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Determinants Of Earnings Management In Industrial Sector Companies Listed On The Indonesian Stock Exchange

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Abstract

This research was conducted with the aim of empirically proving the effects of Profitability, Leverage, and Firm Size on Earnings Management. The variables in this study are measured by Return on Asset, Debt to Asset Ratio, Natural Total Asset Logarithm, and Stubben's Conditional Revenue Model. The population in this study used the industrial sector listed on the Indonesia Stock Exchange for the period 2019 – 2021. The sampling technique used a purposive sampling method with several sample criteria, resulting in 15 companies being sampled in this study. The data analysis method in this study uses panel data regression analysis. The results of this study indicate that Profitability has a negative effect on Earnings Management. Leverage has no effect on Earnings Management and Firm Size has no effect on Earnings Management.

Keywords : Profitability, Leverage, Firm Size, Earnings Management

INTRODUCTION

Earnings Management is an effort on the part of management to influence information in preparing financial reports that aim to provide benefits to related companies. Profit information can also help stakeholders, including investors, in predicting earnings power to determine investment and credit risk. Profit information is the responsibility of management to interested parties. Profit information will later be used as material for consideration in making every decision for the continuity of a company's operational activities (Lubis & Suryani, 2018). An investor also needs profit information to make a decision whether to invest in the company or not. This makes management want to practice earnings management so that the company's profits

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look stable. In addition to wanting to attract the attention of investors, management can also practice earnings management by reducing company profits so that profits appear small so that the impact on corporate tax payments is not too large. The phenomenon of earnings management can be seen from the profits managed by a company. Because the existence of profit can describe the condition of a company in a certain period.

The earnings management phenomenon can be seen in the case of PT Toshiba. In May 2015, PT Toshiba stated that the company was conducting an investigation into an internal accounting scandal and had to revise its profit calculations in the last 3 years. After a through investigation, it turned out that PT Toshiba had experienced difficulties in achieving its business profit target since 2008, when at that time the global economic crisis was going on. It is known that the crisis had an impact on Toshiba's business so that finally PT Toshiba committed an act of deceit through accounting fraud worth 1.2 billion US dollars within 7 years.

The earnings management case carried out by PT Toshiba has had an impact on the resignation of several company leaders, besides that PT Toshiba was removed from the stock index and has experienced a significant decline in sales. At the end of 2015, PT Toshiba had lost US$8 billion.

There are several factors that are considered by management in managing earnings, one of which is profitability. Profitability is the ability of a company to generate profits during a certain period. A company that has a low level of profitability will get an unfavorable view of investors. Therefore, management usually practices earnings management so that profits look stable so that they get a good view from external parties. Research on profitability of earnings management has been carried out by (Cornelia & Adi, 2022) which produces evidence of profitability has a positive effect on earnings management. Meanwhile according to (Ningsih, 2019) shows evidence that profitability has a negative effect on earnings management. And the evidence shown by (Wowor et al., 2021) profitability has no effect on earnings management.

Besides profitability, another variable that is studied as a factor affecting earnings management is leverage. Leverage is a ratio that shows how much of a company's assets are financed by debt. The higher the leverage, the higher the risk of default on the obligations faced by the company. The alternative used is usually through external funding sources in the form of debt, which then the company will try to ful fill the debt agreement in order to get a good rating from creditors. This can encourage management to carry out earnings management in order to avoid violating the debt agreement (Arlita et al., 2019). Research on leverage on earnings management has been carried out by (Miftakhunnimah et al., 2020) who obtained the result that leverage has a significant positive effect on earnings management. These results are different from research conducted by (Komang et al., 2020) where leverage has a significant negative effect on earnings management. Next (Islamiah & Apollo, 2020) have studied similar matters which produced evidence that leverage has no effect on earnings management.

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In addition to profitability and leverage, Firm Size is also a factor that can affect earnings management. Firm Size is a company scale that is grouped according to size or size through the company's total assets. The greater the total assets of the company, the greater the size of the company. This makes the company get a lot of attention so that it is not free in carrying out earnings management practices considering that if the company suffers a loss or commits fraud it will have an impact on damaging the company's good name. On the other hand, if the company belongs to the small company category, the management has freedom in carrying out earnings management practices because small companies usually receive less attention from external parties (Ningsih, 2019). Research on Firm Size on earnings management has been carried out by (Lubis & Suryani, 2018) where the research resulted in a positive influence between Firm Size and earnings management. Unlike the research conducted by (Miftakhunnimah et al., 2020) where firm size has a negative effect on earnings management. There are also those who show that Firm Size has no effect on earnings management, this is evidenced by research that has been conducted by (Islamiah & Apollo, 2020).

