

Determinants of Earnings Quality with Profitability as a Moderating Variable

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ABSTRACT

Purpose: This study aims to empirically examine the influence of company size and capital structure on earnings quality, with profitability serving as a moderating variable, in manufacturing companies listed on the Indonesia Stock Exchange during 2019–2023.

Design/Methodology/Approach: The study employs a quantitative research design with a causal-associative approach to test the hypothesized relationships. Data were analyzed using statistical methods to assess the effects of the independent variables—company size and capital structure—on earnings quality, while evaluating the moderating role of profitability.

Findings: The empirical results indicate that company size does not significantly affect earnings quality, whereas capital structure has a significant impact. Additionally, profitability does not moderate the relationship between company size and earnings quality but significantly moderates the relationship between capital structure and earnings quality.

Research Implications: The findings highlight the importance of capital structure and profitability in managing earnings quality. Companies should carefully consider the composition of debt and equity and how profitability may influence this relationship. While company size does not directly affect earnings quality, firms should remain attentive to size-related factors that could indirectly influence earnings quality outcomes.

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INTRODUCTION

Earnings information is a fundamental component of the income statement and serves as a primary indicator of a firm's financial performance. Reported earnings reflect operational outcomes and provide stakeholders with the basis for estimating future cash flows and evaluating managerial performance (Dechow, Ge, & Schrand, 2010). Earnings quality refers to the extent to which reported earnings accurately represent a company's underlying economic condition and can be reliably predicted in the future (Dechow et al., 2010; Purnamasari & Fachrurrozie, 2020). High-quality earnings indicate minimal accounting manipulation and a truthful depiction of company performance, whereas earnings management practices can undermine earnings quality by presenting figures that deviate from the firm's economic reality. Earnings quality is critical for investors, creditors, and regulators because accurate earnings information facilitates efficient resource allocation. Financial statements allow stakeholders to compare performance across companies and time periods, as well as to assess the financial impact of management decisions (Dechow et al., 2010). Nevertheless, reported earnings are subject to limitations due to accounting assumptions and potential manipulation by management to achieve target objectives.

Empirical studies have examined various determinants of earnings quality. Firm size is frequently associated with earnings quality because larger companies tend to possess stronger internal and external governance mechanisms and greater resources to comply with high reporting standards (Hakim & Naelufar, 2020; Yuliana & Fauziah, 2020). However, empirical evidence regarding the relationship between firm size and earnings quality remains mixed. Capital structure, typically measured by the proportion of debt to equity, is also considered influential. Agency theory and debt pressure suggest that higher leverage may incentivize

earnings management to meet financing requirements or debt covenants (Hakim & Naelufar, 2020; Rohmansyah, Gunawan, & Pambudi, 2021). Similarly, profitability, which reflects the firm's ability to generate returns on assets or equity, is viewed as a key performance metric that may moderate the relationship between other firm characteristics and earnings quality (Purnamasari & Fachrurrozie, 2020).

Despite prior research exploring the effects of firm size, capital structure, and profitability on earnings quality, there remains a research gap regarding the moderating role of profitability. Some studies find significant effects of firm size and capital structure on earnings quality, while others report non-significant or mixed results (Yuliana & Fauziah, 2020; Ayem & Solop, 2023; Risdawaty & Subowo, 2023). In addition, research in Indonesia has yet to comprehensively consider the simultaneous interaction of these variables within a broader temporal and industry context. Real-world cases of earnings manipulation further underscore the importance of understanding earnings quality determinants. For instance, allegations of financial statement manipulation at PT Tiga Pilar Sejahtera Food Tbk (AISA) revealed through an external investigation demonstrated how unreliable accounting practices can erode investor and creditor confidence in reported earnings (detik.com). Such cases highlight the necessity of examining the determinants of earnings quality comprehensively.

This study contributes to the literature by simultaneously examining the effects of firm size and capital structure on earnings quality while explicitly incorporating profitability as a moderating variable. Unlike previous studies that often focus on direct relationships in isolation, this research investigates how profitability may strengthen or weaken the influence of firm characteristics on earnings quality. Moreover, this study uses recent data from manufacturing companies listed on the Indonesia Stock Exchange during 2019–2023, providing an updated empirical context that reflects current financial reporting practices and corporate governance mechanisms in emerging markets. By doing so, the study addresses existing gaps and offers practical insights for investors, regulators, and corporate managers regarding strategies to enhance earnings quality.

Based on this rationale, the present study aims to analyze the influence of firm size and capital structure on earnings quality, incorporating profitability as a moderating variable. By accounting for the moderating role of profitability, this research seeks to provide more robust empirical evidence on the factors affecting earnings quality in manufacturing companies listed on the Indonesia Stock Exchange during 2019–2023.

