(2), pp. 395–403. doi: 10.30638/eemj.2016.041.

[13] Lazarus, E.D., Ziros. L. A., (2021). Yachts and marinas as hotspots of coastal risk, *Anthropocene Coasts,* 4(1):61–76.

[14] Luković, T. & Gržetić Z. (2007). „Nautičko turističko tržište u teoriji i praksi Hrvatske i europskog dijela Mediterana", Hidrografski institut Split, Split.

[15] Luković, T. (2007). Nautički turizam, definiranje i razvrstavanje, Ekonomski pregled, 58(11), pp. 689–708.

[16] Martín, R., Yepes, V. (2021). Bridging the gap between landscape and management within marinas: A review, *Land*, 10 (8), art. no. 821.

[17] Mihanović, V., Peronja, I. &Vukić, L. (2019). Port Area of the Split Port Authority in the Function of Economic Development: Concessionaires Attitudes, *Transactions on Maritime Science*. Split, Croatia, 8(2), 213–218.

[18] Ministarstvo mora, prometa i infrastrukture u RH, last visited 27.12.2020.

[19] Ministarstvo pomorstva, prometa i infrastrukture – More – Marine na Jadranu – adresar, last visited 18.01.2021.

[20] Nacionalna klasifikacija djelatnosti, NKD, NN 102/2007, last visited 06.01.2021.

[21] Parker, N, Vural, C. A. (2016). Customer Segmentation for Marinas: Evaluating Marinas as Destinations, *Tourism Management*, 56, October, pp. 156–171.

[22] Pravilniku o razvrstavanju i kategorizaciji luka nautičkog turizma, NN 72/2008.