

# CEO Narcissism as a Moderator in the Relationship Between Financial Indicators and Earnings Management

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## ABSTRACT

This study examines the influence of leverage, firm size, and profitability on earnings management, with CEO narcissism as a moderating variable. Utilizing a sample of 41 manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2018 to 2023, this research collected panel data totaling 246 firm-year observations. A quantitative approach was employed, using multiple linear regression to test the main effects and Moderated Regression Analysis (MRA) to assess interaction effects. The findings reveal that leverage ( $B = 0.423$ ,  $p = 0.000$ ), firm size ( $B = 0.142$ ,  $p = 0.007$ ), and profitability ( $B = 0.135$ ,  $p = 0.028$ ) positively and significantly affect earnings management. Furthermore, CEO narcissism significantly strengthens the relationship between leverage and earnings management ( $B = 0.185$ ,  $p = 0.001$ ), and between profitability and earnings management ( $B = 0.191$ ,  $p = 0.007$ ), but does not moderate the effect of firm size ( $B = 0.021$ ,  $p = 0.695$ ). These findings contribute to the understanding of how psychological traits of CEOs interact with financial factors in shaping corporate financial reporting behavior, with implications for investor assessment, executive evaluation, and corporate governance practices.

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## INTRODUCTION

In recent years, the issue of earnings management has drawn significant attention from both academics and financial regulators. Numerous companies listed on stock exchanges are motivated to present favorable financial performance by reporting high earnings, which is often perceived as a measure of success by stakeholders. While profitability is a key indicator for evaluating a company's financial health, many firms engage in earnings management to manipulate financial statements for various motives, including investor attraction, tax reduction, and image preservation (Indriani & Pujiono, 2021).

Despite being a widespread practice, earnings management poses a threat to the reliability and transparency of financial reporting. It may mislead stakeholders, distort financial analysis, and ultimately undermine market integrity. This issue becomes more critical in industries with high operational pressures, such as the manufacturing sector, which significantly contributes to Indonesia's economic growth, accounting for approximately 19.25% of GDP in early 2023. Companies in this sector often face intense pressure to maintain financial stability, which may lead to aggressive accounting practices.

The present study aims to investigate the impact of leverage, firm size, and profitability on earnings management practices in manufacturing firms listed on the Indonesia Stock Exchange (IDX). Moreover, this research introduces a psychological dimension by examining CEO narcissism as a moderating variable, acknowledging the significant role of executive personalities in strategic financial decisions. Narcissistic CEOs, characterized by grandiosity, self-admiration, and a desire for recognition (Raskin & Hall, 1979), tend to make high-risk decisions to protect or enhance their personal image, potentially influencing the extent of earnings management.

Previous research has yielded mixed results regarding the effect of leverage, firm size, and profitability on earnings management. While some studies suggest that higher leverage increases the likelihood of accounting manipulation (Capalbo et al., 2018), others argue the opposite (Shinthia & Arisman, 2023). Similar inconsistencies are also found in the relationship between firm size and earnings management. On the other hand, profitability is more consistently associated with the tendency to engage in earnings management, as companies strive to sustain their performance image (Healy, 1985; Dechow et al., 1995).

To address these gaps, this study applies a quantitative explanatory approach using secondary data from annual reports of 41 manufacturing firms over the 2018–2023 period. The Moderated Regression Analysis (MRA) is employed to test the moderating role of CEO narcissism in the relationship between financial indicators and earnings management. The novelty of this research lies in the integration of psychological characteristics into the analysis of financial behavior, offering an interdisciplinary perspective that combines corporate governance, behavioral finance, and financial reporting.

By exploring the interplay between financial variables and executive personality traits, this study contributes to a deeper understanding of how internal and external factors jointly influence the practice of earnings management. It also provides practical insights for regulators, investors, and corporate boards in enhancing transparency and ethical standards in financial reporting.

## **LITERATURE REVIEW**

In the context of earnings management, numerous studies have explored its antecedents and implications, particularly in relation to financial and psychological variables. This section synthesizes key theoretical and empirical insights relevant to leverage, firm size, profitability, and CEO narcissism, as they relate to the likelihood of earnings manipulation. The primary theoretical lenses employed in this study are Agency Theory (Jensen & Meckling, 1976) and Positive Accounting Theory (Watts & Zimmerman, 1990). Agency Theory explains the principal-agent relationship in which managers (agents) may act in their own interests rather than those of shareholders (principals), potentially engaging in earnings management to satisfy personal goals such as bonuses or image preservation. Meanwhile, Positive Accounting Theory provides insight into how accounting choices reflect economic incentives, political costs, and contractual obligations, including bonus plans and debt covenants.

