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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**THE ATTRACTION OF SEAFARING FOR
YOUNG CHINESE STUDENTS**

By

QIANG JIANZHONG

The People's Republic of China

A dissertation submitted to the World Maritime University in partial
fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

In

MARITIME AFFAIRS

(MARITIME EDUCATION AND TRAINING)

2014

DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

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ABSTRACT

Title of dissertation: **The attraction of seafaring for young Chinese students**

Degree: **MSc**

According to the Manpower 2010 Update published by BIMCO/ISF, the shipping industry is facing a shortage of seafarers, especially officers, and the shortage is likely to exist for many years in the future. As a result this would threaten the continuous development of the world's shipping industry. In order to alleviate the problem, IMO, as well as many other institutions and countries, have taken a number of measures to improve the social image of seafaring and motivate young people to make a career in seafaring. However, to train and cultivate a senior officer takes considerable time. Thus, all the stakeholders and relevant institutions should cooperate and collaborate with the aim of maintaining seafaring as an attractive profession that supplies sufficient qualified seafarers for the world's shipping industry.

In China, there are 570 thousand seafarers of which 420 thousand are serving on oceangoing vessels. Their hard work contributes to the development of the nation's economy as well as to the improvement of the citizens' living standards. However, most citizens are totally unaware of the tremendous contribution seafarers make; their social status and social security hardly accounts for all they do for the country. As a result, seafaring is losing its attraction for the Chinese youth, and the graduates of MET institutions are more likely to work ashore. Even if they choose to serve on board after graduation, the service period tends to be quite limited. Consequently, for the purpose of boosting the national economy, the Chinese government needs to make extraordinary efforts and take effective measures to ensure the required supply of manpower to the shipping industry is realised.

This dissertation aims to explore the attraction of seafaring in China and recommends appropriate countermeasures to improve the attraction. In order to achieve this, at the outset a literature review was undertaken to inspire the research. In addition, a SWOT analysis of the current situation of seafaring in China was done, and a questionnaire research survey, aimed at Chinese maritime students, was carried out to realize their actual thoughts. Furthermore, the attempts of international organizations and individual States to improve the attraction of seafaring were sought, contrasted and evaluated. Finally a number of recommendations have been offered to improve the attraction of seafaring particularly in China.

KEYWORDS: shipping industry, seafarers, attraction of seafaring, China

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LIST OF ABBREVIATIONS

ASF	Asian Ship-owners' Forum
BIMCO	Baltic and International Maritime Council
CSF	China Ship-owners' Forum
DWT	Deadweight Ton
ICS	International Chamber of Shipping
ILO	International Labour Organization
IMF	International Monetary Fund
IMO	International Maritime Organization
INTERCARGO	International Association of Dry Cargo Shipowners
INTERTANKO	International Association of Independent Tanker Owners
ISF	International Shipping Federation
ITF	International Transport Workers' Federation
MARPOL	International Convention for the Prevention of Pollution from Ships
MET	Maritime Education and Training
MLC 2006	Maritime Labour Convention, 2006

NOK	Norwegian Krone
SOLAS	International Convention for the Safety of Life at Sea
STCW	International Convention on the Standards of Training, Certification and Watchkeeping for Seafarers
TEU	Twenty-foot equivalent unit
UNCTAD	United Nations Conference on Trade and Development
WFW	Watson, Farley & Williams
WMU	World Maritime University

Chapter I Introduction

1.1 General remarks

This chapter mainly introduces the issues of this dissertation which deal with the attraction of seafaring in China, the factors that affect the attraction and measures that might be effective to enhance the attraction. In addition, this chapter briefly presents background information and the aims and objectives of the dissertation, as well as the methodology used for the research. Additionally, it provides a brief description and explains the pertinence and coherence of each chapter.

1.2 Background

With the globalization of the world's economy, we are now living in a global society. Both the states and each individual are relying on the global economy which is supported by the shipping industry. (Emil & Greti, 2013) The shipping industry transports over 90% of the worlds' commerce and it is said that "without ships, one half of the world would freeze for lack of fuel to heat it, and the other half would starve for lack of the grain that gives it its daily bread." (Mitropoulos E. E., 2008) Seafarers are the foundation talent of the shipping industry; they are the boosters for the development of global trade and the guardians of the marine environment and maritime safety. However, according to the BIMCO/ISF Manpower Update 2010, the shipping industry is facing a shortage of seafarers, particularly for certain ranks and types of ships. (BIMCO/ISF, 2010) The shortage of seafarers, especially senior officers, all of whom are the lifeblood of the world shipping industry, threatens the development of the industry. (IMO, 2010) In order to tackle this problem, IMO

launched the “Go to Sea!” campaign in 2008 aiming to encourage each State and international organization to make suitable efforts within their area to improve the attraction of seafaring and motivate more people to make a career at sea. At the same time, IMO identified “2010: The Year of Seafarer” as the theme of the World Maritime Day in 2010 which was celebrated globally throughout the year, and established the 25th June as the annual Day of the Seafarer to mark the enormous contribution of seafarers to international trade, the world economy and society at large. Moreover, a number of States, who were faced with a shortage of seafarers or realising a decrease in the attraction of seafaring as a profession, also carried out a large number of publicity activities and implemented stimulating policies and supporting measures to improve the social and citizen awareness of seafaring and including the social status of seafarers. Examples of this are the “Ikke for alle - en utdanning du kommer langt med” (“Not for everybody- an education that will take you far”), a campaign carried out in Norway (Hammarstedt & Zaar, 2011), the tonnage tax campaign in the United Kingdom (Lewarn, 2009) and so on.

In China, the shipping industry plays an important role in the development of the national economy and has developed rapidly in the past thirty years together with the blooming economy after China’s reform and opening up. The development is shown clearly by the cargo throughput, the construction of ports and infrastructure as well as the fleet size. (Sun P. , 2013) In the aspect of the fleet, according to the statistics of UNCTAK in 2013, China possessed 11.78% of the world’s total deadweight tonnage taking third place in the 35 largest fleet-owned countries (UNCTAD, 2013). This obviously requires a great number of seafarers to operate and manage the vessels effectively and safely. As is published by the Maritime Safety Administration, China possesses nearly 0.6 million seafarers (China MSA, 2014), and due to the rapid expansion of the number of MET institutions and enrolled students in China, the

demand for seafarers was balanced in previous years before (Sun & Yao, 2013). In China, before the 1980s, seafaring used to be a very attractive profession due to the work stability and high income. It was very hard to become an ocean-going seafarer, which brought seafarers with high professional reputations (Yao, 2007). However, according to the research of Wang Zuwen, who was the previous President of Dalian Maritime University, in recent years, making a seafaring career is losing its attraction to young Chinese people as well as maritime students. In his opinion, seafaring is internationally recognized as an arduous and high-risk career. However, compared to the particularity and risk, the current social status and welfare of Chinese seafarers is not consistent with what they should have. It is mainly reflected in three aspects. Firstly, compared with other countries, Chinese seafarers need to bear a high tax rate. Although, Chinese government had set a few special policies for seafarers in terms of income tax, the tax threshold is still too low. Secondly, the importance of seafarers has not been deeply realized by the society. Seafarers are the reserve force of the navy, but, compared with countries such as the USA and Russia, the development of Chinese seafaring was not combined with the national navy. Thirdly, compared with the Philippines, the relief and compensation to Chinese seafarers after a disaster, such as kidnapping by pirates, is insufficient. (Wang Z. , 2011) In addition, as was stated by Liu Zhengjiang, the Vice President of Dalian Maritime University, there is a narrowing income gap between the seafaring profession and a job ashore, as well as some prejudicial treatment from society where piracy is also an important influence factor for the decrease in attraction of seafaring in China. (Liu Z. , 2010)

Nowadays, more and more researchers are becoming aware of the decreasing attraction of seafarers and its enormous influence to the development of shipping industry in China. It is of great importance and urgency to study the current status of attraction of seafaring among Chinese youths and a possible factor that influences the

attraction, as well as the practical measures or policies to promote the social image of seafaring and prove this attraction to the Chinese youth.

1.3 Aims and Objectives of the dissertation

The primary aim of this dissertation is to discover the willingness of Chinese young students to work on board ship and discuss the feasible countermeasures that are aimed to improving the attraction of seafaring from the perspective of the state, the society, the industry and MET institutions. In order to achieve this, the objectives are identified below.

The first was to research the current situation of the international shipping market and the seafarer labour market. The balance of supply and demand of seafarers would be analysed to verify the significance of increasing the attraction of seafaring in China. In addition, the situation of the shipping and seafarer labour market in China would be analysed to find out the challenges and opportunities for China to develop its shipping industry and make more contribution to the world.

The second was to discuss the possible factors that would affect the attraction of seafaring to young Chinese students studying in MET institutions from three aspects including the international and national shipping market, the influence of family members and other people, as well as the individual living and working conditions on board ship.

The third was to discover the actions certain other countries have taken in facing the problem of the shortage of seafarers and contrasting the measures they have taken to attract young people to engage in the field of shipping industry. The campaigns and policies that have been carried out by the IMO would also be studied to enlighten the discussion of possible solutions to increase the attraction of seafaring in China.

The fourth is to come up with recommendations for China's seafarer market to

handle the negative aspects of the decreasing attraction of seafaring and help to eliminate the difficulty of seafarer shortages in the world's shipping markets. By taking into consideration the reality in China, reasonable and effective measures to motivate more young Chinese people to engage in the seafaring profession would be considered in detail.

1.4 Methodology of the dissertation

In order to achieve the identified aims and objectives of this dissertation as mentioned above, a research plan was designed in March, 2014. Three methods, as listed below, were thus combined to discuss and analyse the current seafarer market, its attraction to potential seafarers, as well as explore possible countermeasures to improve the attraction.

- The literature research method: Various reports and research papers published by governments or organizations and individuals in the field of shipping industry were to be widely reviewed to collect sufficient information and viewpoints related to the international and national shipping industries and to seafarers.
- The questionnaire method: A questionnaire in terms of the attraction of seafaring in China was to be designed to carry out a survey among Chinese maritime students for the purpose of exploring their actual attitude and opinions.
- The comparative method: The attempts of IMO as along with States and institutions to improve the social image of seafaring and attract more youths to make a career at sea were to be compared and evaluated objectively.

1.5 Structure of the dissertation

This dissertation consists of six chapters. The first chapter provides general remarks, background information, aims and objectives, methodology as well as a chapter-by-chapter overview.

The second chapter first conveys the development status of the international shipping industry and seafarer labour market followed by a discussion of the current situation in China. Next, a SWOT analysis of the seafarer labour market in China is offered and finally the worldwide shortage of seafaring is explored to verify the meaning of improving the attraction of seafaring in China.

The third chapter mainly concerns the primary research undertaken through the questionnaire survey. The design and objectives of the survey are stated, and the survey result will be analysed from six aspects as identified.

In the fourth Chapter, the attempts of IMO as well as its member States, including the United Kingdom and Norway, to improve the attraction of seafaring are related so as to summarise their experiences and identify those measures that are most effective.

In the fifth Chapter, recommendations from various perspectives, which give full consideration to the reality of the shipping industry, seafarer labour market, as well as the experiences summarised in former parts, are offered to different maritime sectors in China for the purpose of improving the attraction of seafaring.

In the sixth chapter, an overall summary of the main viewpoints are made along with all the outcomes and findings. Finally, the author brings the work to a conclusion.

Chapter II Analysis of seafarer labour market

2.1 The international seafarer labour market

2.1.1 The international shipping industry

By the early years of the 21th century, the world economy had grown rapidly, which consequently stimulated the growth of cargo movement throughout the world. (International Monetary Fund, 2013) .The seaborne trade kept a steady trend by increasing from 2000 to 2012, with the total cargoes to be loaded rising from 5,984 million tons to 9,165 million tons (UNCTAD, 2013). However, in 2008, the Lehman economic shock occurred; this resulting in a sharp deceleration of the world's economic growth rate in both economies and countries (JITI and The Nippon Foundation, 2010) .The international seaborne trade decreased abruptly in 2008 to a volume of 8,229 million tons (UNCTAD, 2013), which reflected a drastic decline in consumption goods demand, the fall of major economies' industrial production as well as a reduced demand for energy. As a result, the decrease in seaborne trade volume affected various sectors of the shipping market, so that in 2009, the volume of global merchandise trade and seaborne trade declined as never before historically; the decrease in the seaborne trade volume was as much as 371 million tons with both the dry bulk and containerized trades shrinking severely. As Emil & Greti (2013) witness, the global recession of 2009 was the worst for over 7 decades. Nevertheless, in 2010, the increase in world seaborne trade volumes mirrored a brightening of the world economic situation and a positive turnover of the international shipping market after 2009. Already then the demand volume of international seaborne trade had an

upswing to 8,409 million tons (UNCTAD, 2013). However the outlook of the seaborne trade remained fragile as it was essentially subject to the world economy which was in shock and uncertain at that time. In 2011 and 2012, in tandem with the recovery of the world's economy and global merchandise trade, the international seaborne trade grew continuously to volumes of 8,784 million tons and 9,165 million tons.

In the years after the economic crisis, the shipbuilding industry also went through difficult times. However, due to the time lag between ordering and completion, the amount of completed shipbuilding projects had a tendency to increase in the short term after the economic crisis. Namely, ships continued to be constructed in 2008 due to the orders before the economic crisis. Actually, the shipbuilding activities reached a historically recorded peak of deadweight tons in 2008. In the following year, a large number of previous orders were cancelled and the ship yards become busy renegotiating existing building contracts rather than receiving new orders (Emil & Greti, 2013). What was worse is that the number of new shipbuilding orders globally reduced by one thirds two years later, with the result that the ship yards were forced to cancel or postpone deliveries of those orders placed before the Lehman economic crisis.

Nevertheless, the world fleet still maintained its trend of growth after the economic crisis and by the beginning of 2009, the world fleet had increased to 1.19 billion deadweight tons, a year on year growth of 6.7%, as a result of the orders placed before the economic crisis. Thus at the beginning of 2010, the world merchant fleet increased by 84 million dwt reaching 1,276 million dwt in total and by the end of the year the world fleet recorded an increase of 8.6%. The amount of deliveries was 11.7% of the existing fleet, which was a peak that had never been recorded since 1974. At the beginning of 2011, with an increase of 120 million dwt over the year before, the

world merchant fleet reached as much as 1.4 billion dwt and maintained this continuous expansion trend. By January 2012, the world merchant fleet had reached more than 1.5 billion dwt with an increase of more than 37% compared with the year 2008. (Emil & Greti, 2013) The worldwide expand of the fleet leads to an increased demand for seafarers.

2.1.2 The worldwide shortage of seafarers

As said by a spokesperson from The Nippon Foundation, “there is now worldwide concern that the rapid growth of the maritime industry has outstripped the number of available high calibre young seafarers.” (Maritime Journal, 2010) Due to the increase in demand for worldwide cargo movements, the total number of the world commercial fleet has expanded significantly. In such a case, the lack of seafarers has sharpened, especially the lack of senior officers with advanced competence certificates. Therefore, the wages of officers has risen dramatically, and the supply of qualified seafarers had become a serious concern of the shipping industry in short term (JITI and The Nippon Foundation, 2010).

According to the statistics of BIMCO and ISF (2010), the global shortage of senior officers in 2000 was 16,000 which accounts for about 4% of the total amount of the world’s officers. In 2005, the shortage had been reduced to 10,000 and occupied 2% of the world total more or less. The Baltic and International Maritime Conference (BIMCO) and the International Shipping Federation (ISF) had anticipated that the shortage of officers in 2010 would be as much as 21,000 accounting for 4.5% of the world total. According to the research report of Drewry Maritime Research, the worldwide shortage of officers would increase sharply to 83,900 in 2012. However, the Asian Ship-owners' Forum (ASF) and China Ship-owners' Forum (CSF) took consideration of the profound impact of the world economic crisis in the international shipping market and the fact that the global fleet capacity had decreased

slightly, they forecasted that the shortage of seafarers would be 56,000 in 2013.

The forecasting of seafarer shortage has already been verified and become a common view of the shipping industry. As was shown in the Manpower 2010 update of BIMCO/ISF, the worldwide demand for seafarers in 2010 was 1,384,000, among which the demand for officers was 637,000 and for ratings is 747,000. While the worldwide supply of seafarers was 1,371,000, among which the supply of officers was 624,000 and of ratings is 747,000. It revealed that the shortage of the officers was 13,000 while that of the ratings was balanced. (BIMCO/ISF, 2010)

The shortage of seafarers would continue and tend to increase in the near future. As is forecasted, the main cargo-carrying fleets would be in the order of 2,300 vessels in the years from 2013 to 2018. According to the expected manning level and terms of employment, as many as 38,500 additional officers would be required at the end of 2018. Based on the forecast of the net change of fleet number from 2013 to 2018 and the assumption that the inflow of officers to the global fleet will be 1.5% per annum, the gap between the demand and supply of officers would increase to 22,000 in 2018, while the shortage in 2013 was 19,000. (Drewry, 2014)

Nowadays, much more attention has been paid to the human element factor in the operating and managing process of the shipping industry. Due to the innovation in the field of design, construction and equipment of ships, enormous improvements have been made in terms of safety at sea and the protection of the marine environment. This is highlighted to ensure the sufficiency of manpower that is highly competent and appropriately equipped with the necessary knowledge and skills to cope with all the various issues that may come their way, now and in the future. Consequently, the demand for highly trained, skilled and knowledgeable manpower to operate and manage ships, either ashore or offshore, would be for a long period. (Mitropoulos E. , 2010) In addition, as is believed by many experts, the problem that

is facing the shipping industry today is the shortage of highly qualified seafarers, especially senior officers.

