The Effect of Ship Crew Competence, Towing Premium Compensation and Ship Crew Retention On Ship Crew Performance Case Study at PT Varia Usaha Lintas Segara

Tiar Achdian
Universitas Airlangga, Indonesia
Email: tiar2966@gmail.com

*Correspondence: tiar2966@gmail.com

ABSTRACT	
Keywords: Ship crew competence; towing premium compensation; ship crew retention	The purpose of this research to identify the effect of ship crew competence, towing premium compensation and ship crew retention on ship crew performance case study at pt varia usaha lintas segara. This study used quantitative methods. The analysis method used in this study is multiple linear regression analysis method. This method is used to analyze the effect of ship crew competence, financial towing premium compensation and ship crew status on the performance of PT Varia Usaha Lintas Segara's crew. The conclusion of this study shows a significant positive influence of towing premium compensation, ship crew competence, and ship crew retention on ship crew performance at PT Varia Usaha Lintas Segara. Multiple linear regression analysis shows that towing premium compensation has a significant positive influence on crew performance, along with increased crew retention. Furthermore, the improved competence of ship crews also contributes significantly positively to their performance, increasing crew retention.

Introduction

Sea freight transportation is one of the modes of transportation that has a very important role in supporting the growth of the logistics industry to rotate and connect the distribution of goods in today's global business activities (Azanza, Moriano, Molero, & Lévy Mangin, 2015). In the distribution of dry bulk cargo, sea transportation modes that are widely used in Indonesia are types of tug boats and barges that can reach small ports that have low port drafts (Azeez, 2017).

PT. Varia Usaha Lintas Segara is a shipping company engaged in dry bulk sea transportation that can also reach remote areas that are difficult to access by other modes of transportation (Butarbutar & Inrawan, 2015). PT Semen Indonesia (Persero) Tbk as the largest cement company in Indonesia which has many cement factories spread across various regions of Indonesia, where to distribute its products to all corners of Indonesia requires an efficient mode of sea transportation and can reach up to the smallest distribution channels so as to ensure the availability of national cement needs. As is the

case with other modes of transportation, sea freight also has risks and challenges in its operation (Dewi & Riana, 2018).

Human Resource Management (HR), in this case ship crew, in shipping companies plays an important role for the smooth and successful operation of shipping companies. Optimization of ship assets is very dependent on the management of human resources and crew work so that crewing management is important to do with good management principles (Warouw & Lapian, 2015). The performance of the ship crew is observed and assessed based on the results of work in quality and quantity achieved by the ship crew in carrying out their duties according to the responsibilities given. Performance can be influenced by various factors that exist both from internal and external factors. Some factors that can affect the performance of the ship's crew include career path, towing premium compensation and crew status (Lawler & Porter, 2017).

The results of research that have been conducted show that the competence of the ship crew has a positive and significant effect on the performance of the ship crew (Msengeti & Obwogi, 2015). This shows that the better the career path system (mutation and promotion) within the company, the better the performance of the ship's crew. This is because a good career path system will trigger job satisfaction for ship crews, where job satisfaction will encourage ship crews to continue to perform well. (Samudra, Rahardjo, & Mukzam, 2014) suggest that direct and indirect financial towing premium compensation has a positive and significant effect on the performance of the ship's crew. This shows that the better the towing premium compensation system in a company, the better the performance of the company's ship crew.

The results of research conducted by (Suciaty & Rahmawati, 2014) show that financial towing premium compensation has a significant influence on the performance of ship crews. (Samudra et al., 2014) found that direct and indirect financial towing premium compensation has a positive and significant effect on the performance of the ship's crew. The results of research conducted by (Wibowo, Utomo, & Aditya, 2023) also show that financial towing premium compensation has a positive and significant effect on the performance of ship crews through job satisfaction. This shows that the better the financial towing premium compensation system in a company, the better the performance of the company's ship crew. This is because a good financial towing premium compensation system will trigger job satisfaction for ship crews, where job satisfaction will encourage ship crews to continue to perform well (Lisdayanti, Lie, Butarbutar, & Wijaya, 2015).

This study aims to uncover the relationship and influence between competence, towing premium compensation, and crew retention on their performance. First, this study will evaluate whether the competence of the ship's crew has a relationship and impact on their performance (Prasetya & Suryono, 2014). Second, this study will investigate whether towing premium compensation also has a similar relationship and impact on the performance of the ship's crew. Furthermore, this study will explain whether the retention of ship crews has an association and impact on their performance (Pratiwi & Sriathi, 2017).

