

Analysis of Recent Supply and Demand of Educated Seafarers in Montenegro and Worldwide

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This paper illustrates the current state of creation of personnel in the maritime industry in Montenegro and worldwide. We are comparing many different systems of seafarer education around the world and indicating their benefits and shortcomings. We took into consideration BIMCO's research pertaining to the supply of and demand for seafarers on the international labor market. We also took into consideration the development of seafarers' careers in keeping with international conventions governing the systems of education and training of seafarers. This paper focuses on the current condition in seafarer education worldwide. We conducted a survey among 30 Montenegrin and 24 Croatian seafarers to establish their opinion on the educational system, seafarer employment agencies and careers.

KEY WORDS

- ~ Maritime affairs
- ~ Seafarers education
- ~ Human Resource Management
- ~ STCW

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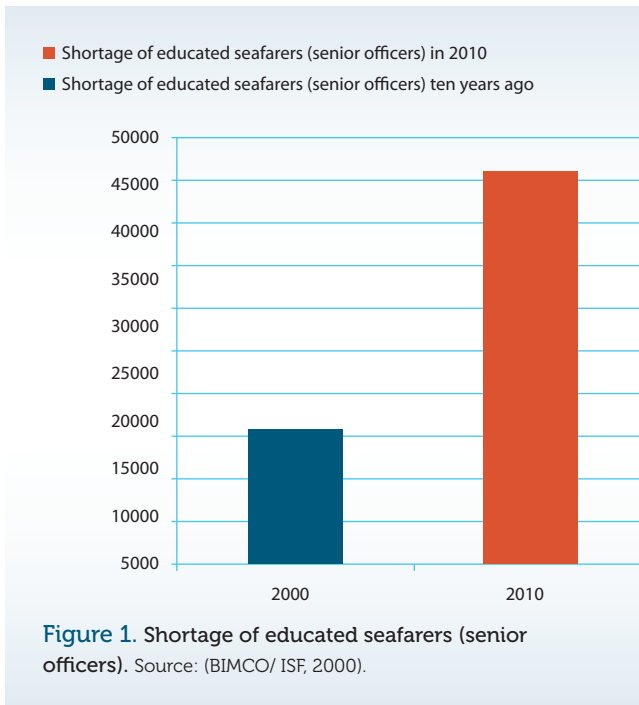
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1. INTRODUCTION

Since human resources management is essential for business because ideas cannot be realized without competent, organized and well-trained employees (Ćorović, 2008), we all need seafarers trained and educated in line with international conventions. If we look back at the past couple of years, we will notice that the EU (European Union) has invested an enormous effort into the adoption of regulations governing the education and training of seafarers, which had a tremendous impact on the maritime industry. Today, quality seafarers cannot be created unless they are educated and trained in accordance with many conventions such as SOLAS (Safety of Life at Sea), STCW (Standards of Training and Certification and Watch keeping) and many others defining the education and training of seafarers in detail. The planning of the educational system is essential for all transitional countries needing to radically reform their educational systems to harmonize them with EU standards and Montenegro is one of such countries. For example, the EU demands knowledge-based life-long learning for seafarers. Montenegro is far from realizing this goal. We need to concentrate our efforts on the education of seafarers, because we are creating human resources that need to find a job on the international labor market. Following the international trends in seafarer education is essential.

2. SUPPLY OF AND DEMAND FOR SEAFARERS ON THE INTERNATIONAL LABOR MARKET

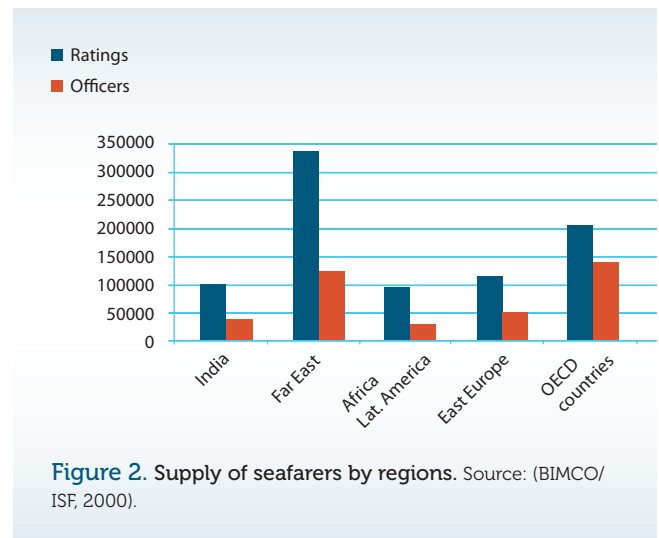
BIMCO (Baltic International Maritime Council Organization) has done research pertaining to the supply of and demand for seafarers.



