

Analysis of Delays' and the Effectiveness of Containers Loading and Unloading Performance on Revenue of KM Logistik Nusantara 4 at PT. Pelni (Persero) Tanjung Priok Branch

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Abstract: Sea transportation plays a very large and strategic role in helping the Indonesian economy. In accordance with Law Number 17 of 2008 concerning Shipping. "Transportation in waters is an activity of transporting and/or transferring passengers and/or goods using ships." From the law above, it can be concluded that sea transportation involves facilities which are the ship itself and infrastructure, namely ports and waterways. By doing this research we can find out the loading and unloading performance system and its effect on revenue KM Logistik Nusantara 4 owned by PT. Pelni (Persero). Analysis of the system for loading and unloading activities can provide a solution to the problem of delays so that factors that allow for delays in the process of loading and unloading activities are obtained. In the discussion this time using the Multiple Linear Regression Analysis method with analysis using the SPSS Program analyzed the contribution of variable X1 (Unloading Delays), variable X2 (Effectiveness of Loading and Unloading Performance) to variable Y (Revenue of KM Logistik Nusantara 4). This discussion reaches the result that variable X1 has a very significant impact on variable Y but both variables simultaneously have an impact on income.

Keywords: *Sea Transportation, Loading and Unloading Performance, Performance Effectiveness, Revenue, SPSS*

Introduction

Sea transportation plays a very large and strategic role in helping the Indonesian economy. with so much trade carried out by sea, the economy in Indonesia is also developing because it can reach disadvantaged, outermost, remote and border areas. The development of loading and unloading activities, especially in sea transportation, helps in national development or development because transportation is vital to the country's development. Transportation must be developed properly and correctly to support this development.

The performance of infrastructure supporting logistics operations (multimodal connectivity) and cooperative coordination between logistics operators is still not optimal, meaning that not everything is running effectively. This results in an inefficient and inefficient logistics system, which, among other things, shows that national logistics costs are still high. The sea highway is actually a hope to play a role in connecting remote areas with production areas as well as a mode of transportation in marketing superior regional products. However, the Sea Toll still faces various operational obstacles, including limited loading and unloading facilities, selecting the wrong type of facility, limited docking facilities, and double handling due to the wrong type of location.

Delay in Loading and Unloading

Definition of delay according to (Fitri Nur Kharina & Kusno Adi Sambowo, 2019) in (DAYU, 2020) is implementation time that is not utilized in accordance with the activity plan, causing one or more of the following activities to be delayed or not completed exactly according to the planned schedule.

Delay is a problem that can result in losses in terms of time, materials, capital and can have an impact on subsequent processes resulting in delays and failure to run as expected (expectations). Basically, loading and unloading of goods is an activity of moving goods from sea transportation to land transportation or vice versa. According to Nuryadi (2018) peraturan pemerintah No. 93 Tahun 2013, Loading and unloading activities are activities engaged in loading and unloading goods from and to ships at ports which include stevedoring, cargodoring and receiving/delivery activities. According to Desta Utami (2018) Loading and unloading is the transfer of cargo from a ship to a land transportation vehicle through a warehouse and from a land vehicle or warehouse to a ship.

Loading is the work of loading goods from the dock or in a warehouse using heavy equipment such as cranes and slings so that they can be loaded on the ship's deck or ship's hold so that they can be distributed to their destination.

Performance Effectiveness

The Indonesian vocabulary derived from English is: "Effective" means successfully followed, validated, effective and happy. From the definition above, the most appropriate is "success". Very If a person knows how to behave well, he can with must work effectively. In its implementation, work always runs out. The five sources of effort are thoughts, energy, time, money and objects. However, the mix is different for each type of work. Usually people carry out several activities from which they want to get maximum results. But there are also questions about the efficiency of many things, so experts provide different definitions to explain what is meant by the limits of the concept of efficiency.

As per Beni's perspective (2016: 69) cited in (Latif & Dewi, 2021), Effectiveness can be defined as the correlation between the results achieved and the set objectives, or it can be characterized as an assessment of the extent to which an organization's outputs align with its policies and procedures. Effectiveness is also closely associated with the level of accomplishment in public sector operations, such that an operation is considered effective when it significantly contributes to the capacity to deliver community services as per the predefined objectives.

