

Container Operation and Distribution Costs on the Work Productivity Terminal on Domestic Containers

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Abstract

Operating costs are all expenses that are directly used for the production or carried out by a company to optimize the current inventory in the field so that it can provide optimal benefits for the company. This study uses quantitative methods and data analysis techniques with multiple linear regression, where the samples used are the operational employees of the Domestic Container Terminal in the finance section and the On Duty Manager (MOD) and their staff as many as 67 respondents. Based on the results of the Keyword Analysis that the Operating Cost Variable has no significant effect on Work Productivity. The Container Distribution variable has a positive and significant effect on the Work Productivity variable. Variables Operating Costs and Container Distribution together have a positive and significant effect on the Work Productivity variable because the F test results show a value of 52.371 which is greater than F table of 3.142. This means that if there is an increase in Container Operation and Distribution Costs, then Work Productivity can also increase. purchase of needed goods. Container distribution is a container distribution activity.

Keywords

Operation Cost, Container, distribution, Work Productivity

1. Introduction

Given the geographical condition of Indonesia as an archipelagic country where the ocean area is larger than the land area, the means of transportation by sea have a big role in connecting cities and islands in the country. The development of sea transportation must be able to drive the development of Eastern Indonesia, by prioritizing the regularity of ship visits that can stimulate the growth of trade and development activities in general. The archipelago sea as a maritime business area requires prioritizing national archipelago shipping that is able to ensure the availability of decent and safe sea transportation services while creating jobs. (MPR Decree No. II/MPR/1993) which indicates that the implementation of development in the sea transportation sector is directed, among others, to increase inter-island trade activities, in addition to inter-state trade (import-export).

With the increase in the flow of goods and services through trade activities by sea, the existence of sea transportation service companies, such as the Ship Loading Expeditionary Company (EMKL) and the Loading and Unloading Company (PBM) have a very large role. Apart from the role of EMKL and PBM, what is not important is the role of port operators who facilitate the two types of companies (EMKL and PBM) operating in the port area.

One of the port operators is the Domestic Container Terminal which started its activities as a port terminal operator since early January 2002. The Domestic Container Terminal has been serving both international and domestic loading and unloading of goods and containers, including containers and non-containers. However, since 2012 the Domestic Container Terminal has no longer served international container activities and in 2014 has also no longer served non-container (bulk) activities until now, which only focuses on loading and unloading services for domestic containers.

In doing business, like companies in general, Domestic Container Terminals always carry out planning and supervision of operating costs, product distribution and company work productivity, so that the company can run smoothly and be able to increase profits according to the direction of the policies it takes. For the three components, operating costs, product distribution and work productivity become one unit in order to achieve the company's main objectives.

Operating costs refer more to costs while operating costs refer to the basis and costs that support it. Cost is also important in cost calculation, planning, and control. According to Mulyadi (2008). Cost is the main physical element that is sacrificed for the sake of the company's interest in generating profits which is the main goal in the company, therefore, in its implementation it requires very important attention. Another thing related to operating costs is product distribution, in this case the Domestic Container Terminal has container loading and unloading services as business actors who become port operators in other words Domestic Container Terminals must also pay attention to the distribution of domestic container distribution.

According to Winardi (2010), what is meant by distribution channel is "Distribution channel is a group of intermediaries that are closely related to each other and who deliver products to buyers". While Philip Kotler (2008) suggests that "The channel is a distribution is an organization that is interdependent and involved in the process to make an item or service ready for use or consumption".

The definition of distribution according to these experts can be said as activities and services made from producers to consumers so that they are widespread. Distribution activities work to bring producers closer to consumers so that goods or services from all over Indonesia or outside Indonesia can be accessed by us.

After discussing the operating costs and product distribution, then another important factor in the company's activities is productivity. According to Suprihanto (2009), productivity is defined as the ability of a set of economic resources to produce something or is also interpreted as a comparison between sacrifice (input) and income (output). Meanwhile, according to Hasibuan (2010) Productivity is a comparison between output (results) with inputs (inputs). From the above understanding it can be said that productivity is the ability to produce compared to the inputs used, an economic activity can be said to be productive if it is able to produce the expected goods or services in a short or appropriate time.

The Domestic Container Terminal Business Entity (BUP) recorded its quarterly operating costs in 2015 and 2016 as shown in the following table:

Table 1. Operational Costs Per Quarter 2015 – 2016, Domestic Container Terminal

	YEAR	
	2015	2016
1st Quarter	156.782.953	191.455.305
2 nd Quarter	186.166.822	222.695.570
3 rd Quarter	175.701.606	211.739.210
4 th Quarter	184.953.920	221.901.692
Total	703.605.361	847.791.777

Source: Domestic Container Terminal Finance Division

From the table above, it is clear that operating costs in 2015 were in the first quarter of 156,782,953, in the second quarter they were 186,166,822, in the third quarter they were 175,701,606 and in the fourth quarter, 184,953,920. In 2016, operating costs were recorded in the first quarter of 191,455,305, in the second quarter of 222,695,570, in the third quarter of 211,739,210 and in the fourth quarter of 221,901,692. From the operating costs per Quarter I to IV in 2015 there were ups and downs, as well as in Quarters I to IV in 2016 also increased and decreased, but when viewed from the total operating costs in 2015 amounted to 703,605,361 compared to the total operating costs in 2016 of 847,791,777, an increase of 144,186,416 or 20, 49%.