2.2 The national seafarer labour market

Seafarers are those who work on board ship engaging in maritime transportation; they are an essential source of manpower for the seaborne trade. In China, the history of seafarers can be traced back 2000 years to the Qin Dynasty (Chey, 2010). In the 15th century, the famous Chinese navigator Zheng He commanded expeditionary voyages to Southeast Asia, South Asia, the Middle East, and East Africa, which is considered as a splendid chapter of Chinese maritime history (Wikipedia, 2014).

In the last three decades, with the deep development of China's reform and opening-up, the economy of China developed rapidly. At the same time, the seaborne trade and the numbers of seafarers grew continuously. Particularly in the years after the 1990s, together with the high-speed development and growth of China's economy and gradual integration of the global economy, as well as innovations in the field of maritime administration and operation, the shipping industry and seafarer labour market in China had made tremendous steps forward.

Nowadays, 19% of the world bulk cargoes are shipped to China and 20% of the containers set off from China, while among the newly increased bulk cargoes, 60% to 70% are shipped to China (China market report network, 2013). The cargo throughputs and container throughputs of Chinese ports occupy the first place in the world. As shown in the statistics announced in October 2013, 7 of the world's top 10 ports calculated by cargo volume are located in China based on the data of 2012 (Ship-technology, 2013). During that year, there were as many as 22 ports in China registering a throughput volume of over 1 million TEUs (Liu Z. , 2013). The Chinese container ports recorded 155,017,351 total TEUs (Twenty-foot equivalent

unit) in 2012 (UNCTAD, 2013) occupying 7 of the world's top 10 container ports calculated by the volume of yearly TEUs (World Shipping Council , 2013). By the end of 2012, the total number of fleets owned by China was 5,313 including 2,665 national flag and 2,645 foreign and international flag, amounting to 190,078,835 dwt which consists of 66,936,002 dwt national flag and 123,142,833 dwt foreign and international flag. It takes third place after Greece and Japan and occupies 11.78% of the world's total fleets (UNCTAD, 2013).

The total number of crews in China has grown significantly in the last two decades. In recent years, there are approximately 1.55 million people working on board ships (China sefarer Recruitment). Further, according to the report in respect of Chinese seafarers published by the Maritime Safety Administration of the People's Republic of China on 25th June 2014, by the end of 2013, the total number of seafarers in China was 574,117 among which 419,029 are working on international routes and 155,088 are working on coastal routes (China MSA, 2014). China possesses a large group of seafarers and has become a large export market of seafaring labour with an export of approximately 100,000 person-time per year. Compared to 34,000 person-time export in 2006, the current amount nearly tripled. (China Internet Information Center, 2013)

2.3 SWOT analysis of seafarer labour market in China

Table 1: A SWOT analysis of seafaring in China

<p>Strengths:</p> <ul style="list-style-type: none"> a. China has established a comprehensive and complete MET system b. Abundant labour resources 	<p>Opportunities:</p> <ul style="list-style-type: none"> a. The global shortage and the eastward shifting of the international seafarer labour market are historical opportunities for China b. The intensified competition in the international labour market promotes the qualification of Chinese seafarers c. The secured legitimate rights and interests enhance the career prospect of seafarers
<p>Weaknesses:</p> <ul style="list-style-type: none"> a. The increasing turnover and wastage rate b. The structural irrationality of manpower restricts the qualifications of Chinese seafarers c. Because of the cultural differences, the cross-cultural communication ability of Chinese seafarers is poor 	<p>Threats:</p> <ul style="list-style-type: none"> a. The stressful competition in the global seafarer labour market b. The surplus of shipping capacity

2.3.1 Strengths

a. China has established a comprehensive and complete MET system

On 8th June 1980, China submitted its ratification documents to the International Maritime Organization (IMO) and became a member state of the STCW Convention. After that, China has formulated a legislation system in terms of the education, training, examination, assessment and certification of seafarers with the purpose of satisfying the effective implementation of the STCW Convention (Sun L. , 2007). In short, in order to meet the new requirements of the world shipping industry, the Chinese government has made great efforts to promote the MET process so that it is possible to cultivate more qualified seafarers to meet the international requirements.

Nowadays, Chinese MET covers four levels of education including postgraduate, undergraduate, higher vocational and middle vocational education. According to the report of the Ministry of Education, the undergraduate majors include navigation, marine engineering and Marine Electrical and Electronic Engineering (Wen, 2012). By December 2010, there were 107 MET institutions located in or near the coastal areas of mainland China, including 14 maritime universities, 25 higher vocational academies, 28 middle vocational schools and 40 training institutions (Zhang, Liu , Yu , & Wen , 2012).

In 2010, IMO held its international conference in Manila to amend STCW 78, which highlighted the importance of seafarers and their qualifications to secure the safety at sea, marine environment protection and the development of the international shipping industry. The Chinese government then renewed the “The People's Republic of China seafarers competence examination and Certification Rules” on December 8, 2011 to promote the overall implementation work of the STCW Convention, as amended (Shi J. , 2012). All these efforts aim to ensure the

consistency of competence between Chinese seafarers and the international requirements so as to facilitate the overall qualification of Chinese seafarers.

b. Abundant labour resources

As is known to most, China is a populous country with rich human resources. As an important part of its human resources, seafarers attract a significant amount of the global attention of ship-owners. Either from the perspective of the historical international export market of seafarers or from the development history of shipping industry and seafarer resources, developing countries traditionally act as the high-yield ground of seafarers for the international labour market. China is now in the development stage; there are abundant resources of qualified seafarers. Admittedly, regarding the future development of the Chinese seafarer labour market, it is certain that China would be able to provide a mass of qualified young seafarers for the international shipping industry (Liu Z. , 2008). As evidence of this statement, the statistics from China Maritime Safety Administration shows that the enrolment of students in MET institutions has also increased a lot in recent years. The growth doubled within three years after 2006 and reached 53,996 enrolments in 2010. Although the number of enrolment decreased a lot in 2011 and 2012, the reservation is still sufficient (Sun & Yao, 2013). (see Table. 2)

Table 2: The enrolment of MET institutions in China, 2006-2012

2006	2007	2008	2009	2010	2011	2012
22,785	31,912	44,310	46,178	53,996	43913	28160

Source: (China Maritime Safety Administration, 2012)

2.3.2 Weaknesses

a. The increasing turnover and wastage rate

With the deepening of China's reform and opening up, as well as the tremendous growth in China's economy, the living standard of Chinese people has improved significantly. At the same time, temptations increased due to the competition between employers in the short supplied seafarers' labour market, some seafarers tend to be impetuous. As the work stress of personnel engaged in ship management increases, seafarers are prone to be impatient or discontent even suffering with slight dissatisfaction, that then trigger the intention to quit. As a result, in order to stable the seafarers' attitude and intentions, it has become an important aspect of the ship-owners' work to correct this in recent years. (Lin, 2012) Moreover, the wastage of undergraduates had increased which in some extent influence the stable of seafarers (Li Q. , 2003). According to the statistics, in the years from 2000 to 2010, 16 Chinese shipping enterprises had employed 19,640 maritime professional graduates. At the time when the statistics were carried out, there were 13,607 persons (69.28%) still working on board while 6,033 had already quitted. Among those who quitted, when grouped by the education background, the quit ratio of undergraduates is 37% while that of college graduates is 25%. When grouped by rank, the quit ratio of third officer/fourth engineer is 60.8% which is the highest; the quit ratio of second officer/third engineer, sailor/rating, chief officer/second engineer and captain/chief engineer are respectively 21.48%, 10.64%, 4.41% and 2.67%. (Zhang, Liu , Yu , & Wen , 2012)

b. The structural irrationality of manpower restricting the qualifications of Chinese seafarers

In terms of the overall number, the absolute population of Chinese seafarers is

relatively large. However, there are a number of problems in respect to the structure of the distribution of manpower. On the basis of the examination and certification data from the examination centre affiliated to the China Maritime Service Centre, we can find the following issues. First, the number of senior officers is comparatively less; especially the lack of officers at management level is a serious issue. The seafarer manpower of China shows an obvious inverted pyramid structure and then the seafarers' overall structure is not reasonable. Secondly, with the expansion of a fleet along the coast of China, the population of senior officers for coastal watercrafts also cannot meet the demand of the development of the industry. (Geren, 2011) Normally, it takes more than 10 years to cultivate a competent captain or chief engineer. However, with the narrowing gap of income between work on board and ashore, the professional advantage of the seafarer has declined and leading to a decrease in the attraction. The shortage of senior officers is likely to continue over a period of time in the future. This has sounded the alarm to the steady development of China's seafarers market as well as the safety of shipping. (Nantong Siyuan Shipping, 2012)

c. Because of the cultural differences, the cross-cultural communication ability of Chinese seafarers is poor

In the international labour market, the foreign employers particularly emphasize seafarers' cross-cultural working and living ability on board ship. However, according to the feedback of foreign employers, quite limited numbers of Chinese seafarers are competent to working on board with foreigners (Hu, Xiao, & Qu, 2011). Over the years, the development of China's seafaring labour service export to Europe and America is slow; quite limited numbers of seafarers are exported to Europe and America, while the export in Asian is developing rapidly. These workers are mainly exported to Singapore, Taiwan, Japan, South Korea etc. (Yu, 2009) One important

reason is that there are huge cultural differences between China and Europe as well as America. As the first-line cultural ambassadors, seafarers' cross-cultural working and living ability influences how the Chinese seafarers are viewed by foreign employers. Seafarers must know how to get along with others from the different background of culture, education, and religion. (World Shipping, 2010) However, Chinese seafarers have a lot of cultural conflicts with the European and American people in terms of management philosophy, thinking habit, language, food, customs etc. On the contrary, the export of the seafaring labour service developed rapidly in countries like the Philippines and India, which have been colonized by western countries for a long period of time, and countries like Ukraine and Russia, which have a similar cultural with the rest of Europe. (Yu, 2009)

At the same time, the Chinese seafarers' ability to communicate in English is another factor that restricts Chinese seafarers in playing a bigger role in the international shipping industry. According to foreign ship-owners, the Chinese seafarers' ability to communicate in English is relatively weak. In the existing maritime English test system in China, too much attention is paid to maritime English rather than verbal communication abilities. Therefore, in respect to the teaching method in MET institutions, the English education for students stayed only at the level of learning rather than communicating. Coupled with the facts that the majority of Chinese seafarers are from the rural areas, where the English education level is inferior compared to urban areas, the Chinese seafarers' ability to communicate in English is quite limited. (Teng & Qu, 2014)

2.3.3 Opportunities

a. The global shortage and the eastward shifting of the international seafarer labour market are historical opportunities for China

Although the factors, including the slowdown of global economic growth, the decline of seaborne freight, the decrease of shipbuilding orders and so on, would affect the balance of demand and supply of seafarers to a great extent in the future, there is no doubt that all of these factors would intensify the competition in the global seafarer labour market. Developed countries have a large number of merchant ships, but due to the high level of economic development, the cost of seafarers in their domestic market would be higher. Employing oversea seafarers would be an effective way to reduce the operating costs. However, for developing countries, carrying out seafaring labour export services by utilizing abundant domestic labour resources would not only create foreign exchange earnings, but also alleviate employment pressures to some extent. Therefore, the centre of the international seafarer labour market is gradually shifting from the west to the east. (Wen, 2012)

Thus, the global shortage of qualified international maritime talent as well as the eastward shifting trend of the international seafarer labour market would create a new historic opportunity for China's seafarer market.

b. The intensified competition in the international labour market promotes the qualification of Chinese seafarers

Due to the unemployment caused by the on-going global economic crisis, some seafarers who had found jobs ashore have returned to work on board ships. During the sluggish period in shipping market, shipping companies reduced their investments on ships, and the ship-owners paid much more attention to the safety of shipping. Consequently, the demand for highly qualified seafarers sharpened. Some

big shipping enterprises reserved a large amount of highly qualified seafarers with better English communication abilities, higher comprehensive qualifications as well as a stronger sense of responsibility. In this particular case, seafarers would have to improve their personal qualities; they would be highly motivated to become a lifelong learner. As a result, this would be favourable in increasing Chinese seafarers' overall qualities and professional abilities. (Wu, 2011)

c. The secured legitimate rights and interests would enhance the career prospect of seafarers

Nowadays, the seafarer profession has aroused considerable attention in the international political community. International conventions, issues and bills related to the protection of seafarers' rights and interests, as well as the professional developments, have been placed on the agenda of the world's major shipping organizations. In 2006, the International Labour Organization (ILO) passed the Maritime Labour Convention which came into force on August 20, 2013. The "Maritime Labour Convention 2006" (MLC 2006) was praised by Mr Mitropoulos (Mao, 2009), the Secretary General of IMO, as one of the four major international maritime conventions together with SOLAS (International Convention for Safety of Life at Sea), STCW (International Convention on Standards of Training, Certification and Watchkeeping for Seafarers) and MARPOL (International Convention for the Prevention of Pollution from Ships). The MLC is considered to be the "bill of rights" for seafarers and provides specific provisions regarding seafarers' working conditions, including employment conditions, welfare benefits and the execution and guarantee of all these provisions. Through detailed standards and executive programs, a new environment for the decent working conditions of seafarers is being created, which will fundamentally enhance the competitiveness of the seafarer profession. In the short term, the implementation of MLC 2006 will

increase the responsibility of the ship-owners and labour management companies and also improve their operating costs. As a result, companies which are extensively managed, and thus ignoring the interests of seafarers and not fully implement the convention, would be eliminated selectively; and the environment of the seafarer labour market would be purified. In the long run, the convention has unified the minimum global standards for the shipping companies and would facilitate developments to guarantee seafarers' rights and services, which in turn would attract more seafarers with presumably excellent talents. (Zhao, 2013) The continuous accumulation of talents and the survival of the fittest among shipping companies would surely benefit the improving the status quo of China's seafarer labour market.

Similarly, the Legal Committee of the International Maritime Organization (IMO) approved the guidelines on the preservation and collection of evidence following an allegation of a serious crime having taken place on board a ship, or following a report of a missing person from a ship, and on the pastoral and medical care of victims.

The primary purpose of the draft guidelines is to assist Masters in the preservation of evidence and in the pastoral and medical care of persons affected and, when appropriate, in the collection of evidence, during the period between the report or discovery of a possible serious crime and the time when law enforcement authorities or other professional crime scene investigators take action. (IMO, 2013)

The guidelines particularly emphasize the protection of seafarers' entitled rights when they are faced with criminal charges.

In reality, most times when major accidents happen, the seafarers often bear the brunt of the "crime". As vulnerable groups, it is easy for them to be treated as scapegoats. Sometimes, even their basic rights to hire a lawyer and be treated fairly cannot be guaranteed at the beginning. Now, it is believed that with the improvement of

international attentions, as well as the promotion of the drafting work of corresponding policies and conventions, the professional treatment and rights guarantee seafarers that they be much better taken care of in the near future.

2.3.4 Threats

a. The stressful competition in the global seafarer labour market

As stated above, the international seafarer labour market is facing a shortage of seafarers. In addition, it is commonly accepted that the number of seafarers from developed countries is decreasing while the number in developing countries is increasing continuously. Now there is a trend that the export of seafaring labour much more relies on developing countries. However, the Philippines, India and Indonesia still occupy nearly half of the total export market. Moreover, all these major seafarer supply countries have their own competitive advantages.

According to Ruan (2012), Philippine seafarers are said to be obedient, loyal and disciplined. Their religious beliefs and personal values are close to the European and American countries. Their ability to communicate in English meets the standards for employment. Moreover, the Philippines pays great attention to the MET process as their training is much more practical, an aspect which is favoured by foreign shipping companies.

Eastern Europe countries are located in the same geographic area with many major ship-owner countries. They have a common social and cultural basis and often similar languages and ways of life. Due to the integration of human resources within the European Union countries, Ruan thinks it is very convenient for seafarers to travel and perform the service contract abroad. Seafarers from Eastern Europe countries have accepted high-quality MET and they possess good management ability, have serious work attitude and good professional norms and ethics. Thus,

they normally work at the management level on board. Although the absolute quantity is not big, they control the leadership power on ships.

In Ruan's opinion, because of the advantages of the commonwealth's culture, language and MET, Indian officers are highly regarded by foreign shipping companies who believe that the professional level and spirit of Indian officers well meets their requirements of employment.

