

The World Cruise Industry: A Profile of the Global Labour Market

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ACKNOWLEDGEMENTS

This report is rather uneven in terms of the scale of people involvement and the period from data collection to this report. The idea of a cruise labour market survey through crew lists was originated from Professor Tony Lane, former director of SIRC who had conducted a world seafarer survey based upon collection and analysis of crew lists from UK seaports (Lane 1996). The scope of information collection was then enlarged through an on-going project of global labour market survey in SIRC and Bernardo Obando-Rojas was in charge of collecting crew lists (including cargo and cruise ships) from main seaports world-wide from 1998. Many port authorities, seamen missions and local collaborators in European ports kindly offered their helps in collection and delivery of cruise lists. With encouragement and help from Bernardo Obando-Rojas and Dr. Minghua Zhao, the data entrance started from October 2000. During the following half year period, Phil Belcher, Drs. Tony Alderton and Nik Winchester also offered their time and expertise to overcome many technical issues in relation to job distinction, database structure and analysis techniques. It is no less important that Ms. Maria Goldoni and Ms. Louise Deeley provided full support for recruiting and managing data entry which lasted for nearly half a year.

Special thanks should be given to Dr. Helen Sampson, current Director of SIRC, who has not only encouraged the publishing of this report but also spent a lot time reading through the manuscript. So also to Professor Tony Lane, Professor Mick Bloor, Dr. Nik Winchester and Dr. Michelle Thomas who offered their support and comments at various stage of writing this report. However, only the author is responsible for any mistakes or misinterpretation.

Part of this information has been used by some publications in other places including: *Crewing International Merchant Fleets* (by Lane *et al*, Lloyd's Register-Fairplay 2002) and "Accession to global labour market: principles and applications of SIRC database in the cruise sector" (Wu, *WMU Journal of Maritime Affair* 2003). This report, however, presents an improvement in both analysis methods and the accuracy of results.

EXECUTIVE SUMMARY

The emergence of a global labour market in the world cruise sector raises questions about the availability of reliable, accurate and timely information about seafarers world-wide. Alongside a global seafarer database established for the cargo sector, the Seafarers International Research Centre (SIRC) at Cardiff University has also created a global seafarer database for the cruise sector. This report aims to: **(1)** introduce the principles of the SIRC cruise labour survey; **(2)** establish a coding system for job recognition, classification and profile analysis; **(3)** reveal the scale and extent of global participation in this sector; **(4)** highlight the contribution of women seafarers; **(5)** explore the methodological implications for the next cohort of the SIRC world cruise labour market survey.

The SIRC cruise database is the product of the on-going SIRC global labour market survey project, which is based upon collecting, cleaning and coding crew lists from major seaports world-wide. As an alternative method to national census or company questionnaire surveys, crew list sampling captures three types of information: voyage details (port visited and destination port), ship details (name etc.) and crew details (nationality, rank and date of birth). Including vessel details allows for linkages to be established with cruise vessel ownership and management company details all of which are available in world vessel databases (e.g. Lloyd's Register-Fairplay world ship CD-ROM). The first cohort of the SIRC world cruise survey was limited to European waters and resulted in the collection of 96 valid crew lists in the period from 1996 to 2000. This report however, focuses on the year 2000 itself, during which time the largest number of crew lists were collected containing 12,000 seafarer cases aboard 37 vessels and accounting for about 15 percent of the world fleet in that year. The profile of the sampled ships in the 2000 dataset is quite well matched with the profile of the world cruise fleet in terms of ship size, age, and flag register. It is therefore reasonable to assume that the results from data analysis offer valuable insights into world cruise employment

although a certain degree of caution may be needed regarding the accuracy of this data when generalising about cruise seafarers world-wide.

One difficulty of compiling this data is that there is a lack of standardisation across the world cruise employment sector, resulting in a great variety of job names and function definitions being used by different cruise operators. In order to cope with this difficulty, this report proposes a coding system based upon three criteria as follows:

- A.) Occupation and skill category, by which the enormous number of job titles can be reduced to a few standardised job areas;
- B.) Functional division, by which hundreds of crew members are relocated into several sections and departments for analysis and comparison purposes;
- C.) Responsibility in crew management, by which all crew members can be distinguished into four hierarchies: senior, junior and petty officers, and ratings regardless of their skills or locations.

As a result, over a thousand job titles in the raw data are reduced to a total of 28 in the dataset. 85 percent of the sample is located in the hotel section, leaving the remaining 15 percent in the marine section. Within the hotel section, nearly 30 percent of people work in the bar and food department and the rest work in guest services (e.g. medicine, security, maintenance, cruise services, in total 25%), galley (21%) and cabin (18%), leaving 6% in the category of “other” (e.g. casino, shop, photo, beauty). A pyramid structure characterises cruise employment with ratings located at the bottom of the pyramid (59%), followed by petty officers (26%) and junior officers (12%), culminating with senior officers (3%) on the top. The distribution of ranks is uneven: the marine section has more senior and junior officers (36%) than the hotel section (11%); within the hotel section, all senior officers are located in guest services while over three quarters of cabin, bar/food and galley staff are ratings.

The average age of cruise seafarers in the 2000 dataset was 33.8 years old although marine staff are nearly 5 years older than this on average. The mean age of senior officers was 44 years old for both marine and hotel sections. Below senior level, marine staff were older than their hotel counterparts by an average of 3 years in the case of junior officers and 8 years in terms of petty officers. A cross-sectional analysis of the age profile indicates that there is a normal distribution at senior officer level, but that amongst the rest of the ranks, cruise seafarers are skewed to younger age groups (i.e. under 30), and there is no significant difference between the marine and hotel sections. Furthermore, amongst hotel staff, junior and petty officers are similar in mean age. The exception to this is found amongst junior officers in the guest services and cabin departments who are an average of 3 years younger than their colleagues, and whose ages more closely correspond with those of hotel ratings.

Within this dataset females constitute 19 percent of (cruise) seafarers, 81 percent being male. A third of females work in guest services, followed by the cabin (23%), bar and food (20%) and “other” (17%) departments. By contrast, few females (7%) are found in either marine or galley departments. Amongst the female ‘favoured’ departments, the share of females in the total staff varies from 56 percent in the “other” category (mainly concessionaire) and 30 percent in guest services and cabin, to 15 percent in the bar/food department. The survey suggests that over a half of all female cruise seafarers are engaged in middle ranking jobs (i.e. junior or petty officers). This places them 16 percentage points above their male counterparts. In addition, the average age of females is just 30 years old, 5 years younger than their male colleagues in all ranks. However, the data also indicates that females are under represented at senior level in both absolute (number) and relative (percent) terms. Only 13% of senior officers, for instance, are female.

99 different nationalities can be found within the SIRC cruise seafarer dataset. However, 10 nationalities account for two thirds of the sample. Of these the Philippines provides 29% of the

total and the next largest suppliers, Italy and the UK, each supply 6%. However a rough regional balance can be identified whereby 40 percent of seafarers are supplied by the Asia-Pacific region (excluding Japan, South Korea, Hong Kong and Taiwan), 30 percent by advanced economies, and the rest by East Europe, Latin America and others. Regional differentiation is apparent in the consideration of the division of labour: over a half of the advanced economies' seafarers are located in the guest services and other departments which is in contrast to those from the developing world (mainly Asia and Latin America) who are more likely to work in the galley, bar and food departments. Additionally, regional inequalities are obvious: seafarers from advanced economies occupy three quarters of senior and over half of all middle ranks. Such Regional differences remain even after gender differences are accounted for.

1. Introduction

The latter part of the 20th Century was characterised by rapid growth in the contemporary cruise industry. According to Institute of Shipping Economics and Logistics (ISL) statistics, the total number of world cruise ships over 1000 GT increased by 65 percent in the year 2000 compared with the year 1985, whilst in gross tonnage (GT) terms there was a growth of approximately 350% in the same period (ISL 2001). This growth was associated with an expansion in the size of the average cruise vessel taking it from 15 thousand GT in 1985 to 32 thousand GT in 2000. Such growth is likely to continue as more new vessels join the world fleet (Wild and Dearing 2000, Klein 2003).

The rapid growth of the world cruise industry is closely related to the establishment and development of a global labour market for seafarers. It is common strategy for cruise companies to seek and recruit seafarers from Asia, Latin America, and East European countries, just like their counterparts in the cargo sector (Klein 2001, Lane *et al* 2002; Wu, 2003). This offers companies cost-cutting opportunities that they are eager to take advantage of.

Compared with the cargo sector however, the labour market is more complex in the cruise sector due to the large size of cruise vessels and their complex division of labour. Reliable, accurate and timely information on the cruise labour market is important for ship owners and managers in order to enable them to evaluate vessel operations, crew size and staffing costs. However, while a regular labour survey is available for the cargo sector (e.g. BIMCO/ISF report), no such work has been done for the cruise sector. As a result we have little knowledge about the world cruise labour market and the extent to which the world cruise sector depends upon a global labour market.

Similarly we do not know what role major suppliers play in this sector or what recruitment patterns have been adopted by the industry?

In an attempt to address these and similar questions, a limited cruise labour market survey has been conducted by the Seafarers International Research Centre (SIRC) at Cardiff, UK. As a part of an on-going global seafaring labour market project, the cruise sector survey follows a similar methodology to that conducted for the cargo sector in terms of data collection and analysis. As the first trial in the world, the SIRC world cruise survey, in phase one, was limited to European waters, resulting in the collection of 96 valid crew lists in the period 1996 to 2000. This report is restricted to the year 2000, which represents the biggest portion of the SIRC cruise database.

