



# A STATISTICAL STUDY OF BLUE BUSINESS AND WOMEN IN IT

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## ABSTRACT

*Identifying the problem points is the first step towards discovering opportunities to jointly develop appropriate measures and solutions to address the challenges faced by the fairer sex in their career development in the maritime industry, with the aim of determining which are the best and most powerful solutions for the inclusion of women seafarers in order to make their careers at sea more attractive in the future. By disseminating this report, the aim is to raise awareness of the main challenges facing women who choose a career in the maritime industry, and not least to identify sustainable solutions.*

**KEYWORDS:** *Statistical Study, Blue Economy, Women Seafarers, Educational And Qualification, Perspectives*

## 1. INTRODUCTION

The selection of women in the maritime industry in Bulgaria is carried out according to general rules and with a set of outstanding personal qualities and a strong desire. There are no obstacles in the legislation of Bulgaria for accepting women even among the command staff of ship crews, and all applicants are accepted under common, non-gender specific conditions, including a psychological test, a job-interview, etc. There are no gender specific conditions and requirements for women for their work at sea - no such requirements are provided regarding their working conditions, nor regarding their employment contracts, and the work activities are carried out according to non-gender specific rules and according to a common pay scale.

Women's difficulties in achieving professional success at sea are related to the perception that they are less competent than their male counterparts. Systemic challenges are tied to social relations on board ship, as women experience isolation and lack of support because of their gender. A problem of extreme importance for women is the lack of family planning options such as maternity leave.

## 2. PROBLEM

In Bulgaria, legislation regarding women in the shipping industry is based on the Maritime Labor Convention (MLC) and the Convention for the Safety of Life at Sea (SOLAS) and the international treaties that Bulgaria has ratified. This law guarantees gender equality in maritime labor and prohibits discrimination on the basis of sex, including in the field of employment and working conditions. Specifically, the law sets out the rights of women working on ships, including the right to equal pay for equal work, the right to pregnancy and maternity leave, the right to leave of absence and other social and trade union achievements. In line with international standards, the law requires employers to provide special conditions and care for pregnant women and mothers working on ships. Bulgaria has ratified the International Labor Organization Maritime Labor Convention, which prohibits discrimination based on gender in maritime labor and promotes gender equality in the professional field [2,3].

The maritime profession is the most preferred among the ladies in Varna and Sofia, but it is clear that it is preferred not only by those living in the seaside cities of Bulgaria. It has been confirmed that most of the representatives of the fairer sex are employees of the State Enterprise "Port Infrastructure", who work in the Head Office in Sofia and in the territorial division in Varna.

