

# Changes in the average length of stay in a mariner's onboard profession and consequences for Maritime Education Universities and shipping companies

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### **Abstract**

The working and living environment and the tasks that entail the seafarer's duties onboard are quite different from those of any land based workplace.<sup>2</sup> Their life is restricted to a certain area for several weeks or months – separated from family and friends and without being able to engage in a hobby like soccer for which you have to attend practice sessions on a regular basis. Seafarers have to socialize themselves with multinational crew members from various cultures and nationalities.

**Key words:** Sea farer, On-board career, Shore based jobs, Psychological stress

# Introduction to mariners' modern life onboard

"Forget any romantic notions of life on the ocean wave; most modern-day seafarers are simply 'prisoners with a salary.'"3

This quote from a newspaper article characterizes best, what some mariners might experience nowadays in their working life. Living and working conditions onboard ships require from mariners a high degree of social responsibility and the ability to handle psychological and physical stress: While a ship sails from one port to another, a whole different set of physical conditions prevail onboard - such as climate changes (temperature, humidity, air speed, heat

<sup>&</sup>lt;sup>1</sup> Email:KumarS@USMMA.EDU <sup>2</sup> Cp. Kristiansen (2005).

<sup>&</sup>lt;sup>3</sup> George (2011).

radiation, and weather conditions) or high levels of noise and vibration, and the 'all hours' work functions.<sup>4</sup>

Above this, they are often faced with time-pressure and hectic activity during their voyage. Depending of the rank and the job tasks on board, the stress level is likely to vary. It can be assumed that officers have to endure higher stress due to their responsibilities for personal and material. Stringent work schedules including watches, port operations, cargo loading and discharging, as well as various other ship generated operations and emergencies and the transition from the 'sea passage' leg of a voyage to the 'stay at port' leg result in inadequate rest and sleep loss between watches. And sea motion sometimes makes the situation worse: Days seem even longer and the work harder. And the days of seafarers are long ones. Even though the International Labour Convention limited the working hours for seamen to 14 hours per day, this time span is often considerably exceeded – for instance on vessels with frequent port clearances.

According to international surveys, the human element is the source of virtually all accidents and collisions with other ships – and many of these accidents are caused by fatigue or false situation assessment due to high stress levels. <sup>9</sup> After finishing long work days, the possibilities of distraction in their free time are limited to a small range of leisure activities. Watching movies and singing Karaoke in the recreation room are the most common forms of entertainment, except for a small number of ships, which are also equipped with gyms.

And when seafarers in former times answered the question about the reason for their job choices with "seeing the world", in these days, mariners do normally not have the chance to even go ashore during port lay times. Nowadays the high technical standard of cargo handling equipment and the port infrastructure made short lay times possible. Container vessels, in particular, are designed to optimize the efficiency of handling operations. The handling rates are so fast, that cargo operations are mostly finished within a few hours. The crew onboard is

<sup>8</sup> Cr. ILO (2006) Regulation 2.3, Standard A 2.3 No. 5 (a) (i) and Oldenburg, Jensen, Latza and Baur (2009), p. 96.

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<sup>&</sup>lt;sup>4</sup> Cp. Theotokas, Papachristou, Koukoravas and Stantchev (2013). p. 6.

<sup>&</sup>lt;sup>5</sup> Cp. Oldenburg, Jensen, Latza and Baur (2009), p. 96.

<sup>&</sup>lt;sup>6</sup> Cp. Theotokas, Papachristou, Koukoravas and Stantchev (2013). p. 6.

<sup>&</sup>lt;sup>7</sup> Cp. Dimitrova (2010), p. 27.

<sup>&</sup>lt;sup>9</sup> Cp. Gregory and Shanahan (2010), p. i.

forced to be on duty at any given time the ship is alongside the pier. Ports are often in remote areas far away from urban centers. Furthermore, authorities issue strict regulations, which make shore leave not only difficult, but often impossible.

As mentioned above, short sea passages between ports leave seafarers working for longer hours with insufficient opportunities of recovery, leading to stress and fatigue. Nevertheless, people have to fulfill their duties (and regulators keep on adding more and more paperwork to these seafarers' duties) despite the fact that they cannot guarantee for their own mental wellbeing, which increases the possibility of an accident enormously.

