



## Perception of Female Managers in Port Enterprises: A Research in the South Marmara Ports

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### ABSTRACT

The participation of women in the workforce is increasing day by day. In many sectors, women are competing at the management level alongside men. However, the maritime sector remains one of the male-dominated industries despite the increasing number of female employees. This study aims to examine perceptions regarding the participation of women in port management, specifically in the male-dominated maritime sector and port operations. Three major port enterprises operating in the South Marmara region constitute the sample of the study. A survey was conducted to measure the perceptions of female managers in port management. The data were subjected to Exploratory Factor Analysis, and the results were analysed using t-tests to determine whether perceptions differed based on the management level of the participants. As a result of the research, the majority of participants rejected the commonly accepted belief that the sector is not suitable for women. Research results do not show any difference at the manager and officer levels. The research findings are considered a positive and inspiring outcome that challenges dominant perceptions of women in leadership positions at the management level.

**Keywords:** Gender perception, male-dominated industries, port sector, women workers.

## Liman İşletmelerinde Kadın Yönetici Algısı: Güney Marmara Limanlarında Bir Araştırma

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### Öz

Kadınların iş yaşamına katılımı her geçen gün artmaktadır. Birçok sektörde kadınlar erkeklerle birlikte rekabetçi yönetim düzeyinde varlığını göstermektedir. Denizcilik sektörü günümüzde kadın çalışan sayısının artmasına rağmen erkek egemen sektörlerden biridir. Bu çalışma erkek çalışan ağırlıklı sektörlerden biri olan denizcilik sektöründe ve liman işletmeleri özelinde, yönetim düzeyinde kadınların liman yönetimine katılımına yönelik algının incelenmesini amaçlamaktadır. Güney Marmara bölgesinde faaliyetlerini sürdürmekte olan üç büyük liman işletmesi çalışmanın örneklemini oluşturmaktadır. Çalışmada liman yönetiminde kadın yöneticilerin yer almasına yönelik algıyı ölçmeye yönelik bir anket çalışması yürütülmüştür. Veriler Açıklayıcı Faktör analizine tabi tutulmuştur. Elde edilen sonuçların, araştırmaya katılan çalışanların yönetim düzeyine göre farklılaşıp farklılaşmadığı da t-testi ile analiz edilmiştir. Araştırma sonucunda araştırmaya katılanların büyük çoğunluğu sektörün kadınlar için uygun olmadığı konusunda genel kabul gören görüşe karşı çıkmıştır. Araştırma sonuçları müdür ve memur düzeyinde herhangi bir farklılık göstermemektedir. Araştırma bulguları, yönetim düzeyinde liderlik pozisyonlarında kadınlara yönelik hâkim algılara meydan okuyan olumlu ve ilham verici bir sonuç olarak değerlendirilmektedir.

**Anahtar Kelimeler:** Cinsiyet algısı, erkek egemen endüstriler, liman sektörü, kadın çalışanlar.

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## Introduction

Gender inequality is one of the crucial topics discussed in many areas, including the workforce, in today's society, regardless of the level of development of countries. From the past to the present, the role of women as the caregiver and maintainer of household order has become ingrained, resulting in women being excluded from economic systems or facing numerous obstacles in the workforce. The perception that women cannot perform certain professions is just one aspect of this social perception. Because of this societal perception, women who already struggle with many challenges in the workforce can face career barriers from the very beginning when certain jobs are considered as men's work.

On the other hand, there are barriers that hinder women's participation and advancement in the workforce solely based on their gender (Karatepe & Aribaş, 2015). The concept of the "glass ceiling" describes the obstacles faced by women, especially in terms of career advancement and promotion in the workplace. However, today, the glass ceiling has become a subject of numerous studies, not only related to promotion barriers but also encompassing various aspects of gender-based discrimination, including hiring, firing, unequal opportunities, and pay discrepancies (Utma, 2019). As an example, a 2002 research study in the United States compared the average income levels of female CEOs to those of male CEOs. The research found that male CEOs earned 50% more than their female counterparts. The inequality in earnings, despite both genders holding the same positions, was interpreted as a result of gender differences. Additionally, it is widely accepted that the formation of male-dominated structures within companies also hinders the progression of women on their career ladder. The company climate, policies, and regulations are believed to be supportive of male employees while acting as obstacles to the advancement of women in their careers (Jafarov, 2022).

