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Achieving Gender Equality in Seafaring: An analysis of Stakeholders' Suggestions

Abstract

Purpose – This paper examines the changes suggested by maritime stakeholders to achieve gender equality in seafaring, a male-dominated profession.

Design/methodology/approach – Adopting a four-stage career cycle framework, this paper analyzes changes proposed by 423 industry stakeholders to promote gender equality in seafaring. These proposed changes were posted on the Day of Seafarers 2019 virtual wall set up by the IMO, which served as a forum for industry stakeholders from all over the world to voice their opinions and suggestions.

Findings – The data analysis shows that the suggested changes reflect many challenges and barriers women seafarers face. While stakeholders from OECD countries are more likely to call for changes to remove barriers in the retention and development stage, gender equality in seafaring in non-OECD countries is still seriously hindered by barriers in the recruitment stage. The paper also reveals that comparatively male stakeholders are less likely to appreciate the problems women seafarers face.

Originality – This paper takes a comparative approach, comparing the changes proposed by seafarers and other industry stakeholders from different parts of the world. This approach provides a nuanced understanding of issues related to gender equality in seafaring by showing that stakeholders from different backgrounds have different priorities.

Keywords: career cycle; gender equality; sustainable development; women seafarers

1. Introduction

'Achieve gender equality and empower all women and girls' is one of the United Nations' (UN) Sustainable Development Goals. However, it is a challenging task in male-dominated sectors, such as construction, mining and transportation (Australian Human Rights Commission, 2013; Turnbull, 2013). This is particularly so in the maritime shipping industry, as women are estimated to represent only two percent of the seafarer population in the world and seafaring gender equality remains to be extremely problematic (European Commission, 2020). With more shipping companies adopting corporate social responsibility (CSR) policies and programmes, they are under pressure to promote and achieve gender diversity in the workplace (Tang and Gekara, 2020). To this end, it is important to identify the challenges and barriers.

To promote women's participation in seafaring, a large amount of research has been conducted to examine women seafarers' experiences, issues and challenges they face at work, and related shipping company policies (Zhao, 1998; Belcher *et al.*, 2003; Thomas, 2004; Guo and Liang, 2012; Kitada, 2013; Stannard *et al.*, 2015; MacNeil

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3 and Ghosh, 2017; Pike *et al.*, 2017). Based on the findings, various recommendations
4 have been provided. What is missing in this body of literature are measures directly
5 proposed by seafarers and other industry stakeholders. For the 2019 Day of the
6 Seafarer campaign, the International Maritime Organization (IMO) encouraged
7 seafarers, shipping companies, and other stakeholders of all genders across the globe
8 to show solidarity for and come on-board with gender equality in seafaring, and invited
9 them to post on a virtual wall answers to the question, 'What would you do if you were
10 able to make just one change to achieve gender equality in seafaring?' This invitation
11 received a large number of answers from the maritime community and this paper
12 analyzes these answers to provide the perspectives of these stakeholders.
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18 It is a common practice in the shipping industry that ship owners/managers from
19 traditional maritime nations (e.g. the UK and Japan) register ships in Flag of
20 Convenience countries (e.g. Panama and Liberia) and source seafarers from cheaper
21 labour supply countries (e.g. the Philippines, China, India, and Eastern European
22 countries). This practice makes shipping a globalized industry and gives rise to a
23 seafarer global labour market (ILO, 2001). Nevertheless, seafarers participating in this
24 global market are not a homogeneous group but embedded in different national
25 contexts. As such, gender equality in seafaring may have different barriers in different
26 parts of the world. A comparative approach to tease out the differences has not been
27 initiated in the previous research on women seafarers. To fill up this gap, this paper
28 draws on a career cycle framework to compare and discuss the differences between
29 the changes directly proposed by seafarers and other industry stakeholders from
30 different parts of the world. It provides a nuanced understanding of issues related to
31 gender equality in seafaring by showing that stakeholders from different backgrounds
32 have different priorities. To make gender equality policy initiatives more effective,
33 policymakers may need to take these differences into account.
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40 The next section of this paper reviews the literature on gender equality in seafaring
41 and draws out a theoretical framework to be employed in data analysis. After an
42 explanation of the research data and methods, the paper moves on to present the
43 research findings. It is concluded by discussing the findings and drawing out the
44 implications.
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48 **2. Gender equality in maritime shipping**