The physical strain of work onboard has shifted to a growing psychological strain because of new technologies in use onboard. The main question to be answered is whether the technological development, with its benefits and profits for the modern shipping industry, has a negative impact on the life of the modern seafarer. Anyway, technological development made it possible to handle largest ships with only small crews – nowadays the crew of cargo ships consists of about 10 to 20 seafarers. <sup>10</sup> For example Maersk Lines triple E class vessels with a capacity of more than 18,000 TEU has only 22 crew members onboard. 11 But reduction in manning levels that occurs due to the cost reduction policies of the shipping companies also contributes to fatigue. 12

Furthermore, ship owners increased the number of ships sailing under a so called "Flag of Convenience" (FOC). "The choice of a vessel's flag is usually dedicated by complex factors and motives. In the past, the reasons for re-flagging of ships were political or military, whereas in recent years they are increasingly economic. One way to reduce costs is to operate under the flag of a nation that as minimum regulations and almost no taxation compared to the flag of a nation with a costly and complex regulatory framework." Due to many authors' research findings, the primary cause for flagging out 14 is the desire to reduce costs – besides decision affecting factors such as the degree of control exercised by the flag state, the type of

<sup>&</sup>lt;sup>10</sup> Cp. Oldenburg, Jensen, Latza and Baur (2009), p. 96.

<sup>&</sup>lt;sup>11</sup> Cp. Maersk Technology (2013).

<sup>&</sup>lt;sup>12</sup> Cp. Theotokas, Papachristou, Koukoravas and Stantchev (2013), p. 6.

<sup>&</sup>lt;sup>13</sup> Dimitrova (2010), p. 17.

<sup>&</sup>lt;sup>14</sup> Out flagging means to sail under a foreign flag, without changes of the ownership. For this a change into the ship register of another states is necessary.

trade in which the ship is engaged or the geographical coverage of that trade.<sup>15</sup> The conditions on some of these ships are in a miserable state concerning their safety and the security. Under some FOC, there are only few restrictions on hiring a crew of any nationality. Crews consisting of various nationalities, often tend to be from less developed countries. FOCs sometimes do not enforce minimum social standards onboard. The International Commission on Shipping has reported many cases of "unsafe working conditions, unsanitary and unhygienic accommodation, lack of medical care and provisions, physical and sexual assaults, underpayment or cheating wages and abandonment."

Another fact is that in dependence of the ship's flag, the size of the crew varies. <sup>17</sup> Sometimes it may seem as if ship owners or charterers do not concern themselves with the human matters of seafarers, but seafarers are human beings with human needs. <sup>18</sup> Then again, there are also many national flag vessels that have bad records.

Today, the labor market is more international. Agencies are managing the employment of crew members from all over the world. The main countries supplying seafarers are the Philippines, China, and India – other nationalities one can find onboard are Russian and Europeans, furthermore people from Kiribati and Tuvalu are popular seafarers. <sup>19</sup> The social contact between individual crew members is often very rare, due to the strict hierarchy that prevails onboard. The difference in native language is another problem that might create a feeling of social isolation when crew members can only hardly express themselves in English. The distance between seamen and their families and friends is an additional reason that adds to this feeling of social isolation. For these reasons the loneliness onboard of ships, depending on the atmosphere of ship's crews and the social responsibility of the ship's owner towards his employees, is one of the biggest problems in the seafaring profession.

As mentioned above, the growing technology presents the automation of many seaman trades, which has been a traditional part of the work. For instance, the Electronic Chart Display and Information System (ECDIS) replaced the paper chart, on which nautical officers carried out the route planning. Traditional seaman knowledge becomes more and more unnecessary and

<sup>&</sup>lt;sup>15</sup> Cp. Mansell (2009), p. 93.

<sup>&</sup>lt;sup>16</sup> Dimitrova (2010), p. 24.

<sup>&</sup>lt;sup>17</sup> Cp. Dimitrova (2010), p. 18.

<sup>&</sup>lt;sup>18</sup> Lobrigo (2012), p. 87.

<sup>&</sup>lt;sup>19</sup> Cp. Couper (), p. 442.

obsolete to manage the daily life onboard. Under these circumstances, it might be hard for working sailors to properly identify themselves with the profession of a mariner.