He thinks, for seafarers from Vietnam, Myanmar and Indonesia, they are relatively competitive in terms of labour price compared with seafarers from most countries.

Then he evaluated and summarised the situation of technology and labour exports within the international shipping market from three aspects, including: 1. seafarers' quality and quantity, 2. geographical, historical and cultural factors, 3. the labour costs. He found that the Philippines is the only country that is well balanced regarding these three factors.

To sum up, the advantages of seafarers from Eastern European countries and India are their high qualifications as well as geographical, historical and cultural factors, while that of other Asian countries is the low labour price.

All the above situations have created a competitive external environment for China's seafaring labour output.

b. The surplus of shipping capacity

In the years after the economic crisis, the world economy is expected to recover. According to the report "World Economic Outlook", published by International Monetary Fund (IMF), the annual change of world trade volumes has decreased enormously after the economic crisis. In 2008, the world trade volume only increased 2.8% compare to 7.9% in 2007; while in 2009, it suffered a decrease of 10.6%.

Although the world trade volumes recovered with 12.8% increase in 2010, the change maintained a decreasing trend after, then to 2.8% and 3.0% increase in 2012 and 2013 respectively. All these statistics together reveal the fact that the world economy is undergoing a slow recovery. (International Monetary Fund, 2014) Due to this, the world seaborne trade has also suffered a downturn.

Currently, the contradiction between supply and demand of the shipping industry still exists. According to some industry insiders, the market cannot bear a large increase in shipping capacity any more. Generally speaking, excess capacity is normal in the shipping market. From the view of enterprises, in order to prevent themselves from missing future opportunities, their planned capacity would be ahead of the market's demands. However, the demand of the market fluctuates cyclically and the scope and trend of the fluctuation is sometimes far more than the forecasts of the enterprises, resulting in the surplus of capacity in the market. From 2002 to 2008, the shipping market went through a long period of expansion which led to an expansion of shipping capacity. Coupled with the outbreak of the economic crisis in 2008, the fluctuation of this round of the market cycle is faster than ever; the surplus shipping capacities cannot be digested effectively by the market in the short term. (Man, 2011)

In 2012, because of the surplus of the global fleet's capacity generated by the severe downturn in trade in the wake of the 2008 economic and financial crisis, the maritime sector continued to experience low and volatile freight rates in its various segments. The steady delivery of new buildings into an already oversupplied market, coupled with a weak economy, has kept rates under heavy pressure. (UNCTAD, 2013)

At the same time, the global commodity prices and fuel price have remained at a high level, and global inflation is still serious. As a result, the shipping companies are squeezed between high cost and low income. This is the plight of the currently imbalanced shipping industry.

Chapter III Analysis of the questionnaire survey

3.1 Design of questionnaire

In designing this questionnaire, the author has referred to the many statistics and research of international and Chinese organizations and official departments. In addition, it took into account the international and domestic historical and current situations. The expected outcome was to study the real thoughts of Chinese youth in respect to current shipping and seafaring as well as their confidence for the future of the shipping industry. The questionnaire consists of five main parts.

Part one is the “demographics” of the respondents, which includes the maritime institution, major, grade and middle school each one attended, the regions they come from and their gender.

Part two aimed to study the respondent’s common ideas about the shipping industry and seafaring, as well as their employment intention and their parents’ attitudes.

Part three mainly aimed at the study of factors that affect the attraction of seafaring from the perspective of the respondents who are asked questions related to both their previous and current ideas. In order to analyse how much the respondents’ thoughts are affected by various factors, twenty possible factors, in accordance with other previous studies, are listed to be ranked in question 17.

Part four is about the career plans of the respondents, including their expected ranks, working periods and preferred ship types. Their attitudes to make seafaring their lifelong profession are also studied.

Part five studies the respondents' opinions to the future of the shipping industry and seafarer market, as well as their expectations for the future.

3.2 Objects of study

The questionnaire survey has been carried out online among Chinese maritime students. In order to guarantee that the results are more representative and convictive, the survey was launched in maritime institutions in different areas and at different level of education in China. All the chosen institutions, mainly involving Dalian Maritime University, Shanghai Maritime University, Jimei University, Wuhan University of Technology, Qingdao Ocean Shipping Mariners College, Jiangsu Maritime Institute, are traditional MET institutions with long histories. In addition, the responding students from these institutions cover all the differing grades and maritime specializations including Navigation, Marine Engineering and Marine Electrical and Electronic Engineering.

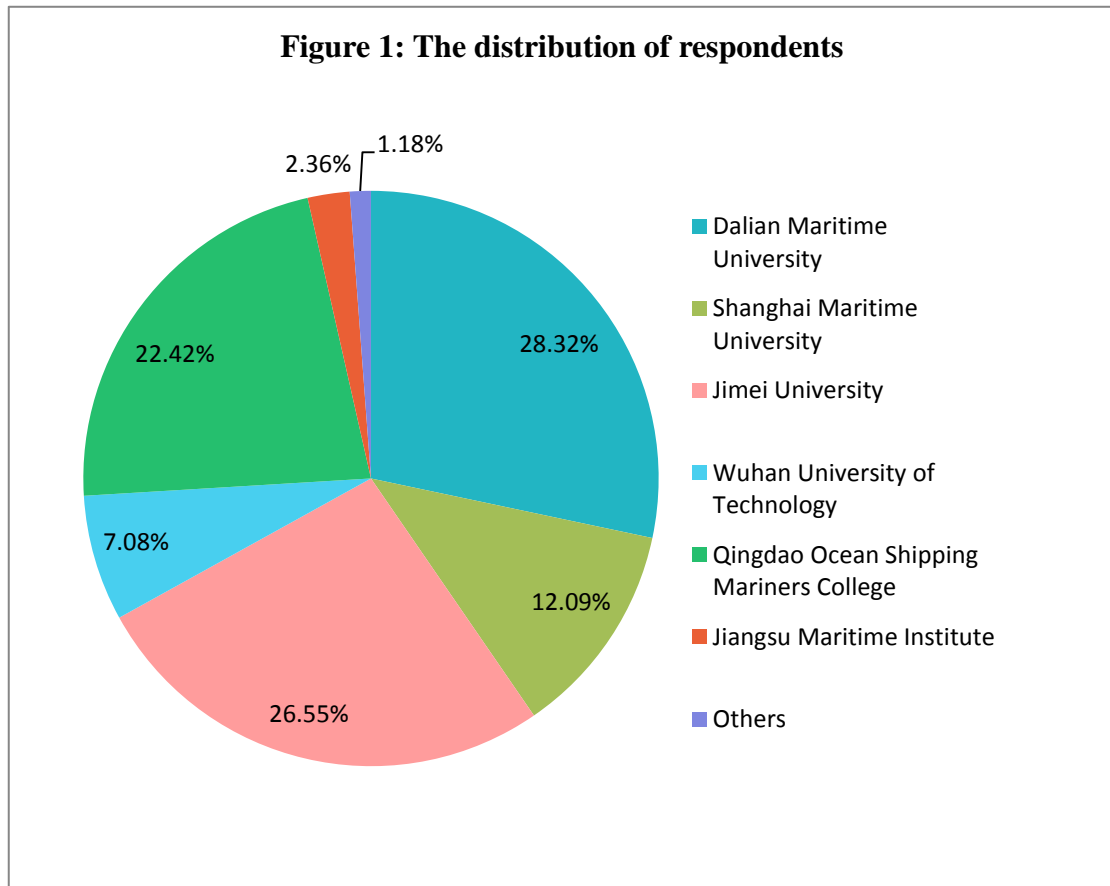
3.3 Pre-test data

In order to examine the rationality and accuracy of the questionnaire survey, a pre-test was carried out among Chinese students at World Maritime University (WMU) who had worked as lecturers or managers in MET institutions and shipping companies, as well as a small group of maritime graduates who are working on board ships. Totally there were 24 respondents, and according to the results and their recommendations, the questionnaire was appropriately revised.

3.4 Data analysis

In all, 339 responses were submitted from all the various institutions; (see Figure 1) 180 from Navigators, 105 from Marine Engineers and 54 from Marine Electrical and Electronic Engineers. The respondents are mainly males, namely 98.23%. As most maritime institutions in China do not recruit females, all the female respondents

came from Shanghai Maritime University, which is the only institution that trains female seafarers in China.



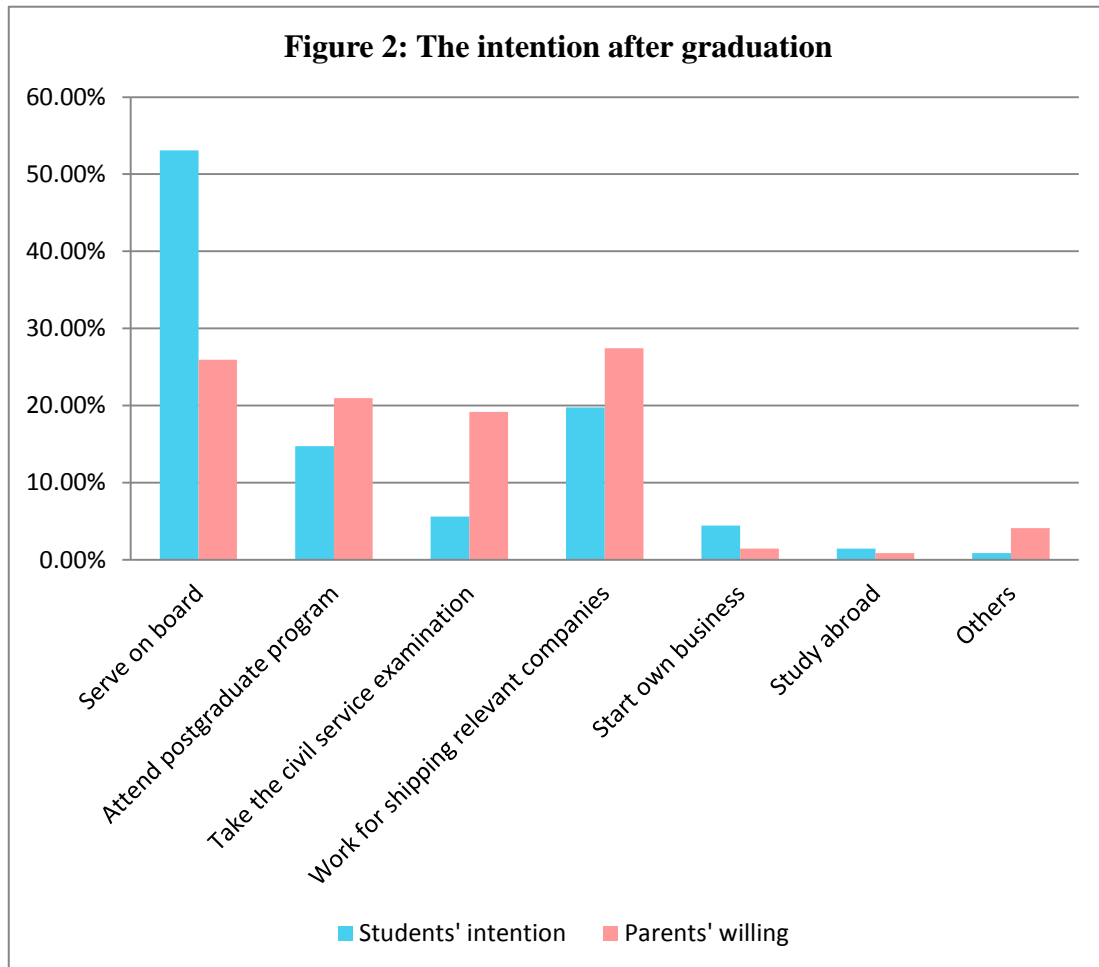
3.4.1 The source of maritime students

As is shown by the questionnaire, the main sources of maritime students are from the eastern part of China; only 5.90% students are from the northwest and 6.78% from the southwest. They are mainly from rural areas, 69.91%, while others are from urban areas where the education resources are relatively rich because of a much more developed economy. In China, the senior middle schools are divided into several levels which reflect the quality of the teaching in particular schools. Among the respondents, 26.55% came from the provincial key senior middle schools, 28.61% from the city key senior middle schools and the 44.84% remaining from regular

senior middle schools. On the whole, the source of students for Chinese MET institutions is relatively well qualified; the students' learning ability and basic knowledge are sufficient.

3.4.2 The willing of respondents to serve on board

Most Chinese maritime students agree with the statement that “Seafarers make a great contribution to the world”; 52.80% of them strongly agree while 33.04% agree with the statement. However, only 53.10% respondents intend to serve on board after graduation with the remainder mainly preferring to work for shipping relevant companies (such as shipping agencies, shipyards and so on) (19.76%) and attend postgraduate programs (14.75%). Some other choices include taking the civil service examination (5.60%), starting their own business (4.42%), studying abroad (1.47%) and others (0.88%). While for their parents, only 25.96 % are willing to allow their children to work on board; generally, they wish their children would work for shipping relevant companies (27.43%), attend a postgraduate program (20.94%) or take the civil service examination (19.17%). (see Figure 2)



The reason for the low percentage of intention to serve on board might mainly lie within three aspects. Firstly, although most of them think that seafarers make a great contribution to the world, they are not highly recognized and admired. Compared to the contribution of seafarers, only 8.26% and 10.03% of the respondents think that recognition and admiration of seafarers is very high and high, and 35.10% think that it is at an average level. As much as 43.36% of the respondents think that the recognition and admiration does not correspond to seafarers' contribution to the world. (see Figure 3) Secondly, as much as 42.48% of the respondents think that the current employment market for seafarers is bad and 13.57% who think the current situation is very bad. (see Figure 4) If they work on board, they might need to face

many difficulties of employment and tough competition. Thirdly, the respondents lack confidence in the seafarer market with 44.84% of the respondents thinking that the attraction of seafaring will decrease which reflects their uncertainty about seafaring in China in the future. (see Figure 5)