This report aims to achieve the following objectives:

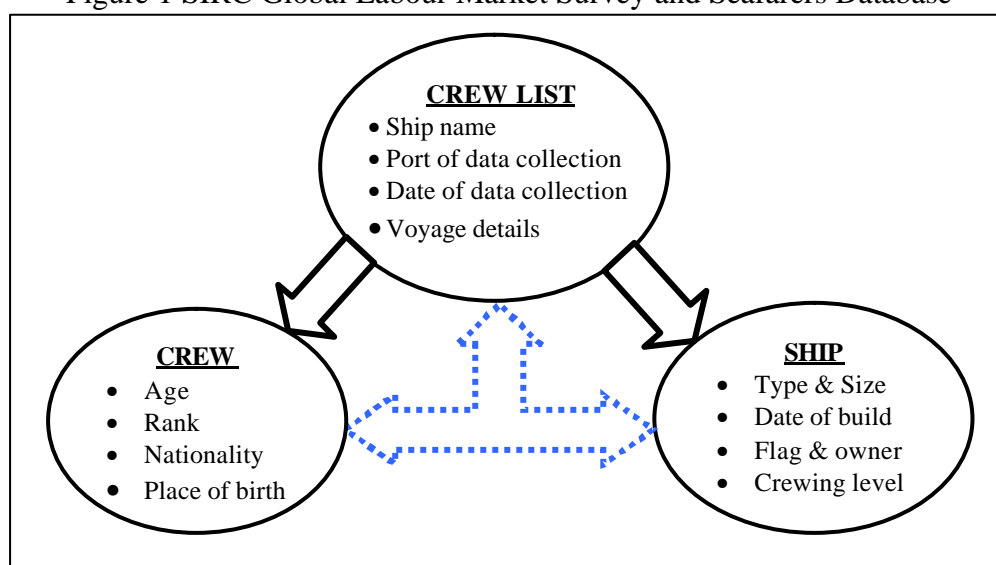
- To introduce the principles of the SIRC cruise labour market survey;
- To establish a coding system for job recognition, classification and profile analysis;
- To reveal the scale and extent of global participation in this sector;
- To highlight the contribution of women seafarers;
- To explore the methodological implications for future cruise sector surveys.

2. The SIRC Cruise Database – Method and Sample

The SIRC cruise database has been developed as part of the on-going SIRC global labour market survey project. It is based upon collecting, verifying, coding and analysing crew lists. Crew lists are legal documents containing information on both vessels and crew members for the purpose of reporting to port authorities or immigration control officers. The information available from a crew list includes: ship name, call time, voyage details, crewing level and a range of information about individual crew members including name, rank, nationality, date and place of birth. As a result, crew lists provide a reliable and efficient means to access up-to-date information on active seafarers in the international fleet.

The survey of the cruise sector labour force began with the collection of crew lists from major seaports in Europe. The information on ship voyages and crew members was entered and supplemented with additional information on ship registration, ship type, size, flag, date of build, nationalities of ship manager and registered owner.¹

Figure 1 SIRC Global Labour Market Survey and Seafarers Database



¹ This data is available from world ship register databases (e.g. Lloyd's Register-Fairplay or Clarksons World Fleet Register).

Figure 1 outlines the framework of the SIRC global seafarer market survey. As an alternative method to those utilising national census data or surveys of international shipping companies, the SIRC survey utilises crew lists to extrapolate world labour market data. Active seafarers constitute a mobile population intrinsically linked with flows of ships, commodities (for the cargo sector) and passengers/services (for the cruise sector) (Wu 2003). In the absence of a sample frame for the world seafaring population, world seaport and fleet statistics provide an alternative means to estimate sample bias and errors in the SIRC database. For instance, sample bias in the cruise dataset can be measured by contrasting all seaports, flag states, or cruise companies recorded in the SIRC cruise dataset with the profile of the world cruise sector as recorded in Lloyd's Register-Fairplay world ship database.

Constrained by limited resource and issues of port access, the first cohort of the SIRC cruise labour market survey was limited to major EU ports including: Barcelona, Southampton and Amsterdam, during the period 1999 to 2000. Prior to data entry, crew lists were 'verified' via the application of the following rules. Firstly, only cruise ships qualified for the survey, which ruled out ferry or other passenger ships. Secondly, in each year a ship was allowed to appear only once in the cruise dataset. Finally, where more than one crew list had been collected from a specific ship within the same year, priority was given to the list collected on a date nearest to the middle of the year (e.g. 1st July, the peak time of cruise business).

Of a total of 96 valid crew lists from 1996 to 2000, this report presents data from the year 2000, the biggest dataset within the SIRC cruise database which contains 12000 seafarers. Although crew lists were collected at EU ports, all 37 sampled vessels within the dataset operated on the world's major cruise routes including: the Caribbean, Mediterranean and Western Europe. These vessels were managed by 26 different companies based in the USA, UK and other EU countries. The ships in the sample were registered with a total of 12 different flag states.

The representativeness of the SIRC sample can be examined by considering: a) vessel characteristics, i.e. the number of vessels, type, size and age; b) the profile of ship management, i.e. ship owner and manager, flag register, country of economic benefit. To assess the former, Table 1 contrasts the sample vessels with the world total in 2000. It shows that the SIRC sample represents more than 15 percent of the world fleet in terms of vessel numbers and 13 percent in total GT (see Table 1). Within the SIRC sample, on average, vessels were slightly smaller (in terms of GT) and older than the average for the world fleet. However, the difference is not great and is unlikely to be significant.

Table 1 Sample Ships in SIRC Database and Profile Comparison with World Fleets

Data	N	GT total ('000)	GT average	Age average
SIRC	37	1,040	28,099	20.2
World	243	7,772	32,000	18.8
SIRC/World (%)	15.2	13.4	87.8	107.5

Source: World cruise data from ISL 2000.

In relation to the profile of cruise management, the representativeness of the SIRC sample is illustrated by Table 2 which shows that the sample ships match the world fleet fairly closely in general, but may be closer for one flag than another (comparing the distribution of Panama and UK vessels in Table 2 for instance) . This seems to indicate that despite the limitations of resource and access constraining the data collection, the information presented in this report can be considered to be reasonably representative of the world cruise fleet. It is thus reasonable to assume that the results from the analysis of the SIRC dataset offer valuable insights into the world cruise employment situation although some caution in generalising from the figures is advisable.

Table 2 Top 5 Flag Register in SIRC Dataset and World Fleet

Rank	SIRC				World			
	Flag	% of total in sample	Average GT (000)	Average Age	Flag	% of total in world fleet	Average GT (000)	Average Age
1	Bahamas	35.1%	21	20.0	Bahamas	28.0%	34	17.6
2	Liberia	24.3%	50	15.6	Liberia	16.9%	50	10.6
3	Panama	8.1%	20	39.3	Panama	14.4%	26	26.9
4	UK	8.1%	55	13.0	UK	4.9%	56	14.8
5	NIS	5.4%	11	21.0	NIS	4.9%	43	14.5
--	--	--	--	--	--	--	--	--
	Total	37 (Ships)	28	20.2	Total	243 (Ships)	32	18.8

Notes: World cruise data from ISL 2000. GT and age of ships as average.

This section of the report has briefly introduced the principles of the SIRC cruise database and examined its overall representativeness. As an alternative to a national census survey or company questionnaire survey, the SIRC labour survey collects, verifies and compiles crew lists from major seaports world-wide, then conjoins them with other information already in the public domain such as world transport/cruise/fleet statistics to extrapolate from these data sources a picture of the world labour market. The accuracy of the SIRC sample is dependent upon both the geographic location of the sample ports and the profile of sample ships. Although the first cohort of the SIRC cruise labour survey was limited to European ports, the profile of sample ships is quite well matched with the world cruise fleet (in 2000) in terms of both the physical characteristics of ships and the profile of ship management. Bearing in mind sample biases however, a certain amount of caution is advisable when generalising from the SIRC dataset and reaching major conclusions about the profile of the world's cruise sector seafarers.

3. Distinguishing Cruise Jobs: The coding system applied in the SIRC dataset

A major barrier to any analysis of the cruise industry labour force is that there are no standard job definitions or classification systems utilised across the sector. This constrains the analysis and any comparison of crew information across flags or companies. In order to overcome this problem a coding system has been established by SIRC to assist with the analysis of the dataset.

The coding system is based upon three criteria as follows.

- A) *Occupation or skill level.* Marine and hotel staff are distinguished from each other using an understanding of their different career routes and qualification requirements.

- B) *Functional differentiation.* Functionally similar groups can be identified within the workforce. For example bar, food, and beverage sections can be treated as similar because they share working procedures, standards and skills. Also guest services - which technically speaking crosses the boundaries of cabin, food processing (galley) or delivery (Bar, Food & Beverage) departments - can be defined as an independent department which provides support, co-ordination or inter-departmental services for customers (e.g. security, medicine, maintenance, entertainment, host/ess; chaplain, librarian, excursion, etc). A category of “other” is used to cover those concessionaires (including casino, shop, photo, hairdresser) which rent a place onboard for special services.