The maritime industry consists of various companies such as shipowners, port operators, brokers, ship agents, freight forwarders, and more (Tongzon and Lee, 2015). It includes many operations-oriented activities, such as the management of goods, ship, and transport equipment (such as containers), loading of goods on the ship, discharging from the ship, handling, storage, stacking, freight management, customs clearance, and transportation. Ports are one of the important areas serving ships (shelter, refuelling, maintenance) and cargo (loading, unloading, handling) (Monteiro et al., 2021). The fact that dirty, difficult, and dangerous work is carried out in the port area: working hours are 24/7, and the port management expects the employees to have received training on the field in fulfilling the requirements of the work causes the sector to be a male-dominated sector (Turnbull, 2013). One possible explanation for the limited representation of women in the maritime sector could be attributed to a lack of awareness regarding it as a viable career choice. Unless women have family members or

acquaintances already engaged in the industry, they may remain unaware of the opportunities available at sea. Additionally, traditional gender roles play a role in this disparity. Lingering stereotypes that perceive the maritime industry as exclusively male may discourage women from pursuing employment in this field, despite the fact that such beliefs are outdated (MITAGS, 2022). On the other hand, young women face a significant challenges due to the preconceptions of ship owners and maritime businesses, which makes them feel disadvantaged at the start of their professional careers (Şenbursa & Özdemir, 2020). Therefore, in order to contribute the skills and knowledge of women to global business, the World Maritime University (WMU) is working to achieve a sustained change in the gender imbalance in the maritime sector, along with the International Maritime Organization (Jones, 2008).

Gender roles that hinder women from freely moving within society and enjoying their inherent rights are one of the fundamental causes of gender inequality. In fact, while work is considered a right and a source of socio-economic satisfaction for both women and men, women's participation in the workforce is still taboo even in today's world. Research has revealed that in certain societies, women working and earning money are seen merely as additional income rather than being valued as productive contributors (Turgut, 2019). On the other hand, despite sectors such as banking, textiles, and tourism being at the forefront in terms of female employment, the number of women executives in top management positions in companies operating in these sectors is quite low. Male-dominated sectors, such as energy, technology, and maritime, are where the glass ceiling effect is most strongly felt (UN Women, 2016). For this reason, the aim of the research was to identify the current status of women employed in ports, as well as to determine the possibilities for women to participate in management positions in the port sector. In this context, a field survey was conducted among employees working at three important ports in the South Marmara region. Through the research questions, an attempt was made to determine the perspective of the port industry towards female employees. The purpose of this research is to measure the perceptions of port employees regarding the participation of women in management positions in port operations. Additionally, the research aims to determine whether these perceptions differ at different managerial levels. It is hoped that the research findings will contribute to the increase in opportunities, initiatives, and practices that promote gender equality in the sector.

## Literature Review on Women Workers in Maritime and Ports Businesses

In workplaces where men predominantly work in certain sectors, there is a perception that women cannot perform the same tasks as men, lack the necessary skills for these jobs, will exhibit low performance, and have low commitment to work and career. Indeed, these gender stereotypes create a basis for legitimizing the activities of

organizations that exclude women from hiring and development processes (Epik and Özen, 2021). The concept of gender inequality in organizations has been one of the most discussed and studied issues, and there is a large amount of national and international literature on gender inequality in workplaces. Prejudices and gender inequality are significant issues in firms for both male and female employees, according to studies. Some jobs are even categorized as being performed by men or women from the very beginning. There is a common misconception that some job-related skills are only performed by men and that women are incapable of these skills (Elbir, 2022).

