

THE OPERATIONAL EFFECTIVENESS OF NATIONAL SHIPYARD BUSINESS OPERATION IN CIREBON WEST JAVA INDONESIA

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IJMSSSR 2022

VOLUME 4

ISSUE 2 MARCH - APRIL

ISSN: 2582 - 0265

Abstract: The research objective is to analyze the direct and indirect effects of the work health and safety, supervisory functions on employees performance through effectiveness of operational variable of National Shipyard Business Operation in Cirebon West Java. One of the implications of the oversight function that is not properly implemented is the level employee occupational health safety were getting low, then will appear workplace accidents, high of working employees wasn't present, employees sickness and resigned that impact on the effectiveness of operational and performance of employees. The analysis technique used is multivariate regression with classic assumptions and path analysis. The research samples of numbers were taken 68 people. Data collection a technique was used the form of questionnaires with a Likert scale. The first research result, it was concluded that—there is a total direct influence between occupational health safety and the supervisory function on employee performance. Also, there is a direct influence individually on the supervisory function on employee work effectiveness and in total there is a direct influence between occupational health and safety, the supervisory function on operational effectiveness at the National Shipyard Business Operation in Cirebon, West Java, Indonesia.

Keywords: Occupational Health and Safety, Supervisory Function, Operational Effectiveness, Employee Performance, National Shipping, Shipyard Business Operation

INTRODUCTION

The rate of fatal accidents in developing countries is usually four times higher than in industrialized countries. The rate of fatal accidents in developing countries is usually four times higher than in industrialized countries. In developing countries most occupational accidents and diseases occur in agriculture, advertising and timber, mining and industry (Haryanto, 2009). As for the number of work accidents in Indonesia, it shows a very worrying number. According to the International Labor Organization, Indonesia is in the 52nd position out of 53 countries with a record of Occupational safety and Health management in the poor category (Sinaga et al., 2019).

Hierarchically, work accidents start from a management function in an effort to implement safety and health for its employees. In general, the increasing cases of work accidents and company losses due to work accidents, as well as the increasing potential for hazards in the production process require an effective, comprehensive and integrated occupational safety and health management in company management. Bahari Nusantara Dock which is located in Cirebon is defined as a company that operates on boat docks. Bahari Nusantara Dock still prioritizes the implementation of the supervisory function in the company and prioritizes work health safety for its employees in a prime manner, but the trend is downward. Employee accidents that took place in July 2017 and also in November 2019 where the victim suffered abrasions on his right leg due to being hit by a plate component while lifting the plate using an overhead crane.

Some of the main problems can be found, namely; (1) Some employees do not use basic and absolute safety equipment in carrying out their work, (2) Employees cannot carry out their duties at work because they have an accidental injury while carrying out the lifting using an overhead crane, (3) Employee competency training in order to improve skills not carried out regularly and continuously, (4) Internal audit is not carried out optimally and continuously. Several problems have an impact on the operational effectiveness and performance of company

employees. Work safety and health is thought to have decreased due to a decrease in activities such as the Safety Talk and Weekly Meeting of Health, Safety and Environment (HSE) which tends to decrease eight times each year, then HSE Training tends to decrease twice every year and drill activities also tend to decrease once per year as well as the audit supervisory function, decreased 0.2 times each year (Table 1).

Table 1. Trends of Safety Input Bahari Nusantara Dock activities in the last five years (2015-2019)

No	Activity	Regression Estimate	Coefficient of Determination	Trend
1	HSE Induction	$y = 305,1 - 60,7x$	76,59%	Tends to decrease by 61 times / year
2	HSE Inspection	$y = 1 + 14,2x$	33,72%	Tends to increase by 14 times / year
3	Safety Talk and Weekly HSE Meeting	$y = 84,5 - 8,3x$	18,96%	Tends to decrease by 8 times / year
4	HSE Training	$y = 13,5 - 1,9x$	54,04%	Tends to decrease by 2 times / year
5	Drill	$y = 5,3 - 0,9x$	88,04%	Tends to decrease by 1 times / year
6	Audit	$y = 1,8 - 0,2x$	8,33%	Tends to decrease by 0.2 times / year

Sources: (DBN, 2019)

Table 1 shows that the performance that occurred during the last five years has tended to decline. One of the reasons for this is the coefficient of determination of 88.04% resulting in a decrease in activities, especially "drill", as well as other activities. As for the quantity, the "drill" activity decreases only once per year, even though this activity is very important to do with a frequent frequency for the sake of company productivity. In addition, problems that arise as a result of the decline in these activities will have an impact on work safety and employee performance without periodic and continuous supervisory from the company.

