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The Effect of Leverage and Profitability on Earnings Management with Company Size as A Moderating Variable

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Leverage; Profitability; Company Size; Earnings Management.

Abstract
Profit management is a strategy implemented by company managers through the selection of accounting policies to change the projected figures stated in the financial statements which aims to manipulate the presentation of profit information so that stakeholders (stakeholders) obtain inaccurate information about the company's actual financial performance and stability. The objective of this study is to determine the extent to which leverage and profitability influence earnings management and to determine the extent to which firm size moderates this relationship. This study employs a quantitative approach using secondary data from companies in the food and beverage subsector listed on the Indonesia Stock Exchange from 2020 to 2024. The method used is purposive sampling, yielding 137 data units that meet the established criteria. To test the hypotheses, various linear regression techniques and Moderated Regression Analysis (MRA) were employed. The results indicate that leverage does not have a significant impact, whereas profitability is found to have a significant influence on earnings management. Meanwhile, firm size is not found to act as a moderating variable

INTRODUCTION

Profit management is a strategy implemented by company managers through the selection of accounting policies to change the projected figures stated in the financial statements which aims to manipulate the presentation of profit information so that stakeholders (stakeholders) obtain inaccurate information about the company's actual financial performance and stability (Anisya, R., 2023). This practice arises because management finds flexibility in the application of accrual-based accounting standards, thus opening up opportunities for intervention in the external financial reporting process (Oneng et al., 2025). The motivation of managers to work on profit management is often triggered by personal interests such as getting bonuses, maintaining the company's reputation, avoiding debt contract violations, and being in line with market expectations, this phenomenon tends to be said to be opportunistic behavior driven by personal interests (Prema et al., 2025).

Profit management practices not only reduce transparency, but also have the potential to create a widening information asymmetry between management and stakeholders, thus contradicting the main purpose of financial reporting (Paramitha & Idayati, 2020). Financial statements should present information on the main criteria, namely relevance and reliability in order to be the basis for decision-making by stakeholders (Dewantari et al., 2020). However, the flexibility of accounting standards opens up space for management to engineer profits

without explicitly violating the rules (Ermita & Tumirin, 2025). Although technically still within the corridor of accounting standards, profit management has the potential to reduce the quality of financial statement information and can result in inappropriate decisions (Wulandari, 2025).

Profit management practices are often the beginning of fraudulent acts in which the manipulation of numbers that is initially legal but becomes a misleading presentation of financial statements (Rindani & Zulfikar, 2025). This profit management practice is often found in Indonesia, one of which can be found in the case that befell PT Garuda Indenesia (Persero) Tbk in 2018, where the company reported a net profit of USD 809.84 thousand. This achievement is considered strange considering that in the previous year the company actually recorded a significant loss, namely = USD 216.5 million. The profit arose due to the recognition of revenue from PT Mahata Aero Teknologi which had not received payment and was still receivable (Putri et al., 2025). This practice triggered the rejection of the commissioner in the GMS and revealed the alleged manipulation of financial statements that lowered the company's credibility.

The internal aspects that are suspected to trigger the management of profit management practices are leverage (Adityaningsih & Hidayat, 2024). Leverage can affect the company's performance because the use of high debt has the potential to increase pressure in achieving profits (Izzati et al., 2024). Leverage describe the application of debt in funding that has implications for financial obligations that must be fulfilled (Ulummudin et al., 2025). Leverage high indicates a great dependence on debt, which can cause pressure on the part of creditors. In these situations, managers tend to engineer financial statements to keep financial ratios looking healthy and eligible for the loan (Yulianto & Aryati, 2022).

Profitability describes an indicator of financial performance that indicates the company's ability to make a profit from its own capital, total assets, and sales (Supriadi et al., 2024). Companies with low and high levels of profit or profitability in a given period often face challenges in maintaining the image of financial performance so that it has the potential to encourage management to work on profit management practices (Aldona & Listari, 2020). The relationship between profitability and profit management is inseparable from the role of company size, because large and small entities find differences in resources, pressures, and strategies in financial management. Empirical evidence from studies (Padang et al., 2024) The results of company size play a role in the moderation variable in the relationship between profitability and profit management, so that the size of the entity affects the strength and direction of the relationship.