For distribution activities, which are divided into distribution activities from the field and distribution of ship unloading, Domestic Container Terminal records distribution activities per Quarter in 2015 and 2016 can be seen in the following table:

Table 2. Field Distribution Activities and Ship Unloading Per Quarter 2015 – 2016,
 Domestic Container Terminal

	YEAR 2015		YEAR 2016	
	Field (CY)	Ship (TL)	Field (CY)	Ship (TL)
1st Quarter	41.368	248.411	54.394	264.410
2nd Quarter	67.412	293.557	78.446	296.387
3rd Quarter	59.364	282.285	58.877	271.713
4th Quarter	61.970	304.868	74.933	315.949
Total	230.114	1.129.141	266.650	1.148.459

Source: Domestic Container Terminal Finance Division

From the table above, it is recorded that field distribution activities in 2015 were 41,368 TEUs in Quarter I, 67,412 TEUs in Quarter II, 59,364 TEUs in Quarter III, and 61,970 TEUs in Quarter IV. In 2016 the distribution was recorded in the first quarter of 54,394 TEUs, in the second quarter of 78,446 TEUs, in the third quarter of 58,877 TEUs, and in the fourth quarter of 74,933 TEUs. When viewed from the total distribution of field activities (CY) in 2015 of 230,114 TEUs compared to the total distribution of field activities (CY) in 2016 of 266,650 TEUs, an increase of 36,536 TEUs or 15.87%.

The distribution of unloading ships was recorded in 2015 at 248,411 TEUs in Quarter I, in the second quarter of 293,557 TEUs, in Quarter III at 282,285 TEUs and in Quarter IV at 304,868 TEUs. While in 2016 it was 264,410 TEUs in the first quarter, 296,387 TEUs in the second quarter, 271,713 TEUs in the third quarter and 315,949 TEUs in the fourth quarter. When viewed from the total unloading production activities in 2015 amounted to 1,129,141 TEUs compared to the total unloading production activities in 2016 of 1,148,459 TEUs, an increase of 19,318 TEUs or 1.71%.

From the three variables above, there is a difference in the increasing trend of each variable, namely in operating costs from 2015 to 2016 there was an increase of 20.49%, in the field distribution (CY) from 2015 there was an increase of 15.87% while in the distribution of loading and unloading ships from 2015 to 2016 only increased by 1.71%, this made researchers interested in conducting research by raising the operating costs and distribution of domestic containers on work productivity at PT. Berlian Indonesia Terminal Services.

2. Literature Review

2.1 Operation Management

According to R Terry cited by Simamora (2008) management is "a typical process consisting of planning, organizing, mobilizing and controlling actions carried out to determine and achieve predetermined targets through the use of human resources and other resources". Understanding Production and Operations Management according to Assauri (2008), says that: "Production and Operations Management are activities that regulate and use materials in the form of human resources, tool resources and financial resources, effectively and efficiently to create and increase the utility of an item or service". Meanwhile, according to Handoko (2000) "Management of production and operations is an optimal management effort, the use of resources (or often called factors of production), labor, machinery, equipment, raw materials and so on in the process. transformation of raw materials and labor into various products or services. From some of the above, it can be said that operations management is an operation design and improvement of the production system as well as a change from the resources owned by the company (including land, labor, capital, and input management) into outputs in the form of desired goods or services.

2.2 Operating Cost

Operating costs according to Nasution and Marlina (2013) are one of the most important elements in economic activity in a company in the formation of profits. According to Nafarin quoted by Nasution and Marlina (2013) states that "operating costs are all activities that occur in an organization carrying out activities and goals that have been determined". So operating costs are expenses related to operations, namely all expenses that are directly used for the production or purchase of goods including general costs, sales, administration, and credit interest.

2.3 Operating Cost Indicator

The indicators used to measure operating costs according to Kuswadi (2008) include the following:

- 1) Cost of goods sold is the cost or cost of acquiring goods consisting of the purchase price of the goods and all costs incurred until the goods are ready to be sold;

- 2) General and administrative expenses are all costs or expenses incurred in connection with general and administrative activities other than selling expenses;
- 3) Selling costs are all costs incurred in the marketing department in order to sell products/services.

