

## Analyzing Factors Influencing Seafarers to Pursue Sailing as a Career

Aby Amal<sup>1</sup>, Totakura Bangar Raju<sup>1</sup>, Syed Aqib Jalil<sup>2</sup>, Prakash Chandra Bahuguna<sup>1</sup>

<sup>1</sup>University Of Petroleum & Energy Studies, School of Business, Dehradun, India.

<sup>2</sup>Sohar University, Faculty of Business, Sohar, Oman.

e-mail: bangarraju@gmail.com

Seafarers form the backbone of the Global Economy by transporting goods from one place to another. New studies show that, there will be a potential shortage of Seafarers, especially Officers in the Global Shipping Industry. Surprisingly, there is a trend of Indian Seafarers preferring not to continue sailing in the future, even though considerable Cadets have passed training. The study intends to find out different factors of Motivation influencing and encourage the Seafarers to continue sailing. Data was collected using a structured questionnaire that was sent to seafaring personnel willing to participate in the study. A total of 13 responses were used for the study. All the respondents are current sailing seafarers with at least 2 years of sailing experience. About 28 motivational factors were identified specific to shipping and are grouped into 3 - Intrinsic Factors (IF), Organizational Factors (OF) and Socio-cultural Factors (SF). The data were analyzed using Fuzzy AHP methodology; furthermore, the factors were ranked in relative, group and global weightage. The result shows that the Intrinsic Factors, which are driven by the internal reward of an Individual, are the prime Factors of Motivation that attract an Indian to seafaring profession. Lastly, the research proposes that a good HR policy coupled with an employee retention strategy will to some extent encourage the seafarers to continue sailing. The results are instrumental in making suitable amendments to the HR policy of a Shipping Company to retain its veteran workforce to compete in the Global Maritime Market.

**Keywords-**Seafarers, Motivation, Fuzzy AHP, Shortage of seafarers

### 1. INTRODUCTION

The shipping industry is the lifeblood of the Global Economy, responsible for the carriage of around 90% of World Trade. Seafarers thus form the backbone of the Global Economy by transporting goods from one place to another. But, according to a BIMCO (Baltic and International Maritime Council) and International Chamber of Shipping (ICS) report, there will be a considerable shortage of Officers in Shipping Industry by 2026 (Ashok Srinivasan, 2021). A study on Indian Seafarers shows that many do not prefer to continue sailing in the future (Ramani et al, 2013). Figure 1 gives the Total Number of Registered Seafarers and the Total Number of Seafarers Employed in Indian Shipping. Figure 2 provides number of Candidates Passed and Ship Board Training Provided in Maritime Training Institutions / Colleges in India.

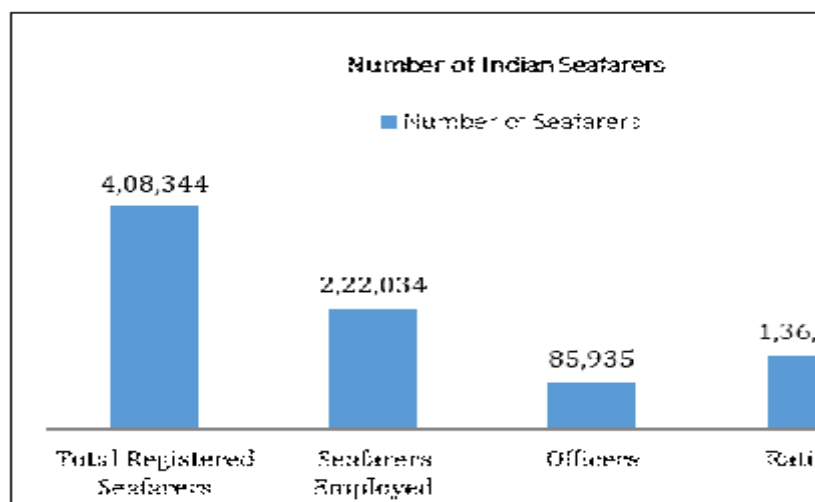
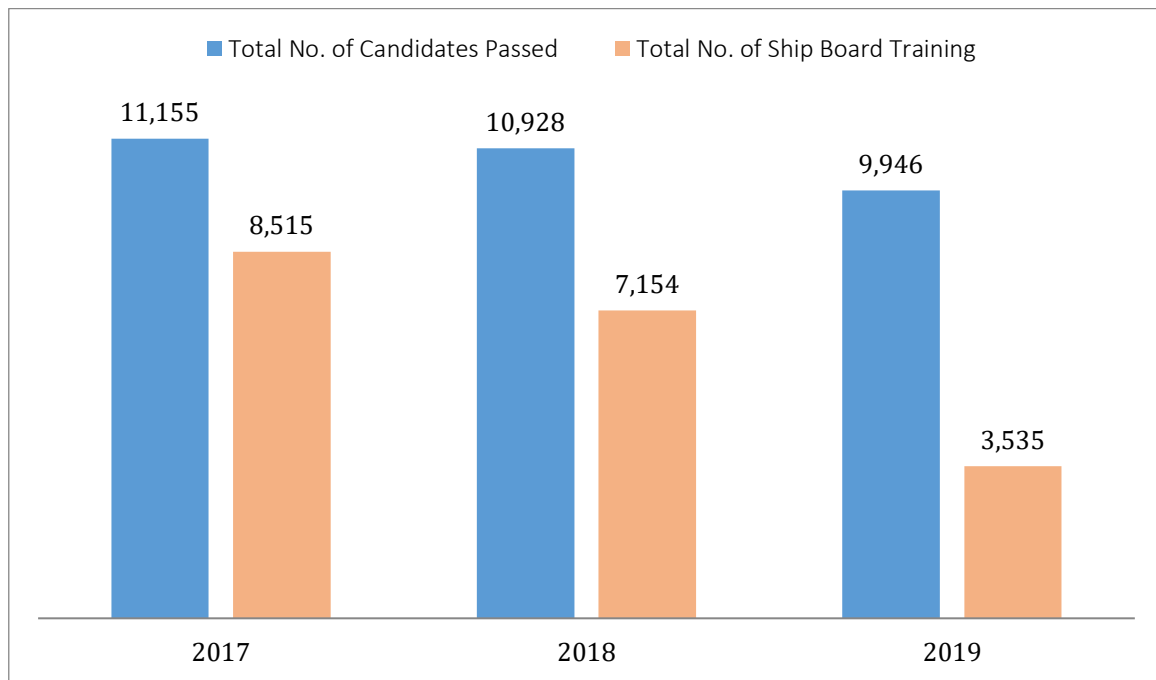