Although the topic of profit management is influenced by leverage and profitability has been extensively researched, the existing results still show differences or have not provided consistent conclusions. Findings from (Yani et al., 2025) indicates that profitability has no effect while the level of leverage has a positive effect. Instead, a study by (Anshari & Kusumawati, 2024) Profitability has an influence on profit management, while leverage has no effect. This finding indicates that there are allegations that there are other variables that have the potential to strengthen or weaken the relationship, one of which is the size of the company that has not been widely studied.

The novelty of this research lies in its comprehensive testing of company size as a moderating variable on the relationship between two key financial ratios (leverage and

profitability) and earnings management, specifically within the food and beverage subsector of the Indonesia Stock Exchange for the recent 2020-2024 period. Unlike previous studies that examined these relationships in isolation or across broader sectors, this study provides a focused and contemporary analysis. It uses Moderated Regression Analysis (MRA) to disentangle the direct and interaction effects, offering a more nuanced understanding of how firm size influences managerial behavior.

The case of manipulation of financial statements that has emerged in Indonesia, where a public issuer is known to exaggerate the value of assets and receivables in order to display optimal financial performance but has the potential to cause errors for stakeholders, this is the main background for this study. This study aims to examine the extent to which leverage and profitability influence profit management actions, taking into account the role of company size as a moderator. Theoretically, this test is expected to be able to make a contribution in enriching the study of financial accounting, especially in enriching the understanding of various factors in profit management practice. Practically, this study can be used by investors, managers, auditors, and regulators to detect the potential for financial statement engineering and support decision-making to be of higher quality.

METHOD

Data Types and Sources

This study applies a quantitative method with secondary data in the form of financial statements of companies in the food and beverage subsector listed on the Indonesia Stock Exchange for the period 2020–2024. The selected sample applied purposive sampling with certain criteria.

Data Analysis Techniques

Data processing is carried out by utilizing SPSS software through a series of relevant and standardized statistical procedures. The analysis stages taken include testing classical assumptions. In addition, it also applies the T test, as well as the F test to see the relationship between variables, multiple linear regression and moderation approaches are used. The basis of this study is compiled in the form of regression equations as follows:

Model 1 without moderation:

$$Y = \alpha + \beta1X1 + \beta2X2 + e$$

Model 2 with moderation:

$$Y = \alpha + \beta1X1 + \beta2X2 + \beta3|X1-Z| + \beta4|X2-Z| + e$$

Operational Definitions and Variable Measurements

Leverage

Leverage describes the proportion of debt application in the company's asset financing structure. One of the most commonly used measuring tools is the Debt to Assets Ratio (DAR) (Nurdin et al., 2024). The calculation of this ratio is done using the following formula:

$$DAR = \frac{\text{Total Debt}}{\text{Total Assets}} \text{ X } 100\%$$

Profitability

The level of profitability reflects the company's potential to generate profits from the operating activities it runs. (Susilo et al., 2025). Return on Assets (ROA) examines the efficient management of managing assets for profit. The formula for calculating ROA is:

$$\text{LENGTH} = \frac{\text{Net Profit}}{\text{Total Assets}} \text{ X } 100\%$$

RESULTS AND DISCUSSION

Table 1. Descriptive Statistical Analysis Results

Descriptive Statistics					
	N	Min	Max	Mean	Std. Deviation
Leverage	137	4.25	88.82	40.3068	18.91944
Profitability	137	.80	56.17	10.0137	7.54483
Leverage*Company Size	137	.24	59.34	17.7350	11.95403
Profitability*Company Size	137	1.52	30.55	20.0379	6.50908
Profit Management	137	-1.26	1.58	-.2104	.55211
Valid N (listwise)	137				

Based on the table above, the descriptive statistical descriptions of the variables in this study are presented as follows:

a) *The leverage* found has a minimum = 4.25 and a maximum value = 88.82. The average score reached 40.31 with a standard deviation of 18.91.
b) The profitability variable shows the mean value. 0.80 and the max value. 56.17. The average value is 10.013 with a standard deviation = 7.32.
c) The *Leverage* variable with company size moderation found a minimum value range of 0.24 to a maximum of 59.34. The average value is 17.73, with a standard deviation of 11.95.
d) The Profitability variable with company size moderation found a minimum value range of 1.52 to a maximum of 30.55. The average score is 20.04 with a standard deviation of 6.51
e) The profit management variable recorded the min value. -1.26 and max. 1.58. The average value = -0.21, with a standard deviation of 0.55.