2.4 Domestic Container Distribution

Container

Yulianto and Setiono (2013) define a container as a specially designed package with a certain size, can be used repeatedly, used to store and transport the cargo contained in it.

2.5 Container Distribution

According to Wijaya and Nugroho (2012) the distribution of containers affects the level of inventory in the field. If inventory is disrupted, it will have a direct impact on the company. Lack of inventory will result in limited container repositioning so that it will affect the level of profit earned. With limited access to existing infrastructure, containers can reach the warehouse belonging to the consignee.

According to Wijaya and Nugroho (2012), after being unloaded at the port, the containers are distributed to the consignees. So that container distribution activities are carried out by a company to optimize the current inventory in the field so that it can provide optimal benefits for the company. In this container distribution, this study uses the unloading volume, which can show the company's unloading capacity for one month with units of 000 tons/m³.

2.6 Work productivity

Productivity

According to Raviyanto (2010), productivity is a comparison between the results achieved and the participation of the workforce per unit of time. According to Suprihanto (2009), productivity is defined as the ability of a set of economic resources to produce something or is also interpreted as a comparison between sacrifice (input) and income (output).

The notion of productivity basically includes a mental attitude that always has the view that the way the work is done now must be better than the way of working in the past and the results achieved for the future. attitude then makes a person always looking for improvement and improvement. Conceptually, productivity is considered as the utilization of resources used to produce goods and services consisting of various factors, namely labor, land and capital including machinery, equipment, raw materials, electric power and technological progress.

The productivity formula according to Isyandi (2008) can systematically be written as follows:

$$\text{Productivity} = \frac{\text{The resulting output}}{\text{Input used}}$$
$$\text{Labor productivity} = \frac{\text{Productivity in units}}{\text{Number of Employees}}$$

According to Moellfi (2008) there are 3 factors that affect productivity, namely:

- 1) Workload. Directly related to the physical, mental, social burden that affects the workforce so that efforts to place workers are in accordance with their abilities and need to be considered;
- 2) Work capacity. Work capacity is a person's ability to complete work at a certain time. Working capacity is highly dependent on gender, education, skills, and nutritional status;
- 3) Additional burden due to work environment (Moellfi, 2003).

Lebleblici (2012) several factors that can affect employee productivity are as follows: (1) Place setting, is one of the things that can attract employee motivation, (2) achievements obtained as rewards from employees and superiors, (3) determination of work processes to explain the workflow through documentation and communication, and (4) support from supervisors is important to encourage and increase trust in employees.

2.7 Work Productivity Indicator

- 1) The indicators used to measure the productivity of work quantity, work quality, and timeliness (Saputra, 2014).
- 2) Quantity of work is a result achieved by a certain number of employees/workers with a comparison of existing standards or has been set by the agency/company;

- 3) Quality of work is a standard of results related to a product produced by employees/workers.
- 4) Punctuality is the level of an activity that is completed at the beginning of a predetermined time, viewed from the point of coordination with the output results, and is able to maximize the time available for other activities.

2.8 Operating Costs and Container Distribution Domestic Relations on Work Productivity

1) The relationship between operating costs and work productivity

Operating costs are one of the basics for work productivity in a business activity carried out by individuals or groups of people or business entities. If operating costs have increased, it must be with the results/profits of business, although the increase in operating costs does not have much effect on increasing productivity itself because operating costs cannot absolutely directly affect the increase in productivity.

2) The relationship of container distribution to work productivity

Domestic container distribution in another sense product distribution is the most important part in marketing management. The distribution of production results is a step to seek business capital and company profits, for product distribution it must be maximized and apply the concept of efficiency and work effectiveness. The more products marketed, the higher the operating costs incurred and the higher the work productivity. The wider the range of product distribution areas, the higher the operating costs and the higher the work productivity. It can be said that distribution costs are part of operating costs that can directly increase work productivity or in other words, an increase in product distribution has an impact on increasing operating costs and work productivity.

So product distribution, or in this research is container distribution, has a direct effect on work productivity because the higher the level of distribution, the more effort to distribute the product and a direct impact on increasing work productivity.

2.9 Previous Research

The following are some of the previous studies referred to as stated in the table below, namely:

Table 3. Previous Research

Researcher Name (Year)	Title of Study	Variable of Study	Technique Analysis	Results of Study
Winarso (2014)	Effect of Operational Costs on Profitability of PT. Telkom	Operating Costs and Profitability	Simple Linear Regression Analysis	Operational costs affect profitability
Army Arfianti (2014)	Analysis of Planning and Budget Realization on Operational Costs at Pelabuhan Indonesia I Belawan Branch	Planning, Budget Realization, and Operational Costs	Qualitative Research with experimental methods	It was found that there was a discrepancy between planning and budget realization on operational costs
Firmansyah Kurniadai (2010)	The Effect of Promotional and Distribution Costs on Increasing Sales Volume at CV Sejati	Cost of Promotion, Distribution and Sales Volume Increase	Multiple Linear Regression Analysis	Promotion and distribution costs both have an effect on increasing sales volume, the amount of promotion costs is more dominant than distribution