Figure 1. Number of Indian seafarers registered and employed in Indian shipping



**Figure 2.** Number of candidates passed and ship board training provided in maritime training institutions/colleges in India

There is a drastic reduction in the number of Seafarers Taking up Sailing as a profession (Figures 1 & 2). It is evident that despite completing the training at Maritime training institute, most youngsters do not end up taking onboard training. From the above it was found that candidates who passed from maritime training institutes were not much interested in taking up sailing as a profession and a steady decline was noticed despite many companies visiting the campus. Also, it was found that more experienced and registered seafarers do not continue sailing. On one hand, there is a predicted shortage of seafarers in the future, and on the other hand, Indian seafarers are discontinuing sailing. This Research paper intends to analyze different factors of Motivation, which motivate Seafarers to continue sailing using qualitative analysis. Various factors of motivation were explored, ranked using multicriteria decision making technique and prioritization was done to understand the most important factors affecting sailing profession. Section 2 discusses the literature review, followed by section 3 detailing research methodology and fuzzy analytical Hierarchy technique methodology deployed. Section 4 describes the analysis of the outcome and section 5 details the conclusion of the research.

## 2. LITERATURE REVIEW

### 2.1. Motivation

Analyzing the intrinsic motivation of consumers of a brand and their commitment towards buying those products using an online survey of Likert-Type scale type was conducted on the consumers, who were active on Facebook fan pages. Findings show community spirit, enthusiasm for the brand, search for entertainment, and prize chase is the motivational factors (Molano-Acevedo et al., 2022). When a new technology is being adopted by the shipping industry not all seafarers are well-versed in the technology. Some shipping companies provide training whereas some companies let the seafarers undergo training at their own cost which can be a demotivating factor. The authors Tang and Sampson attempted to study the same to discover the motivating factors that can be followed by shipping companies to retain seafarers and make them stay motivated (Tang & Sampson, 2018). To explore the impact of extrinsic and intrinsic motivation of employee engagement in public sectors by an explanatory survey conducted on administrative office employees of different cities. Results reveal extrinsic motivation has more importance on employee engagement and therefore Organizations should find quality motivational techniques to retain their employees (Engidaw, 2021). Research conducted investigates the relationship between motivation, emotional labor, and service performance by considering two motivational factors,

autonomous motivation, and controlled motivation. Results show autonomous motivation is positively impacting deep acting whereas controlled motivation favorably impacts service performance (Hur et al., 2022).

The shipping industry in China is experiencing a decline in recent years, due to a lack of attraction of Navigation Students toward the Shipping Career. We studied research which aims to motivate the students by exploring various motivational factors to retain them in the industry. A questionnaire survey has been conducted, and the result reveals universities should strengthen the students' career planning and the Shipping industry should increase the salary, reduce taxes, and should provide a positive working environment in the ship (T. Wang & Shu, 2021). Job Satisfaction and performance are directly proportional. The main objective is to analyze the factors that influence job satisfaction and performance of seafarers. The result of Structural Equation Modeling shows onboard stress levels and rewards are important factors of job satisfaction whereas job design and seafarer disposition have an impact on job satisfaction (Yuen et al., 2018). A study on abusive leadership and its impact on various other factors like emotional job resources and autonomous motivation. Autonomous motivation is a psychological mechanism that can be possibly responsible for extra-role performance. Path analysis test is conducted using Mplus (Parent-Lamarche et al., 2022).

The objective of the research performed was to motivate and retain health workers in developing countries to achieve Millennium Development Goals (MDG's). Study proves financial incentives; career development and management issues are core factors to retain health workers. Result reveals motivational factors are country-specific (Willis-Shattuck et al., 2008). Cultural difference is a real thing when there are employees of different nationalities in a working place. Therefore, Motivational factors also differ from employees of one nationality to other. A survey conducted on Korean and foreign workers of Korean construction sites reveals there are no notable differences in economic, psychological, and social factors overall but there is a significant difference in factors like social security insurance, participation in decision-making, and cultural differences (Kim et al., 2015). The motivational reasons to work in an organization are discussed between employers and their employees often. A review of various articles shows extrinsic motivational factors highly affect employee performance more than intrinsic motivation. Employees with such motivation are often neglected by Organizations; such bias is called Motivation Purity Bias (Derfler-Rozin & Pitesa, 2021). Study on using self-determination theory and job characteristics theory to understand the relationship between Job characteristics and Work Motivation. The motivation here is of two types controlled and autonomous. The result shows Positive Job Characteristics have a positive impact on Autonomous motivation (Liu et al., 2022). Motivating factors of employees in Health care were analyzed. The more efficient the motivation system, the higher the individual outcome and the Hospital's turnover. The questionnaire contains questions related to socio-demographic characteristics, participants' characteristics, and motivational factors. Study shows Salary and good relationship between Physicians and health managers are a vital motivational factor (Krstic et al., 2018). How Job demands affect the circadian rhythm of Seafarers leading to Seafarers' health deterioration and fatigue is studied. Job demand also makes work difficult due to improper planning. The result shows good working environment has a direct impact on motivation (Pauksztat, 2017).

