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Research Article

## The labor market of Chinese cruise seafarers: Demand, opportunities, and challenges

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### Abstract

The rapid development of the Chinese cruise market has brought with it an urgent increase in demand for Chinese cruise seafarers. This brings great opportunities and challenges to the Chinese seafarer labor market. This research aims to contribute to this relatively under-studied area by calculating the demand for Chinese cruise seafarers and understanding the Chinese seafarer labor market from the aspects of training, recruitment, and their work experience on ships. In order to achieve these objectives, a demand model is constructed through the idea of market-driven, in-depth interviews using a detailed questionnaire. The study estimates that the total demand for Chinese cruise seafarers in 2030 will be 100,000. This reveals a predicted gap between demand and supply of 19,200 in 2020. The current source of seafarers is mainly from domestic shipping companies, hotels, and related institutions. Their entry age is relatively young, current job profiles are mostly those in the capacity of assistants, and the average wage is 1217 dollars. Thus, there is a lot of room for improvement with their increasing experience. The study has found that most seafarers are satisfied with the work on cruise ships and are more concerned about their career development rather than salary. English communication skills and practical skills are 2 important aspects of crew training. China's cruise ship labor market thus represents both a high aggregate demand and a lack of high-end experienced talent. Labor market policies and systems in China remain to be improved. Furthermore, in the context of COVID-19's impact on the cruise industry, the study also analyzed the changes faced by the cruise industry and the seafarer market.

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## 1. Introduction

The sudden outbreak of COVID-19 has drastically hit the global tourism industry like never before. The World Tourism Organization estimates that international tourism revenue in 2020 will be reduced by 300 - 450 billion US dollars compared with 2019. Affected by the discovery of the New Crown Virus infection on the Diamond Princess and several other cruise ships, the world's cruise companies have entered a trough, and most cruise ships have been suspended. Each non-sailing cruise ship loses an average of 3 - 4 million US dollars. However, turning points are often brewing in the crisis. In the last 45 days, CruiseCompete.com, an online cruise marketplace, has seen a 40 % increase in bookings for 2021 compared with 2019, said Heidi M. Allison, president of the company. Only 11 % of the bookings are from people whose 2020 trips were canceled; "People are still booking cruises and are anxious to sail again when this is all over," she said. CruiseGuy President Stuart Kellon said the cruise industry is not facing the problems that there were after 9/11. At that time, people worried about their safety and reduced travel abroad. Once the timetable for restoring services is clear, many people are ready to join cruises.

The growth of the cruise industry has been phenomenal. For over 30 years, cruise lines and cruise trade associations have been repeating the same message over and over again: that cruising is one of the fastest growing segments of the tourism industry. Indeed, passenger numbers, cruise line revenues, and the number of cruise ships and their berth capacities have been increasing steadily since the late 1970s (Robbins, 2016).

According to CLIA (2016), the total global economic impact of the cruise industry is 119.9 billion US dollars. The cruise industry provided 939,232 jobs in 2014, and employs over 100,000 shipboard officers and crew, as well as approximately 15,000 employees ashore. Cruise operations tend to be a very people-driven discipline. Its requirements tend to be varied depending on the job profile; this results in diverse and distinctly different career paths for the individuals working in this field.

A large part of the cruise experience itself is created by the interactions between guests and crew, hence the importance of the latter. For example, the P&O Cruises 76,000 GT cruise ship *Aurora* caters largely to the North European market, carrying 1,900 passengers and 842 crew members, creating a crew to passenger ratio of 1:2.25. Of these, 70.6 % are employed in operations related to the catering, hotel, and hospitality departments, and a further 15.2 % are involved with entertainment and services (including medical): this translates to 85.8 % of the crew being involved in activities directly related to customer services (Gibson, 2006). They are mainly assigned to serve passengers and meet their various needs and demands, such as services, spas, food and beverages, housekeeping, retail, entertainment, tours, galleys, casinos, and so on. Cruise companies tend to attach great importance to these sectors, as these sectors not only directly affect the satisfaction of passengers but are also significant sources of income and onboard revenue. For many passengers, this is the main reason for them undertaking the cruise. The remaining 14.2 % of the crew are occupied in deck, engine, and electro-technical departments, similar to those on conventional cargo ships. Thus, for crew working in these departments, there is a great degree of similarity between the cruise ship and the traditional cargo ship. The source of personnel for the former are mostly the conventional hospitality industry, and training institutions related to them, while the source for the latter is the conventional shipping industry. In China, the training of cruise seafarers has not been in place for a long time, but due to the rapid growth in demand, cruise companies have engaged in more extensive and in-depth contacts and cooperation with domestic professional schools to increase the recruitment and training channels for cruise talent. Some cruise companies, such as Royal Caribbean Group, Star Cruises, and Mediterranean Cruises, have cooperated with relevant colleges and universities to develop cruise seafarer training businesses, and have established training bases to train cruise seafarers in a targeted manner.

As per the International Labour Office (2007), the cruise industry employs approximately a quarter of all seafarers (Milde, 2011), which, unsurprisingly, is a disproportionate number of people

on board compared with cargo ships, when the number of ships in both sectors are taken into account (Vogel et al., 2012). Employment on cruise ships has been a subject of many studies. These tend to highlight problems related to working conditions, health and safety issues, and advancement opportunities (Gibson et al., 2012). The cruise industry has found itself under growing pressure to address these issues, due to, among other things, the newly implemented International Labour Organization (ILO) Maritime Labour Convention, 2006 (MLC, 2006), sometimes called the “Seafarers Bill of Rights” (Grosbois, 2016). However, research in this area is far from sufficient (Papathanassis et al., 2011).