The national and private shipbuilding industry requires the right strategy, as well as a competitive industry to develop (Mansyur, 2016; Othman et al., 2018; Utomo & Setiastuti, 2019; Warsilan, 2018). In general, research on the development of operations in the shipping sector and particularly shipyards has been previously studied (Firmansyah & Djafar, 2016; Listianti et al., 2013; Moura & Botter, 2012). Shipyard is one of the supporting elements to meet the ship's feasibility needs through joint maintenance with the engine. Another research, by (Maharja et al., 2018) explained in their research that the management of shipyard companies in Indonesia will be able to take action and also analyze the level of safety culture as a form of monitoring of the existing safety culture.

The main objectives of this study are, (1) to analyze how strong the total effect of occupational health safety is on employee performance through operational effectiveness, (2) to analyze the indirect effect of occupational safety and health on employee performance through operational effectiveness as an intervening variable, and (3) to analyze the effect of indirectly the function of monitoring the performance of employees at Bahari Nusantara Dock through operational effectiveness as an intervening variable.

Literature review and hypothesis

Employee Performance

Theoretically, employee performance is the desired outcome of employee behavior (Gibson et al., 2012; Ivancevich et al., 2018). Research (Klein, 2011; Mc. Murray et al., 2010), have proven that a pleasant work environment is very important to encourage the most productive level of employee performance. Leaders of shipping companies as decision makers must have the ability to improve employee performance (Octaviannand et al., 2017). *Several other studies related to the performance and effectiveness of ship crew work in shipping companies have been studied before (Bedarkar & Pandita, 2014; Corporate Leadership Council, 2000; Schellinck & Brooks, 2016; Thevaranjan & Ragel, 2016; Yuen et al., 2018).* Thus, based on the above theories and researches, from those experts, it can be conceptualized in a concrete way that employee performance variables is a person's behavior that is very closely related to the results of their work in an organization, where the results of the work can be in the form of quality, quantity, and timeliness that is measured in the achievement of the targets of an organization. The employee performance variables indicators includes; (1) Loyalty, (2) Work Performance, (3) Discipline, (4) Creativity, (5)

Cooperation, (6) Proficiency, and (7) Responsible.

Occupational Safety and Health

Theoretically, (Mathis & Jackson, 2010; Mondy & Noe, 2010) describes Occupational Safety and Health (OSH), as a condition that refers to general physical, mental, and emotional stability. In addition, according to (Mondy, 2012) that employees are injured also caused by accidents that are always related to their work. In previous studies, shipyard workers are quite vulnerable to occupational health problems (Koralurk, 2020; Ramdan et al., 2018). The Behavior Based Safety (BBS) study at a shipyard is a process that creates a sustainable safety partnership between management and employees regarding daily safety behaviors (Mohan & Gerald, 2017). In addition, (Yilmaz et al., 2015) stated that in Turkey all major and minor accidents that occur in shipyards must be noted, the causes. Other studies on the occupational safety and health related to awareness towards safety culture have also been carried out by (Bhattacharya, 2015; Jung, 2017) Thus, based on some of the theories of the experts mentioned above, the synthesis of occupational safety and health is a form of effort that aims to create a balance between workers' rights and their personal obligations which are implemented in comfortable, safe, conducive, measurable and pleasant working conditions. The occupational safety and health variables indicator includes; (1) work environment, (2) machinery and work tools and (3) human.

Operational Effectiveness

The level of operational effectiveness can make a positive contribution to the wheels of the organization and an assessment of operational effectiveness, especially in the shipping sector, is needed (Turgut, 2013). In line with the results of research by (Santa et al., 2014), showed that there is a significant and direct influence of alignment (technological innovation effectiveness and operational effectiveness) on improving operational performance. Based on the other research findings, the effectiveness of work plays an important role in increasing national shipping in Indonesia (Ricardianto et al., 2020). In addition, (Mansyur, 2016) stated that the effectiveness of shipyard operations, by performing repair services or ship docking, will provide more benefits than building new ships. Thus, based on some of the theories of the experts mentioned above, the synthesis of operational effectiveness is a synergy between the results of activities that are quantity in nature with results that are quality in time. The operational effectiveness variable indicators includes;(1) the standard of time taken and (2) the results achieved.