According to Marco Polo, the Italian merchant traveler, the man who goes to sea is a man in despair. Since then, many things have changed: Due to the progressive globalisation and further development of technology, the sea travel has increased enormously. In this way, seaborne trade accounted for 89.6% of global trade in terms of volume (tonnes) and 70.1% in terms of value. Seafaring is a vital component of international trade flows. The increase in volume of world trade is accompanied by a transition of the shipping industry from a national to a global model. So it could be expected that in such an important part of the global supply chain, in a modern industry, the onboard living conditions have changed – improved – since then, too. That might well be so – but it is not. George wrote, that Marco Polo's statement is still true, but today's seafarers are also "...probably poor, probably exploited, and living a life that contains, at the least, chronic fatigue and overwork; boredom, pirates and danger. Suicide rates of seafarers are triple those of land-based occupations and carrying sea cargo is the second-most deadly job on the planet after fishing."

Seafaring has changed from a traditional profession, to a job where seamen are just a replaceable part in the maritime economy. In a report from 2006, the International Transport Workers' Federation mentioned that "...the maritime and fishing industries continue to allow astonishing abuses of human rights of those working in the sector...Seafarers and fishers are routinely made to work in conditions that would be unacceptable in civilized society. In some cases they are afraid to complain or seek assistance from trade unions or welfare organisations for fear of blacklisting."<sup>24</sup>

It appears necessary to emphasize that not onboard of all shipping companies prevail such bad conditions, but the high number of various reports telling from poor standards makes clear that there is a significant quantity of "black sheep" among the shipping companies. And besides all these disadvantages named above, the mariner's career is still a fascinating and

<sup>&</sup>lt;sup>20</sup> Cp. Cousins (2013).

<sup>&</sup>lt;sup>21</sup> Hoffmann and Kumar (2010),p. 36.

<sup>&</sup>lt;sup>22</sup> Cp. Dimitrova (2010), p. 5-7.

<sup>&</sup>lt;sup>23</sup> George (2011).

<sup>&</sup>lt;sup>24</sup> ITF (2006), p. 5.

well-paid one for people who want to shoulder high responsibility at an early stage after finishing their maritime education and being at peace with the world and themselves when spending many hours alone. At least for some years it represents a good occupation.

But then – the result of all the disadvantages listed above is that careers at sea are often very short. Most of the seamen already quit the field of working onboard in a very early state of their profession – at least in European countries.<sup>25</sup> Of course, maritime professionals have had always a tendency to look for good job opportunities on shore since they started to long for a more settled life with their families after sailing for certain years.<sup>26</sup> But "…currently it seems like the feeling is shared with many young sailors alike. It is a feeling that has more or less come to every seafarer in the maritime fraternity".<sup>27</sup> There is, therefore, every indication that a transition from an onboard to an onshore occupation might be the best next step in a mariner's career path – after some years of collecting experiences. But in that point of their lives, mariners normally have families depending on that income what makes it harder leaving a well-paid job for a far smaller salary on shore or taking a break from the regular salaries for going back to college for higher studies.<sup>28</sup>

However, there are many more challenges a mariner has to take when he or she wants to start an on shore career. Here are just some examples: For their time being onboard, they had to integrate themselves into a strict hierarchy with normally no or only little possibilities to participate in decision making processes – at least when they are neither the captain nor the chief mate. But when many mariners are in one of these high level onboard positions, they are used to give orders without having to expect any objections from the crew. <sup>29</sup> In on shore occupations, they are likely to find a different situation: they might have to find solutions to given problems by discussing the pros and cons in a team. Furthermore, mariners are trained for onboard challenges – for the safe and secure transport of freight from origin to destination (including responsibility for the vessel and the crew) according to all national and international laws and regulations. But many mariners know little about the wide range of on shore jobs in the whole maritime industry or about an on shore company and in which

<sup>&</sup>lt;sup>25</sup> Cp. Progoulaki (2012), p. 11

<sup>&</sup>lt;sup>26</sup> Cp. Singh (2013).

<sup>&</sup>lt;sup>27</sup> Singh (2013).

<sup>&</sup>lt;sup>28</sup> Cp. Singh (2013).

<sup>&</sup>lt;sup>29</sup> Sometimes, one will find a more cooperative management style onboard of ships. The captain and officers then discuss decisions to find good solutions.

departments exactly they could find an interesting job – besides the "typical" ex-seafarer's occupations such as superintendents, human resources manager for onboard staff or pilots. And even if they work in these typical ex-seafarer occupations there might still be a competence gap which has to be filled. However, former mariners are very popular with employers due to their knowledge, their ability to deal with challenges independently and their personality: "Many of these land-based maritime-related industries have relied traditionally on ex-seafarers as a source of skilled labour and indeed many seafarers, when they leave their working life at sea, move on to a career ashore. In other words, the EU offers advantageous circumstances for its national seafarers for further shore-based employment, something that of course improves their employability. A recent study in the UK revealed that a significant number of employers prefer people with seafaring experience to fill certain land-based jobs, with the relevant number of jobs."

