Department of Digital Business
Journal of Artificial Intelligence and Digital Business (RIGGS)
Homepage: https://journal.ilmudata.co.id/index.php/RIGGS
Vol. 4 No. 2 (2025) pp: 1304-1315
P-ISSN: 2963-9298, e-ISSN: 2963-914X

Improving Ship Crew Job Satisfaction: The Role of Work Environment and Career Development

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Abstract

This study aims to examine the influence of the work environment and career development on the job satisfaction of Yihai ship crews under Raffles Ship Management Pte Ltd. Given the unique and challenging nature of maritime work, both factors are considered crucial in shaping crew satisfaction. A quantitative approach was employed using a survey method, with data collected from 35 ship crew members selected through purposive sampling. The data were analyzed using Structural Equation Modeling (SEM) with the SmartPLS 4.0 software. The results revealed that the work environment did not have a significant impact on job satisfaction. Conversely, career development showed a positive and significant influence. When assessed simultaneously, both variables contributed meaningfully to job satisfaction. These findings underscore the importance of prioritizing structured and ongoing career development programs to enhance employee welfare and satisfaction. For Raffles Ship Management Pte Ltd, this study provides valuable insights for formulating effective policies aimed at boosting the motivation, performance, and long-term retention of their ship crews.

Keywords: *work environment, career development, job satisfaction, ship crew, Raffles Ship Management*

1. Introduction

The shipping industry is a vital pillar of the global economy, with around 90% of world trade dependent on sea freight. However, the sector is also known for its unique challenges, such as harsh working conditions, limited mobility, high work pressure, and isolated living conditions. Crew members, as the frontline workers in shipping operations, face different working conditions compared to workers on land. Research shows that an unsupportive working environment can have a significant impact on crew members' physical, mental well-being, and job satisfaction. Raffles Ship Management PTE LTD, one of the leading ship management companies, faces similar challenges. The company's internal report in 2023 showed an increase in complaints from crew members regarding monotonous working conditions, fatigue due to long working hours, and inadequate facilities. Although the company has made several improvements, such as upgrading cabin facilities and regular training, job satisfaction levels remain stagnant at below 70%, far from the company's target of 85%. This indicates that there are still aspects of the work environment that have not been fully addressed. On the other hand, career development is often a neglected aspect in the shipping industry. Seafarers often feel that their career paths are limited, especially for certain positions such as junior seafarers who find it difficult to advance to senior levels without additional certification or sufficient experience. This is exacerbated by the fact that seafarers often spend months at sea, so they have limited access to additional training or certification. The maritime industry plays a pivotal role in the global economy, particularly in the transportation of goods and natural resources across international borders[1]. Seafarers, as the backbone of maritime operations, face unique occupational challenges that distinguish their work environment from land-based professions. Extended periods at sea, isolation from family, physical risks, and hierarchical organizational structures are common characteristics of the seafaring profession. In this context, job satisfaction becomes a vital concern, not only for individual well-being but also for ensuring crew performance, retention, and overall organizational efficiency.

Raffles Ship Management PTE LTD has tried to address this issue through online training programs and collaboration with shipping institutions to provide additional certification for seafarers. However, these programs face several obstacles, such as unstable internet access at sea and low participation of seafarers. In a 2023 survey, only 40% of seafarers felt that their company provided adequate career development opportunities. This dissatisfaction can reduce work motivation and increase turnover. Job satisfaction is one of the key factors

in creating employee productivity and loyalty. In the context of seafarers, job satisfaction not only affects their performance on board, but also operational safety. Previous research has indicated that a comfortable working environment and clear career development opportunities can increase job satisfaction. However, how these two factors simultaneously affect job satisfaction in the shipping industry still requires further study.

Previous study [2] found that a supportive work environment significantly contributes to crew stress levels, while career development opportunities play an important role in maintaining long-term work motivation. However, the study only focused on the physical work environment aspect without exploring psychosocial factors such as social support and relationships between ship crew members. Meanwhile, career development has been studied more in the context of land-based workers [3], [4], [5], so there is a research gap in understanding this dynamic in the shipping industry. The urgency of this study emphasizes the importance of the role of crew members in global shipping operations, understanding the factors that influence their job satisfaction is very important. The shipping industry is currently facing major challenges, including a shortage of qualified workers and high turnover rates. Raffles Ship Management PTE LTD, as a company operating on an international scale, needs a data-based strategy to improve the welfare and job satisfaction of crew members in order to maintain competitiveness in the market. By examining the influence of the work environment and career development on job satisfaction, this study can provide deeper insights to companies, as well as provide academic contributions in the field of human resource management, especially in the shipping sector.