Classical Assumption Test Results

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test	
	Unstandardized Residual
N	137
Normal Parameters[a,b]	.0000000
	.52523218
Most Extreme Differences	.070
	.070
	-.062
Test Statistic	.070
Asymp. Sig. (2-tailed)[c]	.199

Referring to the results of statistical data management as listed in the table above, the Asymp value is obtained. Sig. (2-tailed) = 0.199. Considering that the significance value exceeds the applied threshold limit of 0.05, so the conclusion of the study data assumes normal.

Table 3. Multicollinearity Test

Coefficientsa

Model		Tolerance	LIVE
1	(Constant)		
	Leverage	.378	2.645
	Profitability	.454	2.203
	MX1	.404	2.476
	MX2	.423	2.367

a. Dependent Variable: Y

Referring to the data presented in the table above, all research variables showed a VIF number of < 10 and a tolerance value of > 0.10, so the test results found no indication of the presence of symptoms of multicollinearity among these variables. Therefore, all independent variables of the model are declared feasible to function as predictors in the next analysis.

Table 4. Heterokedasticity Test Results

Correlations

			X1	X2	MX1	MX2	Unstandardized Residual
Spearman's rho	X1	Correlation Coefficient	1.000	-.401**	.736**	.426**	.010
		Sig. (2-tailed)	.	.000	.000	.000	**.904**
		N	137	137	137	137	137
	X2	Correlation Coefficient	-.401**	1.000	-.331**	-.926**	.068
		Sig. (2-tailed)	.000	.	.000	.000	**.429**
		N	137	137	137	137	137
	MX1	Correlation Coefficient	.736**	-.331**	1.000	.311**	.081
		Sig. (2-tailed)	.000	.000	.	.000	**.349**
		N	137	137	137	137	137
	MX2	Correlation Coefficient	.426**	-.926**	.311**	1.000	-.077
		Sig. (2-tailed)	.000	.000	.000	.	**.371**
		N	137	137	137	137	137
	Unstandardized Residual	Correlation Coefficient	.010	.068	.081	-.077	1.000
		Sig. (2-tailed)	.904	.429	.349	.371	.
		N	137	137	137	137	137

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

To interpret the results of the heterokedasticity test applying the Spearman's rho test, based on the output the value of sig. (2-tailed) for the leverage variable (X1) is 0.904, while for the Profitability variable (X2) = 0.429, for the leverage moderation variable and company size (MX1) = 0.349 and for the moderation variable profitability and company size (MX2) = 0.371. Because the significance value of all these variables exceeds the threshold of 0.05, it is inferred that it is free from the symptoms of heterokrdasticity.

Table 5. Autocorrelation Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Durbin-Watson
1	.125a	.016	-.014	1.803

The test was carried out using the Cochrane-Orcutt method, which resulted in a DW = 1.803. The value is between the upper limit (DU) of 1.7813 and the value of 4-DU = 2.2187, so the model is declared free of autocorrelation issues.

Hypothesis Testing Results

Table 6. Regression Result 1 & Persial T Test

Coefficientsa

	Model	B	t	Sig
1	(Constant)	.064	.465	.643
	X1	-.001	-.554	.580
	X2	-.022	-3.516	.001

a. Dependent Variable: Y

Based on the results of the regression analysis, the following equations are obtained:

Y = 0.64 – 0.001 LV – 0.022 PB + e

The value of the constant = 0.64 shows the amount of profit management when leverage and profitability are zero, so that before being affected by an independent variable, this constant shows the base value of the Y variable.

The leverage regression coefficient (X1) = -0.001 indicates an inverse relationship, where every increase of one unit of X1 will decrease Y = 0.001 by another constant variable. However, a significance value = 0.580 that exceeds 0.05 shows that X1 has no effect on Y.

The profitability regression coefficient (X2) = -0.022 shows that every increase of one unit X2 will decrease Y = 0.022. This is supported by the value t = 3.516 with a significance of 0.000 < 0.05 so that X2 is proven to have an influence on Y.