With the development of the domestic and international tourism industry and the increasing level of per capita consumption in China, many large international cruise lines have begun to introduce new cruise routes to China in order to tap into this growing demand from Chinese residents. As a result of this rapid development of the Chinese cruise market, the industry has also seen a growing demand for Chinese seafarers in these international cruise lines. Judging from the trend of cruise industry development in China, a large number of cruise seafarers will be required in both international and domestic cruise companies operating and rising in China (Cui, 2013). Despite the temporary stagnation of the cruise industry due to COVID-19, on April 17, Arnold Donald, CEO of the cruise giant Carnival, believes that with the global new coronavirus epidemic alleviating, China may be one of the first regions to restart cruise cruises.

Under this background, this research will try to answer 3 questions, Firstly, how large the predicted demand of Chinese cruise seafarers will be in the near future; secondly, what the attitudes of Chinese cruise seafarers are towards their jobs, what their working conditions are, and what their levels of experience are; thirdly, what the problems and challenges in the labor market of Chinese cruise seafarers are.

## **2. The global and Chinese cruise industry and market developments**

### **2.1 The continuous rapid development of the global cruise industry**

After 4 decades of increasing revenues, cruise tourism has become one of the most active sections in the world tourism industry. The global cruise tourism industry has grown at an annual growth rate of more than 7 % since the 1980s and is still considered to be in the golden stage of steady growth (Zheng, 2018). In 2015, there were 421 cruise ships operating worldwide, including 151 river cruise ships and 22 new ships, with a total capacity of 482,000 beds serving the needs of 23 million cruise passengers. Cruise industry expenditures generated 117 billion dollars in total output worldwide, supporting 956,597 full-time employees who earned a gross income of 38 billion dollars in 2015. According to forecasts by the 3 global authoritative cruise organizations PSA (Passenger Shipping Association), CLIA (Cruise Lines International Association), and ECC (European Cruise Council), the global cruise market is expected to reach 30 million passengers in 2020, and 36 million in 2025.

North America is still the largest cruise market in the world, with a market share of 58.6 % in 2015, and the number of passengers in this market is expected to continue to rise in the years to come. However, the global market share of North American passengers has exhibited a downward trend due to increasing numbers in the rest of the world. Europe is the second largest cruise market in the world (Veronica et al., 2014). However, with the increase in disposable incomes and changing needs of professionals in the Asia Pacific region, the growth rate of the cruise industry in this region has been higher than the average growth rate of the world economy. Thus, one expects that the cruise industry will enter into an even more prosperous period. With the changes in tourist demands, and the saturation of the European and American markets, the Asia Pacific region has gradually become an important potential market as well as a cruise destination. The building of large cruise terminals in ports like Shenzhen and Xiamen, and the inclusion of *Gulang Yu* in the UNESCO list of world heritage sites, has provided the necessary infrastructure to support this

increasing demand. The general consensus has been that Asia will become one of the foci of development in the future global cruise market (Sun et al., 2014).

## 2.2 Development of cruise market in China

In recent years, China's position in the global cruise market has been rising rapidly because of the development of its market scale. Data from CLIA (2016) shows that, in 2015, the revenue of the global cruise market was 38.59 billion dollars, with a growth rate of 10.6 %. Compared to this, in China, the revenue was RMB 4.534 billion, and the growth rate was 35.2 %; 3 times as much as that of the global market (Qian, 2017). Because of its favorable geographical position, climatic conditions, and huge potential of the tourist market, China has become the focus of the Asian cruise market (Sun et al., 2014). "We see Asia in general, China in particular, as a strategic objective", Richard Fain, the chief executive officer of Royal Caribbean Cruises Ltd., said on May 28, 2012. According to statistics from the China Cruise & Yacht Industry Association (CCYIA), the total number of Chinese cruise passengers reached 2,020,000 in 2016. As a result, China has jumped up the ladder and has become the second largest cruise market in the world. Its cruise market is expected to maintain this development trend over the next 10 years. CCYIA predicts that, by 2030, China is expected to become the largest cruise market in the world, with more than ten million passengers (Qian, 2017).

In this booming period of the Chinese cruise market, major cruise companies, including Carnival cruise lines, Royal Caribbean International Company, Princess Cruises, Star cruises, and MSC (Mediterranean Shipping Company), have attempted to enter the Chinese market, and presently there are more than ten cruise ships operating in China. By purchasing and leasing international cruise ships, a number of Chinese domestic cruise companies have also begun to develop in the past few years, including Skysea Cruise line, Nanhai Cruises, Chinese Taishan Cruise, and Diamond Cruises. However, compared to foreign cruise companies, domestic companies tend to be smaller in scale, with fewer cruise ships, less tonnage, and fewer cruise routes and associated products and, hence, tend to focus on regional markets. However, due to the rapid development and upgrading of the Chinese market, more cruise brands also plan to enter China in the next few years, including more high-end ones. Some liners have expressed their clear intent in this regard, including Silversea, Cunard, Carnival, AIDA, and Celebrity Cruise (Shi et al., 2018). Others have entered into partnerships with Chinese companies, such as the China Merchants Industry Holdings and Sun Stone Ships Miami. In 2016, Genting HK, the operators of the cruise ship Superstar Virgo, entered into an alliance with China Merchant Group Shenzhen. In October 2018, the China Merchants Group entered into a strategic partnership with Haimen municipality to develop the luxury cruise market in the tropical region of Haimen, Guangdong.

In 2020, the above mentioned international cruise companies deployed 15 ships, with a combined capacity of more than 40,000 under-beds, in the China market (**Table 1**). Despite being affected by COVID-19, these cruise lines were forced to cancel in the first half of the year. Undoubtedly, there will be more cruise ships in the Chinese market in the coming few years. In order to better service the Chinese passengers that account for more than 95 % passengers on board, the demand of Chinese cruise seafarers is, hence, expected to be very strong. Therefore, this research will try to devise a method to predict how large the demand for Chinese cruise seafarers will be and will attempt to understand the current situation and challenges of the labor market catering to the Chinese cruise industry.

