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The Effectiveness Of The Dedicated Storage Method On Building Layout At PT Puninar Anji Kyk Logistik Indonesia

Ayu Sri Rahayu[1], Degdo Suprayitno[2]
[12]STIAMI Institute of Social Sciences and Management, Indonesia
Correspondent: degdosuprayitno@gmail.com[2]

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ABSTRACT: This research was conducted at PT Puninar Anji NYK Logistics Indonesia. The purpose of this study is to determine the results of data analysis from the effectiveness of the dedicated storage method on the warehouse layout at PT Puninar Anji NYK Logistics Indonesia. In this study, researchers distributed 30 questionnaires to respondents, and these respondents were directly related to the object of study. The research methodology used in this study is a quantitative research method, with a type of causal associative research, which is research that aims to determine the cause and effect or relationship between two or more variables to control a phenomenon. The results of data calculation and analysis in this study were processed using the SPSS program version 26. From the calculation results using SPSS Version 26, the results of the regression equation were obtained, namely Y = 0.253 + 0.611X. So it can be concluded that the results show that the Dedicated Storage Method can increase the effectiveness of the Warehouse Layout by 61.1%. The result of the R Square (R2) value of 0.830 or with a percentage of 83%, it can be said that the variable Dedicated Storage Method has an influence of 83% on the warehouse layout, and the remaining 17% is the influence of other factors that are not studied by this study. While the test results show a calculated value of 11.708 > ttable of 2.048, with a significance result of 0.000 < 0.05 so that it can be concluded that the variable of the dedicated storage method (X) has a significant effect on the warehouse layout variable (Y). So it can be concluded that H0 is rejected and H1 is accepted, the dedicated storage method is able to increase the effectiveness of the warehouse layout at PT PANLI.

Keywords: Dedicated Storage Method, Layout, Warehouse

INTRODUCTION

PT. Puninar Anji NYK Logistics Indonesia (PANLI) is a private company established in 2016 as a company engaged in third-party logistics services commonly called 3PL (Third Party Logistics). PT. Puninar Anji NYK Logistics Indonesia (PANLI) assists customers with cargo permits, export and import activities, warehouse management, and delivery of automotive units (automotive industry). One of the customers of PT. Puninar Anji NYK Logistics Indonesia (PANLI) is PT. SAIC General Motor Wuling (SGMW) is engaged in automotive cars. Where almost all manufacturing activities are supported by PT. Puninar Anji NYK Logistics Indonesia (PANLI) both from imported materials, material handling and warehouse management. PT. PANLI manages spare parts on several types of wulling cars, which are as follows:

Table 11.1 Car Type

Car Type	Part Number	Color Classification
Confero	113	White
Confero S	113	White
Cortez S	210	Blue
New Cortez	210	Blue
Almaz	202	Green
Almaz RS	202	Green
All Type	113/210/202	Pink

From the table above, it can be known the types of cars managed by spare parts by PT PANLI. In storage, spare parts are divided into two categories, namely the Big Part category (large car spare parts) totaling 482 part numbers and Small Parts (small car spare parts) totaling 3,069 part numbers. For small spare parts, each part number consists of 36 boxes. As for large spare parts consisting of 6 pcs per wooden case (Al-Ababneh, 2021; Buldeo Rai et al., 2017; Díreš, 2021).
Problems faced by PT. PANLI is an ineffective logistics activity in the warehouse due to the warehouse layout and suboptimal space utilization, mapping for random placement of goods, distances between goods that are still close together, the maximum and minimum quantities of stock that do not match the actual amount in DLOC, as well as the flow of picking and material handling processes that are hampered due to over stock and mismatches between products with floor labels and existing data. So that an ineffective layout can result in a production stop line, this can harm the company (Giuliano & Kang, 2018; Korczak et al., 2016a; Lafazani & Lagarias, 2016; Lucendo-Monedero et al., 2015; Pushpamali et al., 2021; Ruangsriroj & Suvittawat, 2022; Stella et al., 2022; Verdouw et al., 2018; Zizi et al., 2021).
Based on these problems, it is necessary to increase the effectiveness of the warehouse, one of which is by planning a good and correct layout using the dedicated storage method. The Dedicate Storage method is a method that is often referred to as certain and fixed storage because the location for each item has been determined. The number of storage locations for a product must be able to meet the maximum storage space needs of the product. Dedicated storage is also referred to as fixed slot storage, using a specific storage area for each item stored (Costa et al., 2020; Gia et al., 2021; Korczak et al., 2016b; Valax et al., 2019).
By comparing the activities of each spare part product with the space requirements needed by the product in accordance with the min max, then sorted and classifying the types of parts according to DLOC or placement location. By making these improvements, it will get a more optimal layout design, so that the placement of products in the warehouse becomes more effective and efficient, can minimize transportation distances in the warehouse, save material transfer and arrangement of goods in the spare part warehouse at PT. PANLI.