Work environment and career development are two interrelated factors that significantly affect employees' attitudes and motivation. A conducive work environment fosters physical comfort, psychological safety, and effective communication, all of which contribute to increased job satisfaction [6]. For seafarers, the work environment encompasses not only the physical conditions aboard the ship but also interpersonal relationships, leadership styles, and support systems provided by the shipping company. On the other hand, career development reflects an individual's opportunities for personal growth, training, and advancement within an organization. When employees perceive clear paths for career progression, their commitment and satisfaction tend to increase [7]. Numerous studies in organizational behaviour have affirmed that both work environment and career development are strong predictors of job satisfaction across various industries [6], [8], [9]. However, empirical research focusing specifically on maritime personnel—particularly crew members employed by international shipping firms—is relatively scarce. Moreover, the cultural diversity, strict operational protocols, and transnational employment contexts of the shipping industry present additional layers of complexity that may influence the satisfaction of crew members differently than in traditional workplace settings. This study aims to examine the effect of work environment and career development on the job satisfaction of Yihai vessel crew members employed by Raffles Ship Management Pte Ltd. The company is known for operating with multinational crews, and understanding the factors that enhance their satisfaction is crucial for improving retention, performance, and compliance with international maritime labour standards. Based on the theoretical framework and prior empirical findings, the following hypotheses are proposed: H1: Work environment has a significant positive effect on job satisfaction. H2: Career development has a significant positive effect on job satisfaction. H3: Work environment and career development simultaneously influence job satisfaction. By investigating these relationships, this study contributes to the growing body of literature on human resource management in the maritime sector and offers practical insights for shipping companies seeking to enhance crew welfare and organizational outcomes.

Based on the explanation above, the author presents the conceptual framework of this research as shown in **Figure 1** below.

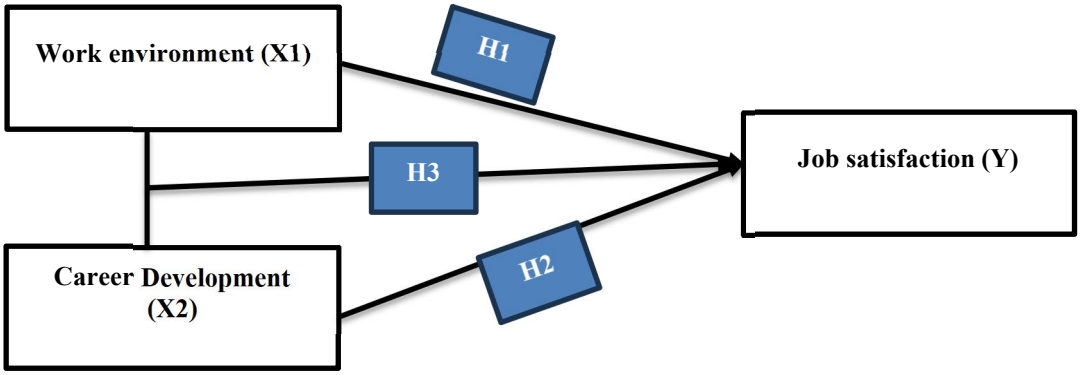

Figure 1. Conceptual Framework of Research

DOI: https://doi.org/10.31004/riggs.v4i2.665

2. Research Methods

This research is designed to answer the problems that have been formulated and the objectives to be achieved and to test the hypothesis [10].

2.1. Research Site and Times

The research location was carried out on the Yihai ship owned by Raffles Ship Management PTE LTD which is headquartered in Singapore. The research period lasted for three months, namely from January to March 2025.

2.2. Population, Sample and Sampling Techniques

The population in this study was all crew members working on the Yihai ship operating under the auspices of Raffles Ship Management PTE LTD. The number of crew members working on the ship was 35 people. Thus, the author used the saturated sampling method where the entire population of 35 people was used as a sample in this study. Saturated sampling refers to a condition where all members of the population are sampled because the population is considered small enough to be fully observed. This method is often used in quantitative or qualitative research if the number of population members is not too large [11]. According to Sugiyono [12], saturated samples are often used if the population is small or the researcher wants to ensure that no data is overlooked.