According to the World Ports Sustainability Program Report 2020, gender equality projects rank near the bottom of priorities in workplaces such as ports. Ports and particularly the workforce in port environments have traditionally been male-dominated (WSP Report, 2020). To change this reality, the promotion of women's employment has been included in the European sectoral social dialogue among port workers and employees. However, the percentage of women in the global maritime workforce is still quite low. Most port operations involve shift-based work that attracts more men, and between 2014 and 2018, the participation rate of women in port operations was 12%, while it was 5% in cargo handling (Yüzbaşıoğlu, 2022).

Port enterprises appear to be among the organizations where these biases are most prevalent. However, it is an important deficiency that research on this subject is quite limited. Although there are limited studies about women working specifically in the port sector such as Halimah et al. (2019) and Barreiro-Gen et al. (2021), it has been observed that studies on women workers in maritime-related jobs have increased in recent years. In the meantime, female maritime education-related studies have also increased in recent years. This state leads to the conclusion that there may be more and more women who are trained in this field and will start working in the sector. It will lead to more studies on women working in this sector in the future. As an example, research revealed by Horck (2010) aimed to determine whether and how European maritime education and training institutions had adjusted to the rising number of female students, as well as how the shipping industry has responded to gender equality. According to the study, more needs to be done to ensure that women can compete in the shipping industry on an even playing field. Furthermore, the article presented by Szozda et al. (2014) provides the findings of recent research conducted at one of Poland's maritime universities to illustrate what female students believe about studying navigation and potential careers at sea. One of the interesting findings is that 84% of the female students declared they would choose the same field of study, having gained experience, including seagoing internships. This statistic also highlights the relatively high interest of young women in maritime navigation in Poland.

In contrast, Ku et al. (2017) conducted a study to investigate how gender cultural beliefs and social

information influence female students' choice of maritime majors. The research focused on 474 first-year and second-year students enrolled in two marine-oriented institutes situated in northern Taiwan. The findings indicate a significant negative association between gender culture beliefs held by female students attending marine-oriented institutes and their inclination to pursue gender-atypical majors. Additionally, the study highlights the crucial role of social information provided by professional role models in influencing female students' decision to opt for a gender-atypical major (Ku et al., 2017).

On the other hand, Belev et al. (2020) examined how conservative views of women's roles in shipping were gradually changing by examining maritime education. According to the research, a competitive environment was established on a completely new basis, as evidenced by the growing number of female candidates at "Nikola Vaptsarov's Navigation, Ship Engineering, and Electrician" studies. It is suggested that this leads to the ability of women to work on an equal footing with men in a solely male-dominated profession. Another significant research study was completed by Barahona-Fuentes and her colleagues in 2020. In their study, a figure analysis of female students in maritime education and training (MET) institutions in thirteen schools in ten different countries over a ten-year period (2009–2018) was conducted. However, they underlined that their findings are not very hopeful because they point to a persistent trend in gender equality in maritime education and training over the years (Barahona-Fuentes et al., 2020).

Research on gender roles in maritime-related jobs and workplaces explores the experiences, challenges, and dynamics of gender in traditionally male-dominated industries such as shipping, seafaring, maritime engineering and ports. Numerous analyses focus on the underrepresentation of women in maritime-related occupations as well as examination of the barriers and challenges faced by women in pursuing maritime careers. Additionally, investigations into occupational segregation within the industry and its impact on gender roles, as well as studies examining the experiences, attitudes, and perceptions of men and women working in maritime roles, are the primary subjects within this research area. Table 1 presents recent studies on these issues.

In the same way, the port sector in Türkiye plays a crucial role in the country's transportation and trade infrastructure. Türkiye, a sea-surrounded country, also has a significant role in worldwide port trade. But Türkiye again has a lower number of women working in port operations compared to their male counterparts, similar to other countries. However, this situation does not apply to every port facility. For instance, DP World Yarımca Terminal, one of Türkiye's largest container ports, became the first port in Türkiye to sign the United Nations Women's Empowerment Principles (WEPs) document. According to DP World (2018), while the percentage of women employees in the industry is 3%, DP World Yarımca boasts a rate of around 16%.