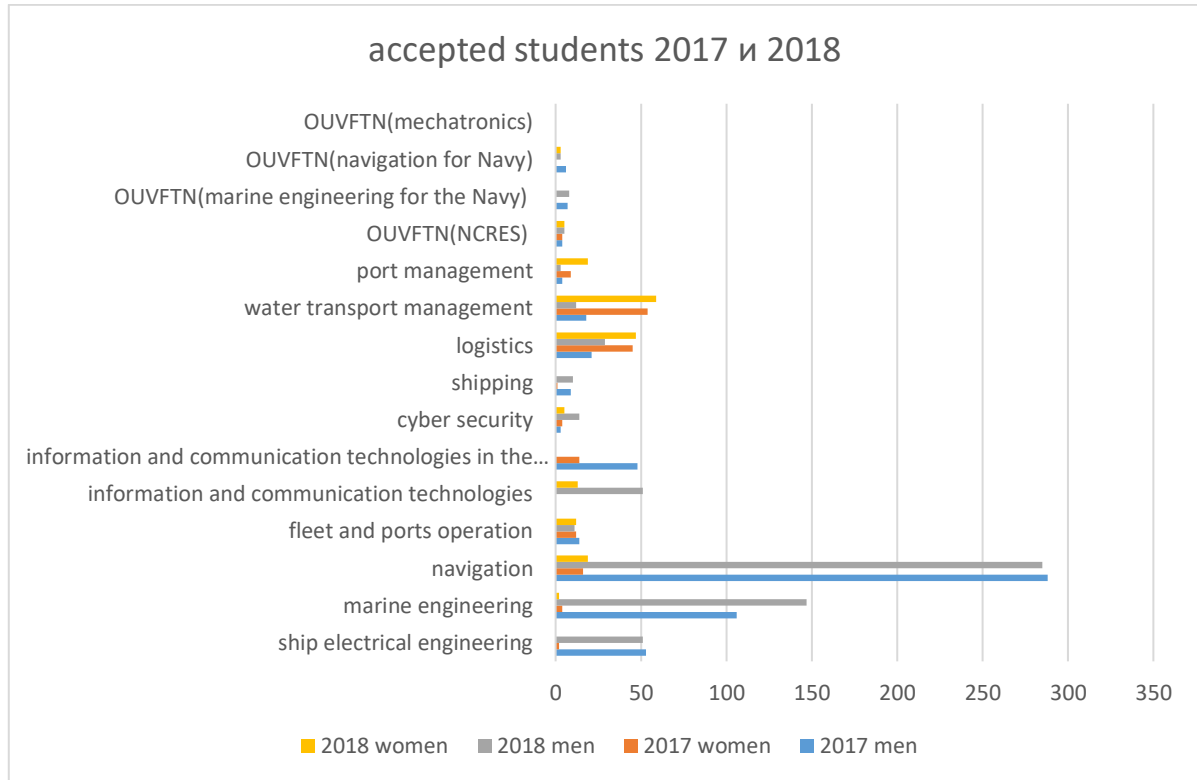


**Table 1: Students admitted at VVMU for the period 2018 – 2022, distributed by gender, specialities and form of study**  
 \*PT – Part Time Education  
 FT – Full Time Education

	2018			2019			2020		
	Total	M	F	Total	M	Ж	Total	M	F
<b>Fleet and Port Operation</b>	<b>23</b>	<b>11</b>	<b>12</b>	<b>31</b>	<b>10</b>	<b>21</b>	<b>26</b>	<b>11</b>	<b>15</b>
Bachelor - PT*	0			0			0		
Bachelor - FT	23	11	12	31	10	21	26	11	15
<b>Logistics</b>	<b>76</b>	<b>29</b>	<b>47</b>	<b>85</b>	<b>39</b>	<b>46</b>	<b>119</b>	<b>46</b>	<b>73</b>
Bachelor - PT	11	4	7	10	2	8	15	12	3
Bachelor - FT	30	8	22	41	18	23	65	19	46
Master (MA) - PT	35	17	18	34	19	15	39	15	24
<b>Management of Water Transport</b>	<b>71</b>	<b>12</b>	<b>59</b>	<b>62</b>	<b>14</b>	<b>48</b>	<b>69</b>	<b>21</b>	<b>48</b>
Bachelor - PT	9	2	7	11	4	7	7	2	5
Bachelor - FT	52	6	46	40	5	35	48	14	34
Master (MA) - PT	10	4	6	11	5	6	14	5	9
<b>Cruise Ship Management</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>9</b>	<b>21</b>
Bachelor - FT	0	0	0	0	0	0	30	9	21

	2021			2022		
	Total	M	F	Total	M	F
<b>Fleet and Port Operation</b>	<b>25</b>	<b>12</b>	<b>13</b>	<b>11</b>	<b>7</b>	<b>4</b>
Bachelor - PT*	0			0	0	0
Bachelor - FT	25	12	13	11	7	4
<b>Logistics</b>	<b>133</b>	<b>58</b>	<b>75</b>	<b>162</b>	<b>80</b>	<b>82</b>
Bachelor - PT	15	4	11	33	18	15
Bachelor - FT	74	32	42	94	51	43
Master (MA) - PT	44	22	22	35	11	24
<b>Management of Water Transport</b>	<b>90</b>	<b>26</b>	<b>64</b>	<b>80</b>	<b>29</b>	<b>51</b>
Bachelor - PT	13	8	5	11	7	4
Bachelor - FT	56	8	48	45	16	29
Master (MA) - PT	21	10	11	24	6	18
<b>Cruise Ship Management</b>	<b>40</b>	<b>13</b>	<b>27</b>	<b>48</b>	<b>16</b>	<b>32</b>
Bachelor - FT	40	13	27	48	16	32

The increased number of women who are interested in maritime professions is also clearly visible. To a large extent, this is attributed to increasing gender equality. As gender equality increases, women have greater access to professional opportunities and can choose to pursue occupations that have traditionally been predominantly male. This is due to a change in the culture and attitude of the ladies, as well as the diversification of professional opportunities for them, for example, providing many different specialties that they would like to pursue.



