

THE INFLUENCE OF FIXED ASSETS INVESTMENT, SOLVENCY, WORKING CAPITAL AND FREE CASH FLOW ON THE PROFITABILITY OF MANUFACTURING COMPANIES LISTED ON THE INDONESIAN STOCK EXCHANGE PERIOD 2017-2020

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Abstract (TNR11)

This research aims to examine the effect of Fixed Asset Investment, Solvency, Working Capital and Free Cash Flow on Profitability. Several previous studies showed various results. To obtain valid results, a test is carried out on each variable based on the hypothesis that is built. The research population is manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2020 period. The sample used was selected using a purposive sampling method. After eliminating data with several criteria, 57 companies were identified as samples during the 2017-2020 period. Hypothesis testing was carried out using multiple linear regression analysis with the help of IBM SPSS version 25 software. The results of this research show that Fixed Asset Investment, Solvency and Free Cash Flow have an influence on Profitability, while Working Capital has no influence on Profitability.

Keywords: Fixed Asset Investment, Solvency, Working Capital, Free Cash Flow, and Profitability.

1. INTRODUCTION

The effect of investment on economic growth and employment is a very relevant topic in macroeconomic analysis. Investment can influence economic growth by increasing national income and improving people's quality of life. Apart from that, investment can also influence labor absorption by creating new jobs and increasing employment opportunities. Investment has an important role in increasing economic growth and employment. However, the results of previous research show that investment does not directly influence economic growth in Indonesian provinces. This is due to several factors, such as the impact of the global economic crisis and natural disasters that occurred in several regions in Indonesia (Sulistiawati, 2012).

Profitability as an indicator of a company's financial performance, especially for manufacturing companies listed on the Indonesia Stock Exchange (BEI), has significant implications in investor decision making. To achieve and maintain optimal profitability, companies must consider various factors that can influence their financial performance. Several studies have been conducted to determine the factors that influence the profitability

of manufacturing companies, such as leverage, activity, liquidity, company size, capital structure, and institutional ownership (Siregar & Mahendra, 2023).

One important factor that influences profitability is fixed asset investment. Fixed assets such as factories, machines and equipment are the operational backbone of manufacturing companies. Proper investment in fixed assets can increase production efficiency and operational capacity, which in turn can increase company profitability. However, investments that are too large without careful calculations can result in high depreciation charges and other financial stress. Another factor is solvency, which measures a company's ability to meet its long-term obligations. Companies with a good level of solvency are better able to survive in uncertain economic conditions and find it easier to obtain external funding. A low level of solvency, on the other hand, can increase the risk of bankruptcy and reduce investor confidence (Lenas & Aminah, 2022).

Working capital, or *modal kerja*, plays a crucial role in influencing the profitability of a business. Adequate working capital ensures that a company has sufficient liquidity to run its daily operations and meet its short-term liabilities. Effective management of working capital can enhance operational efficiency and reduce costs associated with shortages or surpluses of inventory. This is achieved by maintaining a balance between the company's liquid assets and liabilities, ensuring that it can meet its financial obligations without compromising its ability to generate revenue. Free cash flow (FCF) is a crucial indicator that measures the amount of cash available to a company after meeting all operational expenses and capital expenditures. A healthy cash flow allows a company to invest further, pay dividends, and reduce debt, all of which contribute to increased profitability. This indicator is significant because it reflects the company's ability to generate cash from its operations, which is essential for its financial health and growth.

This research aims to analyze the influence of fixed asset investment, solvency, working capital and free cash flow on the profitability of manufacturing companies listed on the IDX during the 2017-2020 period. It is hoped that a deeper understanding of these factors can help company management make better strategic decisions to improve financial performance.

2. RESEARCH METHOD

This research uses quantitative methods because in the process of collecting data and interpreting it, this research involves numerical values. The quantitative method was chosen because the aim of this method is to use mathematical models and hypothetical theories related to a phenomenon. Regression analysis will be used to test the relationship between the independent variables (fixed asset investment, solvency, working capital, and free cash flow) and the dependent variable (profitability) (Kusumastuti et al., 2020).

Population and Sample

This research aims to examine cause-and-effect relationships (causality) by explaining the influence of independent variables, namely Fixed Asset Investment, Solvency, Working Capital, and Free Cash Flow on the dependent variable, namely Profitability. In this research, the population has been determined, namely all manufacturing companies on the Indonesian Stock Exchange for the 2017-2020 period. The data analyzed in this research is secondary data in the form of company financial reports on the Indonesia Stock Exchange for the 2017-2020 period.