# **Research questions**

Seafarers are needed onboard as well as on shore when they served several years at sea and gained lots of experiences. Against this background, it seems not advisable to keep mariners onboard for their whole professional life. But shipping companies complain about the relatively short time mariners spend in the onboard occupations (compared to the education time and the money these companies spend for further training) before leaving for a work on shore. Hence, it appears reasonable to try to extend the time spend in onboard positions. Several studies dealt with the improvement of living and working conditions in order to make seafarers stay longer.<sup>31</sup> But the approach of this survey will be another one: The authors try to find out the mariners' reasons for originally choosing the profession onboard and for leaving their chosen profession. Companies could use this knowledge to react to the initial reasons for this career aspiration and prevent seafarers from possible disillusionments and frustrations what might make mariners leave earlier. Furthermore, this survey will deliver current data on the mariners' length of stay what will help companies support in planning their human resources issues. The relatively short time spent onboard offers room for action also for education institutions: a possible competence gap could be closed by training programmes for mariners being in transition to an on shore work. And the more, education institutions know

<sup>&</sup>lt;sup>30</sup> Mitroussi (2008), p. 1048.

<sup>&</sup>lt;sup>31</sup> For instance the survey of Nautilus: <a href="http://content.yudu.com/Library/A1nb2g/ShipboardSocialCondi/resources/8">http://content.yudu.com/Library/A1nb2g/ShipboardSocialCondi/resources/8</a> htm

about the current length of stay and reasons why mariners leave, the better these training programmes could be tailored to the mariners' needs.<sup>32</sup> Thus, this survey will deal with the following questions:

- Reasons for choosing the onboard profession
- Reasons to leave the onboard profession
- Average length of stay in onboard professions

The methodology employed for answering these research questions will be described in the next paragraph.

The average seafarers' length of stay onboard professions

In former times most seafarers spent their whole life in the profession at sea – they did not need the opportunity to be able to choose or search for a better job on shore. Only illness or an emergency forced them to get a shore-based job.

Today, a seafarer's career mostly ends after a few years of working at sea. This may correlate with the changed expectations young people have: they want compatibility of family and career.<sup>33</sup> When working only a fortnight on off-shore supply vessels for instance, this might be possible. But when sailing a four or five month journey, it is nearly not possible to be up to date with the day to day businesses of the family. And according to surveys, exactly the compatibility of family and career is more important to the so-called young millenials (born between 1981 and 1995, entering the job market or being in the first phases of their career in the beginning of the21st century) than "just" earning lots of money. 34 There are no actual papers about the exact length of stay in their onboard profession.

Former surveys proved an average duration of three to four years. 35 To demonstrate the current development in the average stay, an empirical examination, with participants of all generations has been carried out. Besides the question of the years of stay in the seaman

<sup>&</sup>lt;sup>32</sup> Furthermore, the acquired competences during the time spend in an onboard profession are of great interest for education institutions. The Ph.D. thesis of one of the authors, S. Neumann, will deal with this topic and will be available in 2014.

<sup>&</sup>lt;sup>33</sup> Cp. Vogel (2012), p. 160 f.

<sup>&</sup>lt;sup>34</sup> Cp. PricewaterhouseCoopers International (2011), p. 4.

<sup>&</sup>lt;sup>35</sup> Cp. Gerstenberger and Welke (2005), p. 80.

profession, the participants had to answer a few questions regarding their career at sea. The results of the survey include additional information about the reasons behind becoming a seafarer, their first position onboard, and reasons for or against their decision of working their whole life onboard and about the commonest shore-based jobs.

The survey's participants were German students of nautical sciences, nautical officers who are working at sea, former sea-going officers who are now in land-based occupations and retired seafarers. In total 229 persons participated in the survey: 120 students, 38 officers at sea, 43 former officers in land-based jobs and 28 retired seafarers. Roughly 88 % of the participants were male and 12% female.

The next chapters will show some of the results of the empirical examination.

## Reasons why a person becomes a seafarer

Firstly, the participants were required to list the reasons for their decision of choosing a seafaring career. The answer could be formulated in own words, so the given answers vary. In the following, they are summarised into eleven categories. Illustration 1 shows the main reasons, why people have chosen to become a seafarer.