Table 1: Recent Studies on Gender Roles in Maritime-Related Jobs and Workplaces

Title	Authors	Publication Year	Research Outcome
Retaining talent in the maritime sector by creating a work-family balance logic: implications from women managers navigating work and family	Vo, LC; Lavissiere, MC; Lavissiere, A	2023	The authors indicated four different types of strategies to handle work-family conflicts which are compartmentalizing around work and family, having a career but family comes first if needed, having a family but career comes first if needed, and compromising between work and family.
Key factors impacting women seafarers? participation in the evolving workplace: A qualitative exploration	Narayanan, SC; Emad, GR; Fei, JG	2023	The study addresses the thematic analysis of the data which identified some physical, social, and psychological barriers that impede the workplace participation of women seafarers.
Gender in the maritime space: how can the experiences of women seafarers working in the UK shipping industry be improved?	Pike, K; Wadsworth, E; Honebon, S; Broadhurst, E; Zhao, MH; Zhang, PF	2021	The paper indicated that female seafarers encounter instances of harassment throughout their careers, posing substantial consequences for their occupational health, safety, and overall welfare. These experiences highlight shortcomings in leadership regarding the establishment and promotion of a secure and inclusive onboard environment.
Raising Awareness About Women in Turkish Maritime Industry	Şenbursa, N; Özdemir, P	2020	The research findings highlight that although women seafarers possess a genuine passion for their profession and aspire to work at sea, societal prejudices and biased perceptions among industry stakeholders obstruct their ability
Postmodern Maritime Human Resources Management - Amending the Maritime Labour Convention with Gender Requirements	Dragomir, C	2019	The study outlines specific measures required to amend the Maritime Labour Convention to enhance working conditions for women seafarers and highlights the necessary requirements for promoting gender equality and improving the overall experience of women in the seafaring industry.
Mapping women's presence and importance in the Brazilian maritime community	Medeiros, SE; Piassi, FADV; Feodrippe, RDO	2019	Along with women's main difficulties and challenges in working and thriving in what is essentially a masculine environment, it is also stated that, women in managerial positions still deal with difficulties in their work environment.
Gender in Postmodernism Maritime Transport	Dragomir, C	2019	The paper discusses a new emerging benchmark in the maritime sector, which is called the gendering shipping, based on obvious good examples of responsible social attitudes toward gender issues.
Impact of automation technology on gender parity in maritime industry	Kim, TE; Sharma, A; Gausdal, AH; Chae, CJ	2019	The study stresses physical, psychological, and social barriers of women participation in maritime careers.
Career development for women in maritime industry: organisation and socialisation perspectives	Wu, CL; Chen, SY; Ye, KD; Ho, YW	2017	In the paper, it is indicated that organizational socialization acts as a mediator between women's workplace culture and their career development.
Chinese women seafarers: A case study of the women cadets in Shanghai	Zhao, MH; Zhao, LJ; Zhang, PF; Wu, JJ; Pike, K; Broadhurst, E	2017	The research highlights obstacles to employment opportunities and career prospects for women in the maritime sector in China.
Lost in success: women's maritime careers in Eastern and Southern Africa	Bhirugnath-Bhookhun, M; Kitada, M	2017	The study highlights that a significant number of participants expressed consensus regarding the demanding nature of a maritime career. They emphasized the lack of acknowledgment for their contributions, the need for acceptance as female leaders in the maritime field, and the various financial and non-financial costs associated according to their experiences.

Türkiye has several major ports located along its coastline. Although these ports are workplaces with high employment potential that it is observed that the presence of women in these workplaces is limited. The study titled "Raising Awareness About Women in the Turkish Maritime Industry", conducted by Şenbursa and Özdemir in 2020, is one of the most significant pieces of research that sheds light on women's working conditions in the maritime sector. It is seen that, in the study, discriminatory attitudes toward women in the Turkish marine industry are carefully studied, along with potential solutions. According to Şenbursa and Özdemir (2020) even though women seafarers like their profession and want to work at sea, prejudice in society and misperceptions of stakeholders about women in the industry keep them from achieving their objective.