Source : Data processed

The similarities of this research with previous research are:

- 1) This study uses the variable operating costs as one of the independent variables;

2) This research focuses on financial management and company operations management, both regarding profit, financial realization, and sales volume;

3) This study also uses multiple linear analysis techniques, in the research of Winarso and Firmansyah Kurniadi. The differences between this research and previous research are:

- 1) There is one previous study that used qualitative research and experimental methods (Army Arfianti);
- 2) None of the previous studies used the productivity variable as one of the research variables;
- 3) Previous research used data comparison with an annual system, while in this study only data comparison with a quarterly system was used.

The framework of thinking in this research is as follows.

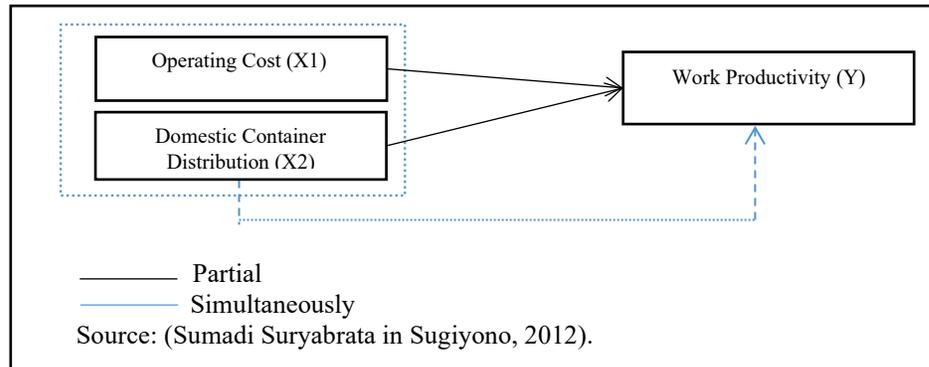


Figure 1. Framework

2.10 Hypothesis

From the explanation of various descriptions related to the operating costs and distribution of domestic containers on work productivity at PT. BJI, which the researcher described earlier, the researcher will put forward several research hypotheses as follows:

- 1) Operating costs affect work productivity at PT. Diamond Indonesia Terminal Services,
- 2) Distribution of domestic containers affects work productivity at PT. Diamond Indonesia Terminal Services,
- 3) The cost of operating and distributing domestic containers is estimated to simultaneously affect work productivity at PT. Berlian Indonesia Terminal Services.

3. Methods

This study uses a quantitative approach. Sugiyono (2012) suggests that the quantitative approach is "a research approach that uses data in the form of numbers from survey answers that are distributed to research samples and analyzed using statistical analysis techniques. The quantitative approach is used because the data used in this study will be processed using statistics."

The type of research used is causal. Causal research according to Silalahi (2009) is "research that examines the causal relationship between two or more variables. In causal research, the effect of changes in value variations in one or more other variables will be explained. That is, does a change in the value of one variable cause a change in the value of another variable? Domestic Container Terminal Research Location, in the North Surabaya area. With the research implementation time from June 1 to July 31, 2020.

3.1 Population and Research Sampling Techniques

The research population is limited to the operational employees of the Domestic Container Terminal in the finance section and the On Duty Manager (MOD) and their staff, consisting of Foreman, Plannership, and Checkers who are operated by 80 people, because this operational division is the spearhead of the main and related activities. directly with the variable operating costs, distribution of domestic containers and work productivity.

The sampling technique used in this study uses the slovin technique, (in Riduwan, 2008) with the following formula: Description :

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

n = sample

N = population

e = 95% precision value or sig. = 0,05.

Because the population of the study was 80 people and the required error rate was 5%, the number of samples used in this study was found:

$$n = N / (1 + N e^2) \Leftrightarrow 80 / (1 + 80 \times 0,05^2) = 66,66 \gg \text{rounded up to 67 respondents.}$$

4. Data Collection

The instruments or tools used for data collection in this study were questionnaires, interview guidelines and study documentation.

While the data collection methods used in this study are as follows:

- 1) Literature Study
- 2) This is done by citing various expert opinions or book authors from various literatures that support the material for writing this research report. This literature/literature study is not only obtained through the library but also from several webs/blogs on the internet;
- 3) Distribution of questionnaires (questionnaire)
- 4) Questionnaire is a collection of data using written questions given to respondents.
- 5) Interview
- 6) Interview is a data collection technique to obtain information from the source in order to find answers to problems that must be done.
- 7) Documentation
- 8) This is done by documenting, recording and quoting several statements relating to various data that exist in the company and which support this research.

