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Analysis of the Seafarers' Signing-on and Signing-off in National Navigation

Abstract

The paper analyses the impact of COVID-19 on signing-on seafarers in national navigation in the Republic of Croatia. Relevant law provisions and regulations referring to this topic were analysed as well as the number of seafarers signed-on in the period from 2018 to 2022. Statistical data on the number of signed-on seafarers were gathered from CIMIS system. Data analysis revealed that the pandemic had a significant impact on the number of signed-on seafarers with a continuous decrease in numbers from 2020 to 2022. By comparing the number of seafarers signed-on in 2018 and in 2022, it was found out that there were 867 less seafarers signed-on in national navigation in 2022, which indicates the negative impact of the pandemic on small shipowners. The greatest number of signed-on seafarers was at the nautical department followed by the engine department, whereas the other departments had fewer numbers of the signed-on seafarers. It was concluded that the number of seafarers signed-on the position of the master was decreasing continuously, whereas the number of seafarers signed-on position of master/chief engineer of a Croatian ship was increasing. Therefore, it can be concluded that the structure of signed-on seafarers changed during the pandemic.

Keywords: national navigation, COVID-19, nautical department, engine department, other departments

1. Introduction

Croatia has a long maritime tradition. Navigation is traditionally one of the most prominent occupations in coastal area [2]. Today, Croatia has about 22,000 seafarers in national and international navigation [3,6], of which approximately 15,000 participate in international navigation, and the rest in national navigation [6]. Total number of seafarers in the world is estimated at approximately 1,800,000, which means that Croatian seafarers make up approximately one percent of the total number of seafarers [4].

COVID-19 pandemic had a significant impact on signing-on seafarers all around the world. Travelling restrictions, border closures and strict quarantines in many countries have led to numerous challenges in the process of signing-on seafarers. One of the greatest problems seafarers were facing with was the inability to reach the port of embarkation. Many countries have closed their borders or introduced very strict travelling restrictions to prevent spreading of the virus. The results were flight cancellations and restrictions in international air traffic, which made it difficult for seafarers to reach the ports of embarkation. Furthermore, many shipping companies have reduced or stopped their working operations that resulted in reducing the number of jobs available for seafarers. Therefore, many seafarers became unemployed or were forced to prolong their contracts since it became impossible to replace the crew. By recognizing seafarers as key workers, the Ministry of the Sea, Transport, and Infrastructure provided direct support to seafarers in times of COVID-19, when the entire shipping industry was facing the challenges imposed by the crisis caused by the pandemic. Since the beginning of the crisis, the Republic of Croatia has paid a special attention to protecting Croatian seafarers all over the world by adopting a number of extraordinary measures. Due to the respectable number of Croatian seafarers in the international navigation, the Republic of Croatia was included in the list of countries that had recognized seafarers as key workers [7]. In the Republic of Croatia, seafarers' working conditions, their rights and duties are defined by the *Maritime Code* [5], Ordinance on Seaman's Books and Embarkation Permits, Procedures and Mode of Registration and Deregistration of Seamen in the Compulsory Pension Insurance Scheme and the Compulsory Health Insurance Scheme [11], Ordinance on Ranks and Certification of Seafarers [10], Regulation on the Minimum Number of Crew Members for Safe Navigation that Vessels, Floating Facilities and Fixed Offshore Facilities Must Have [13], and Ordinance on Health Requirement for Crew Members of Seagoing Vessels, Boats and Yachts [8]. Title VIII of the Maritime Code includes provisions concerning the crew, that refer to health and pension insurance, employment mediation, liability for death or personal injury, and seafarers' return voyage costs. It also prescribes provisions referring to education, obtaining the seafarer's title and issuing the seaman's book. Based on the Maritime Code provision, the Collective Agreement for Seafarers is applied to seafarers' working, living and social conditions. The Republic of Croatia adopted the Maritime Labour Convention - MLC in 2006. Therefore, it is obliged to