Fidan and colleagues (2020) also highlighted the issue of gender-based discrimination in the maritime field within the Turkish public universities. Their research findings indicate that female students tend to experience a higher level of gender discrimination compared to male students. Additionally, an important outcome of the study revealed that despite receiving education in Underwater Technology programs, women face difficulties in securing employment within the industrial diving sector due to restrictions imposed by Turkish labour laws. The purpose of Epik and Özen's (2021) study titled "Women's Labor in 'Men's Work': A Qualitative Study on Women Rebelling Gender Roles" is to examine society's perceptions and attitudes towards women in male-dominated professions, as well as the challenges they face and the coping strategies they employ to continue working in these roles. The study revealed that the main reason for motivating women to work in male-dominated professions is to break down gender biases. It was found that they encounter various challenges while performing their jobs, and to cope with these challenges, they adopt strategies such as dressing, behaving, and acting in a more masculine manner to gain acceptance.

## Methodology

This study aims to reveal the perspectives on the employment of women in management roles in ports located in the South Marmara Region of Türkiye. The South Marmara region is a significant area with growing ports, exerting a substantial influence on Türkiye's foreign trade through maritime transportation. In this context, surveys were conducted with three port enterprises in the South Marmara region, namely Bursa, Bandırma, and Çanakkale. The administrative staff of these companies were requested to participate in the survey. The surveys were conducted through Google Forms between February and December 2022. All participants received study information and provided consent before participating. There are 145 white-collar employees in the three companies. A total of 58 fully completed surveys were obtained, resulting in a response rate of 40% (58/145).

The sample was obtained using convenient sampling, a non-probability-based method (Coşkun et al., 2015).

The study used a questionnaire as the data collection tool. The responses were evaluated using a 5-point Likert scale. The scale ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire consists of two types of questions: demographic and company-related questions, and questions based on the Likert scale. The first section of the questionnaire includes 8 questions about the participants and their companies. The second section contains a 10-item unidimensional scale developed by Halimah et al. (2019) to measure the perception of women's participation in port management. In the translation of the scale into Turkish, the back translation method was used. The English scale was translated into Turkish by the authors, then checked by a proficient English speaker, and compared for meaning with the original scale through back-translation from Turkish to English by another proficient English speaker. The survey questions were submitted to Bandırma Onyedi Eylül University Ethics Committee and were approved by the ethics committee decision with meeting number 2022-2 and dated 11/02/2022. For data analysis in the research, the SPSS 22.0 software package was used. Cronbach's Alpha coefficient was used for the reliability of the scale, and exploratory factor analysis was used for its validity. The participants' demographic data were presented in terms of frequency and percentage distributions. To assess women's perception of participation in port management, we calculated the scale's mean and standard deviation values. In addition, whether the perception differed according to the management level was analysed with the t-test, one of the parametric tests.

## Findings and Analysis

In this section of the study, general information about the participants and port operations, as well as frequency analyses revealing the perception of female managers in the port, have been included.

The data for the study were obtained through a survey of 58 employees of three port enterprises in the South Marmara region. The demographic data can be summarized as follows.

- The majority of the respondents were male, comprising 50 people (86%).
- There were 7 people (12%) in the 18-29 age range, 12 people (21%) in the 30-35 age range, 21 people (36%) in the 36-41 age range, 11 people (19%) in the 42-47 age range, 7 people (12%) aged 48 and above.
- Based on their education levels, participants can be categorized as follows: 2 people (3%) with a primary school diploma, 13 people (22%) with a high school diploma, 31 people (53%) with a bachelor's degree, 12 people (21%) master's degree.

The Cronbach's Alpha reliability coefficient of the scale was found to be 0.804. In the normality assessment of the scale, the Kolmogorov-Smirnov test was conducted, and it

was found to be  $p=0.200$ . Furthermore, Skewness and Kurtosis values, which are other measures examined in assessing the normal distribution, were calculated. The Skewness value was found to be 0.31, and the Kurtosis value was -0.531. Since  $p>0.05$  and the Skewness and Kurtosis values are between -1 and +1, it was concluded that the data showed a normal distribution.