Table 7. Regression Results 2 & Moderation Persial T Test

Coefficientsa

		B	t	Say.
1	(Constant)	-.155	-.537	.592
	X1	.000	.107	.915
	X2	-.017	-1.846	.067
	MX1	-.005	-.811	.419
	MX2	.009	.832	.407

a. Dependent Variable: Y

Based on the results of MRA regression analysis, the following equations were obtained:

Y= -0,155 + 0,000 LV – 0,017 PB – 0,005 |LV-UP| + 0,009 |PB-UP| + e

The results of the t-test showed that the size of the company was unable to moderate the relationship between leverage and profitability to profit management. This is evidenced by the significance values = 0.419 and 0.407, respectively, which > 0.05.

Table 8. Test F Results (Simultaneous)

ANOVA

Model		Sum of Squares	df	Mean Square	F	Say.
1	Regression	3.938	4	.985	3.464	.010b
	Residual	37.518	132	.284		
	Total	41.456	136			

a. Dependent Variable: Y

b. Predictors: (Constant), MX2, MX1, X2, X1

The table of results presented above, the F value is 3.464 with a significance value of 0.010 where the value is far below the threshold of 0.05, so it is concluded that all research variables have a significant impact on the Y variable.

Hypothesis Result 1

Based on Table 6, the variable X1 gets a value of t = -0.554 with a significance level of 0.580 where the value is greater than 0.05 thus indicating that leverage does not have a significant impact on profit management practices (H1 rejected). The insignificance of this effect indicates that the high or low debt ratio does not provide an incentive for management to carry out profit management actions, or otherwise even though the company finds leverage The management is suspected of not being able to freely carry out profit management due to intensive monitoring from creditors through debt agreements. The results of this study are also consistent with the findings (Wardana et al., 2024), (Wijayanti, 2024) which stipulates that leverage unable to influence profit management. The findings corroborate the absence of a meaningful link between leverage levels and profit management actions in companies.

Hypothesis Result 2

Based on Table 6, the variable X2 gets a t-value of -3.516 with a significance level of 0.001, which is lower than 0.05, so it is stated that profitability has a significant influence on profit management (H2 accepted). This proves that partially, profitability plays a crucial role in influencing profit management practices. The direction of the negative value coefficient reflects the inverse relationship between the two variables, namely an increase in the company's profitability level will be followed by a decrease in management's tendency to work on profit management. In theory, when a company finds high profitability, it reduces management's push to distort profits because their performance and compensation targets have been met. On the other hand, when profitability declines, profit management practices are vulnerable to occur due to pressure to hide poor performance in order to avoid negative reactions from the capital market and stakeholders. These results are in line with the findings by (Wulandari, 2021),

(Fatimah & Puspitaningrum, 2026), said that profitability found a significant negative influence on profit management.

Hypothesis Outcome 3

Based on Table 6, on the interaction variable leverage and the size of the company, obtained a value of t = 0.811 with a significance level = 0.419. The significance value is greater than 0.05 so that the conclusion of the interaction variable does not have an effect on profit management (H3 rejected). Thus, the scale of the business entity does not determine the extent to which leverage able to encourage or limit profit management behavior. This means that the height and size of the company does not affect how leverage encourage or hold back profit management practices. The results of this study are in line with the (Subing & Sari, 2023) who say the size of the company does not have the ability to influence relationships leverage with profit management.

Hypothesis Result 4

Based on Table 6, it was found that the interaction variable between X2 and the moderation variable received a significance value of 0.832 where the number was >0.05. Therefore, the hypothesis that the size of the firm is able to be a moderator of the relationship between the X2 variable and the Y variable is rejected (H4 rejected). Companies with high or low profitability are often associated with an urge to work on profit engineering either to minimize taxes or to maintain consistency of performance in the eyes of investors or stakeholders. However, the results of this study show that the size of companies, both large and small, is not a triggering factor or an obstacle for management in utilizing this level of profitability to work on profit management. This research is in line with research by (Kurniadi & Anam, 2023) which shows that the size of the company does not have the ability to affect the impact of profitability on profit management practices.

CONCLUSION

This study aims to examine the impact between leverage and profitability variables on profit management practices and examine the role of company size as a moderation variable. Based on this objective, the results are obtained that leverage does not result in profit management while profitability has a significant negative effect on profit management, which indicates that increased profitability tends to be ringed by reduced profit management actions. However, the results of the next study, namely the size of the company, were proven to be unable to weaken or strengthen the relationship between leverage and profit management, and were unable to moderate the relationship between profitability and profit management.

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