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ANALYSIS OF FACTORS AFFECTING THE PROFITABILITY OF LOGISTICS COMPANIES DURING THE COVID-19 PANDEMIC

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A R T I C L E I N F O

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ABSTRACT

This research aims to determine the effect of Net Profit Margin (NPM), and Operating Expenses to Operating Income (BOPO) to Return On Assets (ROA). The type of research used is Explanatory Research, with a quantitative approach. Sampling technique with purposive sampling with company criteria logistics that presents financial statements for the period 20 19 to 20 20 so that a sample of 7 . is obtained companies and 14 data samples. The analysis used is multiple linear regression analysis. The results of this study are known that simultaneously and partially NPM and BOPO have a significant effect on ROA.

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1. Introduction

A Logistics company is a company that provides service send goods, warehouse, management, to transportation. Logistics services usually only deliver to location from one consumer just in accordance map distribution product consumer it. Usually is a consumer from circles companies that want to channel products to various locations. Specially engaged in the field of service freight forwarding is very close relation with door to door transportation services. Own door-to-door transportation services are delivered from origin owner until to user deep stuff _ operate a business this company logistics is very dependent to the vendors. There is a number of types of vendors involved that is from freight vendors, clearance vendors, PBM vendors, and trucking vendors. This trucking vendor is the contributor component service biggest in business logistics. According Jiaju Wu, Gang Liu and Chuanyu Xi to the vendor selection process can be outlined as following that is company analyze market conditions more first, then ensure the target vendor and made guidelines for election vendors [1].

Covid-19 (SARS-Cov-2) is " a virus that attacks system respiration man as well as result in happening infection I until culminate in death [2] [3]. this virus first time appeared in Wuhan, China later spread to whole around the world including early Indonesia 2020 as well has snatch life millions humans ." because _ that , WHO has make the corona virus a something global pandemic because has resulted in many countries affected impact by him. Wrong one step concurrent countermeasures _ carried out by the government in various countries is apply lockdown, that stops temporary whole activity Public for the sake of keeping distance between man or the usual in Indonesia called with PSBB. Policy social distancing that has been applied in many countries to avoid more expansion plague this covid-19 pandemic cause impact negative to many parties especially for activity economy society.

Many companies and markets must be closed while, so also the place travel, shops, hotel, until station and the airport had to stop operating. This impact to mobility _ import-export ingredient raw Becomes hard, performance company and profitability becomes _ decrease until forced do mass layoffs to its employees. In Indonesia, itself, based on exposure General Chairperson of Kadin (Chamber of

Commerce and Industry) Sector Carmelita communication is available to drop performance finance in industry transportation in Indonesia to by 50% as a consequence of closing airports, stations, and terminals in many areas during the social distancing period in Indonesia [4] [5].

To rate company performance _ could use ratio reflected profitability _ from Return on Assets (ROA) value. ROA is a ratio that shows results (return) top total assets used _ in a company. ROA is also something size about effectiveness in managing the investment. ROA is more effective to see the company's profitability because ROA focuses on achieving profit in the company's operational activities. Net profit margin (NPM) or ratio profit to total sales is ratio profitability used _ in do a measurement of profit margin obtained in every sale. Measurement with comparing Among profit after tax with total sales net earned _ company. Ratio this utilized in look for know how much big income net earned _ company on something sale so that could see how much effective management in minimize costs to produce advantage. Another factor used in do evaluate bank performance is BOPO. BOPO is one of the groups the ratio that measures efficiency and effectiveness operational something company with track compare one to other. The more low BOPO means the more efficient the bank is in control cost operations, with existence efficiency cost so the profit earned by the bank will the bigger.

2. Methods

This research use types quantitative data., defines data quantitative as data in the form of numbers [6] [7]. The Source of data in the study is in the form of ratio finance obtained from the IDX official website.

Population in research is company Logistics which is recorded in BEI. Data study obtained from 2019 to 2020. The data analysis technique used in the form of analysis descriptive, test assumptions classic, and regression multiple with help SPSS software version 26 [8] [9].

Sample in the study obtained through technique purposive sampling. according to [6], purposive sampling was used if target the sample under study has its own characteristics certain. So that selected sample _ should be based on :

a. Companies listed on the IDX from 2019 to 2020.
b. Enter category 7 companies logistics with profitability biggest based on IDX statistical data for 2019 up to 2020.
c. Ratio data finance found on the website of the Financial Services Authority year 2019 to 2020.