adjust the existing laws and regulations accordingly. Maritime Labour Convention was adopted at the International Labour Conference - ILO and has been in force since August 20, 2013. Based on the Maritime Labour Convention, an Ordinance on Implementation of the Maritime Labour Convention, on Croatian vessels, was adopted in 2006 [9]. Ordinance on Seaman's Books and Embarkation Permits, Procedures and Mode of Registration and Deregistration of Seamen in the Compulsory Pension Insurance Scheme and the Compulsory Health Insurance Scheme regulates the topic of who can possess the seaman's book, i.e., a seafarer, Croatian citizen embarked on a Croatian or a foreign vessel. Ordinance on Ranks and Certification of Seafarers defines study programmes, qualifications, vocation, and conditions on acquiring certificates of competency and certificates of proficiency. Ordinance on Health Requirement for Crew Members of Seagoing Vessels, Boats and Yachts defines the Occupational Medicine's procedure, i.e., the Occupational Medicine issues health certificate and sends it to a ship department - nautical department, engine department, GMDSS or other departments. Regulation on the Minimum Number of Crew Members for Safe Navigation that Vessels, Floating Facilities and Fixed Offshore Facilities Must Have defines the minimum number of crew members. In other words, the minimum number of crew members is determined by port authorities, where the vessel was registered, by issuing the Certificate on the Minimum Number of the Crew Members. Furthermore, it prescribes all the necessary certificates of competency and certificates of proficiency the seafarer must possess for a certain job position.

In the text that follows, the procedures referring to signing-on seafarers in national navigation in the Republic of Croatia will be analysed. The analysis of the number of seafarers signed-on in the period from 2018 to 2022 will be conducted with the goal of determining the COVID-19 impact on the results. The number of seafarers signed-on before, during and after the pandemic will be researched, i.e., major factors that had the impact on the results will be identified. The goal of the research is to give an insight into the real impact of the pandemic on signing-on seafarers in national navigation in the Republic of Croatia.

2. Signing-on seafarers in national navigation

The procedure of signing-on/signing off seafarers is carried out through the Crew Lists, the seaman's book, and the Croatian Integrated Maritime Information System (hereinafter CIMIS). CIMIS is an information system that ensures electronic operations in receiving and dispatching vessels among system users in the Republic of Croatia, as well as the exchange of data with the SafeSeaNet system.

An authorised employee of the Harbour Master's Office or its branch office (if the vessel is in the port of its authority) enters data into the CIMIS system. The Harbour Master's Office employee is obliged to verify the seafarer's Certificates of competency, Certificates of proficiency and Health Certificate in the system of seaman's books and

certificates, including their expiration dates. Afterwards, the employee verifies signingon in the Crew List and the seaman's book, and enters embarkation details into the CIMIS system. According to the port registry, the authorised Harbour Master's Office issues the Crew List.

The master signs-on/signs-off the crew, whereas the vessel's owner signs-on/signs-off the master. By creating a seafarer's new voyage, the name of the ship they are embarking on, their position, the port of embarkation, and the embarkation date are entered into the CIMIS system when signing-on. When signing-off, the port of disembarkation and the disembarkation date are entered into the CIMIS system.

2.1. Inspection supervision of the implementation of the Maritime Labour Convention, 2006

The shipowner is obliged to ensure that enough crew members are signed-on to enable the vessel's safe navigation. Signing-on a sufficient number of crew members with necessary certifications enables smooth performance of duties. Furthermore, the shipowner is responsible for providing the crew with working and living conditions on board, salary, annual leave, medical care, and repatriation of the seafarer. The shipowner's legal representative on board is the master.

The inspection supervision of vessels is under the authority of navigation safety inspectors, authorised officials of the Ministry, and Harbour Master's Offices. Inspection supervision can be basic, extended, detailed, or based on a report – damage. Article 76 of the Maritime Code defines the vessel's seaworthiness. If a safety inspector notices non-compliance with the Maritime Labour Convention, 2006, the Harbour Master's Office issues a decision on signing-off a seafarer, at their request, and in accordance with Article 177 of the Maritime Code. If, as a result of signing-off one or more seafarers, the number of crew members falls below the minimum prescribed, the navigation safety inspector will prohibit the vessel's departure using the Code 30, in accordance with Article 76, paragraph 3, point 1 of the *Maritime Code*. Additionally, a misdemeanour citation will be issued in accordance with Article 998 of the same Code. It is important to emphasize that if the inspection supervision reports that a vessel is not seaworthy, the prescribed fines can amount to 33,000 euros. Vessel's departure prohibition is lifted when the shipowner signs-on a minimum number of the crew and undergoes a reinspection by the navigation safety inspector. During the vessel's inspection supervision, the inspector fills in Record A, Record B, misdemeanour citation, and, if necessary, issues a Decision on the Prohibition of the Vessel's Departure, and a Decision on the Removal of Deficiencies.