5. Result and Discussion

4.1. Characteristics of Respondents

In accordance with the predetermined sampling mechanism, the number of financial and operational employees to be studied is 67 people who will be described based on age, education, work experience and years of service.

4.1.1. Validity test

After the researchers processed the data to determine the validity, the researchers did the calculations. Based on the calculations obtained, the researchers obtained a statistical table of item-total. The table of item-total statistics is as follows:

Table 4. Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
P1	34.6866	15.491	.608	.853
P2	34.7761	16.176	.403	.870
P3	34.7761	14.934	.690	.845
P4	34.6567	15.653	.569	.856
P5	34.7761	14.207	.789	.835
P6	34.9851	14.863	.689	.845
P7	34.8358	14.503	.689	.844
P8	34.8358	16.048	.294	.888
P9	34.7463	13.919	.785	.834

Source: Data processed

From the results of data processing, the Corrected Item-Total Correlation value is overall above the r table value, namely $r(67,05) = 0.246$. Thus, all data in this study were declared valid.

4.1.2. Reliability Test

Table 5. Reliability Statistics

Cronbach's Alpha	N of Items
0.867	9

Source: Data processed

In the table above, it can be seen that there is a calculated Cronbach alpha value of $0.867 > 0.06$, because the alpha value is greater than 0.06 then all data are declared reliable.

4.4 Descriptive Analysis

In this section, the researcher will present the data based on the results of the questionnaire in the form of a frequency distribution table, this aims to make it easier to read the results of the research that has been done. The data for making the distribution table was obtained from the results of processing questionnaire data using SPSS software by looking at the frequency level of respondents in choosing the available answers.

4.4.1 Variable Operating Cost

In this study, operational cost variables are measured against each indicator which includes employees, operational costs, and maintenance costs which will be described through the distribution table as follows:

Table 6. Questionnaire Results of Employee Cost Indicators

X1.1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.5	1.5	1.5
	3	1	1.5	1.5	3.0
	4	32	47.8	47.8	50.7
	5	33	49.3	49.3	100.0
	Total	67	100.0	100.0	

Source : Data processed

Table 6 shows that the respondents' answers to the employee cost indicator are divided into answers: those who answered strongly agreed there were 33 respondents or 49.3%, those who answered agreed were 32 respondents or 47.8%, who answered doubtfully there was 1 respondent. or as much as 1.5%, and who answered disagreed there was 1 respondent or as much as 1.5%. With the results of the respondents' answers, they can ensure that the key financial and operational employees have understood the importance of employee costs, namely those who see strongly agree and agree there are 65 respondents or 97.1%, who are in doubt there is 1 respondent or 1.5%, and 1 respondent or as much as 1.5%, is considered to still do not understand.

Table 7. Questionnaire Results Indicator Operating Cost

X1.2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.5	1.5	1.5
	3	4	6.0	6.0	7.5
	4	32	47.8	47.8	55.2
	5	30	44.8	44.8	100.0
	Total	67	100.0	100.0	

Source : Data processed

Table 7 shows that the respondents' answers to the operating cost indicator are divided into answers: those who answered strongly agreed there were 30 respondents or 44.8%, those who answered agreed were 32 respondents or

47.8%, and those who answered in doubt were 4 respondents or as many as 6%, while those who answered disagreed there were 10 respondents or as much as 14.92%, and those who answered strongly disagreed there was 1 respondent or as much as 1.5%. With the results of respondents' answers, it can be said that the key financial and operational employees understand the importance of operating costs, namely answering strongly agree and agree there are 62 respondents or 92.6%, who do not understand there is 1 respondent or 1.5% and the remaining 4 respondents or only 6% are still in doubt.

Table 8. Results of the Maintenance Cost Indicator Questionnaire
 X1.3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	3.0	3.0	3.0
	4	37	55.2	55.2	58.2
	5	28	41.8	41.8	100.0
	Total	67	100.0	100.0	

Source : Data processed

Table 8 shows that the respondents' answers to the maintenance indicator are divided into answers: those who answered strongly agree there were 28 respondents or 41.8%, those who answered agreed were 37 respondents or as many as 55.2%, no one answered in doubt there were 15 respondents, who answered disagree there are 2 respondents or as much as 3%. With respondents' answers, it can be said that only a small proportion of financial and operational employees understand the importance of maintenance, namely those who see strongly agree and agree there are 65 respondents or 97%, those who do not understand are 2 respondents or as much as 3% and no one has any doubts.

4.4.2 Container Distribution Variable

The distribution of a discrete variable is a random variable that has a finite number of different values. Distribution of continuous variables, random numbers With a finite number of possible values.