Analyzing Seafarers' work performance in terms of motivational level, creativity, and job satisfaction has significant importance in the success of any shipping company. A study conducted on Mariners working in Marine Services Company Limited (MSCL) helps improve the company's productivity. A Fuzzy Electre Model (FEM) is developed to determine the importance of factors and sub-factors that has an impact on seafarers' performance (Massami & Manyasi, 2021). Maritime academies have an important role in enhancing the quality of maritime students to meet the standards of the European maritime community. A series of a study conducted on the research area starts with distributing a questionnaire and then cleaning the data collected, Data is then analyzed using Cronbach's alpha test, Kolmogorov-Smirnov test, Mean of ranks (MR) and Median, Chi<sup>2</sup>, Spearman's rank correlation coefficient, Cross tabulation, and t-test. Result reveals the motivational factors to choose this profession are stable employment, traveling and seeing new places, and a good salary. Whereas the undermining factors are family life issues and expensive studies (Fernandez Gonzalez et al., 2014). Self-determination theory here examines the motivational factors to become a social entrepreneur. Autonomous and controlled motivations are considered. Intrinsic motivations have a positive effect on the Social entrepreneurial intention of individuals (Yamini et al., 2022). A company can play top in the business market depending upon the positive performance of its employees. Proper Training and competence can improve employee performance; this study aims to propose a model that gives better employee performance based on achievement-oriented work motivation. Data was collected using the

Purposive Random Sampling method and tested using Structural Equation Modeling (SEM). Results show Effectiveness of training, soft skill competence, and Achievement-oriented work motivation are the factors that positively influence employee performance (Damarwulan & Dibyantoro, 2022). To identify the motivational factors that positively influence employees' commitment to work by lining a relationship between materialistic and no materialistic motivational factors. Work satisfaction is considered a dependent variable whereas motivation is considered the independent variable. Statistical analysis software was used to analyze data collected using a structured questionnaire (Isaković et al., 2021).

A structured questionnaire was used to measure the employees' attitudes using the Likert scale. Important Motivational factors of employees in different physical education organizations in terms of their interest and belongingness are studied. The questionnaire was issued and the Jersy-Morgan table is used to test the issue. The strength of the questionnaire was analyzed by experts, advisors, and counselors (Naghshbandi et al., 2012). An unsatisfied employee is a threat to an organization due to their strong impact on the organization's growth. Employee satisfaction leads to higher performance and indirectly leads to organizational growth. Exploring the factors that motivate unpleasant feelings in the workplace and searching for another job. Data collected are tested using Correlation Bivariate analysis (Muslim et al., 2016). A study to build a motivational model that helps teachers, who are at the start of their career to stay motivated. Two types of motivation were considered, autonomous and controlled motivation. The model created provides a motivational pathway to maintain the teacher's psychological health (Fernet et al., 2016). Motivational Factors that lead the Business Schools in India to provide sustainable Entrepreneurship training to its students, is the main theme of the study conducted. Sustainable entrepreneurship training has three objectives initiate, ensure and integrate. The findings of the study show business schools in India focus on "initiate" based training (Kummitha & Kummitha, 2021).

The study performed identified the factors that impact job motivation among physicians by exploring the most frequent motivators and demotivators. As a result, a tool is formulated that estimates physicians' motivation (Malik et al., 2010). Herzberg's two-factor theory of motivation is used to explore the factors that motivate the Medical Laboratory Professionals (MLPs) in Oman to stay satisfied in their job. Data for the study is collected through Focus Group Discussions (FGDs), collected data were compared using Herzberg's theory. Relationships with co-workers and leaders; and professional development are found to be the motivational factors (Alrawahi et al., 2020). To explore various intrinsic factors that impact the job satisfaction of nurses by data collected using a Self-administered questionnaire, the relationship among collected data's independent and dependent variables was analyzed using bivariable and multivariable logistic regression analysis. The result shows nurses' job satisfaction was 52.4% (Ayalew et al., 2021). The research focused on exploring the demotivating factors in purchasing an Airbnb (Air Bed and Breakfast) in Vietnam. Value of the property and functional aspects are the important motivators whereas safety concerns are demotivating factors/demotivators (Tran & Filimonau, 2020). Telephonic Medication Management Centers (MMCs) provides service related to medication issues. The motivating factor that drives them was studied. An electronic Employee Motivation Questionnaire (EMQ) is used for data collection; collected data is analyzed using Rasch analysis. EMQ data provides reliable evidence for measuring motivation factors (Dhatt et al., 2021). Bidding Strategies and motivational factors adopted by online bidders were studied. Ratchet bidding, Agent bidding, and Snipe bidding were analyzed using logistic regression. Results show utilitarian motivations, hedonic motivations, time availability, and risk preference were the factors that impact Bidding Strategies (Cui et al., 2020).

