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The Effect of Asset Efficiency and Growth on Financial Performance in the Defense Industry Sector

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Abstract: This research focused on three defense industry companies, namely PT Dirgantara Indonesia, PT PAL Indonesia (Persero) and PT Pindad (Persero). This study used a quantitative research approach with a time period from 2011 to 2020. The results of the study show that the magnitude of the effect of efficiency and asset growth on financial performance in the defense industry sector is 45.0% and the remaining 55.0% is explained by other variables not examined in this study. Efficiency and Asset Growth have a simultaneous effect on Financial Performance in the Defense Industry Sector. Efficiency partially has a positive effect on Financial Performance in the Defense Industry Sector. Asset Growth partially does not affect Financial Performance in the Defense Industry Sector. This can be a concern for companies in the defense industry sector so that Indonesia can create a strong, independent and competitive defense industry.

Keywords: Asset Growth, Efficiency, Financial Performance, Global, Technology

A. Introduction

A country's defense is measured through many aspects that can support and maintain the security and stability of a country. Literally in the Regulation of the Minister of Defense Number 16 of 2012 concerning the Policy for Integrating Components of National Defense that defense is all forms of effort in maintaining and upholding the sovereignty, integrity and safety of the entire Indonesian nation (Ministry of Defense Regulation Number 16 of 2012 concerning Policy for Integrating Components of National Defense, 2012). One of the supporters of national defense is the defense industry, where in Law Number 16 of 2012 concerning the Defense Industry states that the defense industry is a national industry which is divided into state-owned enterprises and private-owned enterprises approved by the government to produce defense and security equipment. As well as maintenance services that are useful for supporting national defense (Law No. 16 of 2012 concerning the Defense Industry, 2012).

The dynamic development of global threats both militarily and non-military makes defense technology go hand in hand in improving national defense. The capability of deterring and overcoming threats from national defense forces is not only

measured by the strength of the number of military personnel, but technology in defense equipment (the main weapon system tool) is a major factor in measuring a country's defense. The stability and independence of the defense industry is the key in the development of defense equipment technology that can improve national defense (Bukhari, 2012).

To support increased technology development in the defense industry, the most important thing that must be done is to increase the defense industry's budget and capital. developed countries cooperate with other countries to build a defense industry which will reduce development and production costs. This happened because of trends regarding budgetary tightening policies, increased costs and development, as well as increased competition in the defense industry market (Bitzinger, 2009). The progress of a company can be measured by one aspect, namely financial performance. Financial performance can show the ability and independence of a company in its financial planning (Nugraha et al., 2020). It was explained that financial performance is a picture of the state of a company's financial condition to identify good and bad company finances which indicate financial performance achievements in a certain period (Rahman, 2020). Therefore, the Indonesian defense industry requires a level of financial performance that has independence and achievements in order to make the defense industry self-sufficient. The Ministry of Defense as the institution responsible for financial reports in the form of budget realization reports, balance sheets, operational reports, changes in equity reports, and financial report records as mandated in Law Number 17 of 2003 concerning State Finance (Ministry of Defense, 2015).

Financial report performance can be influenced through efficiency and asset growth. This can be seen if the utilization of economic resources is with the right method, then financial performance can gain effectiveness and efficiency that can be obtained by companies in using resources effectively (South et al., 2016). Asset growth is the desire of the company's internal or external companies where an increase in assets followed by an increase in operating results can increase the level of trust performance and can build trust from outsiders of the company (Purnama et al., 2021). To measure a company's financial performance which is affected by efficiency and asset growth, this study will focus on three defense industry companies, namely PT Dirgantara Indonesia, PT PAL Indonesia (Persero) and PT Pindad (Persero). From the explanation above, this study will analyze the effect of efficiency and asset growth on the financial performance of Indonesian defense industry companies with problems divided into: 1) Do efficiency and asset growth have a simultaneous effect on financial performance in the Indonesian defense industry? 2) Does efficiency affect financial performance in the Indonesian defense industry? 3) Does asset growth have an impact on financial performance in the Indonesian defense industry? After determining the problems to be examined, this study aims to identify and analyze the effect of efficiency and asset growth on financial performance in the Indonesian defense industry?

