ASRO JOURNAL
http://asrojournal-sttal.ac.id/index.php/ASRO

Volume 14, Number 03, pp.1-8
April-June 2023
ISSN: 2460-7037
E-ISSN: 2722-5763

THE INFLUENCE OF MANAGEMENT HOUSEKEEPING AT THE X-COMPANY SHIPYARD ON THE DOCKING WORKS OF THE ABC-FLEET

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DOI: https://doi.org/10.37875/asro.v14i02.505

Manuscript received 31st March 2023, Revised 12nd April 2023, Published 8th May 2023

ABSTRACT

This research aims to analyze the influence of Housekeeping Management on the Warship in ABC Fleet Docking Work at the The X-Company Shipyard by controlling the Work Experience variable. The independent variable (Housekeeping Management) is measured using a scale of 1-10, while the dependent variable (Docking Work) is measured using the same scale. Work Experience (Years) is used as a control variable. Data were analyzed using the linear regression method. The research results show that there is a significant influence between Housekeeping Management and Docking Work, where 64.6% of Warship in ABC Fleet(Y) Docking Work is influenced by Housekeeping Management (X1) and the remaining 35.4% is influenced by other variables outside the research.However, after the Work Experience variable (X2) was introduced as a control variable, the influence increased, namely 72.3% of the Warship in ABC Fleet(Y) Docking Work was influenced by Housekeeping Management (X1) and Work Experience (X2) and the remaining 27.7% was influenced by other variables outside the research.In conclusion, better Housekeeping Management has the potential to improve the quality of Docking Work in shipyards. It is recommended that companies increase awareness and commitment to Housekeeping Management practices and strengthen supervision of the quality of Docking Work.

Keywords: *Housekeeping Management, Docking Work, Work Experience.*

1. INTRODUCTION

Indonesian Shipbuilding is an industry that has an important role in the construction and maintenance of ships. Docking work, as an integral part of the ship maintenance process, involves various activities aimed at maintaining, repairing, and improving the condition of the ship. In this context, it is important to pay attention to factors that can influence the quality of Docking work, including Housekeeping Management and work experience.

Housekeeping Management, which includes aspects of cleanliness, tidiness, and orderliness of the work environment, has an important role in creating a safe, efficient, and productive work environment. In the shipbuilding industry, good housekeeping management practices can reduce the risk of accidents, maintain the quality of equipment and facilities, and increase the efficiency of work processes. Therefore, this research aims to identify the influence of Housekeeping Management on the quality of Docking Work at the X-Company Shipyard.

Apart from Housekeeping Management, work experience is also a factor that can influence the quality of work in the shipbuilding industry. Work experience provides the knowledge, skills and insight necessary to carry out tasks related to Docking Work. In this context, this research will also consider the influence of work experience as a control variable.

By understanding the influence of Housekeeping Management and work experience on the quality of Docking Work, it is hoped that this research can provide valuable insight for The X-Company Shipyard in increasing the effectiveness and efficiency of the ship maintenance process. The results of this research can also contribute to the shipbuilding industry as a whole, by identifying key factors that influence the quality of shipyard work.

Volume 14, Number 02, pp.1-8
ISSN: 2460-7037
E-ISSN: 2722-5763

2. LITERATURE REVIEW

2.1 Housekeeping Management

Housekeeping Management is a systematic approach in managing and maintaining cleanliness, tidiness and order in the work environment. In the shipbuilding industry, Housekeeping Management plays an important role in creating a safe, efficient and productive work environment. By implementing good Housekeeping Management practices, it is hoped that it can reduce the risk of accidents, maintain the quality of equipment and facilities, and increase the efficiency of work processes (Gunawan, 2018).

Good Housekeeping Management practices can also have a positive impact on the quality of work, as in the case of this research regarding the Warship in ABC Fleet Docking Work (Sutrisno, 2019). Cleanliness and orderliness of the work environment can influence effectiveness and efficiency in carrying out work. With an organized and clean work environment, work can be done more smoothly, reducing the risk of errors and increasing productivity.

Apart from that, good housekeeping management practices can also reflect the company's professionalism and responsibility towards employees and customers. A clean and orderly work environment creates a comfortable and safe atmosphere for employees. This can have a positive impact on motivation and job satisfaction, as well as influence the company's image in the eyes of customers and business partners (Moleong, 2019).