Supervisory Function

Supervisory according to (Terry, 2011) is the activity of a manager who tries to get the job done in accordance with a predetermined plan with the desired results. In their study, regarding the variable of the supervisory function, (Lee & Kusumah, 2020), recommends businesses to adopt an approach and formulate policies that encourage practices to improve employee performance and improve performance. Another finding, according to (Munandar et al., 2015) that ship building supervisory will make it easier for ship owners to see firsthand the ship building process by comparing the progress of ship building work in several shipyards and speeding up the time for supervisors to process the required surveillance information data. Thus, based on some of the above mentioned theories, the synthesis of the implementation of the supervisory function is a preventive action from an organization in implementing one of its management functions to find out the progress or progress of the organization consistently based on initial planning to achieve mutually agreed goals. The supervisory function variable indicators includes ;(1) monitoring input, (2) process monitoring and (3) monitoring output.

Hypotheses

- H1: Occupational Safety and Health (X_1) has influences on Operational Effectiveness (Y)
- H2: Supervisory Function (X_2) has influences on Operational Effectiveness (Y)
- H3: Occupational Safety and Health (X_1) has influences on Employee Performance (Z)
- H4: Supervisory Function (X_2) has influences on Operational Effectiveness (Y)
- H5: Operational effectiveness (Y) has influences on Employee Performance (Z)
- H6: Occupational Safety and Health (X_1) has indirect influences on Employee Performance (Z) through Operational Effectiveness (Y)
- H7: Supervisory Function (X_2) has indirect influences on Employee Performance (Z) through Operational

Effectiveness (Y)

We propose that Occupational Safety and Health (X_1), Supervisory Function (X_2), and Operational Effectiveness (Y) are signaling tools that increase Employee Performance (Z) of National Shipyard Business Operation in Cirebon, West Java.

The research framework is drawn as follows (Figure 1).

