

Expectations of Maritime University Students of Future Work on a Ship

N. Kłopotek, P. Dmowski & A. Szkiel
Gdynia Maritime University, Gdynia, Poland

ABSTRACT: The main goal of education at a maritime university is to provide students with knowledge and practical skills necessary for future work on a ship. To receive the diploma of merchant navy officer, students are required to complete a 12-month maritime internship. During the internship, as well as during the entire course of studies, students' expectations regarding their future professional work are developed, related to, among others, working and living conditions on a ship, employment conditions and cooperation with the shipowner. These expectations determine the students' subsequent choices towards a given shipowner as a potential employer, as well as their decisions about further professional development in this field. From the point of view of operational management, it is therefore important for the shipowner to know the requirements that must be met in order to have a motivated and competent staff. This article aims to classify the requirements for students relative to their future work on a ship based on assessing the impact of the requirement fulfilment level against the level of their satisfaction. The results obtained made it possible to indicate those requirements regarding working conditions, the fulfilment of which should be treated by shipowners as a priority, because they determine the students' satisfaction to the highest degree.

1 INTRODUCTION

According to the data provided in the Seafarer Workforce Report (2021), there are currently 1.89 million seafarers in the global merchant fleet, handling a total of more than 74,000 ships. At the same time, there is a constantly growing shortage of qualified maritime personnel facing higher and higher requirements in terms of their knowledge and skills, resulting, e.g. from the ongoing digitization and decarbonization in maritime shipping. Since 2015, we have observed an 11.8% increase in demand for merchant navy officers, with a shortage of 26,000 officers expected by 2026. The greatest demand refers to officers of technical departments at the management level. In recent years, we have also

observed significant impact of the pandemic on the maritime labour market.

A substantial number of seafarers have given up working at sea, and as a result, those who remain extend their work at sea into old age. The report also indicates the expectations to increase the participation of women in maritime work. We can already observe an increase in the number of women working on ships (by 48% since 2015), but this group still accounts only for 1.28% of the global seafarers' labour market [8, 13].

In accordance with the provisions of legal regulations, seafarers are required to have specialized education, undergo a number of trainings, as well as obtain certificates and qualifications confirming their competence to work on a ship. In addition, the required training and certificates must be regularly

updated and seafarers' knowledge should be constantly extended and broadened. The documents mandatory for the maritime staff include: maritime health certificate, safety training certificate, seaman's booklet, qualification certificate (e.g. seafarer's, motorman's, cook's certificate) and passport (STCW). In addition, depending on the position, type of vessel and shipowner's requirements, it is necessary to have specialized qualifications. Furthermore, seafarers are required to acquire knowledge in the field of new technological solutions that are introduced on ships.

At the same time, the maritime staff also has a number of requirements to follow while choosing a shipowner or type of vessel. A similar trend is observed among candidates for seafarers – maritime students and apprentices. These people, who do not yet have work experience, have some idea of working aboard the ship and the expectations that will or will not be met in their future work on the ship, which will affect their satisfaction and subsequent choices related to maritime work and professional development in a diversified manner.

The ever-growing shortage of highly qualified seafarers refers to the fact that crewing companies employing seafarers should provide working conditions meeting the specific requirements of seafarers. Providing conditions encouraging young candidates to gain maritime education and work in the merchant navy may constitute grounds for increasing the number of seafarers with high competences. Therefore, to properly manage the organization, it is necessary for shipowners to know the requirements of their interested parties, primarily employees – seafarers [2]. This is confirmed by the results of previous research devoted to the seafarers' needs and expectations. Yildirim et al. (2022) indicate that poor working conditions have an adverse impact on the physical and mental health of seafarers, resulting in a shortage of qualified staff. The authors point out that substantial earnings constitute an important factor attracting people to take up the seafarer's job. At the same time, they note that adequate remuneration is not sufficient and shipowners should develop incentive strategies to increase the supply of seafarers. Such a strategy can be based on the knowledge about the requirements that have the greatest impact on seafarers' satisfaction, which may also indicate how to improve the quality of crewing services in terms of employment conditions and ensure the working environment on the ship [19].

In the face of the growing crisis on the labour market in the global maritime industry, information on the expectations of maritime students regarding future work at sea also seems valuable. This knowledge will help both universities and training entities, as well as employers (crewing companies) from the maritime industry to properly manage the expectations of future employees. When students' expectations are unknown, this consequently leads to mismanagement of their career ambitions, resulting in their quitting the jobs on a ship [2].