The benefits of this study are significant. For researchers, this research can deepen academic knowledge in the field of ship crew management and improve their analytical and methodological skills (Putra & Rahyuda, 2019). For companies, research results can provide improvement and innovative ideas for the development of human resource management with continuous improvement. For the academic community, this research can contribute to the advancement of science, enrich the knowledge base in the academic

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sphere, and provide insight to the general public. In addition, this study also provides benefits for future research by providing direction to continue and improve previous research (Ripaldi, Marnis, & Restu, 2017).

Research Methods
Types of Research
This study used quantitative methods. The analysis method used in this study is multiple linear regression analysis method. This method is used to analyze the effect of ship crew competence, financial towing premium compensation and ship crew status on the performance of PT Varia Usaha Lintas Segara's crew.
Data Sources and Types
This study used primary data sourced from the results of questionnaires that disseminated to respondents, in this case the ship's crew.
Population and Research Sample
The population of this study was the entire crew of PT Varia Usaha Lintas Segara which amounted to 55 people.

(1)

$$n = \frac{N}{1 + Ne^2}$$

Information:
n = Sample size
N = Size of opulation
e = Tolerable allowance for sampling inaccuracies/errors

Results and Discussion
Overview of PT Varia Usaha Lintas Segara
PT Varia Usaha Lintas Segara was established in 1997 with an initial mission as a subsidiary of PT Semen Indonesia (Persero) Tbk specifically for the distribution of inbound and outbound cargo via sea. The Company's shares are owned by PT Semen Indonesia Logistik 70% and PT. Marine Business Varia 30%. The company's 2023 work plan will focus on the marine transportation logistics business with the concept of consolidator cargo for the distribution of cement and building materials. Companies in the logistics sector will act as cost efficiency through efficient logistics service providers for PT Semen Indonesia (Persero) but still pay attention to competitive profits for customers outside the group. As for the distribution business, it has a task as trading cement commodities and other building materials.
Description of Respondents
Before entering the testing stage, a description of the characteristics of respondents will first be presented with the aim of displaying relevant information contained in the data. Descriptive demographics of respondents provide an overview of the characteristics of respondents which shows the percentage of age, length of work and last education of the crew of PT Varia Usaha Lintas Segara.
Description of respondents by age
Here is the data of respondents by age:

Table 2 Description of respondents by age

Age (Years)	Frequency	Percentage
< 25 years	2	1%
25 – 30 years	24	12%

30 – 35 years	39	20%
35 – 40 years	29	15%
> 40 years	99	51%
TOTAL	193	100%

Source : Processed primary data, 2023

Based on table 2, it was obtained that the age of the crew of the PT Varia Usaha Lintas Segara ship which was sampled in the study had age characteristics of around 25-30 years as many as 24 people (12%), then the age of ≥ 40 years as many as 99 people (51%), then the age of 30-35 years as many as 39 people (20%) and the age of < 25 years as many as 2 people (1%). So it can be concluded that ship crews with a lifespan of > 40 years more dominate.

Description of respondents based on length of work

Based on the research data, the characteristics of research respondents based on length of work were obtained as follows:

Table 3 Description of respondents based on length of work

Period of Service	Frequency	Percentage
< 5 years	5	9%
5 – 15 years	24	43%
16 – 25 years	20	35%
> 25 years old	6	13%
Total	55	100 %

Source : Processed primary data, 2023

Based on table 3, it can be seen that respondents with a length of working < 5 years as many as 5 people with a percentage of 9%, then respondents with a length of work of 5-15 years as many as 24 people or around 43%, then respondents with a working period of >25 years as many as 6 people or 13%. So it can be concluded that respondents with a working period of 5-15 years are the most dominant.

Description of respondents based on recent education

Based on the research data, the characteristics of research respondents based on the latest education were obtained as follows:

Table 4 Description of respondents based on recent education

Final Education	Frequency	Percentage
SMA	17	31%
DIPLOMA	7	12%
S1	30	55%
S2	1	2%
Total	55	100 %

Source : Processed primary data, 2023

Based on table 4, it is known that respondents with the last high school education were 17 people or 31%, then respondents with the last Diploma education were 7 people or 12%, then respondents with the last S1 education were 30 people or 55%, the last with the last S2 education was 1 person or 2%. Based on the table above, it can be concluded that respondents with the last S1 education are the more dominant.

Variable Description

Descriptive analysis of variables aims to find out the picture of respondents' answers to variables. The variables in this study consist of variables of ship crew

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competence (X1), towing premium compensation (X2), ship crew retention (X3) and ship crew performance (Y).