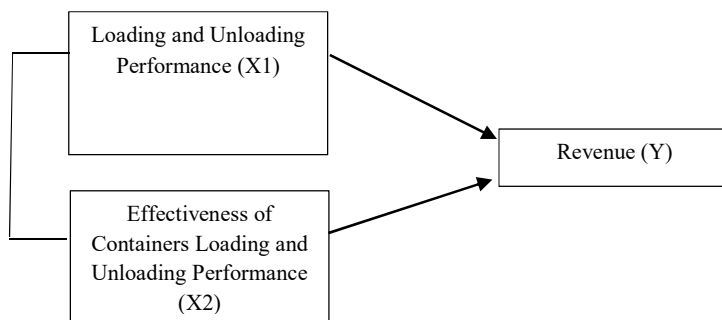
Revenue

Ikatan Akuntan Indonesia (2019:22) disclosed in the Financial Accounting Standards for Entities Without Public Accountability defines Income as income that arises in the course of the entity's ordinary activities and is known by different names such as sales, fees, interest, dividends, royalties and rent.

According to Harnanto (2019:102) stated, Revenue is "an increase or increase in assets and a decrease or decrease in a company's liabilities which is a result of operational activities or the procurement of goods and services to the public or consumers in particular.

It can be concluded that PT PELNI's KM Logistik Nusantara 4 Loading and Unloading Performance and Performance Effectiveness to KM Logistik Nusantara 4 Revenue is thought to have a significant effect, so that customers are satisfied with PT PELNI service. Therefore, the significance of this research is to find out correlation between Loading and Unloading Performance and Performance Effectiveness.

Hypothesis



Research Method

This study used a quantitative approach along with descriptive analysis and multiple linear regressions. The data were derived from questionnaires completed by employees of PT PELNI and laborers of KM Logistik Nusantara 4 services who served as respondents. Attitudes, both for independent and dependent variables, were measured using a 5-point Likert scale, ranging from "Strongly Disagree (1)" to "Strongly Agree (5)." The analysis of the research data was facilitated by utilizing the SPSS application version 21.0 to examine the questionnaire results.

Population and Sample

Based on research, the population of this study is operational employees, equipment operator staff, and loading and unloading workers. Of the total, a total of 68 respondents were obtained. There is an increase in the accuracy level of 5% because the sampling error that can be tolerated is 5%. Results will be calculated using the Slovin formula.

$$n = N (1 + (N \times e^2))$$

$$n = 68 / (1 + (68 \times 0.05^2)) = 58 \text{ Respondents}$$

Discussion and Result

Tabel 1 dan 2 shows the characteristics of respondents based on profession and gender

Tabel 1 Profession Classification

No.	Division	Employee	Percentage (%)
1	Operational Staff	17	29%
2	Tool Operator	14	24%
3	Laborer	27	47%
Total		58	100%

Tabel 2 Gender Classification

No.	Gender	Employee	Percentage (%)
1	Male	38	65.5%
2	Female	20	34.5%
Total		58	100%

Validation

Tabel 3, 4, dan 5 shows the validity of the data studied

Tabel 3 Validation test for X1

Questions Item	r - hitung	<i>Pearson Product Moments</i>	Explanation
X1.1	0,597	0,266	<i>Valid</i>
X1.2	0,636	0,266	<i>Valid</i>
X1.3	0,677	0,266	<i>Valid</i>
X1.4	0,553	0,266	<i>Valid</i>
X1.5	0,601	0,266	<i>Valid</i>
X1.6	0,577	0,266	<i>Valid</i>
X1.7	0,487	0,266	<i>Valid</i>

Tabel 4 Validation Test for X2

Questions Item	r - hitung	Pearson Product Moments	Explanation
X2.1	0,533	0,266	<i>Valid</i>
X2.2	0,651	0,266	<i>Valid</i>
X2.3	0,560	0,266	<i>Valid</i>
X2.4	0,690	0,266	<i>Valid</i>
X2.5	0,506	0,266	<i>Valid</i>
X2.6	0,523	0,266	<i>Valid</i>