The research conducted aimed to classify the expectations (requirements) of maritime students relative to their future work on a ship based on

assessing the impact of the requirement fulfilment level against the level of their satisfaction.

2 LEGAL REQUIREMENTS

The most important requirement to be met by shipowners when organizing work aboard the ship is to ensure the safety of crew, property and natural environment. Universal standards in the field of maritime safety are defined by the International Maritime Organization (IMO) [9]. In 1993, the IMO adopted the International Safety Management Code (ISM Code), which requires all shipping companies operating certain types of ships to establish and maintain the effective safety management systems [1, 6]. In addition to the ISM Code, the SOLAS Convention, considered one of the most important of all international agreements on merchant ship safety, adopted in 1914, is crucial for ensuring maritime safety, in response to the Titanic disaster. The main objective of the SOLAS Convention is to define minimum standards for the construction, equipment and operation of ships, relevant to their safety [4]. In order to increase the level of safety of life and property at sea and the protection of marine environment by establishing under common agreement the requirements for training, certification and watchkeeping of seafarers, the International Convention on Standards of Training, Certification and Watchkeeping (STCW) was adopted by the parties to the International Maritime Organization IMO in 1978, in London [5, 6].

The competence of staff employed on ships also affects the safety of maritime navigation. Seafarers are required to have appropriate education and training, depending on their position and regardless of their country of origin. The basic international requirements for seafarers are described in the MLC Convention – Maritime Labour Convention. The Maritime Labour Convention establishes minimum standards for the working and living conditions of all seafarers working on ships flying the flag of the ratifying countries. This document contains the requirements for seafarers and the ship concerning e.g.:

- minimum age of seafarer (16 years),
- valid medical certificate attesting to medical fitness to perform duties aboard the ship,
- appropriate training and qualifications,
- access to the job search system without the need to pay fees (employment agencies should be certified),
- opportunity to examine and seek advice on the agreement before signing,
- payment of remuneration at no greater than monthly intervals,
- total weekly standard working time (not exceeding 48h),
- minimum hours of rest,
- the height and size of seafarers' living quarters,
- a hospital room and office and recreation facilities.

The requirements of the MLC aim to ensure decent working and living conditions for seafarers, as well as to improve the safety and quality of services provided by the maritime industry [10].

Each country ratifying the international conventions should adapt its national law to the requirements of the Convention. For this reason, there are a number of national legal acts that are mandatory regarding the training requirements for seafarers and the documents they hold. They may be more detailed than the international requirements, but they cannot diverge therefrom.

3 METHODOLOGY AND DESCRIPTION OF STUDY

To achieve the objective of the work, the Kano method, appropriate for management and quality sciences, was applied. It is a quality management method that is used to determine the relationship between the degree of fulfilling the requirements for a product or service and customer satisfaction. It is based on the assumption that not all requirements affect the degree of customer satisfaction in the same way [7, 12, 15, 16]. By assessing the well-being of customers related to the fulfilment or non-fulfilment of individual requirements, the Kano method makes it possible to classify the requirements and set the directions and priorities as for improving the product or service quality. The Kano method can be used to assess and classify the requirements for various products and services. There are numerous studies on the application of the Kano method in order to assess customer requirements for services such as: catering, education, aviation, mobile applications and services offered by certification bodies or hospitals, as well as to improve products such as: cars, prams, footwear or mobile phones [3, 17, 18]. By reason of its universal nature, the Kano method can also be used to assess students' expectations as for their future work on a ship.

In the first stage of the study, by interviewing seafarers with experience in working at sea, well acquainted with the principles of cooperation with the shipowner and working conditions on the ship, the seafarers' requirements for work aboard the ship were identified, which constituted the subject of the study. As a result of this stage, 35 requirements for work aboard the ship were obtained, and were used to develop the questionnaire including 35 pairs of questions for each of the indicated requirements. The first type of questions aimed to assess the student's well-being if certain requirements are met, while the second question (opposite) aimed to assess the student's well-being if the requirement failed to be met. Questions addressed to respondents included issues such as:

1. Method of employment (through an agency or directly through the shipowner's office),
2. Shipowner's country of origin,
3. Number of shipowner's vessels,
4. Type of agreement (contract/other),
5. Contract duration,
6. Amount of earnings compared to the competition,
7. possibility to negotiate the rates/terms of the contract,
8. Pension contributions paid by the shipowner,
9. Payroll taxes paid by the shipowner,
10. Regular, stable medical assistance (insurance),