#### Exploratory Factor Analysis

Exploratory factor analysis was conducted to determine the factor structure of the scale. As a result of the first analysis, the factor load values of the 7th and 9th items were  $<.45$  (.017 and .014) (Büyükoztürk, 2017), so these items were excluded from the analysis. In the second analysis, it was seen that the remaining 8 items were gathered under a single dimension. The findings are as follows:

The KMO value, which indicates the suitability of the data set for factor analysis, was .79 and the Bartlett sphericity test was significant ( $\chi^2 (28)=240.76$ ,  $p<.001$ ) (Hutcheson & Sofroniou, 1999). The factor loading values range from .615 to .882.

After removing 2 items, Cronbach's Alpha coefficient was checked again and it was seen that the value increased to ,867.

#### Perception Findings Regarding the Involvement of Women in Port Management

The study initially examined participants' attitude scores regarding the involvement of women in port management, which reflects their perceptions. The descriptive analysis results are presented in Table 3. The port employees participating in the research disagreed with the idea that women should not be involved in port management, with an average score of 2.31 and a standard deviation of 0.88.

Furthermore, the perception of employees participating in the research regarding the involvement of women in port management was examined based on their managerial level. As seen in Table 3, employees were categorized into two groups: officers and managers. The differentiation of perception regarding the presence of women in port management was analyzed using a t-test, considering the managerial level. According to the t-test results, there was no significant difference in the perception of officers (Mean=2.42, Std. Deviation=0.94) compared to managers (Mean=2.19, Std. Deviation=0.81) regarding the participation of women in management.

Table 2: Result of Exploratory Factor Analysis

Item	Component 1		
	Factor Loading	% of Variance	
LYK1	.635	52.39	
LYK2	.683		
LYK3	.692		
LYK4	.882		
LYK5	.811		
LYK6	.789		
LYK8	.615		
LYK10	.637		
<b>KMO and Bartlett's Test</b>			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.79
	Approx. Chi-Square	240.76	
Bartlett's Test of Sphericity	df	28	
	Sig.	.00	

Table 3. Perception Scores of Participants Regarding the Involvement of Women in Port Management

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
NWPM_mean	58	1.00	4.13	2.31	.88
Valid N	58				

Table 4. T-Test Results Showing the Perception of Participants Regarding the Involvement of Women in Ports Based on Management Level

Variable	Management_Level	N	Mean	Std. Deviation	t	df	p
NWPM_mean	Officer	31	2.42	.94	1.007	56	.32
	Manager	27	2.19	.81	1.018	56	.31

## Conclusion

This research highlights the issue of gender discrimination in the labour market, particularly within the field of port management, which is predominantly male-dominated. One of the starting points of this study is the observation that workers, despite having similar skills, education, and experience, may face discrimination in employment, access to jobs, promotion, or wages based on their gender, regardless of their productivity. Previous research on gender has shown that differences between genders are largely attributed to gender-based occupational and industrial discrimination, as well as institutional differences such as the distinction between the private and public sectors. Therefore, this study aims to examine a sector where gender-based research has not been conducted before, thus shedding light on this unexplored area.

The study covers port enterprises, which is one of the important elements of the maritime sector, which is a male-dominated sector. In the study, the perception of women's participation in port management was investigated. The research conducted with three port management companies located in South Marmara showed that port workers did not have a negative perception of women participating in port management. In addition, it has been checked whether this perception has changed depending on the fact that the port employees are officers and managers. No significant difference was found between officers and managers.

Overall, the study aims to underscore the importance of addressing gender disparities and promoting equal opportunities for women in the maritime sector. In the literature review, it is seen that much research highlights the challenges that women face in the male-dominated maritime sector and the efforts being made to promote gender equality in the industry. Hence, the literature review highlights key research points and insights related to the glass ceiling, gender disparities, struggles, prejudices, and stereotypes.