**Table 1** Cruise ships operating home port routes in China in 2020 (original plan).

Cruise lines	Cruise ship	Standard capacity
Costa Crociere	Costa Serena	3,000
	Costa neo Romantica	1,578
	Costa Venezia	4,232
	Costa Atlantica	2,112
Princess Cruises	Sapphire Princess	2,674
Royal Caribbean Cruises	Spectrum of the sea	4,200
	Quantum of the sea	4,180
	Voyager of the sea	3,840
MSC Cruises	MSC Splendida	3,274
	MSC Bellissima	4,500
Dream Cruises	World Dream	3,360
	Explorer Dream	1,870
Star Cruises	Superstar Gemini	1,529
Astro Ocean Cruise (Domestic)	Piano Land	2,014
Bohai Ferry (Domestic)	Chinese Taishan	1,000

### 3. Materials and methods

#### 3.1 Model for calculating the demand for Chinese cruise seafarers

##### 3.1.1 Demand model building

Cruise tourism is typically a service-intensive industry (Işık, 2015). The cruise seafarer demand within a certain regional market in a certain period is determined by the scale of the cruise tourism market. As a result, we mainly adopt a market-driven method to build the demand model. In the analysis and forecast of the demand for Chinese cruise seafarers, our research only considers the requirements of seafarers on cruise ships that operate in Chinese home ports, to the exclusion of Chinese seafarers dispatched to other cruise ships and to foreign countries by registered labor companies and agencies. The steps of model building and calculation are as follows (the significance and value of the main parameters in the model will be introduced in 3.1.2). Firstly, total cruise seafarer demand ( $D_t$ ) (is described by net cruise seafarer demand ( $D_n$ ) and the reserve rate of cruise seafarers ( $R$ ).

$$D_t = D_n \times R \quad (1)$$

Since  $D_t$  is determined by the number of cruise ships  $N_s$ , average cruise carrying capacity ( $C_a$ ), and ratio of staff to customer ( $R_{s/c}$ ), and  $N_s$  is determined by the total number of cruise passengers ( $P_t$ ), average cruise carrying capacity ( $C_a$ ) and average turnover of cruise ( $T_a$ ) is described by the number of days of cruise operation throughout the year ( $N_d$ ) and average cruising period ( $C_p$ ). Hence, the relationship of the above parameters can be described by the following equations:

$$D_n = N_s \times C_a \times R_{s/c} \quad (2)$$

$$N_s = \frac{P_t}{C_a \times T_a} \quad (3)$$

$$T_a = \frac{N_d}{C_p} \quad (4)$$

Substituting (2) - (4) into (5) yields the following equation:

$$D_t = \frac{P_t \times C_p \times R_{s/c} \times R}{N_d} \quad (5)$$

However, due to factors described in 3.12, there are differences between the composition of seafarers in international cruise companies and domestic cruise companies. Therefore, we represent these 2 types of the seafarers in demand separately as the total Chinese cruise seafarer demand in international cruise lines ( $D_{ti}$ ) and the total Chinese cruise seafarer demand in local cruise lines ( $D_{tl}$ ). Clearly, the demand for Chinese cruise seafarers is equal to the sum of these 2 parts, i.e.:

$$D_t = D_{ti} + D_{tl} \quad (6)$$

Therefore, formula (5) needs additional calculation steps and parameters. Because the number of cruise ships ( $N_s$ ) equal to the sum of number of international cruise ships ( $N_{is}$ ) and the number of domestic cruise ships ( $N_{ls}$ ), the number of these 2 types of cruise ships needs to be determined, and the proportion of Chinese seafarers on these ships should be considered. In view of this, the following parameters need to be considered and added: the proportion of international cruise ships ( $P_{is}$ ) and the proportion of local cruise ships ( $P_{ls}$ ), the proportion of Chinese seafarers in international cruise lines ( $P_{ci}$ ), the proportion of Chinese seafarer in local cruise lines ( $P_{cl}$ ). So, the calculation formula derivation process is as follows:

According to formula (3), the formulas for the number of international cruise ships ( $N_{is}$ ) and the number of local cruise ships ( $N_{ls}$ ) becomes (7) and (8):

$$N_{is} = \frac{P_t \times P_{is}}{C_a \times T_a} \quad (7)$$

$$N_{ls} = \frac{P_t \times P_{ls}}{C_a \times T_a} \quad (8)$$

Substituting formula (7) into formula (5), formula (9) for total Chinese seafarer demand in international cruise lines ( $D_{ti}$ ) is obtained as:

$$D_{ti} = \frac{P_t \times C_p \times R_{s/c} \times R}{N_d} \times P_{is} \times P_{ci} \quad (9)$$

Similarly, substituting (8) into formula (5), formula (10) for total Chinese seafarer demand in local cruise lines ( $D_{tl}$ ) is obtained as:

$$D_{tl} = \frac{P_t \times C_p \times R_{s/c} \times R}{N_d} \times P_{ls} \times P_{cl} \quad (10)$$

Substituting (9) and (10) into formula (6), and after simplifying, formula (11) for total cruise seafarer demand ( $D_t$ ) can be eventually obtained:

$$D_t = \frac{P_t \times C_p \times R_{s/c} \times R}{N_d} \times (P_{is} \times P_{ci} + P_{ls} \times P_{cl}) \quad (11)$$

### 3.1.2 The parameters for the model

The parameters of the calculation model are divided into 2 categories: dynamic parameters and equilibrium parameters. As China's cruise market is in the developmental stage, the scale of cruise tourists is increasing in keeping with an upgradation of demand. This will change with time. Accordingly, some parameters will need to be adjusted dynamically according to time, such as the number of passengers, the average cruise period, the ratio of staff to customers, the composition of different types of cruise ships, etc.. Meanwhile, to simplify the calculation, for some parameters, we have also taken a balanced control method, such as the cruise operation days, the average carrying capacity, and so on. To determine these parameters, we mainly take into account industry experience and the characteristics of the regional market (**Table 2**).