What was the reason to choose a seafaring career? 0 no further details 1 Poverty in the post-war period Number of... 2 The work at sea, the pleasure to... 3 Childhood dream/ Vocation 10 4 Course guidance, journal, acquaintance 12 5 Ratio of holidays to working time 13 6 Family tradtion 18 7 Abnormality/Variaty of the profession 21 8 Sailing or other water activities 9 Previous job leads to a profession at sea 31 10 Prospect of promotion, Salary 33 11 Fascination for the sea, Romance of... 52 10 20 30 40 50 60

Illustration 1: Main reasons becoming a seafarer

Source: Own illustration (30 July 2013)

Looking at the diagram, there is a huge amount of people who became a seafarer because of the "romantic aspect" at sea. Even young people argued with this reason, although today the adventures and mystical side of seafaring is mostly gone, due to the constant changes in the industry.<sup>36</sup> Here the assumption rises, that the reality of seafaring often is a disappointment to young officers. Consequently they decide to quit the profession at sea at an early state of their career.

Another reason to choose a seafaring profession has been the prospect of promotion. Regarding shore-based jobs, the aim of becoming a pilot was especially mentioned very often. Interesting to observe, was that none of the participants chose the profession because of the more or less high salary. Additionally, a personal reason why that person wants to work at sea was always listed. The exceptions are some retired seafarers of the post-war generation, who chose the profession at sea because of the poverty after the Second World War. For them, seafaring was a way to escape a weak financial situation. Another reason was that it was possible to avoid the draft of the Federal Armed Forces by signing onto a cargo ship. In Germany, a compulsory military service for young men existed for many years — unless they proved that they are about to start an onboard career. Another difference between the young and the old generation is that today's retired seamen often chose to become a seafarer because of family tradition.

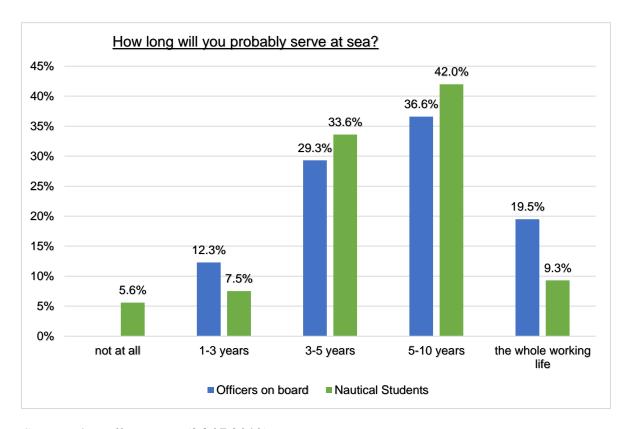
## The expected stay of nautical students and officers onboard

The following diagram shows a comparison of answers of nautical students and officers onboard. Due to the different numbers of participants, the result is shown in per cent.

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<sup>&</sup>lt;sup>36</sup> Cp. Dimitrova (2010), p. 34.

Illustration 2: Expected stay in the profession of a seaman of nautical students and officers onboard



Source: Own illustration (26.07.2013)

The question of the expected stay in their onboard profession was answered by 41 officers onboard and 107 students. The blue bars show the answers of the officers and the green bars show the answers of the students.

The analysis of the answers shows that 5.6 % of the students never want to practice the job at sea. Some people of this group often only study nautical science to be highly qualified for other professions. Other people of this group based their decision not to work at sea on the bad experiences they made during their internship onboard during their studies. 12.3 % of the officers and 7.5 % of the students are planning a duration time of one to three years. A duration time of three to five years is planned by 29.3 % of the officers and 33.6 % of the students.

Both groups of participants chose the duration of five to ten years the most. Officers chose this answer at a percentage of 36.6 %, students with 42 %. A higher difference is visible by analysing the last answer. Here, 19.5 % of the officers are planning to stay their whole life working onboard while students plan to stay for this particular duration only at an amount of 9.3 %.

Subsequently, that means that 80.5 % of the officers onboard will change their profession at sea to a shore-based job. From their current point of view, the students will quit the profession at sea after a few years. 90.7 % of the students don't want to spend their whole life at sea. Of course this analysis is just an assumption, keeping in mind that the career at sea could always be unexpectedly interrupted due to health problems, family planning, etc. Today the current standard of living and working conditions onboard of some ships show no promise of positive development (Reasons mentioned above). Many seafarers still work on substandard vessels in terrible living conditions. But apart from all this the situation is different on every ship and there are ships, on which crews are treated fairly and work under good relations and in good working conditions.<sup>37</sup> Due to the fact that on most ships the human values are still neglected, the opportunity to spend an entire lifespan at sea is often left out of consideration.<sup>38</sup> On the other hand, the attitude of young seafarers towards the profession at sea could change while they practice the job as a nautical officer. That means, that the decision to either work at sea, or to quit the job after a certain time, can only be assumed, due to permanent changes in the economic conditions and in the individual private situations.