## **2.2 Motivation and Retention**

A study to identify the motivational factors that retain millennials in their job. The Survey was conducted in an oil and Gas Company, in Malaysia with 150 respondents through Random Sampling Technique. Bivariate Analysis and Linear Regression techniques are used to analyze the hypothesis (Saeed et al., 2018). Employees' loyalty and productivity are improved by formulating good Organizational Compassionate Policies and Practices. Results of the research show the relationship between employees and employers should never be a zero-sum game (Dr. J alal Armache, 2014). Accountants are the ones that maintain highly secure and important financial matters in an organization. Keeping such Accountants satisfied is essential to improving the organization's financial health. The factors that motivate the accountant's satisfaction to work are studied. Task performance, working relationships, career expectations, and workplace climate are found to be important motivational factors (Uansa-Ard & Phoehawm, 2017). Citizen Science (CS) means voluntary public engagement in scientific research activities. The core of this paper is to avoid resource limitations in CS projects and to

meet the expectation of volunteers in terms of resources to have long-term volunteer participation using thematic analysis (Robinson et al., 2021).

### 2.3 Motivation Factors Ranking

A survey was conducted to explore the determinants that impact the motivation of Software Engineers and to propose a proper regulation for future motivational programs in Software Engineering in which, 20 Motivational factors arranged in a review pattern and a questionnaire were made and surveyed. As a result, a five-factor structure is formulated which categorizes the variables set and can regulate future motivational models in Software Engineering (da Silva & Frana, 2012). A tool that estimates physician's motivation by Questionnaire with motivational factors was classified into three such as intrinsic, socio-cultural, and organizational factors. These factors were tested. The result of Factor analysis reveals intrinsic motivation relies on 6 Factors, organizational motivation on 7 factors, and socio-cultural on 3 Factors (Malik et al., 2018). A study on the important determinants that motivates a teacher to become a School leader in the U.S.A and Germany, in which Results of various Survey Data and Follow-up Interviews clearly shows the similarities and differences of such motivational factors in both countries (Hancock et al., 2019). Effective Motivational Programs play a vital role in a company's growth. The stronger the Motivational Programs are higher the employee satisfaction and motivation to work toward the company's growth. A Multi-Factor Analysis (Cluster Analysis) method is used to form an effective motivational program and a questionnaire is used to analyze various motivational factors. A unified Motivational Program is created (Zámečník, 2014).

### 2.4 Research Gap

There is a need to encourage youngsters and retain experienced Indian seafarers, to fill the future shortage in manpower at sea. Most motivational HR strategies employed by the management of different Industrial Sectors are unique to that Industry. However, there is very less study is employed on this aspect in Indian Shipping Sector. Therefore, the study aims to analyze different factors of Motivation, which motivates Indian Seafarers to prefer seafaring as a career option. Through extensive Literature Review and casual interviews with subject matter experts, the following are found to be the Overall Motivational Factors that will influence the seafarer's willingness to continue sailing. These factors are grouped under – Intrinsic, Organizational, and Socio-cultural (Bhatnagar et al., 2017). In addition, the sub-factors are also listed in the three Factors (Table 1).

Code	Factor	Description
	<b>Intrinsic Factors</b>	
IF 1	Individual Health	Individuals Health mental and physical
IF 2	Job Satisfaction	Self-contentedness with their job/profession
IF 3	Job Passion	Enthusiasm to continue the work.
IF 4	Living Conditions	Basic onboard accommodation facilities for the crew to stay
IF 5	Company Name	Pride to be associated with an Organization
IF 6	Decision Making	One's participation in onboard decision Making
IF 7	Professional Independence	Degree of Professional autonomy
IF 8	Ethical Values	Ethical principles of an Individual
IF 9	Explore World	Desire to see the world

IF 10	Professional Pride	One’s attitude towards the Job, as in uniformed Profession like military
IF 11	Dependents	Family members' well-being.
	<b>Organizational Factors</b>	
OF 1	Job Security	Assurance of future employment
OF 2	Work Safety	Occupational safety measures
OF 3	Medical Insurance	Insurance coverage offered by the company
OF 4	Working Environment	Onboard workplace atmosphere
OF 5	Enterprise Environment	An employee-friendly atmosphere in an organization
OF 6	Job Flexibility	Flexibility in choosing the contract
OF 7	Performance Appraisal	Constructive performance appraisal of the Employee
OF 8	Overtime	Overtime payment
OF 9	Communication Facilities	Onboard communication facilities to contact Family
OF 10	Salary	Wages according to Industry standard
OF 11	Monetary Incentives	Monetary Incentives such as Annual Bonuses, Rejoining bonuses, etc.
OF 12	Onboard Incentives	Onboard Incentives such as Free Internet, Above standard provisions, etc.
OF 13	Career Growth	Promotion prospects
	<b>Socio-cultural Factors</b>	
SF 1	Work/Life Balance	To be able to balance one’s Profession and Family commitments
SF 2	International Exposure	Working with Multi-National crew
SF 3	Interpersonal Relationship	Interpersonal relationships based on work culture onboard
SI 4	Social Status	Improves Status in the Society

**Table 1.** List of factors and sub-factors.

### 3. RESEARCH METHODOLOGY

#### 3.1 Fuzzy AHP Methodology

The fuzzy AHP technique using extended analysis and swarm optimization is used to convert Public Transport Providers' subjective preferences and ferry performance into a single dimensionless index (Cheemakurthy & Garne, 2022). Factors affecting Enterprise Resource Planning's procurement decision were analyzed with mix-method research by combining both qualitative and quantitative techniques. Additionally, sensitive analysis was carried out to check the strength of the Fuzzy AHP analysis (Bhatt et al., 2021). A study on Ergonomics- Related disorders has arisen due to Online Education, using Fuzzy AHP (Upadhyay et al., 2021). By combined evaluation of existing recourses and their perceived attractiveness

are used to assess Nature-based tourism Attractiveness, through Fuzzy AHP approach, which was tested at a tourism destination in China (Gu et al., 2022). Different factors affect the small-scale farmer's natural rubber production in Liberia using MCDM, grading them using Fuzzy AHP (Sumo et al., 2022). A fuzzy AHP tool is used to analyze factors that influence Organizational Leadership on innovation management (Wegner et al., 2021). A company's performance is appraised to have a better market advantage and enterprise environment using AHP (Xia et al., 2022). Various factors influencing Container shipping through Inland waterways in India are analyzed using Fuzzy AHP analysis. The Factors were classified into 4 main categories and 21 sub-factors. From the result, the individual factors and sub-factors are ranked individually and also Global weightage is calculated (Totakura et al., 2022).