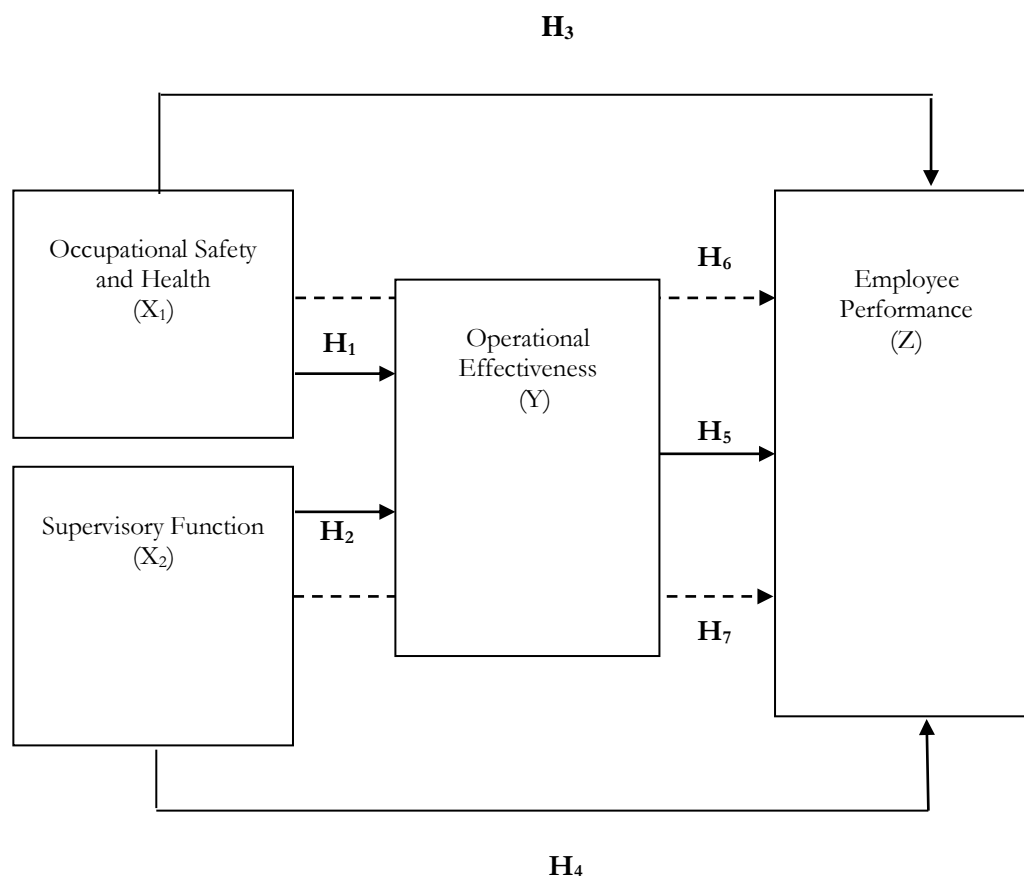


Figure 1. Research Framework

METHODS

In the course of this research, the research population used in this study is the whole of the employees who work at Bahari Nusantara Dock, located at Cirebon, West Java, the number of which is 68. The research questionnaire consisted of a list of questions related to work health and safety, implementation of supervisory function, operational effectiveness and employee performance at Bahari Nusantara Dock has a total of 54 questions. The statistical analysis used in this research is path analysis. In the path analysis, the influence of the independent variables on the dependent variable can be in the form of a direct effect, in other words, multiple regression analysis considers the direct effect. The analysis used to determine the quantitative description of each research variable is the Weight Mean Score. The employee performance variable on previous research uses Path Analysis by (Karatepe et al., 2005; Pristiyono et al., 2019; Zimmerman & Damold, 2009). The operational variable includes in this research includes the independent variable which is used there are two variables, namely the independent variable, including the work health and safety of employees as X_1 and the variable of the supervisory function as X_2 in Bahari Nusantara Dock. Furthermore, the dependent variable (Y) is employee performance changes in the company and the intermediate variable or intervening variable (Z) in this study is the operational effectiveness of the employees.

RESULTS AND DISCUSSION

Hypothesis Testing

Effect of Occupational Health and Safety and Supervisory Function on Operational Effectiveness

Through the Ftest, based on the results of the Ftest by comparing the value of F_{table} and $F_{statistic}$, the value of F_{table} is 3.14, while the calculated Fvalue is 35.365 from the ANOVA (Table 2). The comparison result $F_{statistic}$ is 35.365 is greater than F_{table} is 3.14, so it can be concluded that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a). The variables of occupational safety and health and the supervisory function on operational effectiveness together or simultaneously have a very significant effect on operational effectiveness.

Table 2. Anova table of Sub Structure Model 1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F-Statistic	P-Value
1	Regression	1470.932	2	735.466	35.365	.000 ^b
	Residual	1351.785	65	20.797		
	Total	2822.716	67			

a. Dependent Variable: Operational Effectiveness
 b. Predictors: (Constant), Occupational Health and Safety and Supervisory Function

Whereas through the t test, the t_{table} value obtained is 1.671 which is obtained from the t table, then t is 2.642 is greater than t_{table} is 1.671 so it can be concluded that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted, meaning that the occupational health safety variable has a very significant effect. significant partially on operational effectiveness.

Based on the data analysis, it shows that the correlation coefficient between the variables of occupational health and safety and the supervisory function is 0.772, which means that simultaneously there is a positive relationship between the two variables on the operational effectiveness of the employees at the Bahari Nusantara Dock with the strength level of the correlation "Strong". As for partially, the correlation coefficient value between the variable occupational health safety and work effectiveness obtained a value of 0.673 which means that there is a positive relationship between the two variables with the strength level of the correlation "Strong". Likewise, the correlation between the variable of supervisory and the operational effectiveness of employees obtained a value of 0.685 which means that there is a positive relationship between the two variables with the strength of the correlation "Strong". The value of the regression coefficient (slope) is to be substituted for the structural equation path one. The regression coefficient value for the variable occupational health and safety is a constant of 0.357. Then the control function regression coefficient value is 0.410 (Table 3).

Table 3. Partial Test of The Regression Coefficient and The Significance of The Variables of Occupational Health and Safety, Supervisory Function and Operational Effectiveness

Variable	Regression Coefficient (<i>b_i</i>)	T-statistic	P-Value
Operational Effectiveness (Y)	-	3,486	0,001
Occupational Health and Safety (X ₁)	0,357	2,642	0,010
Supervisory Function (X ₂)	0,410	3,033	0,003