11. Regular, stable medical assistance for family members (insurance),
12. Currency of remuneration paid,
13. Costs of the journey to and from the ship paid by the shipowner,
14. Possibility to collect advance payments,
15. Apprenticeship benefits and incentive bonuses,
16. Fast-track path of promotion,
17. Training to improve competences and all related costs covered by the company,
18. Timeliness of crew substitutions (as per the contract),
19. Regular rotation contracts (permanent crew on the ship),
20. Type of vessel,
21. Size of vessel,
22. Frequency of port calls
23. Age of vessel,
24. Access to mobile phone network and the Internet,
25. Variety and palatability of meals,
26. Access to the products you need, e.g., food, cosmetics, domestic detergents,
27. Level of ship's protection against maritime piracy
28. Social conditions on board, e.g., gym, multimedia room,
29. Efficiency of ship equipment,
30. Crew country of origin,
31. Briefings for officers in the shipowner's office,
32. Positive feedback among friends and on the Internet,
33. Possibility to disembark during ship's stay in port,
34. Possibility to get alternative employment, e.g., in the shipowner's office,
35. Effective cooperation with the shipowner's office.

The study covered 75 students (15 women and 60 men) who studied at maritime faculties at Gdynia Maritime University and who had no experience in working on a ship. All respondents belonged to the under-30-years-of-age group.

Based on the analysis of the answers obtained, it was possible to provide an individual and then collective categorization of students' expectations. The expectations were divided into six categories: M – Must-be, O – One-dimensional, A – Attractive, I – Indifferent, Q – Questionable, R – Reverse [11, 14]. Depending on the category, fulfilling or not fulfilling a given expectation affects the degree of student satisfaction in a diversified manner. Therefore, depending on the category referring to a given requirement, the shipowner may take other actions to increase the satisfaction of future employees.

4 DISCUSSION OF STUDY RESULTS

The study resulted in providing the collective categorization of students' expectations regarding their future work on the ship. The satisfaction coefficient was also calculated, i.e. the impact of the degree of fulfilling a given requirement on the degree of students' satisfaction and dissatisfaction (Table 1). This coefficient indicates how strongly a given requirement can affect the satisfaction or,

if it is not fulfilled, the dissatisfaction of a customer. The positive coefficient (degree of

satisfaction) falls within the range from 0 to 1, and the negative factor (degree of dissatisfaction) from -1 to 0. The closer the value is to 1, the greater the impact on student satisfaction. The positive coefficient that approaches 0 means that the impact is very low. However, at the same time, if the coefficient approaches -1, the impact on student dissatisfaction is particularly high when a given requirement is not fulfilled. A value of approx. 0 means that this quality fails to cause any dissatisfaction, if it is not fulfilled [11]. The numbers in the first column of the table indicate the requirement number in the questionnaire form.

Table 1. Collective categorization of students' expectations as for work aboard the ship

No.	Students' expectations	Volume of satisfaction	Volume of dissatisfaction
Category: Attractive requirements			
20	type of vessel	0.83	-0.32
5	contract duration	0.81	-0.44
7	possibility to negotiate the rates / terms of contract	0.80	-0.31
16	fast-track path of promotion	0.79	-0.35
21	size of vessel	0.78	-0.23
28	social conditions, e.g., gym, multimedia room	0.75	-0.32
11	regular stable medical assistance for family members (insurance)	0.74	-0.43
15	apprenticeship benefits and incentive bonuses	0.73	-0.30
12	currency of remuneration paid	0.72	-0.21
25	variety and palatability of meals	0.70	-0.45
17	training to improve competences and all the related costs covered by the company	0.66	-0.49
26	access to necessary products, e.g., food, cosmetics, domestic detergents	0.66	-0.38
13	costs of the journey to and from the ship paid by the shipowner	0.65	-0.48
24	access to mobile phone network and the Internet	0.65	-0.36
2	shipowner's country of origin	0.60	-0.17
19	regular rotation contracts (permanent crew on the ship)	0.60	-0.10
33	possibility to disembark during ship's stay in port	0.60	-0.45
34	possibility to get alternative employment, e.g., in the shipowner's office	0.58	-0.22
4	type of agreement (contract/other)	0.54	-0.30
8	pension contributions paid by the shipowner	0.52	-0.43
Category: Mandatory requirements			
10	regular stable medical assistance (insurance)	0.53	-0.56
Category: One-dimensional requirements			
6	amount of earnings compared to the competition	0.86	-0.58
32	positive feedback among friends and on the Internet	0.67	-0.49