This study used the Likert scale for respondent answers with the highest score of each question item being 5 and the lowest score of each question item being 1. To find out the category of each mean, it can be seen from the range. Range or also called range is the difference between the data with the largest value and the smallest value data. The range of distribution of research variables can be seen in table 5 as follows:

Table 5 Variable Distribution Range

Variable Distribution Range	Interpretation
1 – 1,99	**Less**
2 – 2,99	**Keep**
3 – 3,99	**Strong**
4 – 4,99	**Very Powerful**

Distribution of Respondents' Answers on Crew Competency (X1)

The indicators of the variable Competence of ship crew (X1) are divided into 5 indicators, namely Education, Training, Mutation, Promotion, Length of Service. The results of the description of respondents' answers to the variables of ship crew competence are as follows:

Table 6 Variable Frequency Distribution of Crew Competency (X1)

Responden tentang Pengembangan Karir (X1)				
Item	SS	S	TS	STS
X1.1	59	117	16	1
X1.2	64	110	17	2
X1.3	38	110	37	8
X1.4	67	105	17	4
X1.5	46	96	48	3

Source: Processed primary data, 2023

Based on table 6, the total of the most respondents' answers is indicator 4 of 4.13, which is a factor that greatly affects the competence of ship crew on ship crew retention is an indicator of promotion. So it can be said that the promotion indicator has a very strong answer.

Distribution of Respondents' Answers on Towing Premium Compensation (X2)

The indicators of the towing premium compensation variable (X2) are divided into 4 indicators, namely fair salary and wages, incentives in accordance with sacrifices, benefits that meet expectations, adequate facilities. The results of the description of respondents' answers to the towing premium compensation variable are as follows:

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Table 7 Variable Frequency Distribution of towing premium compensation (X2)

Responden tentang Kompensasi (X2)				
Item	SS	S	TS	STS
X2.1	28	138	20	7
X2.2	32	122	30	9
X2.3	35	120	33	5
X2.4	31	127	30	5

Source: Processed primary data, 2023

Based on table 7, the total of the most respondents' answers is indicator 4 of 11, which is a factor that greatly affects the compensation of towing premiums for ship crew retention is an indicator of adequate facilities. So it can be said that the indicator of adequate facilities has a very strong answer.

Distribution of Respondents' Answers on Crew Retention (X3)

The indicators of the ship Crew Retention variable (X3) are divided into 3 indicators, namely organizational career opportunities, awards given, ship crew relations. The results of the description of respondents' answers to ship crew retention variables are as follows:

Table 9 Variable Frequency Distribution of Ship Crew Retention (X3)

Responden tentang Retensi Karyawan (X3)				
Item	SS	S	TS	STS
X3.1	40	130	20	3
X3.2	36	122	34	1
X3.3	40	134	17	2
X1.4	59	127	7	0

Source: Processed primary data, 2023

Based on table 4.9, the total of the most respondents' answers is indicator 1 of 4.22, namely the factor that greatly affects the retention of ship crews is an indicator of organizational career opportunities. So it can be said that the indicators of organizational career opportunities have very strong answers.

Test Data Analysis

Validity Test

The validity test serves to measure the validity or validity of a questionnaire. A questionnaire is said to be valid if the statements in the questionnaire can reveal something that will be measured by the questionnaire (Ghozali, 2016). The validity test can be measured by comparing the calculated r value with the table r. In this study the

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number of samples (n) = 88, df = 88-2=86 and significance of 0.05 was obtained from r table = 0.2096. If the count r is greater than the table r and is positive, then the question or indicator can be declared valid. The validity test results for the towing premium compensation variable (X1) are as follows:

Table 10 Validity Test Results of Ship Crew Competency Variables (X1)

Statement items	R-count	R-table (a=5%,df=86)	Information
1	0,615	0,2096	Valid
2	0,690	0,2096	Valid
3	0,637	0,2096	Valid
4	0,778	0,2096	Valid

Source: Processed primary data, 2023

Based on the calculation results in table 10, for the validity test on the towing premium compensation variable (X1) consisting of 4 statement items, each question item has an R-count value (R pearson) greater than the r-table with a=0.05 and df=86 which is 0.2096 so that it can be concluded that the statement items on the towing premium compensation variable are valid. Furthermore, the validity test results for the ship crew competency variable (X2) are as follows:

Table 11 Variable Validity Test Results of Towing Premium Compensation (X2)