LITERATURE REVIEW

Agency Theory

Agency theory posits potential conflicts of interest between managers (agents) and shareholders (principals), where managers may prioritize personal goals over shareholder wealth maximization (Jensen & Meckling, 1976). Earnings management is one common manifestation of such conflicts. Firm size and capital structure directly relate to agency considerations. Larger firms generally have more formalized governance, internal controls, and monitoring mechanisms that reduce opportunistic managerial behavior, thereby enhancing earnings quality (Dechow, Ge, & Schrand, 2010). Meanwhile, high leverage can increase the pressure on managers to manipulate earnings to meet debt obligations, illustrating the trade-off between financial structure and agency costs.

Signaling Theory

Signaling theory suggests that managers use financial reporting to convey private information about firm performance to external stakeholders (Spence, 1973; Watts & Zimmerman, 1986). High-quality earnings serve as credible signals, enhancing investor confidence. In this context, firm size and profitability act as positive signals: larger and more

profitable firms are perceived as lower risk and more transparent, leading to stronger investor trust in earnings reports.

Trade-Off Theory

Trade-off theory explains how firms balance the benefits and costs of debt financing (Kraus & Litzenberger, 1973; Frank & Goyal, 2009). While debt can provide tax advantages and leverage returns, excessive borrowing increases financial risk and the likelihood of earnings manipulation. Profitability mitigates these risks by reducing dependence on external debt and improving internal funding capacity, which in turn may positively influence earnings quality even under high leverage.

Effect of Firm Size on Earnings Quality

Firm size reflects the scale of a company's operations and its resource capacity, often proxied by total assets or logarithm of assets. Larger firms are expected to have more established governance, broader market exposure, and more stringent reporting processes, which can potentially improve earnings quality (earnings quality refers to the degree to which reported earnings reflect economic reality and can predict future performance). However, empirical results remain mixed. Some studies find a positive association, arguing that larger firms have better monitoring mechanisms and transparency (Pariang Siagian et al., 2022), while others find no significant effect in certain contexts, indicating that firm size alone may not determine earnings quality (Handayani & Syaiful, 2024).

H1: Firm size has a significant effect on earnings quality

Effect of Capital Structure on Earnings Quality

Capital structure, measured by financial leverage, reflects the extent to which a firm depends on debt financing. A well-balanced capital structure is theorized to discipline managers through creditor monitoring, potentially enhancing earnings quality, but excessive leverage may increase risk and earnings manipulation incentives. Recent empirical evidence suggests that the capital structure can influence earnings quality, though findings diverge by industry and context. For example, Tanto (2023) finds that leverage positively affects earnings quality in Indonesian industrial firms, possibly due to stronger creditor oversight.

H2: Capital structure has a significant effect on earnings quality

Moderating Role of Profitability on Firm Size–Earnings Quality Relationship

Profitability measures a firm's ability to generate returns from its resources and signals financial health to stakeholders. Firms with higher profitability may experience less pressure to manipulate earnings, particularly if they are large and have stable operations. Previous research highlights that profitability can enhance the effectiveness of firm characteristics in shaping reporting outcomes. While specific moderation effects often require testing, evidence suggests profitability can strengthen the relationship between firm attributes and reporting quality due to reduced financial pressure on management.

H3: Profitability moderates the relationship between firm size and earnings quality

Moderating Role of Profitability on Capital Structure–Earnings Quality Relationship

Profitability may also influence how leverage affects earnings quality. Firms with stronger profitability generate internal cash flows, alleviating reliance on debt and reducing pressures that may lead to earnings distortion. This moderating mechanism implies that profitability could attenuate adverse effects of high leverage on earnings quality, as financially strong firms can better manage reporting incentives. Empirical studies on this moderating effect

are limited, making it a valuable contribution to investigate within the Indonesian manufacturing context.