In this study, we employed the Fuzzy AHP based on the methodology developed by Krejčí et al. (2017). The process is widely recognized for its capability to handle uncertainty and ambiguity in decision-making, particularly suitable for the complexities of our research context. For the computational aspects, we relied on the FuzzyAHP package (Caha and Drázná, 2019) in the R software, which streamlines the entire procedure. Thus, instead of following the intricate manual calculations, we direct readers to the software's documentation and Krejčí et al. (2017) extensive works for comprehensive details.

### 3.2 Data Collection

Data was collected using a structured questionnaire that was sent to seafaring personnel willing to participate in the study. Eighteen were ready to respond based on the request sent. All are current sailing Officers and Engineers sailing with Foreign Going vessels. Also, all of the respondents have at least 2 years of sailing experience in Foreign Going Vessels. Out of the 18, only 13 responses were complete and used for the study. The application of the Fuzzy AHP methodology, particularly the pairwise comparison aspect, necessitates participants who possess both the expertise and experience to provide consistent and insightful responses. In this study, the focus was placed on the quality of data and its consistency, which sometimes leads to the acceptance of a smaller, but more qualified respondent pool. Furthermore, our study isn't an outlier in adopting this approach. For instance: Munim et al. (2022) assessed measures by export-oriented RMG firms during COVID-19 using only 11 respondents. Another study by Munim, Sornn-Friese, and Dushenko (2020) applied the Analytic Network Process and Best-Worst methods to ports in the Indian Ocean Rim with just 3 respondents. Ayyildiz and Taskin Gumus (2021) utilized a Pythagorean fuzzy AHP for risk assessment in hazardous material transportation in Istanbul with 5 respondents. Çalık (2021) presented a novel Pythagorean fuzzy AHP and fuzzy TOPSIS methodology for green supplier selection in the Industry 4.0 era based on feedback from 4 respondents. These references serve as a testament to the acceptability and prevalence of smaller respondent pools in MCDM studies, especially when detailed and accurate answers are really important. Our method is similar to these well-known studies, valuing good, reliable data from a few skilled people rather than just getting large pool of inconsistent responses.

Brief details of the respondents are given below in Table 3.

Number of Respondents	Respondents Category	Experience and Role
2	Junior Officer and Engineers	Less than 5 Years of Sailing Experience
8	Junior Officer and Engineers	More Than 5 Years of Sailing Experience
3	Management Level Officer and Engineers	More Than 5 Years of Sailing Experience

Table 3. Details of the respondents

## 4 RESULT AND ANALYSIS

Three main Motivational Factors were Ranked based on their weightage (Table 4 and Figure 5) and Hierarchy of the Factors depicted in Figure 4. Thus, the utmost ranked is the Intrinsic Factors (IF), followed by Organizational Factors (OF) and Socio-cultural Factors (SF). Therefore, the result shows that the Intrinsic Factors, which are driven by the Internal Reward of an Individual, are the prime Factors of Motivation that attract Indians to the Seafaring Profession. Additionally, the Fuzzy analyses of the other sub-factors are illustrated below.

In Intrinsic Factor (IF), Dependents, Individual Health, and Ethical Values have surfaced as the top three.