49 In line with the UN sustainable development goals (SDGs), the IMO has undertaken
50 various initiatives to promote women's participation in the shipping industry since the
51 late 1980s. More specifically, in 2010 it adopted Resolution 14 of the STCW (the
52 Convention on Standards of Training, Certification and Watchkeeping for Seafarers)
53 Manila conference: Promotion of the participation of women in the maritime industry.
54 The Resolution requires Member States to ensure equal access of both genders in the
55 maritime industry, to promote women's greater participation in maritime training and
56 at all levels in the maritime industry, and to highlight the role of women in the seafaring
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3 profession. In 2019, 'Empowering Women in the Maritime Community' was
4 specifically chosen by the IMO to be the World Maritime Day theme in order to raise
5 awareness of the importance of gender equality. Similarly, another specialized UN
6 agency, the International Labour Organization (ILO), adopted the Resolution
7 concerning the promotion of opportunities for women seafarers in 2006. At the country
8 level, there are also numerous initiatives. For example, in the UK, the Women in
9 Maritime Taskforce has been set up to promote gender balance in the sector, and in
10 Denmark, many shipping companies have signed a charter for more women in
11 shipping (Bakhsh, 2020).
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18 Gender equality initiatives in shipping also draw momentum from evidence indicating
19 that gender diversity can bring various benefits to an organization and improves its
20 performance. A number of studies have shown that companies with more women
21 board members are more likely to have better financial returns than those with fewer
22 (Owen and Temesvary, 2018). Two meta-analyses conducted by Post and Byron
23 suggest that women on boards tend to not only boost firms' financial performances
24 (Post and Byron, 2015), but also enhance corporate social performance (such as CSR
25 rating and codes of ethics) and social reputation (Byron and Post, 2016). Gender
26 diversity studies have further revealed that companies with more women in their
27 research and development teams were more likely to have increased innovation
28 outputs (Díaz-García, González-Moreno and Jose Saez-Martinez, 2013; Sastre,
29 2014).
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36 Therefore, there are both push (e.g. UN SDGs and government policies) and pull (the
37 expected benefits) factors promoting gender diversity and equality in organizations.
38 As a response to these factors, many shipping companies see gender diversity in the
39 workplace as an important part of CSR and report their performance in CSR and
40 sustainability reports (Tang and Gekara, 2020).
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45 In practice though, seafaring can be particularly challenging for women and previous
46 research revealed a number of hurdles that women seafarers are likely to face
47 (Belcher *et al.*, 2003; Thomas, 2006; Turnbull, 2013; Stannard *et al.*, 2015; Guo, 2019;
48 ILO, 2019; Piñeiro and Kitada, 2020), including a lack of employment opportunities,
49 bullying and sexual harassment at sea, resistance from male colleagues, the need to
50 make more effort than male colleagues in order to be accepted by the crew, poor
51 working and living conditions on-board ships, and feeling isolated at sea and in need
52 of peer support because there is often only one woman working on a ship.
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57 In general, this body of research also shows that shipping companies are reluctant to
58 employ women seafarers, though one recent piece of research (Pike *et al.*, 2017)
59 indicates that driven by inclusion and diversity policies, UK shipping companies are
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3 now keen to recruit women seafarers to demonstrate compliance. It is fair to say that
4 despite policy initiatives and interventions and some positive outcomes, gender
5 equality remains extremely difficult to achieve in the shipboard workplace (European
6 Commission, 2020).
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11 Nevertheless, positive outcomes do deserve attention. Drawing on the attraction-
12 selection-attrition (ASA) framework (Schneider, Goldstiein and Smith, 1995), Guo and
13 Liang (2012) argue that the male-dominated culture in the shipboard workplace can
14 be gradually reshaped and become more accommodating to women seafarers when
15 the latter start to join. They showed that once women seafarers were attracted to
16 seafaring, selected by shipping companies, and successfully socialized into the
17 shipboard workplace, they would impress their (male) senior colleagues by their work
18 attitude, capabilities, and sense of responsibility and make the workplace more
19 accepting and friendlier to women seafarers. Similarly, according to Thomas (2004),
20 shipping companies who had employed women seafarers tended to be positive about
21 their professionalism and competence and even perceived that women seafarers
22 performed better than their male counterparts. In another study, Theotokas and
23 Tsalichi (2013) also found that when male seafarers had worked with a woman
24 colleague they were likely to adopt a positive and accepting attitude. Therefore, the
25 participation and retention of women seafarers and a gradual cultural shift towards
26 being more inclusive are mutually reinforcing.
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35 **To promote gender equality in employment, it is important to identify the obstacles and**
36 **challenges systematically; and for this purpose, a career cycle approach is often taken.**
37 **In the transport sector, Turnbull (2013) develops a career cycle model consisting of**
38 **six stages: attraction, selection, retention, disruption, re-entry, and realization.** The
39 disruption and re-entry stages are added to consider women's career disruption
40 possibilities due to childbearing and other caring responsibilities. Realization refers to
41 'the progression from a job to a career and the subsequent realization (self-
42 actualization) of the individual' (p. 9). In relation to women seafarers, Turnbull argues
43 that recruitment and retention are the two most critical stages and points out that policy
44 interventions should be directed at mitigating and removing barriers in these two
45 stages.
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52 In other male-dominated industries, such as mining and construction, women face
53 similar challenges, such as sexual harassment, resistance from male colleagues, poor
54 working conditions, a lack of female interactions, and an unsupportive environment
55 towards healthy family commitments (Lekchiri and Kamm, 2020). Unsurprisingly, a
56 career cycle approach has also been adopted in these industries to facilitate the
57 inclusion of women (Australian Human Rights Commission, 2013). In this approach,
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3 attraction, recruitment, and retention and development are seen as the stages of a
4 career cycle, and each stage is crucial to promote women's participation.
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8 Although the detailed models used in previous studies differ, the career cycle
9 approach helps tease out the issues of women's employment in male-dominated
10 industries holistically and systematically. Therefore, this paper adopts this approach.
11 It first maps changes recommended by stakeholders into different stages of a career
12 cycle. Then it conducts analyses to find out the stages in which women seafarers face
13 more challenges and the differences between different groups of stakeholders.
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19 **3. Research data and methods**