The sampling technique in this research is purposive sampling based on the criteria of the specified sample. In purposive sampling, the researcher has a specific aim or target in selecting samples non-randomly using a sample selection method based on considerations. In sampling, the criteria for determining the sample in this research include defining the population to be observed, determining the sample frame and a collection of all events that can occur, determining the appropriate sampling technique or method, carrying out sampling (data collection), and carrying out re-examination in the sampling process (Yusuf Abdhul Azis, 2023).

Data Collection Techniques

This research uses secondary data, the data processing and analysis techniques used include: The analysis that the author uses is based on primary accounting data such as the Financial Reports of manufacturing companies on the Indonesia Stock Exchange for the 2017-2020 period (Nastalim & Hapsari, 2020).

Research Instruments

Research instruments are tools used to obtain or collect data in order to solve research problems or achieve research objectives. Research instruments are created for one particular research purpose that cannot be used by other research, so research must design their own instruments for each research, which is not always the same as other research because the goals and working mechanisms in each research technique are also different. Data collected using certain instruments will be described and attached or used to test the hypothesis proposed in a study.

Data Analysis Techniques

1. Descriptive Statistical Analysis

Descriptive statistics provide an overview or description of data that is seen from the average value (mean), standard deviation, variance, maximum, minimum, sumrange,

kurtosis and skewness (distribution differences), to provide an overview of descriptive statistical analysis. Data transformation is a crucial step in statistical analysis, particularly in research studies where data is presented in a tabular format to facilitate understanding and interpretation. This process involves applying mathematical functions to each value in the dataset to replace the original value with a new one. The primary purpose of data transformation is to make the data more interpretable and comparable, which is essential for statistical analysis and drawing meaningful conclusions from the data.

2. Classic Assumption Test

The Classic Assumption Test is a statistical procedure carried out before multiple linear regression analysis to ensure that the data meets several assumptions required in the analysis. The purpose of the classical assumption test is to ensure that the data meets the statistical requirements necessary for accurate and reliable regression analysis. The following are several types of classical assumption tests that are commonly used:

a. Normality test

This test is carried out to determine whether the independent variables and dependent variables, as well as the residual values, have a normal distribution or not. The normality test is usually carried out using the One Sample Kolmogorov Smirnov test, where if the significance value is above 5% or 0.05, then the data has a normal distribution

b. Multicollinearity Test

This test aims to find out whether the regression model created has independent variables that are significantly related to each other. The multicollinearity test can be carried out using methods such as Variance Inflation Factor (VIF) or Tolerance.

c. Heteroscedasticity Test

This test is carried out to find out whether the residual variance is different in each observation. Heteroscedasticity can be recognized by looking at scatterplot graphs or predicted values.

d. Autocorrelation Test

This test is carried out to find out whether the residual value has a correlation with the previous residual value. The autocorrelation test can be carried out using methods such as the Durbin-Watson test

3. Multiple linear regression

Multiple linear regression is a statistical analysis method used to predict the value of a dependent variable based on the value of more than one independent variable. In multiple linear regression analysis, the regression model used is an ordinary least

squares (OLS) based model, which requires several statistical assumptions to ensure the accuracy of the analysis results.

3. RESULTS AND DISCUSSION

a. Data Description

This research focuses on manufacturing companies listed on the 2017-2020 Indonesia Stock Exchange, totaling 149 companies. Of the 149 manufacturing companies listed on the IDX in 2017-2020, there are 30 companies that publish financial reports using currencies other than the rupiah, 3 manufacturing companies that are listed on the Indonesia Stock Exchange (BEI) in 2017-2020 whose financial reports cannot be found. and 1 company with suspension status. Apart from that, as many as 58 companies had outlier data. The following is a summary table of the research sample selection presented in table1.