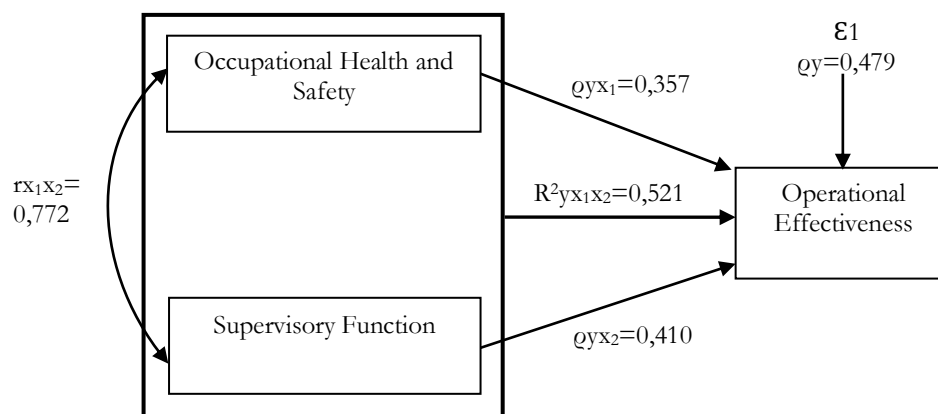


Figure 2. Sub Structure Model 1

Based on Figure 2 it provides an indication that the main problems in the substructure can be answered one by one, namely; (1) There is a direct effect individually on occupational health safety on operational effectiveness of 0.357, (2) There is an individual direct influence of the supervisory function on the operational effectiveness of employees of 0.410 and (3) There is a total direct effect of occupational health safety and a supervisory function on operational effectiveness. employees amounted to 0.521.

Effect of Occupational Health and Safety, Supervisory Function and Operational Effectiveness on Employee Performance

Through the F test, the F_{table} value obtained is 2.36 obtained from table F while the F_{table} value from ANOVA (Table 4) is 46.734, then $F_{statistic}$ is $46.734 > F_{table}$ is 2.36 so it can be concluded that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) accepted or all the variables of occupational health safety, supervisory function and operational effectiveness together (simultaneously) have a very significant effect on employee performance.

Table 4. Anova table of Sub Structure Model 2

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F-statistic	P-Value
1	Regression	2876.616	3	958.872	46.734	.000 ^b
	Residual	1313.142	64	20.518		
	Total	4189.758	67			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Occupational Health and Safety, Supervisory Function and Operational Effectiveness

Meanwhile, through the t test, the t_{table} value obtained is 1.671 which is obtained from the t_{table} , then $t_{calculate}$ is $1.367 < t_{table}$ is 1.671 so that it can be concluded that H_0 is accepted and H_a is rejected, meaning that in the 95% confidence interval or the 5% significance level of the occupational health and safety variable does not have a partially significant effect on employee performance.

Based on the calculation, it shows that the correlation coefficient between the variables of occupational health and safety, supervisory function and operational effectiveness is 0.687 which means that simultaneously there is a positive relationship between these three variables on employee performance with the level of correlation strength "Strong". If there is an increase in the variables of occupational health and safety, supervisory function and operational effectiveness, there will also be an increase in employee performance linearly. Likewise, if there is a decrease in the variables of occupational health safety, supervisory function and operational effectiveness, there will also be a decrease in employee performance.

As for partially, the correlation coefficient value between the variable occupational health safety and employee performance obtained a value of 0.709, which means that there is a positive relationship between the two variables

with the level of strength of the correlation "Strong". Furthermore, the correlation between the supervisory function variable and the employee's performance obtained a value of 0.768, which means that there is a positive relationship between the two variables with the strength of the correlation "Strong". Next, the correlation between the operational effectiveness variable and the employee's performance obtained a value of 0.742, which means that there is a positive relationship between the two "Strong" variables. To test the statistical hypothesis, a t-test was performed (Table 5).

Table 5. Partial Test of The Regression Coefficient (Bi) and The Significance of The Occupational Health and Safety, Supervisory Function, Operational Effectiveness and Employee Performance Variables

Variable	Regression Coefficient (bi)	t-Statistic	P-Value
Employee Performance (Z)	-	2,935	0,005
Occupational Health and Safety (X ₁)	0,158	1,367	0,176
Supervisory Function (X ₂)	0,396	3,365	0,001
Operational Effectiveness(Y)	0,364	3,600	0,001

The results of the t_{table} value of the supervisory function variable on Coefficients obtained a value of 3.365 with a significance value of 0.001 which means that the value of 0.001 is smaller than the significance value of 0.05 ($P_{-value} < 0.05$) means that the conclusion is that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) be accepted.