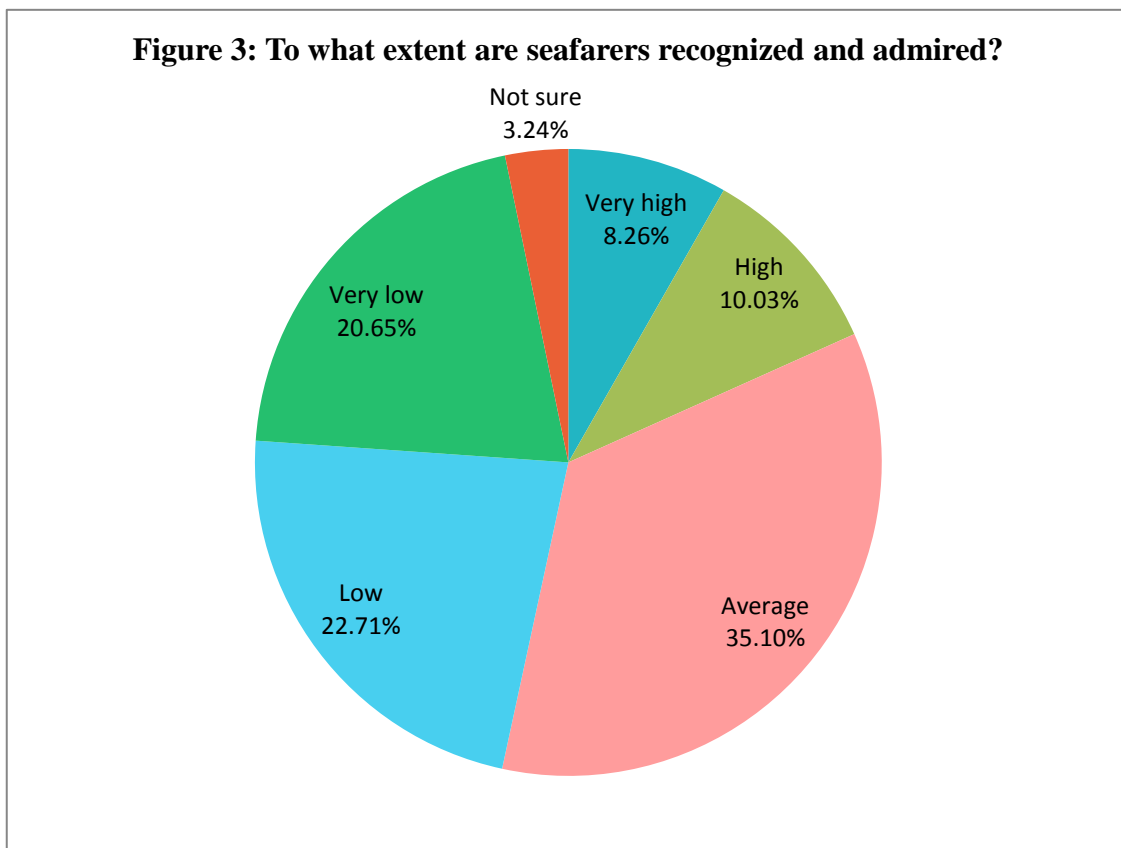


Figure 4: The current employment market for seafarers

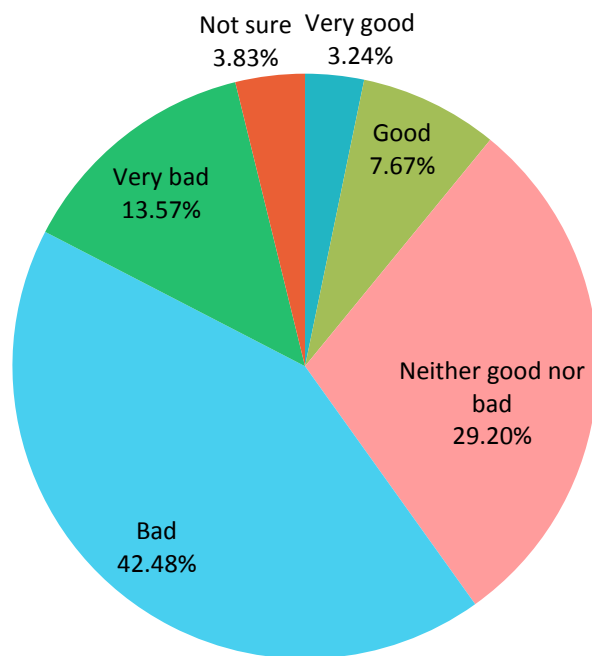
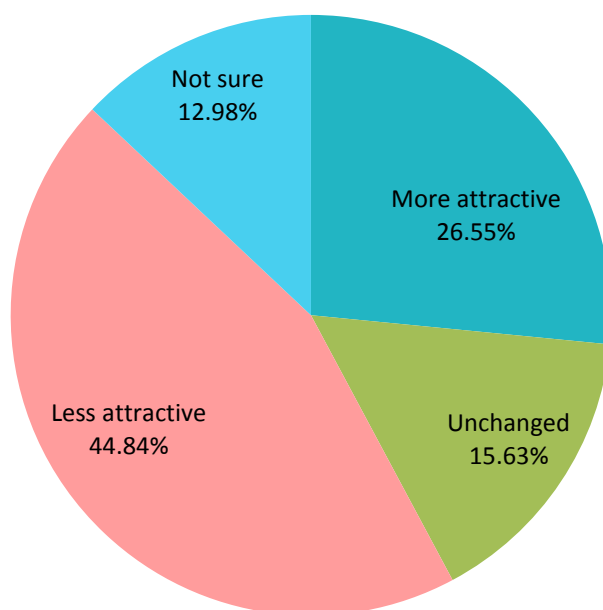
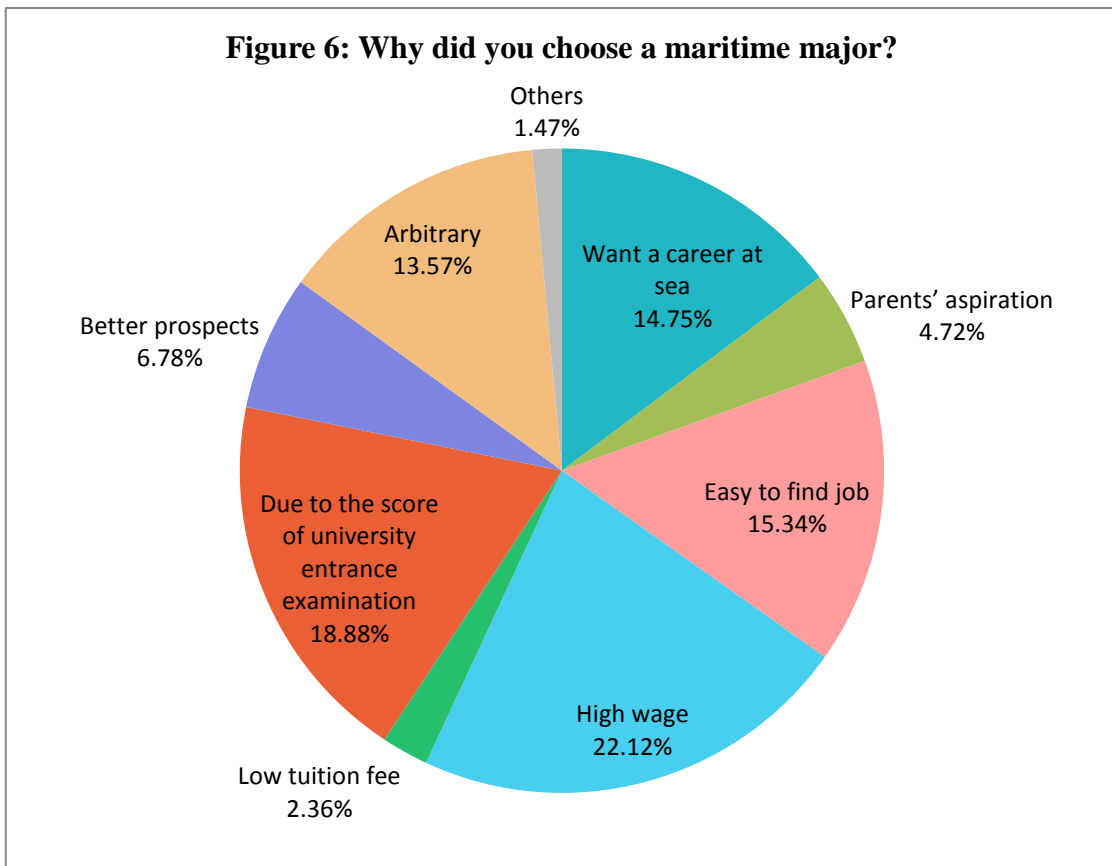


Figure 5: The attraction of seafaring in the future



3.4.3 Reasons for engaging in seafaring

According to the survey, the reasons why the respondents chose maritime majors before entering the university are various. Four self-motivating reasons are the high wage, the ease in finding a job, the strong willingness to work on board, and better prospects, all of which account for 22.12%, 15.34%, 14.75%, and 6.78% respectively. All these are advantage factors that would motivate the students to study hard to become seafarers in the future. However, a large group of respondents (37.17%), who chose maritime majors according to the score of university entrance examination (18.88%), arbitrarily (13.57%) and complying with their parents' aspirations (4.72%), were not highly motivated. (see Figure 6) They are more likely to quit which can be demonstrated by the fact that 80.95% of them prefer to work ashore or continue learning rather than serving on board.



3.4.4 Concerning factors for seafaring or not

When choosing a job, their decisions are mainly influenced by the people around them. For most of the respondents (44.76%), when choosing a job, they are mainly influenced by their parents and friends, and would be concerned more about their opinion; while, others are likely to be influenced by their schoolfellows (13.88%) and instructors (13.03%). (see Figure 7) Regarding the seafarer profession, half of the respondents think that the most attractive factor of seafaring is the high salary (50.15%), which is seen to be a greater gap between the jobs on board and ashore. (see Figure 8)

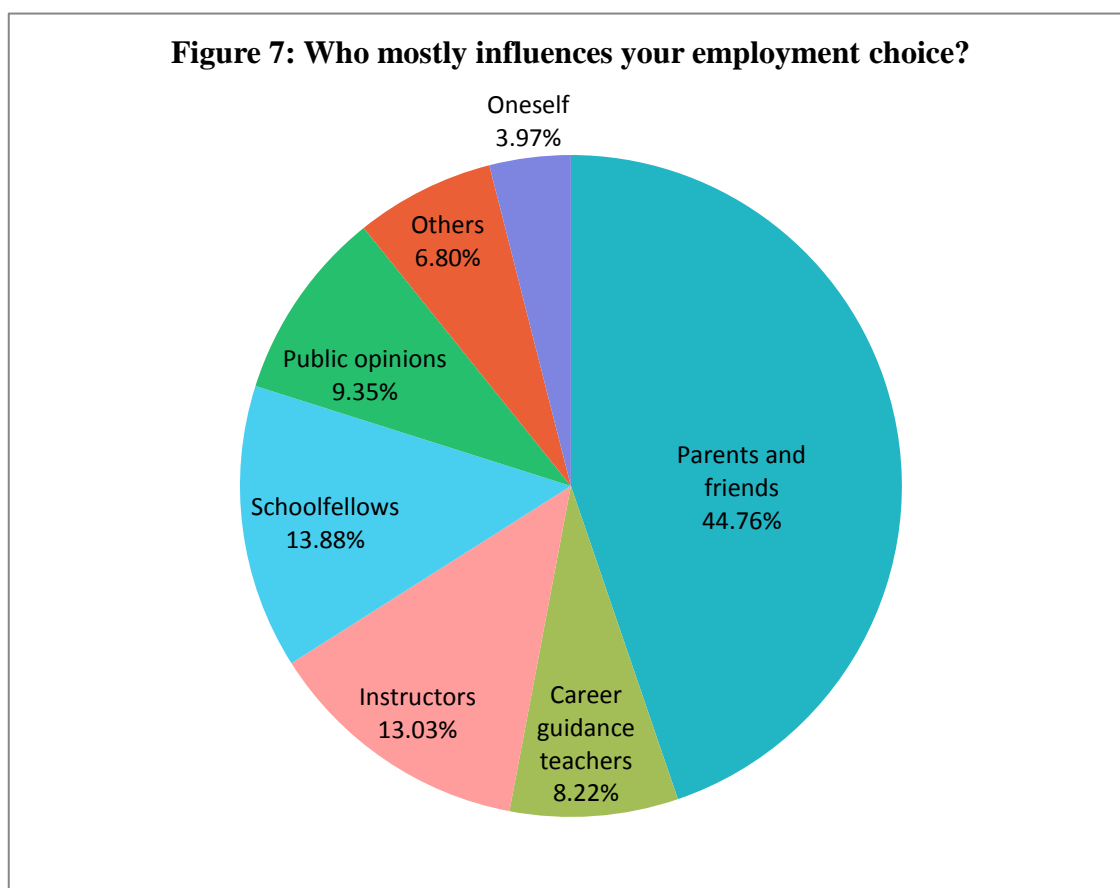
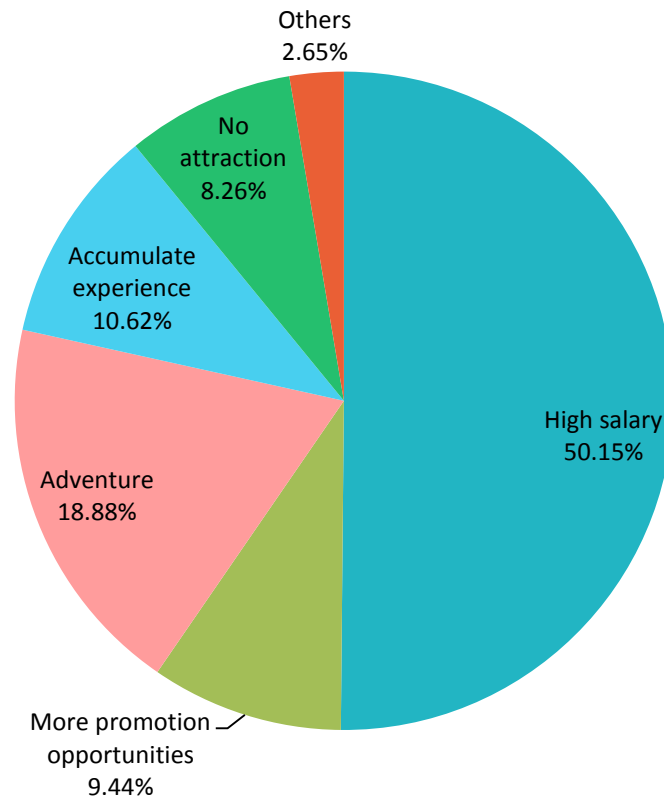
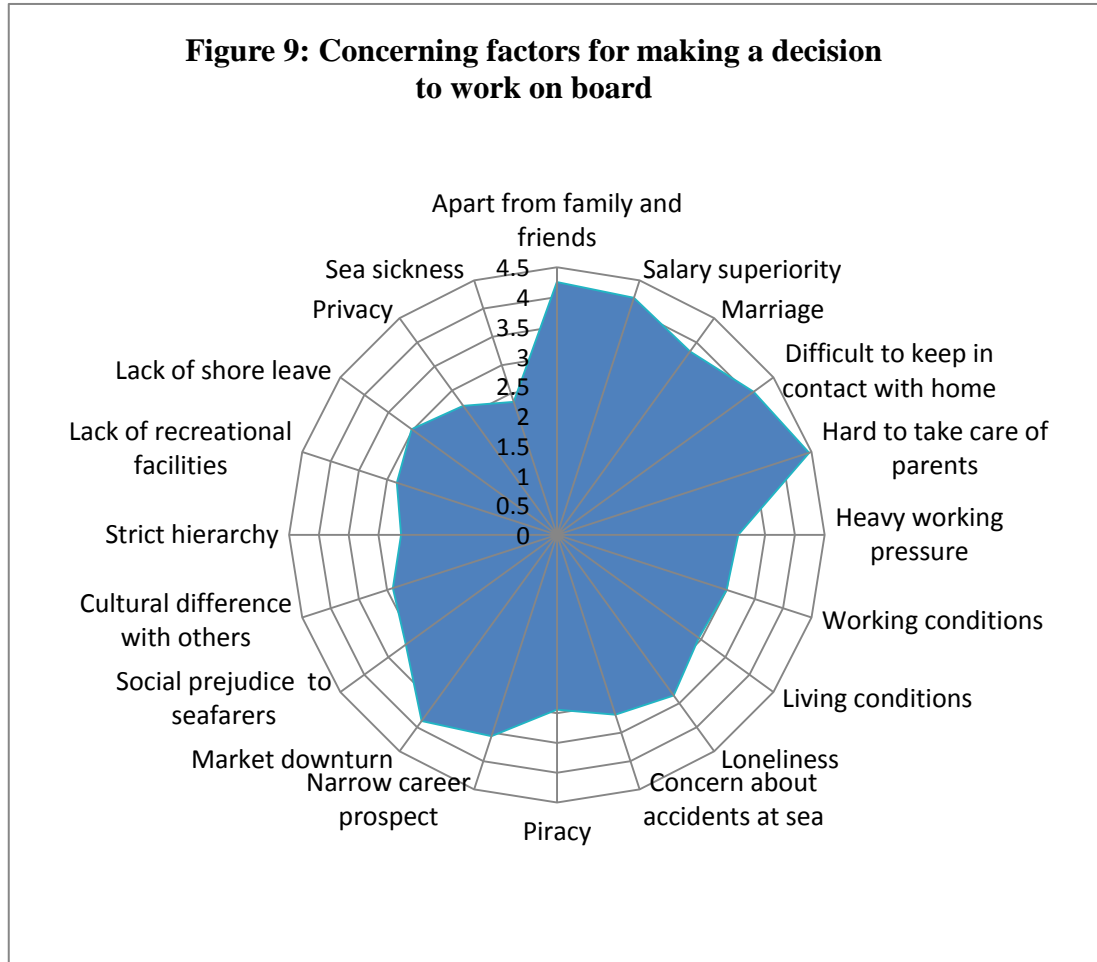


Figure 8: What mostly attracts you to work at sea?



When making a decision whether to work on board or not, the respondents are also greatly concerned about their families. In the survey, the respondents are requested to rank 20 listed factors that might influence their decisions on a scale of 1 to 5. Among the top four scored factors, only the third one is about salary (4.19) while all the other three are related to family issues, including “hard to take care of parents” (4.46), “apart from family and friends” (4.25) and “difficult to keep in contact with home” (4.09). Additionally, they are also highly concerned about the market downturn (3.87), which might lead to a worse employment market, as well as their current and future personal circumstances such as factors like narrow career prospect (3.56), loneliness (3.34), accidents at sea (3.18), social prejudice to seafarers (3.14) and so on. (see Figure 9) What should be emphasized is that their concerns about piracy are relatively low, compared to the point of view that piracy would put people off going

to sea in the Life at Sea Survey 2012 from Shiptalk (Shiptalk, 2012).