Table 1. Details of Research Sample Selection Stage

No	Criteria	Amount
1	Manufacturing companies that were successively listed on the Indonesia Stock Exchange (BEI) in 2017-2020.	149
2	Companies publish financial reports using currencies other than the Rupiah	(30)
3	Manufacturing companies that were successively listed on the Indonesia Stock Exchange (BEI) in 2017-2020 whose financial reports cannot be found	(3)
4	Companies currently under Suspension on the Indonesian Stock Exchange	(1)
5	Number of manufacturing companies that have criteria	115
6	Companies that contain outliers	(58)
7	Number of samples of manufacturing companies registered on the IDX during 2017-2020 (84 companies x 4 years)	57
8	Year of Research	4
	Number of samples used in research	228

b. Processing Research Results Data

Descriptive Statistical Analysis

Table 2. Results of Descriptive Statistical Analysis Test

	N	Minimum	Maximum	Mean	Std. Deviation
FATR	228	.0013	3.2723	1.616692	.8002945
DAR	228	.0076	.9913	.374230	.1819621
WCT	228	-5.4859	10.6232	3.298720	2.3983001
FCFM	228	-.2776	1.1353	.054829	.1570009
ROA	228	-.2293	.2575	.053195	.0741706
Valid N (listwise)	228				

Table 2. shows the results of descriptive statistical analysis tests on Fixed Asset Investment using the Fixed Asset Turnover Ratio (FATR), showing a minimum value of 0.0013 obtained from the company PT Astra International Tbk (ASII) in 2020, while the maximum value is 3 .2723 was obtained from the company PT Ateliers Mecaniques D'Indonesie (AMIN) in 2017. The average value (mean) is 1.616692 and has a standard deviation value of 0.80029 with a sample size (N) of 228.

Normality Test Results

In the graphic analysis test, a histogram graph is used to compare the observed data with a distribution that is close to normal. Apart from the histogram graph, this research also uses a normal probability plot which compares the cumulative distribution and the normal distribution.

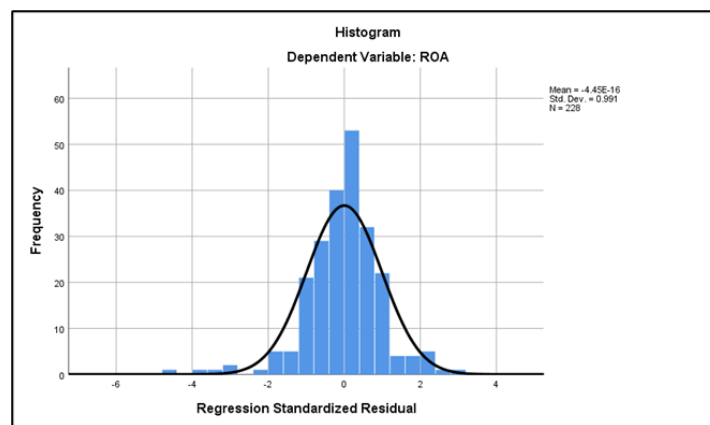


Figure 1. Normality Test Results with Normal Histogram

In Figure 1. it can be seen that the histogram graph above depicts a symmetrical shape, in the histogram graph this means it does not deviate to the right or left. Based on Figure 1 above, it can be concluded that the data in this study is normally distributed. Apart from testing the histogram graph

Table 3. Normality test One-Sample Kolmogrov-Smirnov Test

		Unstandardized Residual
N		228
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.06440830
Most Extreme Differences	Absolute	.074
	Positive	.059
	Negative	-.074
Test Statistic		.074
Asymp. Sig. (2-tailed)		.004 ^c
Monte Carlo Sig. (2-tailed)	Sig.	.153 ^d
99% Confidence Interval		
Lower Bound		.143
Upper Bound		.162
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. Based on 10000 sampled tables with starting seed 2000000.		

In table 3. from the One-Sample Kolmogrov-Smirnov test above, after removing outliers, with a sample of 228, the One-Sample Kolmogrov-Smirnov results show that the Monte Carlo sig (2-tailed) is 0.153. This value is greater than the significance value, namely 0.05. Thus it is concluded that the data is normally distributed or it can be said that H_a is accepted and H_o is rejected.

Multicollinearity Test Results

Table 4. Multicollinearity Test Results

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.064	.015	4.239	.000		
	FATR	.023	.006	.247	4.019	.000	.899
	DAR	-.138	.025	-.338	-5.535	.000	.909
	WCT	.000	.002	-.008	-.125	.901	.873
	FCFM	.085	.029	.181	2.945	.004	.898

a. Dependent Variable: ROA

In table 4. the results of the multicollinearity test above show that the tolerance value is > 0.1 and $VIF < 10$. It can be concluded that the independent variables in this study are not correlated with each other or there are no symptoms of multicollinearity between variables.

