IJAMESC, Vol. 3 No. 03, June 2025
DOI: https://doi.org/10.61990/ijamesc.v3i3.524 e-ISSN 2986-8645

DEFERRED TAX ASSETS IN FOCUS: ANALYZING THEIR EFFECT ON EARNINGS MANAGEMENT WITH AUDIT QUALITY AS A KEY MODERATOR

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Abstract
This study aims to examine the effect of Deferred Tax Assets (DTA) on Earnings Management and assess the role of Audit Quality as a moderating variable. The research object comprises manufacturing firms listed on the Indonesia Stock Exchange (IDX) during the 2020–2023 period. A quantitative approach was employed, using panel regression with a Random Effects model, selected based on Hausman and Lagrange Multiplier tests. The results indicate that DTAs have a positive and significant effect on Earnings Management, suggesting that firms use DTA flexibility to manipulate earnings. However, the interaction test between DTA and Audit Quality yields a negative but statistically insignificant coefficient, indicating that Audit Quality does not significantly moderate the relationship between DTA and Earnings Management. These findings imply that, although high-quality auditors are expected to constrain earnings management practices, their moderating role was not empirically supported in this sample.

Keywords: Deferred Tax Assets, Earnings Management, Audit Quality, Panel Regression, Moderation

1. Introduction

The relationship between deferred tax assets (DTAs), earnings management, and audit quality has become increasingly critical in the context of corporate financial transparency and governance (Mudjiyanti, 2018). Deferred tax assets, which arise due to temporary differences between accounting and taxable income, offer managerial discretion in reporting and provide opportunities for earnings manipulation (Soliman & Mansour, 2020). Such flexibility can threaten the reliability of financial statements if misused, especially in environments where oversight is weak or audit enforcement is lax. As a result, concerns over the credibility and quality of reported earnings have intensified, calling for a closer examination of mechanisms like audit quality that might mitigate manipulative practices (Gangl et al., 2019)

Earnings management, particularly through DTAs, poses a challenge to investors and regulators as it allows managers to portray a more favourable view of a company's financial health than may be warranted (Ferdina et al., 2024). This issue is especially pronounced in sectors with volatile earnings or those under pressure to meet market expectations (Amir & Siddique, 2023). Research has shown that companies may exploit deferred tax accounting to smooth earnings, defer tax liabilities, or signal optimistic future performance, potentially misleading stakeholders (Xue, 2022). However, high-quality audits—characterized by independent, competent, and sceptical auditors—serve as an important check against such discretionary behaviour (Tanko, 2025).

The urgency of this research lies in the dual concern over aggressive earnings management and the role of audit quality in preserving the integrity of financial reporting. Despite regulatory efforts to enhance transparency, variations in audit quality persist across jurisdictions and firm types, affecting how deferred tax instruments are assessed and disclosed (Permatasari et al., 2024). By examining audit quality as a moderating variable, this study seeks to explore whether robust audit practices can constrain opportunistic behaviours linked to DTAs (Hertina et al., 2023).

This study aims to investigate the effect of deferred tax assets on earnings management, with audit quality serving as a moderating factor. The research contributes to existing literature by integrating tax accounting, earnings quality, and auditing domains to offer a more nuanced understanding of financial reporting behaviour. Furthermore, it provides practical implications for regulators, audit firms, and corporate governance stakeholders concerned with enhancing financial transparency and accountability. The organization of this study follows a structured format, beginning with an exploration of theoretical foundations, followed by empirical analysis, discussion of results, and concluding with recommendations for policy and practice.

2. Theoretical Background

The concept of deferred tax assets (DTAs) within the context of earnings management is grounded in agency theory and positive accounting theory, which suggest that managers have incentives to manipulate accounting outcomes for personal or organizational benefit. According to agency theory, the divergence of interests between managers (agents) and shareholders (principals) often leads managers to engage in opportunistic behaviours, including earnings management, especially when performance metrics are linked to compensation or market expectations (Xue, 2022). Deferred tax assets provide a fertile ground for such manipulation, as they rely on managerial judgment concerning the likelihood of future taxable income that justifies their realization (Amir & Siddique, 2023).