3.4.5 The career plan of the respondent

There are 18.58% respondents who would not wish to serve on board. While for those who intend to work on board, most of them prefer to work on board for more than 5 years and more than one fourth of them would like to serve as much as 8 years. At the same time, 13.67% intend to serve less than three years at sea. (see Figure 10) Further, as much as 38.41% expect to become captains or chief engineers, while 36.96% prefer to become chief officers or second engineers. Such manpower would become a strong force to balance the shortage of senior officers in the future. (see Figure 11) Most of the respondents prefer to work on container ships, bulk carrier,

and tankers which carry large amounts of cargo for the world seaborne trade. (see Figure 12)

Figure 10: Expected service period on board

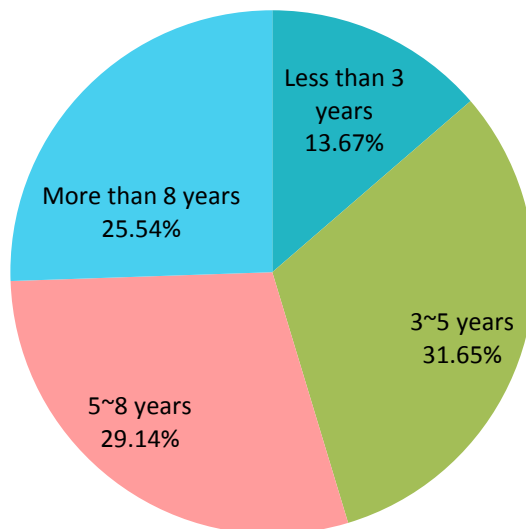
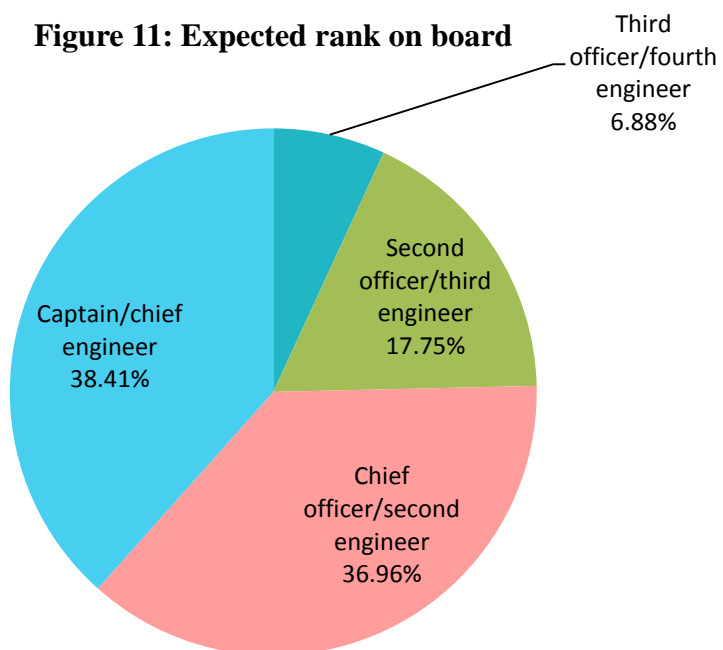
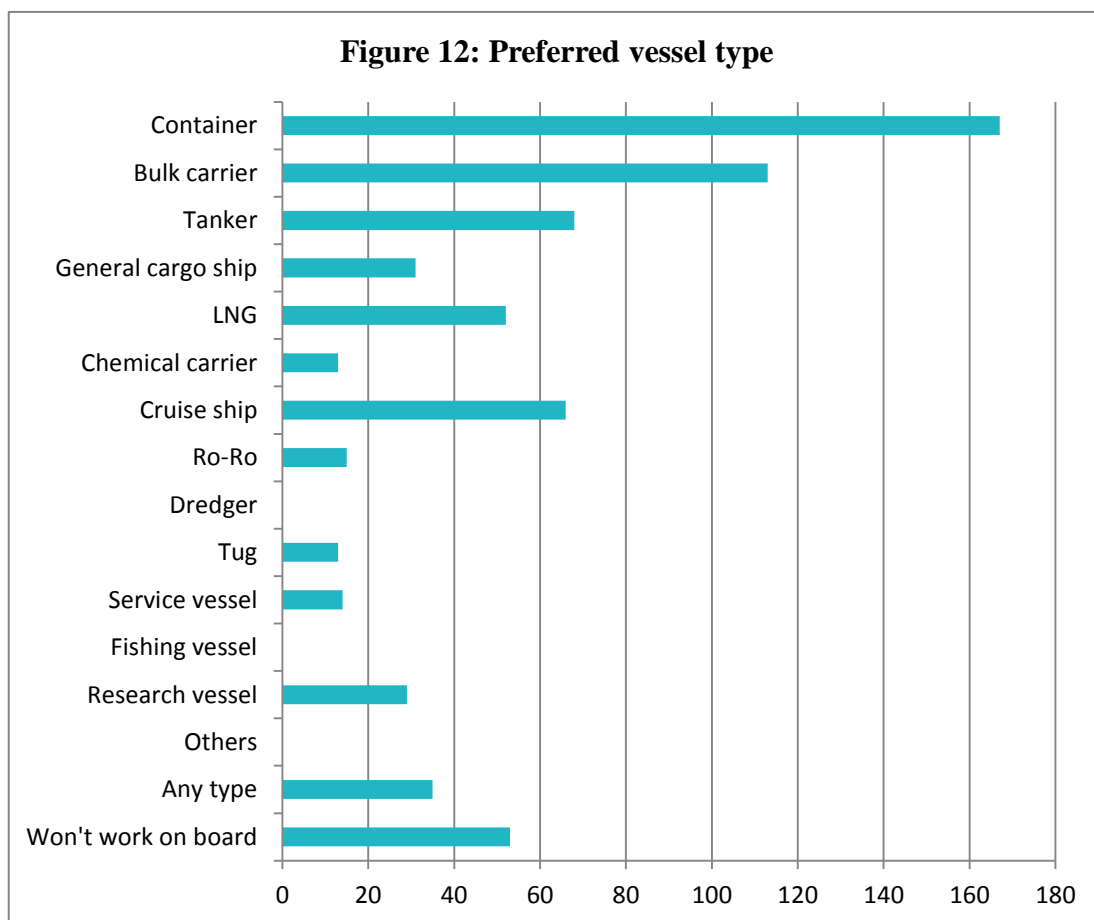
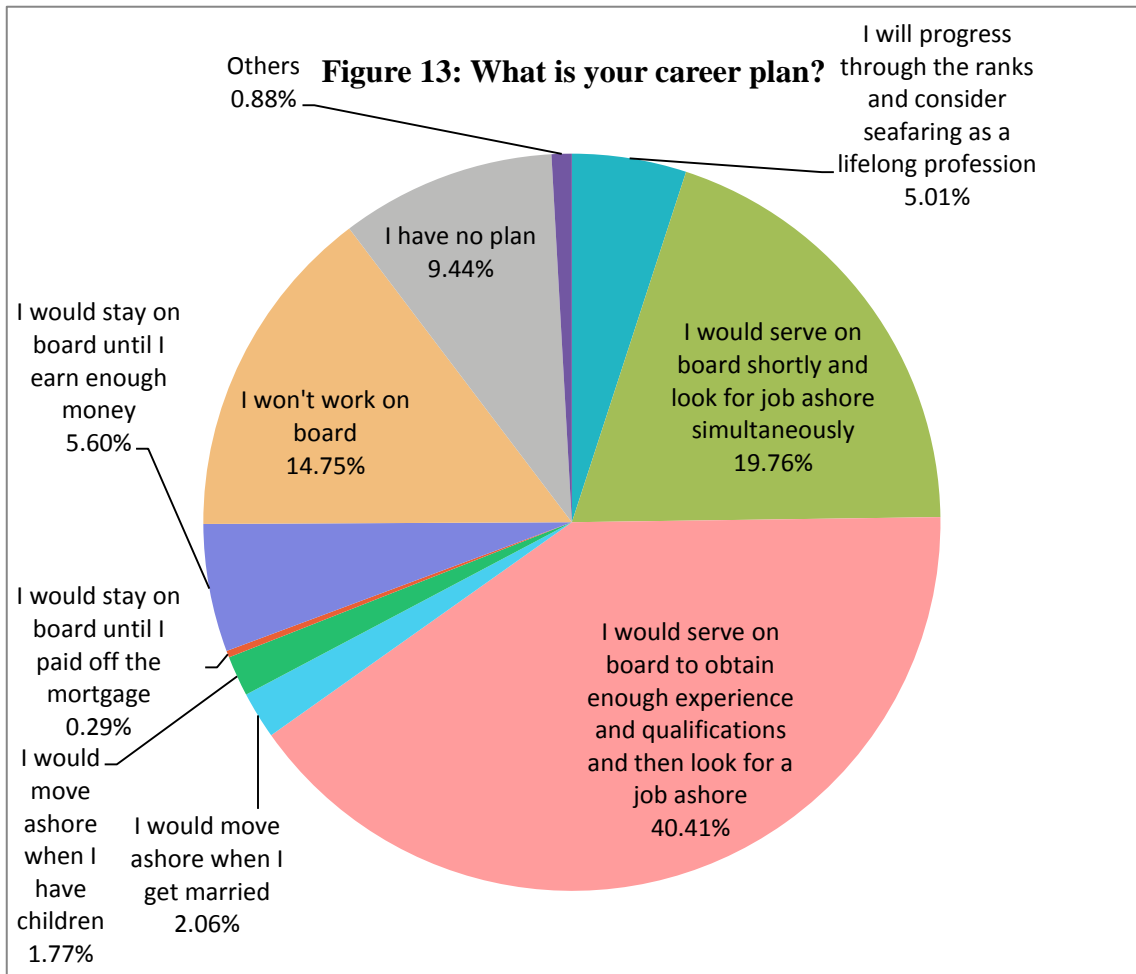


Figure 11: Expected rank on board





Regarding the respondents' career plans, many would prefer to serve on board to obtain enough experience and qualifications and then look for a job ashore (40.41%). They could earn much more money compared to their peers; at the same time, it would be much easier for them to find a better job when they are enriched by their experiences on board. However, another large group of respondents, who prefer to serve on board for a short time and look for a job ashore simultaneously (19.76%), would seriously influence the stability of the seafarer market. The percentage of some other choices, such as stay on board until getting married or earn enough money, is relatively low. This reveals that for those who have made the decision to serve on board, money and family is not the key influence factor for quitting. They are mainly concerned with their career prospects. (see Figure 13)



3.4.6 The prospects and expectations for the future

The future of the shipping market remains uncertain. Up to 29.20% of respondents neither agree nor disagree with the viewpoint that seafaring in China would grow significantly. Only 24.19% agree with the viewpoint; on the contrary, 23.89% disagree. (see Figure 14) In recent years, the shipping market has been at a low ebb, and all companies have been faced with operational difficulties. Although it is certain that the market will recover, it is hard to say when this historical turning point will arrive and people have not regained their confidence in the market.

Figure 14: Indication of agreement to the statement "Seafaring in China is expected to grow significantly"

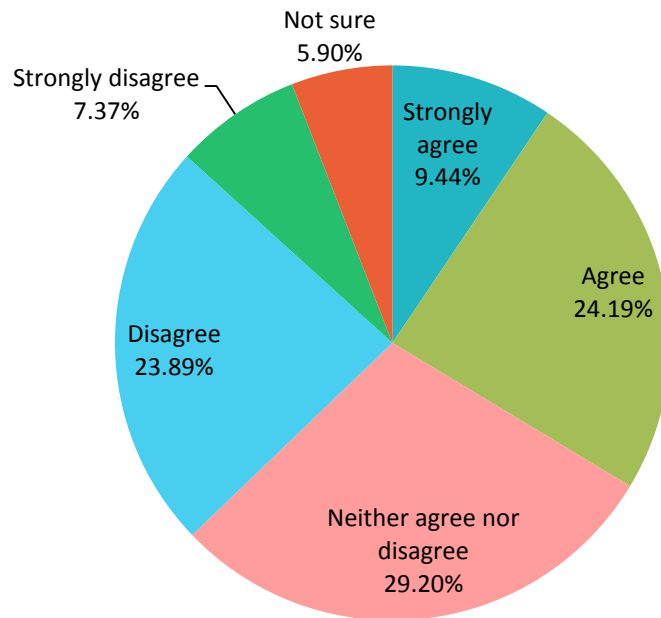
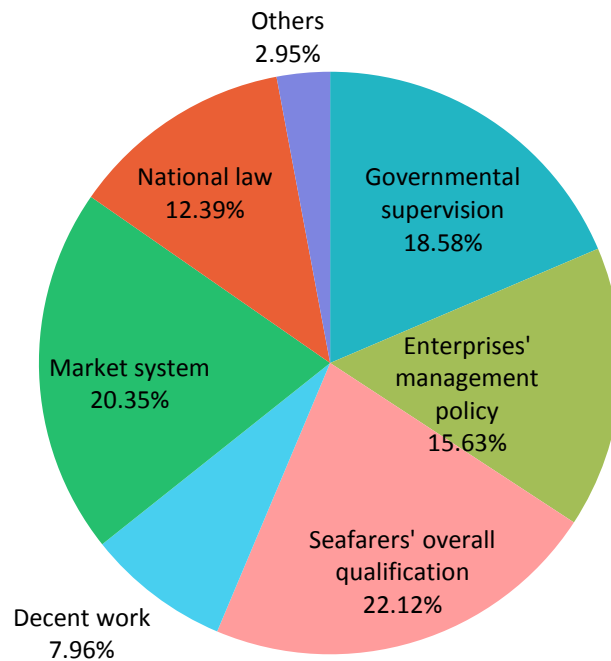


Figure 15: Aspects that need to be strengthened in China



The recovery and development of the seafarer market needs various efforts to strengthen and improve all aspects from the perspectives of the government, society and enterprises. The questionnaire showed much more concern about the overall qualification of Chinese seafarers (22.12%), market system (20.35%) and governmental supervision (18.58%). (see Figure 15) People are more concerned with the overall function of the government and companies which relate to the protection of seafarers interests and rights.

Chapter IV Attempts to enhance the attraction of seafaring

4.1 IMO

4.1.1 “Go to Sea!” Campaign

In November 2008, a global campaign called “Go to Sea!” was launched by IMO. This aimed to provide young people with rewarding, stimulating and long-term prospects regarding the maritime industry, and promote the attraction of a career at sea, as well as in the broader maritime industry. The launch of the campaign was associated with the “Round Table” of shipping NGOs, including BIMCO, ICS/ISF, INTERCARGO and INTERTANKO, the International Labour Organization (ILO) and the International Transport Workers Federation (ITF) (IMO, 2010). The campaign was initiated due to the estimated global shortage of seafarers suggested in Drewry Shipping Consultants and the Manpower Update report issued by BIMCO and ISF. Together with the unprecedented rise in orders for new buildings, IMO believed that the shortage of seafarers, both quantitatively and qualitatively, would be exacerbated (Mitropoulos E. E., 2008). Moreover, IMO realized the fact that in some parts of the world, young people were apparently reluctant to engage in a career at sea. In addition, even if they did chose seafaring as a profession, it was frequently witnessed to be for a short period at sea due to their unwillingness to stay on board and/or their inability to take on the higher duties (IMO, 2008). In order to collect the voices of students and maritime institutes and clarify possible measures, the campaign gave suggestions as to how States and institutions could tackle the problem.

The shipping industry is urged to take the lead and more can to promote itself through the media, in particular the electronic media. The industry should continue to provide support for and endorse campaigns aimed at improving its image and use some key industry figures as examples of career progression. It is also urged to do more to make life on board and away from home more akin to the life enjoyed by others ashore; to encourage women to work in the seafaring profession; and to promote the industry at non maritime-related events.

Governments are asked to give greater prominence to the maritime perspective, by doing more to support and encourage the shipping industry in any initiatives it takes to enhance its image and to remove adverse actions that may damage that image. Maritime training facilities need to be resourced adequately (both in financial and human resource terms) to ensure a supply of competent seafarers. Governments could do much to promote a wider take-up of a sea career through, for example, recognition of sea service instead of compulsory military service, training of jobless persons and promoting the career for women.

IMO itself will develop a page on its public website highlighting the types of career paths available to seafarers, through links to industry sites. While on missions abroad, where practicable, the Secretary-General will visit maritime and non-maritime training facilities and seafarer organizations to express support and address both maritime and non-maritime Government departments to promote shipping and seafaring. And the ILO, which promotes the objective of decent work for all, has adopted several instruments directly relevant to the campaign and will support it in every way possible. (IMO, 2008)

4.1.2 The Year of the Seafarer

During the meeting of the IMO Council's 102nd session from 29 June to 3 July 2009, the theme for World Maritime Day of 2010 was identified to be "2010: Year of the Seafarer" which was celebrated throughout the year. The theme was aimed to "give IMO and the international maritime community the opportunity to pay tribute to the world's seafarers for their unique contribution to society and in recognition of the risks they shoulder in the execution of their duties in an often hostile environment." (IMO, 2009)

4.1.3 Day of the Seafarer

During the Diplomatic Conference in Manila, the Philippines, in 2010, the Member States of IMO agreed to establish the Day of the Seafarer, which would be celebrated on 25 June yearly. The Day of the Seafarer was on the day which the STCW revisions were adopted and was to annually mark the unique contribution made by those who work on board ships to the world and the people all over the world. (IMO, 2010)

4.1.4 Evaluation of IMO's attempts to improve the attraction of seafaring

With the launch of the “Go to Sea!” campaign, the identification of “The year of the Seafarers” and the establishment of the “Day of the Seafarer”, IMO opened an umbrella under which the shipping industry and the Governments of nations could mount their own campaigns to improve seafarer recruitment (IMO, 2010). A number of States were highly motivated and responded to the “Go to Sea!” campaign, carrying out various activities and stimulating policies to attract potential young seafarers (Hammarstedt & Zaar, 2011). However, those States which are highly motivated are mostly countries which are facing a shortage of seafarers, thus it was not surprising that they successfully attracted a large number of youths to make a career at sea. However, in States which currently have an abundant of seafaring labour resources, the enthusiasm was relatively low and it would seem that not surprisingly such campaigns are of little value. Nevertheless, the core mission of the “Go to Sea!” campaign should have attracted seafarers far more by concentrating on arousing the social communities’ awareness of seafarers and a seafaring career. Actually, seafarers are in a relatively weak position in the shipping industry, especially in certain developing countries (Pan, 2012). Thus, campaigns similar to “Go to sea!” should be regularly carried out in order to motivate more States to participate. Furthermore, according to the campaign, it was proposed that the

participation of more female seafarers is an effective way to alleviate the shortage of seafarers (JITI and The Nippon Foundation, 2010). However, in certain parts of the world, for cultural and religious reasons, it is inapplicable for females to engage in seafaring due to their relatively low social status and the conservative traditional concepts of females.