METHOD

The research approach is divided into two, namely quantitative research and qualitative research. This study used a quantitative research approach. Quantitative research methods are one type of research whose specifications are systematic, planned and clearly structured from the beginning to the making of the research design.
(Sugiyono, 2017) argues that quantitative research methods can be interpreted as research methods based on the philosophy of positivism used to examine certain populations or samples, sampling techniques are generally carried out randomly, data collection using research instruments, quantitative or statistical data analysis with the aim of testing hypotheses that have been set.
The type of quantitative research used in this study is causal assosoative research. Causal associative research is research that aims to determine the relationship between two or more variables by building a theory that serves to explain, predict and control a phenomenon. A causal relationship is a cause-and-effect relationship. In this study there is an independent variable that affects other variables, namely the dependent variable.
With this type of causal associative research, the effectiveness of the Dedicated Storage Method can be drawn as variable X and Warehouse Layout as variable Y. Both variables are used to determine the extent

of the cause-and-effect relationship of the Effectiveness of the Dedicated Storage Method on the Warehouse Layout at PT PANLI.

RESULT AND DISCUSSION

A. Overview of the Research Object

1. Brief History of the Company

PT Puninar Anji NYK Logistics Indonesia or better known as PANLI is a company engaged in logistics that was established in 2016. PT. Puninar Anji NYK Logistics Indonesia is located at Greenland International Industry Center (GIIC) Block BA-2, Kota Deltamas, Sukamahi Village, Central Cikarang District, Bekasi, West Java – 17530. From 1976 to 1984 Puninar invested several units of trucks to satisfy service to customers, not only as a customs intermediary but also as a high-priority cargo delivery carrier. From 1984 to 1990 throughout Puniar's career in logistics, Puninar built its own warehouse in Sunter as a general warehouse. Puninar which continues to grow in the field of logistics also builds warehouses in various regions such as in Cilincing, Nagreg, Semarang and others. From 1990 to 2001 Puninar completed customs services for air cargo and was based at Wisma Soewarna at Soekarno Hatta International Airport. On the other hand, Puninar also built distribution warehouses in Cililincing, and Nagreg. Together with NYK (Nippon Yusen Kaisha) as a Joint Venture. Puninar has been trusted to operate NYK counter depot to meet customer needs, Puninar established a branch office in Surabaya for customs operations. And in 2001 Puninar opened another branch with an office in Semarang for distribution warehouse operations and as a 3PL (Third Party Logistics) with a focus as a Solution Developer.