**Table 2** The main parameters and their description of the model.

Parameter	Description
Total cruise passengers ( $P_t$ )	The staff on cruise ship are to provide direct and indirect services for passengers. The number of the seafarers is in a certain proportion to that of the passengers.
The ratio of staff to customers ( $R_{s/c}$ )	The ratio of staff to customers is a very important indicator to measure the service quality and is directly related to the orientation of cruise ship (Robbins, 2016). The ratio is determined by the supply of cruise brands in the market.
The number of days of cruise operation throughout the year ( $N_d$ )	According to industry experience, except for an average 5 days of maintenance and short stops caused by other possible causes, generally, within a year, the normal cruise operation time is about 360 days (Shi et al., 2018).
Average cruising period ( $C_p$ )	The average cruising period is influenced by the regional geographical position (destinations and ports) and the level of market maturity and other factors (such as the holiday system).
Average cruise capacity ( $C_a$ )	Affected by scale economy, the cruise capacity is becoming bigger and bigger (Douglas, 2014). The capacity of most cruise ships in the Chinese market has been more than 3,000 (Shi et al., 2018).
The proportion of Chinese seafarers on ship ( $P_{ci}$ )	At present, foreign international cruise companies are the main suppliers in the Chinese cruise market, and Chinese seafarers on board are very few. But the situation will change with the development of the Chinese cruise industry and market.
Reserve rate of cruise seafarers ( $R$ )	Determined by the nature of the work of the seafarers and the holiday system, cruise companies must reserve more cruise seafarers to make them available.

## 3.2 Survey of Chinese cruise seafarers

### 3.2.1 Interview results

In order to understand the Chinese seafarer recruitment process, their level of training, their work conditions, and their experience on board, this study carried out a series of interviews. The targets of the interviews were Chinese labor agency managers, professors and researchers in related organizations, universities, and academies, and seafarers employed in the cruise industry. The interviews were centered on the following aspects:

- What are the positions in which Chinese seafarers are employed on cruise ships?
- What are the salaries of these different positions of Chinese seafarers?
- What are the recruitment sources and their proportion with respect to Chinese seafarers employed on cruise ships?
- What are the training courses that they attend, the patterns of work and attendance, and the duration of this training?
- What is the average age (at the time of entry) and gender of Chinese cruise seafarers?
- What are the recruitment requirements of cruise companies in China?
- What are the opinions and perspectives of stake holders on the current recruitment and training of, and labor market for, Chinese cruise crew (including challenges and solutions)?

### 3.2.2 Questionnaire

The contents of the questionnaire were divided into 2 parts (**Table 3**). The first part contained questions related to basic information about the respondents, including gender, age, position on board, salary, etc. The second part was more specific and related to questions about their work experience on cruise ships and attitudes towards their work.

**Table 3** The content of questionnaire.

Questions		
Part I Basic data	Gender ( ), age ( ), position ( ), salary (\$_per month), working period (year), previous work ( )	
Part II Questions and choices	a. Are you satisfied with your current job?	Very satisfied ( ) Satisfied ( ) Relatively satisfied ( ) Not satisfied ( )
	b. What factors influence your degree of satisfaction about your job?	Work time ( ) Salary ( ) Accommodation ( ) Position ( ) Career development opportunities ( ) Holidays ( ) Interpersonal relationships ( ) Working conditions ( ) Other reasons ( )
	c. Are you willing to continue working on cruise ships?	Yes, I am ( ) No, I am not ( ) Uncertain ( )

Notes: Part II consisted of choices. Only one option could be chosen to answer for questions a. and c., but one or more than one option could be chosen for question b. \$ is US dollars.



With the help of a Chinese labor agency, we sent the questionnaire to 151 Chinese seafarers working on cruise ships. These respondents were from Carnival, MSC, and Skysea (a Shanghai based Chinese company); most of them worked on board in the hotel and hospitality sectors. **Table 4** details the basic data of Chinese seafarers participating in the questionnaire.

**Table 4** The basic data of 151 samples in the questionnaire.

Features	Average value	Classification	Number
Gender	-	Male	73
		Female	77
Age	25.8 year-old	20 - 25 year-old	60
		26 - 30 year-old	69
		30+ year-old	22
Working period	3.49 years	1 - 3 years	59
		4 - 6 years	48
		7 - 9 years	24
		≥10 years	19
Salary	1,217 USD	<1,000USD	43
		1,000 - 1,500USD	56
		1,501 - 2,000USD	39
		>2,000	11
Job (sample number)	Asst. bar manager (3), Asst. Maître D' (10), waiter (21), bar server (16), bartender (3), cafe attendant (5), cashier (4), casino worker (9), chef (16), head chef (8), sous chef (4), cleaner (6), cruise ambassador (4), cruise staff (5), photographer (6), room service attendant (7), security guard (3), shop seller (7), sports staff (4), nurse (2), stage staff (4), youth staff (3)		

## 4. Results and finding

### 4.1 The demand for Chinese cruise seafarers and the gap with supply

According to the above model, we put the value of parameters into formula (11). However, in view of the uncertainty of COVID-19, the recent annual prediction results obtained in this study will be adjusted to the cruise industry recovery period (probably 2021). The total demand for cruise seafarers in 2021 and in 2030 is presented in **Table 5**.