- C) *Responsibility and crew management.* Four categories or hierarchies are used for this report including: *senior officers* who take charge of, and manage, staff to achieve the aims of the cruise operation; *junior officers* who are responsible for achieving aims defined by senior officers through detailed planning, communication or management practices; *petty officers* who have a role in the supervision of a work group or who can work onboard ship with minimum

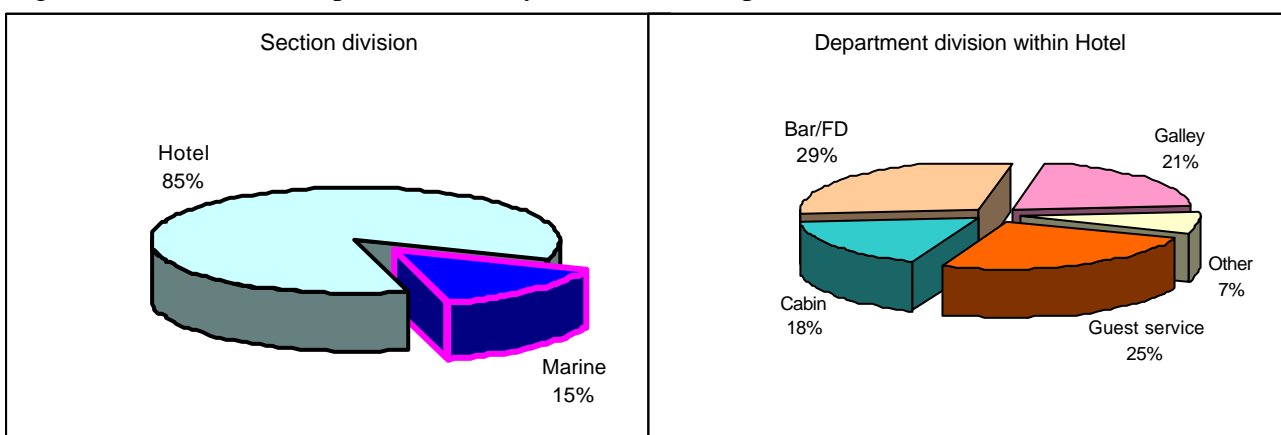
supervision; *ratings* are all other crew members (although some may have more skills than others).

Applying these criteria to the SIRC dataset enables us to conflate all job variations (1500+) found in the raw data to a more manageable and meaningful 28 job categories for the purpose of analysis.

Cruise staff can be divided into those who work in the marine and those who work in the hotel sections of the ship. Within each section, several departments can be identified. For the purpose of this report, we do not distinguish between deck and engine staff within the marine section and we focus on the much larger and more differentiated hotel side. Accordingly, in this report the hotel section is divided into five “departments”: *guest services, cabin, bar and food, galley and other.*

Figure 2 illustrates the distribution of the sample of seafarers by section: 85 percent of cruise staff work in the hotel section and 15 percent on the marine side. Within the hotel section, the largest department is bar and food which employs nearly 30 percent of the hotel staff, followed by guest services (25%), galley (21%) and cabin (18%). The other (concessionaire) department represents about 7 percent of the total personnel in the hotel section.

Figure 2 Division of Sample Seafarers by Section and Department



With reference to management and supervisory responsibilities, a “four-tier” occupational hierarchy aboard cruise ships can be identified as follows:

- *Senior officers*: captain, staff captain, chief engineer, purser, cruise director. Doctors onboard are also put into this category in recognition of their special responsibility and social status.
- *Junior officers*. Officers at or below 2nd officer and 3rd engineer as well as radio, electrical and trainee officers (cadets). Managers on the hotel side who are in charge of a department.
- *Petty officers*. On the marine side these include the bosun and fitter. On the hotel side, chief waiter/ess, chief cook, as well as some key positions such as store keeper, tailor, entertainment and concessionaire staff are placed in this category.
- *Ratings* are all crew members outside these categories although some of them may have more skills (e.g. baker or cooks) than others (e.g. deck boy, cleaner or various trainees).

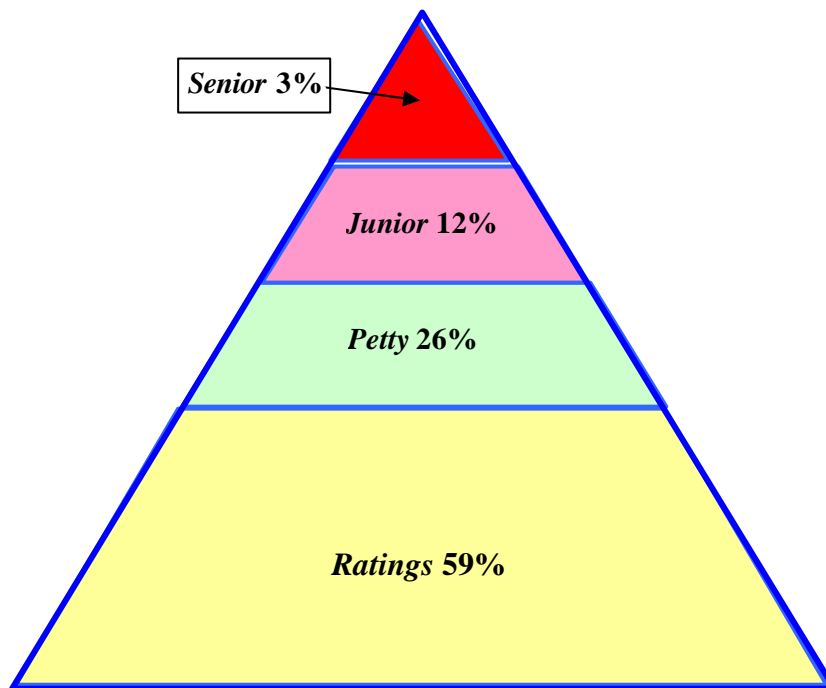
Table 3 provides a “road-map” illustrating the job coding system implemented in this analysis and demonstrating the intersection between departmental and hierarchical divisions. Here we see that the occupational division of labour aboard cruise vessels must be understood in terms of both a horizontal and vertical differentiation.

Table 3 Road-Map for Job Coding System

RANK	MARINE	GUEST	CABIN	BAR/FD	GALLEY	OTHER
Senior	Captain, Ch engineer 1 st mate, 2 nd engineer	Staff captain purser, doctor, cruise director	--	--	--	--
Junior	2 nd officer/3 rd engineer, cadet	Security officer cruise assistants nurses	Manager Clerk officer	Manager	Chef	--
Petty	Bosun, fitter, Quarter master	Maintenance Ch laundry Entertainment	Manager assists Linen store, tailor, Ch steward	Manager assist Ch waiter/ess	Ch cook	All staff
Rating	Ratings in deck and engine	Fireman steward, cleaner utility	Steward, Cleaner Utility	Waiter/ess utility	Cook Steward Cleaner	--

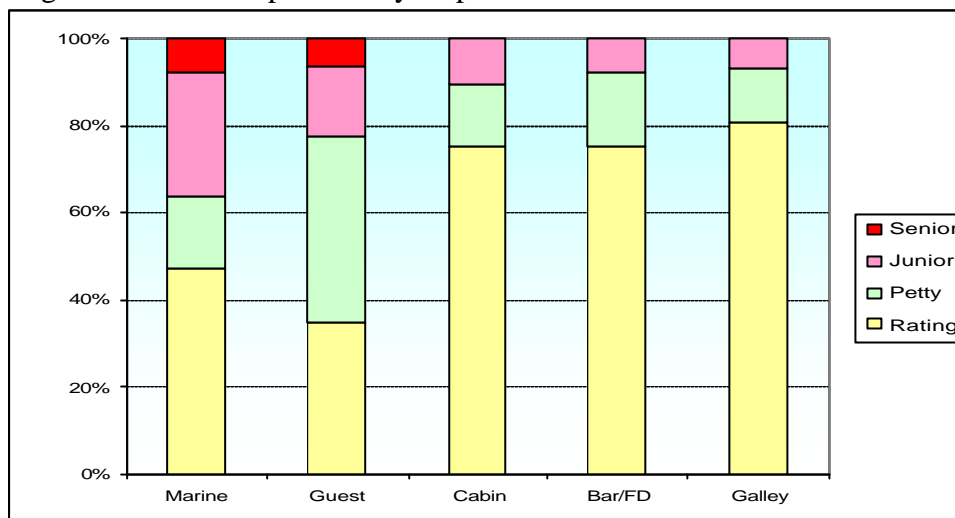
If we consider the horizontal division of labour on board we find a pyramid structure in which ratings constitute the bottom (59%), followed by petty officers (26%), junior officers (12%) and finally senior officers (3%) (see figure 3).

Figure 3 Pyramid Structure of Cruise Employees



However, when we consider vertical as well as horizontal divisions of labour aboard cruise vessels we find a more complex and revealing pattern. Figure 4 illustrates that there are a greater proportion of senior and junior officers (36 % in total) in the marine section than in the hotel section (11% in total). Within the hotel section however, different departments are characterised by different hierarchical patterns. Specifically the cabin, bar/food and galley departments share a similar pattern in which over three quarters are ratings. This differs markedly from the guest services department where ratings constitute less than 40 percent of the total and where all senior officers within the hotel side are located.

Figure 4 Rank Composition by Department



In summary, the great variety of jobs aboard cruise ships can be categorised and analysed with reference to three criteria: occupation/skill category, functional differentiation and management/supervisory responsibility. Such an analysis reveals that 85 percent of cruise sector workers are employed in the hotel section and 15 percent in the marine section. Within the hotel section, nearly 30 percent are employed in the bar/food department, followed by guest services, galley, cabin and “other”. A pyramid structure applies to the cruise hierarchy in which nearly 60 percent of posts are filled by ratings, followed by petty and junior officers and culminating with senior officers. The distribution of ranks between the marine and hotel sections is uneven: the marine section has a higher proportion of senior and junior officers (36%) than the hotel section (11%). It is also interesting to note that within the hotel section, all senior officers reside in guest services departments whilst over three quarters of cabin, bar/food and galley staff are ratings.

4. Age and Gender Profiles

Using the categorisation already described, this section further considers cruise vessel employment in terms of age and gender.

The average age of the sample is 33.8 years old. However age varies considerably across section and rank. Marine staff are, on average, nearly 5 years older than the mean for cruise ship workers while senior officers in both marine and hotel sections have an average age of over forty.