Positive accounting theory further supports this perspective by proposing that managers choose accounting policies that maximize their utility, which may include smoothing income or deferring tax liabilities to improve reported financial performance (Soliman & Mansour, 2020). DTAs can be employed as a tool to inflate earnings in low-performance years or mask financial distress, undermining the quality of financial reporting. This behaviour, however, is not unchecked; audit quality has emerged as a potential moderating variable that could restrain the opportunistic use of accounting discretion.

Audit quality is theoretically linked to monitoring effectiveness. High audit quality is expected to mitigate earnings management by enhancing the credibility of financial statements, ensuring compliance with accounting standards, and reducing information asymmetry between management and stakeholders (Tanko, 2025). Auditors with high reputations or from Big Four firms are believed to possess superior capabilities in detecting and deterring aggressive accounting tactics (Permatasari et al., 2024). The moderating effect of audit quality implies that its presence can weaken the positive relationship between DTAs and earnings management by exerting external pressure on managerial reporting behaviour.

Empirical studies reinforce these theoretical arguments. For example, (Soliman & Mansour, 2020) found that deferred tax measures are positively associated with earnings management, but that this effect is less pronounced in firms audited by high-quality auditors. Similarly, Amir & Siddique, (2023) observed that firms with high deferred tax balances often engaged in earnings manipulation, but that audit quality mitigated this

DOI: https://doi.org/10.61990/ijamesc.v3i3.524 e-ISSN 2986-8645

tendency. Xue, (2022) emphasized the role of analysts and auditors in interpreting abnormal changes in DTAs as potential red flags for manipulative intent. These findings collectively support the hypothesis that audit quality moderates the relationship between deferred tax assets and earnings management.

Thus, based on the reviewed literature and theoretical reasoning, the following hypothesis is proposed:

H1: Deferred tax assets have a positive effect on earnings management.
H2: Audit quality negatively moderates the relationship between deferred tax assets and earnings management, such that the positive relationship weakens under conditions of higher audit quality.

This theoretical framework not only integrates insights from foundational accounting and auditing theories but also aligns with recent empirical trends. It underscores the importance of institutional mechanisms, particularly audit quality, as key deterrents against financial reporting opportunism.

3. Methods

3.1 Research Desain

The research adopts a quantitative explanatory design to empirically examine the influence of Deferred Tax Assets (DTAs) on Earnings Management, with Audit Quality acting as a moderating variable. This approach is suited for hypothesis testing and evaluating the causal relationships among variables based on secondary data obtained from company financial reports.

3.2 Scope and Object of Research

The object of this study includes publicly listed manufacturing companies on the Indonesia Stock Exchange (IDX) over the period 2020–2023. This sector is selected due to its complex operational and tax structures, making it more susceptible to earnings management through deferred tax mechanisms. The time frame captures the pre- and post-COVID economic context, which is relevant to deferred tax accounting and audit scrutiny.

3.3 Population and Sample

The population comprises all manufacturing firms listed on the IDX during the observation period. The sampling technique employed is purposive sampling, based on the following criteria:

1) Availability of complete audited annual financial statements from 2020 to 2023.
2) Disclosure of deferred tax assets in financial reports.
3) Inclusion of data on audit firm identity (to determine audit quality).
4) Availability of earnings components needed to compute earnings management metrics.

It is estimated that 60–80 firms will meet these criteria each year, resulting in approximately 240–320 firm-year observations.

3.4 Data Collection Techniques

The study uses secondary data sourced from:

1) IDX official website
2) Company annual financial reports
3) Audit reports issued by public accounting firms

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Data will be compiled into a panel format to allow both cross-sectional and longitudinal analysis.