According to research results, in 2000 there was a shortage of 16 000 officers which is approximately 4 % of the total officer pool. Predictions for 2010 show that there is a shortage of 46 000 officers. Research results indicate that there is a significant shortage of educated and well-trained senior officers on the labor market. The positive variation of demand for and supply of ratings suggests that the shortage of senior officers could be compensated with the additional education of ratings. On the other hand, the traditional division of positions on board, as well as big differences in education, indicate that the mentioned solution may not be good in the long run. This survey also indicates that the problem is rooted in two factors. The first is the quality of the educational system and the second is the lack of interest for navigation. The goal of the conducted survey was to define the most appropriate measures to encourage the interest in the seafaring careers. The identifying dynamics of the educational system needs to be determined. Contemporary economic paradigms proscribe sophisticated methods of workforce management, instead of manpower supervision characteristic of industrial paradigms. The main question here is how to develop quality seafarers whose competencies are the origin of new knowledge and competitiveness. To accomplish this goal we need to educate and ensure the development of employees, as well as to create an environment in which knowledge is acquired and shared, which entails trust, cooperation, team work and dedication to goals. A positive example are the German maritime industry and its human resources programs. Germany is trying to recover and recruit its seafarers by providing many facilities

and benefits. Due to its geographical characteristics, Germany developed continental industries. In the 19th century, the concept of the German merchant fleet became very significant. Since Germany didn't have market support like for example the United Kingdom or the Netherlands, it needed a state protocol that offered many benefits for the development of the maritime industry. The protocol established the role of Germany as a supporter of the maritime industry. This role continued throughout World War II, as well as in the post-war years. By that time the main workforce came to Germany from Spain, Greece, Italy and Turkey (Kundu et al., 2007). Today the majority of seafarers come from North America, Japan and European countries. The shipping industry is worried about the fact that over 40 % of officers are older than 50 years, and 18 % are over 55 years of age. The question here is why young people no longer wish to work in the shipping industry. One of the possible answers might be that the education for this career is very difficult, and one needs a lot of work experience to be promoted. This is why the EU is trying to attract as many young people as possible with special benefits. One of the countries that implemented such benefits is Croatia. These benefits are applied in the educational system, where one can become a senior officer without having a university diploma. Nevertheless, the seafarers need to attend many model courses to achieve the rank of senior officer. Nowadays seafarers don't need to graduate from university to reach higher ranks on board. Time will show whether this is a good or a bad solution. The fact is that it devalues university diplomas, which could become a big problem. In our opinion the crucial factors for advancement in the shipping industry are knowledge and experience.

According to BIMCO's study, the majority of seafarers comes from the Far East and minority from European countries (BIMCO/ ISF, 2000). Data from figure 2 show that the center of gravity of



the manpower industry has continued to move away from most of the traditional maritime countries in Europe, Japan and North America towards countries in the Far East, in the Indian sub-continent and Eastern Europe. Seafarers from OECD countries currently constitute some 27.5% of the marine global workforce compared to 31.5% in 1995 and there have been particularly substantial reductions in the numbers of junior deck and engine officers from OECD nations. But while these changes may well have been quite dramatic at the level of individual companies or countries, from the global perspective the overall 4% decline of OECD seafarers over a five-year period suggests that the changes are evolutionary rather than revolutionary.

3. EDUCATION OF SEAFARERS IN MONTENEGRO AND WORLDWIDE

Seafaring is specific because people involved in seafaring - seafarers - are subjected to many specific conditions which shape their career and education. Being a seafarer implies the need for constant improvement and knowledge verification due to the fact that since during navigation there are many risks affecting the safety of crew, cargo and ship, there is a constant need for everybody on the ship to work as a team. Seafarers are submitted to permanent knowledge and skill verification on the international labor market. Everything implies that seafaring requires continuous education, be it due to the rapid development of navigational equipment or for the sake of environmental protection. Senior officers need to know how to manage their crew in the frequent dangerous situations.