Figure 5 Mean Age by Section and Rank

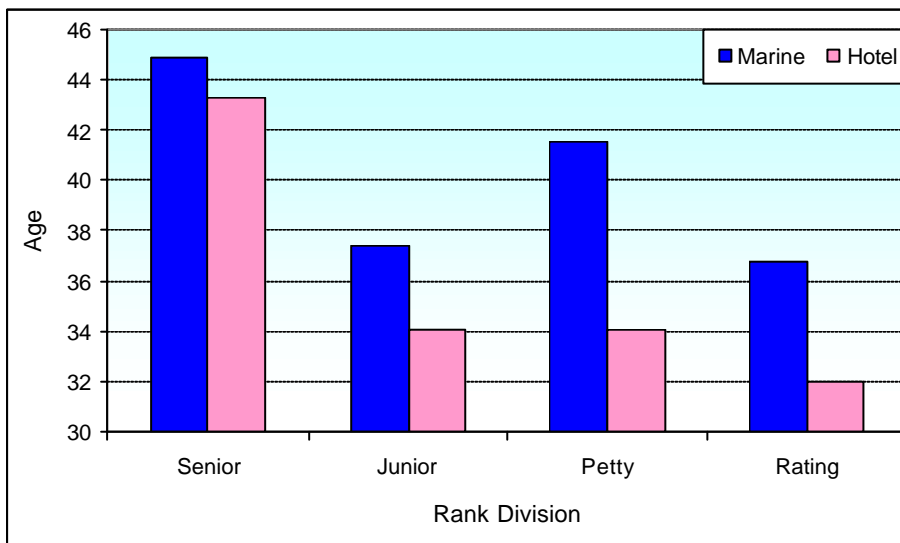
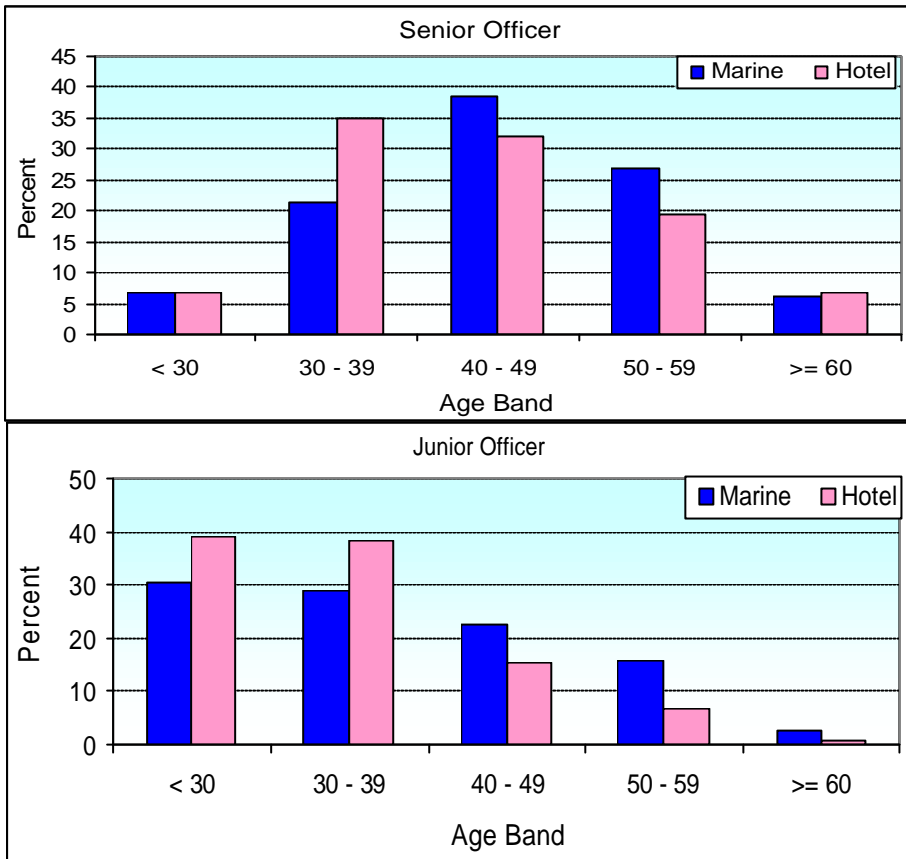


Figure 6 illustrates age profile by rank and section. Amongst senior officers, in general a normal age distribution can be found for both marine and hotel staff. By contrast, the age profile for junior officers is skewed towards younger age groups in both the marine and hotel sections (see Figure 6). Such patterns also apply to petty officers and ratings in both sections.

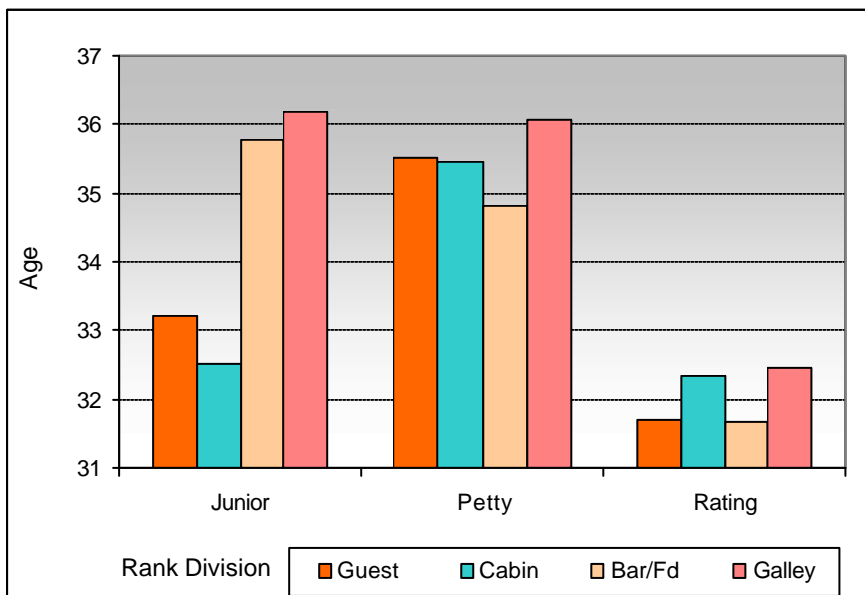
Figure 6 Comparison of Age Profile by Section and Rank (2000)



Amongst hotel staff, junior and petty officers are similar in terms of mean age (see Figure 7).

The exception is found amongst junior officers in the guest services and cabin departments who are on average 3 years younger than their colleagues.

Figure 7 Mean Age of Hotel Staff by Department and Rank



Compared with the cargo sector where less than 1 percent of seafarers are women (Belcher *et al* 2003: 10), contemporary cruise ships generally offer more opportunities to females. In conducting this survey, practical problems were encountered in collecting data on gender as less than 20 percent of crew lists contained information on sex which impedes effective gender analysis and comparison. To partially address this difficulty, the first names of crew members were entered into the database alongside their nationality and members from appropriate cultural groups were consulted about naming practices vis a vis gender. Using this method, 95 percent of the sample's gender was identified, and the rest was treated as missing data and weighted using mathematical procedure.

Using this technique, we are able to estimate with a reasonable degree of confidence that female seafarers account for 19 percent of the sample (see Figure 8).

Figure 8 Participation of Female Seafarers in Sample Cruises

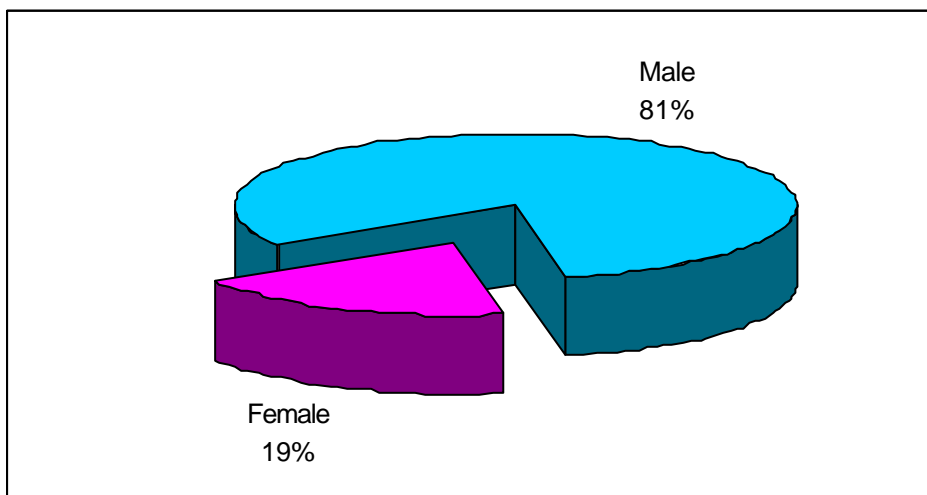
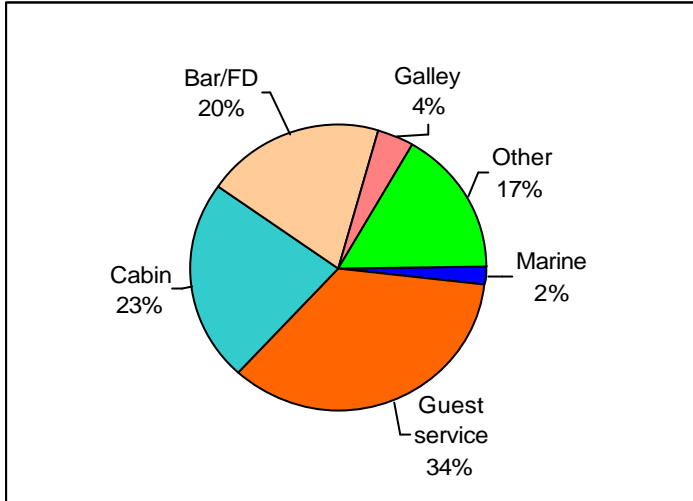


Figure 9 indicates the distribution of women across sections/departments. It is notable that there are few females working in either the marine section (less than 2 percent) or the galley (4%)