Table 9. HQuestionnaire Results Indicators for the Entry of Containers in the Field X2.1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.5	1.5	1.5
	3	1	1.5	1.5	3.0
	4	30	44.8	44.8	47.8
	5	35	52.2	52.2	100.0
	Total	67	100.0	100.0	

Source : Data processed

Table 9 shows that the respondents' answers to the indicators for the entry and exit of containers in the field are divided into answers: those who answered strongly agree there were 35 respondents or 52.2%, those who answered agreed were 30 respondents or 44.8%, and those who answered doubtful. in doubt there is 1 respondent or as much as 1.5% and answered disagree as much as 1 respondent or as much as 1.5%. With the results of the answers, respondents can ensure that the key from financial and operational employees about the importance of regulating and supervising the release of containers in the field is agreeing and agreeing as much as 97%, and the rest is 1 respondent or 1.5% who are still hesitant and do not understand as much as 1

people or 1.5%.

Table 10. Questionnaire Results Indicators of Length of Time for Container Stockpiling in the Field
 X2.2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	3.0	3.0	3.0
	3	2	3.0	3.0	6.0
	4	33	49.3	49.3	55.2
	5	30	44.8	44.8	100.0
	Total	67	100.0	100.0	

Source : Data processed

In table 10, the respondents' answers to the indicator that the container storage period is needed in the field are divided into the following answers: those who answered strongly agreed there were 30 respondents or 44.8%, those who answered agreed were 33 respondents or as many as 49.3%, who answered undecided. there are 2 respondents or as much as 3%, and who answered disagree there are 2 respondents or as much as 3%. With the respondents' answers, they can ensure that the owners of financial and operational employees understand the need to regulate the storage period for containers in the field, namely those who strongly agree and agree there are 63 respondents or 94.1%, who still do not understand there are 2 respondents or as many as 3 % respondents and who answered in doubt there were 2 respondents or as much as 3%.

Table 11. Results of the Questionnaire of Capacity Indicators and Realization of Field Use
 X2.3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.5	1.5	1.5
	3	7	10.4	10.4	11.9
	4	40	59.7	59.7	71.6
	5	19	28.4	28.4	100.0
	Total	67	100.0	100.0	

Source : Data processed

Table 11 shows that the respondents' answers to the indicators of capacity and realization of field use are divided into the following answers: 19 respondents who answered strongly agree or 28.4%, those who answered agreed, there were 40 respondents or 59.7%, who answered undecided. in doubt there are 7 respondents or as much as 10.4%, and who answered disagree there is 1 respondent or as much as 1.5%. With the results of respondents' answers, they can ensure that key financial and operational employees understand the importance of capacity planning and realization of field use, namely those who agree and agree there are 59 respondents or 88.2%, who do not understand there are 1 respondent or 1 respondent, 5% , and the rest who are in doubt there are 7 respondents or as much as 10.4%.

4.4.3 Work Productivity Variables

Table 12. Questionnaire Results Indicators of Employee Work
 Y1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	3.0	3.0	3.0
	3	4	6.0	6.0	9.0
	4	33	49.3	49.3	58.2
	5	28	41.8	41.8	100.0
	Total	67	100.0	100.0	

Source : Data processed

Table 12 shows that the respondents' answers to the employee performance indicators are divided into answers: those who answered strongly agreed there were 28 respondents or 41.8%, those who answered agreed were 33 respondents or 49.3%, those who answered doubtful were 4 respondents or as much as 6% and who answered disagreed as many as 2 respondents or 3.0%.

With the answers, respondents can ensure that the key financial and operational employees understand the importance of maintaining the work of employees, namely those who see strongly agree and agree there are 61 respondents or 91.1%, and those who do not understand are 2 respondents or 3% and the rest are still in doubt there are 4 respondents or as much as 6%.

Table 13. Questionnaire Results Employee Work Quality
 Y2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	4	6.0	6.0	6.0
	3	5	7.5	7.5	13.4
	4	25	37.3	37.3	50.7
	5	33	49.3	49.3	100.0
	Total	67	100.0	100.0	

Source : Data processed

Table 13 shows that the respondents' answers to the indicators of employee work quality are divided into the following answers: 33 respondents who answered strongly agree or 49.3%, those who answered agreed, there were 25 respondents or 37.3%, and those who answered doubtful were there. 5 respondents or as much as 7.5%, and who answered disagree there were 4 respondents or as much as 6%.

With the answers, respondents can ensure that the key financial and operational employees understand the importance of maintaining the quality of employee work, namely those who see strongly agree and agree there are 58 respondents or as many as 86.6%, who do not understand there are 4 respondents, and the rest are still in doubt. 5 respondents or as much as 7.5%.