20 As of June 1st of 2020, a total of 426 posts were made on the IMO virtual wall, and the
21 majority of these posts contained brief information about the poster's gender,
22 occupation, and nationality. These posts were from 423 individuals (three of them
23 made the same post twice), including 248 females (58.6 percent), 171 males (40.4
24 percent), and 4 unspecified individuals. They were from a wide range of maritime-
25 related occupations, including 272 seafarers of various ranks, 42 maritime students
26 and cadets, 12 pilots, 9 marine superintendents, 184 other shore-based stakeholders
27 (e.g. maritime training institute lecturers, maritime lawyers, port workers, surveyors,
28 maritime authority officers, trade unionists, and HR managers), and four unspecified
29 individuals. The majority of them (59.3 percent) are from eleven countries, India 37,
30 Nigeria 35, Ghana 28, Brazil 24, Malaysia 23, The Philippines 20, The United Kingdom
31 20, The United States 20, Egypt 19, Kenya 15, and Mexico 10. Two major seafarer
32 supply countries, China and Russia, however, are not represented. By contrast,
33 African and Latin American countries, who are minor players in the global seafarer
34 labour market and have rarely been the focus of maritime labour related studies, are
35 well represented. As such, these posts capture some hitherto under-represented
36 voices.
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45 These 423 posts on the virtual wall together with the demographic information of the
46 respondents formed the dataset for this research. Overall, they captured a wide range
47 of suggestions on achieving gender equality in seafaring from stakeholders across the
48 world. While the wide range of suggestions allowed to produce a comprehensive list
49 of policy recommendations, the demographic information enabled the examination of
50 the differences between stakeholders from various backgrounds. The majority (393)
51 of the posts were written in English, and 30 of them were in French, Spanish,
52 Portuguese, or Arabic. These 30 posts were translated into English using both DeepL
53 translator and Google translator. The usage of two translators allowed cross-checks
54 which ensured that the translation was as accurate as possible.
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3 Data analysis consisted of two stages. The first stage was a qualitative thematic
4 analysis of the 423 posts. An induction approach to data coding was taken (Braun and
5 Clarke, 2012), in which codes or themes were not predefined but drawn out of these
6 posts. Before coding, the author did a thorough reading of the entire set of posts to
7 become familiar with the data. In the first round of coding, each post was assigned a
8 code. As each post proposed one change, no post was assigned multiple codes. All
9 the posts were then sorted into theme groups. In the second round, the posts with the
10 same code were read in comparison with each other. If the meaning of a particular
11 post was quite different from that of the rest, either a new code was generated to
12 accommodate it, or it was assigned another existing code that was more suitable.
13 Meanwhile, some codes were combined for two reasons. First, they had similar
14 meanings in the context of this research, for example, 'equality in employment' and
15 'anti-discrimination'. Second, their meanings were closely related. For example, 'anti-
16 harassment', 'respect' and 'acceptance' were all related to how women seafarers were
17 expected to be treated by their male colleagues in the workplace. Furthermore, as the
18 boundaries between closely related codes in some cases were ambiguous, combining
19 these codes into one helped solve this issue. In the next step, the codes or themes
20 were categorized and mapped into different stages of a career cycle.
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30 The second stage was a quantitative analysis. As information about nationality and
31 gender was available, SPSS Chi-Square tests were conducted to explore what
32 differences nationality and gender would make in terms of themes identified in the first
33 stage. The large dataset made the comparisons meaningful, which provided a more
34 nuanced understanding of gender equality in seafaring in a globalized industry.
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39 **4. The thematic analysis findings**