TABLE 1
OF RESEARCH SAMPLES (IN BILLION RUPIAH)

No	Company name
1	ACTION
2	BLTA
3	DEAL
4	MIRA
5	SMDR
6	TMAS
7	TRUCK

Source : Indonesia Stock Exchange (2020)

2.1 Variable Dependent

Profitability is variable dependent in study this , which is proxied by Return on Assets (ROA). Return on Assets is "one " ratio intended profitability _ for measure ability company on the total amount invested in activity used _ for activity operation company with purpose produce profit with utilise the assets it owns . Profitability proxy company _ with ROA describing ability company in utilise the activity for get profit [10]. Return on Assets (ROA) is something the ratio that has been often worn

in do analysis to level profit or results obtained _ something company use asset which have . other than that profit earned _ later will can show level productivity from the use of funds in the company , the more small ratio this so more impact bad vice versa. _ So that ratio this could used for measure level effectiveness from the company. The Formula used _ in measurement ratio this is :

$$\text{Return on Assets: } \frac{\text{EAIT}}{\text{Total Asset}} \quad \ldots\ldots (1)$$

2.2 Independent Variable

a. Net Profit Margin (NPM)

Net profit margin (NPM) is the ratio between net profit (net profit) and operating income. According to Brigham & Houston (2013) NPM is measure big profit clean company compared with the sale [11] . The NPM formula is as follows:

$$\boldsymbol{NPM = \frac{Laba\ Bersih}{pendapatan\ operasional} \times 100}$$

b. Cost Operational to Income Operational (BOPO)

Puspitasari, Aprilia, Mentarie, & Bilkis, (2021) explains that "BOPO has strong influence _ in do measurement accuracy and ability company in do activity operations [12]. Look connection the implications _ in ratio this is if Companies own cost small operation and income _ operational which big so Case the will bring Mark plus for profitability at the companies. As for BOPO, it is also able to look at companies' efficiency in managing their finances. Number 13/30 of 2011 then has The formula for calculating BOPO is determined, namely :

$$\text{BOPO} = \frac{\text{Cost Operational}}{\text{P income Operational}} \times 100\%$$

TABLE 2
PERCENTAGE BOPO STANDARD

Group	Limitation
BOOK I	85%
BOOK II	78% - 80%
BOOK III	70% - 75%
BOOK IV	60% - 65%.

Source: Financial Services Authority(2013)

3. Result and Discussion

3.1 Analysis Statics Description

Based on technique purposive sampling, research data amounted to 14 obtained of 7 companies logistics from the year 2019 to 2020.

TABLE 3
DESCRIPTIVE STATISTICS

	mean	Std. Deviation	N
ROA	-.01779	.061211	14
BOPO	-.07264	.099324	14
NPM	-.07507	.211761	14

In accordance with table 3 which shows the average (mean) of the Net Interest Margin (NPM) of -7.507 % , then the average of BOPO of -7.264 %. For variable dependent which used is ROA with an average of -1.779%.

3.2 Classic Assumption Test (Normal Test)

According to Perdana K (2016) the way for knowing that there is a sample obtained _ from distributed population _ normally with _ perform normality test [13]. The Kolmogorov-Smirnov test is a tool used _ in studying this for normality test.

TABLE 4
ONE-SAMPLE KOLMOGOROV-SMIRNOV TEST

		Unstandardized Residual
N		14
Normal Parameters [a,b]	Mean	.0000000
	Std. Deviation	.01312895
Most Extreme Differences	Absolute	.161
	Positive	.130
	Negative	-.161
Test Statistics		.161
asymp . Sig. (2-tailed)		.200 [c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance

Sourc : Research data processed (2022)

In accordance with table 4, data in study distribute normally because _ Mark asymp . sig (2 *-tailed*) generated more of 0.05 i.e. as big as 0.200 . Then the data is normally distributed .

3.3 Multicollinearity Test

According to Perdana K (2016) multicollinearity test used for find existence correlation Among variable independent [13]. In this test look from aspect Mark tolerance and VIF (Variance Inflation Factor). Not happening problem multicollinearity if variable independent own Mark tolerance 0.10 and the VIF value is around numbers 1-10.

TABLE 5
ONE-SAMPLE KOLMOGOROV-SMIRNOV TEST

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	.010	.005		2.022	.068		
BOPO	.093	.040	.150	2.292	.043	.974	1.027
NPM	.286	.019	.990	15.102	.000	.974	1.027

a. Dependent Variable: ROA

3.4 Heteroscedasticity Test

According to Perdana K (2016) for a look, the difference variance of the residual in one observation to observation another could be using the heteroscedasticity test [13]. Model regression said well if problem heteroscedasticity no found.

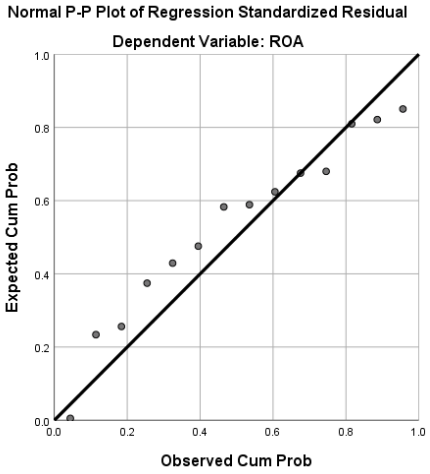

Figure 1. Heteroscedasticity Test

TABLE 6
HETEROSCEDASTICITY TEST

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	.010	.005		2.022	.068
BOPO	.093	.040	.150	2.292	.043
NPM	.286	.019	.990	15.102	.000

a. Dependent Varia a. Dependent Variable: ROA

Source: Research data processed (2022)

As in table 6, one test for knowing is there is problem heteroscedasticity that does glejser test with using *absolute unstandardized residuals*. The test results show no occur problem heteroscedasticity because variable independent used _ own Mark level significance above 0.05.