2.2. Docking Work

Docking work in shipyards involves the process of maintaining and repairing ships which includes checking, maintaining and improving the condition of ships (Riyanto, 2017). Docking is an important stage in a ship's life cycle, where the ship is towed ashore to carry out various activities such as hull maintenance, structural inspection, and installation or repair of ship equipment. The quality of Docking work is very important to ensure the ship operates well, safely and efficiently after the repair process.

During the Docking process, Housekeeping Management plays a crucial role in maintaining an optimal working environment. Cleanliness of the work area, efficient arrangement of tools and materials, and an orderly layout can facilitate better work implementation (Wibowo, 2020). This can minimize the risk of accidents, facilitate accessibility, and speed up the ship repair process.

Apart from that, the quality of docking work can also be influenced by the level of competency and experience of the workforce involved. The use of advanced technology and tools, as well as a deep understanding of the ship repair process, also contributes to quality work results. Therefore, companies need to ensure that the workforce involved in Docking work has adequate skills and receives the necessary training.

2.3 Factors Affecting the Quality of Work in the Shipbuilding Industry

Apart from Housekeeping Management, there are other factors that can influence the quality of work in the shipbuilding industry. Several relevant factors include work experience, technical expertise, use of appropriate technology, selection of appropriate materials, and effective time management (Nasution, 2019). These factors interact with each other and can influence the outcome of Docking work, including timeliness, reliability and customer satisfaction.

Work experience plays an important role in the quality of work in the shipbuilding industry. Workers who have extensive experience in carrying out docking work tend to have a better understanding of the processes, methods and challenges that may occur (Sugiyono, 2018). This experience allows them to take appropriate actions, overcome obstacles more efficiently, and produce quality work.

In addition, adequate technical expertise is also a determining factor in the quality of Docking work. Workers who have in-depth knowledge of ship repairs, welding techniques, ship structures and mechanical systems involved in docking are able to produce more precise and accurate work (Soekanto & Soekanto, 2017).

The use of appropriate technology also contributes to the quality of work. The use of sophisticated equipment and tools can increase efficiency and accuracy in carrying out docking work. Apart from that, selecting materials that suit quality standards and ship requirements is also important in achieving high quality work results.

Effective time management is also a determining factor in the quality of Docking work. Good planning, efficient schedule management, and close monitoring of work execution times can ensure that work is completed on time without sacrificing quality.

Volume 14, Number 02, pp.1-8
ISSN: 2460-7037
E-ISSN: 2722-5763

2.4 Research Approach

This research will use a quantitative approach with research samples taken from the The X-Company Shipyard. Data collection will be carried out through a survey using a questionnaire which will be distributed to respondents consisting of employees at various levels in the shipyard. The questionnaire will include questions related to the level of Housekeeping Management, the quality of the Warship in ABC Fleet Docking Work, and the control factor, namely work experience. The Likert scale will be used in the questionnaire to measure the respondent's level of agreement or disagreement with related statements. The collected data will be analyzed using statistical methods to test the influence of Housekeeping Management on the quality of the Warship in ABC Fleet Docking Work, with work experience as a control variable. The results of the analysis will provide a better understanding of the influence of Housekeeping Management on the Warship in ABC Fleet Docking Work at the The X-Company Shipyard.

2.5 Population and Sample

The population in this study were all employees who worked at the The X-Company Shipyard. However, due to time, resource and accessibility limitations, this study will use a representative sample of this population. The sample will be randomly selected from various levels of employees at the shipyard, including management, supervisors, and operational staff. The number of samples taken will include sufficient numbers to obtain representative results and reasonable generalizations to the population. By using a representative sample, it is hoped that this research can provide results that can be applied to a wider population in the shipbuilding industry.

2.6 Data collection technique

Data collection for research into the influence of Housekeeping Management on the Warship in ABC Fleet Docking Work at the The X-Company Shipyard can be done using various methods. Primary sources such as questionnaires, interviews, and focus groups can be used to collect data from current shipyard personnel and executives. Likewise, secondary resources such as published records, reports, and statistics can be used to gather factual information about shipyard operations. Additionally, survey and observation methods can be used to gain insight into the shipyard's daily workflow. After the data is collected, it can then be processed and analyzed sequentially.