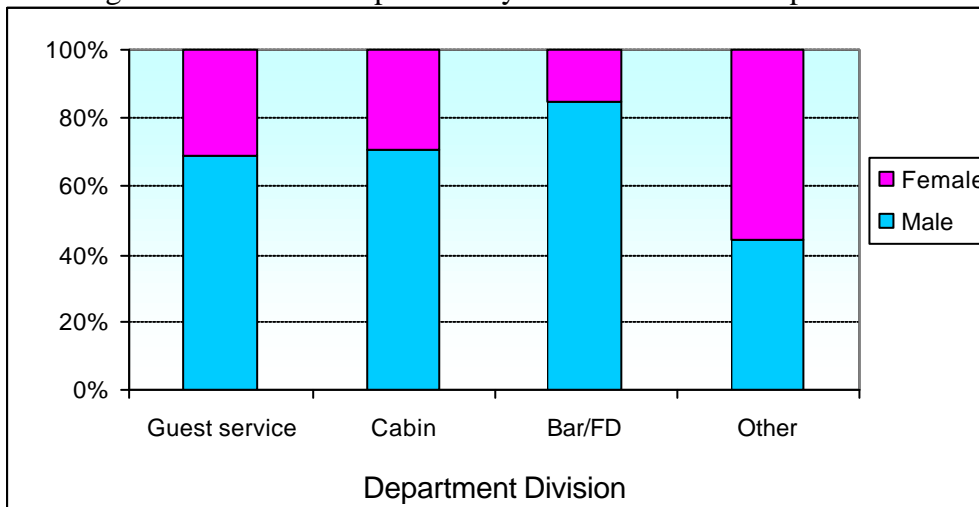
department. By contrast, over one third of them are employed in guest services, followed by the cabin (23%), bar/food (20%), and other (concessionaires, 17%) departments.

Figure 9 Distribution of Female Seafarers by Department/Section



Within female-favoured departments, the female share of employment varies ranging from 15 percent in bar/food to 30 percent in guest services and cabin (see Figure 10). It is noteworthy that female seafarers are actually dominant in the ‘other’ (concessionaire) department where 56 percent of staff are female.

Figure 10 Gender Composition by Female-favoured Department



The survey shows (Figure 11) that over half of all female seafarers are employed as middle ranking officers (junior or petty officers), compared with only one third of their male counterparts. Less than half of the females working aboard cruise vessels are ratings, which contrasts with the figure for males (62 percent are ratings). However, the numbers of women employed as junior officers and the very small numbers occupying senior posts suggest that, once employed, women may have less opportunities for promotion than their male counterparts.

Figure 11 Rank Composition of Sample Seafarers by Gender Division (2000)

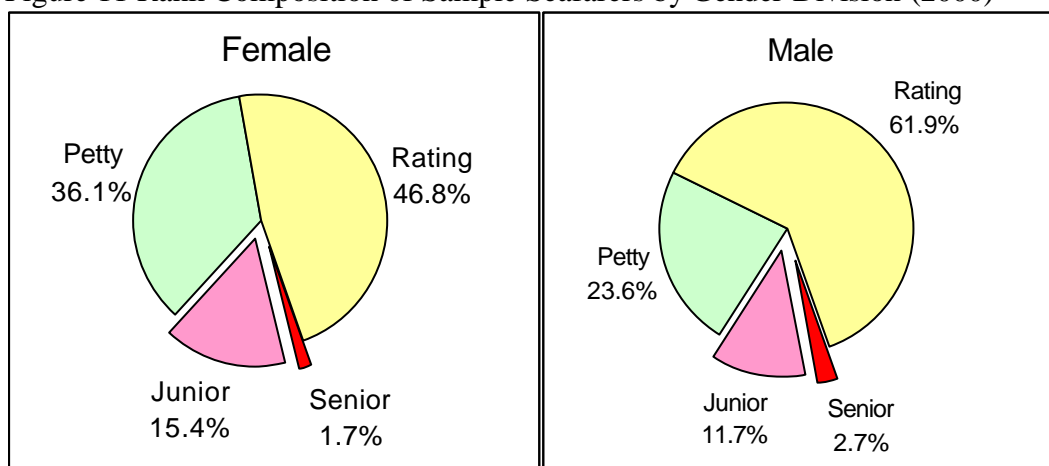


Table 4 examines rank composition by gender and selected department within the hotel section. It shows that in the guest service and cabin departments, females occupy more junior officer posts than their male counterparts. The ‘other’ (concessionaires) department does not appear in this table because only one rank, petty officer, applies to this department (i.e. 100%).

Table 4 Contrast of Rank Composition by Gender and Department (% , row as 100)

Gender	Dept.	Senior	Junior	Petty	Rating
Female	Guest	4.4	24.6	42.9	28.1
	Cabin	--	21.7	7.3	71.0
	Bar/FD	--	4.6	10.1	85.2
	Galley	--	5.5	19.8	74.7
Male	Guest	7.2	12.3	43.0	37.5
	Cabin	--	5.9	17.3	76.7
	Bar/FD	--	8.2	17.9	73.9
	Galley	--	6.7	12.3	81.0

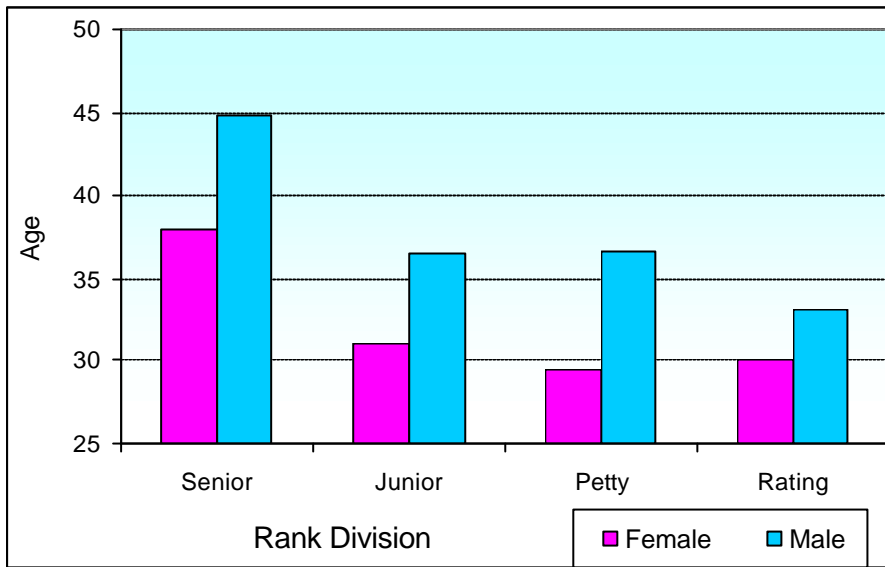
Male predomination in senior officer posts is confirmed by Table 5 which shows gender composition by department and rank. Indeed, female senior officers account for only 13 percent of the total senior officers. This is six percentage points less than would be expected given their numbers on board (see Figure 8). This indicates that whilst the largest number of female seafarers are employed in middle ranks (junior and petty officers), they are under represented at senior officer level. Significantly they are also massively underrepresented in marine departments where only 2.8 percent of senior officers, 3.2% of junior officers and 1.3% of petty officers are female. This suggests that, in the cruise sector, vertical gender segregation is stronger than horizontal gender segregation.

Table 5 Ratio of Female to Male Seafarers by Department and Rank (% , column as 100)

Rank	Gender	Marine	Guest	Cabin	Bar/FD	Galley	Other	Total
Senior	Female	2.8	21.5	--	--	--	--	12.7
	Male	97.2	78.5	--	--	--	--	87.3
Junior	Female	3.2	47.3	60.1	9.2	3.5	--	23.6
	Male	96.8	52.7	39.9	90.8	96.5	--	76.4
Petty	Female	1.3	30.9	14.7	9.2	6.6	55.5	26.5
	Male	98.7	69.1	85.3	90.8	93.4	44.5	73.5
Rating	Female	2.3	25.1	27.5	17.2	3.9	--	15.1
	Male	97.7	74.9	72.5	82.8	96.1	--	84.9

Our survey suggests that the average age of female seafarers is just over 30 years old, making them an average of 4.6 years younger than their male colleagues. Furthermore, Figure 12 indicates that females are younger than males in all positions but that the average age difference ranges from 7 years amongst senior and petty officer ranks to 3 years amongst ratings (see Appendix 2 for details).

Figure 12 Difference of Mean Age by Gender and Rank



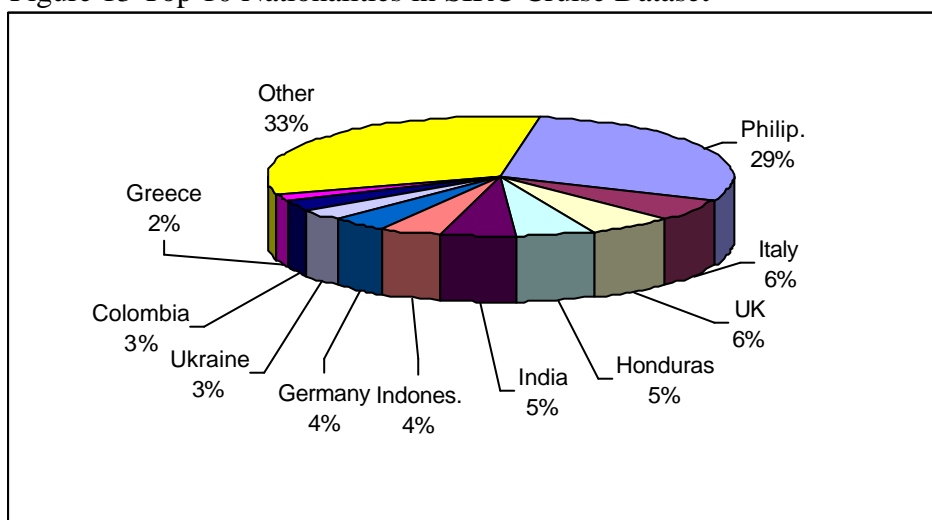
In summary, this section has examined the age and gender profile of cruise ship workers. Two conclusions can be drawn from this data. Firstly, the world cruise industry is dominated by young employees; the average age of the sample being less than 34 years old. With the exception of senior officers, employment in all ranks is skewed toward younger age groups (i.e. under 30). The SIRC cruise survey also indicates that there is a significant contribution from female workers in the cruise sector. However, whilst females represent 19 percent of all employees, they are unevenly distributed by department and rank. Generally, females are employed in higher numbers in concessionaire, guest services and cabin departments. They are under represented in the marine section and galley department. Female seafarers are, on average, younger than their male counterparts. In addition, females are better represented in junior or petty officer posts than their male counterparts. However, they are significantly less likely to hold a senior position than males.