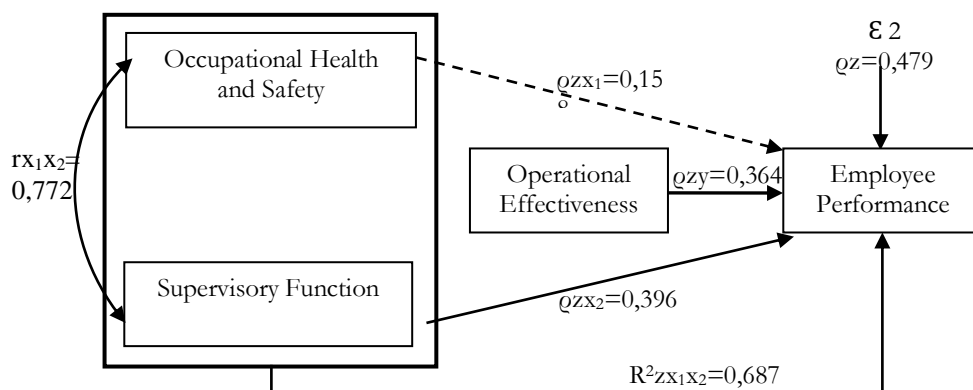


Figure 3. The Substructure Model 2

The Influence of The Supervisory Function and Operational Effectiveness on Employee Performance

Based on the F test, the results show that the F_{table} value obtained is 3.14 obtained from the F_{table} and the $F_{calculate}$ value obtained from ANOVA (Table 6) is 68.523. Because the value of F_{count} is 68.253 is greater than the value of F_{table} is 3.14, it can be concluded that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted, meaning that all variables of the supervisory function and operational effectiveness together (simultaneously) have a very significant effect. on employee performance.

Table 6. Anova table of Sub Structure Model 3

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F-Value	P-Value
1	Regression	2838.269	2	1419.135	68.253	.000 ^b
	Residual	1351.489	65	20.792		
	Total	4189.758	67			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Supervisory Function, Operational Effectiveness

Based on the t test, the results of the t_{table} value of the operational effectiveness variable on coefficients obtained a value of 4.208, then $t_{calculate}$ is $4.208 > t_{table}$ is 1.671 so it can be concluded that H_0 is rejected and H_a is accepted, so the operational effectiveness variable has a very significant partially effect on employee performance.

Based on the calculation, it shows that the correlation coefficient between the variables of the supervisory function and operational effectiveness is 0.823, which means that simultaneously there is a positive relationship between the two variables on employee performance with the level of correlation strength "Strong". If there is an increase in the variable of the supervisory function and operational effectiveness, there will also be an increase in the performance of the employees in a linear manner. Likewise, if there is a decrease in the variable of the supervisory function and operational effectiveness, there will also be a decrease in employee performance.

As for partially the value of the correlation coefficient which is located in the coefficients table between the variable of the supervisory function and the employee's performance obtained a value of 0.768, which means that there is a positive relationship between the two variables with the level of strength of the correlation "Strong". Furthermore, the correlation between operational effectiveness variables and employee performance obtained a value of 0.742, which means that there is a positive relationship between the two variables with the strength level of the correlation "Strong".

Table 7. The Output of The SPSS Regression Coefficient and The Significance of The Supervisory Function, Operational Effectiveness and Employee Performance

Variable	Regression Coefficient (<i>b_i</i>)	T-Statistic Value	P-Value
Employee Performance (Z)	-	3,324	0,001
Supervisory Function (X ₂)	0,489	5,054	0,000
Operational Effectiveness (Y)	0,407	4,208	0,000