2.7 Research Framework

The operational hypothesis above can be described with the following hypothetical thinking framework:

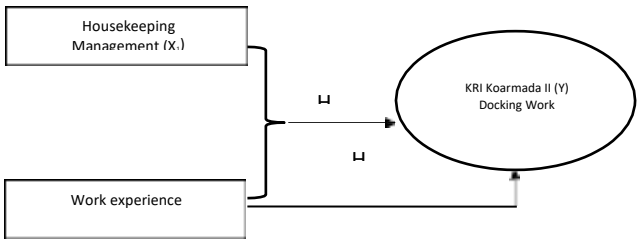

Figure 1. Research Framework

3. RESEARCH METHODS

The Influence of Housekeeping Management in the The X-Company Shipyard Regarding the Docking Work of Warship in ABC Fleet, Independent Variable (Housekeeping Management), Control Variable (Work Experience), Dependent Variable Docking Work) The data used is as follows:

Table 1. The Influence of Housekeeping Management in the The X-Company Shipyard

Housekeeping Management (Scale 1-10)	Warship in ABC Fleet Docking Work (Scale 1-10)	Work Experience (years)
7	6	8
6	7	7
8	7	9
5	5	6
9	9	9
7	4	7
6	6	8
8	7	9
7	4	8
9	9	9
4	5	5
8	4	6
10	7	9
9	8	9
6	7	6
7	7	8
5	4	6
4	3	5
10	6	8

3.1 Regression Analysis

Simple Linear Regression Analysis can be used to determine the effect of the independent variable (X) from one variable on the dependent variable (Y), while Multiple Linear Regression Analysis can be used to determine the effect of the independent variable (X) from more than one variable on the dependent variable (Y). This

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ISSN: 2460-7037
E-ISSN: 2722-5763

research uses the following regression equation model:

Simple Linear Regression Equation:

Y = α + β1 X1 + e

Multiple Linear Regression Equation:

Y = α + β1 X1+ β2 X2 + e

Explanation:

Y : Warship in ABC Fleet Docking Work

e : Standard Error

α : Constant

X1 : Housekeeping Management

X2 : Work experience

β1 : Variable regression coefficientHousekeeping Management

β2 : Variable regression coefficientWork experience

a. Simple Linear Regression

Simple Regression Analysis is used to determine how much influence the independent variable Housekeeping Management (X1) has on the dependent variable Warship in ABC Fleet(Y) Docking Work. Based on the calculation results of the simple linear regression model, the results of the regression equation are obtained which can be seen in the table below:

Table 2. The Results of The Regression Equation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.032	.794		3.821	.001
	Housekeeping Manajemen	.618	.108	.804	5.735	.000

a. Dependent Variable: Pekerjaan Docking

From the table above it can be seen that the resulting regression equation is as follows:

The regression formula used is:

Y = α + β1 X1 + e

Y = 3.032 + 0.617 X1 + e

Information :
Y :Warship in ABC Fleet Docking Work
e :Standard Error
α :Constant
X1 :Housekeeping Management
β1 :Housekeeping variable regression coefficient Management

Based on the analysis of the regression coefficient values, it can be concluded that:

1) The value of the dependent variable Warship in ABC Fleet(Y) Docking Work can be seen from its constant value of 3.032 provided that the independent variable Housekeeping Management (X1) has no effect on the dependent variable Warship in ABC Fleet(Y) Docking Work

2) The influence of the independent variable Housekeeping Management (X1) on the Docking Work of Warship in ABC Fleet(Y) if seen from the regression coefficient of 0.617, it can be interpreted that for every change in the variable Housekeeping Management (X1) by one unit, the variable Docking Work of Warship in ABC Fleet(Y) will increased by 0.198.

Based on the table above, it can be seen that:

- Significance value = 0.000
- The calculated t value = 5.735
- The t table value = 1.734

The t table value can be seen in the t table with df = n – k – 1 = 20 – 1– 1 = 18 and a significance of 5%. Because the calculated t value > t table is 5.735 > 1.734 and the significance value is 0.000 < 0.05, H0 is rejected and Ha is accepted. This shows that the Housekeeping Management variable (X1) has a significant effect on the Docking Work of

Volume 14, Number 02, pp.1-8
ISSN: 2460-7037
E-ISSN: 2722-5763

Warship in ABC Fleet(Y).

Table 3. t-table value

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.804[a]	.646	.627	.852

a. Predictors: (Constant), Housekeeping Manajemen

b. Dependent Variable: Pekerjaan Docking

From the table above it is known that the correlation coefficient (R), namely the correlation between the independent variable Housekeeping Management (X1) and the dependent variable Warship in ABC Fleet Docking Work (Y) is 0.804. This means that there is a very strong relationship between the independent variable Housekeeping Management (X1) to the dependent variable Warship in ABC Fleet(Y) Docking Work.