5. Global Participation in the Contemporary Cruise Sector

That cruise shipping employs a multinational workforce can be illustrated by the scale and extent of differentiation by nationality.

Amongst the total 12,450 seafarers in the SIRC dataset, 99 nationalities are represented. Of these, ten nationalities constitute two thirds of the sample. Figure 13 shows the most common nationalities found aboard contemporary cruise vessels.

Figure 13 Top 10 Nationalities in SIRC Cruise Dataset



Regional patterns can be identified using the International Monetary Fund's regional categorisation (IMF 2003). Thus four regions can be identified: Advanced Economies, East Europe (or countries in transition), Asia², Latin America and others (for a comprehensive list see Appendix 1). Using this differentiation, Table 6 highlights the regional distribution of the sample and the major players within each group. Generally, advanced economies supply nearly 30 percent of cruise labour, Asia supplies 40 percent, and 30 percent is supplied by East Europe, Latin America and others.

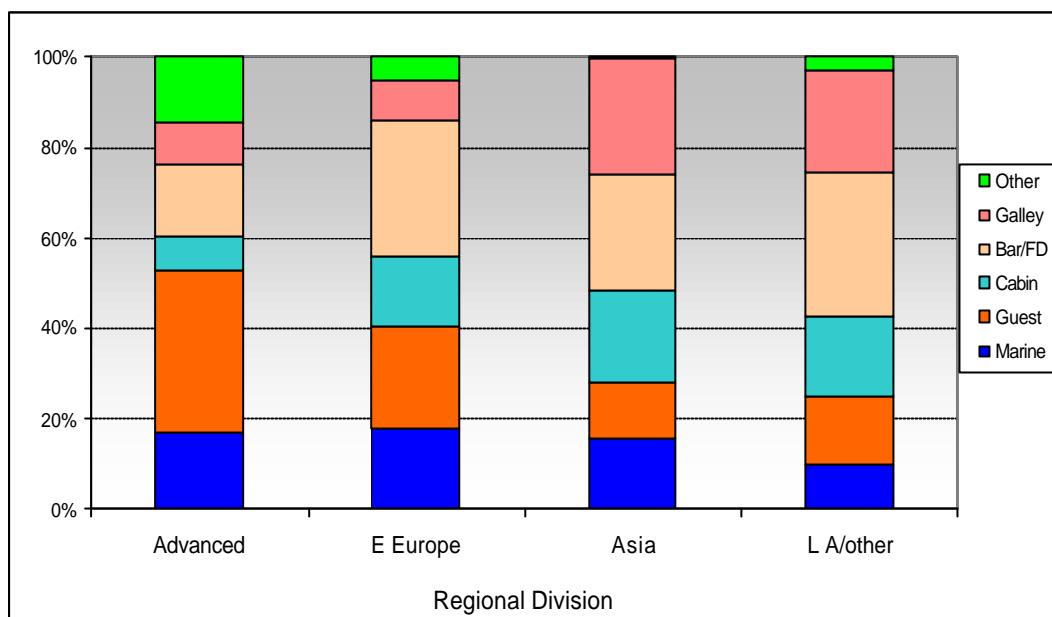
² Asia here excludes those countries or regions - Japan, South Korea, Hong Kong, Taiwan and Singapore - which are in the Advanced Economies category.

Table 6 Regional Division and Top 5 Nationalities within each Region (2000, unweighted)

Region	Nationality	N	% of Region	% of World
Advanced	Italy	789	21.8	6.3
	United Kingdom	722	19.9	5.8
	Germany	484	13.4	3.9
	Greece	280	7.7	2.2
	United States	200	5.5	1.6
	Sub-total	2475	68.4	19.9
	Regional total	3621	100.0	29.1
E Europe	Ukraine	416	23.1	3.3
	Russia	242	13.4	1.9
	Croatia	227	12.6	1.8
	Romania	202	11.2	1.6
	Poland	194	10.8	1.6
	Sub-total	1281	71.1	10.3
	Regional total	1801	100.0	14.5
Asia	Philip.	3546	71.3	28.5
	India	670	13.5	5.4
	Indonesia	524	10.5	4.2
	China	103	2.1	0.8
	Thailand	73	1.5	0.6
	Sub-total	4916	98.9	39.5
	Regional total	4973	100.0	39.9
L America & others	Honduras	677	32.8	5.4
	Colombia	315	15.2	2.5
	Peru	266	12.9	2.1
	Mauritius	128	6.2	1.0
	Mexico	108	5.2	0.9
	Sub-total	1494	72.3	12.0
	Regional total	2059	100.0	16.5
World Total		12454	--	100.0

Figure 14 shows the regional characteristics of the division of labour onboard. Over half of the advanced economies' seafarers work for the guest services and other departments, which contrasts with the domination of the galley, bar and food departments by Asian and Latin American seafarers.

Figure 14 Distribution of Regional Seafarers by Department



The data indicate that there are some concentrations of nationals in particular jobs and ranks.

Table 7 illustrates some of these national “specialities”. For example, whilst British seafarers are concentrated in the guest services and “other” departments, half of the Greeks employed can be found within the Marine section.

Table 7 Speciality of Labour Supply by Selected Countries (% , row as 100)

Nationality	Marine	Guest	Cabin	Bar/FD	Galley	Other
U. K.	11	43	4	6	1	34
Greece	50	19	3	19	9	1
Italy	26	32	7	13	10	11
Russian	19	39	12	21	8	0
Ukraine	29	14	19	24	14	0
Honduras	17	13	18	23	29	0
India	3	16	25	32	23	1
Philip.	17	12	16	27	27	1

Regional differences are even more evident when rank is considered. Figure 15 shows that over 30 percent of the advanced economies’ seafarers occupy senior or junior posts, compared with almost no senior officers and few junior officers from Asia and Latin America. By contrast, less than one

quarter of ratings come from advanced economies and more than three quarters of ratings come from Asia and Latin America.

Figure 15 Rank Composition of Regional Seafarers

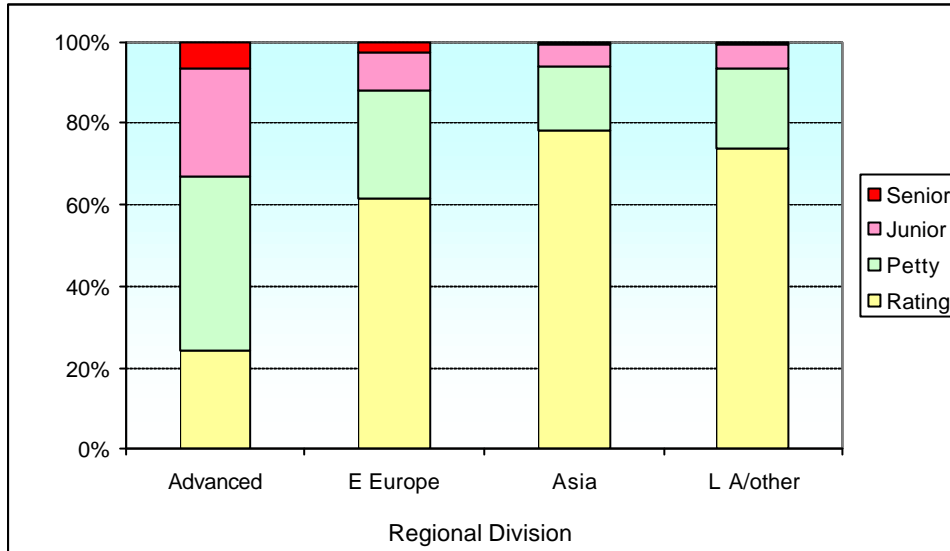
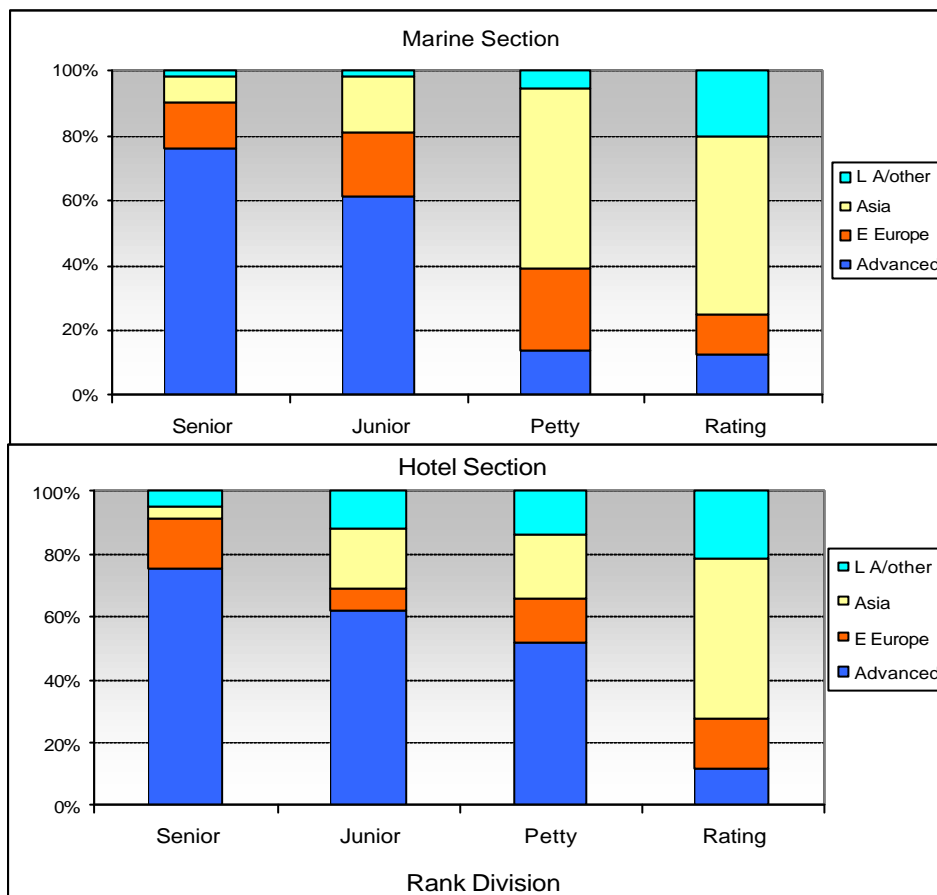