Table 14. Results of Questionnaire Indicators of Accuracy and Work Speed of Employees
 Y3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	3.0	3.0	3.0
	3	4	6.0	6.0	9.0
	4	27	40.3	40.3	49.3
	5	34	50.7	50.7	100.0
	Total	67	100.0	100.0	

Source : Data processed

Table 14 shows that respondents' answers to the Accuracy and Speed of Work indicators of employees are divided into answers: those who answered strongly agreed there were 34 respondents or as many as 50.7%, who answered agreed there were 27 respondents or as many as 40.3%, who answered undecided. there are 4 respondents or as much as 6% and who answered disagree there are 2 respondents or as much as 3%.

With the answers, respondents can ensure that the key to employees and operations about the importance of maintaining distance and speed of work of employees is by answering strongly agree and agree as many as 61 respondents or as much as 91%, who do not understand there are 2 respondents and the remaining 4 respondents or as many as 6% who still doubtful.

4.5 Hypothesis Test

4.5.1 Classical Assumption Test Results

The classical assumption test is used to detect whether or not there is a deviation from the classical assumption or the multiple equations used. This test consists of normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test. The following are the results of classical assumption testing consisting of:

1. Normality Test

To test the normality of the data can also use the Kolmogorov Smirnov statistical test (K-S). The magnitude of the K-S value with a significance level above 0.025 means that it can be said that the residual data is normally distributed. The results of the normality test of the data briefly the results can be seen in table 4.17 below:

Table 15. Kolmogorov-Smirnov Test . One-Sample Normality Test Results

		BI.OP	D.PK.DOM	PROD.PK
N		67	67	67
Normal Parameters ^a	Mean	13.1642	12.9851	12.9851
	Std. Deviation	1.55307	1.62828	1.74506
Most Extreme Differences	Absolute	.182	.168	.190
	Positive	.131	.108	.124
	Negative	-.182	-.168	-.190
Kolmogorov-Smirnov Z		1.490	1.376	1.555
Asymp. Sig. (2-tailed)		.034	.045	.026

a. Normal test distribution,.Source: Data processed

The results of the Kolmogorov-Smirnov calculation show that the significance value of the operational cost variable (X1), the domestic container distribution variable and the loading and unloading productivity variable (Y) are 0.034,

0.045, and $0.026 > 0.025$, respectively. (Trihendradi, 2011). Thus, it can be said that the regression model is feasible to use because it meets the assumption of normality or it can be said that the research is normally distributed.

2. Multicollinearity Test

Multicollinearity test aims to detect the presence or absence of multicollinearity in the regression model, it can be seen from the tolerance value and variance inflation factor (VIF). The cut value that is commonly used to indicate the presence of multicollinearity is the tolerance value > 0.10 or the same as the VIF value < 10 . The results of the multicollinearity test can be seen briefly in table 4.16. as follows:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Partial	Tolerance	VIF
		1	(Constant)	2.265			1.164		1.946	.056	
	BI.OP	.095	.110	.088	.859	.394	.539	.229	.154	.583	1.352
	D.PK.DOM	.732	.103	.728	7.137	.000	.741	.631	.531	.692	1.445

a. Dependent Variable: PROD.PK, Source : Data processed

From the table above, it can be summarized as follows:

Variable	Tolerance	VIF	Summarized
Operating Cost	0,583	1,352	There is no multicollinearity problem
Container Distribution	0,692	1,445	There is no multicollinearity problem

Source : Data processed

Based on table 17, it can be seen that the tolerance value for Operating Costs is 0.584 with a VIF of 1.352 while for Container Distribution the tolerance value is 0.692 with a VIF of 5.007. These results indicate a tolerance value of more than 0.10 and a VIF value of less than 10, so the research variables are considered free from multicollinearity symptoms. As the results of the analysis above, it can be stated that the variables in this study can be stated not to have multicollinearity disorders.

3. Autocorrelation Test

The autocorrelation test aims to test whether there is a correlation between the confounding error in period t and the confounding error in period t-1 (previous). To detect whether or not autocorrelation uses the Durbin Watson test (DW test), the Durbin Watson test is only used for first-order autocorrelation and requires an intercept (constant) in the regression model and no more variables among the independent variables. testing is obtained as follows:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.788 ^a	.621	.609	1.09137	.621	52.371	2	64	.000	1.802

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.788 ^a	.621	.609	1.09137	.621	52.371	2	64	.000	1.802
a. Predictors: (Constant), D.PK.DOM, BI.OP, b. Dependent Variable: PROD.PK										

Source : Data processed

Based on table 18, it can be seen that the Durbin Watson value is obtained = 1.802, this value is compared with the Durbin Watson statistical value (table) using a significance value of 5%. The number of samples is 67 (n) and the number of independent variables is 2 (k=2). Based on the Durbin Watson 65 table with a significance of 5%, the values of $dl = 1.538$ and $du = 1.665$ are obtained. The DW value of 1.802 is greater than the upper limit (du) which is 1.665 and less than $4 - du = 4 - 1.665 = 2.335$, so it can be said that there is no positive and negative autocorrelation or it can be said that there is no autocorrelation.