PT. Puninar Anji NYK Logistics Indonesia (PANLI) was established in 2016 as a company engaged in third-party logistics services commonly called 3PL (Third Party Logistics). PT Puninar Anji NYK Logistics Indonesia is a joint venture of 3 companies consisting of 3 different countries, including PT Puninar Logistics from Indonesia, SAIC Anji Logistics from China and also Nippon Yusen Kaisha (NYK) from Japan. PT Puninar Anji NYK Logistics Indonesia serves logistics that covers all shipping routes, including air transportation, sea transportation, cross-border, and land transportation. Until now PANLI manages both local and international shipments, and we always continue to strive to expand the range of solutions offered to customers. In addition, PT Puninar Anji NYK Logistics Indonesia also has several other ongoing businesses, including inbound logistics/milkrun and warehousing, Finished Vehicle Logistics and Open Lard Warehousing and Minning Transporter. In addition, PT Puninar Anji NYK Logistics Indonesia also has several other ongoing businesses, including inbound logistics/milkrun and warehousing, Finished Vehicle Logistics and Open Lard Warehousing and Minning Transporter.

One of the customers of PT. Puninar Anji NYK Logistics Indonesia (PANLI) is PT. SAIC General Motor Wuling (SGMW) where almost all manufacturing activities are supported by PT. Puninar Anji NYK Logistics Indonesia (PANLI) both from imported materials, material handling and warehouse management.

PT. Puninar Anji NYK Logistics Indonesia (PANLI) has its first office in the Cikarang Bekasi industrial area to support the production of Chinese car units known as Wuling Confero, Wuling Cortez, and Wuling Almaz cars. Since then PANLI has built good relationships and trust with quite a lot of customers engaged in automotive logistics services.

2. Vision and Mission

a. Vision

The focus on corporate customers will be to become a leading logistics service provider using state-of-the-art technology and solutions to face the future.

b. Mission

Offering environmentally friendly and secure logistics with robotic systems, information systems and multifunctional networks as core strengths to keep up with technological changes and developments and create value for supply chains across industries.

B. Research Results

1. Respondent Overview

an overview of the characteristics of the responsent, all of whom are people who have responsibilities in the warehouse department, where research is carried out at PT Puninar Anji NYK Logistics. In this study, the author determined a sample of 30 respondents. Data collection in this study was carried out by distributing questionnaires through Google Form links to respondents. Based on the distribution of questionnaires, the details of questionnaire taking answered by respondents in this study are presented in table 4.1 below:

Table 4.1 Dissemination and Receipt of Questionnaire Results

Respondent Description	Sum	Percentage
Total Questionnaires distributed	30	100%
Total questionnaires received	30	100%
Total non-returned questionnaires	0	0%
Totak questionnaire received, but cannot be processed	0	0%
Total Questionnaires that can be processed	30	100%

Source : Data processed from Google Form questionnaire, 2022

Based on table 4.1, it can be seen that the questionnaire distributed to 30 respondents has a rate of 100%, which means that all questionnaires are accepted back by the researcher and can be processed. And no questionnaire is not returned or not filled out. From the results of the distribution of questionnaires, the presentation of respondents' descriptions according to gender and age of respondents can be obtained.

a. Description of respondents by gender

Table 4.2 Description of Respondents by Gender

Respondent's Gender	Sum	Percentage
Man	25	83,3%
Woman	5	16,7%
Total	**30**	**100%**

Source : Data processed from Google Form questionnaire, 2022

In table 4.2, we can see the description of respondents based on gender from 30 respondents consisting of men by 83.3% as many as 25 respondents and women by 16.7% as many as 5 respondents who filled out questionnaires, whose data can be used in data processing. This shows that the most respondents based on gender description are men.

b. Description of respondents by age

Table 4.3 Description of respondents by age

Age of Respondents	Sum	Percentage
18 – 25 Years	15	50%
26 – 35 Years	8	26,7%
> 36 Years	7	23,3%
Total	**30**	**100%**

Source : Data processed from Google Form questionnaire, 2022

In table 4.3, we can see the description of respondents based on the age of 30 respondents consisting of 50% for ages 18-25 years as many as 15 respondents, 26.7% for ages 26-35 years as many as 8 respondents, and 23.3% for ages > 36 years. This shows that the most respondents based on age description are 18-25 years old, which is 50%.