Figure 16 confirms the unevenness of regional distribution across rank. It shows that in particular more than half of all petty officer jobs on the hotel side are occupied by seafarers from advanced economies which is in contrast to less than 20 percent on the marine side. East European seafarers are well represented in junior and petty officer positions within the marine section whilst Latin American seafarers hold more officer posts on the hotel side than on the marine side. Senior officer posts in the marine department are most commonly held by seafarers from advanced economies with the majority of ratings and petty officer positions being held by Asian seafarers (see Appendix 3 for details).

Figure 16 Comparison of Regional Composition by Section and Rank



Gender and Nationality

The SIRC dataset shows that women seafarers aboard cruise ships are employed from fewer countries (74) than their male counterparts (99). Table 8 contrasts the top ten labour supply countries by gender. It indicates that three of the five top female labour supply countries are advanced economies with Britain in a lead position.

Table 8: Top 10 Nationalities by Gender Division

Rank	Female			Male		
	Nationality	N	% of Total	Nationality	N	% of Total
1	United Kingdom	337	14.3	Philippines	3280	32.5
2	Philippines	266	11.3	Honduras	662	6.6
3	Germany	193	8.2	India	641	6.3
4	Italy	177	7.5	Italy	612	6.1
5	Ukraine	147	6.2	Indonesia	494	4.9
6	Russian	98	4.2	United Kingdom	385	3.8
7	United States	87	3.7	Germany	291	2.9
8	Peru	71	3.0	Colombia	277	2.7
9	France	69	2.9	Greece	273	2.7
10	Romania	62	2.6	Ukraine	269	2.7
	Sub-total	1507	64.0	Sub-total	7184	71.1
	Total of 74 nations	2353	100.0	Total of 99 nations	10101	100.0

At a regional level, Figure 17 illustrates that over half of the cruise sector’s female workforce comes from advanced economies compared with less than one quarter of the male labour force. It also indicates that East Europe plays an important role in the supply of females as nearly one quarter of the female total comes from this region. By contrast, Asia provides only 15 percent of the female workforce compared with 46 percent of the male.

Figure 17 Gender Comparison of Regional Composition

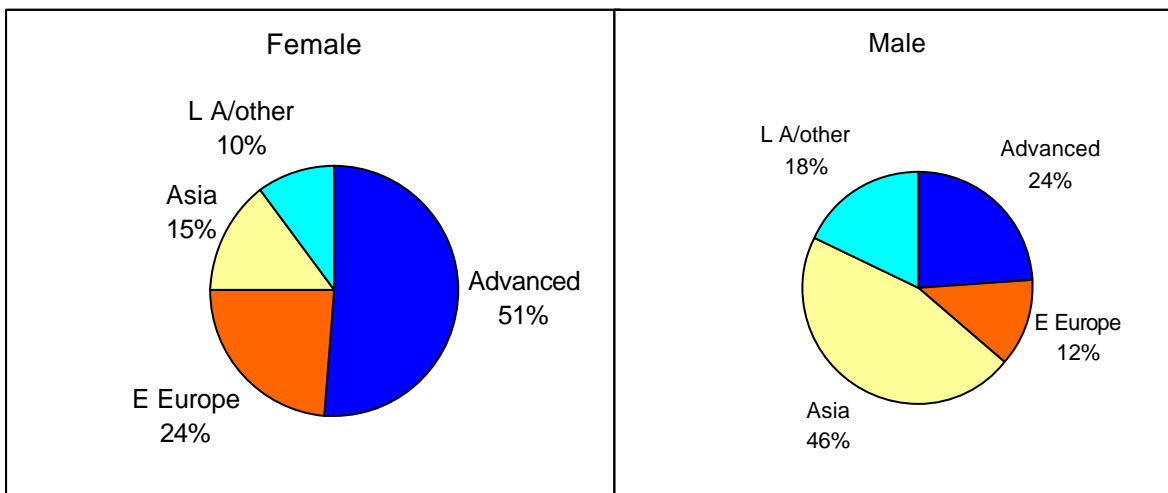


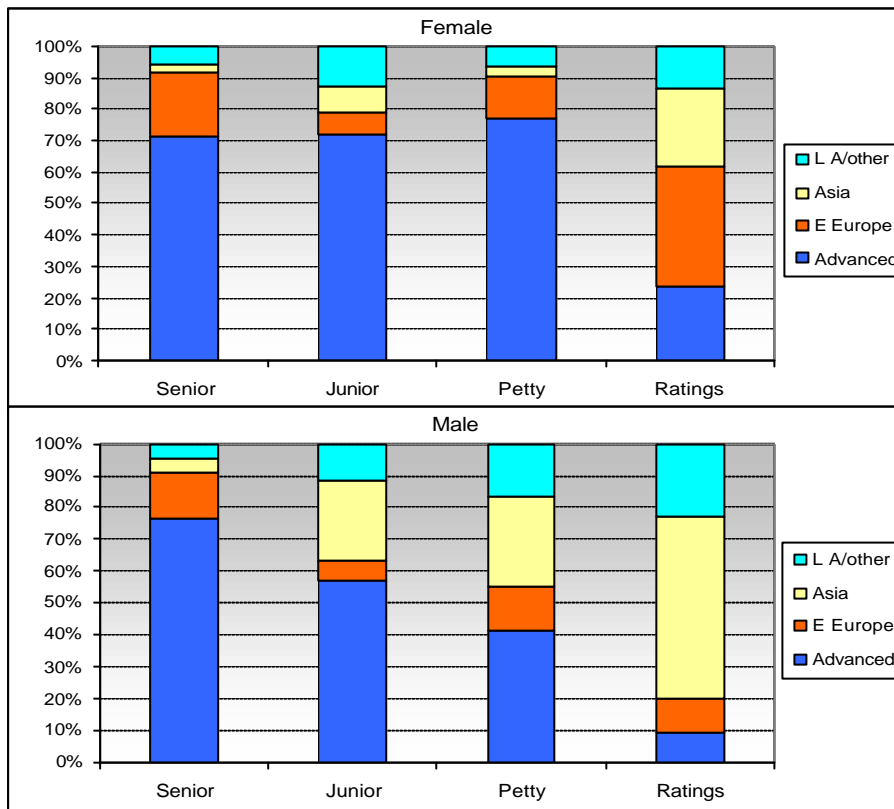
Table 9 shows that nearly one quarter of female seafarers from advanced economies are senior or junior officers, over half are petty officers, and just over 20 percent are ratings. In sharp contrast, 70 to 80 percent of East European and Asian women work aboard cruise vessels as ratings. It is notable that nearly 40 percent of female seafarers from Latin America occupy middle ranking jobs (junior and petty officers), a higher proportion than is found amongst their female colleagues from East Europe and Asia and also their male counterparts from Latin America.

Table 9 Rank Composition by Gender and Region in All Sections (% , row as 100)

Gender	Region	Senior	Junior	Petty	Rating	Total
Female	Advanced	2.2	21.9	54.3	21.5	100
	E Europe	1.6	4.7	20.7	73.0	100
	Asia	0.6	8.8	8.2	82.5	100
	L A/other	0.9	17.6	21.5	60.1	100
	Total	1.7	15.4	36.1	46.8	100
Male	Advanced	8.8	28.9	37.3	25.0	100
	E Europe	3.1	11.8	29.0	56.1	100
	Asia	0.4	5.6	16.5	77.6	100
	L A/other	0.5	4.6	19.4	75.4	100
	Total	2.7	11.7	23.6	61.9	100

In the hotel section, over 70 percent of female officer positions (senior, junior and petty officers) are occupied by women from advanced economies (see Figure 18) which is in contrast to their male counterparts who occupy slightly more senior, but considerably fewer, junior positions (see Appendix 4 for further details).

Figure 18 Regional Composition by Gender and Rank in the Hotel Section



In summary, this section has attempted to reveal the scale and extent of global participation in the cruise labour force by considering: how many countries are involved in cruise vessel labour supply and who are the major players in the sector? In addition we have considered the regional characteristics that can be identified in relation to the distribution of cruise staff by department, rank, and gender. The data suggests that we can conclude:

1. A global labour market operates in the cruise industry with about hundred nationalities represented aboard.
2. Nationalities are unevenly distributed across departments and ranks. Three quarters of senior officers, over 60 percent of junior officers, and over half of all petty officers are from advanced economies. This contrasts with seafarers from the developing world (Asia, Latin America and others), over three quarters of whom work as ratings.

3. The global labour market in the cruise sector operates differently for male and female workers with significantly fewer countries involved in the supply of female labour (74 as opposed to 99). Data analysis shows that advanced economies and Eastern Europe predominate in the supply of female labour, accounting for three quarters of the female total.