The coefficient of multiple determination (R-square) is 0.646 or 64.6%. This value shows that 64.6% of the Warship in ABC Fleet (Y) Docking Work is influenced by Housekeeping Management (X1) and the remaining 35.4% is influenced by other variables outside research.

b. Multiple Linear Regression

Multiple Regression Analysis is used to determine how much influence the independent variables Housekeeping Management (X1) and Work Experience (X2) have on the dependent variable Warship in ABC Fleet Docking Work (Y).

Based on the calculation results of the multiple linear regression model, the results of the regression equation are obtained which can be seen in the table:

Table 3. Multiple Linear Regression Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.460	.769		3.200	.005		
	Housekeeping Manajemen	.456	.123	.593	3.707	.002	.635	1.575
	Pengalaman Kerja	.283	.130	.348	2.176	.044	.635	1.575

a. Dependent Variable: Pekerjaan Docking

From the table above it can be seen that the resulting regression equation is as follows:

The regression formula used is:

Y = α + β1 X1+ β2 X2 + e

Y = 2.460 + 0.456 X1 + 0.283 X2 + e

Information :
Y :Warship in ABC Fleet Docking Work
e : Standard Error
α : Constant
X1 :Housekeeping Management
X2 :Work experience
β1 :Variable regression coefficientHousekeeping Management
β2 :Regression coefficient for the Work Experience variable

Based on the analysis of the regression coefficient values, it can be concluded that

1) The value of the dependent variable Warship in ABC Fleet(Y) Docking Work can be seen from its constant value of 2.460, noting that the independent variables Management Housekeeping (X1) and Work

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ISSN: 2460-7037
E-ISSN: 2722-5763

Experience (X2) have no effect on the dependent variable Warship in ABC Fleet(Y) Docking Work

2) The influence of the independent variable Management Housekeeping (X1) on the Warship in ABC Fleet(Y) Docking Work if seen from the regression coefficient of 0.456, it can be interpreted that for every change in the Management Housekeeping variable (X1) by one unit, the Warship in ABC Fleet(Y) Docking Work variable will increased by 0.456 provided that the Work Experience variable (X2) remains the same.

3) The influence of the independent variable Work Experience (X2) on the Warship in ABC Fleet(Y) Docking Work, if seen from the regression coefficient of 0.283, it can be interpreted that for every change in the Work Experience variable (X2) by one unit, the Warship in ABC Fleet(Y) Docking Work variable will increased by 0.283 provided that the Housekeeping Management variable (X1) remains constan.

3.2 Hypothesis Testing (F Test)

In this research, hypothesis testing (f test) is used to determine whether the independent variables Housekeeping Management (X1) and Work Experience (X2) have a significant effect on the dependent variable Warship in ABC Fleet Docking Work (Y) simultaneously. For this reason, this research uses the f test as shown in the following table.

Table 4. Hypothesis Testing (f test)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.728	2	13.364	22.225	.000[b]
	Residual	10.222	17	.601		
	Total	36.950	19			

a. Dependent Variable: Pekerjaan Docking

b. Predictors: (Constant), Pengalaman Kerja, Housekeeping Manajemen

The steps in the F test are:

a. Hypothesis:

H0 : β1,β2 = 0 (Housekeeping Management (X1) and Work Experience (X2 simultaneously or together have no effect on the Warship in ABC Fleet(Y) Docking Work

Ha : β1,β2 ≠ 0 (Housekeeping Management (X1) and Work Experience (X2), simultaneously or together influence the Warship in ABC Fleet (Y) Docking Work

b. Mark

Significance value = 0.000

Calculated F value = 22.225

F table value = 3.592

The F table value can be seen in table F with df1 = 2 and df2 = 17.

c. F test results

Because the calculated F value > F table is 22.225 > 3.592 and the significance value is 0.000 < 0.05, H0 is rejected and Ha is accepted. This shows that Housekeeping Management (X1) and Work Experience (X2) simultaneously or together influence the Docking Work of Warship in ABC Fleet(Y).

3.3 Hypothesis Testing (t Test)

In this research, hypothesis testing (t test) is used to determine whether the independent variables Housekeeping Management (X1) and Work Experience (X2) have a significant effect on the dependent variable Warship in ABC Fleet(Y) Docking Work partially or individually. For this reason, this research uses a t test as shown in the following table.