2. Descriptive Analysis

According to Sugiyono (2017: 35) defining descriptive statistical analysis is an analysis carried out to determine the existence of independent variables, either only on one or more variables (stand-alone variables or independent variables) without making comparisons of the variables themselves and looking for relationships with other variables.

Based on the theory above, the researcher makes questions that are used to obtain data or information from respondents, where later data processing will be carried out from the

questionnaire. The value in the Likert scale where the variable to be measured is described as a variable indicator and is used as a starting point for compiling instrument items and has a gradation from strongly disagree to strongly agree.

a. Descriptive Analysis of Dedicated Storage Method Variables (X)

From the variable dedicated storage method there are 3 dimensions and 10 indicators with 10 instruments. Measured by the following indicators:

1) Storage Space Location

Table 4.7 Storage Area

No	Alternative Answers	Frequency (F)	Percentage (%)	Weight (X)	Σ(X. F)	m= σf(x) / n
1	Strongly Disagree	0	0%	1	0	= 134 / 30
2	Disagree	0	0%	2	0	**= 4.46**
3	Neutral	4	13,3%	3	12	
4	Agree	8	26,7%	4	32	
5	Totally Agree	18	60%	5	90	
Sum		30	100%		134	Information: Excellent

Source : Data processed from Google Form questionnaire, 2022

From the calculation of table 4.7 shows that there are 0% or no respondents who strongly disagree and disagree, 13.3% or 4 respondents who express neutrality, 26.7% or 8 respondents who express agreement, and 60% or 18 respondents who express strong agreement with the instrument able to adjust the warehouse area with the goods stored. So that on this interval scale it has been determined that the average result of the respondent's answer score to the statement is 4.46 and the figure is included in the scale of 4.21 – 5.00 with a very good assessment category.

Table 4.8 Storage space standards according to needs

No	Alternative Answers	Frequency (F)	Percentage (%)	Weight (X)	Σ(X. F)	m= σf(x) / n
1	Strongly Disagree	0	0%	1	0	= 118 / 30
2	Disagree	0	0%	2	0	**= 3.93**
3	Neutral	2	6,7%	3	6	
4	Agree	14	46,7%	4	56	
5	Totally Agree	14	46,7%	5	56	
Sum		30	100%		118	Information: Good

Source : Data processed from Google Form questionnaire, 2022

From the calculation of table 4.8 shows that there were 0% or no respondents who expressed strong disagreement and disapproval, 6.7% or 2 respondents who stated neutral, 46.7% or 14 respondents who expressed agreement, and 46.7% or 14 respondents who expressed strong agreement with the instrument being able to provide storage warehouse standards that are in accordance with the needs of PT PANLI. So that on this interval scale, it has been determined that the average result of the respondent's answer score to the statement is 3.93 and the number is included in the scale of 3.41 – 4.20 with a good assessment category.

Table 4.9 Productivity levels with quantity and quality of work

No	Alternative Answers	Frequency (F)	Percentage (%)	Weight (X)	Σ(X. F)	m= σf(x) / n = 134 / 30 = 4.46
1	Strongly Disagree	0	0%	1	0	
2	Disagree	0	0%	2	0	
3	Neutral	5	16,7%	3	15	
4	Agree	6	20%	4	24	
5	Totally Agree	19	63,3%	5	95	
Sum		30	100%		134	Information: Excellent

Source : Data processed from Google Form questionnaire, 2022

From the calculation of table 4.9 shows that there are 0% or no respondents who strongly disagree and disagree, 16.7% or 5 respondents who express neutrality, 20% or 6 respondents who express agreement, and 63.3% or 19 respondents who express strongly agree with instruments able to adjust productivity by increasing the quantity and quality of work. So that on this interval scale it has been determined that the average result of the respondent's answer score to the statement is 4.46 and the figure is included in the scale of 4.21 – 5.00 with a very good assessment category.