Existing literature highlights a variety of factors influencing earnings management. Leverage is often associated with pressure to meet debt obligations, which can lead to earnings manipulation (Capalbo et al., 2018). High-leverage firms may attempt to appear financially healthier to avoid violating debt covenants or to maintain good relations with creditors. However, some studies find no significant effect, suggesting that external monitoring mechanisms may mitigate this behavior (Ghofir & Yusuf, 2020).

Firm size also presents mixed findings. Larger firms may engage in earnings management to meet analysts' expectations and maintain their reputation, but they also face more scrutiny from regulators and stakeholders (Yuliana & Trisnawati, 2015). Conversely, smaller firms may manipulate earnings to attract investment or portray growth potential. These inconsistencies suggest that size alone may not be a determinant but rather interacts with other factors, including leadership style.

Profitability, generally measured by Return on Assets (ROA), consistently shows a positive relationship with earnings management. More profitable companies may attempt to maintain a consistent upward trend in reported earnings to meet market expectations or signal sustainable growth (Healy, 1985; Dechow et al., 1995). This motivation is particularly pronounced during periods of economic uncertainty or heightened investor sensitivity.

One of the most innovative angles in recent literature is the inclusion of CEO narcissism as a moderating variable. Narcissistic CEOs, characterized by grandiosity, dominance, and a need for admiration (Raskin & Hall, 1979), are more likely to engage in manipulative behaviors, including earnings management, to reinforce their image (Chatterjee & Hambrick, 2007). Studies such as those by Capalbo et al. (2018) and Christian & Sulistiawan (2022) find that CEO narcissism can intensify the use of earnings manipulation, particularly when financial performance is under pressure.

This study selects CEO narcissism as a moderating variable based on its psychological and behavioral relevance in executive decision-making. Unlike traditional financial variables, CEO narcissism represents a personal trait that can amplify or attenuate the influence of financial stressors. It is assumed that narcissistic CEOs are more sensitive to external perceptions and are therefore more likely to react to financial indicators such as leverage or profitability by manipulating earnings to protect or enhance their self-image. This trait-based moderation approach allows the research to move beyond a purely structural analysis and explore how executive personality interacts with financial contexts to affect corporate behavior.

In synthesizing the literature, three themes emerge: (1) financial variables like leverage and profitability serve as both pressures and enablers for earnings management; (2) firm characteristics such as size shape the extent of this practice through their influence on visibility and regulation; and (3) executive traits, particularly narcissism, may act as internal catalysts that moderate or amplify these effects. This literature review contributes to the existing body of knowledge by bridging behavioral finance and accounting practices, emphasizing the complex interplay between organizational structure and executive psychology. The synthesis here not only summarizes previous research but critically evaluates the limitations, contradictions, and evolving perspectives that inform the current study's framework. It serves as a foundation for exploring how both external and internal forces coalesce to shape earnings management behavior within Indonesian manufacturing firms..

## **METHODS**

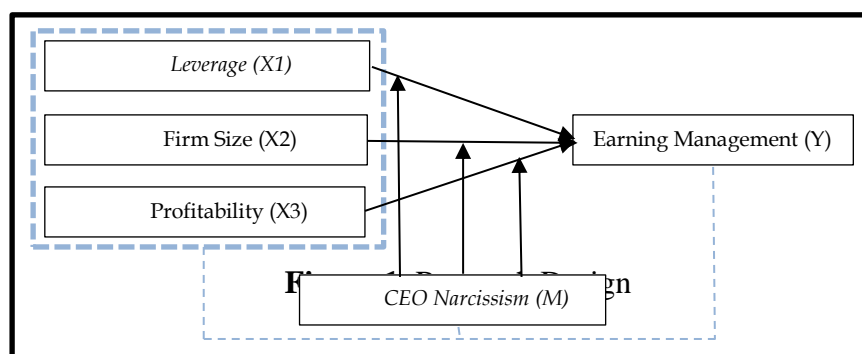
This study adopts a quantitative approach with an explanatory research design, aimed at examining the causal relationship between financial indicators (leverage, firm size, and profitability) and earnings management, with CEO narcissism introduced as a moderating variable. The research was conducted on manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2018–2023 period.