40 Career cycle models have been adopted in previous research about gender equality
41 in the workplace (Australian Human Rights Commission, 2013; Turnbull, 2013). They
42 cover a number of career stages, including attraction, recruitment, retention and
43 development, interruption, re-entry, and realization. In the case of this research, the
44 themes identified largely fall into the first three stages, which indicates that these
45 stages are more crucial for gender equality in seafaring. It is worth noting that an extra
46 stage 'cadet training' that has not been featured in previous research also emerges
47 from the thematic analysis. This extra stage reflects the difference between seafaring
48 and many other occupations. For seafarers, vocational training is indispensable. To
49 enter the profession, one needs to take lengthy vocational training, pass relevant
50 exams, and obtain a certificate of competency. Therefore, this paper adopts a four-
51 stage framework that achieves a better fit with the data. Table 1 shows all the themes
52 that emerged from the data, the stages that they are mapped into, and the number of
53 posts in each theme and stage. Next, the themes will be discussed in detail.
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Table 1. Themes and frequencies

Stage of a career cycle	Theme	Posts per theme	Post per stage
Attraction	Raise awareness and encourage girls	32	64
	Attitude change	25	
	Role models	7	
Cadet training	equality in education/scholarship	36	45
	Gender sensitivity training	9	
Recruitment	Equality in employment/anti-discrimination	119	152
	Regulation/affirmative act	33	
Retention & development	Anti-harassment/respect/acceptance	26	106
	improve workplace conditions	8	
	PPE/Sanitary products	14	
	Flexible employment/maternity leave	18	
	Support	25	
	Fair promotion/more women leaders	15	
Not relevant	Encouragement	16	56
	Non-gender related	40	
Total		423	423

4.1 Attraction

Shipping and seafaring activities are largely invisible to the general public because they take place at sea and in enclosed ports, which are inaccessible to the eyes of the wider population. As such, many people may have never heard or been made aware of the seafaring profession (Tang, 2012a; Pike *et al.*, 2017). Furthermore, seafaring has been traditionally associated with men and therefore for those who know it, it may not occur to them that it can be a profession for girls. As such to attract women into the profession, it is important to raise awareness and change the perception that seafarers are by default associated with men only.

In this context, thirty-two respondents proposed to 'raise awareness and encourage girls' to enter. While some of them simply posted 'More visibility for women in shipping', others provided more specific answers. For example, a Nigerian male deck officer posted, 'My one change is to go out to my own interior village and enlightened the females on seafaring job.'

Another 25 respondents proposed 'attitude change', that is, to change attitudes and perceptions. One female maritime administration officer from Ghana replied, 'Denouncing the age-old notions that seafaring is solely a male-dominated profession

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3 and encouraging young girls at an early age to take on the challenge of entering into
4 the seafaring profession.'

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7 'Role models' is another theme in this stage. Role models make visible that women
8 can develop a career at sea, inspire others to follow, and offer them reassurance and
9 hope for success. They can be instrumental in raising awareness and changing
10 perceptions. Therefore, seven respondents' answers are related to this theme. A
11 Canadian woman chief officer posted, 'Female role models, instead of feeling like my
12 career was bucking the system.'

13 14 15 16 17 18 4.2 Training and education

19 When a girl is attracted to seafaring and plans to venture into it, she will need to go
20 through cadet training and obtain the qualification first. However, unequal participation
21 in education between males and females is not uncommon, especially in developing
22 countries (Shabaya and Konadu-Agyemang, 2004; Tuwor and Sossou, 2008). This
23 inequality is more profound in seafarer cadet training, and some training colleges are
24 not even open to female applicants (Pike *et al.*, 2017). Furthermore, cadet training
25 requires specialized and capital-intensive equipment and facilities, such as ship bridge
26 and engine room simulators, which makes tuition fees too expensive to be affordable
27 for poorer students from developing countries (Zhao and Amante, 2005). Expensive
28 tuition fees and unequal access to education inevitably work together to discourage
29 women's participation.
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35 Against this background, thirty-six suggested changes fall under the theme 'equality
36 in education/scholarship' (for female cadets). One Nigerian female marine surveyor
37 made this suggestion, 'Give as many opportunities for training to female cadets as the
38 male colleagues. Even so often from the training stage there are always fewer females
39 selected, so the system is already creating a disadvantage.'