**Table 5** The parameters and calculation results of the demand for Chinese cruise seafarers.

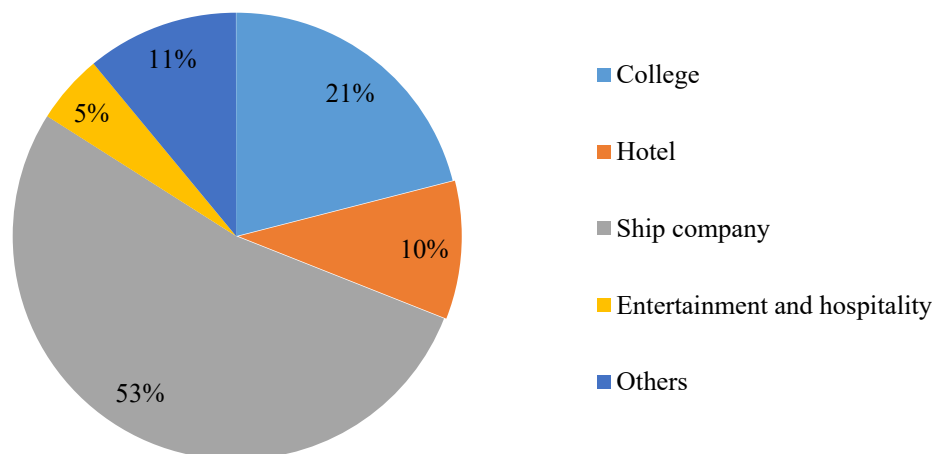
Parameter		Recovery period (probably 2021)	2030	Reference source
Dynamic parameter	$P_t$	$5\times10^6$	$10\times10^6$	Qian and Wang (2016)
	$C_p$	5	6	Statistics of CCYIA (2016)
	$R_{s/c}$	1:2.5	1:2	Ward, 2015
	$P_{is}$	90 %	80 %	Interviews
	$P_{ls}$	10 %	20 %	Interviews
Equilibrium parameter	$C_a$	3,000		Statistics of CCYIA (2016)
	$N_d$	360		Industry experience
	$P_{ci}$	30 %		Interviews
	$P_{cl}$	80 %		Chinese policy and regulations
	$R$	300 %		Gibson and Walters (2012)
Calculation result	$D_t$	$2.92\times10^4$	$10\times10^4$	-

Based on this table, the total demand for Chinese cruise seafarers in 2021 is expected to reach 29,200, and 100,000 in 2030. This demand will be both a great opportunity, as well as a challenge, for the Chinese seafarer labor market.

In China, there are more than 30 universities teaching major subjects related to the cruise industry. These are of 3 types: cruise management, cruise sales, and cruise services. Of these, it is the third type of service personnel which is in line with the requirements of cruise seafarers. It is estimated that, in 2021, these universities will be able to train about 60,000 to 70,000 cruise service personnel (Sun et al., 2014). At the same time, there also some other training schools and labor agencies cooperating with cruise companies to train and recruit Chinese seafarers. According to statistics gathered from universities and labor agencies, the total supply of these will not be more than 10,000 in 2021. There is, thus, a projected gap of 19,200 personnel (29,200 - 10,000) between the predicted demand and supply in 2021. If the capacities of training and education are not quickly improved, then the gap will be even more striking in future.

#### 4.2 The recruitment and training of Chinese cruise seafarers

The study found that current Chinese employees on cruise ships hold most of the shipboard jobs except for those of captain and chief engineer. The recruitment sources of cruise seafarers include (**Figure 1**): professional colleges and schools related to the cruise industry; hotels and tourism enterprises; domestic shipping companies; entertainment and service sectors, and others. Domestic shipping companies account for 53 % of the proportion, mainly focusing on the engineering and deck departments.



**Figure 1** Recruitment sources of Chinese cruise seafarers.

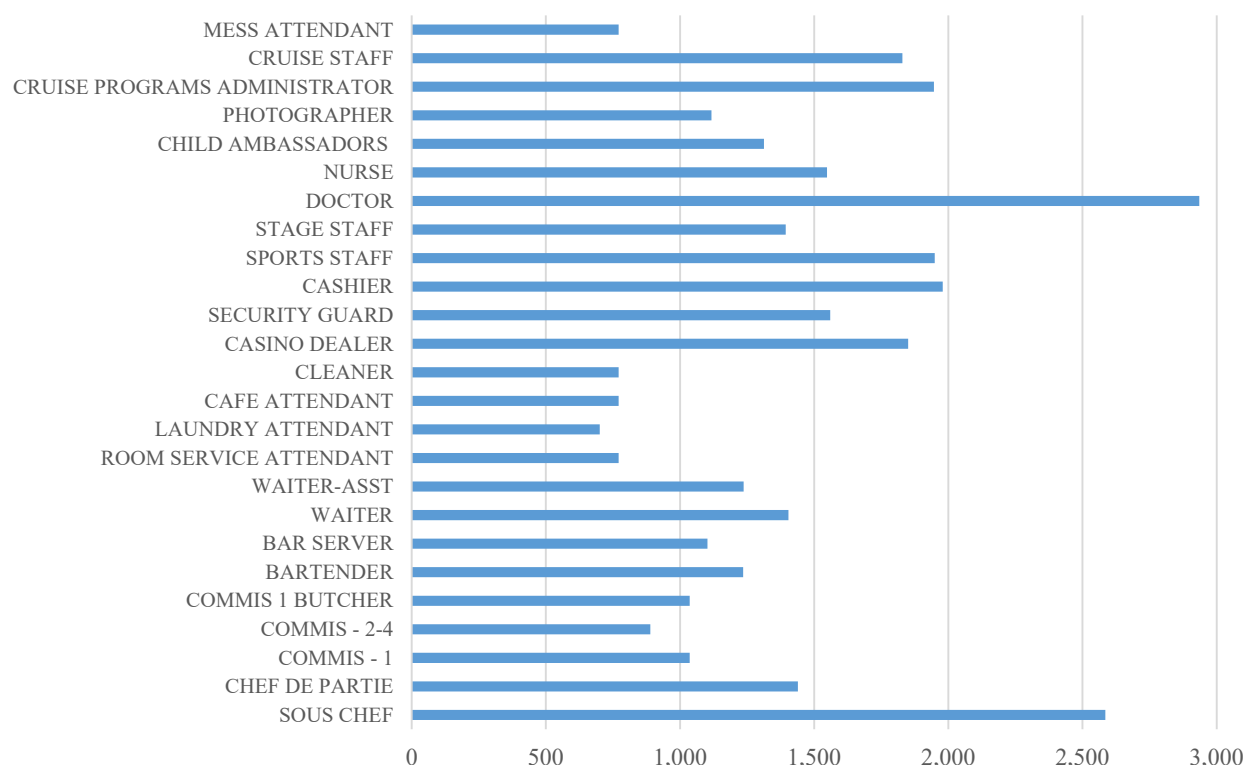
At present, there are more than 30 universities in China that have cruise or cruise-related majors, such as Shanghai Maritime University, Shanghai University of Engineering Science, Tianjin Maritime College, Qingdao Ocean Shipping Mariners College, and others. However, they have been in existence for just a few years in China and have been established on the basis of related majors, such as tourism management and hotel management. The teaching system and training mode are still in a state of exploration. Some schools have collaborated with related colleges in Europe, trying to perfect their teaching models as quickly as possible. The cooperation between Dalian Maritime University and the University of Plymouth in 2013 is one such example. In addition, a number of international cruise companies, such as Carnival and Royal Caribbean, have begun to pursue cooperation with Chinese colleges to train their cruise crew.