In the literature, much research has described the maritime sector as a male-dominated and demanding sector (Narayanan et al., 2023; Fidan et al., 2020; Halimah et al., 2019; Bhirugnath-Bhookhun, & Kitada, 2017). This research also reveals a similar result. Most participants in the research sample are comprised of men. Even though there is no reliable and clear statistical data available for women working in ports in Türkiye, past research has shown that the number of female employees is quite low. Furthermore, in some research, prejudices and stereotypes against women in maritime jobs are attributed to societal and cultural structures (Fidan et al., 2020; Kim et al., 2019; Wu et al., 2017). The study's focus is not on social prejudices, nor has it placed a strong emphasis on them. However, in contrast to the widely held belief in the literature, the research findings do, in a sense, present a positive and encouraging conclusion that challenges stereotypes about women in leadership roles at the management level.

In the same way, some research highlights the slow progress in the sector. Despite theoretical rights and international initiatives, progress towards gender equality in the maritime sector is depicted as slow, and it may take decades for women to achieve the recognition they deserve (Pike et al., 2021; Şenbursa & Özdemir, 2020; Medeiros et al., 2019). This has also been one of the notable points in this research. Overall, it has been found that there are very few women at the management level.

Based on the obtained results, the absence of a negative perception of women's involvement in port management creates hope for an increase in the number of female executives in ports in the future. The study suggests that supporting employment and increasing the presence of women in port enterprises would be beneficial for gender equality and even adopting a positive discrimination perspective. The limitations of the study include its coverage of only three port enterprises in the South Marmara region and the use of quantitative data analysis methods. In future studies, it would be possible to conduct a more comprehensive examination of the subject by including a greater number of ports and utilizing qualitative or mixed data analysis methods. The study suggests that future research could focus on identifying measures that can be taken, both short-term and long-term, to help women advance in their maritime careers and contribute to the sector effectively. We believe that the promotion of gender equality in the maritime sector is a way to improve efficiency, morale, communication, and productivity within the industry.

## Extended Abstract

This study mainly discusses the issue of gender inequality, particularly among female workers in the maritime industry. It highlights the societal perceptions and barriers that hinder women's participation and advancement in various professions. The concept of the "glass ceiling" is mentioned as a major obstacle to women's career advancement and promotion, along with gender-based discrimination in hiring, firing, pay discrepancies, and opportunities. The maritime industry, being male-dominated, also faces challenges in attracting and retaining women employees due to traditional gender roles, a lack of awareness, and preconceptions within the sector. In the study, the importance of achieving gender equality and promoting women's representation in management positions in the maritime industry particularly the port sector is emphasized. The goal of the research was to understand the current status of women employed in ports and explore possibilities for their participation in management positions, with the aim of contributing to initiatives promoting gender equality in the sector.

In the study, the main discussion revolves around gender inequality in workplaces, particularly in male-dominated sectors like the maritime industry. There is a perception that women lack the necessary skills and commitment for certain jobs, which leads to their

exclusion hiring and development processes. Despite efforts to promote gender equality in ports, the global maritime workforce's percentage of women remains low. Research on women in the port sector is limited, but studies on women in maritime-related jobs and education have increased. More women are being trained in the field, and their interest in maritime navigation is evident. However, biases and gender stereotypes persist in port businesses, calling for further efforts to level the playing field for women in the shipping industry.

There are many studies that shed light on the challenges women face in the maritime industry and provide insights into improving gender equality and fostering a more inclusive work environment. For example, some research reveals various physical, social, and psychological barriers that hinder women seafarers' involvement in the workplace, while others mention female seafarers who face harassment, highlighting deficiencies in leadership and the need for a safe and inclusive onboard environment. Again, there are many studies that propose measures to enhance working conditions and promote gender equality for women seafarers or highlight challenges faced by women in a predominantly male environment, including difficulties for women in managerial positions.

Many studies also highlight the low representation of women in the port sector of Türkiye, which plays a crucial role in the country's transportation and trade infrastructure. Several major ports along Türkiye's coastline have limited female participation despite their potential for high employment. One particularly important article sheds light on discriminatory attitudes toward women in the Turkish maritime industry and explores potential solutions. The research reveals that societal prejudice and misperceptions about women in the industry hinder their progress as seafarers. Another study highlights gender-based discrimination within Turkish public universities' maritime programs, where female students perceive higher levels of discrimination compared to males. Another study investigates society's perceptions and attitudes towards women working in male-dominated professions in Türkiye. It uncovers the challenges faced by women in these roles and how they adopt coping strategies to break down gender biases and gain acceptance.