Record A contains information about the vessel (name, type, port of registry, IMO number, call sign, carrying capacity, and the construction year), owner, shipowner, master, vessel's certificates, and details about the last technical inspection. In Record B, the inspector documents the nature of deficiencies with references to regulations,

technical rules, or conventions, as well as the measures taken. The misdemeanour citation determines the fine.

It is important to mention the Article 117a of the *Maritime Code*, paragraph 1, which refers to shipowners' abandonment of seafarers, i.e., it refers to the violation of the *Maritime Labour Convention*, 2006 (seafarer left without necessary support, food supplies, water, fuel, medical care, or the shipowner has broken off relations with the seafarer). Paragraph 2 of the same article refers to the vessel's departure prohibition in case when the number of crew members is lower than the minimum prescribed.

2.2. Provisions of the Collective Agreement

The Collective Agreement for seafarers on ships engaged in liner coastal maritime transport was signed between the Seafarers' Union of Croatia and the Croatian Shipowners' Association - Mare Nostrum. It applies to seafarers, citizens of the Republic of Croatia and seafarers, citizens of the European Economic Area member states working on ships engaged in liner coastal maritime transport. The agreement has been in effect since September 1, 2023. The Collective Agreement defines seafarers' rights and obligations. Seafarers are considered employed when the conclusion of the Employment Contract that has to be in writing, typically valid for an undetermined period, enters into force. However, according to the Labour Law, it can be also concluded for a fixed term in exceptional circumstances. According to the provisions of the Labour Law, a fixed-term contract can be concluded when the need for a specific job is temporary, or predetermined by a specific time, such as replacing an absent employee.

Before the conclusion of an Employment Contract, a seafarer submits to the employer a Seaman's Book, a valid health certificate, as well as certificates required for performing duties on board as prescribed by the *Ordinance on Ranks and Certification of Seafarers*. Based on the ranking, the *Ordinance* determines basic wages, for state lines, for local, county, and inter-county lines, as well as maritime allowances of the seafarer. The seafarer's salary consists of basic wages (based on the ranking), compensations, and other earnings. The basic salary includes the basic wages based on the ranking. The compensations refer to work on Sundays, holidays, at night, the seniority allowance, maritime allowance, and an allowance for extraordinary work that is not part of regular duties.

The Collective Agreement specifies provisions referring to working hours. Compensation for work on Sundays, holidays, night shifts, and overtime is increased in regard to regular working hours. Night shift compensation is increased by 30%, while work on Sundays and holidays is increased by 50% in regard to regular working hours.

According to the Ordinance on Watchkeeping Requirements and Carrying out other Shipboard Duties on board, Ensuring Safe Navigation and Protection of Pollution from Ships [12], the standard of normal hours of work for seafarers is based on

eight-hour workday with a day of rest per week and break during national holidays. Working hours should be registered through hours of work and rest for every seafarer individually. There should not be more than 14 hours of work in any 24-hour period. During any 24-hour period, a seafarer must be granted at least 10 hours of rest and 77 hours of rest in any 7-day period. Daily rest period can be divided in two parts, one of which should be at least 6 hours long, while the interval between consecutive periods of rest must not exceed 14 hours. Each seafarer is entitled to annual leave, paid an unpaid leave, sick leave, embarkation costs, repatriation, all paid for by the employer. The termination of the employment contract ends with the expiration of a fixed-term contract, termination by either party, mutual agreement, the seafarer's retirement, the seafarer's retirement due to disability, a decision by the competent court, the death of the seafarer or employer, or the liquidation or deletion of the company from the court register. The employer terminates the employment contract in writing if there is no longer a need for a specific job (business-conditioned termination); if the seafarer is unable to fulfil their obligations (personally conditioned termination); if the seafarer breaches obligations from the employment contract (termination conditioned by the employee's misconduct); if the seafarer has not met expectations during the probationary period (termination due to unsatisfactory performance during the probationary period). The reasons for the termination of a contract must be explained in the contractual notice period. Any seafarer can terminate the employment agreement by giving a 30-day written notice to the employer.