2.3. Data Types and Sources

There are two types of research, namely quantitative and qualitative research. This study uses quantitative research, namely systematic scientific research on relationships or influences developed using statistical models [13].

The data sources in this study consist of primary and secondary data:

1. Primary data, namely data obtained from observations, questionnaires and interviews. Primary data is obtained from observations obtained from processing questionnaire data and from interviews with the crew of the Yihai ship operating under the auspices of Raffles Ship Management PTE LTD.
2. Secondary data, namely data obtained from Raffles Ship Management PTE LTD, both obtained directly and obtained through data from previous research.

2.4. Method of collecting data

The data collection methods (instruments) used are observation, questionnaires, interviews and documentation.

1. Observation is a research activity by directly conducting observations in the field according to the objects observed related to consumer identity data as respondents.
2. A questionnaire is a list of statements distributed and given to informants to answer questions by checking the weight according to the category assumptions. The statement items in the questionnaire are based on relevant management theories and from the findings of previous researchers. Questions or statements in the questionnaire are measured using the Likert scale as follows: score/value 1 to 5 which means value 1 = strongly disagree, 2 = disagree, 3 = less agree, 4 = agree and 5 = strongly agree.
3. Interviews are questions and answers in this case the researcher confirms the research object.
4. Documentation is secondary data that has been processed and archived to strengthen the results of observations.

2.5. Data Analysis Methods

The data from the respondents' answers through the questionnaire were then processed and analyzed using Partial Least Square (PLS) analysis because the author found that this method is most suitable for testing complex path models and can handle data with small sample sizes and high multicollinearity [14], [15], [16]. Hypothesis testing was then carried out using Smart PLS software version 4.

2.6. Operational Definition of Variables

The author summarizes the operational definitions of the variables used to measure these variables in the following **table 1**.

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Table 1. Operational Definition of Research Variables

No	Variable	Indicator	References
1	Work environment (X1)	X1.1 Facility X1.2 Space Layout X1.3 Workplace Cleanliness X1.4 Safety at work X1.5 Relationship with superiors X1.6 Relationship with coworkers X1.7 Role Clarity X1.8 *Work-Life Balance*	[17]
2	Career Development (X2)	X2.1 Mutation X2.2 Selection X2.3 Placement X2.4 Education X2.5 Training	[17]
3	Job Satisfaction (Y)	Y1 Satisfaction with Salary Y2 Satisfaction with coworkers Y3 Satisfaction with working conditions Y4 Satisfaction with development opportunities Y5 Satisfaction with working conditions	[18]

3. Results and Discussions

3.1. Respondent Data Description

Based on the results of the study, it was found that out of 35 respondents who filled out the questionnaire, all (100%) were male. Based on the length of service. Employees who have worked for more than 3 years numbered 20 people or equivalent to 57.14% of the total respondents. Those whose working age was between 1 to 3 years, we found 9 people or equal to 25.71% of the total respondents. The remaining 6 people or equal to 17.14% whose duration of work at the company was less than 1 year. In terms of Education Level, this study found that out of 35 respondents who had Ant/Att education (equivalent to high school) were 17 respondents (48.57%). Those who had Ant/Att 3 education (equivalent to D3) were 6 people (17.15%). Those who had Ant/Att 2 education (equivalent to D4 / S1) were 10 people (28.57%). The remaining 2 people (5.71%) were educated Ant / Att 1 (equivalent to S2).

Finally, we also examined respondents based on their monthly income level. The results of the study found that those who earned between $ 750-1500 were 17 people (48.57%). Those who earned between $ 1,501 to 2,750 were found to be 5 people (14.29%). Those who earned between $ 2,800 to $ 3,700 per month were 5 people (14.29%). Those who earned between $ 3,800 to $ 6,700 per month were 6 people (17.14%). The rest, those with the highest income on the ship who were above $ 6,700 per month were 2 people (5.71%).

For more details, we present our respondent data in **Table 2** below.