H4: Profitability moderates the relationship between capital structure and earnings quality

METHODS

This study employs a quantitative research approach, which involves numerical analysis to test research hypotheses based on positivist principles (Creswell, 2014; Sugiyono, 2017). The research design is associative-causal, aiming to examine the effect of firm size and capital structure on earnings quality, with profitability as a moderating variable. This design allows the study to identify not only the direct relationships between independent and dependent variables but also the interactive effect of the moderator. The population consists of all manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the period 2019–2023. To select the sample, the study applies a purposive sampling technique, based on specific criteria such as; (1) Companies must be continuously listed on the IDX between 2019 and 2023; (2) Companies must publish complete financial statements for the period under study; (3) Firms with extraordinary events that may distort earnings quality (e.g., mergers or corporate restructuring) are excluded. The final sample includes manufacturing firms meeting these criteria, providing data for testing the proposed hypotheses. Data are collected from secondary sources, primarily the companies’ annual financial reports available on the IDX website. The study applies partial least squares structural equation modeling (PLS-SEM) to test the relationships between variables and the moderating effect of profitability. PLS-SEM is appropriate for complex models with moderating effects and allows for assessment of both measurement and structural models simultaneously (Hair, Hult, Ringle, & Sarstedt, 2022). Descriptive statistics, reliability, and validity tests are conducted to ensure data quality before hypothesis testing.

RESULT AND DISCUSSION

Classical Assumption Tests

Before conducting hypothesis testing, classical assumption tests were performed to ensure that the regression model produces valid, unbiased, and efficient estimates. The tests included normality, multicollinearity, heteroskedasticity, and autocorrelation. The results are presented and interpreted in the following sub-sections.

Normality Test

Normality of residuals was examined to confirm that the error terms follow a normal distribution, a prerequisite for parametric regression analysis. Both the Kolmogorov-Smirnov test and Shapiro-Wilk test were employed.

Table 1. Normality Test of Residuals

Test Method	Statistic	Sig. (p-value)	Conclusion
Kolmogorov-Smirnov	0.081	0.200*	Residuals are normally distributed
Shapiro-Wilk	0.972	0.315	Residuals are normally distributed

Source: Data Processed by IBM SPSS 25, 2025

Both tests indicate p-values greater than 0.05, confirming that the residuals do not significantly deviate from normality. This validates the assumption required for regression-based hypothesis testing. The normal distribution of residuals ensures that estimates of coefficients and p-values are reliable.

Multicollinearity Test

Multicollinearity was assessed using Variance Inflation Factor (VIF) and Tolerance to check for high correlations among independent variables.

Table 2. Multicollinearity Test

Variable	VIF	Tolerance	Conclusion
Firm Size	1.82	0.549	No multicollinearity
Capital Structure	1.91	0.523	No multicollinearity
Profitability (Moderator)	1.67	0.599	No multicollinearity

Source: Data Processed by IBM SPSS 25, 2025

All VIF values are below 10 and Tolerance values exceed 0.1, indicating that multicollinearity is not present. This suggests that the independent variables provide unique and reliable information for predicting earnings quality.

Heteroskedasticity Test

The Breusch-Pagan test was used to detect heteroskedasticity, which occurs when the variance of residuals is not constant across levels of independent variables.

Table 3. Heteroskedasticity Test

Independent Variable	Chi-Square	df	Sig. (p-value)	Conclusion
Firm Size	0.875	1	0.349	No heteroskedasticity
Capital Structure	1.024	1	0.311	No heteroskedasticity
Profitability (Moderator)	0.764	1	0.382	No heteroskedasticity

Source: Data Processed by IBM SPSS 25, 2025

All p-values exceed 0.05, indicating that residual variance is constant across independent variables. This ensures that the model provides efficient and unbiased coefficient estimates.

Autocorrelation Test

Autocorrelation was examined using the Durbin-Watson (DW) statistic to check for independence of residuals, particularly important for time-series or panel data.

Table 4. Autocorrelation Test

Test Method	DW Statistic	Acceptable Range	Conclusion
Durbin-Watson	2.03	1.5–2.5	No autocorrelation detected

Source: Data Processed by IBM SPSS 25, 2025

Hypothesis Testing

The hypotheses were tested using t-tests in SPSS to determine the significance of the effects of Firm Size (FS), Capital Structure (CS), and their interactions with Profitability (ROA) on Earnings Quality (EQ).

Table 5. t-test

Model	t-test	Sig.	Info.
Firm Size	-0.775	0.439	H ₁ Rejected
Capital Structure	3.352	0.001	H ₂ Accepted
Firm Size * Profitability	0.269	0.788	H ₃ Rejected
Capital Structure * Profitability	-2.234	0.026	H ₄ Accepted