3. The analysis of the number of seafarers signed-on in national navigation for the period from 2018 to 2022

The following text analyses statistical data on the number of signed-on seafarers gathered from the CIMIS system [11], for the period from 2018 to 2022. The data are used to compare the number of seafarers before, during, and after the end of the COVID-19 pandemic.

The number of seafarers signed-on in national navigation in the period from 2018 to 2022 is graphically represented in Figure 1.

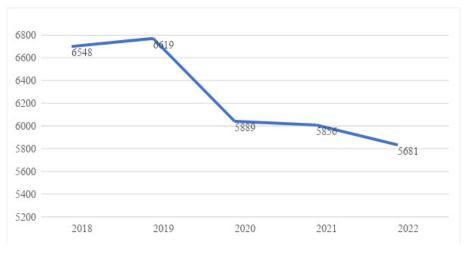


Figure 1. Total number of seafarers signed-on in national navigation from 2018 to 2022

Data analysis revealed that the number of seafarers signed-on in 2018 was 6548, followed by a slight increase in 2019 when the number of signed-on seafarers was 6619. The highest number of seafarers signed-on in the pre-pandemic period was recorded in 2019. During the pandemic, in 2020, there were 5889 signed-on seafarers, representing a decrease of 730 signed-on seafarers when compared to the previous year. The trend of decreasing numbers continued in 2021 when 5856 seafarers were signed-on. The decrease continued in 2022 as well when 5681 seafarers were signed-on. When comparing the numbers of seafarers signed-on in 2018 and in 2022, it can be concluded that there were 867 less seafarers signed-on in 2022. In other words, COVID-19 pandemic had a significant impact on small shipowners.

Total number of seafarers signed-on by departments is represented in Figure 2.

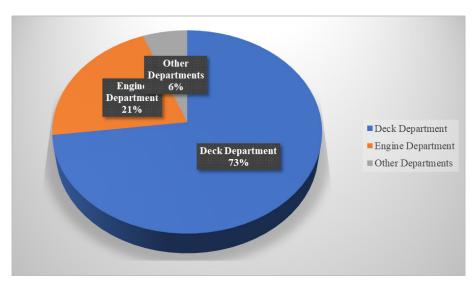


Figure 2. Total number of seafarers signed-on in 2018, by departments

Data analysis revealed that the highest number of seafarers was signed-on at the nautical department, a total of 4780 seafarers. The engine department follows with 1388 seafarers, while 380 seafarers were signed-on at other departments.

Total number of seafarers signed-on by professions in 2018 is graphically represented in Figure 3.

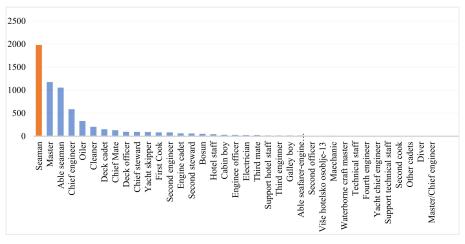


Figure 3. Number of seafarers signed-on in 2018, by professions

As can be seen from the graphical presentation in Figure 3, the highest number of signed-on seafarers was at the nautical department, followed by engine department and other departments. At the nautical department, ordinary seaman were the most signed-on seafarers. At the engine department, chief engineers were the most signed-on seafarers, whereas at other departments that were chief stewards.

Total number of seafarers signed-on by departments in 2019 is represented in Figure 4.

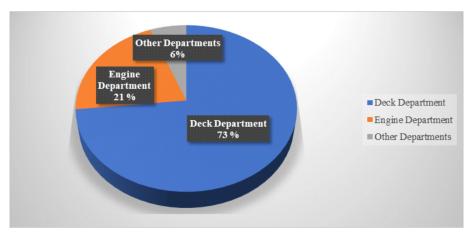


Figure 4. Number of seafarers signed-on in 2019, by departments

Data analysis revealed that the total number of seafarers signed-on in 2019 was 6619. As per departments, 4862 seafarers were signed-on at the nautical department, 1384 at the engine department and 373 at other departments. In comparison to the previous year, there was an increase by 82 seafarers signed-on at the nautical department, a decrease by 7 seafarers at other departments, and a decrease by 4 seafarers at the engine department.