The stay in the onboard profession of former officers in land-based jobs

In this part of the analysis the participants were divided into two groups. One group represents the nautical officers, who, after their life at sea, changed their profession to "normal" land-based job, like work in an office of a shipping company or work as a nautical inspector. The other group consists of officers, who became a pilot after their career at sea. This differentiation was necessary, because pilots are required to have a longer duration of career in the profession at sea. In contrast to the officers, who change to a "normal" land-based job, they need more experience at sea to learn how to maneuver ships in a secure way.

28 pilots and 15 persons, who are employed in a shore-based business, are included in the examination. Following illustration shows the length of stay in the onboard profession of both groups in per cent.

<sup>&</sup>lt;sup>37</sup> Cp. Dimitrova (2010), p. 68.

<sup>&</sup>lt;sup>38</sup> Cp. Dimitrova (2010), p. 68.

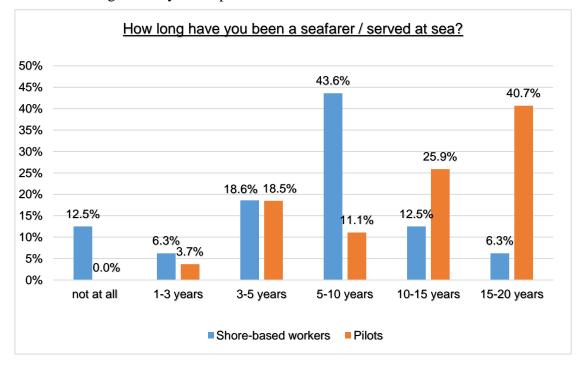


Illustration 3: Length of stay in the profession of a seaman of former nautical officers

Source: Own illustration (23.09.2013)

The blue bars show the answers of shore-based workers, the orange bars show the answers of the pilots. Looking at the duration of shore-based workers, a short stay at sea is noticeable. After their nautical studies, people often immediately start to work in a position ashore. On average, the duration in a profession at sea is 7.3 years. The most chosen answer of this group was to remain onboard for five to ten years. This duration was voted by 43.6 % of persons in a shore-based job. The most often chosen answer of the pilots, with an amount of 40.7 %, was a duration time of 15-20 years.

Two of the participants, in shore-based jobs, just practiced the work onboard during their time as a cadet, within the framework of their nautical studies. 6.25 % of the inquired persons worked as a nautical officer from three to five years. A duration at sea of three to five years were chosen by 18.6 % and a duration of ten to fifteen years by 12.5 %. Only one person in a shore-based job chose to stay in the profession as a seaman for fifteen to twenty years.

Looking at the pilots, every single one of the participants collected a few years of experience at sea. Only one person became a pilot after one to three years onboard. The answer three to five years was chosen by 18.5 % of the pilots and around 11 % chose a duration time of five to ten years at sea. 16 % of the pilots practiced the profession at sea for ten to fifteen years.

Once again, the diagram illustrates the differences in the average stay in the profession as a seaman between former officers in shore-bases jobs and former officers who became a pilot

after their career at sea. In comparison, pilots stay around five to ten years longer in the onboard profession than the former officers, who switched to a "normal" position ashore.

# The length of stay in the onboard profession of retired seamen

Here the arrangement of the answers had to be adjusted to the longer duration at sea, that the retired seamen spent. The count begins from five to ten years, because all of the before mentioned practiced the profession at sea for at least five years.

The analysis of the average stay of these participants seems predictable, but in comparison to the other groups, it is still astonishing. The average stay of the retired seamen onboard ships adds up to 24.5 years, which is an enormous difference compared to the other groups, especially to the group of the younger generation. Here the duration onboard mostly already ends after a stay of five to ten years, whereas the career at sea of the retired seamen really just started after this duration. The next illustration shows further answers of this group.