Cao, a manager of a crewing agency in Shanghai, remarked:

“The average age of the recruited Chinese Cruise crew is relatively young. Most of them have some related work experience. Crew training is arranged by the cruise company, and is provided free of cost to the seafarer, for about a week, specifically introducing the corporate culture and the notices on board for the new staff. The F&B departments will have additional training, such as how to set the table, how to make drinks, and so on. About the duty-free shops, employees are basically very experienced. The trainee of casino departments generally will receive related skills training on board.”

### 4.3 The posts and salaries of Chinese cruise seafarers

There are differences in the remuneration of different positions on the cruise. This is due to the position and nature of the work and is also affected by their work experience and performance (Yang, 2016). At present, major cruise companies pay more attention to recruiting Chinese seafarers that provide direct service to customers, especially staff in the hotel department. **Figure 2** presents information on the positions and salaries for new Chinese staff in cruise companies. A comparison between various companies shows that there is very little difference in the positions and salaries among companies. Experienced staff can often get higher levels of position and compensation.



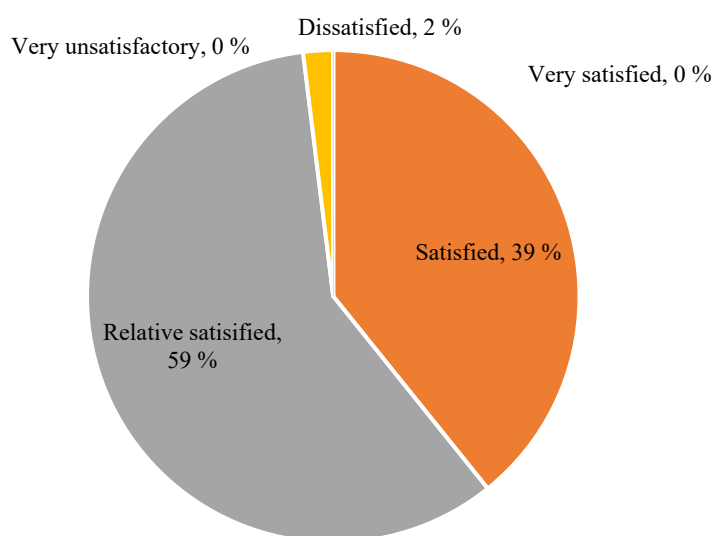
**Figure 2** The positions and the salaries for new Chinese staff in major cruise companies.

According to **Figure 2**, it can be seen that, for most of the posts, salaries range between \$1,000 - 2,000 per month. Generally, the salary of assistant posts is relatively low, ranging between \$700 and \$900 per month; doctors have a higher salary of nearly \$3,000 per month. Therefore, the salary level is closely related to the nature of the job, which is also consistent with the situation on shore. According to our interviews and survey, the salaries on cruises is much higher than that on land for the same job in China. Salary levels on board can be very tempting, especially for personnel from the central and western regions of China, which are underdeveloped areas compared

to the more developed parts of eastern China. Nevertheless, in recent years, this salary advantage has, to a certain degree, been influenced by the US dollar being down against the RMB.

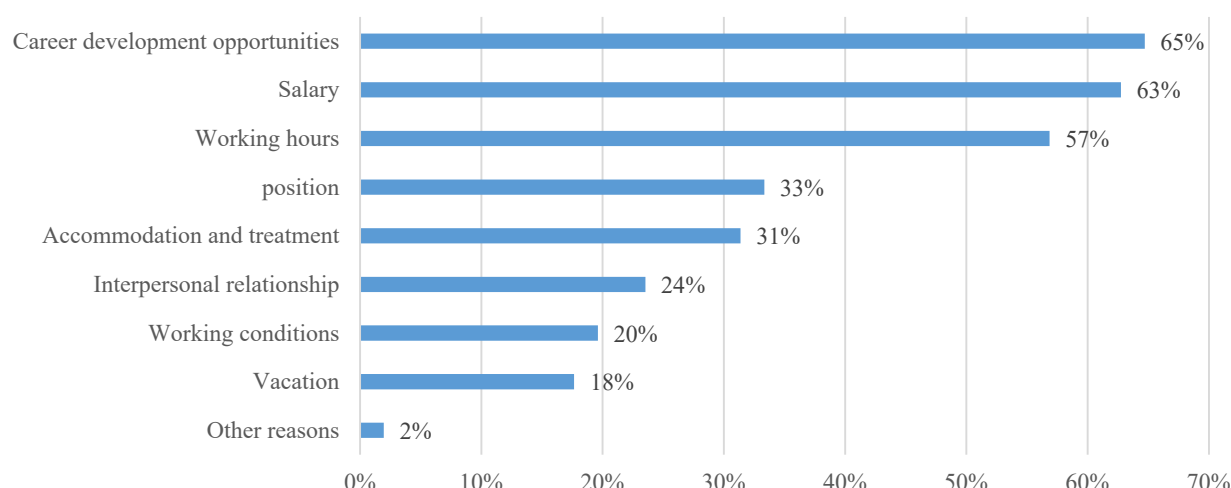
#### 4.4 Job satisfaction of Chinese seafarers

This study conducted a survey of job satisfaction on board using the questionnaire method. The question was, “Are you satisfied with your current job?” The answers were categorized at 5 levels, from high to low, namely “very satisfied”, “satisfied”, “relatively satisfied”, “not satisfied” and “very unsatisfactory”. The result (**Figure 3**) shows that the majority of those surveyed were “satisfied”, although no one chose “very satisfied”. The proportion of the choice “satisfied” and “relative satisfied” accounted for 39 and 59 %, respectively, while only 2 % of people chose “dissatisfied”.