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43 It was also suggested that topics on gender issues and prejudice and bias against
44 women should be an integral part of seafaring vocation training. In this way, the next
45 generation of male seafarers from the very beginning would be sensitized to a mixed-
46 gender working environment and learn to behave with respect toward women
47 colleagues. Nine respondents proposed 'gender sensitivity training'. An Indian female
48 engineer officer, for example, posted on the virtual wall, 'Would be to sensitize men
49 regarding acceptable behaviour towards women on-board. Sometimes getting carried
50 away in an all-male environment 'conditions' mindset and one is carried away to
51 overlook it when women are on-board.'

52 53 54 55 56 57 4.3 Recruitment

58 As Turnbull (2013) points out, recruitment is one critical stage in the career cycle of
59 women seafarers. In many places shipping companies are reluctant or refuse to
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3 employ women seafarers (Turnbull, 2013; Pike *et al.*, 2017; Guo, 2019). In this
4 research, as shown in Table 1, this is the stage where the respondents were most
5 likely to propose related changes (152 posts in total).
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8 On the virtual wall, a Nigerian female deck officer posted, 'Employ more female
9 seafarers... It's five years since I graduated and got my license but no work.'
10 Concurring with this Nigerian deck officer, another 118 proposed changes fall under
11 the theme of 'equality in employment/anti-discrimination', making this theme the most
12 popular one. Under this theme, respondents called for shipping companies and the
13 industry as a whole to promote equal opportunity in employment.
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19 There are also 33 respondents going a step further, calling for regulations or
20 affirmative act to ensure equal employment opportunity. These were categorized into
21 the theme 'regulation/affirmative act'. A male Ukrainian captain for example suggested,
22 'It must be accepted a new international law for obligatory of at least 15% women
23 employment on board of each vessel.'
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29 4.4 Retention and development:

30 Following the recruitment stage, retention and development is the stage where the
31 respondents proposed the second largest number of related changes (106 posts in
32 total, see Table 1). In this stage, six themes emerge from the data and the most
33 frequent one is 'anti-harassment/respect/acceptance'. It is related to women seafarers'
34 interaction with their male colleagues in the workplace, and calls for respect and
35 acceptance from the latter. More importantly, it requests anti-harassment policies. One
36 UK female chief officer suggested:
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39 Stop making advertising campaigns about equal opportunity and start actively
40 investigating complaints, ask females that have left companies why.
41 Companies won't start caring about equal opportunity until they are held
42 accountable for what females have had to tolerate in their roles.
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47 As seafarers work and live on-board ships for a prolonged period, the shipboard
48 environment can be problematic for women seafarers. Eight posts are categorized into
49 the theme 'improve workplace conditions'. One Malaysian male seafarer, for example,
50 suggested, 'Improving the living condition on-board as a whole to allow for a more
51 suitable place for women to work in.'
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56 Fourteen respondents mentioned personal protective equipment (PPE) and sanitary
57 products onboard ships. Although these are also related to shipboard environments,
58 they are more specific. For this reason, these are categorized into a different theme
59 'PPE/sanitary products'. Half of them proposed to provide PPE fit for women. Another
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3 seven respondents' answers were related to the provision of personal sanitary and
4 hygiene products. One Irish female ETO proposed, 'Please make it a requirement for
5 companies to provide female sanitary products onboard their ships, just so I don't have
6 to pack a five-month supply.'
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11 A seafaring career entails intermittent and prolonged separations from home, which
12 are disruptive to family life (Tang, 2009, 2012b). In one study of women seafarers, the
13 authors pointed out that women leaders in shipping tended to be single and never
14 married (Dragomir *et al.*, 2018). Furthermore, the Maritime Labour Convention, 2006
15 adopted by the ILO to protect the rights of seafarers worldwide, while specifying that
16 seafarers are entitled to paid annual leave, does not touch on maternity or paternity
17 leave. This omission reflects the fact that the industry in general does not provide
18 seafarers any maternity or paternity benefits. This practice is particularly challenging
19 for women. As such, the theme 'flexible employment/maternity leave' appear in 18
20 posts. An Indian female pilot, for instance, posted, 'Eliminate pregnancy discrimination
21 for women seafarers by making compulsory, the adoption of Maternity rights and
22 policies about the break in service and allow the mothers to get back at sea!'
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30 Needless to say, career development is important for retention. As the number of
31 women seafarers is small and they are constantly subject to discrimination and
32 prejudice in their careers (Belcher *et al.*, 2003; Thomas, 2004; European Commission,
33 2020), they need peer support, solidarity and mentoring. Twenty-five of the
34 respondents expressed such opinions, calling for support, such as women support
35 groups/associations, women seafarer helplines, and mentoring. These reflect the
36 theme 'support'. A US female working in the offshore industry proposed, 'My one
37 change is mentoring for female seafarers.'
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43 The theme 'fair promotion/more women leaders' were related to 15 respondents' posts.
44 Some of them believed that women seafarers were not appraised or promoted fairly.
45 Thus, one female Ghana Chief officer suggested, 'Female seafarers should be given
46 an equal platform for promotions.' It can be argued that fair promotion of women
47 seafarers serves three purposes. First, it is beneficial for individuals and motivates
48 them to stay in the profession. Second, they serve as role models to inspire the next
49 generation. Third, promotion enables some women seafarers to grow into leaders in
50 the company as well as in the industry, who are more able to promote gender equality
51 and make women's voices heard. One US female deck officer suggested, 'More
52 women are needed in leadership roles – on ships and ashore, in order to provide the
53 female perspective on the executive/senior level.'
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4.5 Other proposed changes