29	efficiency of ship equipment	0.64	-0.67
35	effective cooperation with the shipowner's office	0.64	-0.55
18	timeliness of crew substitutions (as per the contract)	0.51	-0.50
27	level of ship's protection against maritime piracy	0.48	-0.60

Category: Opposite requirements

9	payroll taxes paid by the shipowner	0.25	-0.15
---	-------------------------------------	------	-------

Category: Neutral requirements

23	age of vessel	0.54	-0.05
22	frequency of port calls	0.50	-0.13
31	briefings for officers at the shipowner's office	0.48	-0.10
14	possibility to collect advance payments	0.40	-0.10
3	number of shipowner's vessels	0.39	-0.07
1	method of employment (through the agency or directly through the shipowner's office),	0.37	-0.07

Category: Questionable requirements

30	crew country of origin	0.48	-0.17
----	------------------------	------	-------

Source: own elaboration.

The impact of the degree of fulfilling a given requirement on the degree of student satisfaction and dissatisfaction is presented in chart 1.

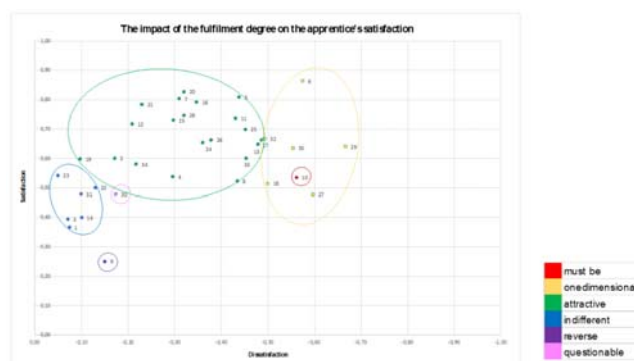


Figure 1. The impact of the fulfilment degree on the apprentice's satisfaction. Source: own elaboration.

The largest category refers to attractive qualities. They included more than half of the expectations of the students surveyed. Taking into account the highest level of student satisfaction in meeting these requirements, the "attractive" category includes:

- type of vessel (no. 20),
- contract duration (no. 5),
- possibility to negotiate the rates/terms of the contract (no.7),
- fast-track path of promotion (no.16),
- type of vessel (no. 21),
- social conditions, e.g., gym, multimedia room (no. 28),
- regular, stable medical assistance for family members (insurance – no.11),
- apprenticeship benefits and incentive bonuses (no.15),
- currency of remuneration paid (no.12),
- variety and palatability of meals (no. 25),

- training to improve competences and all related costs covered by the company (no.17),
- access to the products you need, e.g., food, cosmetics, domestic detergents (no.26),
- costs of the journey to and from the ship paid by the shipowner (no.13),
- access to mobile phone network and the Internet (no.24),
- shipowner's country of origin (no.2),
- regular rotation contracts (permanent crew on the ship – no.19),
- possibility to disembark during ship's stay in port (no.33),
- possibility to get alternative employment, e.g., in the shipowner's office (no.34),
- type of agreement (contract/other – no.4),
- pension contributions paid by the shipowner (no.8),

These are qualities that apprentices do not expect, but they turn out to be useful for them. When these qualities are provided, the apprentice's satisfaction increases, but the fact that they are unavailable fails to result in apprentice's dissatisfaction. When looking for employment and choosing a shipowner, failure to meet these requirements will not affect rejecting a given company by the student. At the same time, meeting these expectations will have a positive impact on the choice of a given shipowner. The shipowner should offer meeting these requirements, but not all of them at the same time, due to the fact that these qualities may change into a one-dimensional or mandatory category and the shipowner will have to offer meeting further expectations that will be attractive to students in order to encourage potential employees. A few selected qualities should be ensured in stages at the maximum level.

Based on the categorization, it was found that only regular stable medical assistance (health insurance during the contract and during the stay at home – requirement no. 10) is a mandatory quality in the opinion of students. This means that the lack of medical assistance for students will result in a significant increase in their dissatisfaction. This may result in rejecting a given shipowner as a potential employer, which is unfavourable for a crewing company, given the increasing shortage of maritime staff. Therefore, shipping companies should consider providing health insurance for seafarers not only on board, but also apart from the contract - while they stay at home.