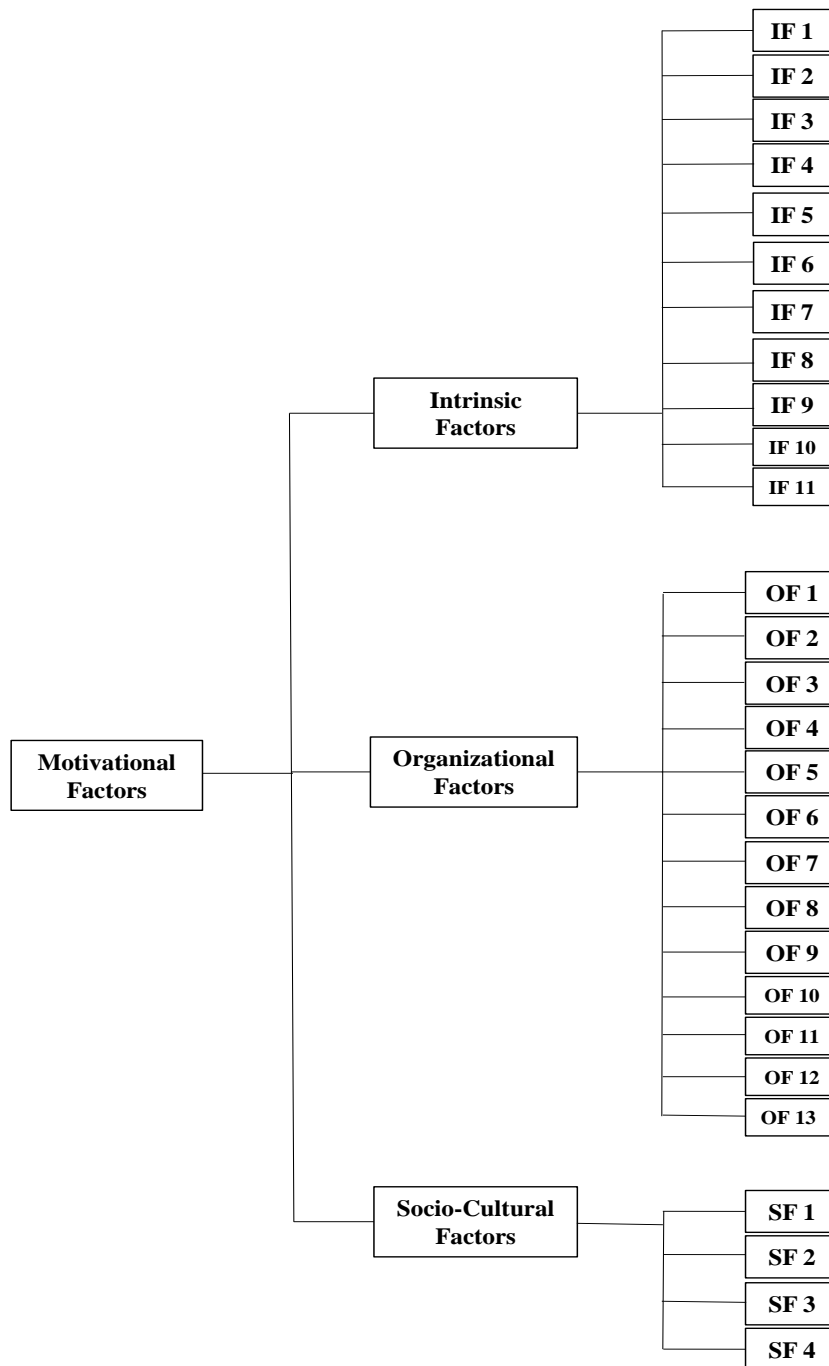
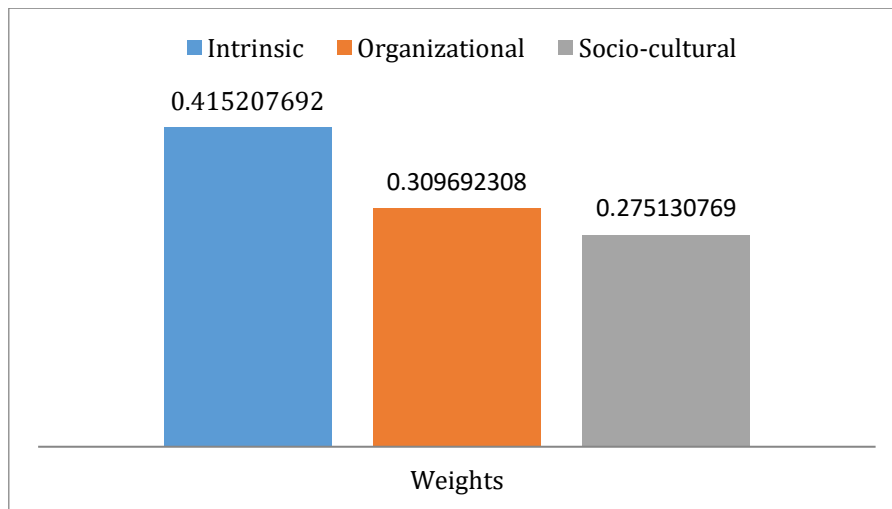


Figure 4. Hierarchy of motivational factors affecting seafarers



Criteria	Weights	Ranks
Intrinsic	0.415207692	1
Organizational	0.309692308	2
Socio-cultural	0.275130769	3

**Table 4.** Weights and ranks of 3 main factors

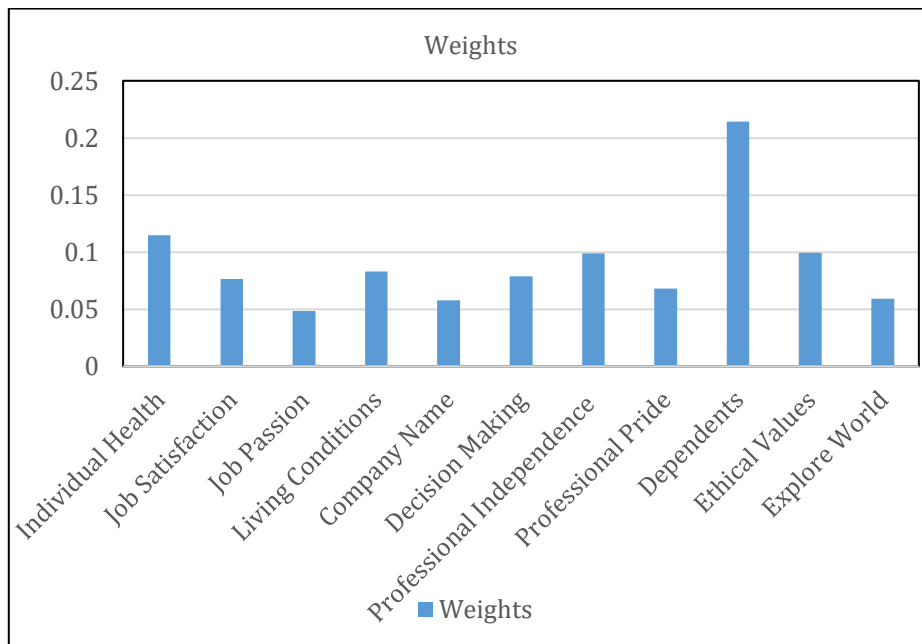


**Figure 5.** Relative importance of criteria

Relative weightage and ranking of the sub-factors under Intrinsic Factors (Table 6 and Figure 6). Under Intrinsic criteria Dependents bag first place, followed by Individual health and Ethical values. Interestingly, Job passion, Company Name, and Exploring the world came out to be the least preferred Motivational Sub-factors.