4.2 England

4.2.1 The introduction of tonnage tax

Between the 1970s and late 1990s, the shipping industry in the United Kingdom experienced a steady decline in qualified officers. According to the statistics, the registered fleet in the UK fell from 50 million DWT (3,822 ships) in 1975 to 4 million DWT (1,391 ships) by 1999. Further, the number of officers dropped from 28,000 in 1980 to 13,285 in 2000 (Drewry, 2014). In addition, most of the shore-side maritime clusters, such as ship port management, ship insurance and so on, rely on the skill supply of ex-seafarers. These maritime cluster firms faced a shrinking crisis due to the decline of seafarers. In the mid-1990s, the government was aware of the dramatic effect and threat posed by the decline of the UK fleet and number of qualified officers (Gekara, 2007). In order to cope with the crisis, the UK government introduced the tonnage tax in 2000, which was expected to underpin the renaissance of the shipping industry in the UK (Maritime UK, 2012).

As a response to the decline of the UK fleet and number of qualified officers, the tonnage tax was designed to encourage the growth of the fleet and shore-side cluster of maritime related industries in the UK. The tonnage tax was designed as an alternative method which would calculate the tax of the corporation in accordance with the net tonnage of its ships rather than its total profits and chargeable gains from its shipping activities (Gekara, 2007). As the level of tax was fixed referring to the

fleet tonnage of the corporation rather than the profits and gains which are variable, these tonnage tax corporations would gain an advantage of much lower and predetermined amount of tax.

At the same time, the tonnage tax was also designed to ensure the shipping companies would commit to train new seafaring recruits (Gekara, 2007). A company willing to enter or remain within the tonnage tax system needs to meet certain training requirements and fulfil minimum training obligations. The Department for Transport thus issued an approval to the company which had proposed the training plan, and then the company could make a decision to enter or remain within the system or not (WFW, Summary of UK Tonnage Tax Legislation). A company should train one eligible officer trainee for each 15 officer posts in existence on the vessels that it operates. If the company could not supply enough training places, they need to contribute a certain amount of money instead. The companies should also make an effort to supply the ratings with more training and employment opportunities (Customs, HM Revenue & Customs). The companies need to report to show their compliance with the requirements every four months as well as the changes of their fleet numbers (WFW, Summary of UK Tonnage Tax Legislation).

For a company that wants to enter the tonnage tax system, it needs to be qualified by HM Treasury and then get the right to decide to enter within one year. Normally, the tonnage tax election would come into effect from the day they were validated eligible to enter the system. The election lasts ten years and could be renewed at any time within the valid period (WFW, Summary of UK Tonnage Tax Legislation).

4.2.2 The success of tonnage tax in the UK

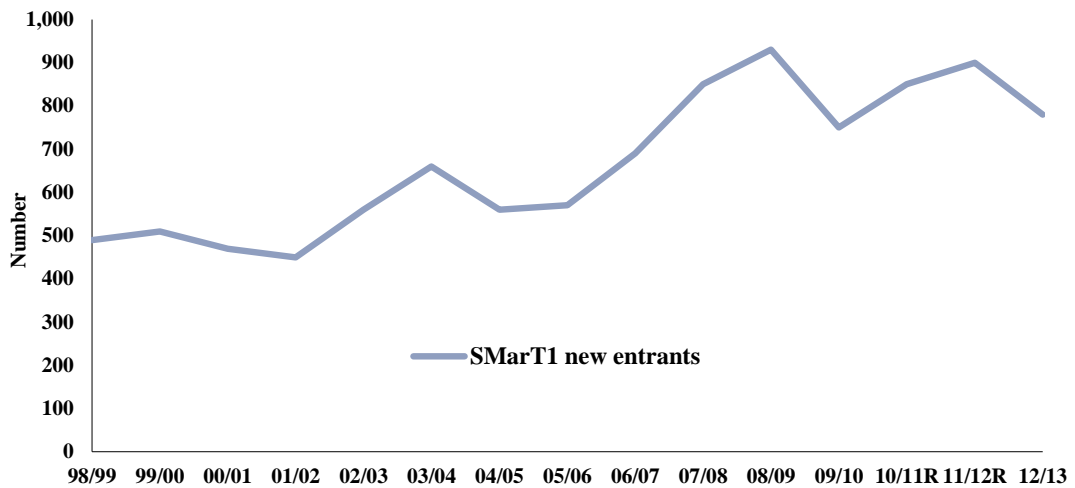
After the introduction of tonnage tax, the numbers of ship owners and operators in the UK have grown enormously. According to the report from Maritime UK in 2012,

the number of UK-owned fleets was nearly three times more than that in 2000, while the UK-registered fleets, which were quite a few, were as much as six times more than in 2000 (Maritime UK, 2012).

The shipping industry has continuously contributed to the GDP of the UK in terms of turnover and added value in last decade. The contribution had grown about two to three times (Maritime UK, 2012). According to the report of Oxford Economics, in 2013, the shipping industry directly offers nearly 262,700 employment positions, which is 0.8% of the national total amount; namely, there is one from the shipping industry among every 120 employments. It is also shown that the shipping industry contributes £ 13.8 billion to the GDP of the UK (0.9% of the total), and contributes as much as £2.7 billion tax revenue to the Exchequer (Oxford Economics, 2013).

In the meantime, the tonnage tax strategy also benefits the training conditions of the UK. The officer trainees newly entering the shipping industry had doubled in the years after 2000 (Maritime UK, 2012). This is shown in the statistical work of the Department for Transport where the number of new trainees was 470 in the financial year 2000/2001, while in the financial year 2011/2012 and 2012/2013, the number was 900 and 780 respectively. Although there has been a decrease in the most recent two years, that is still a considerable amount compared to the early years of 21st century. (see Figure.16)

Figure 16: The UK officer cadets: 1999-2013



(Source: Department for Transport, 2014)

4.2.3 The failure of tonnage tax in the UK

Normally, it is popular to consider the tonnage tax as a successful strategy as stated above. However, from the point of view of some training companies and colleges, the strategy could not be registered as successful in the field of retaining selected cadets. Previously, the strategy was originally projected to increase the training levels and shipping skills of the cadets. Nevertheless, contrary to popular perception, it has been shown that there is a high wastage of cadets. The main reason leads to the reduced attraction among British youth is the pressure in the process of learning. A large numbers of cadets would quit the training programme before completion. For those enrolled on the training, they could hardly withstand the physical and academic strength and high requirements of the training programme. This might be due to the decreasing quality of enrolled cadets or the deteriorating training conditions of the programme. (Gekara, 2007)

The main reason for the high dropout rate lies in the employment opportunities. UK-based companies lack of interest in British seafarers; they are not motivated to

train British cadets as they rely on the seafarer labour markets of third countries rather than the British labour market. A lot of tonnage tax companies do not participate in the training directly, they take advantage of the option window. They delegate the training institutions to undertake all the responsibilities regarding the training of cadets. What is worse is that some training institutions do not concern much about the cadets. And these tonnage tax companies who are not concerned much about the cadets, and these tonnage tax companies who do not take good care of their cadets are not aiming to employ them. As a result, the cadets are much more likely to quit the profession of seafarer. This reveals that there is a lack of employment links between the tonnage tax strategy and UK-based companies. The adverse impacts do not only reflect a decreased attraction to young British people to undertake the career of seafarer and increase the dropout rate of cadets, but also embody in the failure to force the tonnage tax companies to perform their basic obligation to train cadets. These companies do not take good care of the cadets, and at the same time, the cadets realize the lack of sufficient employment opportunities and promising career prospects; so they consider seafaring as a difficult lifestyle. All these factors together lead to a high dropout rate among young British cadets. (Gekara, 2007)

4.3 Norway

Norway is among the countries of vital importance and strategic influence to the international shipping market as well as the seafarers' labour market. As shown in the Review of Maritime Transport 2013 published by UNCTAD, Norway owns a fleet of 45,992,245 deadweight tons which ranks 9th of the world and occupies 2.85% of the world's total deadweight tonnage (UNCTAD, 2013). Norway is also among the world's top 20 officer supplying counties. In 2010, it supplied 16,082 officers and 7,300 ratings which is 2.58% and 1.05% of the world respectively, which makes

Norway the 11th largest global supplier of officers (BIMCO/ISF, 2010). Norway is highly motivated to carry out effective action to maintain the attraction of seafaring, as it is known as a shipping and seafaring country with a strong maritime heritage which dates back to the Vikings. Norway is among the first States that was aware of the threat of the decreasing attraction of seafaring to its development and made special efforts to attract young persons to make a career at sea. Thus, the aforementioned policies, measures and methods of the Norwegian government to improve the attraction of seafaring are valuable models for countries and institutions such as IMO to refer to.

4.3.1 Support to the MET sector

In recent years, the Norwegian government, as well as some public and private institutions, have taken several measures to promote the attraction of seafaring among youngsters so that there are sufficient qualified seafarers to operate and manage their vessels (Deloitte Energy & Resources Group, 2011). From the perspective of the Norwegian government, they spend a lot of energy creating more training opportunities for the cadets for the purpose of improving their practical ability and ensuring the competency of cadets.

In Norway, there are four maritime training offices which are authorized to train seafarers and are owned by shipping companies who own or operate various kinds of vessels. Taking the Maritime Opplæringskontor as an example, it is considered as the nation's largest training body and contributes a lot in attracting young Norwegian seafarers; the number of its apprenticeship contracts has varied between 350 and 400 in the past five years. Further, in order to increase the number of apprenticeship contracts, Maritime Opplæringskontor uses their website as a way to advertise the various maritime educational programmes and career paths available through videos and figures. At the same time, it offers an informative table of member companies

who can offer apprenticeship and their planned number of apprentices. (Maritimt Opplæringskontor, 2014) This is a convenient way for students to find information about related member companies so that they are highly supported when they make a decision to engage maritime professions. Also, there are some schools carrying out training on board. During the school year, students would live on board, study and get tuition in navigation, deck work for two or three years. For such schools, the condition of their training ships is of great importance to them. In order to update and modernize the training facilities of training ships, the Norwegian government has contributed a great deal (Wood Turning Cruise, 2014). For instance, they have contributed as much as 5 million NOK (Norwegian Krone) financing the upgrading and adjustments to be made to the school training ship M/S GANN to become more functional as a school ship. Further, in order to safeguard the updating of maritime schools' and colleges' infrastructure, the Norwegian government is allocating 10 million NOK to school equipment (Dragomir, 2014). These facts show the strong support of the Norwegian government to MET as well as their great willingness to attract more youths to enrol in the shipping industry and to ensure the practical ability of the graduates.

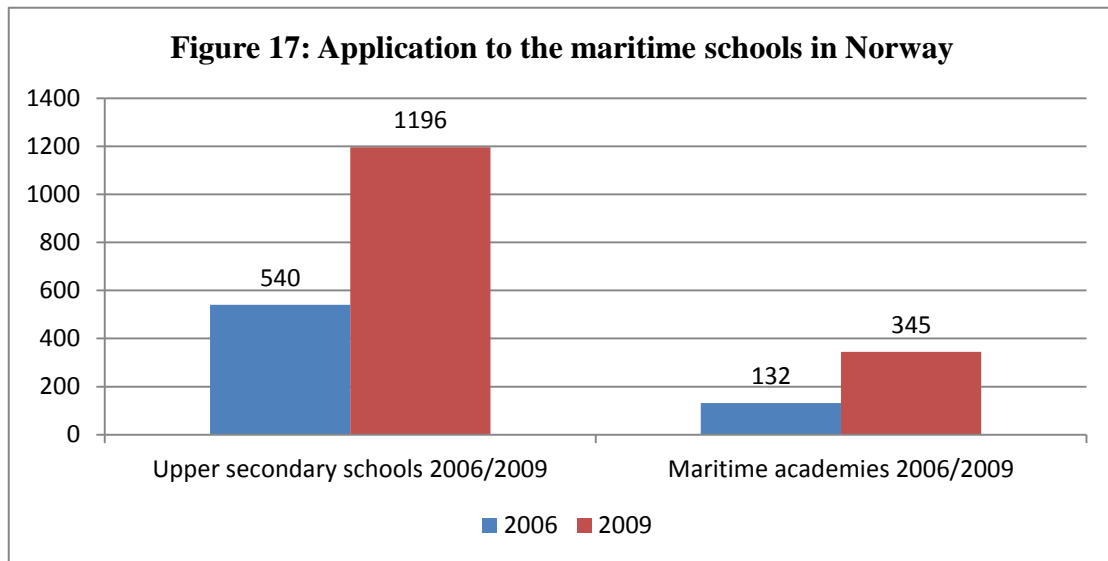
4.3.2 Carrying out of *Ikke for all* (Not for everybody) campaign

As mentioned above, in 2006 the world shipping industry underwent an expansion of its fleets with the result that there was an increasing demand for seafarers. Simultaneously, MET institutions in Norway, as well as many other large shipping countries, experienced a decreasing attraction of seafaring and a low number of applicants. In order to deal with this enormous challenge to the shipping industry, the Norwegian government started up a campaign entitled *Ikke for alle - en utdanning du kommer langt med* ("Not for everybody- an education that will take you far") in January 2007. This was managed by an association called Maritimt Forum

(“Maritime Forum”) and aimed at informing young people, mainly pupils in the tenth grade of the ten-year compulsory school, and students in the third grade of the three-year upper secondary school, about educational and career opportunities in the maritime sectors. It was also aimed at parents and counsellors who are guiders of youths and who might influence their choice of working at sea. (Hammarstedt & Zaar, 2011)

In order to reach the goal of the campaign, they made great efforts to change the outdated opinion that people often have about the maritime industry. They established a website for the *Ikke for all* (Not for everybody) campaign and offered a short presentation about each section of Norwegian maritime industry and its importance to the international shipping world as well as a detailed introduction to different professions within the shipping industry. They also raised some arguments in terms of seafaring and MET to attract the eyes of youths and shared some other maritime professionals’ ideas about the positive aspects of working at sea. Moreover, in addition to the website, they held exhibitions about different aspects of shipping and advertised invitations in periodicals and newspapers to these potential seafarers. At the exhibition centre, they handed out brochures and give-aways to the visitors, as well as providing posters and other materials for study counsellors along with a newsletter to the teachers and study counsellors. (Hammarstedt & Zaar, 2011)

According to the project manager Maritimt Forum, the campaign successfully achieved its goals; applications to maritime schools in Norway more than doubled from 2006 to 2009. (See Figure 17) Norway’s success in attracting youths to take part in the shipping industry and make a profession at sea is a good example of improving the social cognition of seafaring and making many more people aware of the real life and work of seafarers.



4.3.3 The success of Norway's attempts

The success of Norway to increase the attraction of seafaring is not only owed to the support of the government, but also owed to the efforts of various maritime institutions and stakeholders.

The Norwegian government's attempts do not unilaterally aim to increase the attraction of seafaring. They have further made efforts to increase the social awareness of the whole shipping industry by presenting an overall perspective of each sector (Hammarstedt & Zaar, 2011), which has helped to attract talent as well as to stabilise the labour resource for the whole shipping industry. Even more importantly, through their campaigns, they have supplied abundant information and recommendations for those who might have an initial intention to make a career at sea. Young people could make a better plan for the days when they have accumulated abundant experience on board, which consequently strengthens their determination and confidence to choose a career at sea.

At the same time, the Norwegian maritime stakeholders are highly aware of the importance of national seafarers for their own development. They clearly realize that

they are actually the beneficial owners of the increased attraction of seafaring, and have taken their responsibilities for the development of the nation's shipping industry rather than greedily earning as much money as possible and leaving their responsibilities aside. Their contribution to MET, as well as their efforts of offering apprenticeships and introducing seafaring on their website, demonstrate their great concern for seafarers and encourage the nation's youth to choose a career at sea.