Total number of seafarers by professions in 2019 is graphically represented in Figure 5.

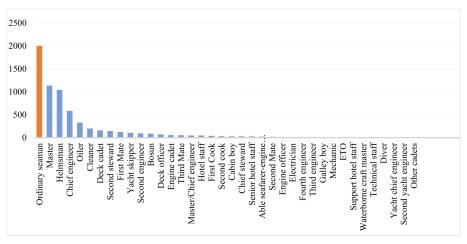


Figure 5. Number of seafarers signed-on in 2019, by professions

As can be seen from the graphical presentation in Figure 5, the highest number of seafarers signed-on in 2019 was at the nautical department, followed by engine department and other departments. At the nautical department, ordinary seaman were the most signed-on seafarers. At the engine department, chief engineers were the most signed-on seafarers, whereas at other departments that were second stewards.

Total number of seafarers signed-on by departments in 2020 is represented in Figure 6.

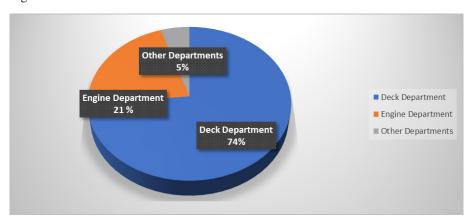


Figure 6. Number of seafarers signed-on in 2020, by departments

There were 5889 seafarers signed-on in national navigation in 2020. As per departments, 4333 seafarers were signed-on at the nautical department, 1264 at the

engine department, and 292 seafarers at other departments. In comparison to the previous year, the highest decrease was in the numbers of seafarers signed-on at the nautical department, i.e., there were 529 less signed-on seafarers. At the engine department, there were 120 less signed-on seafarers, whereas at other departments there were 81 signed-on seafarers less than in 2019.

Total number of seafarers by professions in 2020 is graphically represented in Figure 7.

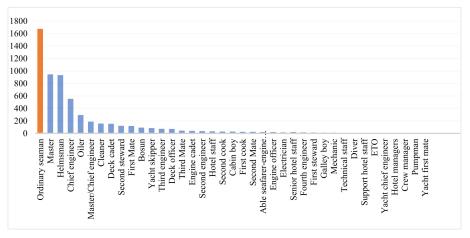


Figure 7. Number of seafarers signed-on in 2020, by professions

In 2020, there was a decrease of signed-on masters, i.e., 189 less than in 2019. However, an increase of signed-on masters/chief engineers was noticed, i.e., 139 more than in the previous year.

Total number of seafarers signed-on by departments in 2021 is graphically represented in Figure 8.

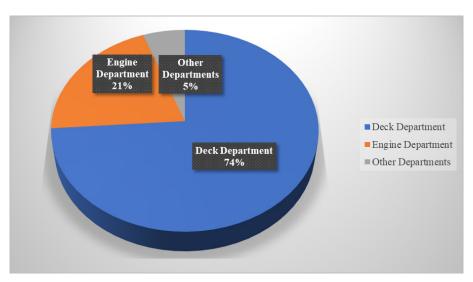


Figure 8. Number of seafarers signed-on in 2021, by departments

Total number of seafarers signed-on in national navigation in 2021 was 5856. At the nautical department, there were 4325 signed-on seafarers, followed by engine department with 1207 signed-on seafarers and other departments with 325 signed-on seafarers. When compared to the previous year, there was an increase in the numbers of seafarers signed-on at other departments, i.e., 33 seafarers more than in 2020. At the nautical department, there were 8 seafarers less, and at the engine department 57 signed-on seafarers less than in the previous year.

Total number of seafarers signed-on by professions in 2021 is graphically represented in Figure 9.

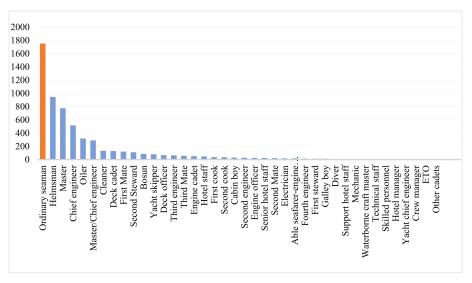


Figure 9. Number of seafarers signed-on in 2021, by professions

In 2021, there was a decrease of signed-on masters. However, there was an increase of signed-on masters/chief engineers. When compared to 2020, there were 172 less signed-on masters, whereas there were 101 more signed-on masters/chief engineers than in the previous year.