**Figure 1: Students admitted at Nikola Vaptsarov Naval Academy for the period 2017-2018, distributed by gender and by speciality**

- OUVFTN Organization and management of military formations at the tactical level (Mechatronics)
- OUVFTN Organization and management of military formations at the tactical level (Navigation for Navy)
- OUVFTN Organization and management of military formations at the tactical level (Medical insurance of the Armed Forces)
- OUVFTN Organization and management of military formations at the tactical level (Marine engineering for the Navy)
- OUVFTN Organization and management of military formations at the tactical level (cyber operations)
- OUVFTN Organization and management of military formations at the tactical level (NCRES - Naval Communication and Radio Engineering Systems)
- Port management
- Water transport management
- Logistics
- Fleet and ports operation
- Passenger ships' management
- Shipping
- Navigation
- Marine engineering
- Ship electrical engineering
- Inland waters navigation
- Ships communications and navigation system
- Intelligent system in transportation (Mechatronics)
- Cyber security
- Information and communication
- Integrated Remote Monitoring and Control Systems
- Information and Communication Technologies in the Maritime Industry
- National Security Management
- National and regional maritime security [1].

Both economic and social factors influencing the trend in 2017-2018 are the reason for the growing number of ladies in specialties such as Water Transport Management, Logistics, Fleet and Port Operation. It is an essential fact that for Bulgaria tourism and the



maritime industry in general are important economic activities and port management can be considered an attractive and well-paid profession, therefore women are encouraged to train in these specialties. There is an increase in institutions and organizations that encourage women to engage in this field, offering special programs or scholarships, thus aiming to increase perspectives and ideas within the structure, improve the working environment and culture, and encourage innovation and more effective solutions.

### 3. CONCLUSION

The encouragement of women in the maritime professions must be initiated from universities and then by shipowners. The role of the state and the role of the non-governmental sector in encouraging young girls in their career development in the maritime industry to become more inclusive and more attractive to women seafarers is crucial.

At the moment, the Naval Academy offers more educational opportunities for women and men in the field of navigation and engineering such as courses and trainings, helping to develop the necessary skills and knowledge. In the Republic of Bulgaria, about 70-80% of all qualification activities (in the full spectrum of IMO-model courses and STCW-requirements) take place at the Nikola Vaptsarov Naval Academy. The data shows that about 80% of all trainees undergo training in Basic Safety Training, Proficiency in Security Awareness, Specialized Training for Passenger Ship Crews (including Ro-Ro passenger ships) - Specialized Training for Personnel on Passenger Ships (Including Ro-Ro Passenger Ships) and Marine Environmental Awareness. These are the minimum training requirements for work at sea that manning companies set when selecting support level staff to work on board passenger ships. Fewer ladies undergo advanced training - required for officers on passenger and merchant ships. These are courses Proficiency in Survival Craft and Rescue Boats other than Fast Rescue Boats, Advanced Training in Fire Fighting and Proficiency in Medical First Aid, as well as some more specific courses required by shipowners. The specialization courses that the officers undergo are:

- IMO Model Course 7.01 Master and Chief Mate
- Bridge Team and Resource Management
- Preparatory Course for Management Level for Navigational Officers
- Operational Use of ECDIS
- IMO Model Course 7.02 "Chief Engineer Officer and Second Engineer Officer"
- Preparatory Course for Ship Engineer Officers at Management Level
- Training in Engine Room Resource Management and Teamwork
- Training in Safe Operation and Maintenance of Power Systems in Excess of 1000 Volts
- Monitoring of the Main and Auxiliary Machinery Operation and Associated Control Systems;

### REFERENCES

- [1] <http://www.naval-acad.bg/>
- [2] [https://www.europarl.europa.eu/doceo/document/A-9-2022-0089\\_BG.html](https://www.europarl.europa.eu/doceo/document/A-9-2022-0089_BG.html)
- [3] <https://www.marad.bg/bg>