B. Methods

This study uses a quantitative research approach where quantitative research is research that collects data in the form of numbers and then analyzes it in order to obtain scientific results and information (Martono, 2014). The type of data used is cross section and time series data where cross section data is a type of data that is divided into variables obtained based on time sequence in a certain time level from a number of individuals or categories. Meanwhile, time series is a type of data obtained based on time sequence in a certain time level (Rosadi, 2011). The sample used consisted of three defense industry companies, namely PT Dirgantara Indonesia, PT PAL Indonesia (Persero) and PT Pindad (Persero) which were calculated from the time period 2011 to 2020. Financial performance will be measured through efficiency and asset growth, where efficiency is obtaining maximum output with certain inputs to obtain certain outputs (Cicilia et al., 2019). Efficiency measurement is calculated through the ratio between output and input where the amount of output will be compared with the input which will obtain the level of efficiency of a company (Mardiasmo, 2011).

Therefore, the efficiency formula obtained is as follows (Cicilia et al., 2019): Efficiency Ratio = Expenses incurred to obtain income/realization of revenue receipts x 100%. Asset growth is the percentage change in total assets from the end of the previous fiscal year to the end of the current year (Cooper et al., 2008). As for asset growth, it shows changes as measured by the level of increase and decrease in total assets in the company, where the formula obtained is as follows (Sunardi & Sasmita, 2019): Total Assets = Total assets t - total assets t - 1/total assets t – 1 x 100%. The data obtained will be analyzed using the multiple linear regression analysis method, in which this method will link two or more independent variables (Hidayat et al., 2022). The multiple linear regression analysis method aims to analyze the direction and impact of the independent and dependent variables (Ghozali, 2018). The multiple linear regression model formula for testing the hypothesis is (Hidayat et al., 2022): $Y = b0 + \beta1X1 + \beta2X2 + \varepsilon t$.

C. Results and Discussion

Table 1. Data processing
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-2.371	.508		-4.667	.000
	x1	2.575	.508	.699	5.066	.000
	x2	.048	.258	.026	.185	.854

a. Dependent Variable: y
Source: Data processed by researchers using SPSS, 2023

Based on the regression equation table above, it can be concluded as follows: Y = -2.371 + 2.575 X1+ 0.48 X2 + εt Constants = Constants are variables whose data values are fixed and cannot be changed. In this model, the constant value is -2,371 meaning that if the X1 (Efficiency) variable is 0 and X2 (Asset Growth) is 0, then Y (Financial Performance) is -2,371. β1 value = 2.575. This means that if the Efficiency variable increases by 1 unit, the Financial Performance increases by 1.240986. This positive sign means that Efficiency and Financial Performance have a unidirectional relationship. β2 value = 0.48. This means that if the Asset Growth variable increases by 1 unit, the Financial Performance increases by 0.453361. This positive sign means that Asset Growth and Financial Performance have a unidirectional relationship. Then do the normality test

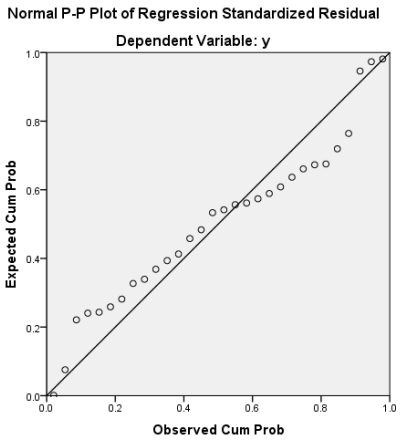

Figure 1. P-Plot Graph Normality Test Results

Based on the results of the image above, the results of the normality test using the Normal P-P Plot show that the data in the image spreads around the diagonal line and follows the direction of the diagonal line. So, it can be concluded that the data in this study were normally distributed and the regression model fulfilled the assumption of normality. Then do the Heteroscedasticity test