Table 4.10 Product sizes or dimensions

No	Alternative Answers	Frequency (F)	Percentage (%)	Weight (X)	Σ(X. F)	m= σf(x) / n = 126 / 30 = 4.20
1	Strongly Disagree	0	0%	1	0	
2	Disagree	0	0%	2	0	
3	Neutral	7	23,3%	3	21	
4	Agree	10	33,3%	4	40	
5	Totally Agree	13	43,3%	5	65	
Sum		30	100%		126	Information: Good

Source : Data processed from Google Form questionnaire, 2022

From the calculation of table 4.10 shows that there are 0% or no respondents who expressed strong disagreement and disapproval, 23.3% or 7 respondents who stated neutral, 33.3% or 10 respondents who expressed agreement, and 43.3% or 13 respondents who expressed strong agreement with the instrument able to adjust the type of product to the size of the product dimensions. So that on this interval scale it has been determined that the average result of the respondent's answer score to the statement is 4.20 and the figure is included in the scale of 3.41 – 4.20 with a good assessment category.

Table 4.11 Utilizing warehouses for smooth operational processes

No	Alternative Answers	Frequency (F)	Percentage (%)	Weight (X)	Σ(X. F)	m= σf(x) / n = 125 / 30 = 4.16
1	Strongly Disagree	0	0%	1	0	
2	Disagree	0	0%	2	0	
3	Neutral	8	26,7%	3	24	
4	Agree	9	30%	4	36	
5	Totally Agree	13	43,3%	5	65	
Sum		30	100%			Information: Good

Source : Data processed from Google Form questionnaire, 2022

From the calculation of table 4.11 shows that there are 0% or no respondents who express strong disagreement and disapproval, 26.7% or 8 respondents who express neutrality, 30% or 9 respondents who express agreement, and 43.3% or 13 respondents who express strong agreement with the instrument can make good use of the warehouse so as to create smoothness in the operational process. So that on this interval scale it has been determined that the average result of the respondent's answer score to the statement is 4.16 and the number is included in the scale of 3.41 – 4.20 with a good assessment category.

2) Operational Process

Table 4.20 Provides stock overload areas to avoid excess stock that can hamper operational processes

No	Alternative Answers	Frequency (F)	Percentage (%)	Weight (X)	Σ(X. F)	m= σf(x) / n = 131 / 30 = 4.36
1	Strongly Disagree	0	0%	1	0	
2	Disagree	0	0%	2	0	
3	Neutral	2	6,7%	3	6	
4	Agree	15	50%	4	60	
5	Totally Agree	13	43,3%	5	65	
Sum		30	100%		131	Information: Excellent

Source : Data processed from Google Form questionnaire, 2022

From the calculation of table 4.20 shows that there are 0% or no respondents who expressed strong disagreement and disapproval, 6.7% or 2 respondents who stated neutral, 50% or 15 respondents who expressed agreement, and 43.3% or 13 respondents who expressed strong agreement with the instrument being able to provide product overload areas to avoid obstacles to warehouse activities. So that on this interval scale it has been determined that the average result of the respondent's answer score to the statement is 4.36 and the number is included in the scale of 4.21 – 5.00 with a very good assessment category.

Table 4.21 Provides smoothness for the Material Handling process

No	Alternative Answers	Frequency (F)	Percentage (%)	Weight (X)	Σ(X. F)	m= σf(x) / n = 133 / 30 = 4.43
1	Strongly Disagree	0	0%	1	0	
2	Disagree	0	0%	2	0	
3	Neutral	4	13,3%	3	12	
4	Agree	9	30%	4	36	
5	Totally Agree	17	56,7%	5	85	
Sum		30	100%		133	Information Excellent

Source : Data processed from Google Form questionnaire, 2022

From the calculation of table 4.21 shows that there are 0% or no respondents who strongly disagree and disagree, 13.3% or 4 respondents who say neutral, 30% or 9 respondents who agree, and 56.7% or 17 respondents who say strongly agree with the instrument being able to provide a smooth material handling process. So that on this interval scale it has been determined that the average result of the respondent's answer score to the statement is 4.43 and the number is included in the scale of 4.21 – 5.00 with a very good assessment category.