There are also some posts that do not specifically answer the question – what would you do if you were able to make just one change to achieve gender equality in seafaring. They can be categorized into two themes. One is ‘encouragement’ which does not recommend any change but simply encourages women to believe in themselves and be brave. One Mozambique female student for example posted, ‘The most important thing is that women must believe that they can and do it whenever they have chance!’

The other theme is ‘non-gender related’. Forty respondents asked for changes in relation to other seafaring issues, such as racism and criminalization of seafarers. For instance, one Indian male deck officer posted, ‘Stop racism in the industry. Give opportunities irrespective of colour to all in all domains of Shipping Industry.’

5. The comparative analysis findings

Although shipping is a global industry and the seafarer labour market is largely globalized (ILO, 2001), some of the challenges seafarers face may vary depending on where they are from (Tang and Zhang, 2019). The same applies to women seafarers, and for this reason, gender equality may entail different priorities in different parts of the world. To develop a more nuanced understanding of gender equality issues in this global industry, it is important to examine nationality differences.

To make such an analysis meaningful, the nationalities of respondents are categorized into two groups. One is Organisation for Economic Co-operation and Development (OECD) countries, and the other non-OECD countries. A total number of 113 respondents are from OECD countries, and the remaining 310 are from non-OECD countries.

Table 2 shows the distribution of answers from each group across the themes and the stages. Table 3 shows the result of the Chi-Square test. As less than 20 percent of the expected counts are less than 5 and all individual expected counts are greater than 1, the Chi-Square test is valid (Yates, Moore and McCabe, 1999), which indicates statistically significant differences. Table 2 shows that the most visible differences are related to three themes: equality in education/scholarship, equality in employment/anti-discrimination, and PPE/sanitary products. While there were significantly more respondents from OECD countries suggesting changes associated with PPE/sanitary products, more respondents from non-OECD countries recommended equality in education/scholarship and equality in employment/anti-discrimination.

Table 2. Theme * Nationality crosstab results

Stage	Theme	OECD (%)		Non-OECD (%)	
Attraction	Raise awareness and encourage girls	8.0	17.7	7.4	14.1
	Attitude change	5.3		6.1	
	Role models	4.4		0.6	
Cadet training	equality in education/scholarship	1.8	4.5	11.0	12.9
	Gender sensitivity training	2.7		1.9	
Recruitment	Equality in employment/anti-discrimination	23.0	31.0	30.0	37.4
	Regulation/affirmative act	8.0		7.7	
Retention & development	Anti-harassment/respect/acceptance	8.0	35.5	5.5	21.3
	improve workplace conditions	2.7		1.6	
	PPE/Sanitary products	9.7		1.0	
	Flexible employment/maternity leave	6.2		3.5	
	Support	6.2		5.8	
	Fair promotion/more women leaders	2.7		3.9	
Not relevant	Encouragement/Non-gender related	11.5	11.5	13.9	13.9
Total		100	100	100	100

Table 3. Chi-Square Test (Theme * Nationality)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	39.589 ^a	13	.000

a. 5 cells (17.9%) have expected count less than 5. The minimum expected count is 1.87.