3.5 Autocorrelation Test

According to Perdana K (2016) for test is there is problem autocorrelation that is with using the Durbin-Watson statistical test . not available problem autocorrelation if Mark dU < DW < (4-dU).

TABLE 7
AUTOCORRELATION TEST

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.977 [a]	.954	.946	.014273	1,738

a. Predictors: (Constant), NPM , BOPO

b. Dependent Variable: ROA

Source : Research data processed (2022)

In accordance with table 7 which shows Durbin-Watson value is 1.738. In other words no there is problem autocorrelation.

3.6 Regression Test multiple

The analytical method used in the study this is with use analysis multiple linear regression (*multiple linear regression*). Analysis multiple linear regression used when total variable minimum number of independent as much as 2 variables independent . use analysis multiple linear regression meant for determine influence variable ordinary free _ called with ***x*** to the dependent variable which is commonly referred to as ***y***.

TABLE 8
REGRESSION TEST MULTIPLE

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.010	.005		2.022	.068		
	BOPO	.093	.040	.150	2.292	.043	.974	1.027
	NPM	.286	.019	.990	15.102	.000	.974	1.027

a. Dependent Variable: ROA

Based on Table 8, it is obtained equality multiple linear regression as following .
Y = 0.10 + 0.93X1 + 0.286X 2 + e

3.7 Hypothesis Test

a. T Uji test

T test aims for test influence variable independent by _ Partial or individual namely NPM and BOPO against variable ROA dependent .

TABLE 9
T UJI TEST

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.010	.005		2.022	.068
	BOPO	.093	.040	.150	2.292	.043
	NPM	.286	.019	.990	15.102	.000

a. Dependent Variable: ROA

Based on table 9 can see that :

a. Known Mark coefficient regression from BOPO variable is 0.093, that is worth positive. This thing means BOPO has an effect positive against ROA. Known statistic t or t count from BOPO is 2292 and the value of Sig. is 0.043 , which is more small from level the significance of 0.05, then the BOPO has an effect significant against ROA. So that concluded that BOPO has an effect positive and significant against ROA.
b. Known Mark coefficient regression from NPM variable is 0.286 , i.e. worth positive . This thing means that NPM is influential positive against ROA. Known statistic t or t count from NPM is 15,102 and the value of Sig. is 0. 000 , that is more small from level the significance of 0.05, then the NPM has an effect significant against ROA. So that concluded that NPM has an effect positive and significant against ROA.

3.8 Test Statistics F

F test aim for test influence variable free by together or simultaneous to variable not ROA free .

TABLE 10
TEST STATISTICS F

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.046	2	.023	114,054	.000 [b]
	Residual	.002	11	.000		
	Total	.049	13			

a. Dependent Variable: ROA
b. Predictors: (Constant), NPM , BOPO

Based on Table 10, it is known that F value count 1 14,054 and value *Sig.* is 0.00 0 . With n value *Sig.* 0.000 < 0.05 , then BOPO and NPM are simultaneous or together take effect significantly against ROA.

3.9 Coefficient Determination (R 2)

Coefficient determination (R^2) is a value (proportion value) that measures how much the ability of the independent variables used in equality regression , in explain variation variable not free .

TABLE 10
TEST STATISTICS F

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.977 [a]	.954	.946	.014273	1,738

a. Predictors: (Constant), NPM , BOPO
b. Dependent Variable: ROA

Based on Table 11, it is known that Mark coefficient determination (*Adjusted R-Square*) is 0.946. The value could interpreted variable BOPO,NPM by together or simultaneous capable affect ROA by 94.6%, the rest of 5.4% is explained by the variable or factor other.

3.10 Discussion

a. From result calculation got that NPM own influence positive and significant . That thing shown by table 9 which obtains result 15,102 and value significant 0.000 . This research is in accordance with the research of Meliyanti (2008) which states that the NPM variable has a significant effect on ROA .

b. From result calculation got that BOPO own influence positive and significant . That thing shown by table 9 which obtains result 2488 and value significant 0.020 . This study is in accordance with the research of Meliyanti (2008) which states that the BOPO variable has a significant effect on ROA. according to Siamat (2005) This BOPO often used for measure ability bank management in control cost operational to income operational [14] . With thus increase in BOPO then efficiency company will decreased . So if high BOPO value automatic Mark cost operational the big and income low . The amount of BOPO can be also caused by the height the cost of funds raised and low income from investment or capital . because of that why this BOPO's own connection positive against ROA. The meaning of the word positive this is comparing backwards with ROA.

4. Conclusions

From the result analysis carried out could obtain conclusion as follows : Variable Net Profit Margin is influential positive and significant to variable Return On Assets . Variable Cost Operational to income operational take effect positive and significant to variable Return On Assets .

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