Whereas one-dimensional qualities that are the most important for student satisfaction include expectations such as:

- amount of earnings compared to the competition (no.6),
- positive feedback among friends and on the Internet (no.32),
- efficiency of ship equipment (no.29),
- effective cooperation with the shipowner's office (no.35),
- timeliness of crew substitutions (as per the contract – no.18)),
- level of ship's security (effective protection against maritime piracy in hazardous areas – no. 27).

The greater the degree of fulfilling these expectations, the greater the student's satisfaction and

vice versa. When seeking future employment on a ship, students will pay the utmost attention to meeting their expectations in this regard. Therefore, these requirements should be met and developed by the shipowner and their level should not be lower than that offered by other shipowners. Meeting these expectations undoubtedly exerts an impact on the choice of a given shipowner as a potential employer. Among the one-dimensional qualities, student satisfaction is the most affected by the amount of earnings higher than that offered by the competition (0.86). A similar level of satisfaction is associated with meeting the requirements for positive opinions among friends and on the Internet (0.67), efficiency of ship equipment (0.64) and effective cooperation with the shipowner's office (0.64).

Whereas payroll taxes paid by the shipowner (requirement no. 9) are perceived by students as the opposite quality, i.e., unwanted. This means that if the shipowner takes over the obligation to pay payroll taxes, it will increase the student's dissatisfaction. Thus, shipowners should ensure that employees can pay payroll taxes on their own. The terms of the contract providing for the tax settlement by the shipowner may result in rejecting such shipowner as a potential employer.

Based on the study, it can also be concluded that six of the identified requirements are neutral qualities for students. This category includes:

- age of vessel (no. 23),
- frequency of port calls (no.22),
- briefings for officers in the shipowner's office (no.31),
- possibility to collect advance payments (no.14),
- number of shipowner's vessels (no.3),
- method of employment (through an agency or directly through the shipowner's office – no.1).

Meeting these requirements by the shipowner regarding these expectations will affect neither satisfaction nor dissatisfaction of students. These qualities are not important for students in the context of future employment aboard the ship, consequently they do not affect the choice of a given shipowner as a potential employer.

The last category – questionable, includes the expectation regarding the crew country of origin (no. 30). This means that it is difficult to say whether the fact that crew members come from one or different countries affects the satisfaction or dissatisfaction of students – this can vary depending on the specific situation on the ship. Therefore, it is difficult to indicate what actions the shipowner should take in this regard. Currently, most ships are operated by international crews, so it is probably enough to inform the prospective employee whether the crew is international or only from the employee's country of origin.

5 CONCLUSION

In response to the constantly growing shortage of qualified maritime personnel in the world, it is necessary to look for solutions to this issue. An important role in changing this unfavourable trend

refers to identifying the seafarers' requirements as well as the expectations of maritime students – future employees. Therefore, modern shipowners should prioritize the management aimed to build maritime human capital. The Kano Method is an effective method for identifying the expectations of maritime students regarding future work and verifying which of them are the most important and exert the greatest impact on students' satisfaction. The prospective seafarers' decisions to choose professional development at sea and work for a given shipowner are related to the conditions provided for them. Hence, shipowners should take into account the students' expectations to encourage the maritime future staff to take up employment and start professional development. From the operational management point of view, the shipowner should consequently decide which requirements to meet in order to have motivated and competent staff.

The study found that students primarily expect the employment conditions to include the health insurance, both during the contract and during their stay at home. However, at present this depends on the contract conditions and most frequently health insurance is provided only during the work on the ship. However, given that for students this is a mandatory requirement, it is worth considering meeting students' expectations in this area, as it may encourage them to choose a given crewing company. Students also expect the highest level of earnings – the higher the level of remuneration compared to that offered by the competition, the higher their satisfaction. The one-dimensional qualities that directly determine the choice of a given shipowner as a potential employer by students also include: positive opinions about the shipowner, efficiency of ship equipment, effective cooperation with the shipowner's office, timely crew substitutions and effective protection against maritime piracy in dangerous regions of the world. Most of the identified students' expectations were assigned to the "attractive" category. Students' satisfaction is influenced, to the greatest extent, by meeting their expectations regarding the preferred ship type, preferred contract duration, ability to negotiate the rates / contract terms and fast track of promotion.

The survey shows that most of the students' expectations, with the greatest impact on their satisfaction, relate to the earning issues. Therefore, financial issues are very important for young people in the light of the beginning of their adult independent life.