Chapter V Recommendations to enhance the attraction of seafaring in China

5.1 Improving the social status of seafarers

Seafarers play a vital role in the promotion and development of a country's foreign trade and national economy; however, their social status and relative income have declined. In recent years, there have been very few positive media reports and publicity regarding seafarers; and what has been reported is nearly always associated with accidents and pollution at sea and the perils seafarers face, which are snow plus frost for the decreasing social image of seafarers. Now, one is witnessing growing concern regarding this matter among governments and commerce and it is clearly time to urgently improve the social status of seafarers in order to stem the tide (Pan, 2012). Thus, in the context of this dissertation, the Chinese government should introduce concrete measures to achieve this objective.

5.1.1 More publicity for Chinese seafarers

The publicity departments of all nations at all levels need to intensify the publicity of seafarers in order to promote their great contribution in the progress of mankind, the development of the world and the country and their diligent, brave, optimistic and cheerful noble sentiments (Lu, 2012). This requires making the whole of society aware of the seafarers' work and contribution to the development of the economy and society, as well as their basic rights and interests; to build a social environment with great respect and care to the seafarers and their families and make seafaring a respected and decent profession.

5.1.2 Special privileges for seafarers

Seafarers should be provided with special privileges in the aspect of politics and policies so as to highlight the importance of seafarers for the national economic development process. For instance: among all levels of the People's Congress representatives and the Chinese People's Political Consultative Conference members, there should be a certain amount of real seafarer representatives. At the same time, during the selection process of model workers at all levels, the proportion of seafarers should be increased appropriately.

5.1.3 Increasing the income of seafarers

Seafarers' wages need to be increased. As a special profession, which requires potentially dangerous and enduring work compared with other professions, the Chinese government should publish a relevant individual income tax relief policy and keep the wages of seafarers in line with international standards so as to highlight the importance of seafarers; at present, the wages of Chinese seafarers are relatively low compared to the level of international seafarers. The monthly wage of a captain or chief engineer on oceangoing vessels is about forty to sixty thousand China Yuan (about 7-9 thousand dollars); while for a general sailor and motorman, it is normally around five to six thousand Chinese Yuan (about 0.8-1 thousand dollars) (News and information network, 2014). Furthermore, in order to ensure a seafarer's basic life style, the Chinese government has set standards relating to the wages of seafarers when they have vacations, but this is actually at a low level and as a result, the overall wage level of seafarers remains significantly low (Wang Z. , 2011). Moreover, a seafarer's income tax deduction standard is comparatively low when compared to the international level. Generally speaking, the international deduction standard for seafarers is three to five times higher than normal taxpayers, but that for Chinese seafarers is nearly the same as normal taxpayers (Cao & Li, 2014).

Seafarers' incomes have the potential to greatly influence the attraction of seafaring, so the government should raise the standard of the seafarer's lowest wage in accordance with the country's economic development level and the citizens' consumption level. Furthermore, by implementing tax relief policies for seafarers, the income advantage would be restored. These advantages would be helpful in attracting many more youths into the shipping industry.

5.2 Facilitating the development of MET

MET institutions are the source of manpower for the shipping industry. By facilitating the level of MET, the overall ability of graduates would be promoted which would create more opportunities for them in the competitive world and national labour market.

5.2.1 Promoting the innovation of the MET mode

The relatively new amendments to the STCW Convention pay much attention to the practical training and evaluation of maritime education and emphasize the seafarer's actual ability to use all sorts of knowledge (IMO, 2011). This presents new requirements in the MET field, and will have a great influence in the maritime educational system. In order to strengthen specialized practice, MET institutions should make efforts to create more practical opportunities. Referring to this, the Chinese MET institutions should make Norway an example and give full play to the important role of ship-owners for the training and cultivation of seafarers. MET institutions should take advantage of the ship-owners' resources by combining the requirements of practical training with the ship-owners' demands, and actively exploring the cooperation mechanisms for the cultivation of students so as to enable the students to have sufficient practice opportunities in shipping companies.

On the other hand, as stated above, the lack of sufficient English communication

skills among Chinese seafarers, which is partly caused by the existing Maritime English teaching methods being used, weakens the overall competitiveness of Chinese seafarers and threatens the long-term development of the Chinese seafarer labour market (Teng & Qu, 2014). Therefore, MET should be revitalised to improve the English teaching mode as well as the nautical students' oral English level.

Firstly, the process of learning specific English and General English should be bonded organically. According to this author's investigation, for most Chinese nautical students, they need to attend basic English classes in the first year to meet the requirements of the Ministry of Education, and then undergo maritime specific English courses in the second and/or third year to meet the requirements of the STCW Convention, as amended. Nevertheless, when starting to learn maritime specific English, some students' are found to lack the basic English ability required to meet the initial requirements of Maritime English education, which leads to low efficiency and ineffective learning. Thus, it would be a good choice to make a combination of basic English and Maritime English education as has been achieved at Dalian Maritime University, where specific basic English textbooks have been written for specialized maritime students taking into consideration their maritime knowledge.

Secondly, in some Chinese MET institutions, more attention is paid to the test of reading ability, where the examination pass rate is overemphasized, which in consequence leads to a neglect of the three other language skills: listening, speaking and writing. The students' inability to use English in daily life is thus insufficient and leads to further difficulties in communicating with foreigners when working on board (Shen & Lv, 2007). Consequently, it is necessary to establish a national standard for the education and examination of Maritime English, as well as an advanced Maritime English examination system, which scientifically considers the percentage of

listening, speaking, reading and writing abilities required.

5.2.2 Emphasizing the cultivation of seafarers' professional qualities

When working on board, due to the particular restricted environment, such as natural environment, noisy and high temperature environment and so on, seafarers are likely to become anxious, whiny and exhausted. Moreover, the working environment and conditions on board are complex and changeable, especially when experiencing the many unexpected emergencies that may occur, where there is a need to take effective action decidedly, timely and independently to secure lives and property on board (Jiang, 1997). In addition, according to Ji & Yuan (2012), as much as 80% of maritime accidents are caused by human error, among which poor psychological quality is one of the main factors (Ji & Yuan, 2012). Therefore, for MET institutions, the cultivation of a maritime student's professional quality, which is far more than passing all the examinations and being awarded the certificate of competence, should be promoted. Firstly, the mental health classes should be widely carried out among maritime students to enhance their ability to control emotion and adjust mental status, as well as their ability to adapt to various living and working conditions on board. Secondly, MET institutions should arrange a certain amount of teamwork training and physical education. On the one hand, students' emergency response ability and sense of responsibility would be improved in the process of solving problems; simply, they would learn to cooperate and get along with each other. Thirdly, the construction of a campus culture should be highlighted, since campus culture is a kind of potential hidden curriculum, which plays an important role to the cultivation of students' behavioural habits, ideology and morality (Shi X. , 2011). MET institutions should strengthen the construction of maritime culture by carrying out maritime specialist seminars, marine culture publicity activities and similar activities. At the same time, it is important to cooperate with shipping enterprises and play a role within corporate

culture to boost the construction of campus maritime culture. Thus, the students' awareness of the ocean, understanding the shipping industry, as well as their horizons, would be provided and accumulated in daily life.

5.2.3 Strengthening the training of MET teachers

The purpose of MET is to cultivate the applied talents of Navigation, Marine Engineering and Marine Electrical and Electronic Engineers who are competent to operate modern vessels. Consequently, MET teachers are required to possess sufficient theoretical knowledge, a high level of hands-on ability, as well as abundant practical experience to operate and manage vessels, which means to cultivate double capability teachers. According to documents from the Ministry of Education, "Double capability teacher" mechanism, which has been successfully applied in countries such as Germany, Denmark and the USA, is one key of raising teaching quality in higher vocational schools. (Chen & Jiang, 2010) Therefore, MET institutions should create and encourage more opportunities for MET teachers to serve on board, and approve and apply appropriate incentives and evaluation mechanisms to stimulate them to do so. Moreover, MET institutions should employ a certain number of experienced captains and chief engineers to work as full-time or part-time teachers, which is also an effective way to improve the teachers' overall double capability and capacity.

5.2.4 Improving the conditions of practical training

For maritime education and training, the running fund is an important material guarantee to education quality. However, the allocation of practical training facilities for Chinese MET institutions varies from school to school (Zhang, Liu , Yu , & Wen , 2012). For some institutions, which are supported by the central government or big shipping enterprises, their practical facilities are comprehensively and completely

constructed, but for those which are supported by other institutions or individuals, they cannot allocate substantial practical training facilities due to their financial constraints; it is often hard for them to update their facilities to keep in line with the development of maritime technology (Qu X. , 2014). As a result, the level of practical training in the different MET institutions might reveal considerable gaps. Thus, the maritime administration, education authority and local governments should further increase the financial budget and strengthen the running investment of the MET fund so as to improve the construction of maritime infrastructure, and in particular the overall condition of practical training. Moreover, currently the Ministry of Education, Ministry of Transport and Maritime Safety Administration in China have only established standards for specific parts of the practical training equipment, but for some other parts there is no mention and the allocation to institutions has no uniform standards, which might lead to a surplus or a lack of training resources (Wen, 2012). Therefore, it is necessary to establish a complete set of standards for the allocation of practical training facilities as soon as possible for the purpose of guiding and regulating the allocation of practical training facilities and ensuring a minimum national standard for practical training.

At the same time, MET institutions should make efforts to establish an off-campus practical training base that resembles Norway's, where shipping companies are able to supply a large number of apprenticeships (Dragomir, 2014). The shipping companies should also support the teaching processes of MET institutions, which would finally cultivate and provide much better trained and qualified seafarers for them. The cooperation between MET institutions and shipping companies is an effective way to cultivate qualified seafarers (Gao, 2010). At the same time, students can acquire more practical training opportunities on board by gathering practical skills and experience. As a result, such skilled students would be more likely to serve

for companies in which they have been practically trained. This would seem to be an asset that benefits the companies, which ensures an abundant source of qualified seafaring manpower. Consequently, cooperation between the maritime schools and shipping companies would be strengthened and provide an outcome that benefits all.

5.3 Enhancing the protection of Chinese seafarers' rights and interests

5.3.1 Improving legislation for the protection of seafarers' rights and interests

On August 20, 2013, the International Maritime Labour Convention, 2006, came into force aiming to promote the decent work practices of seafarers (SOL, 2013). However, similar to some other traditional shipping countries in the northwest of Europe and Baltic Sea region, China has not ratified MLC 2006 due to the extensive and time-consuming demands required to ratify and fully implement the Convention (Bao, Liang, & Mao, 2013). Nevertheless, in order to regulate the shipping industry in China, and coordinate the relationship between the international and national seafarer protection policies, the government should make efforts to ratify MLC 2006 in the near future. On the other hand, the main shipping nations in the world have set up a Seafarer Act to clarify and safeguard seafarers' rights and obligations and to ensure the development of the seafarer labour market and the shipping industry (Wang F., 2007). Moreover, due to the particularities of seafaring, issues such as working hours and holiday systems are totally different from the situation ashore, thus, the existing China Labour Law, which is aimed at the nationwide labour force, cannot fully coordinate and solve those problems related to seafaring labour relations. Consequently, it is necessary and urgent to enact China's Seafarer Act which should technically be consistent with the actual situation of seafarers and in harmony with the spirit of the MLC Convention.

5.3.2 Promoting the overall service level of the seafarer service agency

In 2008, based on the requirements of MLC 2006, China MSA implemented the “Administrative Provisions of the People's Republic of China on Seaman Service”, which aims at standardizing the management of seafarer service agencies (Liu & Wei , 2010). Thus, in 2010, the Ministry of Commerce and the Ministry of Transport of the People’s Republic of China adopted the "Notice on the strengthening of assigning sailors to foreign labour cooperation management related matters" which cleared the rights of the Ministry of Transport to supervise and manage the export of seafaring labour. At the same, China MSA completed the enactment of the “Provisions of the People's Republic of China on the Administration of Overseas Assignment of Seamen” which further regulated the export of seafaring labour in China (Li N. , 2013). All these actions show the willingness of the Chinese government to promote the management of seafarer service agencies, as well as the efforts of the Chinese government to comply with MLC 2006. In addition, each maritime administration should continuously optimize the supervision and audit the requirements concerning the manning agency of seafarers. When carrying out inspections, it must now be guaranteed that all the requirements are applied strictly in accordance with the “Administrative Provisions of the People's Republic of China on Seaman Service”. At the same time, the daily supervision and management is to be highlighted. Further, the maritime administration is directed to make efforts to establish a proper seafarer complaints mechanism, quality management system and integrity management mechanism, as well as to coordinate with various management departments to supervise the seafarer service agencies effectively and guide the seafarer labour market correctly.

Moreover, according to this author’s investigation, from the perspective of the seafarer service agency the management mechanism is of great importance in

attracting seafarers. In order to retain the human resource, the seafarer service agency should establish a proper mechanism regarding all seafarers' career plans and make efforts to help seafarers to achieve their individual plan step by step. Specifically, seafarer service agencies are to supply sufficient information regarding the career path of seafaring, particularly regarding the choices for seafarers after accumulating a wealth of experience on board, and arrange training programmes that promote the achievements of their career plan. Additionally, a proper reward system, and a priority mechanism for seafarers to compete for positions ashore, should be established so as to create a cultural atmosphere of respecting and caring seafarers, which would strengthen the seafarers' sense of belonging and identification. Against the competition of the seafarer labour market, the service agency should keep a foothold at present and have the future in mind. By continuously enhancing the seafarers' value and treatment, it will ensure that the career advantages of seafaring will exist for the long-term.

5.3.3 Improving the relief and compensation to seafarers after a disaster

Due to the tough environment at sea, with incidents such as shipwrecking and piracy, a seafarer's individual and familial life is likely to change significantly. Thus, the seafarers' disaster relief and compensation system should be established and optimized to protect seafarers' rights to exist when they get into trouble due to casualties or loss as the result of an incident or accident. If the casualty or loss is caused by a force majeure, in addition to the insurance compensation, the government should compensate as well to safeguard the interests of seafarers and highlight the contribution of seafarers to the community. On the other hand, if the casualty or loss is caused by the seafarers' intentional or unintentional error or negligence, as well as the inability to perform their obligations when injured or ill, except for assuming the responsibilities and punishments, the government should

also compensate them, to some extent, to guarantee their basic living conditions. Moreover, in consideration of the special nature of living at sea, the standard of relief and compensation for seafarers should be higher than jobs ashore.

5.3.4 Guaranteeing the social security of seafarers

With the coming into force of the Social Insurance Law of the PRC on July 1, 2011, the protection of security of manpower ashore became much more complete. Yet, there is no specific legislation for the protection of seafarers' social security; the protection of seafarers' social security in China needs to refer to the standard ashore. However, due to the particularities of seafaring, as mentioned above, it is far from covering the full protection of seafarers (Xie, 2011). Thus, it is necessary to build a specific legal system for the protection of seafarers' social security in China referring to the requirements of international conventions and the experience of other countries.

On the one hand, from the international point of view many countries have a wide range of laws and regulations involving the protection of seafarers' welfare, such as the Seafarer Act, Seamen's Union Law, Seamen Employment Agency Management Act and so on (Chen R. , 2008). China should finalise the implementation experience of existing laws and regulations involved with seafaring and prescribe the social insurance, social welfare and social relief of seafarers on the basis of the actual domestic conditions. The employers' contribution rate for seafarers' endowment insurance, injury insurance, unemployment insurance as well as medical insurance should be improved and strictly supervised.

On the other hand, for seafarers assigned overseas, especially for those working on ships flying flags of convenience, the protection of their social security might depend on the policies of the flag state and require the cooperation between flag state and the

seafarer's country. Thus, the Chinese government should earnestly consider the immediate interests of the seafarers assigned overseas and provide effective protection for both domestic and foreign seafarers by strengthening bilateral and multilateral cooperation with all relevant States.

5.3.5 Promoting the protection of seafarers' mental health

The nature of seafaring requires seafarers to be away from their kinsfolks, friends and the humanistic environment for long stretches of time; they engage in maritime operations independently, thus it is easy for them to suffer mental health, problems which may be harmful not only to the seafarers themselves, but also to the safety of other seafarers and the ship (Wang Z. , 2014). Thus, the government, society and related businesses should pay more attention to relieving seafarers' difficulties at home and also their tendency to become homesick. Firstly, it is important to provide a strong shore-based support for seafarers' families; proper policies should be implemented to guarantee the living standard of seafarers' family members, ensure their children's education and take care of any sick family members. Secondly, society should organize various activities and publicity events to make all citizens aware of the real life of seafarers and claim more respect and understanding for them, which would be helpful in promoting the social status of seafarers. Thirdly, seafarer management companies should strengthen the construction of living and recreational facilities and broaden all channels of information and communication for seafarers on board, such as supplying unrestricted access to the internet, modern fitness equipment and so on. In short, seafarers should be able to acquire sufficient rest time and have suitable entertainment to relax.

5.4 Constructing maritime culture

According to the report to the Eighteenth National Congress of the Communist Party

of China on November 8, 2012, “We should enhance our capacity for exploiting marine resources, develop the marine economy, protect the marine ecological environment, resolutely safeguard China's maritime rights and interests, and build China into a maritime power.” (The Seventeenth Party Central Committee of the Communist Party of China, 2012) In such a historical period, as an important segment of building a maritime power, the Chinese shipping industry will play an important role for the development of the country in the near and distant future (Qu & Li, 2013). Thus, maritime culture, which refers to the people’s understanding and recognition of the ocean, shipping industry and seafaring, is a major asset that concerns the heightening of the development of the shipping industry which as a consequence will drive the seafarer labour market.