Source: Data Processed by IBM SPSS 25, 2025

The results of the hypothesis testing reveal several important insights regarding the determinants of earnings quality in Indonesian manufacturing firms. First, the direct effect of firm size on earnings quality was not statistically significant ($t = -0.775$, $p = 0.439$), indicating that larger firms do not necessarily produce higher quality earnings. This suggests that while large firms may have more resources and formal governance structures, firm size alone is insufficient to enhance earnings quality, possibly due to other influencing factors such as managerial practices or external audit quality. In contrast, capital structure showed a significant effect on earnings quality ($t = 3.352$, $p = 0.001$), with higher leverage associated with lower earnings quality. Firms with high levels of debt face increased pressure to meet interest and principal obligations, which may incentivize earnings management practices. Regarding the moderating role of profitability, the interaction between firm size and profitability (FS \times ROA)

was not significant ($t = 0.269$, $p = 0.788$), suggesting that profitability does not enhance the effect of firm size on earnings quality. Even profitable firms do not necessarily translate their size advantage into better-quality earnings, highlighting that other mechanisms beyond size and profitability may be needed to improve financial reporting quality. However, the interaction between capital structure and profitability ($CS \times ROA$) was significant ($t = -2.234$, $p = 0.026$), indicating that profitability mitigates the negative effect of leverage on earnings quality. Profitable firms are better able to manage the risks associated with debt, reducing the need for earnings manipulation and sustaining more reliable financial reporting.

DISCUSSION

The results of this study offer important theoretical and empirical insights into the determinants of earnings quality and the moderating role of profitability in Indonesian manufacturing firms. Consistent with Agency Theory, Capital Structure (leverage) exerts a significant negative effect on earnings quality. High levels of debt increase agency costs and managerial pressure to meet debt covenants, which can incentivize earnings manipulation as managers seek to present more favorable financial outcomes to external stakeholders. This finding aligns with Purnamasari & Fachrurrozie (2020) who report negative effects of leverage on earnings quality, reinforcing the expectation that debt-driven incentives can compromise financial reporting reliability.

In contrast, Firm Size alone did not significantly influence earnings quality. Agency theory and Signaling Theory would suggest that larger firms, due to stronger governance mechanisms and more rigorous reporting practices, should produce higher quality earnings. However, the insignificant effect found in this study suggests that size alone may not be sufficient to alter managerial behaviour in financial reporting—a result that is consistent with research by some recent studies (e.g., Tanto, 2025), which also report non-significant effects of firm size on earnings quality in certain industrial contexts.

The moderating role of Profitability provides a nuanced understanding of how firm characteristics interact in shaping earnings quality. Profitability did not strengthen the relationship between firm size and earnings quality, indicating that even financially successful firms may not necessarily translate their earnings strength into enhanced reporting quality unless other governance mechanisms are present. This is consistent with findings in literature that the direct influence of size and profitability on earnings quality can vary across contexts and is often contingent on additional firm-specific factors (e.g., managerial incentives, external audit quality).

Importantly, the interaction between Capital Structure and Profitability was significant and positive in mitigating the negative effect of leverage on earnings quality. Under Trade-Off Theory, firms with stronger profitability rely less on external debt, reducing the financial pressure that often leads to earnings management. This finding echoes research indicating that profitable firms exhibit more transparent financial reporting and lower incentives for earnings manipulation despite high leverage levels. Studies by Ghoffar & Yuyetta (2023) and Bimo (2024) support the view that profitability can compensate for the adverse effects of leverage on earnings quality by providing stable internal resources that reduce dependence on debt.

Several empirical studies align with aspects of these results. Research by Firdaus & Trisnarningsih (2023) shows that firm size and profitability can significantly influence earnings quality, reinforcing that profitability remains a key determinant in financial reporting practices. Further, studies such as Rachmawati (2025) demonstrate how leverage and profitability jointly affect earnings quality in industrial firms, highlighting the interactive dynamics among financial factors. Additionally, broader investigations into earnings quality determinants suggest that multiple financial characteristics—such as leverage, liquidity, and firm size—affect reporting quality, often with context-specific variations.

Overall, the results largely corroborate theoretical expectations from agency, signaling, and trade-off frameworks. Capital structure emerges as a significant determinant, profitability functions as an important moderator that can buffer negative leverage effects, and firm size alone may not sufficiently drive earnings quality without supportive internal and external governance. These empirical patterns contribute to a more nuanced understanding of how financial metrics interact to shape financial reporting quality, particularly in emerging market contexts such as Indonesia.

CONCLUSION

This study investigates the effects of firm size and capital structure on earnings quality, with profitability as a moderating variable, in Indonesian manufacturing firms. The findings indicate that capital structure significantly affects earnings quality, with higher leverage reducing quality, while firm size alone does not have a significant impact. Furthermore, profitability moderates the relationship between capital structure and earnings quality, mitigating the negative effects of high leverage, but does not strengthen the impact of firm size. These results highlight the critical role of financial management and profitability in maintaining high-quality financial reporting. Practically, firms should focus on managing debt levels and enhancing profitability to improve earnings reliability and investor confidence.

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