Sub Criteria	Weights	Ranks
Individual Health	0.114901	2
Job Satisfaction	0.076348	7
Job Passion	0.048475	11
Living Conditions	0.08323	5
Company Name	0.057954	10
Decision Making	0.07888	6
Professional Independence	0.098926	4
Professional Pride	0.068076	8
Dependents	0.214424	1
Ethical Values	0.099396	3
Explore World	0.05939	9

**Table 5.** Weights and ranks of sub-criteria of the “intrinsic” criteria

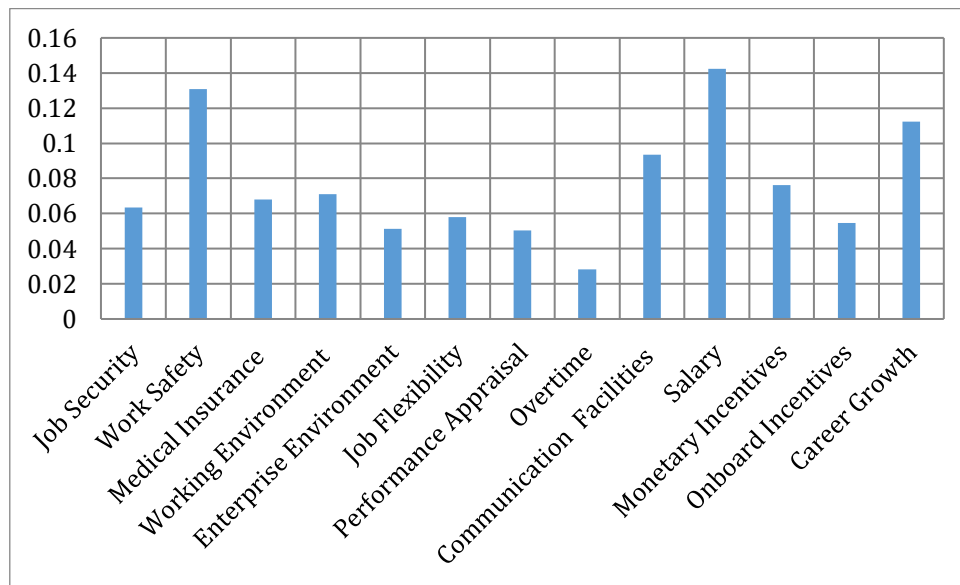


**Figure 6.** Relative importance of sub-criteria of the “intrinsic” criteria

Relative weightage and ranking of the sub-factors under Organizational Factors (Table 7 and Figure 7). Work Safety, Salary, and Career Growth have emerged as the prime three factors in Organizational Factors (OF). Whereas, Overtime, Performance Appraisal, and Enterprise Environment are the least preferred Motivational Sub-factors with Organizational Factors (OF).

Sub Criteria	Weights	Ranks
Job Security	0.063454	8
Work Safety	0.130867	2
Medical Insurance	0.068135	7
Working Environment	0.070934	6
Enterprise Environment	0.05134	11
Job Flexibility	0.057854	9
Performance Appraisal	0.050393	12
Overtime	0.028331	13
Communication Facilities	0.093469	4
Salary	0.142309	1
Monetary Incentives	0.076071	5
Onboard Incentives	0.054593	10
Career Growth	0.11225	3

**Table 6.** Weights and ranks of sub-criteria of the “organizational” criteria

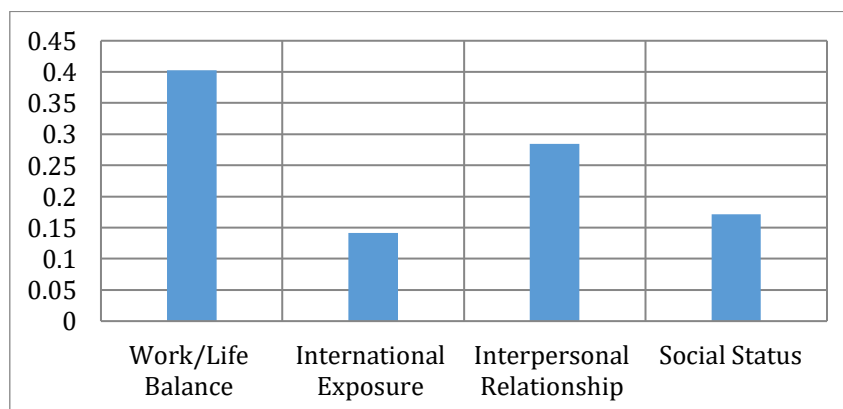


**Figure 7.** Relative importance of sub-criteria of the “organizational” criteria

Relative weightage and ranking of the sub-factors under Socio-cultural Factors (Table 8 and Figure 8). Within Socio-cultural (SF), Work/Life Balance, Interpersonal Relationship, and Social Status has surfaced as the top three. While, International Exposure, is the least favorite Motivational Factor under Socio-cultural Factors (SF).

Criteria	Weights	Ranks
Work/Life Balance	0.40279033	1
International Exposure	0.14157052	4
Interpersonal Relationship	0.28440376	2
Social Status	0.17123539	3

**Table 7.** Weights and ranks of sub-criteria of the “socio-cultural” criteria



**Figure 8.** Relative importance of sub-criteria of the “socio-cultural” criteria

Relative Global weightage and ranking of the sub-factors of all the Main Factors (Table 10). Finally, when we study the Global Raking from Table 9, it's evident that Work/Life Balance, Dependents, and Interpersonal Relationships are the three main Motivational Factors that motivate Seafarers. Interestingly, Overtime, Performance Appraisal, and Enterprise Environment are the least preferred Motivational factors in Global Weightage. These Factors are traditionally preferred by the Employees, in choosing an Organization to work with.