Total number of seafarers signed-on by departments in 2022 is graphically represented in Figure 10.

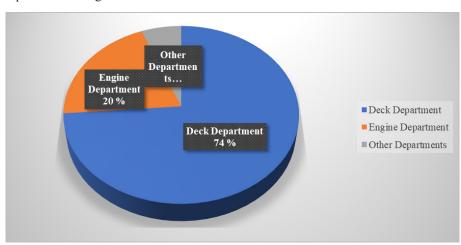


Figure 10. Number of seafarers signed-on in 2022, by departments

In 2022, there were 5681 seafarers signed-on in national navigation. At the nautical department, there were 4198 signed-on seafarers, 1152 at the engine department and 342 signed-on seafarers at other departments. When compared to the previous year, the highest decrease of the number of signed-on seafarers was at the nautical department, i.e., 127 seafarers less than in the previous year. A decrease was also recorded at the engine department, i.e., 55 seafarers less than in the previous year. However, there was an increase recorded at other departments, i.e., 17 seafarers more than in the previous year.

Total number of seafarers signed-on by professions in 2022 is graphically represented in Figure 11.

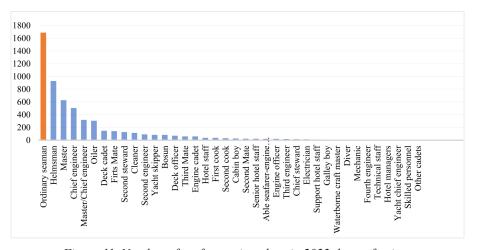


Figure 11. Number of seafarers signed-on in 2022, by professions

In 2022, there was a decrease of signed-on masters. However, there was an increase of signed-on masters/chief engineers. When compared to 2021, there were 146 less signed-on masters, whereas there were 30 signed-on masters/chief engineers more than in the previous year.

Comparison of numbers of signed-on masters/chief engineers for the period from 2018 to 2022 is graphically represented in Figure 12.

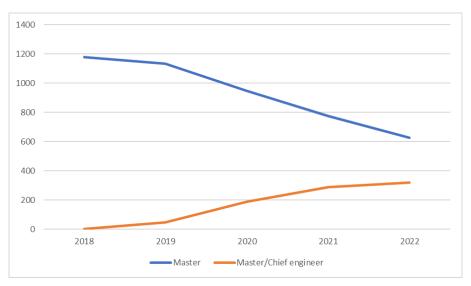


Figure 12. Comparison of numbers of signed-on masters and masters/chief engineer for the period from 2018 to 2022

When comparing data on the number of signed-on seafarers on the position of a master and those on the position of the master/chief engineer from 2018 to 2022, it can be concluded that the number of signed-on masters was decreasing, whereas the number of signed-on masters/chief engineers was increasing. In 2018, the number of signed-on masters was 1177, whereas in 2022 it was 628, i.e., there was a decrease of 549 signed-on masters. On the other hand, in 2018, there were only two signed-on masters/chief engineers, whereas in 2022 there were 319 signed-on masters/chief engineers, which is a significant increase in numbers. The increase of the number of signed-on masters/chief engineers is to a large extent the result of the shortage of engine officers and cost savings by the shipowners.

Signing-on seafarers in the dual role of a master/chief engineer is very pronounced among small shipowners where the master is usually the owner of a vessel. A master/chief engineer can be signed-on on a fishing, cargo, or a passenger ship in national navigation on the basis of the *Regulation on the Minimum Number of Crew Members*. According to this regulation, the master must possess the appropriate certificate of competency for the role of an engine officer in order to perform the dual role. In accordance with the CIMIS System, the correct title of this position is master of the Croatian ship/chief engineer in national navigation.

4. Conclusion

In the Republic of Croatia, seafarers' work, their rights, and obligations are regulated by the *Maritime Code* and accompanying regulations. Through the analysis of the *Maritime Code* and accompanying regulations, this paper has given a legal framework for the seafarers' profession. The framework includes signing-on and signing-off procedures, the crew's health fitness, minimum number of crew members needed for safe navigation, ranks and certificates of competency, seamen books, and embarkation approvals.