4. Heteroscedasticity Test

Heteroscedasticity test is used to see whether there is an inequality of residual variance from one observation to another. In this study, the heteroscedasticity test used the Glejser test.

If the significance level is above 5%, it means that there is no heteroscedasticity, but if it is below 5%, it means that there is heteroscedasticity. The results of the heteroscedasticity test can be seen in tab 4.21 below:

Table 19. Heteroscedasticity Test Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.747	.698		2.501	.015
	VAR00001	-.064	.057	-.166	-1.121	.266
	VAR00002	.004	.056	.011	.075	.941

a. Dependent Variable: RES_2
 Source : Data processed

From the table above it can be summarized as follows:

Table 20. Results of Heteroscedasticity Test

Variable	T count	p-value	Sig	Summarized
Operating Cost	1,121	$p > 0,05$	0,266	There is no heteroscedasticity problem
Container Distribution	0,075	$p > 0,05$	0,941	There is no heteroscedasticity problem

Source : Data processed

From the data above, it can be seen that each variable has a significance value of more than 0.05, so it can be said that each variable does not contain heteroscedasticity, thus fulfilling the requirements in regression analysis.

4.5.2 Multiple Linear Regression Test

Multiple linear regression is used to determine the magnitude of the effect of differences from one variable on other variables, in this case the variable operating costs and container distribution on work productivity as an intervention variable with the following formula:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$$

Description :

- Y = Work productivity
- X1 = Operating Cost
- X2 = Domestic Container Distribution
- Bo = Constanta
- $\beta_{1,2}$ = Regression coefficient
- e = Error value

Based on the analysis, the results of the analysis are as follows:

4.5.4 Effect of Container Distribution on Work Productivity

The results of this study indicate that the t count of Container Distribution (X2) is 7,137 t table = 1,997, then the value of t count > t table. Meanwhile, the significance value of t count variable for Container Distribution (X2) is 0.000, meaning <0.05. Based on these results, H0 is rejected and Ha is accepted, which means that Container Distribution has a significant effect on Work Productivity (Y).

This is in accordance with what is explained by Firmansyah Kurniadai (2010) in a study entitled The Effect of Promotional and Distribution Costs on Increasing Sales Volume, where an increase in product distribution will definitely increase work productivity, especially in the production and marketing department. The conditions that occur at PT Berlian Jasa Terminal Indonesia Pelabuhan related to the increase in distribution are:

1. Enforcement of the tariff rate for the storage period for containers in the field which has an impact on planning and shipping activities to immediately shorten the storage period for containers so that the cycle/distribution of containers in the field is faster;
2. Enforcement of the requirement of 75% of containers required to stockpile so that ships can dock has an impact on optimizing vacant land;
3. Enforcement of mandatory stockpiling requirements for frozen food containers to further optimize the rifer field in accommodating refrigerated containers.

For the simultaneous relationship of the variable operating costs and container distribution which together have a significant effect on the productivity of loading and unloading work which can be proven in the F test results obtained, Fcount shows a value of 52.371 which is greater than Ftable 3.142 with a significance value of 0.000, if operating and distribution costs container increases, work productivity can be reduced and also increases.

5. Conclusion

In accordance with the objectives formulated in this study, the results of the analysis that have been carried out show that the Operating Cost Variable has no significant effect on the Work Productivity variable, meaning that if there is an increase in operating costs it does not necessarily increase work productivity.

The Container Distribution variable has a positive and significant effect on the Work Productivity variable, meaning that if there is an increase in the Container Distribution, the Work Productivity will increase.

Operational Cost Variables and Container Distribution together have a positive and significant effect on the Work Productivity variable because the F test results obtained show a value of 52,371 which is greater than Ftable of 3,142. This means that if there is an increase in Container Operation and Distribution Costs, then Work Productivity can also increase.

6. Suggestion

Based on what shows a significant and positive effect of the variable Operational Cost and Container Distribution on the Work Productivity variable, it provides suggestions that can be used as references and considerations so that in the future it can be useful. The following are suggestions given by the author based on the results of the study:

1. To increase employee productivity, the company should use proper training for employees. With the right training method, employees can easily understand the content of the training materials so that they are more effective and efficient in increasing employee productivity.
2. Companies must be more careful in planning activities to reduce operating costs without having an impact on decreasing loading and unloading productivity.
3. Calculations for operating cost planning consider the distribution of containers and the productivity of unloading work so that the total operating costs do not occur.
4. The company must also be firm in implementing the rules for the distribution of containers, especially regarding the rules regarding the shortage of shipping fleets in loading and unloading, so shipments must receive their unloaded containers first in the field to facilitate loading and unloading activities.
5. For further research, it is hoped that someone will examine how the distribution of containers can be optimized to obtain maximum profit for the company, not only to increase work productivity.

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