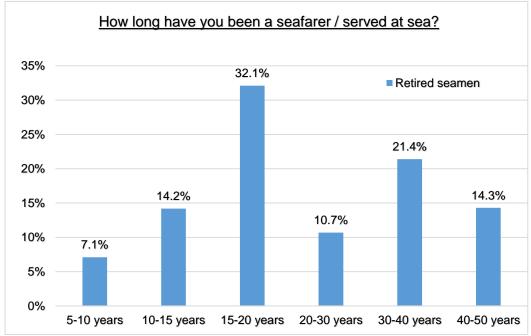


Illustration 4: Length of stay in the profession at sea of retired seamen

Source: Own illustration (26.07.2013)

28 retired persons were surveyed. 7.1% of them spent five to ten years at sea, 14.2 % practiced ten to fifteen years in the onboard profession. Just like the pilots, the longest duration is between fifteen and twenty years. 32.1 % gave this answer. Participants of this group are the only persons, whose duration onboard exceeds twenty years in total (except

those questioned whose answer was to spend their whole working life at sea). As the illustration shows, 10.7 % of the retired seamen remained twenty to thirty years at sea, a duration of thirty to forty years was chosen by 21.4 %, and forty to fifty years at sea were chosen by 14.3 % of the participants. The last two named durations (between thirty and fifty years) represent a whole life profession at sea.

Working at sea for such a long period has become very unusual for today. About 36 % of the retired seamen have been loyal to their profession their whole life, whereas only 19.5 % of the younger nautical officers want to spent their whole working life at sea.

# Reasons for the change from an onboard to a shore-based profession

Another aspect of the empirical examination is the reasons why seafarers change from their onboard to a shore-based profession. The following paragraphs give an overview of the most mentioned reasons, in decreasing popularity of answers. To further clarify the situation of seamen onboard, some comments of participants are included.

The mainly mentioned reason to leave the profession at sea is family planning and the loss of social contacts. Family and friends are important to many of the participants. Not seeing their own children growing up and the difficulty to keep up the social contacts ashore, by being absent for months at a time, are only a few arguments to justify the end of a career at sea. In the following, an example from the various comments will be mentioned:

"I want to be there for my family. The management in the seafaring business does not create a lively working atmosphere."

High stress levels and lack of recreational facilities onboard of ships is the second highest mentioned reason of ending a career at sea. Short lay days and sea passages, strengthened regulations and national entry legislation, and the growing bureaucracy onboard are perceived as a physiological burden to the crew, which only a very few wish to endure for their whole working life. Small crew sizes and cultural differences between the crew members lead to an increase of the social isolation onboard, which is another reason for bad mental health in the profession of a seafarer. One participant describes this problem as follows:

"The adventures and mystical side of seafaring is gone. Lay days are reduced to a minimum; you haven't got a chance to visit other countries. Instead, you just know the different container storage areas [...]"

Also, retired seamen justified the end of their career at sea with decreasing living- and working conditions onboard starting in the seventeen's of the 20<sup>th</sup> century.

- "The outflagging began in the end of the sixties; by 1970 the German seafaring seemed to have come to an end. That was the reason for me to change to an appropriate profession ashore."
- "Since the seventies, the social life has ridiculously worsened in such a way, that you just become lonely and mentally wither away."

Another reason to end the career at sea after only a few years is the aim to become a pilot. Around 30 % of the participants begin to study nautical science to practise the profession as a pilot.

"My aim is to become a pilot, as a compromise between not giving up seafaring completely and on the other hand to be able to settle down and start a family."

The desire to live a well-ordered life is another influence that reduces the duration at sea. The working schedule onboard is not precisely plannable. Of course the duties are divided into different watches within a fixed rotation, but this system is interrupted by harbour operations, which lead to irregular working hours and insufficient opportunities for recovery. Additionally, there is a problem of drawing a dividing line between working and living areas onboard. Whilst shore employees are able to go home after the end of their day at work, the mariner is, even after the end of duty, still required to be in an alerted state, in order to solve a potentially arising urgent problem. This means there is no continuity considering working and recovery times.

Furthermore, the crew change can only be organized approximately, for instance tramp shipping, where the crew replacement is limited to fixed ports, so that a change of crew cannot always be guaranteed. Unforeseeable situations (i.e. a stay in a shippard or an accident

of a crew member) could be a reason to increase or decrease the time onboard; subsequently lengthening or shortening vacations.

Sometimes seafarers change their profession due to financial or economic reasons. Seafaring jobs depend on the economic situation. In tight financial situations, ship owners might replace German seafarers with foreign employees.