**Figure 3** The proportion of job satisfaction.

Furthermore, in order to understand their attitude and work situation in greater depth, we designed a question about the factors of their job dissatisfaction. The question, “What factors caused your dissatisfaction with your job?” mainly concentrated on 8 aspects, according to the rank of their answers (**Figure 4**), from high to low, mainly including occupational development opportunities, salary, work hours, accommodation, position, interpersonal relationships, working conditions, and holidays. We found that the Chinese cruise seafarers interviewed were more concerned about the development of their career path. Obviously, it is very important to help them to understand and plan the path of their career development, and to give them more development opportunities in order to improve their satisfaction and the quality of service on board.

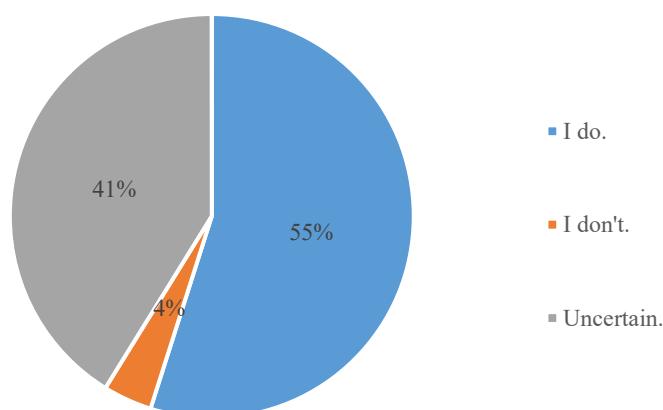


**Figure 4** The proportion of factors of job dissatisfaction.

The second contributing factor was salary, which was selected by 63 % of the informants. So, salary was also a very important factor. Since the majority of informants were recruited 2 - 3 years ago, they mainly worked as assistants at positions where the salary was relatively lower. Work time (duration of working hours) was the third factor that caused dissatisfaction among Chinese cruise seafarers. In order to provide better service and experience to passengers, the opening times of F&B on board is often more than 10 - 12 h per day, and sometimes even 24 h (Robbins, 2016). For example, Royal Caribbean International introduced a slightly different concept called “My Time Dining” in 2009, wherein passengers can opt to dine at any time in the main dining room (Papathanassis et al., 2011). Therefore, long working hours and heavy workloads pose severe challenges for cruise seafarers.

#### 4.5 Attitude about the job

Although the survey showed some dissatisfaction, the attitudes of most cruise seafarers to their own job future were relatively optimistic. When they were asked if they wanted to continue working on board cruise ships, more than half of the respondents responded with “I do” (**Figure 5**). A seafarer interviewed felt “working on board is challenging, exciting, and fresh, and is a very good opportunity to exercise and improve myself”. Especially, for those who have just graduated from college, working on board can help them accumulate experience that will prove beneficial to their future work prospects.



**Figure 5** The response for ‘willingness to continue working on the cruise ships’.

Of course, there are also a lot Chinese seafarers (41 %) who are not very positive whether they are willing to engage in the work on cruises in the future; they chose “uncertain”, and 2 even bluntly answered “I don’t” for the question (**Figure 5**). This may depend on different individual circumstances, such as the factors of dissatisfaction that we previously discussed. For example, older personnel may consider their work hours a problem with respect to their marriage. Like their counterparts on cargo ships, and unlike their counterparts working in the shore-based hospitality industry, cruise seafarers are usually away from home for weeks and even months at a stretch. For women, the issue of raising their children must also be taken into account. Thus, when there are better or similar job opportunities ashore, the migration of cruise seafarers to such shore-based jobs is a frequent phenomenon. It is possible that such a phenomenon might also be found among other seafarers; however, the increased number of conventional jobs ashore for cruise seafarers in the hospitality industry exacerbates this “reserve rate” of cruise seafarers.

## 5. Conclusions and further discussion

### 5.1 The challenges of Chinese cruise seafarer training and recruitment

At present, China's cruise seafarer training is mostly provided by tourism colleges and training centers. College training can provide students with a theoretical background and comprehensive knowledge of all aspects of the cruise industry but has the drawback of inadequate practical and employment based training (Cui, 2013). Training centers, on the other hand, tend to be established by cruise companies and related schools. Cruise companies often participate directly in training, especially where the cruise brand culture and practical operational skills are taught. This is a faster and more efficient way of training cruise seafarers. The cooperative initiative between Zhejiang Tourism Technical College and Royal Caribbean International, and some colleges in Guangdong and Star Cruise Company, are 2 such examples.

English is the language of international cruise ships. On the one hand, seafarers need to communicate with colleagues from different countries and nationalities. For example, the 1,200 seafarers on the “Mariner of the Seas” of Royal Caribbean are from 43 countries and regions. They also need to serve passengers from different countries and regions. Therefore, one of the keys of training is to improve communicative competence. However, because English is not the mother tongue of Chinese people, it brings great challenge to Chinese cruise seafarers. On the other hand, if Chinese people themselves are a majority of the passengers, this limitation may not be as relevant. Hence, further research needs to be done to ascertain the specific requirements of the customers of the Chinese cruise market, which may or may not be similar to their counterparts in other countries.