Statement items	R-count	R-table (a=5%,df=86)	Information
1	0,551	0,2096	Valid
2	0,664	0,2096	Valid
3	0,615	0,2096	Valid
4	0,549	0,2096	Valid
5	0,746	0,2096	Valid

Source: Processed primary data, 2023

Based on the calculation results in table 11, for the validity test on the ship crew competency variable (X2) consisting of 5 statement items, each question item has an R-count value (R pearson) greater than the rtable with a = 0.05 and df = 86 which is 0.2096 so that it can be concluded that the statement items on the ship crew competency variable are valid. Furthermore, the results of the validity test for the job satisfaction variable (X3) are as follows:

Table 12 Validity Test Results of Ship Crew Retention Variables (X3)

Statement items	R-count	R-table (a=5%,df=86)	Information
1	0,617	0,2096	Valid
2	0,617	0,2096	Valid
3	0,697	0,2096	Valid
4	0,620	0,2096	Valid
5	0,688	0,2096	Valid

Source: Processed primary data, 2023

Based on the calculation results in table 12, for the validity test on the job satisfaction variable (X3) consisting of 5 statement items, each question item has an R-count value (R pearson) greater than the r-table with a=0.05 and df=86 which is 0.2096 so that it can be concluded that the statement item item on the job satisfaction variable is valid. Furthermore, the validity test results for the ship crew retention variable (Y) are as follows:

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Table 13 Validity Test Results of Ship Crew Retention Variable (Y)

Statement items	R-count	R-table (a=5%,df=86)	Information
1	0,646	0,2096	Valid
2	0,800	0,2096	Valid
3	0,846	0,2096	Valid

Source: Processed primary data, 2023

Based on the calculation results in table 13, for the validity test on the ship crew retention variable (Y) consisting of 3 statement items, each question item has an R-count value (R pearson) greater than the r-table with a = 0.05 and df = 86 which is 0.2096 so that it can be concluded that the statement item item on the ship crew retention variable is valid.

Reliability Test

Reliability test serves to measure a questionnaire which is an indicator of variables. A questionnaire is considered reliable if a person's answers to statements are consistent or stable over time (Ghozali, 2016). The following are the results of reliability tests in this study:

Table 14 Reliability Test Results

Variable	Cronbach's Alpha Value	Information
Towing premium compensation	0,605	Reliable
Competence of the ship's crew	0,607	Reliable
Crew Retention	0,648	Reliable
Crew Performance	0,651	Reliable

Source: Processed primary data, 2023

From the results of table 14, it can be concluded that the questionnaire of each variable has a value of Cronbach's alpha > 0.6 so that it can be interpreted that the questionnaire variables Compensation for towing premiums, Competence of ship crew, Retention of ship crew in this study is declared reliable or reliable.

Classical Assumption Test

The classical assumption is that a vital step is carried out in the regression analysis process. If there are no symptoms, classical assumptions are expected to produce reliable regression models in accordance with the BLUE rule (Best Linear, Unbiased Estimator, which produces regression models that are unbiased and reliable as estimators (Ghozali, 2008).

Normality Test

The normality test serves to test one of the basic assumptions of multiple regression analysis, namely that independent and dependent variables must be normally or close to normal (Ghozali, 2011). In this study the normality test used Kolmogorov Smirnov test, histogram graph and normal p-plot test of regression standardized residual with the help of SPSS software.

The hypothesis in the normality test is as follows:

H0: The sample comes from a normally distributed population

Ha: The sample comes from a population that is not normally distributed

Test Criteria:

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H0 is accepted if Asymp. Sig.> α (0.05)
H0 is rejected if Asymp. Sig.< α (0.05

Conclusion

The conclusion of this study shows a significant positive influence of towing premium compensation, ship crew competence, and ship crew retention on ship crew performance at PT Varia Usaha Lintas Segara. Multiple linear regression analysis shows that towing premium compensation has a significant positive influence on crew performance, along with increased crew retention. Furthermore, the improved competence of ship crews also contributes significantly positively to their performance, increasing crew retention. So is the retention of the ship's crew, which has been shown to have a significant positive influence on their performance. Taken together, these three factors simultaneously affect the performance of the ship's crew, which was tested using F count (43.204) > Ftable (2.71) with significance values of 0.000 < 0.005, so Ho was rejected and Ha was accepted. Of the three variables, towing premium compensation is the factor that has the greatest influence on the performance of the crew of PT Varia Usaha Lintas Segara, with a regression coefficient value of 0.314. In addition, the results of the Adjusted R Square test of 0.593 showed that these variables, namely towing premium compensation, ship crew competence, and ship crew retention, affected the performance of the ship crew by 59.3%, while the remaining 40.7% were influenced by other variables outside the scope of this study.