Criteria	Sub criteria	Global Weight	Global Rank
<b>Intrinsic</b>	Individual Health	0.0477	4
	Job Satisfaction	0.0317	14
	Job Passion	0.0201	22
	Living Conditions	0.0346	12
	Company Name	0.0241	18
	Decision Making	0.0328	13
	Professional Independence	0.0411	8
	Professional Pride	0.0283	16
	Dependents	0.0890	2
	Ethical Values	0.0413	7
<b>Organizational</b>	Explore World	0.0247	17
	Job Security	0.0197	23
	Work Safety	0.0405	9
	Medical Insurance	0.0211	21
	Working Environment	0.0220	20
	Enterprise Environment	0.0159	26
	Job Flexibility	0.0179	24
	Performance Appraisal	0.0156	27
	Overtime	0.0088	28
	Communication Facilities	0.0289	15
	Salary	0.0441	6
	Monetary Incentives	0.0236	19
	Onboard Incentives	0.0169	25
	Career Growth	0.0348	11
<b>Socio-cultural</b>	Work/Life Balance	0.1108	1
	International Exposure	0.0390	10
	Interpersonal Relationship	0.0782	3
	Social Status	0.0471	5

**Table 8.** Global weights and ranks of the sub-criteria

The result from table 8 shows a deviation from the long-established trend that Salary, Overtime pay, etc., influence an employee’s motivation to draw a person’s affinity to an Organization. This Sailing profession in India is unique and had its roots drawn from Colonial era education and training systems. Continuous training and up gradation of certification are required in this profession, which is very tiresome and time-consuming. Despite all these and other hardships, we see that the interest of the employee in this profession lies towards Intrinsic Factors (IF) like Work-life balance, Dependents, etc.

## **5 CONCLUSION**

The study aimed to explore the main motivational factors among seafarers to continue to pursue this profession and to rank the factors by using the Fuzzy AHP method. There is a trend of many seafarers quitting sailing for shore jobs or other personal reasons, in the last decade. India is a significant supplier of Human resource to the Global Shipping Industry. Only a very less proportion of Indians are taking up Sailing as a Profession. These seafarers bring foreign exchange to India which in turn helps to strengthen the Indian Economy. But there is a predicted shortage of seafarers, especially officers soon (Ashok Srinivasan, 2021). Thus, if India can increase its supply of Officers in the Global Shipping market, it could dominate the Maritime Industry. Even though Chinese and Filipino Seafarers dominate the Global Shipping market, there is a matter of concern that if, these countries compromise on quality than quantity (Minghua Zhao and Maragtas S. V. Amante, 2014). The study used random convince sampling to collect the primary data by structured Questionnaire. The results of the study show that the seafarers value Intrinsic factors which are the very fundamental aspect of an Individual in modern society. Also, it is evident from the results that Work/life balance, Dependents, and Interpersonal relationships are the three most important factors which motivate seafarers. These are mutually connected.

Surprisingly, Overtime, Performance Appraisal, and Enterprise Environment are the least preferred Motivational factors in Global Weightage. These Sub-factors fall under Organizational Factors. Thus, we understand that Seafarers give the least preference to the Organizational Environment, where they are employed. This can be because most of the Seafarers are contract-based employees of a Shipping company. That is, they are associated with an Organization only till the tenure Onboard the vessel operated by a Shipping Company. Unlike other professions, sailors have the least association with an Organization. Most of the respondents have at least changed 2 Shipping Companies in their career. Most International shipping companies recruit Indian seafarers either through their Branch officer in India or by a Third Party manning Agency operating in India, which may supply manpower to different shipping companies. Therefore, there are chances that while employed on a ship, seafarers may be associated with more than one company or organization. As a result, the HR policies of all the companies involved in the contract will have a considerable effect on a seafarer, during a tenure or contract period. From an Organizational perspective, a decent salary, work safety, and upright promotion prospects can in the long run secure an employee's loyalty to an Organization. Even though salary traditionally was considered to be a prime motivational factor to choose a profession, the result of the study shows a contradiction to this belief. Nevertheless, this should be considered on

Most factors in Intrinsic Factors (IF) and Socio-cultural (SF) are not directly influenced by the policies of the Shipping Company, but it's driven by Individual needs and personal perspectives. Again, this may differ with different Nationalities also. Thus, the result obtained should be used to study through an Indian employee perspective, seeking employment in an International Shipping Company. This study intended to limit the scope of study to Indian seafarers and thus, there is room for expanded study in a Global perception, including other Nationals. The scope of the study is limited to Indian seafarers, due to resources, reach, and monetary limitations. However, there is a scope for further study in this aspect taking into account, different nationalities. To conclude, a good HR policy coupled with an employee retention strategy will to some extent encourage youngsters to choose this profession and to retain and encourage existing Officers to continue sailing. The results may be instrumental for taking suitable amendments to the HR policy of a Shipping Company to retain its veteran workforce to compete in the Global Maritime Market.

### **Authorship Contributions**

Concept design: Aby Amal, B.R. Totakura, Data Collection or Processing: Aby Amal, B.R. Totakura, Analysis or Interpretation: Aby Amal, S.A. Jalil, Literature Review: Aby Amal, B.R. Totakura, Writing, Reviewing and Editing: Aby Amal, B.R. Totakura.

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