Table 4.22 Making good use of warehouse facilities

No	Alternative Answers	Frequency (F)	Percentage (%)	Weight (X)	Σ(X. F)	m= σf(x) / n = 131 / 30 = 4.36
1	Strongly Disagree	0	0%	1	0	
2	Disagree	0	0%	2	0	
3	Neutral	4	13,3%	3	12	
4	Agree	11	36,7%	4	44	
5	Totally Agree	15	50%	5	75	
Sum		30	100%		131	Information Excellent

Source : Data processed from Google Form questionnaire, 2022

From the calculation of table 4.22 shows that there are 0% or no respondents who strongly disagree and disagree, 13.3% or 4 respondents who express neutrality, 36.7% or 11 respondents who express agreement, and 50% or 15 respondents who strongly agree with the instrument can make good use of warehouse facilities. So that on this interval scale it has been determined that the average result of the respondent's answer score to the statement is 4.36 and the number is included in the scale of 4.21 – 5.00 with a very good assessment category.

Table 4.23 Able to provide smooth picking and unpacking process

No	Alternative Answers	Frequency (F)	Percentage (%)	Weight (X)	Σ(X. F)	m= σf(x) / n = 125 / 30 = 4.16
1	Strongly Disagree	0	0%	1	0	
2	Disagree	0	0%	2	0	
3	Neutral	6	20%	3	18	
4	Agree	13	43,3%	4	52	
5	Totally Agree	11	36,7%	5	55	
Sum		30	100%		125	Information: Good

Source : Data processed from Google Form questionnaire, 2022

From the calculation of table 4.23 shows that there are 0% or no respondents who strongly disagree and disagree, 20% or 6 respondents who say neutral, 43.3% or 13 respondents who say agree, and 36.7% or 11 respondents who say strongly agree with the instrument can make good use of warehouse facilities. So that on this interval scale it has been determined that the average result of the respondent's answer score to the statement is 4.16 and the number is included in the scale of 3.41 – 4.20 with a good assessment category.

b. Recapitulation of Warehouse Layout Variables (Y)

The following is a table of the results of the recapitulation of respondents' responses to the warehouse layout variable (Y):

Table 4.24 Results of Recapitulation of Variable Y

NO	Indicators	Value	Category
1	Inventory characteristics in operational warehouses are divided into three, namely, materials, work-in-progress goods, and finished goods.	4,23	Excellent
2	Accuracy of the order of goods with appropriate data and not mixed with other types / types of goods so as to facilitate the picking process	4,40	Excellent
3	Provide an overload area to avoid excess stock that can hamper operational processes.	4,36	Excellent
4	Provide smooth material handling process	4,43	Excellent
5	Make good use of warehouse facilities.	4,36	Excellent
6	Able to provide a smooth picking and unpacking process.	4,16	Good
Total Value		25,94	
Average		4,32	Excellent

Source : Data Processed by Researchers, 2022

From table 4.24, it can be seen that the recapitulation results of variable Y obtained that the results of the overall interpretation of the indicator are very good, with the highest value obtained by the indicator providing smoothness for the material handling process of 4.43 and the lowest value of the indicator being able to provide a smooth picking and unpacking process of 4.16.