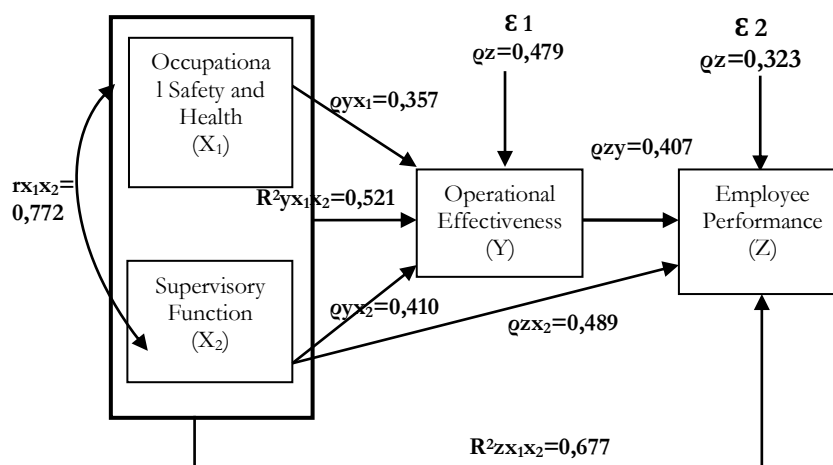


Figure 5. The Third Substructure Model Between the Variables of the Supervisory Function and Operational Effectiveness on Employee Performance

Based on Figure 5 shows that the dominant influence occurs in the variable of the supervisory function on employee performance is a total of 0.756% with the correlation between the two variables in the "strong" category of 75.6% and the coefficient of determination of 59.0% (Table 8).

Table 8. Domination of Direct and Indirect Influence on Occupational Health and Safety, Supervisory Function, Operational Effectiveness and Employee Performance

Variables	Effect		Total	R	R ²
	Direct	Indirect			
X ₁ → Y	0	0.145	0.145	0.709	0.503
X ₂ → Y	0.489	0.167	0.756	0.768	0.590
Z → Y	0.407	0	0.407	0.742	0.551
X ₁ → Z	0.357	0	0.357	0.673	0.453
X ₂ → Z	0.410	0	0.410	0.685	0.469

Based on Table 8 and Figure 5, there is no individual direct effect of occupational safety and health on employee performance. There is a direct effect individually on the supervisory function on employee performance is 0.489. Then there is an indirect effect individually between work health safety through operational effectiveness on employee performance is 0.145. There is an indirect effect individually on the supervisory function through operational effectiveness variables on employee performance of is 0.167. There is a total direct influence between work health safety and the supervisory function on employee performance is 0.677. Furthermore, there is a direct effect individually between operational effectiveness on employee performance is 0.407.

DISCUSSION

The Effect of Occupational Health and Safety and the Supervisory Function on Operational Effectiveness

The occupational safety and health conditions of employees at Bahari Nusantara Dock on average are included in the "Good" category or at 79.51 based on the WMS calculation results. Furthermore, the WMS calculation results on the supervisory function in Bahari Nusantara Dock on average are included in the "Very Good" category or 81.43 higher than occupational safety and health. This is presumably because in the implementation of supervision, the company has a clear vision and mission as well as a good monitoring and evaluation strategy. Then the results of WMS calculations on the operational effectiveness of employees at Bahari Nusantara Dock on average are included in the "Very Good" category or equal to 81.94.

The relationship between occupational safety and health and supervisory is "strong" and positive. This can be shown by the results of the calculation with a value is 72.2%, meaning that if the level of supervisory increases, the safety and health of work will also increase. This is in line with the opinion (Kasmir, 2017) which states that one of the factors that affect occupational safety and health is supervisory.

Furthermore, the results of this study also show that occupational safety and health have a direct individual effect on operational effectiveness at the Bahari Nusantara Dock, which is only is 35.7%. Meanwhile, the supervisory function has a direct individual effect on the operational effectiveness of employees is 41%. The contribution of the supervisory function to operational effectiveness is greater than occupational health and safety, this is presumably because the supervisory function is dynamic in nature and requires improvement which is the characteristic of the supervisory function. The implication of regular and continuous supervisory on improving employee work management is increasing both in quality and quantity.

Meanwhile, occupational safety and health are static and stagnant, so that the operational effectiveness factor is still dominantly influenced by the supervisory function. This is in line with the statement (Sedarmayanti, 2011) that effectiveness is related to maximum work achievement in terms of achieving targets related to quality, quantity and time. So that operational effectiveness is a goal to be achieved by the company by developing employee capabilities in a directed, effective and efficient manner in accordance with predetermined plans. Simultaneously, there is a direct effect of total occupational safety and health and the supervisory function on the operational effectiveness of employees at Bahari Nusantara Dock is 52.1%.