Table 2. Respondent Characteristics (N=35)

Category	Subcategory	Frequency	Percentage (%)
Gender	Male	35	100.00%
	Female	0	0.00%
Length of Service	< 1 year	6	17.14%
	1 – 3 years	9	25.71%
	> 3 years	20	57.14%
Educational Level	ANT/ATT (High School)	17	48.57%
	ANT/ATT 3 (Diploma - D3)	6	17.15%
	ANT/ATT 2 (Bachelor - D4/S1)	10	28.57%
	ANT/ATT 1 (Master - S2)	2	5.71%

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Category	Subcategory	Frequency	Percentage (%)
Monthly Income (USD)	$750 – $1,500	17	48.57%
	$1,501 – $2,750	5	14.29%
	$2,800 – $3,700	5	14.29%
	$3,800 – $6,700	6	17.14%
	> $6,700	2	5.71%

Source: Primary data processed (2025)

3.2. SEM Analysis with Smart-PLS

Partial Least Square (PLS) is a Structural Equation Modeling (SEM) equation model based on components or variants. According to Ghozali & Latan [19], PLS is an alternative approach that shifts from a covariance-based SEM approach to a variance-based one. Covariance-based Structural Equation Modeling (SEM) generally tests causality/theory while PLS is more of a predictive model. PLS is a powerful analysis method because it is not based on many assumptions, for example, data must be normally distributed, samples do not have to be large.

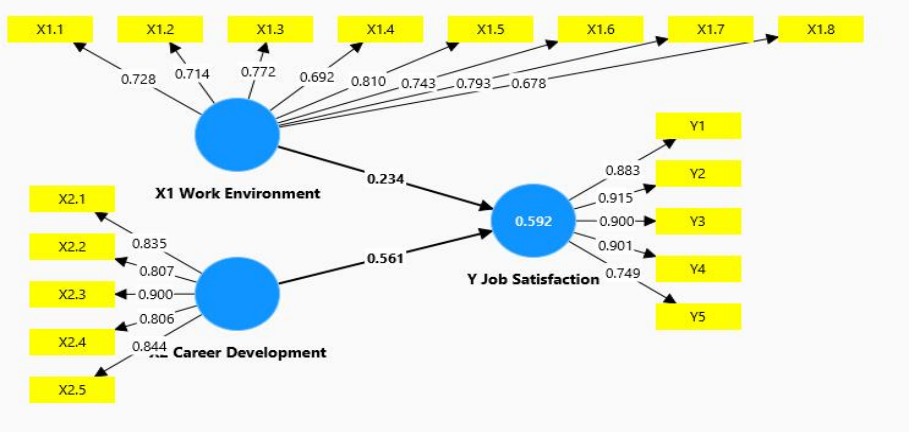
Smart-PLS software was created as a project at the Institute of Operation Management and Organization (School of Business) University of Hamburg, Germany. Smart-PLS uses Java Web start Technology [13]. SEM model analysis with the Smart PLS program consists of several stages, including:

3.2.1 Outer Model Test

The outer model test is conducted to ensure that the measurement model used is suitable for measurement (valid and reliable). This Outer Model analysis is to determine the relationship between latent variables and their indicators, or it can be said that the outer model defines how each indicator relates to its latent variables. Three measurement criteria are used in the data analysis technique using SmartPLS to assess the model. The three measurements are Convergent validity, Reliability, and Discriminant Validity [20].

A. Convergent Validity Test

The convergent validity value is the factor loading value on the latent variable with its indicators. The convergent validity value is used to determine the validity of a construct. According to the general rule (rule of thumb), the indicator factor loading value ≥ 0.7 is said to be valid. However, in the development of new models or indicators, the factor loading value between 0.5 - 0.6 is still acceptable [14].



Source: Primary Data Processed (2025)

Figure 2. Convergent validity value (outer loading value)