There are also other factors that affect the effectiveness of cruise seafarer training. In the current era, due to the one-child policy, most of the students attending the above mentioned training institutions are the only children in their family. Some of them might not be that keen on the hard life that one can expect on cruise ships. Much of the perception of cruise ships among new entrants is only from a theoretical context, without experience and adequate psychological preparation. Hence, their work for long durations away from the land and home can negatively influence their happiness index. This also affects the recruitment of cruise seafarers. At the same time, these factors also affect the parameter R (reserve rate of cruise seafarers) in the previous model and the satisfaction of cruise seafarers with their work.

Universities play a very important role in the training of seafarers in the cruise industry, many of which are based on the original professional courses of hotel service and management, such as courses in dealing with room service, restaurants, and bar service, with some courses of seafarer qualifications and cruise knowledge added. This kind of training can meet the needs of the hotel department, with it having the largest demand for employees on cruise ships. In addition, there are some departments of entertainment, medical treatment, casinos, tourism, etc., on cruise ships that need professionals in these fields, where employees go through short-term pre-job training courses, such as seafarer qualifications and cruise knowledge. As for seafarers in ship driving and

marine engineering, their training is similar to traditional seafarer training, as long as the corresponding cognitive courses in cruise ships are added.

The main purpose of China's cruise labor agencies is to facilitate communication between the cruise company and cruise seafarers and to coordinate training for the cruise company. At present, cruise labor agencies are mainly concentrated in Xiamen, Qingdao, Nantong, Tianjin and other regions in China. They engage in recruiting seafarers and in handling the relevant formalities related to their qualifications and entry procedures on behalf of the practitioners.

## **5.2 Rules and regulations concerning the Chinese cruise seafarer labor market: key issues and problems**

The eastward trend of the entire global cruise market is obvious. Most cruise companies are gradually entering the Asian market (Post, 2019). The potential of the market in China in this regard is gradually being released, and international cruise companies are deploying more and more “super cruise ships” in China, as was discussed at the beginning of this paper. However, at present, the rules and regulations of China's cruise labor market are still evolving and need relevant norms and systems to protect the normal order of the market. As Cao (a manager of a maritime labor agency) told us:

“The wages of the same positions are basically the same among the companies. Because of the high turnover rate of cruise seafarers, they are free to choose different cruise companies for higher salaries after they have completed the contract and became more experienced. The industry is a small world, so they often communicate and discuss (amongst themselves) which companies provide better treatment for staff and operate more attractive cruising routes and destinations, in order to choose their favorite ships and companies. The market demand creates a hot enrolment of seafarers and also results in severe competition. Except for a few formal agencies, many small companies charge an agency fee from the applicants. There are even a number of fraudulent companies using this market opportunity to get a lot of money from the applicants. This has a bad effect on the market.”

## **5.3 Lack of senior cruise personnel and large growth space of cruise seafarers in China**

China has a large fleet of cargo ships, and this has created a large number of experienced shipping and management professionals engaged in the cargo shipping industry (Post, 2019). However, the priorities of the cruise industry are distinctly different. Cruise shipping is a special form of maritime shipping, in which requirements and standards of operations and customer service are far higher than that of the general cargo ship (Lu et al., 2017).

Because cruise tourism is a relatively high-end consumption product, more professional and more high-end services should be provided on board. Therefore, cruise seafarers need to master relevant and additional professional skills to meet these stringent requirements. At the same time, because of the limited crew complement on cruise ships, staff who are capable of working in more than one position are more popular with cruise companies (Tai, 2016). Therefore, work on cruise ships can be very demanding, and working on board them can enhance the ability of individuals. Although work on board these ships can be challenging, and working conditions far from optimum, many Chinese cruise seafarers are willing to work on cruise ships and expect to be get recognition and future development opportunities (Li et al., 2014).

As per Zhen, the director of CCYLA (China Cruise & Yacht Industry Association), “...at present, a lack of talent, especially senior management personnel, is the most prominent problem for cruise industry development”. It is for this reason that the “*MV New Century*” of Chinese Skysea Cruise is managed by the American Royal Caribbean Cruise Company. It is, thus, necessary for Chinese cruise seafarers to accumulate knowledge and practical experience on an urgent basis. This

is not only significant for the seafarers themselves but is also the need of the hour for the development of the Chinese cruise industry.

#### 5.4 Challenges facing cruise seafarers after COVID-19

The UBS report, issued March 31, said the bookings for 2021 cruise trips included people using their credit for canceled sailings, but added that volume “still shows a surprising resilience in desire to book a cruise” (Eben, 2020). Travel agents and experts say the booking rates for cruise trips in 2021 represent more than just passengers rebooking their canceled trips. In an analysis of the cruise industry, Swiss banking giant UBS wrote that cruise booking volume for 2021 was up 9 % in the last 30 days compared with the same time last year. At present, the impact of the epidemic on the cruise industry on the cruise seafarer market is not very large, because most people are still confident about the future of the cruise industry.

Cruise companies will make a lot of improvements to the service process in order to improve their reputation, which may change the look of cruise ships as we are now familiar with them. After the outbreak, the cruise industry will usher in major changes, such as stricter medical measures, disinfection robots that meet hospital health standards, and the serving of individual dishes. Regular temperature checks, upgraded medical centers on board, improved air filtration systems, and mandatory health certificate checks for older travelers are all likely to become standard for future cruises. COVID-19 has accelerated the tourism industry in the direction of higher health standards. Automation and digital cleaning systems will be the trends in the future. Technology to improve the safety of tourism will be a priority for companies to regain confidence from consumers after the outbreak (Hugo, 2020).

In the face of the above changes in the cruise industry, cruise seafarers will also have corresponding service standards and the ability to apply these new technologies. This is because the improvement of epidemic prevention standards will have new requirements for the workflow and regulations of seafarers in every department of the cruise ship. Of course, new training programs and courses may be needed.

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