So it can be concluded on the interval scale it has been determined that the result of the warehouse layout variable (Y) is 4.32 and the number is included in the scale of 4.21 – 5.00 with a very good category.

c. Normality Test

The normality test used is the Kolmogorov-Smirnov test. Data is said to be accepted, if the significant value is greater than 0.05 at (P>0.05). Conversely, if the significant value is less than 0.05 at (P<0.05), then the data is said to be rejected.
Here are the results of the normality test with kilmogorov-smirnov processed using SPSS Version 26:

Table 4.25 Normality Test Results – Kolmogorov Smirnov

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		30
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	1,43681395
Most Extreme Differences	Absolute	,155
	Positive	,154
	Negative	-,155
Test Statistics		,155
Asymp. Sig. (2-tailed)		.062[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Source : Data Processed Using SPSS Version 26, 2022

Based on table 4.25, it can be seen the results of the Kolmogorov-Smirnov normality test in this study variable of 0.062. It can be said that the significance value of kolmogorof-smirnov is greater than 0.05, which is 0.062 > 0.05, it can be concluded that the results of the normality test in this study are normally distributed.

d. Test the hypothesis

1. Correlation Coefficient Test

This Correlation Coefficient Test aims to determine the level of closeness of the relationship between variables in the study expressed by the correlation coefficient (r).

Table 4.26 Correlation Coefficient Test Results

Correlations

		Dedicated Storage Method	Warehouse Layout
Dedicated Storage Method	Pearson Correlation	1	,911**
	Sig. (2-tailed)		,000

	N	30	30
Warehouse Layout	Pearson Correlation	,911**	1
	Sig. (2-tailed)	,000	
	N	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Source : Data Processed Using SPSS Version 26, 2022

Based on table 4.26, it can be seen that the significance value for the relationship between the dedicated storage method and the warehouse layout is 0.000, meaning that because the value is smaller than 0.05, it can be said to correlate that there is a relationship between the dedicated storage method and the warehouse layout. While the value of pearson correlation is 0.911. So it can be concluded that the dedicated storage method is positively related to the warehouse layout with a degree of perfect correlation relationship with a pearson correlation value of 0.911.

2. Test Coefficient of Determination (R2)

The coefficient of determination test aims to measure how far the independent variable model is able to explain the variation of the dependent variable.

Table 4.27 Coefficient Determination Test Results

Model Summary[b]

Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.911[a]	,830	,824	1,462

a. Predictors: (Constant), Dedicated Storage Method

b. Dependent Variable: Warehouse Layout

Source : Data Processed Using SPSS Version 26, 2022

Based on table 4.27, it can be seen that the results of R Square of 0.830 which means that the influence of the variable dedicated storage method (x) on warehouse layout (y) is 83%, while the remaining 17% is influenced by other factors that were not studied in this study.

3. Simple Linear Regression Test

Linear regression test is a measuring tool used to measure the presence or absence of correlation between research variables. Here is the formula of simple linear regression:

Y = a + bX

Information:

Y = Bound Variable (Warehouse Layout)

a = constant value

b = Coefficient or number of direction of variable X

X = Free Variable (Dedicated Storage Method)

Table 4.28 Simple Linear Regression Test Results

Coefficients[a]

Type		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	,253	2,255		,112	,911
	Dedicated Storage Method	,611	,052	,911	11,708	,000

a. Dependent Variable: Warehouse Layout

Source : Data Processed Using

Based on table 4.28 it is known that the constant value is 0.253 while the trust value (b / regression coefficient) is 0.611, so the linear regression equation can be written as follows:

Y = a + bX

= 0.253 + 0.611X

-A constant of 0.253 which means if the value of the free variable (dedicated storage method) is zero, then the value of the bound variable (warehouse layout) is 0.253.

-The X regression coefficient of 0.611 states that for every 1% trust value added, the participation value increases by 0.611. The regression coefficient is positive, so it can be said that the direction of influence of variable x on variable y is positive.

4. Partial Test (Test t)

Comparing a significant level (α) of 0.05 (5%) with a known significant level t directly using the IBM SPSS 26 program. The criteria used in the t test are:
-Significant value t < 0.05. Then H0 is rejected and Ha is accepted, meaning that the independent variable (X) partially affects the bound variable (Y).
-Significant value t > 0.05. Then H0 is accepted and Ha is rejected, meaning that the independent variable (X) has no partial effect on the bound variable (Y).
In this study there are the following hypotheses:
H0: There is no effectiveness of the Dedicated Storage Method on the Warehouse Layout.
H1: There is an effectiveness of the Dedicated Storage Method on the Warehouse Layout.