LITERATUR REVIEW

Agency Theory

Agency theory states that earnings management practices can occur due to the influence of conflicts, usually there are three types of agency conflicts that often occur, namely conflicts between shareholders and management, shareholders and shareholders, and shareholders and minority shareholders. In agency theory, it is described that earnings management occurs as a result of differences in economic interests between earnings management and shareholders (Islamiah & Apollo, 2020).

Earnings Management

Earnings management is a manipulation step carried out by management to increase or decrease the current year's profit of a company it manages without causing an increase or decrease in the company's economic profits in the long term (Lubis & Suryani, 2018).

Profitability

Profitability is the level of net profit obtained by an entity in carrying out its operational activities. Profitability is commonly used by investors to see the level of a company's ability to generate profits. If the profit earned by the company is too high, the management will reduce profits. And if the profit earned by the company is too low, the management will increase the profit so that the company's profit looks good (Ningsih, 2019).

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Leverage

Leverage is a ratio to see how much the company's assets are financed by debt. Companies that have a high leverage ratio, it can be interpreted that the debt scale is higher than the asset scale. The condition of a company with a high level of leverage indicates that the condition of the company is not good because it will create opportunities for the company to be unable to pay or pay off the debts it bears (Ningsih, 2019).

Firm Size

Firm Size is a scale for classifying the size of a company by looking at its total assets, total sales, stock market value, and others (Islamiah & Apollo, 2020). The more value of assets owned by the company, the more capital invested. The higher the sales value, the greater the velocity of money and the greater the market capitalization, so that the company is known to the public (Ningsih, 2019).

Effect of Profitability on Earnings Management

An investor wants a stable profit, because this will provide investors with a sense of security for the investment that has been invested in a company. If the company's profit level next year is high, the management will manipulate the profit reduction so that next year's profit budget is not too high in line with the expectations that the company can achieve. However, if the company's profits are too low, the management will increase profits so that management performance is not seen as bad, which then has the potential for management changes. The logic in this study is in line with the logic of previous studies such as the research conducted by (Ningsih, 2019) which shows that profitability has a negative effect on earnings management. Based on this explanation, the hypothesis proposed in this study is :
H1: Profitability has a negative effect on Earnings Management.

Effect of Leverage on Earnings Management

Companies with high levels of leverage can indicate unfavorable company conditions because it will create opportunities for the company to be unable to pay off the debts it bears. Leverage is one of the factors that influence earnings management because earnings management is related to external funding sources, especially debt used in the company's operations. This logic is the same as the logic in previous studies that have been carried out by (Miftakhunnimah et al., 2020) which shows that leverage has a positive effect on earnings management. Based on this explanation, the hypothesis proposed in this study is :
H2: Leverage has a positive effect on Earnings Management.

Effect of Firm Size on Earnings Management

Large companies are more likely to receive attention from the public and stakeholders, so that financial reporting will be carried out more carefully and

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accurately. Meanwhile, companies with small sizes tend to want to prioritize the conditions of companies that have good performance so that investors are interested in investing in these companies. This logic is in line with the logic in research that has been conducted by (Lubis & Suryani, 2018) which in this study shows that Firm Size has a positive effect on earnings management. Based on this explanation, the hypothesis proposed in this study is :

H3: Firm Size has a positive effect on Earnings Management.

RESEARCH METHOD

In this study, the type of data used is secondary data in the form of quantitative data obtained from the annual financial reports of industrial sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2019 – 2021. The data source used in this research was obtained from the official website of the IDX that is (www.idx.co.id). Data analysis technique with panel data regression analysis using the Eviews 10 data processing application.

Purposive sampling technique is the technique used in sampling in this study. The purposive sampling is a sampling technique based on a consideration, the characteristics or
characteristics of a population. Data collection in the purposive sampling technique was not carried out randomly, but focused on a particular goal.

Some of the sample criteria used in this study include:

1. Industrial sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2019 – 2021.
2. Industrial sector companies that publish financial reports for the period 2019 – 2021.
3. Industrial sector companies that make profits during the 2019 – 2021 period.