The differences reflect two issues. First, in OECD countries, especially Western European countries, cadet training is more likely to be sponsored by shipping companies with subsidies from the governments (Frazer-Nash Consultancy, 2017). By contrast, although there are also shipping companies sponsoring cadet training in non-OECD countries, the number of sponsored positions are very limited and the majority of non-OECD cadets have to pay for the training themselves (Zhao and Amante, 2005; Tang and Zhang, 2021). Furthermore, in many non-OECD countries girls do not have equal access to education (Shabaya and Konadu-Agyemang, 2004; Tuwor and Sossou, 2008). **Regarding maritime training, whereas Western European countries started to train women cadets in the 1970s (Zhao, 1998), the major seafarer supply**

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3 countries in Asia, such as the Philippines and India, did so only in the late 1990s (Tangi,
4 2016; SHM Shipcare, 2019). Unequal access and poverty make it challenging for girls
5 to take seafarer cadet training. In this context, the difference between the two groups
6 concerning the theme of equality in education/scholarship is understandable.
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11 The second issue is equality in employment, which also reflects cultural differences.
12 The Global Gender Gap Index (World Population Review, 2022) shows that while
13 Western Europe (OECD countries) has the highest gender parity, Asia and Africa have
14 the lowest. In relation to the major seafarer labour supply countries in Asia, such as
15 the Philippines and India, research has shown that the traditional patriarchal belief that
16 seafaring is man's turf still prevails (Tangi, 2016; Gupta, 2021). As a result, shipping
17 companies and manning agencies in Asian (and also African) countries are reluctant
18 to accept female applicants (Tangi, 2016; Pike *et al.*, 2017; Human Rights at Sea,
19 2019). By contrast, in Western European countries, it is reported that workplace
20 inclusion and diversity policies have become a driving force spurring shipping
21 companies to recruit more women seafarers (Pike *et al.*, 2017). This trend is reflected
22 in seafarer population statistics. While women represent only about two percent of the
23 seafarer population in the world (European Commission, 2020), around 16 percent of
24 UK seafarers active at sea in 2019 are female (DfT, 2019), and seven percent of
25 seafarers working on Danish-flagged ships are women (Bakhsh, 2020). As women in
26 non-OECD countries face more barriers in the recruitment stage, respondents from
27 these countries have more reasons to suggest changes in the area of 'Equality in
28 employment/anti-discrimination'.
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36 The two issues mean that women seafarers from non-OECD countries face more
37 challenges, especially in the early stages of the career cycle. When the initial entry is
38 overwhelmingly difficult, they are more likely to be blocked from progressing to the
39 retention and development stage. Having experienced higher entry barriers,
40 understandably, non-OECD respondents were more likely to propose the removal of
41 these barriers. By contrast, in OECD countries cadet training is more likely to be
42 sponsored and inclusion and diversity policies are gaining momentum in seafarer
43 recruitment, which seems to have afforded OECD respondents to pay more attention
44 to retention and development issues. As such, OECD respondents, especially women
45 seafarers, were more likely to propose changes in relation to practical issues at the
46 workplace such as PPE/Sanitary products.
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52 Overall, Table 2 indicates that while OECD respondents were more likely to propose
53 changes in the retention and development stage (which contains 37.4 percent of the
54 OECD posts), non-OECD respondents' proposed changes were more likely to fall into
55 the recruitment stage (which contains 35.5 percent of the non-OECD posts).
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Apart from nationality, Chi-Square test shows that gender also makes differences (see Table 5). As shown in Table 4, more than half of the male respondents focused on two themes: slightly over a third (33.9 percent) of them proposed changes to promote equality in employment/anti-discrimination, and 22.2 percent of them used the opportunity to raise non-gender related grievances. Comparatively, while around a quarter (24.2 percent) of female respondents also focused on equality in employment/anti-discrimination, their proposed changes are more evenly spread out across the four stages. The differences may suggest that while men are aware of gender inequality in shipping, they are less likely to be aware of the specific barriers and challenges women face in every stage of a seafaring career cycle.

Table 4. Theme * Gender crosstab results

Stage	Theme	Female (%)		Male (%)	
Attraction	Raise awareness and encourage girls	8.9	18.6	5.8	9.9
	Attitude change	7.3		3.5	
	Role models	2.4		0.6	
Cadet training	equality in education/scholarship	10.1	12.5	6.4	8.2
	Gender sensitivity training	2.4		1.8	
Recruitment	Equality in employment/anti-discrimination	24.2	32.7	33.9	40.9
	Regulation/affirmative act	8.5		7.0	
Retention & development	Anti-harassment/respect/acceptance	6.5	29	5.8	18.6
	improve workplace conditions	1.2		2.9	
	PPE/Sanitary products	4.8		0.6	
	Flexible employment/maternity leave	5.2		2.9	
	Support	7.3		4.1	
	Fair promotion/more women leaders	4.0		2.3	
Not relevant	Encouragement/Non-gender related	7.3	7.3	22.2	22.2
Total		100	100	100	100

Table 5. Chi-Square Test (Theme * Gender)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	39.490 ^a	13	.000

a. 5 cells (17.9%) have expected count less than 5. The minimum expected count is 2.86.