There are 3 common systems of seafarer education in the world:

- Traditional system,
- Gradient system (university and adept),
- University system (Ćorović, 2011).

Traditional system successfully combines theory and learning through practice. Practice additionally explains theory and makes career development easier. This system consists of several phases which individually last 2 or 3 months, with the whole system taking between 5 and 7 years to complete. The duration of this system is its biggest disadvantage, as well as the main reason why it is slowly being replaced by other more efficient systems. Many countries such as the United Kingdom, some Asian and African countries are still using this system but their tendency is to replace it.

Gradient system is much more popular and practiced in Western European countries, the USA, Australia, Canada, India, Philippines and Egypt. This system involves navigational practice lasting 6 - 12 months. Its total duration is 3 - 4 years after which the candidate acquires a BSc diploma (Bachelor of science) and STCW certificate OOW (Officer of the Watch), (Deck/engine); Mar

off, Dual (Polyvalent officer). This type of education is provided at academies, independent universities, colleges and state universities. Following the adoption of the Bologna declaration, Montenegro started using this system of seafarer education. As a result, we have well-trained and educated seafarers.

University system is still being used in France, Spain, Greece, China, Poland, Russia, Bulgaria, Slovenia and Romania. There is a small difference between this system and the gradient system. After completion of this type of education candidates acquire a BSc diploma with the possibility to continue their education in postgraduate studies. During this type of education the main courses are: laws, economics, environmental protection, human resources management.

All systems that mentioned above have some similarities such as: they all meet requirements of STCW 95 convention, all of them combine theory and practice (working knowledge). They successfully prepare students for work on board.

Survey that we conducted among seafarers indicates that seafarers rate the maritime educational system with the average 3.3. Many seafarers are obviously unsatisfied with the educational system. Croatian seafarers believe that the main disadvantage is the fact that one can become a captain without having a university diploma, while Montenegrin seafarers believe that the main disadvantage is the lack of practice during education. As for compliance with IMO standards on universities, both Croatian and Montenegrin seafarers evaluated it with average mark of 3.5 which is satisfying. 53% of examinees find that knowledge and skills they obtained in school/university are applicable on ship while 46% think that such knowledge and skills are not applicable.

Examinees find that the significance of simulator in education is rather big and they have given average mark of 3.9. Examinees are indecisive about whether online learning should be part of educational methods for seafarers, 40% find that online learning should be part of educational system, 41% are not interested in online learning and 19% don't know whether it should be a part of the educational system. The majority of examinees, 63%, find contemporary methods of learning better, while 47% prefer traditional methods.

4. TRAINING AND DEVELOPMENT OF CAREER IN MARITIME INDUSTRY

Training is the planned process of formation of attitudes and acquisition of skills and knowledge through learning. The primary purpose of training is to improve employee performances to meet the needs of the company for certain profiles of employees. Training is considered a form of investment into employees to enable them to do certain jobs.

If we want to increase the level of knowledge and skills that seafarers need, we need to shape a certain model of

Are knowledge and skills that you achieved through education applicable on ship?

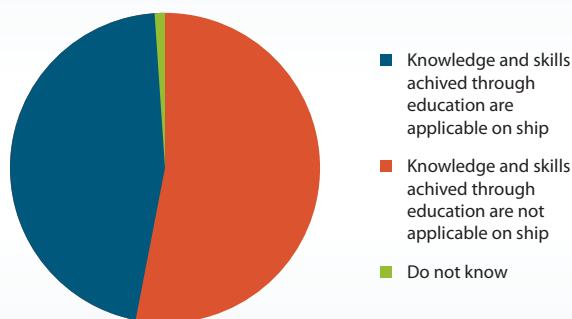


Figure 3. Evaluate maritime education.

education and training. Contemporary circumstances dictate the development of seafarers' knowledge and skills, as well as the acquisition of new ones. This is also requested by organizations controlling the education and training of seafarers. The main reason for such drastic changes in education and training is technological development. Over the last fifty years there have been many changes such as container ships. Every change in the maritime industry requires additional education and training of seafarers. However, many things remain the same, for example relations between crew members on board. A ship is an isolated social environment in which seafarers work and live. Autocratic crew management exists due to the hierarchy of the ship's crew. On board every crew member knows what his responsibilities are, who gives orders and who executes orders.