Tabel 5 Validation Test for Y

Questions Item	r - hitung	Pearson Product Moments	Explanation
Y1.1	0,803	0,266	<i>Valid</i>
Y1.2	0,861	0,266	<i>Valid</i>
Y1.3	0,555	0,266	<i>Valid</i>
Y1.4	0,746	0,266	<i>Valid</i>
Y1.5	0,605	0,266	<i>Valid</i>

Realibility

Variabel	Cronbach's Alpha	Criteria	Explanation
Loading and Unloading Performance (X1)	0,708	0,6	<i>Valid</i>
Effectiveness of Containers Loading and Unloading Performance (X2)	0,606	0,6	<i>Valid</i>
Revenue (Y)	0,773	0,6	<i>Valid</i>

Based on the table above, it can be stated that the Cronbach's alpha value of the three variables, namely Delay in Loading and Unloading (X1), Effectiveness of Loading and Unloading Performance (X2), and Revenue (Y) is greater than the provisions (0.6) so it can be concluded that the data is valid and Reliable means that the questionnaire that has been prepared can be used in research.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.491	7.114		3.302	.002
	X1	.076	.183	.057	.414	.680
	X2	.106	.199	.074	.533	.596

In the table above it can be seen that the results of the F test using the SPSS program show that the delay variable (X1) has a partial relationship or separately there is significance to the Revenue variable (Y). This can be seen from the calculated t result which is 3.302 from the F table which is only 0.187 and in the T test the significance level is also 0.002 and smaller than 0.05.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.338	2	2.669	.187	.830 ^b
	Residual	784.541	55	14.264		
	Total	789.879	57			

a. Dependent Variable: Pendapatan

b. Predictors: (Constant), Efektivitas Kinerja, Keterlambatan Bongkar Muat

Based on the table above, it can be seen that the loading and unloading delay variables (X1) and the effectiveness of loading and unloading performance (X2) simultaneously or simultaneously have a significant relationship to the income variable. This can be proven or seen in the F value, namely the result that is greater than Cronbach's alpha of 0.05 or 5%.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.822 ^a	.676	.294	2.77682

a. Predictors: (Constant), X2TOTAL, X1TOTAL

Conclusion

Effect of Loading and Unloading Delay Variable (X1) on Loading and Unloading Logistics KM Revenue Variable (Y)

The results of this research show that variable X1 has a significant relationship with variable Y. This shows that the T value of variable X1 is 3.302 with significant rate at 0.02 which is smaller than Cronbach's alpha value (0.05) it means the first hypothesis is accepted

Influence of the Effectiveness of Loading and Unloading Performance (X2) on the Revenue of KM Logistik Nusantara 4 (Y)

The research results of the loading and unloading performance effectiveness variable (X2) also have a significant relationship with the income variable (Y) but are inversely proportional because the result of the f value is 0.187 with a significance level of 0.830, therefore it can be concluded that if there is a decrease in the effectiveness of the assessed performance, it has already occurred. well then there will be losses from the PT PELNI (Persero) Company.

Effect of Delay in Loading and Unloading (X1) and Effectiveness of Loading and Unloading Performance (X2) on KM Logistik Nusantara 4 Revenue (Y)

The results of the f test in this research show that the calculated f value produced by testing the regression model is 2,669. This value has proven the existence of the third hypothesis in this research. "The delay variable and the performance effectiveness variable have different influences on the income variable." This shows that these two variables do have a significant relationship with the income variable, but only partially. This is supported by the correlation coefficient or R value produced by the regression model of 0.822, thus indicating that there is a very strong correlation or link between the two variables Loading and Unloading Delay (X1) and Loading and Unloading Performance Effectiveness (X2) with the Revenue variable. (Y). The regression coefficient value is 0.676, which shows that 67% of these two variables have an influence on the income variable. Therefore, it can be concluded that the loading and unloading delay variable is the one that has the greatest influence on income.

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