Some of the participants believe that they have good career prospects and a higher salary for themselves in shore-based jobs.

"I'm studying nautical science only to get a better position in a shore-based job. Due to this I only want to be working at sea until I get the qualification certificate of a captain. After this, my plan is to work ashore."

Take educational courses, i.e. a second study or further education, is mentioned less often, but still noteworthy. The reasoning behind this is that the work at sea becomes increasingly monotonous after a few years in practice. The seafaring sector offers fewer chances to acquire further qualifications, since they are not necessary. Training courses take place ashore and the acquired knowledge is not intended to be applied to onboard purposes, another reason why the decision to change to a shore-based job occasionally follows.

A small amount of participants also consider the health aspect, which could be a reason to end the nautical career. The older, as well as the younger generation, has doubts of practicing the profession at sea up to an old age, since physical fitness is a precondition to work on a ship safely.

"The time will come when the body can't take the strain of the life at sea anymore. That's the time to change to a shore-based job."

In spite of all these negative reasons of working as a seaman, there are still people who want to work at sea their entire life; and they have their reasons for this, too. The main precondition to remain true to seafaring is the passion and the pleasure these people feel, when they participate their job as a seafarer.

The ratio of holidays to time spent onboard is very often mentioned as a positive aspect of seafaring. With a fixed rotation system of crew changes, and a good time management ashore,

participants claim that they can spend more time with family and friends practicing the job of a seaman compared to working in a shore-based job.

"The profession of a seaman guarantees a good salary and long vacations, which offers me a lot of opportunities to spend my free time."

According to this group of participants, monotony boredom is not an issue, because seafarers are always mobile, and is therefore not a reason to change their profession. To these individuals, the romance of the seafaring still exists.

"When I stay too long at home, it is time for me to travel again. The work is a real pleasure. Every day is different, it's never boring."

## Conclusion

When looking at the results of the empirical examination, it cannot be expected that young mariners will stay longer than five to ten years in an onboard occupation. Furthermore, this survey did not lead to the conclusion that the onboard duration time is significantly decreasing – what a number of people in maritime industry assume. Instead, the evaluation showed that the average time – of three to four years – people spend onboard mentioned in the introductory paragraph, stayed nearly the same: three to five years. What could be proven by this survey is that a higher number of young people decide against a lifelong onboard career.

Due to the fact that future seamen will most likely end their careers at sea after some years onboard, the question arises, whether there will be a knowledge gap when "old generations" of seafarers cease to exist. The older generation maintains and hands down a very traditional know-how, which is in danger of being forgotten, in case there is no such exchange of knowledge between young and old officers. The traditional know-how of this generation is based on many years of seafaring experience. It is not possible to learn these very practical things in a short term, theory-based education at school. Ship owners and nautical universities should take the responsibility to maintain this traditional knowledge - maybe by implementing an onboard knowledge management system. Besides that, this survey lead to another interesting action point for human resources managers. A significant number of survey participants answered the question about the reason for their job decision with somewhat like "passion for the seafaring profession". And as it was mentioned above – when these mariners who have been passionate for the onboard job realize that they had a false pretense what make they think of leaving their job for an on shore work. Hence, it seems recommendable that shipping companies' and crewing agencies' decision makers might change the onboard situation in that way, that mariners will be able to enjoy their work and live at sea – like people were able in former times. An example might be to spread the enormous amount of paperwork on more shoulders for instance, but for this, larger crews are necessary. And educational institutions need to adjust their study programmes to the real career path. This means that young people should get the possibility to learn more about possible on shore occupations and what kind of competences they might need for these professions. That makes it possible for mariners to put things on the right track at a very early stage in their career. Above this, educational institutions should start offering short study programmes providing mariners in their transition time from an onboard to an onshore occupation with the competences needed for the new challenge. In this time of their career it could be expected that these people might have a family relying on the (ex-)mariner's income. Hence, the time they spend in a study programme before starting an on shore work should be kept as short as possible since these people including their families might have to live on their saving during the further education.

The education of nautical employees must be adjusted to the current and future average length of stays at sea. The preservation of the traditional seafaring knowledge must be guaranteed, so that future generations are able to fulfill their profession as seamen. Lastly, the education of young officers should include the theoretical knowledge, which is necessary to be prepared for potential shore-based jobs.

In conclusion, the question remains, whether it will be possible to educate a sufficient number of future nautical employees, whose education incorporates seaman's expertise alongside at least a few years of experience, in order for them to be employed in the maritime economy.

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