Autocorrelation Test Results

Table 5. Durbin Watson Test Results

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.354 ^a	.126	.110	.04604	1.937

a. Predictors: (Constant), Lag_LnX4, Lag_LnX1, Lag_LnX2, Lag_LnX3
b. Dependent Variable: Lag_LnY

In table 5., the results of the autocorrelation test with the Durbin Watson test above after using the Durbin two step method obtained a DW result of 1.937. It is known in the Durbin Watson table (attached) that DU is 1.8320 and 4-DU is 2.1680. This means that the condition for no autocorrelation to occur is met in the normality test for autocorrelation because $DU < DW < 4-DU$ or $1.8320 < 1.937 < 2.1680$. So it can be concluded that this research does not contain autocorrelation.

Heteroscedasticity Test Results

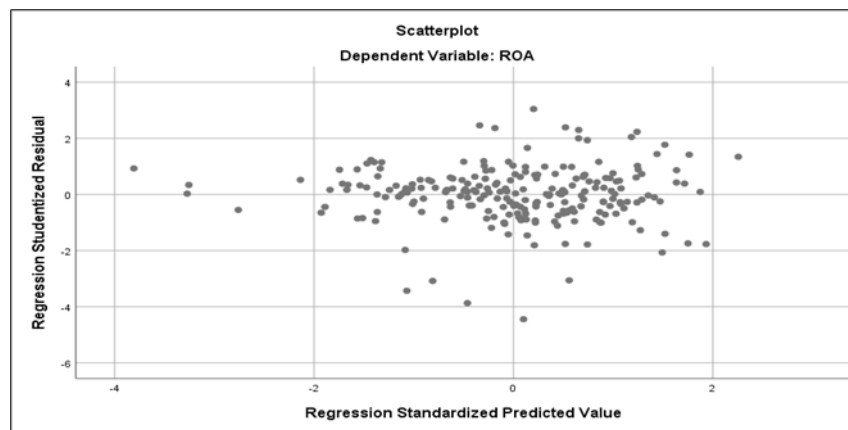


Figure 2. Scatterplot Graphics

In Figure 2, it can be seen that on the Scatterplot graph, the points do not form a regular pattern and there is no clear pattern and the points are spread above and below the number 0 on the Y axis. So it can be concluded that heteroscedasticity does not occur.

Multiple Linear Regression

Table 6. Multiple Linear Regression Analysis Test Results

Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	.064	.015		4.239	.000
	FATR	.023	.006	.247	4.019	.000
	DAR	-.138	.025	-.338	-5.535	.000
	WCT	.000	.002	-.008	-.125	.901
	FCFM	.085	.029	.181	2.945	.004
a. Dependent Variable: ROA						

In table 6, it can be seen that the multiple regression equation is as follows: Profitability $it = 0.064 + 0.023 \text{ IAT}\alpha - 0.138 \text{ Solvency}\alpha + 0.000 \text{ Working capital}\alpha + 0.085 \text{ FCFM}\alpha$. From the multiple regression equation model above, it can be seen that the constant value is 0.064, which means that with the addition of Fixed Asset Investment, Solvency, Working Capital and Free Cash Flow, the profitability of manufacturing companies will increase by 0.064 in 2017-2020. The coefficient value of Fixed Asset Investment with the Fixed Asset Turover Ratio (FATR) is 0.023 which shows a positive result, this means that every 1% increase or addition to fixed asset investment in manufacturing companies will increase the company's profitability by 0.023 times in the 2017-2020 period. assuming the other variables in the regression equation remain constant.

The solvency coefficient value with the Debt to Assets Ratio (DAR) is -0.138 which shows a negative result, this means that every increase or addition of 1% in solvency in manufacturing companies will reduce the company's profitability by -0.138 times in the 2017-2020 period with variable assumptions others in the regression equation remain. The Working Capital coefficient value with Working Capital Turover (WCT) is 0.000 which shows a positive result, this means that every increase or addition of 1% of working capital in the company will increase the company value by 0.000 times in the 2017-2020 period with assuming other variables in the regression equation remain constant.

The Free Cash Flow coefficient value is 0.085 which shows a positive result, this means that every increase or addition of 1% in solvency in manufacturing companies will reduce the company's profitability by 0.085 times in the 2017-2020 period assuming the other variables in the regression equation remain constant.