This study focuses on understanding the perspectives on the employment of women in management roles in ports within the South Marmara Region of Türkiye, which has significant importance for the country's foreign trade through maritime transportation. The research involved with three port enterprises (Bursa, Bandırma, and Çanakkale) and a survey of the administrative staff of these companies. The surveys were conducted using Google Forms from February to December 2022. A total of 58 fully completed surveys were obtained from the 145 white-collar employees, resulting in a response rate of 40%. The data collection tool was a questionnaire with two sections: one related to demographic and company-related questions and the other based on a 10-item Likert scale to measure the perception of

women's participation in port management. The questionnaire's reliability was evaluated using Cronbach's Alpha coefficient, and its validity was assessed through exploratory factor analysis. Data analysis was performed using the SPSS 22.0 software package, and statistical tests like t-tests were used to analyse differences in perception based on management level.

The study collected data from a survey of 58 employees working in three ports in the South Marmara region. The majority of respondents were male (86%), with various age groups and educational backgrounds represented. The reliability of the scale used in the study was assessed using Cronbach's Alpha coefficient, which showed good internal consistency (0.804). The data was tested for normality, and the results indicated that it followed a normal distribution. An Exploratory Factor Analysis (EFA) was conducted to determine the factor structure of the scale. Two items were excluded from the analysis due to low factor load values. The remaining eight items were found to belong to a single dimension. The perception of participants regarding the involvement of women in port management was assessed. On average, the employees disagreed with the idea that women should not be involved in port management. The perception of officers and managers regarding the participation of women in management did not show a significant difference. In summary, the study examined the perception of female managers in the port industry based on data collected from 58 employees in the South Marmara region. It utilized exploratory factor analysis and descriptive statistics to reveal participants' attitudes toward the involvement of women in port management, showing an overall positive perception. Additionally, no significant difference was found in the perception of officers and managers regarding the participation of women in management.

Based on the obtained results, the study suggests that the absence of negative perceptions regarding women's involvement in port management is promising for the future increase of female executives in the port industry. The findings imply that promoting employment opportunities and enhancing the presence of women in port management would contribute to achieving gender equality, and the study even proposes adopting a positive discrimination perspective to support this goal. However, the study has some limitations, such as its narrow scope, as it only covers three port enterprises in the South Marmara region. Additionally, it relies solely on quantitative data analysis methods. For future research, it is important to conduct a more extensive investigation by including a larger number of ports and employing qualitative or mixed data analysis methods to gain a deeper understanding of the subject.

Finally, the study's positive findings regarding the perception of female managers in port operations suggest that promoting gender diversity in leadership positions could be beneficial for the port industry and overall gender equality. Nevertheless, further research is encouraged to overcome the study's limitations and provide a more comprehensive understanding of this important topic.



## Conflict of Interest

The authors declare no conflict of interest. Both authors contribute the research (plan, design, data analysis and writing process) equally.

## Ethical Permission of the Research

In this study, all the rules specified in the "Ethical Guidelines for Scientific Research and Publication in Higher Education Institutions" have been followed. No actions contrary to the "Actions Contrary to Scientific Research and Publication Ethics" section of the guidelines have been taken. The study was conducted with the ethical approval of the Bandırma Onyedi Eylül University Social and Human Sciences Ethics Committee, with meeting number 2022-2 and approval date of 11/02/2022. The necessary permissions for the questionnaire used in this study have also been obtained.

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## Questionnaire Survey Items- Perceptions Towards Port Management

1	The maritime industry is not suitable for women
2	The seaport sector is not favourable for women
3	There is no demand of women in seaport sector
4	The seaport management prefers men as it suits the nature of ports business
5	The seaport operations require men as work is tough and challenging
6	Staff working in seaports prefer men as working peers
7	Management needs to have gender diversity as the Company's strategic agenda
8	Management has preference for men for port management
9	The management treats women staff equally to men staff
10	The management is selective when it comes to hiring women managers