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ISSN: 2460-7037
E-ISSN: 2722-5763

Table 4. Hypothesis Testing (t test)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.460	.769		3.200	.005		
	Housekeeping Manajemen	.456	.123	.593	3.707	.002	.635	1.575
	Pengalaman Kerja	.283	.130	.348	2.176	.044	.635	1.575

a. Dependent Variable: Pekerjaan Docking

a. The Influence of Housekeeping Management Variables (X1) on the Docking Work of Warship in ABC Fleet(Y)

1) Hypothesis

Ho: β1 = 0 (partially the Housekeeping Management variable (X1) has no effect onWarship in ABC Fleet(Y) Docking Work).

Ha: β1 ≠ 0 (partially the Housekeeping Management variable (X1) has an effect onWarship in ABC Fleet(Y) Docking Work).

2) Mark

Significance value = 0.002

The calculated t value = 3.707

The t table value = 1.740

The t table value can be seen in the t table with df = n – k – 1 = 20 – 2 – 1 = 17 and a significance of 5%

3) t Test Results

Because the calculated t value > t table is 3.707 > 1.740 and the significance value is 0.002 < 0.05, H0 is rejected and Ha is accepted. This shows that partially the Housekeeping Management variable (X1) has a significant effect on the Docking Work of Warship in ABC Fleet(Y).

b. The Influence of the Work Experience Variable (X2) on the Warship in ABC Fleet (Y) Docking Work

1) Hypothesis

Ho: β1 = 0 (partially the Work Experience variable (X2) has no effect on the Warship in ABC Fleet (Y) Docking Work).

Ha: β1 ≠ 0 (partially the Work Experience variable (X2) influences the Warship in ABC Fleet Docking Work (Y).

Significance value = 0.044

The calculated t value = 2.176

The t table value = 1.740

The t table value can be seen in the t table with df = = n – k – 1 = 20 – 2 – 1 = 17 and a significance of 5%

3) T test results

Because the calculated t value > t table is 2.176 > 1.740 and the significance value is 0.044 < 0.05, H0 is rejected and Ha is accepted. This shows that partially the Work Experience variable (X2) has a significant effect on the Warship in ABC Fleet (Y) Docking Work

4. CONCLUSION

Based on the results of this research, it can be concluded that Housekeeping Management (X1) has a significant influence on the Docking Work of Warship in ABC Fleet(Y), where 64.6% of the Docking Work of Warship in ABC Fleet(Y) is influenced by Housekeeping Management (X1) and the remaining 35.4 % influenced by other variables outside the research. However, after the Work Experience variable (X2) was introduced as a control variable, the influence increased, namely 72.3% of the Warship in ABC Fleet(Y) Docking Work was influenced by Housekeeping Management (X1) and Work Experience (X2) and the remaining 27.7% was influenced by other variables outside the research, so that with Work Experience (X2) as a control variable, the influence of Housekeeping Management (X1) increases.

Therefore, The X-Company Shipyard can pay attention to and improve Housekeeping Management practices as part of a strategy to improve the quality of Docking Work in their shipyards.

Volume 14, Number 02, pp.1-8
ISSN: 2460-7037
E-ISSN: 2722-5763

ACKNOWLEDGEMENT

The authors greatly acknowledge the support from Indonesia Naval Technology College STTAL Surabaya Indonesia for providing the necessary resources to carry out this research work. The authors are also grateful to the anonymous reviewers and journal editorial board for their many insightful comments, which have significantly improved this article.

REFERENCES

Gunawan, J. (2018). Marketing Management: A Practical Guide and Concepts. Jakarta: Erlangga.

Moleong, L. J. (2019). Qualitative Research Methodology: Revised Edition. Bandung: PT Teen Rosdakarya.

Nasution, H. (2019). Qualitative Naturalistic Research Methods: Communication, Economics, Health, and Social Sciences. Jakarta: Kencana Prenada Media Group.

Riyanto, B. (2017). Corporate Spending Basics. Yogyakarta: BPFE-Yogyakarta.

Soekanto, S., & Soekanto, S. (2017). Sociology: An Introduction. Jakarta: PT RajaGrafindo Persada.

Sugiyono. (2018). Quantitative, Qualitative, and R&D Research Methods. Bandung: Alphabeta.

Sutrisno, E. (2019). Human Resource Management: A Practical Approach. Jakarta: Kencana Prenada Media Group.

Wibowo, A. (2020). Work management. Jakarta: RajaGrafindo Persadafor the Twenty-First Century. London: Routledge.