Coefficient of Determination Test Results (R2)

Table 7. Coefficient of Determination Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.496 ^a	.246	.232	.0649834
a. Predictors: (Constant), FCFM, FATR, DAR, WCT				
b. Dependent Variable: ROA				

In table 7. it can be seen that the Adjusted R Square value is 0.232. This research produces indications that the profitability of manufacturing companies listed on the IDX can be explained by the independent variables, namely Fixed Asset Investment, Solvency, Working Capital and Free Cash Flow, with an expected percentage of 23.2%, so that the

remaining 76.8% is determined by variables. others that were not examined in this research, such as liquidity, sales growth, interest rates and so on.

Discussion

1. Effect of Fixed Asset Investment (IAT) on Company Profitability

In table 7. it can be seen that Fixed Asset Investment has a t count of 4.019 with a significance level of 0.00. This shows that the significance level is below or $< \alpha$ ($\alpha = 0.05$). This research also shows a positive direction with an unstandardized beta value of 0.023. With this, the results of the research show that H1 is accepted, which means that fixed asset investment has an effect on company profitability. This research is in line with research conducted by Herawati and Fajar (2016) that fixed asset investment has a positive and significant effect on profitability because part of every profit a company makes will be invested in fixed assets. Apart from that, this research also supports research conducted by Olatunji (2014) that there is a positive correlation between company profits and fixed assets, this implies that an increase in company profits results from an increase in fixed asset investment.

The rate of return on Fixed Asset Investment affects the level of profit in the company. Fixed assets must be used effectively and productively to increase profitability in order to satisfy the expectations of investors (principals) in agency relationship work contracts.

2. Effect of Solvency on Company Profitability

In table 7, it can be seen that Solvency has a t count of -5.535 with a significance level of 0.000. This shows that the significance level is below or $< \alpha$ ($\alpha = 0.05$). This research also shows a negative direction with an unstandardized beta value of -0.138. With this, the results of the research show that H1 is accepted, which means that solvency influences the company's profitability. The results of this research support research conducted by Lilia (2018), Hazrah (2019) and Putri (2019) that solvency has a significant effect on company profitability, the increase in DER (debt to equity ratio) is directly proportional to the increase in profitability. If a company has high solvency, then the company has a large risk of loss but also has the opportunity to gain large profits from the role of external parties. If the company has a high level of liabilities, this will affect the company's financial performance and make it difficult to obtain funds from other third parties.

3. Effect of Working Capital on Company Profitability

In table 7, it can be seen that Working Capital has a t count of -0.125 with a significance level of 0.901. This shows that the level of significance is above or $> \alpha$ ($\alpha = 0.05$). This research also shows a positive direction with an unstandardized beta value of

0.000. With this, the results of the research show that H1 is rejected, which means that working capital has no effect on company profitability.

4. The Effect of Free Cash Flow on Company Profitability

In table 4.8 it can be seen that Free Cash Flow has a tcount of 0.181 with a significance level of 0.004. This shows that the significance level is above or $< \alpha$ ($\alpha = 0.05$). This research also shows a positive direction with an unstandardized beta value of 0.04. With this, the results of the research show that H1 is accepted, which means that Free Cash Flow has an effect on company profitability (Ghozali, 2016). The results of this research support research conducted by (Bella & Yantri, 2021) and (Kamran et al., 2017) because the higher the Free Cash Flow a company has, the more it can be optimized to obtain high profitability. Meanwhile, this research is not in line with research conducted by Sebastian and Sundar (2018) that Free Cash Flow cannot be considered the main factor influencing profitability because there is not always an impact of Free Cash Flow on company profitability. Free Cash Flow can also cause a decline in a company's financial performance due to lack of investment.

4. CONCLUSION

This research provides information regarding factors that can cause disruption to profitability in a company. This research shows that Fixed Asset Investment, Solvency and Free Cash Flow have an influence on company profitability. However, Working Capital cannot influence profitability in a company. Providing knowledge and understanding to management so that they can minimize the risks that occur and can provide considerations in making the best decisions for the company. Providing knowledge and understanding to principals and investors regarding agency relationships in order to minimize the occurrence of information asymmetries and also create trust and understanding in management as well as consideration in making investment decisions. Principals and investors must be active in monitoring the results of profits (company profitability) by looking at how these profits can be created and the factors that can influence the level of profit, in this case the company's profitability, thereby influencing investment decisions through this research information.

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