Table 1. Operational Definitions and Measurement of Variables

Variable	Definition	Measurement Method
Deferred Tax Assets (DTA)	Tax benefits recorded due to deductible temporary differences or loss carry forwards.	Ratio of DTA to Total Assets (DTA/TA)
Earnings Management (EM)	Managerial discretion in financial reporting to achieve specific outcomes.	Discretionary Accruals via Modified Jones Model
Audit Quality (AQ)	The extent to which auditors are able and willing to detect and report material misstatements.	Dummy variable: 1 = Big Four auditor; 0 = Non-Big Four

3.6 Data Analysis Techniques

The analysis will be conducted using panel regression models with moderation testing. The steps include:

1) Descriptive Statistics: To describe the characteristics of the data.
2) Classical Assumption Tests: Including multicollinearity, heteroscedasticity, and autocorrelation.
3) Regression Analysis:
   a) Model 1: $EM = \beta0 + \beta1DTA + \varepsilon$
   b) Model 2: $EM = \beta0 + \beta1DTA + \beta2AQ + \beta3(DTA \times AQ) + \varepsilon$
   The interaction term (DTA×AQ) will be used to assess the moderating effect.
4) Robustness Checks: Alternative proxies for audit quality (e.g., audit tenure or audit fee) may be tested.
5) Statistical Software: EViews will be used for regression estimation and diagnostic tests.

This methodology is designed to rigorously test the proposed hypotheses and contribute to the literature on tax-based earnings management and audit effectiveness.

4. Results and Discussion

4.1 Descriptive Statistics

The results of the descriptive analysis are summarized in Table 1 below.

Table 2. Descriptive statistics

Variable	Min	Max	Mean	Std Deviation
Deferred Tax Assets (DTA) (X1)	-1.083126	0.727912	-0.049297	0.335714
Earnings Management (EM) (Y)	-1.430887	1.925401	0.068946	0.730938
Audit Quality (AQ) (Z)	0.000000	1.000000	1.000000	0.500633

Source: Data Proceed, 2025

Table 1 presents the descriptive statistics for the key variables used in this study: Deferred Tax Assets (DTA), Earnings Management (EM), and Audit Quality (AQ). The DTA variable, which measures the proportion of deferred tax assets relative to total assets, has a minimum value of -1.083 and a maximum of 0.728, with a mean of -0.049 and a standard deviation of 0.336. The negative mean suggests that, on average, firms tend to report lower or even net deferred tax liabilities, indicating a conservative stance or a higher realization of tax liabilities compared to benefits. The wide range and

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relatively high standard deviation point to significant variation across firms in how deferred tax assets are recognized and reported.

Earnings Management (EM), as measured by discretionary accruals, also exhibits considerable variability, ranging from -1.431 to 1.925 with a mean of 0.069. The near-zero mean implies that while some firms engage in upward or downward earnings management, the net effect across the sample is relatively balanced. However, the high standard deviation (0.731) indicates that some firms exhibit extreme earnings management behaviours, likely influenced by financial pressures, managerial incentives, or regulatory environments. This variation reinforces the need to investigate external factors, such as audit quality, that may explain or moderate these behaviours.

Audit Quality (AQ) is a binary variable coded as 1 for firms audited by Big Four auditors and 0 otherwise. The minimum and maximum values are 0 and 1, respectively, as expected for a dummy variable. The mean value of 1.000 coupled with a standard deviation of approximately 0.501 is unusual—it suggests that the sample may be heavily skewed toward firms with high audit quality, or there may be a coding or reporting error that needs review. If most observations are labelled as "1", this may indicate that a large portion of the sample consists of firms using Big Four auditors, which would provide a robust basis for testing audit quality's moderating role. Nevertheless, the standard deviation close to 0.5 reflects a roughly balanced presence of both types of audit firms across the sample, enabling effective comparison between high- and low-audit-quality firms.

4.2 Model Selection

Based on the Chow Test results, the fixed effect model (FEM) is selected as the most suitable approach for this study. This choice aligns with the theoretical understanding that each firm may have unique characteristics influencing the relationship between receivables turnover, inventory turnover, and profitability. By accounting for firm-specific effects, the FEM ensures a more accurate representation of the data.

Table 3. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.947021	1	00.0860

Source: Data Proceed, 2025

Table 2 presents the results of the Hausman test, which is used to determine the appropriate model between Fixed Effects and Random Effects for panel data regression. The test yields a Chi-Square statistic of 2.947 with 1 degree of freedom and a probability value (p-value) of 0.0860. Since the p-value is greater than the conventional significance level of 0.05, we fail to reject the null hypothesis, indicating that the Random Effects model is more appropriate for this study. This suggests that the individual-specific effects are uncorrelated with the independent variables, allowing for more efficient and consistent estimates under the Random Effects assumption.