Based on these criteria, 15 industrial sector companies were obtained which could be used as samples in this study. The independent variables are profitability, leverage, and firm size while the dependent variable is earnings management with details on variable measurements as follows :

Table 1. Variable Measurement

No	Variable Name	Definition	Measurement	Scale
1.	Earnings Management (Y)	The ratio for the distribution of profits as a condition for the category of companies conducting	$\Delta ARit = \alpha + \beta 1 \Delta Rit + \beta 2 \Delta Rit \times SIZEit + \beta 3 \Delta Rit \times AGEit + \beta 4 \Delta Rit \times AGEit_SQit + \beta 5 \Delta Rit \times GRR_Pit + \beta 6 \Delta Rit \times GRR_Nit + \beta 7 \Delta Rit \times GRMit + \beta 8 \Delta Rit \times GRM_Sqit + \varepsilon it$ *Source: Fitriana (2020)*	Ratio

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		earnings management		
2.	Profitability (X1)	Ratio to assess the company's ability and seek profits	ROA = $\frac{\text{Net Profit After Tax}}{\text{Total Assets}}$ X 100% *Source: Wowor et al (2021)*	Ratio
3.	Leverage (X2)	Comparison ratio between total debt and total assets	DAR = $\frac{\text{Total Amoun of debt}}{\text{Total Assets}}$ *Source: Miftakhunnimah et al (2020)*	Ratio
4.	Firm Size (X3)	A scale to classify the size of a company	SIZE = Ln Total Assets *Source: Lubis & Suryani (2018)*	Ratio

RESULT

Selection of Panel Data Regression Model Techniques

Chow test

Redundant Fixed Effects Tests
Equation: EQ01
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.304083	(14,27)	0.2678
Cross-section Chi-square	23.243581	14	0.0564

Figure 1. Chow Test Result

Based on the calculation results above, the probability value of Cross-Section F and Cross-Section Chi-Square > α (0.05), it can be concluded that the Common Effect Model (CEM) is more appropriate to use.

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Hausman Test

Correlated Random Effects - Hausman Test
Equation: EQ01
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	15.132503	3	0.0617

Figure 2. Hausman Test Result

Based on the results of the calculation above, the Cross-section random value > α (0.05), it can be concluded that the Random Effect Model (REM) is more feasible to use.

Lagrange Multiplier Test

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	5.981521 (0.0145)	36.18263 (0.0000)	42.16415 (0.0000)

Based on the calculation results above, the Breausch-pagan Cross-section Probability value <α (0.05), it can be concluded that the Random Effect Model (REM) is more appropriate to use.

CONCLUSION PANEL DATA REGRESSION MODEL USED

Table 2. Conclusion Panel Data Regression Model used

No	Method	Testing	Results
1	Chow test	CEM vs FEM	CEM
2	Hausman test	REM vs FEM	REM
3	LM test	CEM vs REM	REM

Based on the results of the three tests that have been carried out, it can be concluded that the Panel Data Regression Model used is the Random Effect Model (REM).

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Hypothesis Testing
F Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	27831.30	24675.23	1.127904	0.2659
ROA	-6.844856	5.294098	2.192922	0.0233
DAR	-0.811700	1.839198	-0.441334	0.6613
SIZE	-0.490256	0.799801	-0.612973	0.5433
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			17318.42	1.0000
Weighted Statistics				
R-squared	0.495930	Mean dependent var		6660.222
Adjusted R-squared	0.419949	S.D. dependent var		18016.51
S.E. of regression	18195.33	Sum squared resid		1.36E+10
F-statistic	7.013140	Durbin-Watson stat		3.143468
Prob(F-statistic)	0.000083			
Unweighted Statistics				
R-squared	0.495930	Mean dependent var		6660.222
Sum squared resid	1.36E+10	Durbin-Watson stat		3.143468

Figure 4. F Test Result

Based on F-statistic with F table

The output shows that the F-statistic value is 7.013140, while the F table with a level of α = 5%, df1 (k-1) = 3 and df2 (nk) = 41 obtained an F table value of 2.832747. Thus it can be concluded that F-statistics > F table, then Ha is accepted, which means ROA, DAR, and Firm Size simultaneously affect earnings management.

Based on Probability

In the output above, it can be seen that the Prob(F-statistic) value < α 0.05, then Ha is accepted, namely the variables ROA, DAR, and Firm Size simultaneously affect earnings management.

Coefficient of Determination

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	27831.30	24675.23	1.127904	0.2659
ROA	-6.844856	5.294098	2.192922	0.0233
DAR	-0.811700	1.839198	-0.441334	0.6613
SIZE	-0.490256	0.799801	-0.612973	0.5433
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			17318.42	1.0000
Weighted Statistics				
R-squared	0.495930	Mean dependent var		6660.222
Adjusted R-squared	0.419949	S.D. dependent var		18016.51
S.E. of regression	18195.33	Sum squared resid		1.36E+10
F-statistic	7.013140	Durbin-Watson stat		3.143468
Prob(F-statistic)	0.000083			
Unweighted Statistics				
R-squared	0.495930	Mean dependent var		6660.222
Sum squared resid	1.36E+10	Durbin-Watson stat		3.143468

Figure 5. Coefficient of Determination Result

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The figure above shows that the Adjusted R-Squared value is 0.419949, meaning that changes in the ups and downs of earnings management can be explained by ROA, DAR, and SIZE of 41.9 percent. While the remaining 58.1 percent is explained by other variables not examined in this study.

T Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	27831.30	24675.23	1.127904	0.2659
ROA	-6.844856	5.294098	2.192922	0.0233
DAR	-0.811700	1.839198	-0.441334	0.6613
SIZE	-0.490256	0.799801	-0.612973	0.5433
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			17318.42	1.0000
Weighted Statistics				
R-squared	0.495930	Mean dependent var		6660.222
Adjusted R-squared	0.419949	S.D. dependent var		18016.51
S.E. of regression	18195.33	Sum squared resid		1.36E+10
F-statistic	7.013140	Durbin-Watson stat		3.143468
Prob(F-statistic)	0.000083			
Unweighted Statistics				
R-squared	0.495930	Mean dependent var		6660.222
Sum squared resid	1.36E+10	Durbin-Watson stat		3.143468

Figure 6. T Test Result

Based on the figure above it can be explained as follows, The t-statistic value (ROA) is 2.192922, while t table with a level of α = 5%, df = (nk) = 41, the t table value is 2.019541. Thus the t-statistic ROA (2.192922) > t-table (2.019541) and the Prob value. 0.0233 < 0.05. So it can be concluded that the ROA variable in this study has an effect on Earnings Management. The regression coefficient value of the ROA variable is -6.844856, this illustrates that the ROA variable has a negative effect on Earnings Management.

The t-statistic value (DAR) is -0.441334, while t table with a level of α = 5%, df = (nk) = 41, the t table value is 2.019541. Thus the t-statistic DAR (-0.441334) < t-table (2.019541) and the value of Prob. 0.6613 > 0.05. So it can be concluded that the DAR variable in this study has no influence on Earnings Management.

The t-statistic value (SIZE) is -0.612973, while t table with a level of α = 5%, df = (nk) = 41, the t table value is 2.019541. This the t-statistic SIZE (-0.612973) < t-table (2.019541) and the Prob. 0.5433 > 0.05. So it can be concluded that the SIZE variable in this study has no influence on Earnings Management.

DISCUSSION

Effect of Profitability on Earnings Management

Based on the calculation results in figure 6, it can be seen *t-statistic* ROA 2.192922 > t-table 2.019541 and the coefficient value indicates a number -6.844856, meaning that profitability calculated by return on assets has a negative effect on

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earnings management. Where the profitability generated by small companies shows the profits generated by the company are also low. When the profits are low, this will make shareholders worried about the sustainability of the company and make it possible to change management. To overcome this, management will carry out earnings management with the aim of increasing profits so that the management position is not disturbed or replaced. The results of this study are in line with research (Ningsih, 2019) which states that profitability has a negative effect on earnings management.

Effect of Leverage on Earnings Management

Based on the calculation results in figure 6, it can be seen *t-statistic* DAR -0.441334 < t-table 2.019541, meaning that leverage calculated by debt to asset ratio has no effect on earnings management. Where the level of leverage generated by the company will not affect earnings management actions taken by the management. The results of this study are in line with research (Islamiah & Apollo, 2020) which states that leverage has no effect on earnings management. While this research is not in line with research (Miftakhunnimah et al., 2020) which states that leverage has a positive effect on earnings management.

Effect of Firm Size on Earnings Management

Based on the calculation results in figure 6, it can be seen *t-statistic* SIZE -0.612973 < t-table 2.019541, it means that Firm Size has no effect on earnings management. This shows that the size of a company is not a benchmark for management to carry out earnings management actions. The results of this study are in line with research (Komang et al., 2020) which states that Firm Size has no effect on earnings management. While this research is not in line with research (Lubis & Suryani, 2018) which states that Firm Size has a positive effect on earnings management.

CONCLUSION

Based on the test results listed in this study, it shows that profitability which is proxied by Return On Assets (ROA) has a negative effect on earnings management, while leverage is proxied by Debt To Equity Ratio (DAR) and company size has no effect on earnings management.

If seen from the coefficient of determination there are still 58.1% of other independent variables not examined in this study which may affect earnings management. To strengthen the research results, further researchers can add other variables that have not been discussed in this study. Future researchers can also add other sectors to serve as research samples.

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