From the viewpoint of seafarers with professional experience, the perception of the requirements related to the work on a ship may differ. The study with the results presented in this article constitute the first in a series of ongoing studies. In the following study, the categorized students' expectations will be compared with the requirements of seafarers with many years of experience. The above study aims to identify differences in students' expectations and seafarers' requirements towards the work on a ship.

REFERENCES

- [1] Batalden, B.M. Sydnes, A.K. 2014. Maritime safety and the ISM code: a study of investigated casualties and incidents. *WMU Journal Marit Affairs*. 13, 3–25. DOI:10.1007/s13437-013-0051-8.
- [2] Caesar, L. Cahoon, S. 2015. Training Seafarers for Tomorrow: The Need for a Paradigm Shift in Admission Policies. *Universal Journal of Management*. 3(4), 160-167. DOI: 10.13189/ujm.2015.030404.
- [3] Howsawi, A.A. Althageel, M.F. Mohaideen, N.K. Khan, M.S. Alzahrani, A.S. Alkhadir, M.A. Alageel, S.M. Alkathiri, M.A. Hawsawi, R.A. 2019. Application of the Kano model to determine quality attributes of patient's care at the primary healthcare centers of the Ministry of health in Saudi Arabia. *Journal of Family and Community Medicine*. 2020(27). 178-185. DOI: 10.4103/jfcm.JFCM_92_20.
- [4] International Convention for the Safety of Life at Sea (SOLAS). 1974.
- [5] International Convention on Standards of Training, Certification and Watchkeeping. International Maritime Organization. London. 2017.
- [6] International Safety Management (ISM Code). International Maritime Organization. London 2018.
- [7] Kłopotek, N. Dmowski, P. Szkiel, A. Directions of using the Kano Model to improve the quality of products and services. [in:] H. Śmigielka (ed), *Current trends in Quality Sciences – consumer behavior, logistic, product management Part 2*. Sieć Badawcza Łukasiewicz – Instytut Technologii Eksploatacji Wydawnictwo Naukowe. 418-432. Radom 2021. ISBN 978-83-7789-669-3.
- [8] Kołodziej, A. 2016. Atrakcyjność, satysfakcja, prestiż. O praktycznym znaczeniu społecznej oceny zawodu marynarza. *Annals of Maritime Sociology*. XXV.
- [9] Kozłowski, M.H. 2003. Wpływ Konwencji o prawie morza (UNCLOS) na prawo bezpieczeństwa morskowego. *Prawo Morskie*. XIX. 291-314. ISSN 0860-7338.
- [10] Maritime Labour Convention (MLC). Genewa. 2006.
- [11] Matzler, K. Hinterhuber, H.H. 1998. How to make product development projects more successful by integrating Kano's model of customer satisfaction into quality function deployment. *Technovation*. 18(1). 25-38.
- [12] Rashid, M. M. Tamaki, J. Ullah, A.M.M.S. Kubo, A. 2011. A Kano Model Based Linguistic Application for Customer Needs Analysis. *International Journal of Engineering Business Management*. 3(2). ISSN 1847-9790, 29-36.
- [13] Seafarer Workforce Report - The global supply and demand for seafarers in 2021.
- [14] Thipwong, P. Wong, W-K. Huang, W-T. 2020. Kano Model Analysis For Five-Star Hotels In Chiang Mai, Thailand. *Journal of Management Information and Decision Sciences*. 23(1).
- [15] Ulewicz, R. 2016. The use of Kano model for the classification of the elements of product quality. *Systems Supporting Production Engineering, Review of Problems and Solutions*, 3(15), 117-126.
- [16] Wiśniewska, M. 2009. Rozpoznanie i zaspokojenie wymagań klienta z wykorzystaniem modelu Kano. *Problemy Jakości*. 2009-4. 6-10.
- [17] Yadav, H.C. Jain, R. Singh, A.R. Mishra, P.K. 2017. Kano integrated robust design approach for aesthetical product design: a case study of a car profile. *Journal of Intelligent Manufacturing*. 28. 1709-1727. DOI: 10.1007/s10845-016-1202-5.
- [18] Yao, M.L. Chuang, M-C. Hsu, C-C, 2018. The Kano Model Analysis of Features for Mobile Security Applications. *Computers & Security*. 78. 336-346. ISSN: 01674048. DOI: 10.1016/j.cose.2018.07.008.
- [19] Yildirim, U. Toygar, A. Çolakoğlu, C. 2022. Compensation effect of wages on decent work: A study on seafarers attitudes. *Marine Policy*. 143(105155). ISSN 0308-597X. DOI: 10.1016/j.marpol.2022.105155.