In a comprehensive manner, Bahari Nusantara Dock is one of the companies engaged in the maritime sector and prioritizes excellent service to its customers. So the possibility of this is what makes scientific reasons that the

variability of occupational safety and health and the supervisory function has a high contribution to its operational effectiveness. According to (Nederhof et al., 2008) that the results of their research show that there is a strong correlation between the effectiveness of the products produced and the effectiveness of the process. This kind of thing is in line with the results of the ongoing research conducted by (Santa et al., 2014) that the dimensions of the effectiveness of technological innovation include user satisfaction, service quality, information quality, system quality, and performance orientation based on operational effectiveness such as costs, quality, reliability, flexibility and speed are important factors and are significantly well-correlated. In addition, there is a significant and direct effect of the effectiveness of technological innovation and operational effectiveness on improving operational performance.

Effect of Occupational Health and Safety, Supervisory Function and Operational Effectiveness on Employee Performance

Partially each variable such as occupational health and safety, the function of supervisory and operational effectiveness on employee performance at Bahari Nusantara Dock has been generated by using the t test. The results of this research show that there is a contribution of direct individual influence between operational effectiveness on employee performance at Bahari Nusantara Dock is 40.7%. This value is still low when compared to the effect of the supervisory function on employee performance. This study is in accordance with the opinion, (Hasibuan, 2013) explaining the relationship between work performance appraisal and employee operational effectiveness, namely job performance appraisal is to assess the ratio of real work results to the quality and quantity standards produced by each employee. Operational effectiveness will have an impact on employee performance both in quantity and quality.

The result of the t-test which states that the variable of the supervisory function on the performance of employees at Bahari Nusantara Dock is 48.9%. This value is greater than the value of the effect of operational effectiveness on employee performance. The possibility of this is suspected because in terms of quantity the percentage of indicators on operational effectiveness is 73.3% higher than the employee's performance is 64.29%.

The results of this study also indicate that in a comprehensive manner the variability in employee performance at the Bahari Nusantara Dock is quite large, namely 67.7% can be explained by the variability of occupational safety and health, supervisory function and operational effectiveness. These data strongly support the quality and quantity of production taken by the company is very good, so it is very natural that many product buyers from these companies collaborate and trust to order products from that company. In the results of this study, only occupational safety and health did not have a direct effect individually on employee performance at Bahari Nusantara Dock. The results research, by (Sabrina et al., 2021; Tobing & Simanjuntak, 2020) state that the culture of occupational health and safety partially and simultaneously provides a significant influence on employee performance variables. The research done by (Apriliani et al., 2014) state that the variables of the work health and safety management system provide a significant influence on employee performance variables, especially in shipbuilding companies.

The possibility of this is presumably because the indicators on occupational safety and health related to work comfort and employee rights have a low value. According to the research results of (Gomes et al., 2010), the Health Care Operational Effectiveness (HOE) approach provides the organization practically and systematically towards the stage of monitoring and improving its performance. Thus, the HOE approach can improve employee performance.

Other research by (Celebi et al., 2010) strongly supports this research, that occupational safety and health will be able to protect workers from the effects of risks and minimize work accidents as well as to protect companies from the risk of fire, explosion, and machine damage. There are several attempts to minimize work accidents in the shipbuilding industry, as has been researched by (Iqbal et al., 2010; Lokhande, 2014; Yilmaz et al., 2015; Zaman et al., 2020) by providing training to new workers, conducting field training, exchanging workers from one place to another, creating a comfortable working atmosphere and providing adequate facilities. Regular health checks and health education are indispensable for safety and health management (Barlis, 2012).

CONCLUSION

Occupational health and safety has an individual direct effect on operational effectiveness at Bahari Nusantara Dock amounting to 35.7%. Furthermore, there is a direct effect of the supervisory function on operational effectiveness by 41.0%. Regarding the performance of employees at Bahari Nusantara Dock, the variable work health safety does not have a direct effect on individuals or zero. However, the supervisory function has a direct individual effect on employee performance by 48.9% and the total effect is 75.6%. Then there is an indirect effect individually between work health and safety through operational effectiveness on the performance given by employees at Bahari Nusantara Dock which is only 14.5%. Meanwhile, the supervisory function has an indirect effect individually through work effectiveness on employee performance which is only 16.7%. The total direct effect between work health and safety and also the supervisory function on the performance provided by employees at Bahari Nusantara Dock is 67.7%. There is a direct effect individually between work effectiveness on the performance given by employees of 40.7%.

The policy implication is a gradual improvement in the skills of employees at Bahari Nusantara Dock, a more intensive management supervisory function using the latest information technology and adding an employee training frequency agenda to increase the level of company operational effectiveness.

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