6. Concluding discussion

This paper examines changes proposed directly by 423 industry stakeholders to promote gender equality in seafaring. It sheds new light on gender equality in seafaring in several ways. First, as the changes were proposed by a large number of stakeholders based on their experiences, this analysis covered a wider range of recommendations than a small research team could come up with and therefore it was able to synthesize these into a more comprehensive list. Overall, the analysis identified 15 themes, and 13 of them were relevant to policy changes toward gender equality.

Second, this paper draws on the career cycle approach (Australian Human Rights Commission, 2013; Turnbull, 2013). In the process of mapping the identified themes to the career cycle stages, it becomes clear that a new stage, cadet training, needs to be considered in a seafaring career. This additional stage reflects the nature of the seafaring profession: obtaining a certificate of competency is the basic entry requirement for this profession which entails taking lengthy vocational training courses and passing relevant exams.

Third, while previous research implicitly treated women seafarers as a homogeneous group, this paper differentiates OECD and non-OECD women seafarers and creates a nuanced understanding of how their nationality may condition the career barriers. Although the cadet training stage is an integral part of the four-stage framework adopted in this paper, this stage seems to be a concern mostly for non-OECD respondents, and for OECD respondents it is rather insignificant. This difference reflects the practice that cadet training in OECD countries is more likely to be sponsored by shipping companies with subsidies from the government. By contrast, in non-OECD most students have to pay for the training themselves. In the context that boys are likely to have priority in education in some non-OECD countries (Shabaya and Konadu-Agyemang, 2004; Tuwor and Sossou, 2008), training fees can be daunting for girls especially if they are from poorer families.

Turnbull (2013) points out that recruitment and retention are the two most critical stages for women seafarers and that policy interventions should target the barriers in these two stages. The findings in this paper confirm this point. However, regarding which stage is more crucial, there is a difference between OECD and non-OECD respondents. Compared with OECD respondents non-OECD respondents were more concerned about equality in the recruitment stage. The difference indicates that women seafarers from non-OECD countries are more likely to face barriers and challenges in the initial two stages of their careers.

Fourth, this paper also brings to the fore male voices. Seafaring is still a male-dominated profession and working at sea is physically and mentally challenging. In this context, it is fair to say that understanding and support from male colleagues is necessary for women seafarers' career development and workforce diversity. It is

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3 important to take male seafarers on-board and understand their attitudes and
4 perceptions. Surely men are aware of gender inequality in seafaring, but they are less
5 aware of the specific barriers and challenges women face in their career cycle.
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10 These findings have policy implications. In some OECD countries, as workplace
11 inclusion and diversity policies have been effectively driving shipping companies to
12 recruit as many women seafarers as they can find (Pike *et al.*, 2017), equality in the
13 recruitment stage has been improved. In this context, further policy interventions
14 should target the retention and development stage as well as the attraction stage. By
15 contrast, in non-OECD countries, policy interventions should pay serious attention to
16 the recruitment stage. When a woman cadet successfully completed her studies
17 despite all the challenges but could not find employment because of her gender, this
18 not only is unfair to her but also serves to discourage other women from taking the
19 training. Furthermore, policy interventions can also provide more support to encourage
20 girls to take seafarer cadet training.
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25 Needless to say, to achieve gender equality in seafaring, it is important to support
26 women seafarers in every stage of their careers and enable more of them to complete
27 their career cycles. Successful careers bring women into leadership roles where they
28 would be more capable of promoting gender equality, making women's voices heard,
29 and adding women's perspectives in decision-making.
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34 This paper also has limitations. The data was naturally occurred. As such, the sample
35 is not representative, and two major seafarer supplying countries, China and Russia,
36 are not represented. While the missing of certain countries does not invalidate the
37 findings for the countries in the sample, it would be ideal to include all the countries.
38 Furthermore, the posts on the virtual wall were relatively brief and did not provide
39 detailed explanations for the proposed changes. To overcome these limitations, future
40 research with a more representative sample and capable of collecting in-depth data is
41 needed to explore further the differences between different groups of stakeholders.
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