## Research Design and Procedure

The study was structured in several phases. The first phase involved identifying the population and determining the sample using purposive sampling, which allows for the selection of specific units that meet predefined criteria. The sample consisted of 41 manufacturing firms that met the following conditions: (1) the firm consistently published annual financial reports from 2018 to 2023, (2) did not report consecutive losses during the period, and (3) did not undergo CEO replacement within the observation window.

The second phase included operationalizing variables based on established definitions. Leverage was measured using the Debt to Equity Ratio (DER), profitability was measured using Return on Assets (ROA), and firm size was measured by the natural logarithm of total assets. Earnings management was calculated using the Modified Jones Model (Dechow et al., 1995), while CEO narcissism was assessed through a secondary-data-based proxy derived from the CEO's photograph size and presence in annual reports, following the approach of Chatterjee & Hambrick (2007).

However, this proxy approach for measuring CEO narcissism presents inherent limitations. Relying solely on visual cues such as photo size and placement may oversimplify the psychological construct of narcissism and may not fully capture deeper personality traits or behavioral patterns. To enhance construct validity, future studies could consider triangulating data sources, such as integrating content analysis of CEO speeches, annual letters to shareholders, or third-party psychometric evaluations. Furthermore, expert-based assessments using trained raters or validated narcissism inventories could offer more nuanced and reliable results. These complementary methods would improve the robustness of the moderating variable and provide richer insights into how executive personalities influence earnings management behavior.



## Hypotheses

- $H_1$  : Leverage has a significant effect on earnings management
- $H_2$  : Firm Size has a significant effect on earnings management
- $H_3$  : Profitability has a significant effect on earnings management
- $H_4$  : CEO Narcissism can moderate Leverage on earnings management.
- $H_5$  : CEO Narcissism can moderate Firm Size on earnings management.
- $H_6$  : CEO Narcissism can moderate Profitability on earnings management.

## Data Acquisition

The study relies entirely on secondary data, which were collected from annual reports and financial statements publicly available on the official website of the Indonesia Stock Exchange (IDX). Data collection covered a six-year period, resulting in a panel dataset of 246

firm-year observations. Financial ratios and CEO narcissism indicators were manually extracted and processed for each company-year.

### Data Analysis Techniques

To ensure the validity of the regression model, classical assumption tests were performed, including tests for normality, multicollinearity, heteroscedasticity, and autocorrelation. Multiple linear regression was used to test the direct influence of leverage, firm size, and profitability on earnings management. Furthermore, Moderated Regression Analysis (MRA) was employed to test the moderating effect of CEO narcissism. All statistical analyses were conducted using SPSS software.

## RESULTS AND DISCUSSIONS

This study conducted a Moderated Regression Analysis (MRA) to examine the role of CEO narcissism in moderating the influence of leverage, firm size, and profitability on earnings management. The interaction terms were constructed by multiplying each independent variable with the moderating variable (CEO narcissism), and then included in the regression model. The regression output is presented in the following table:

**Table 1.** Multiple Linear Regression Analysis

Coefficients <sup>a</sup>			
		Coefficients	
Model		B	Std. Error
1	(Constant)	-.049	.043
	Leverage	.695	.063
	Size Firm	.181	.054
	Profitability	.188	.062

a. Dependent Variable: Earning Management

From the analysis results, the following regression equation model can be formed:

$$Y = -0,049 + 0,695X_1 + 0,181X_2 + 0,188X_3 + e$$

**Table 2.** Moderated Regression Analysis

Coefficients <sup>a</sup>			
		Unstandardized	
Model		B	Std. Error
1	(Constant)	-.070	.044
	Leverage	.423	.073
	Size Firm	.142	.052
	Profitability	.135	.061
	CEO Narcissism	.165	.056
	Leverage*CEO Narcissism	.185	.057
	Size Firm*CEO Narcissism	.021	.054
	Profitability*CEO Narcissism	.191	.071

a. Dependent Variable: Earning Management

From the analysis results, the following regression equation model can be formed:

$$Y = -0,070 + 0,423X_1 + 0,142X_2 + 0,135X_3 + 0,165Z + 0,185X_1*Z + 0,021X_2*Z + 0,191X_3*Z + e$$

## Hypothesis Testing for Multiple Linear Regression Analysis

### 1. Coefficient of Determination Test ( $R^2$ )

**Table 3.** Coefficient of Determination Test ( $R^2$ )

Model Summary <sup>b</sup>			
Model	R	R Square	Adjusted R Square
1	,769 <sup>a</sup>	.592	.587

a. Predictors: (Constant), Profitability, Size Firm, Leverage

b. Dependent Variable: Earning Management

### 2. Simultaneous Test (F Test)

**Table 4.** Simultaneous Test (F Test)

ANOVA <sup>a</sup>			
Model		F	Sig.
1	Regression	116.887	,000 <sup>b</sup>

a. Dependent Variable: Earning Management

b. Predictors: (Constant), Profitability, Size Firm, Leverage

### 3. Partial Test (T-Test)

**Table 5.** Partial Test (T-Test)

Coefficients <sup>a</sup>			
	Model	t	Sig.
1	(Constant)	-1.132	.259
	Leverage	11.085	.000
	Size Firm	3.343	.001
	Profitability	3.020	.003

a. Dependent Variable: Earning Management

## Hypothesis Testing for Moderated Regression Analysis

### 1. Coefficient of Determination Test ( $R^2$ )

**Table 6.** Coefficient of Determination Test ( $R^2$ )

Model Summary <sup>b</sup>			
Model	R	R Square	Adjusted R Square
1	.811 <sup>a</sup>	.658	.647

## 2. Simultaneous Test (F Test)

**Table 7.** Simultaneous Test (F Test)

ANOVA <sup>a</sup>			
Model		F	Sig.
1	Regression	65.289	.000 <sup>b</sup>

## 3. Partial Test (T-Test)

**Table 8.** Partial Test (T-Test)

Coefficients <sup>a</sup>			
	Model	t	Sig.
1	(Constant)	-1.590	.113
	Leverage	5.762	.000
	Size Firm	2.729	.007
	Profitability	2.213	.028
	CEO Narcissism	2.929	.004
	Leverage*CEO Narcissism	3.251	.001
	Size Firm*CEO Narcissism	.393	.695
	Profitability*CEO Narcissism	2.700	.007

a. Dependent Variable: Earning Management

This section discusses the results of the moderated regression analysis in relation to the six research hypotheses, as well as relevant findings from previous literature.

### **H<sub>1</sub>: Leverage has a significant effect on earnings management**

The analysis shows that leverage has a positive and statistically significant impact on earnings management ( $B = 0.423$ ,  $p = 0.000$ ). This finding supports H<sub>1</sub> and is consistent with the agency theory, which posits that firms with higher debt levels are under greater pressure to meet obligations and may manipulate earnings to avoid covenant violations (Capalbo et al., 2018). This result also aligns with the findings of (Christian & Sulistiawan, 2022), suggesting that leverage serves as a financial stressor that encourages earnings management behavior.

### **H<sub>2</sub>: Company Size has a significant effect on earnings management**

The regression results indicate that firm size also has a significant positive influence on earnings management ( $B = 0.142$ ,  $p = 0.007$ ), thus supporting H<sub>2</sub>. Larger firms often experience greater public scrutiny, yet may also have more complex operations that create



opportunities for discretion in financial reporting. This result contrasts with previous studies that reported insignificant relationships (Wirianata, 2020), suggesting that contextual factors—such as regulatory oversight and industry characteristics—may influence the firm size-earnings management relationship in different markets.

### **H3: Profitability has a significant effect on earnings management**

The coefficient for profitability is positive and significant ( $B = 0.135$ ,  $p = 0.028$ ), confirming H3. Firms with strong profitability might engage in income smoothing to maintain a consistent performance trajectory, which is valued by investors and analysts (Healy, 1985; Dechow et al., 1995). This result implies that high profitability does not necessarily eliminate the incentive for earnings manipulation but may instead reinforce the desire to sustain favorable impressions.