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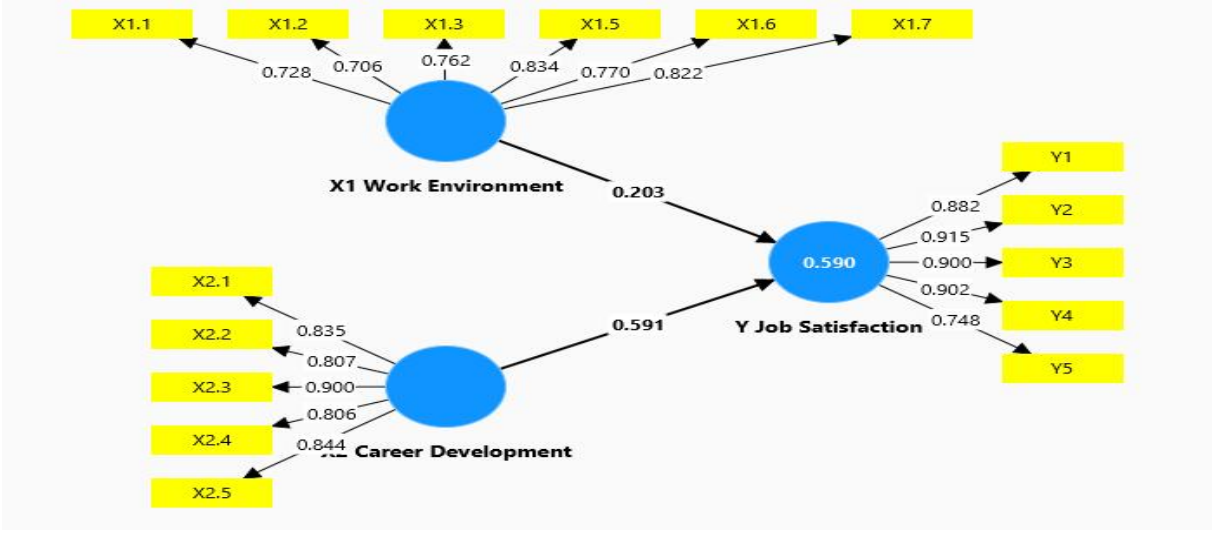
From the image above, it can be seen that there are 2 invalid measurement items, namely items X1.4 and X1.8. Apart from these two items, all items of factor loading values (outer loading) are above 0.7 [20]. So, these items are declared valid. And the author removed the 2 invalid items from the measurement indicators for the X1 variable. So for the new X1 measurement item, there are only 6 indicators, namely: X1.1, X1.2, X1.3, X1.5, X1.6, X1.7. And here is the image of the Convergent Validity model after we removed the two invalid indicators.



Source: Primary Data Processed (2025)

Figure 3. Convergent validity value Valid Item (outer loading value)

The results of the new validity test are presented in the following table:

Table 3. Results of Item Validity Test After Reducing 2 Indicators (Convergent Validity)

Variable	Item	Outer Loading Value	Outer Loading Value Limits	Decisions
Work Environment (X1)	X1.1	0,728	0,7	Valid
	X1.2	0,706	0,7	Valid
	X1.3	0,762	0,7	Valid
	X1.5	0,834	0,7	Valid
	X1.6	0,770	0,7	Valid
	X1.7	0,822	0,7	Valid
Career Development (X2)	X2.1	0,835	0,7	Valid
	X2.2	0,807	0,7	Valid
	X2.3	0,900	0,7	Valid
	X2.4	0,806	0,7	Valid
	X2.5	0,844	0,7	Valid
Job Satisfaction (Y)	Y1	0,882	0,7	Valid
	Y2	0,915	0,7	Valid
	Y3	0,900	0,7	Valid
	Y4	0,902	0,7	Valid
	Y5	0,748	0,7	Valid

Source: Primary data processed (2025)

From **Table 3** above, it can be seen that all item loading factor values (outer loading) are above 0.7. So these items are declared valid [14], [16], [20].

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B. Reliability Test (Composite Reliability and Cronbach Alpha) and Average Variance Extracted (AVE) Test

According to Haryono [16], the requirements used to assess reliability are that the Chronbach's Alpha and Composite Reliability values must be greater than 0.70 for confirmatory research and a value of 0.60 - 0.70 is still acceptable for exploratory research. The following is the analysis data from the Cronbach alpha test, Composite reliability, and AVE values:

Table 4. Evaluation of Measurement Models

Construct	Cronbach's Alpha	CR	AVE
Work Environment (X1)	0,864	0,898	0,595
Career Development (X2)	0,895	0,922	0,704
Job Satisfaction (Y)	0,921	0,940	0,760

Source: Primary Data Processed (2025)

The second approach determines the average variance extracted (AVE) value for each variable with the objective to measure discriminant validity. Discriminant validity is said to be good if the AVE value of a variable is equal to or greater than 0.500, in accordance with established criteria [20]. In **Table 4** it can be seen that the AVE value for all variables includes Work environment with a value of 0.595, Career Development shows a value of 0.704, the AVE Job satisfaction value is 0.760. This confirms that each variable shows good discriminant validity, indicating that they are distinct constructs that effectively measure different aspects of this research.