5.4.1 Improving and cultivating national ocean awareness

Normally, it is considered that the marine culture consists of three aspects, namely the marine material culture, marine institutional culture and marine ideological culture. Marine ideology, which is also considered as ocean awareness, mainly refers to the people’s understanding and belief formed during the oceanic development process and reflects their psychological perception and perceived values regarding the ocean. It is a deeper sense of marine culture existing in people’s hearts and plays a key supporting role for the construction of maritime culture. (Qiao, 2009) Thus, in order to drive the development of shipping industry, ocean awareness should further be studied continuously and be disseminated through various forms of activities to guide public opinion and acquaint people, especially those at senior executive levels, with the value of the ocean and then to set up proper social ocean awareness conditions.

5.4.2 The leading effect of the government's policy

In order to construct a maritime culture in China, the leaders from all walks of life should firstly have a high awareness and perception of what the ocean really is and how it can combine the sustainable development of politics, economics, society and culture with the sustainable development of the ocean, this as well as being able to implement the national ocean strategies into the combination of the marine culture construction with specific ocean awareness strengthening measures. For this purpose, the government should make practical and effective plans to coordinate various departments so that the strategies can exceed the academic levels (Guo & Jinli, 2010). One possibility is that the government could set up a special committee which would play a role in coordinating all the related aspects and interests involved and develop special guidance documents and policies to instruct the actual work of different regions. For instance, the government could establish a marine education department at the national level that would actively promote the general education of marine knowledge. At the same time, the government should give specific financial support to the cultivation of marine and maritime science & technology talent in all primary schools, middle schools, academies and universities. On China's maritime day, July 17th, the government could give support to various organizations or departments to carry out appropriate, attractive and stimulating activities for the purpose of motivating citizens to study and think deeply about the importance of marine and maritime culture in order to arouse common interest among all Chinese citizens regarding the nation's maritime culture.

5.4.3 Popularizing maritime education

To strengthen the construction of maritime culture and to improve national ocean awareness is a systemic long-term task which needs to be implemented through both formal and informal education (Jing, 2012).

On the one hand, it is needed to fully utilize the strength of the existing marine and maritime museums, institutions, newspapers and all other media to organize various periodical activities by attracting citizens to participate in all kinds of popular marine science activities; these include maritime culture seminars, exhibitions and travels involved with marine humanity, history and science, to increase citizens' awareness of ocean and shipping. Furthermore, as is applied in Norway, these activities should much more aim at supplying abundant teaching materials and inspiration for teachers from various levels of schools who would significantly influence the thoughts of Chinese youth in the process of teaching. (Hammarstedt & Zaar, 2011)

On the other hand, institutes of higher education, especially MET institutions, should be duty-bound to assume more obligations. By applying appropriate educational concepts, designing closely related curricula, choosing scientific teaching materials, organizing culture activities within campuses, and exhibiting various collections in the library, institutes of higher education are expected to exert a subtle influence on the students' ocean awareness. Especially for the MET institutions, it is of vital significance to strengthen the daily dissemination of maritime culture and promote the student's ocean awareness so as to motivate them to become eager seafarers.

To sum up, in order to improve the attraction of seafaring in China, it is of great importance to basically make the rights, interests as well as social status of seafarers as the central task and focus on both the physical and psychological health of seafarers. Meanwhile, by establishing and optimizing reliable mechanisms and implementing appropriate policies, it is expected to continuously promote the development of each aspect regarding seafaring and strongly support the protection of seafarers; and thus attract more Chinese youths to make a career at sea.

Chapter VI Conclusion

With the globalization of the world's economy, the international cargo trade has helped to stimulate growth with the result that the world's shipping industry has prospered over many decades. However, seafarers, as the lifeblood of the shipping industry, have received very little attention from the international community in recent years to the extent that in a significant number of countries a seafaring career has been forgotten. As a result, more international organizations and nations have to become aware of the implications of having their nationals on vessels to ensure that a certain number of seafarers within the shipping industry are capable of operating and managing the transfer of cargo by sea, both locally and globally. What currently is of much concern, especially to the stakeholders in major shipping countries, is the difficulty of recruiting and retaining seafarers, which is caused by the rapid expansion of the world fleet and the difficulty in attracting seafarers to do the work.

As a populous country, China has an abundance of human resources which enables it to train and cultivate a large cluster of seafarers both for internal purposes and as an export to man the world's fleets. It is therefore of great significance to be able to explore how to attract Chinese youths to make a career at sea and how to stabilise the development of seafaring in China.

In this dissertation, an attempt has been made to discover and discuss the current seafarer labour market, the attraction of seafaring in China, as well as those feasible countermeasures to improve the attraction of seafaring for Chinese youths by referring to the attempts of IMO and many States.

Firstly, according to the analysis of the international and national seafarer labour market, China is experiencing an historical opportunity, as well as challenges, for the development of seafaring. Although the volume of global merchandise trade declined enormously in 2009, due to the influence of the economic crisis that occurred in 2008, it has since then increased year by year as a result of the world's economic recovery. Further, the seaborne trade has maintained a steady upward trend in the last decade. At the same, although the shipping industry suffered a downturn after the economic crisis, the deadweight tonnage of the world merchant fleet has increased continuously in recent years. All these aspects together would likely lead to an increasing demand for seafarers to operate the increase in vessels. Moreover, the shortage of seafarers in the international shipping market, especially the shortage of qualified officers, has existed for some years and is anticipated to continue not only today, but well into the future. China has the potential to take full advantage of its abundant domestic manpower resources and train a large number of qualified seafarers to help alleviate the world's shortage. Moreover, China's shipping industry has developed rapidly in the last three decades in the aspects of fleet number and port construction, which also require qualified seafarers to work on board and to engage in relevant work ashore, such as inspectors and supervisors of shipbuildings, with an accumulated abundance of on board experience. To take this historical opportunity for the development of the seafaring market, China needs to make the utmost of the advantages it has and dedicate great efforts in overcoming the disadvantages. Nowadays, it has established a systemic MET mechanism for the cultivation of competent seafarers, but compared to some other countries, the competitiveness of China's maritime graduates is relatively weak. Thus, the Chinese government, the shipping industry, as well as the MET system, should coordinate and take effective measures to ensure and promote the development of the seafarer market in China.

Secondly, the decreasing attraction of seafaring among Chinese youths should receive much greater recognition. As is shown by the data analysis of the questionnaire survey, most maritime students are aware of the great contribution seafarers give to the world. However, in their opinion, what seafarers gain is not consistent with what they have done for the world and all its individuals; this implies a relatively low social awareness regarding seafarers. At the same time, they show great apprehension concerning the various negative factors that they have to suffer on board, which prevents them from making the decision to choose a career at sea. As a result, they are not highly motivated to take this step; a large number of them (nearly half of the respondents) intend to find their way ashore rather than serve on board.

Nevertheless, there are those who wish to work on board and prefer to serve for more than 5 years and acquire a rank higher than chief officer or second engineer, which would supply a significant number of senior officers for China's shipping industry. However, compared to the rapid development of the country's shipping industry, namely the expanding national fleets, such a low intention of maritime students to serve on board surely cannot meet the potential demand in the near future. Moreover, the rising percentage of those who quit should be of great concern. Even if maritime graduates are forced to serve on board due to the poor employment conditions caused by any downturn in the global shipping market, they are more likely to resign when they find opportunities to work ashore; the outcome being a shortage of senior officers.

To sum up, measures need to be taken, as argued throughout this dissertation, to increase the attraction of seafaring among the Chinese youth; this for the purpose of preventing China's shipping industry from suffering from a serious shortage of seafarers in the future, and particularly from a shortage of senior officers.

Thirdly, whether taking the opportunity for developing or for preventing China from

facing a shortage of seafarers, the attraction of seafaring to Chinese youth needs to be highlighted. Moreover, to improve the attraction of seafaring is a systemic and comprehensive task; it will never be achieved by the effort of a single institution or organization. Thus, all the sectors within the shipping industry are required to contribute in every respect to improve the attraction of seafaring.

Regarding the social status, there is a direct bearing on the physical and mental life of seafarers. Due to the particularities of seafaring, a seafarer's social power is generally weak. To improve this, the government and society should carry out more publicity concerning seafaring and create more opportunities for seafarers to take part in political and social activities so that they may stand outside the edge of the people's eyesight and become more powerful in claiming their rights and interests. At the same time, the narrowing income gap between seafaring and jobs ashore is not consistent with seafarers' additional hard work. Therefore, increasing the income gap and recovering the income superiority of seafarers is of great significance for improving the attraction of seafaring.

In respect of MET, it is the source of manpower for the shipping industry, as well as the place where students take the first step of making a career at sea. Advanced MET helps to cultivate more qualified seafarers and enhance the competitiveness of graduates in the international seafarer labour market; this encourages them to work on board after graduation. Moreover, due to the improved requirements of the STCW Convention, as amended, and the fact that the global shipping industry actually has a lack of qualified officers, improving the quality of MET to meet the global requirements and exporting more highly qualified seafarers is, as emphasised here, surely needed. For this reason, the government as well as the shipping industry should act by providing financial and policy support and cooperate with MET institutions in all aspects, especially in the field of practical training. In the meantime,

MET institutions should emphasize the professional quality of seafarers and optimize the educational system by combining the internationally successful MET experiences noted in Chapter IV, with the reality of China.

In addition, when talking about attracting seafarers into the profession, it is crucial to ensure that the basic rights and interests of seafarers are cared for and implemented. Compared with some other major shipping nations who have established the Seafarer Act, the existing Labour Law in China cannot fully protect the rights and interests of seafarers due to the big difference of working conditions between on board and ashore. Thus, the government needs to establish laws specific to all the issues related to seafarers. Meanwhile, the supervision of the seafarer service agencies, which have a direct relationship and interest with seafarers, should be strengthened to ensure a decent and moral employment relation that include the protection of seafarers' rights and interests. In addition, the social security of seafarers should also be highlighted, and a relief and compensation system aiming to help seafarers, who may suffer incidents and accidents, should be established. The purpose of these actions is not only to ensure the interests of seafarers, but also to safeguard their families' living standards. When combined with the promoted social status, improved on board living standards, and so on, these actions would relieve the seafarers' stress and thus benefit their mental health.

Furthermore, in 2012, the Chinese government proposed its national strategy to build China into a maritime power, which consequently promoted the development of the shipping industry to the national strategic level. Thus, to cultivate maritime culture among Chinese people and promote the nationwide awareness of ocean and shipping has become an important task for all maritime sectors. At the governmental level, efforts should be made to facilitate the wide popularization of marine knowledge at different levels of education. At the same time, the government must implement

proper policies to coordinate and motivate various key organizations and institutions to take part in publicising maritime culture. Moreover, as the cultivation of a certain culture is a long-term task, an appropriate education mode and cultivation mechanism should be established in education institutions, particularly in MET institutions. By taking such kinds of measures, the overall ocean awareness of Chinese people would improve continuously; and then more Chinese youths would be motivated to choose maritime majors and aspire to working on board after graduating.

To sum up, the attraction of seafaring is a key factor for the development of the shipping industry and the attempt to build China into a maritime power, which will also benefit the international seafarer labour market. Consequently, each sector of the shipping industry in China should actively make a sustained effort to attract its youth in making seafaring their career, and support them to become the mainstay of not only China's shipping industry but the world's shipping industry as well.

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APPENDIX A

The attraction of seafaring in China

Thanks for your participation. This survey aims to explore the actual opinion of Chinese Maritime students to seafaring and analyse possible influence factors.

Part 1: “Demographics”

1. Your university:

- A、 Dalian Maritime University
- B、 Shanghai Maritime University
- C、 Jimei University
- D、 Wuhan University of Technology
- E、 Qingdao Ocean Shipping Mariners College
- F、 Jiangsu Maritime Institute
- G、 Others_____

2. Your specialization:

- A、 Navigation
- B、 Marine Engineering
- C、 Marine Electrical and Electronic Engineer

3. Your grade:

- A、 Grade one
- B、 Grade two
- C、 Grade three
- D、 Grade four

4. Your gender:

- A、 Male
- B、 Female

5. Which area are you from?

- A、 East China
- B、 South China
- C、 North China
- D、 Central China
- E、 Southwest China
- F、 Northwest China
- G、 Northeast China

G、 Others

13. What's your parents' willing to you after graduation?

- | | |
|---------------------------------------|---|
| A、 Serve on board | E、 Work for shipping relevant companies |
| B、 Attend postgraduate program | F、 Study abroad |
| C、 Take the civil service examination | G、 Others_____ |
| D、 Start own business | |

Part 3: Factors that affect the attraction of seafaring

14. Why did you choose maritime major?

- | | |
|-------------------------|--|
| A、 Want a career at sea | F、 Due to the score of university entrance examination |
| B、 Parents' aspiration | G、 Better prospects |
| C、 Easy to find job | H、 Casual |
| D、 High wage | I、 Others_____ |
| E、 Low tuition fee | |

15. Who mostly influences your employment choice?

- | | |
|-----------------------------|--------------------|
| A、 Parents and friends | E、 Public opinions |
| B、 Career guidance teachers | F、 Yourself |
| C、 Instructors | G、 Others_____ |
| D、 Schoolfellows | |

16. What mostly attracts you to work at sea?

- | | |
|---------------------------------|--------------------------|
| A、 High salary | D、 Accumulate experience |
| B、 More promotion opportunities | E、 No attraction |
| C、 Adventure | F、 Others_____ |

17. To what extent the following factors influence your decision to work on board? Please rank them on a scale of 1-5.

- | | |
|-----------------------------------|--|
| [] Salary superiority | [] Difficult to keep in contact with home |
| [] Apart from family and friends | [] Marriage |

- | | |
|---|--|
| <input type="checkbox"/> Hard to take care of parents | <input type="checkbox"/> Market downturn |
| <input type="checkbox"/> Heavy working pressure | <input type="checkbox"/> Social prejudice to seafarers |
| <input type="checkbox"/> Working conditions | <input type="checkbox"/> Cultural difference with others |
| <input type="checkbox"/> Living condition | <input type="checkbox"/> Strict hierarchy |
| <input type="checkbox"/> Loneliness | <input type="checkbox"/> Lack of recreational facilities |
| <input type="checkbox"/> Concern about accidents at sea | <input type="checkbox"/> Lack of shore leave |
| <input type="checkbox"/> Piracy | <input type="checkbox"/> Privacy |
| <input type="checkbox"/> Narrow career prospect | <input type="checkbox"/> Sea sickness |

Part 4: Career plan

18. How long do you prefer to work on board?

- | | |
|----------------------|------------------------|
| A、 Less than 3 years | D、 More than 8 years |
| B、 3~5 years | E、 Won't work on board |
| C、 5~8 years | |

19. Which rank do you want to acquire?

- | | |
|----------------------------------|---------------------------|
| A、 Third officer/fourth engineer | D、 Captain/chief engineer |
| B、 Second officer/third engineer | E、 Won't work on board |
| C、 Chief officer/second engineer | |

20. What type of vessel do you prefer?

- | | |
|-----------------------|------------------------|
| A、 Container | J、 Tug |
| B、 Bulk carrier | K、 Service vessel |
| C、 Tanker | L、 Fishing vessel |
| D、 General cargo ship | M、 Research vessel |
| E、 LNG | N、 Others |
| F、 Chemical carrier | O、 Any type |
| G、 Cruise ship | P、 Won't work on board |
| H、 Ro-Ro | |
| I、 Dredger | |

21. What is your career plan?

- A、 I will progress through the ranks and consider seafaring as a lifelong profession
- B、 I would serve on board shortly and look for job ashore simultaneously
- C、 I would serve on board to obtain enough experience and qualifications and then look for a job ashore
- D、 I would move ashore when I get married
- E、 I would move ashore when I have children
- F、 I would stay on board until I paid off the mortgage
- G、 I would stay on board until I earn enough money
- H、 I won't work on board
- I、 I have no plan
- G、 Others_____

Part 5: Opinion of the future market

22. Seafaring in China is expected to grow significantly. Please indicate your agreement with the statement.

- | | |
|-------------------------------|----------------------|
| A、 Strongly agree | D、 Disagree |
| B、 Agree | E、 Strongly disagree |
| C、 Neither agree nor disagree | F、 Not sure |

23. What do you think about the attraction of seafaring over the next ten years?

- | | |
|--------------------|--------------------|
| A、 More attractive | C、 Less attractive |
| B、 Unchanged | D、 Not sure |

24. Which issue do you think would be most critical for seafaring in China in the future?

- A、 Governmental supervision
- B、 Enterprises' management policy
- C、 Seafarers' overall qualification
- D、 Decent work
- E、 Market system
- F、 National law
- G、 Others_____