Bibliography

Azanza, Garazi, Moriano, Juan A., Molero, Fernando, & Lévy Mangin, Jean Pierre. (2015). The effects of authentic leadership on turnover intention. *Leadership & Organization Development Journal*, *36*(8), 955–971.

Azeez, Shaheeb. (2017). Human resource management practices and employee retention: A review of literature. *Journal of Economics, Management and Trade*, *18*(2), 1–10.

Butarbutar, Marisi, & Inrawan, Ady. (2015). Pengaruh Kompensasi Terhadap Retensi Karyawan Pada Toko Harum Manis Pematangsiantar. *Maker: Jurnal Manajemen*, *1*(2), 61–67.

Dewi, Kadek Osiana Elsa, & Riana, I. Gede. (2018). *Pengaruh Pengembangan Karir, Kompensasi Dan Komitmen Organisasional Terhadap Retensi Karyawan Pada Bintang Kuta Hotel*. Udayana University.

Ghozali, Imam. (2008). *Structural equation modeling: Metode alternatif dengan partial least square (pls)*. Badan Penerbit Universitas Diponegoro.

Ghozali, Imam. (2011). Multivariate analysis application with SPSS program. *Semarang: Diponegoro University Publishing Agency*.

Ghozali, Imam. (2016). *Desain penelitian kuantitatif dan kualitatif: untuk akuntansi, bisnis, dan ilmu sosial lainnya*.

Lawler, Edward E., & Porter, Lyman W. (2017). The effect of performance on job satisfaction. *Industrial relations*.

Lisdayanti, Lisdayanti, Lie, Darwin, Butarbutar, Marisi, & Wijaya, Andy. (2015). Pengaruh kepuasan kerja terhadap retensi karyawan pada PT Bumi Sari Prima Pematangsiantar. *Maker: Jurnal Manajemen*, *1*(1), 30–38.

Msengeti, David Mwakidimi, & Obwogi, Joseph. (2015). *Effects of pay and work environment on employee retention: A study of hotel industry in Mombasa county*.

Prasetya, Wibawa, & Suryono, Yoseph Stepanus. (2014). Kajian Empiris Faktor-faktor yang mempengaruhi Retensi Karyawan. Makalah Disajikan Dalam. *Prosiding Seminar Nasional Aplikasi Sains & Teknologi*, 179–188.

Pratiwi, Luh Putu Yunia Anggy, & Sriathi, Anak Agung Ayu. (2017). *Pengaruh Lingkungan Kerja Dan Pengembangan Karir Terhadap Retensi Karyawan Pada Hotel Santika Nusa Dua Bali*. Udayana University.

Putra, Putu Elicia Dewianti, & Rahyuda, Agoes Ganesha. (2019). The role of job satisfaction in mediating relationship between psychological empowerment and lecturer performance. *European Journal of Business, Economics, and Accountancy*, *7*(3), 26–37.

Ripaldi, Alpen, Marnis, Marnis, & Restu, Restu. (2017). *Pengaruh kepuasan kerja dan organizational citizenship behavior terhadap stres kerja dan retensi karyawan di PT Multi Auto Intrawahana Pekanbaru*. Riau University.

Samudra, Angga Putra, Rahardjo, Kusdi, & Mukzam, M. Djudi. (2014). Pengaruh Kompensasi Finansial Terhadap Kinerja. *Studi Pada Karyawan PT. Bank Jatim Cabang Malang*.

Suciaty, Tiara, & Rahmawati, Siti. (2014). Hubungan Kompensasi Finansial dengan Kinerja Karyawan Kontrak PT Unilever Body Care Indonesia Tbk. *Jurnal Manajemen dan Organisasi*, *5*(1), 45–61.

Warouw, Angela Alvina, & Lapian, SLHVJ. (2015). Analyzing the Factors Influencing Employee Retention At Pt. Bank Negara Indonesia (Bni) Persero. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, *3*(2).

Wibowo, Frendy, Utomo, Chandra Wisnu, & Aditya, Adik. (2023). Pengaruh

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Pengembangan Karir Dan Remunerasi Terhadap Turnover Intention Dengan Kepuasan Kerja Sebagai Variabel Mediasi. *Jimma: Jurnal Ilmiah Manajemen Muhammadiyah Aceh*, *13*(2).