Table 5. Discriminant Validity with the Fornell and Larcker Approach

Variable	Work Environment	Career Development	Job satisfaction
Work Environment	**0,772**		
Career Development	0,737	**0,839**	
Job Satisfaction	0,697	0,760	**0,872**

Source: Primary Data Processed (2024)

Discriminant validity can be assessed by comparing the correlation values among latent variables with the square root of the Average Variance Extracted (AVE). According to the Fornell-Larcker Criterion, the AVE square root should exceed the correlation coefficients between latent constructs [14]. As shown in Table 4, this condition is satisfied, indicating that the AVE square roots are greater than the inter-construct correlations. Therefore, each item in the research instrument is deemed reliable and suitable for measurement purposes.

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Furthermore, to assess the reliability of the research instrument, both Cronbach's alpha and composite reliability values were calculated for all constructs. An instrument is regarded as reliable if both Cronbach's alpha and composite reliability are equal to or greater than 0.700 [14]. As illustrated in Table 5, all variables in this study meet or surpass this threshold, thereby confirming the reliability of the instrument used.

3.2.2 Structural Model Test

The internal structural model in this research is evaluated using the R-squared (R^2) value, which reflects the level of variance explained in each endogenous latent variable. The first step involves examining the R^2 values for all endogenous constructs. These values help determine the extent to which exogenous latent variables account for variations in the endogenous constructs and whether such influence is statistically meaningful [14]. According to Hair et al. [20], an R-squared value above 0.670 indicates a substantial effect, values between 0.330 and 0.670 suggest a moderate effect, while values ranging from 0.190 to 0.330 reflect a weak influence.

Table 6. R-Square Value

	R-Square	R-Square Adjusted
Job Satisfaction	0,590	0,565

Source: Primary Data Processed (2025)

The R-square value for the Job Satisfaction variable is 0.590, indicating that 59% of the variance in Job Satisfaction can be explained by the Work Environment and Career Development constructs. The remaining 41% is attributed to factors not examined in this study. Based on the R-square classification by Ghozali [14], values of 0.67, 0.33, and 0.19 represent strong, moderate, and weak levels of explanatory power, respectively. Therefore, the result suggests that the model exhibits a moderate level of influence.

Subsequently, the effect size (F-square) was computed to assess whether the exogenous latent variables exert a meaningful influence on the endogenous latent variables. As stated by Hair et al. [21], an F-square value of 0.02 indicates a small effect, 0.15 reflects a moderate effect, and 0.35 denotes a large effect. The detailed output of these calculations is presented in **Table 7**.

Table 7. F-Square Value

Variable	Work Environment (X1)	Career Development (X2)	Job Satisfaction (Y)
Work Environment (X1)			0,030
Career Development (X2)			0,254
Job Satisfaction (Y)			

Source: Primary Data Processed (2025)

Based on the output above, the results can be interpreted as follows: The Work Environment variable has an F-square value of 0.030 in relation to Job Satisfaction, indicating a weak or minor influence. Meanwhile, the Career Development variable exhibits an F-square value of 0.254 on Job Satisfaction, which suggests a strong or substantial effect.

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3.2.3 Hypotheses Test

Hypothesis testing in this study is conducted using the Bootstrapping feature of Smart-PLS 4 software. In the fields of economics and management, it is widely accepted that the significance level should fall within the range of 5% to 10%. A hypothesis is considered supported when the T-statistic exceeds the threshold value of 1.960 and the significance level, indicated by the P-value, is equal to or less than 0.050. This implies a significant relationship between the exogenous and endogenous variables. Conversely, when the P-value exceeds 0.050 and the T-statistic falls below 1.960, the effect is regarded as insignificant, indicating no meaningful relationship between the exogenous and endogenous constructs [14], [16], [20].

Table 8. Path Coefficient and Hypotheses Testing

Hypothesis	Relation	Original Sample	Mean	SD	T-Statistics	P-Values	Description
H1	WE → JS	0,203	0,216	0,257	0,788	0,431	**Rejected**
H2	CD → JS	0,591	0,592	0,219	2,691	0,007	**Supported**

Note: WE = Work Environment, CD = Career Development, JS = Job Satisfaction.
Source: Primary Data Processed (2025)

Referring to the research findings presented in Table 8, the following interpretations can be made: The original sample value of 0.203 suggests a positive direction of influence; however, the P-value of 0.431 exceeds the 0.050 significance threshold, and the T-statistic value of 0.788 falls below the critical value of 1.960. These results indicate that the relationship between the Work Environment and job satisfaction among the crew of MV. Yihai is not statistically supported. Consequently, Hypothesis 1, which posits that the Work Environment affects job satisfaction, is not accepted.