6. Conclusions

This report presents the findings of an analysis of the SIRC (cruise sector) seafarer database for the year 2000. Whilst we freely acknowledge some limitations in the data collection process, specifically the method for sampling crew lists, the study nevertheless provides some considerable insight into patterns of employment in the cruise sector.

The findings indicate that approximately 85% of employees aboard cruise vessels are employed in the hotel sections of these ships with only 15% of staff serving as seafarers on the marine (deck and engine) side of vessel operations. Almost 60% of posts across the board are filled by ratings. However, there is a higher proportion of senior and junior officers as compared with ratings on the marine side of operations where 36% of seafarers occupy these ranks. On the hotel side of the cruise sector different departments are characterised by different occupational hierarchies. For example, the survey found that senior officers are only employed in guest service departments and over three quarters of the staff in the galley, bar/food, and cabin, departments were ratings.

Seafarers working aboard cruise vessels are relatively young on average, with women tending to be younger than men. The mean age across the sample was found to be 34, however, as one might expect, senior officers tended to be older than this on average. Women constituted 19% of the sample of seafarers although they were unevenly distributed across ranks and departments. Women employees tended to be concentrated in the concessionaire, cabin, and guest service departments and they were under-represented in jobs on the marine side of vessels. Women tended to occupy middle ranking jobs on board but were under represented in higher management positions suggesting that they are less likely to be promoted than their male counterparts.

The cruise sector labour market is also differentiated by nationality. While in the region of one hundred nationalities were represented in the sample, these were not evenly distributed across ranks or departments. For example, three quarters of senior officer posts were occupied by seafarers from countries with advanced economies whilst similar proportions of ratings' jobs were allocated to seafarers from developing areas of the world.

The labour market for cruise sector seafarers is, thus, complex and diverse. Further research with employers is required to reveal the rationale behind the employee distribution that has been identified here, and it is hoped that there may be opportunities to undertake such research at some time in the future.

Postscript: comments relating to the data collection process

The rapid growth of the world cruise industry has been associated with the development of a global labour market for cruise sector workers. By extending its expertise from the cargo to the cruise sector, the Seafarers International Research Centre (SIRC) has initiated a world cruise labour market survey and this report is one outcome from this on-going project.

The SIRC cruise database is based upon the collection of crew lists from major seaports worldwide. As an alternative method to a national census or company questionnaire survey, the sample of crew lists, in theory, provides a means to access reliable, accurate and current information on the cruise labour market.

While a great effort has been made to produce a reliable and comprehensive cruise labour market survey, there are limitations to the existing database. For example, the first data sweep was limited to European ports which calls into question, but does not rule out, representativeness. In addition, any quantitative analysis of the world cruise labour market inevitably lacks depth and detail and should thus benefit from consideration alongside more detailed qualitative studies of the cruise sector.

With respect to the improvement of the SIRC world cruise labour market survey, the following require further consideration:

- The possible inclusion of major seaports beyond Europe, esp. North America, Caribbean, East Asia;
- The inclusion of onboard observation and qualitative studies.

Any further extension of this survey will bear these points in mind and will build upon the experience of collecting this initial data chunk.

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APPENDICES

Appendix 1 List of Seafarer Nationalities by Regional Division

Region	Nationality	Region	Nationality	Region	Nationality
Advanced	Australia	Asia	China	L A/other	South Africa
	Austria		India		Syria
	Belgium		Indonesia		Trinidad and Tobago
	Canada		Malaysia		Tunisia
	Denmark		Burma/ Myanmar		Uganda
	Finland		Nepal		Tanzania
	France		Pakistan		Uruguay
	Germany		Philippines		Venezuela
	Greece		Sri Lanka		Zimbabwe
	Hong Kong		Thailand		
	Iceland		Vietnam		
	Ireland	L	Algeria		
	Israel		Angola		
	Italy		Argentina		
	Japan		Barbados		
	Luxembourg		Brazil		
	Netherlands		Chile		
	New Zealand		Colombia		
	Norway		Costa Rica		
	Portugal		Cuba		
	Korea, South		Cyprus		
	Singapore		Dominica		
	Spain		Dominican Rep		
	Sweden		Ecuador		
	Switzerland		Egypt		
	Turkey		El Salvador		
	United Kingdom		Guatemala		
	United States		Guyana		
	E Europe		Belarus	Haiti	
			Bosnia & Herzegovina	Honduras	
			Bulgaria	Jamaica	
			Croatia	Lebanon	
Czech Rep			Malta		
Estonia			Mauritania		
Hungary			Mauritius		
Latvia			Mexico		
Lithuania			Morocco		
Poland			Nicaragua		
Romania		Nigeria			
Russian		Panama			
Slovakia		Paraguay			
Slovenia		Peru			
Macedonia		Saint Lucia			
Ukraine		Saint Vincent			
Yugoslavia		Seychelles			

Appendix 2 Comparison of Mean Age by Gender, Department and Rank

Gender	Dept	Senior	Junior	Petty	Rating	Total
Female	Marine	42.8	30.9	46.8	36.7	36.0
	Guest	37.5	32.5	29.2	29.7	30.5
	Cabin	--	28.2	34.5	30.8	30.5
	Bar/fd	--	33.3	29.4	29.0	29.2
	Galley	--	28.6	33.8	31.4	31.8
	Other	--	--	28.7	--	28.7
	Female Total		38.0	31.0	29.4	30.1
Male	Marine	44.9	37.6	41.4	36.8	38.4
	Guest	44.8	33.9	38.3	32.4	36.0
	Cabin	--	39.1	35.6	32.9	33.8
	Bar/fd	--	36.0	35.4	32.2	33.1
	Galley	--	36.5	36.2	32.5	33.2
	Other	--	--	30.9	--	30.9
	Male Total		44.9	36.6	36.7	33.1

Appendix 3 Top 5 Nationalities by Section and Rank

Rank	Marine		Hotel	
	Nationality	% of the total	Nationality	% of the total
Senior	Italy	17.9	Italy	17.2
	Greece	15.9	United Kingdom	12.9
	Norway	12.4	Greece	11.7
	Germany	11.0	Germany	10.4
	United Kingdom	7.6	Ukraine	5.5
	<u>Sub total</u>	64.8	<u>Sub total</u>	57.7
Junior	Italy	21.1	Italy	14.2
	Greece	17.5	Philippines	12.9
	Philippines	14.9	Germany	11.4
	United Kingdom	10.1	United Kingdom	9.3
	Ukraine	6.9	France	4.7
	<u>Sub total</u>	70.5	<u>Sub total</u>	52.5
Petty	Philippines	47.4	Philippines	16.4
	Ukraine	10.1	United Kingdom	14.2
	Indonesia	8.1	Italy	11.7
	Italy	7.1	United States	5.6
	Poland	5.5	Germany	5.5
	<u>Sub total</u>	78.2	<u>Sub total</u>	53.4
Ratings	Philippines	41.8	Philippines	37.0
	Indonesia	12.6	Honduras	7.0
	Honduras	11.3	India	6.7
	Italy	5.6	Indonesia	5.2
	Ukraine	5.3	Colombia	3.5
	<u>Sub total</u>	76.5	<u>Sub total</u>	59.4

Appendix 4 Profile of Selected Nationalities by Age, Section, Gender and Rank Composition

Nation	Item	Section		Gender		Rank				Total
		Marine	Hotel	Female	Male	Senior	Junior	Petty	Rating	
Colombia	Age	40.4	36.1	33.1	37.0	47.0	33.7	37.4	36.5	36.5
	%	10.5	89.5	12.1	87.9	0.3	4.8	15.6	79.4	100.0
Germany	Age	42.5	31.1	28.4	35.0	44.4	34.7	32.1	28.1	32.3
	%	11.0	89.0	39.9	60.1	6.8	27.5	33.1	32.5	100.0
Greece	Age	43.5	40.6	35.1	42.2	45.8	40.4	44.6	41.0	42.1
	%	49.6	50.4	2.5	97.5	15.0	39.6	16.1	29.3	100.0
Honduras	Age	39.0	35.3	34.5	36.0	--	37.2	38.2	35.4	35.9
	%	16.7	83.3	2.2	97.8	--	1.5	19.2	79.3	100.0
India	Age	33.6	30.8	29.6	30.8	32.5	30.3	33.1	30.7	30.9
	%	2.7	97.3	4.3	95.7	1.2	7.1	8.8	82.9	100.0
Indonesia	Age	38.5	31.9	31.5	33.8	--	39.3	37.3	32.9	33.7
	%	26.5	73.5	5.7	94.3	--	1.5	15.1	83.4	100.0
Italy	Age	38.8	36.8	29.5	39.6	46.7	36.4	35.1	41.4	37.4
	%	26.5	73.5	22.4	77.6	6.9	31.8	44.8	16.4	100.0
Philip.	Age	35.6	33.8	31.7	34.3	41.4	36.7	38.3	32.9	34.1
	%	17.0	83.0	7.5	92.5	0.3	5.8	17.4	76.5	100.0
Russian	Age	40.7	32.9	31.0	36.7	44.9	39.8	33.7	32.9	34.4
	%	19.0	81.0	40.5	59.5	5.0	10.3	20.2	64.5	100.0
Ukraine	Age	43.4	34.7	33.9	39.1	46.1	43.1	41.7	34.0	37.2
	%	29.3	70.7	35.3	64.7	4.3	10.3	22.8	62.5	100.0
U. K.	Age	34.2	31.4	28.7	34.5	43.8	33.8	29.9	32.6	31.7
	%	11.5	88.5	46.7	53.3	5.0	22.3	62.5	10.2	100.0
SIRC total	Age	38.4	33.0	30.1	34.6	44.0	35.3	34.8	32.6	33.8
	%	15.3	84.7	18.9	81.1	2.5	12.4	26.0	59.1	100.0