### **H4: CEO Narcissism moderates the effect of leverage on earnings management**

The interaction term leverage  $\times$  CEO narcissism is statistically significant ( $B = 0.185$ ,  $p = 0.001$ ), indicating that CEO narcissism strengthens the positive effect of leverage on earnings management. This supports H4, highlighting how narcissistic CEOs, driven by self-admiration and a need for recognition, are more likely to engage in aggressive earnings manipulation under financial pressure (Chatterjee & Hambrick, 2007). This behavior may be motivated by a desire to preserve or enhance personal and corporate image in the face of high debt.

### **H5: CEO Narcissism moderates the effect of company size on earnings management**

Contrary to expectations, the interaction term firm size  $\times$  CEO narcissism is not significant ( $B = 0.021$ ,  $p = 0.695$ ), leading to the rejection of H5. This suggests that narcissistic CEOs do not significantly influence the relationship between firm size and earnings management. It may be that firm size alone does not generate sufficient personal threat or reward to activate narcissistic behavior, or that the effect is mitigated by other factors such as board control or regulatory compliance.

Regarding the interaction effect between firm size and CEO narcissism (H5), the result was statistically insignificant ( $B = 0.021$ ,  $p = 0.695$ ). This suggests that narcissistic traits may not be triggered or expressed in the context of firm size. One plausible explanation is that organizational scale measured via total assets does not directly influence the CEO's perceived personal image or recognition in the same way that financial performance (e.g., profitability or debt pressure) does. Narcissistic behavior tends to surface when self-esteem or social admiration is at stake. In contrast, firm size may be perceived more as a structural attribute rather than a personal achievement. Additionally, large firms often have stricter governance mechanisms, which may constrain the CEO's ability to exercise earnings discretion, regardless of personality traits.

These findings call for further investigation into the situational triggers of narcissistic behavior in financial decision-making and highlight the importance of contextual factors—such as visibility, media exposure, or public recognition—in shaping CEO behavior.

### **H6: CEO Narcissism moderates the effect of profitability on earnings management**

The interaction term profitability  $\times$  CEO narcissism is statistically significant ( $B = 0.191$ ,  $p = 0.007$ ), supporting H6. This finding indicates that narcissistic CEOs are more likely to manipulate earnings in profitable firms, possibly to enhance personal credit for the



company's success. The desire for admiration and positive external validation can motivate such leaders to maintain or inflate strong financial performance, even when the underlying profitability is already adequate.haja

## CONCLUSION

This study has empirically examined the influence of leverage, firm size, and profitability on earnings management, while also assessing the moderating role of CEO narcissism in these relationships. The findings reveal that all three independent variables—leverage, firm size, and profitability have significant positive effects on earnings management. Furthermore, CEO narcissism significantly moderates the relationships between leverage and earnings management, as well as profitability and earnings management, but not firm size.

These results contribute to the literature by integrating psychological traits into financial decision-making models, offering a behavioral perspective on corporate financial reporting. The study highlights the relevance of executive personality—particularly narcissism as a factor that can intensify or shape earnings manipulation tendencies in response to financial pressure.

### From a practical standpoint, these findings offer valuable implications:

1. For **regulators**, there is a need to strengthen corporate governance frameworks by incorporating behavioral risk assessments in leadership evaluations. Regulatory bodies could consider requiring disclosures or assessments of CEO behavioral tendencies as part of fit-and-proper tests.
2. For **shareholders and investors**, understanding the psychological profiles of top executives can enhance risk assessment beyond traditional financial indicators. This can be integrated into Environmental, Social, and Governance (ESG) frameworks as a component of executive accountability.
3. For **human resource departments (HRD)**, especially in publicly listed firms, psychological evaluations such as narcissism screening or behavioral interviews—can be used during CEO recruitment or promotion processes to mitigate potential financial manipulation risks driven by self-centered leadership styles.

Despite its contributions, this study is not without limitations. The measurement of CEO narcissism relied on a visual proxy (photo prominence in annual reports), which may not fully capture the complexity of narcissistic behavior. Expanding future research with psychometric tools, speech content analysis, or multi-source assessments is recommended. Furthermore, the study focused solely on Indonesian manufacturing firms; thus, generalizations to other sectors or countries should be made with caution.

Future researchers are encouraged to adopt mixed methods, explore other personality traits (e.g., overconfidence, Machiavellianism), and examine cultural or institutional contexts that influence earnings management behavior.

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