Regarding the second hypothesis, which examines the potential relationship between Career Development and job satisfaction of the MV. Yihai crew, the original sample value of 0.591 indicates a substantial influence. The P-value of 0.007 is well below the 0.050 threshold, and the T-statistic of 2.691 exceeds the critical value of 1.960. These findings confirm a positive and significant effect of Career Development on job satisfaction, thereby supporting Hypothesis 2.

3.3 Discussion

3.3.1 The Influence of the Work Environment on MV. Yihai Crew Job Satisfaction

To answer the formulation of the problem and the first hypothesis, it can be observed from the results of the path analysis in table 12. Based on the results of the study, it was found that the work environment had no effect on the job satisfaction of the Yihai crew. This is because the t-count value <t table (0.788 <1.96) and the P values> 0.05 (0.431> 0.05), so the hypothesis that the work environment has a positive and significant effect on the job satisfaction of the Yihai crew can be rejected.

Thus, the first hypothesis stating that "the work environment has a positive and significant effect on the job satisfaction of the Yihai crew" is not proven and can be rejected. This is in contrast to the previous study [18], [22] which found a positive effect of the work environment on employee job satisfaction.

Although in theory a good work environment can increase employee job satisfaction, the different work environments where the crew are required to work on board and in the middle of the ocean seem to affect the results of this study. The insignificant influence of the work environment on the job satisfaction of Yihai ship crews in this study may be due to the safety factor and the crew's anxiety about their safety (X1.4) in working also affects their level of satisfaction with their work. This can be seen from table 3 Descriptive statistical

DOI: https://doi.org/10.31004/riggs.v4i2.665

analysis which shows the lowest mean value (3.31). In addition, many ship crews feel unable to divide their time between work and family (X1.8). This is understandable considering the location of the work that requires the ship crew to be far out at sea and far from their families. It can be seen from table 3 the respondent's answer which has the second lowest mean value (3.46) Empirical facts from field research show that the ship crew feel compatible and satisfied with their colleagues and superiors in the field. From the results of interviews with ship crews in the field, Yihai's strong and positive corporate culture can create a sense of togetherness and satisfaction among the ship crew, thereby minimizing the negative impacts of a less-than-ideal work environment. The implication of the results of this study is that a conducive work environment does not necessarily increase the job satisfaction of the Yihai ship crew. Companies can continue to strive to improve the sense of security of ship crews to avoid the risks of work that are different in characteristics from jobs on land. In addition, long working hours at sea and away from family can also be minimized by companies by implementing an even shift division for all ship crews working in the company.

3.3.2 The Effect of Career Development on MV. Yihai Crew Job Satisfaction

Based on the findings of this study, it is evident that Career Development exerts a positive and significant influence on the Job Satisfaction of the MV. Yihai crew. This conclusion is supported by the statistical evidence, where the T-value (2.691) exceeds the critical threshold of 1.960 and the P-value (0.007) is below the significance level of 0.05. Consequently, the hypothesis stating that Career Development positively and significantly affects job satisfaction is accepted. These findings are further corroborated by the path analysis results presented in Table 12. The results align with previous studies [6], [23], which also demonstrated a significant impact of career development on employee job satisfaction. Insights from the questionnaire responses (refer to Table 4) indicate that the majority of Yihai crew members perceive that job placements within their work environment align well with their qualifications (Indicator X2.4), which is reflected in the highest mean score of 4.03 among all career development indicators. Furthermore, a substantial number of crew members expressed satisfaction with the selection process for specific positions (X2.2), as evidenced by the second-highest mean value of 3.97. Regular training programs conducted by the company also received a strong mean score of 3.91, highlighting their contribution to enhancing job satisfaction. However, Indicator X2.4, which measures the extent to which the company provides educational opportunities to improve employee skills and competencies, received the lowest mean value (3.57). This suggests an area where the company can enhance its support for crew members—particularly by offering opportunities for further education in maritime-related fields. Such initiatives would not only foster individual development but also contribute to overall organizational performance. In summary, the implication of these findings is clear: career development initiatives play a pivotal role in enhancing job satisfaction among crew members. Therefore, it is recommended that the company actively identify and expand career advancement opportunities for its personnel. By doing so, the organization can expect improvements in both employee satisfaction and performance, which in turn will positively affect the company’s overall productivity and success in the long term.