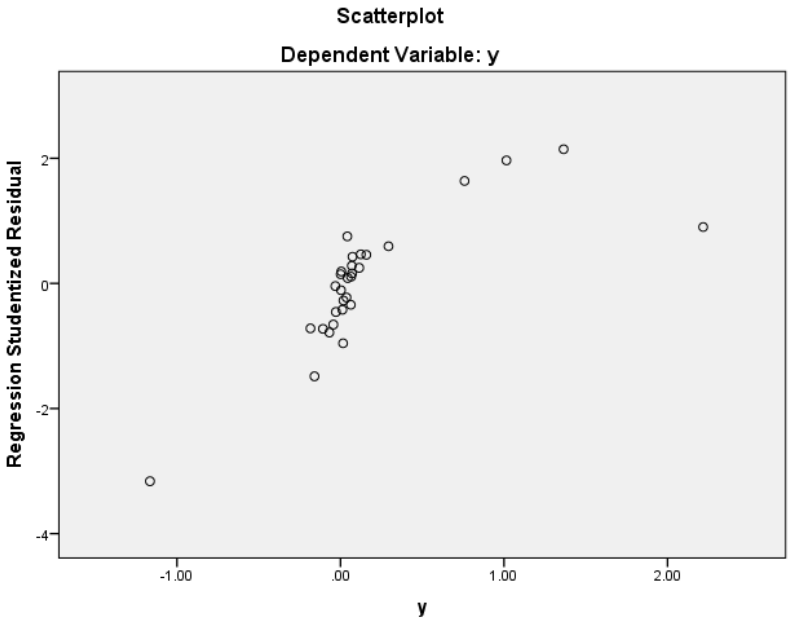

Figure 2. Scatterplot Graph Heteroscedasticity Test Results

Based on the scatterplot graph above, it shows that the data is spread above and below the number 0 on the Y axis and there is no clear pattern in the distribution of the data. This means that there is no heteroscedasticity in the regression equation model, so the regression model can be used to measure the dependent variable that affects the independent variable. This test has also passed other classic assumptions such as the Multicollinearity Test and the Autocorrelation Test.

Hypothesis test

Table 2. Multiple Correlation Coefficient Test
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.698[a]	.487	.450	.41861	1.736

a. Predictors: (Constant), x2, x1
b. Dependent Variable: y

The R value which describes the level of relationship between the independent variable (X) and the dependent variable (Y) ranges from 0 to 1. If the value is closer to one, it means that the relationship is getting stronger, conversely the value is getting closer to 0, the relationship is getting weaker. The magnitude of the effect of efficiency and asset growth on financial performance in the defense industry sector is 45.0% and the remaining 55.0% is explained by other variables not examined in this study. The F test is used to test the significant level of the effect of the independent variables simultaneously on the dependent variable. (Santoso Slamet, 2013). If f count > f table

and value < 0.05 (α = 5%), then the independent variables simultaneously have a significant effect on the dependent variable.

Table 3. Examination of F

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.500	2	2.250	12.841	.000[b]
	Residual	4.731	27	.175		
	Total	9.232	29			

a. Dependent Variable: y
b. Predictors: (Constant), x2, x1

Based on the F test table where the F test above obtained an F-statistic probability value of 0.000. so that a significant statistical F-value of 0.000 <0.05 is obtained, then H0 is rejected and Ha is accepted, meaning that efficiency and asset growth have a simultaneous effect on financial performance. Next is to do the t test. Where the t test is used to test the significant level of the influence of the independent variables partially on the dependent variable. The test is carried out by comparing t count with t table (Santoso Slamet, 2013). With the provision that if t count > t table and significant value < 0.05 (α: 5%), then the independent variable partially has a significant effect on the dependent variable, t-count Efficiency 5.066 > t-table 1.69726 and a significant value <0.05. It can be concluded that efficiency partially has a positive effect on financial performance. While Asset Growth t-count 0.185 > t-table 1.69726 and a significant value > 0.05, it can be concluded that Asset Growth partially has no effect on Financial Performance. Asset Growth should be highly expected for the company's development both internally and externally, because high growth signals the company's development but in the Defense Industry sector here it has no effect. This can be a concern for companies in the defense industry sector so that Indonesia can create a strong, independent and competitive defense industry.

D. Conclusion

The conclusion from writing this article is that the magnitude of the effect of efficiency and asset growth on financial performance in the defense industry sector is 45.0% and the remaining 55.0% is explained by other variables not examined in this study. F-statistic of 0.000. so that a significant statistical F-value of 0.000 <0.05 is obtained, then H0 is rejected and Ha is accepted, meaning that efficiency and asset growth have a simultaneous effect on financial performance in the defense industry sector, t-count Efficiency 5.066 > t-table 1.69726 and a significant value <0.05. It can be concluded that efficiency partially has a positive effect on Financial Performance in the Defense Industry Sector. Asset Growth t-count 0.185 > t-table 1.69726 and a significant value > 0.05, it can be concluded that Asset Growth partially has no effect on Financial Performance in the Defense Industry Sector. This can be a concern for

companies in the defense industry sector so that Indonesia can create a strong, independent and competitive defense industry.

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