It was emphasised that signing the Collective Agreement in linear national and international navigation, as well as the ratification of the Maritime Labour Convention in 2006, have contributed to the protection of seafarers' rights. The number of seafarers signed-on in national navigation was significantly influenced by COVID-19 pandemic. Data analysis has shown that the number of signed-on seafarers was decreasing continuously from 2020, when the highest decrease was recorded, to 2022. By comparing the number of seafarers signed-on in 2018 and 2022, it was concluded that there were 867 less seafarers signed-on in 2022, which indicates a negative impact of the pandemic on small shipowners. Furthermore, data analysis has shown that the highest number of signed-on seafarers was at the nautical department, followed by engine department, whereas other departments had the smallest number of signed-on seafarers. The highest number of signed-on seafarers at the nautical department was on the position of ordinary seaman; at the engine department, it was the chief engineer, whereas at other departments it was the steward. Furthermore, it was concluded that the number of seafarers signed-on position of the master was decreasing continuously, whereas the number of seafarers signed-on position of the master/chief engineer was increasing. These conclusions indicate the changes in the system of signing-on seafarers during the pandemic.

References

- 1. CIMIS Croatian Integrated Maritime Information System, available from: https://mmpi.gov. hr/more-86/vts-croatia-114/cimis-hrvatski-integrirani-pomorski-informacijski-sustav/16553 [Accessed 2nd November 2023].
- Gundić, A., Maglić, L. & Zec, D. (2015) Recent developments in higher maritime education in Croatia. *Pomorstvo*. 29 (2), 115-121.
- 3. https://static.eurofound.europa.eu/covid19db/cases/HR-2021-4_1747.html [Accessed 2nd November 2023].
- 4. Marinov, E., Maglić, L. & Bukša, J. (2015) Market Competitiveness of Croatian Seafarers. *Pomorstvo*. 29 (1), 64-68.
- 5. Maritime Code, Official Gazzette 181/04, 76/07, 146/08, 61/11, 56/13, 26/15, 17/19.
- Ministarstvo mora, prometa i infrastrukture Republike Hrvatske. (2014) Strategija pomorskog razvitka i integralne pomorske politike Republike Hrvatske za razdoblje od 2014. do 2020. godine. Available from: https://mmpi.gov.hr/UserDocsImages/arhiva/POMORSKA%20STARTEGIJA%20 VRH%202207201%20web%2026-7 14.pdf [Accessed 2nd November 2023].

- 7. Ministarstvo mora, prometa i infrastrukture Republike Hrvatske. (2021) *Hrvatska na listi zemalja koje pomorce prepoznaju kao ključne radnike*. Available from: https://mmpi.gov.hr/vijesti-8/hrvatska-na-listi-zemalja-koje-pomorce-prepoznaju-kao-kljucne-radnike/22602 [Accessed 2nd November 2023].
- 8. Ordinance on Health Requirement for Crew Members of Seagoing Vessels, Boats and Yachts, Official Gazzette 93/07, 107/14, 124/15, 72/16.
- 9. Ordinance on Implementation of the Maritime Labour Convention on Croatian Vessels, 2006, Official Gazzette 122/16, 42/19.
- 10. Ordinance on Ranks and Certification of Seafarers, Official Gazzette 130/13, 45/14, 124/15, 72/16.
- 11. Ordinance on Seaman's Books and Embarkation Permits, Procedures and Mode of Registration and Deregistration of Seamen in the Compulsory Pension Insurance Scheme and the Compulsory Health Insurance Scheme, Official Gazzette 112/16, 17/19.
- 12. Ordinance on Watchkeeping Requirements and Carrying out other Shipboard Duties on board, Ensuring Safe Navigation and Protection of Pollution from Ships, Official Gazzette 125/2005, 126/2008, 34/2011, 155/2013, 29/2016.
- 13. Regulation on the Minimum Number of Crew Members for Safe Navigation that Vessels, Floating Facilities and Fixed Offshore Facilities Must Have, Official Gazzette 63/07, 76/11, 46/13, 104/15, 31/16, 83/16.