3.3.3 The Influence of Work Environment and Career Development Simultaneously on Yihai Ship Crew Job Satisfaction

Job satisfaction is an important aspect in the workplace, especially for crew members who work in unique and challenging environments. The work environment and career development opportunities have a significant impact on the level of job satisfaction of Yihai crew members. The physical condition of the ship, such as cleanliness, comfort, and availability of facilities, greatly affects the quality of life of the crew members while on duty. A clean, comfortable ship equipped with adequate facilities will improve the morale and productivity of the crew members. Flexible work schedules and sufficient rest time will help the crew members maintain a balance between work and personal life. Overly tight work schedules and limited rest time can cause fatigue, stress, and decreased performance. In addition, harmonious relationships between fellow crew members, as well as between crew members and officers and management, are very important to create a positive work atmosphere. Good relationships will increase a sense of solidarity and teamwork, and reduce conflict. Ensuring safety and security while on duty is very important for the crew members. Shipping companies must provide adequate safety equipment and conduct regular training to reduce the risk of accidents. In terms of career development, clear and open promotion opportunities will motivate the crew members to continue to improve their performance and competence. Shipping companies must have a transparent and fair career system. In addition, ongoing training and development programs will help crew members improve their skills and knowledge. Training that is relevant to job requirements will increase self-confidence and productivity. Companies also need to note that job rotation to various positions will provide crew members with broader experience and prepare them to occupy higher

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positions. Equally important is the support from superiors and the company in career development will be very meaningful for crew members. The company must provide mentoring and coaching to help crew members reach their maximum potential. A good working environment and adequate career development opportunities will have a positive impact on Yihai crew members' job satisfaction. Crew members who are satisfied with their jobs tend to have higher productivity, lower absenteeism rates, and higher loyalty to the company. Conversely, a poor working environment and minimal career development opportunities can lead to decreased job satisfaction, stress, and high personnel turnover.

4. Conclusion

The findings of this study reveal that the Work Environment does not significantly influence the Job Satisfaction of Yihai ship crew members. This result is rather unexpected, as it contrasts with a number of previous studies that have demonstrated a positive relationship between these two variables. Given this discrepancy, it is recommended that the company critically reassess the current human resource management strategies in place. Attention should be redirected toward identifying and optimizing other, potentially more influential, determinants of job satisfaction. Moreover, further research is essential to validate these findings and to explore alternative factors that may more accurately account for variations in crew members' job satisfaction levels. Conversely, the study confirms that Career Development has a positive and statistically significant effect on the job satisfaction of Yihai ship crews. This suggests that opportunities for professional growth and advancement are key contributors to enhancing job satisfaction. Crew members report greater fulfilment when the organization invests in their skill enhancement, knowledge development, and role expansion. Accordingly, Yihai Shipping Company should treat career development not merely as an HR function, but as a strategic, long-term investment in its workforce. Effective career development initiatives are likely to yield improved productivity, greater employee loyalty, and stronger retention rates. To capitalize on this, the company must implement structured training and development programs aligned with both the operational demands and the career aspirations of its crew. Such initiatives will not only build competence and self-confidence but also encourage innovation and motivation among employees. Establishing transparent and structured career pathways—such as a clear career map outlining potential advancement routes—will further empower crew members to pursue their professional goals with clarity and purpose. Furthermore, the combined effect of the Work Environment and Career Development was found to significantly influence Job Satisfaction, indicating that both factors are interrelated and mutually reinforcing in fostering a positive and productive work atmosphere. The physical condition of the ship, quality of interpersonal relationships, access to promotion, and availability of training programs all contribute meaningfully to job satisfaction. These findings underscore the importance of a holistic and integrated approach in enhancing employee satisfaction. Yihai Shipping Company is encouraged to pursue comprehensive improvements that encompass both the physical and psychosocial dimensions of the work environment, alongside sustained investments in career development opportunities. Ultimately, viewing these dual strategies as long-term investments will contribute to building a more engaged, capable, and high-performing workforce.

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