The recruitment of seafarers is a way to improve the competitiveness of a shipping company. Before recruiting new seafarers every shipping company should have a plan explaining the need for certain types of seafarers in the future. However, prior to the recruitment of seafarers it is essential to establish the amount of funds required to train new seafarers. If we take in consideration a seafarer's career, every seafarer needs to determine his goal and interest, in keeping with which he then plans his career. As far as seafarer's career is taken in consideration we might say that every seafarer is responsible for his own career. If they are well motivated and good mannered they will soon advance and develop their career. Nevertheless there are some conditions that need to be met, for example STCW convention precisely defines how many years of work experience a senior officer needs to have in order to become a captain. In order to advance, seafarers need to attend many model courses to acquire new knowledge and skills. Seafarer's knowledge and skills need

to stay abreast with technological development. Ignorance and irresponsibility cost a lot and might end a seafarer's career, (Pritchard, 2007) .

Data from our survey indicate that 72 % of seafarers are going to quit sailing before retirement and only 28% of seafarers will retire as seafarers. This is a major problem for maritime companies, because they cannot find skilful seafarers and they need to invest money to training new ones.

Data collected in the survey indicate that 8% of examinees will quit sailing in less than a year, 22% of examinees will quit sailing in 1 to 5 years and 47% will quit sailing in 5 to 10 years, while 23% of seafarers will conduct their duties on board for 20 or more years. Examinees find that the main reason why young people are not interested in navigation is distance from family and friends and they gave it the average mark of 4.9, the second reason is the fact that young people are not encouraged by the government to navigate, with the average mark of 3.5. As the third reason they stated that salary and working conditions are not attractive enough compared to other professions, with

I plan to quit sailing in:

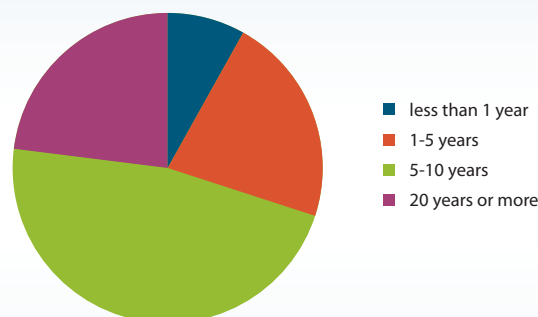


Figure 4. Seafarers fluctuation.

the average mark of 3.1. According to survey data, the least important reasons are the dangerousness of the seafarer's job, with the average mark of 2.7 and unfavorable condition on the world market, with the same mark.

As far as employment agencies are concerned, the survey data indicate that seafarers are not satisfied with their service. Seafarers find that employment agencies conform with international labor regulations and they gave them the average mark of 3.3. According to this survey seafarers are unsatisfied with employment agencies because they do not negotiate on behalf of seafarers, with the average score of 2. In seafarers opinion employment agencies are not doing enough to improve their service and examinees gave them the average score of 2.1.

5. CONCLUSION

The education of seafarers is a long-term process that needs to be well-planned in accordance with the new global trends. That is not an easy job because it requires a lot of effort, as well as the harmonization of national legislation with international conventions. Nowadays conventions are rapidly changing in order to improve the safety of navigation. Technological development calls for additional education and training of seafarers. Since keeping pace with all sophisticated new equipment is difficult, company management needs to assure its employees that additional education and training are in their best interest if they want to advance in their career. We mustn't forget the world economy which shapes the demand for seafarers. If the shipping industry is not doing well and is experiencing difficulties, many seafarers won't be able to find a job. Supply will exceed demand. Everything mentioned affects the plans for demand and is therefore of relevance for the education of seafarers. The interest of young people in navigation is also important. As illustrated

above, the majority of seafarers are old. The question is why this profession is becoming so unattractive to young people?! Being a small country, Montenegro needs to attract as many young people as possible into the shipping industry to reward those who put their efforts into educating new seafarers.

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