Table 4.29 Partial Test Results (t-test)

Coefficients[a]

Type		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	,253	2,255		,112	,911
	Dedicated Storage Method	,611	,052	,911	11,708	,000

a. Dependent Variable: Warehouse Layout

Source : Data Processed Using SPSS Version 26, 2022

Based on table 4.29 of significance results of 0.000 < 0.05, it can be concluded that the dedicated storage method variable (X) affects the warehouse layout variable (Y). Based on the calculated value of 11.708 > ttable of 2.048, so it can be said that the variable of the dedicated storage method (X) affects the warehouse layout variable (Y). Then it can be concluded that H0 is rejected and H1 is accepted.

C. Discussion

Based on the title of the research conducted by the researcher and the results of the study conducted with several tests starting from validity, reliability, descriptive analysis, normality, and hypothesis testing, the researcher conducted evidence to find out how influential the variable of the dedicated storage method (X) to increase the effectiveness of the warehouse layout variable (Y). So it can be described as follows:

1) Based on the recapitulation results on the variable dedicated storage method (X), an average result of 4,243 was obtained in the very good category. As for the recapitulation results on the warehouse layout variable (Y), an average result of 4.32 was obtained with a very good category.
2) In this study, researchers conducted a correlation coefficient test. The significant result for the relationship between variable x and variable y is 0.000, which means that the value is greater than 0.05, while the value of pearson correlation is 0.911. So it can be said to correlate that there is a relationship between variable x and variable y, so it can be concluded that the deicated storage method is positively related to the warehouse layout with the degree of perfect correlation relationship.
3) Then test the coefficient of determination to find out the independent variable to explain the dependent variable. The Dedicated Storage Method Variable (X) can explain or explain the Warehouse Layout Variable (Y) with an R Square percentage of 83% or 0.830, while the remaining 17% is influenced by other factors or variables that were not studied in this study.
4) The results of a simple linear regression test, in this study obtained a constant result of 0.253 which means if the value of the free variable (dedicated storage method) is zero, then the value of the bound variable (warehouse layout) is 0.253. The X regression coefficient of 0.611 states that for every 1% trust value added, the participation value increases by 0.611. The regression coefficient is positive, so it can be said that the direction of influence of variable x on variable y is positive.
5) The Effectiveness of the Dedicated (X) Storage Method on Warehouse Layout (Y) The test results show a calculated value of 11.708 > a table of 2.048, with a significance result of 0.000 < 0.05 so that it can be concluded that the variable of the dedicated storage method (X) affects the warehouse layout variable (Y). So it can be concluded that H0 is rejected and H1 is

accepted, the dedicated storage method is able to increase the effectiveness of the warehouse layout at PT PANLI.

CONCLUSION

Based on the results of the tests and analyzes carried out, researchers can conclude that the Dedicated Storage Method Variable (X) can explain or explain the Warehouse Layout Variable (Y) with an R Square percentage of 83% or 0.830, while the remaining 17% is influenced by other factors or variables that are not studied in this study.

This research shows that every 1% increase or addition to the Dedicated Storage Method (X) will be followed or can affect the Warehouse Layout (Y). Which means the Dedicated Storage Method can increase the effectiveness of the Warehouse Layout at PT Puninar Anji NYK Logistics Indonesia by 61.1%. The percentage is positive, so it can be said that the direction of influence of variable x on variable y is positive.

Based on the test results, it shows a calculated value of 11.708 > ttable of 2.048, with a significance result of 0.000 < 0.05 so that it can be concluded that the variable of the dedicated storage method (X) has a significant effect on the warehouse layout variable (Y). So it can be concluded that H0 is rejected and H1 is accepted, the dedicated storage method is able to increase the effectiveness of the warehouse layout at PT PANLI.

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