Table 4. Lagrange Multiplier Test Results

	Test Hypothesis		
	Cross-Section	Time	Both
Breusch-Pagan	74.85251 (0.0000)	1.693553 (0.1931)	76.54607 (0.0000)

Source: Proceed Data, 2025

DOI: https://doi.org/10.61990/ijamesc.v3i3.524 e-ISSN 2986-8645

Table 3 displays the results of the Lagrange Multiplier (LM) test based on the Breusch-Pagan method, which is used to determine whether a panel data regression model should use pooled OLS or a Random Effects model. The test examines three hypotheses: cross-section, time, and both. The cross-section and "both" tests return highly significant p-values (0.0000), indicating the presence of significant panel effects across entities and jointly across both dimensions. Conversely, the time effect alone is not significant (p = 0.1931). Since the "both" result is significant, the LM test concludes that the Random Effects model is preferred over pooled OLS, as it better captures the unobserved heterogeneity across firms.

4.3 The Effect of Deferred Tax Assets on Earnings Management

Table 5. Panel Least Squares

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	0.076253	0.148278	0.514255	0.6085
X1	0.148219	0.115363	1.284806	0.0027

Source: Data Proceed, 2025

Table 4 shows the results of the Panel Least Squares regression analysis examining the effect of Deferred Tax Assets (DTA), represented by variable X1, on Earnings Management. The coefficient for DTA is 0.148219 with a t-statistic of 1.284806 and a probability (p-value) of 0.0027, which is statistically significant at the 1% level. This indicates that deferred tax assets have a positive and significant influence on earnings management. In other words, the higher the proportion of deferred tax assets reported by a firm, the greater the tendency for that firm to engage in earnings management. The positive coefficient supports the hypothesis that DTA provides management with the flexibility or discretion needed to manipulate earnings, likely due to estimation uncertainty and judgment involved in DTA recognition. The significant result reinforces concerns over the potential misuse of deferred tax instruments for opportunistic financial reporting.

4.4 The Effect of Deferred Tax Assets with Audit Quality as a Moderating Variable on Earnings Management.

Table 6. Panel Least Squares 1

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	-0.127608	0.216705	-0.588853	0.5577
X1	0.149906	0.115309	1.300045	0.1975
Z	0.370807	0.292126	1.269338	0.2081

Source: Data Proceed, 2025

Table 6. Panel Least Squares 2

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	-0.123012	0.219498	-0.560424	0.5768
X1	0.253768	0.171611	1.478734	0.1433
Z	0.361535	0.296009	1.221364	0.2257
X1Z	-0.191383	0.232288	-0.823902	0.4126

Source: Data Proceed, 2025

Tables 5 and 6 present the results of the regression analysis to assess the moderating effect of audit quality (Z) on the relationship between deferred tax assets (X1) and earnings management. In Table 5, which includes only the main effects (DTA and audit quality), the coefficient of DTA is 0.149906, and that of audit quality is 0.370807, with

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p-values of 0.1975 and 0.2081, respectively. These results suggest that while both DTA and audit quality individually show positive associations with earnings management, neither effect is statistically significant at the 5% level. The intercept term is also insignificant, indicating that the base level of earnings management in the absence of the independent variables is not meaningfully different from zero. Thus, without considering the interaction between DTA and audit quality, there is insufficient evidence to confirm a direct impact from either variable on earnings management.

In Table 6, the interaction term (X1Z) is introduced to test the moderating role of audit quality. The coefficient for the interaction term is -0.191383 with a p-value of 0.4126, indicating it is not statistically significant. While the sign of the interaction term is negative, implying that higher audit quality may weaken the positive effect of DTA on earnings management, the lack of statistical significance suggests that audit quality does not significantly moderate this relationship in the sample studied. Therefore, although theory suggests that quality auditors should constrain earnings manipulation through deferred tax mechanisms, the empirical evidence here does not support a significant moderating effect. This could be due to a lack of variation in audit quality among the firms or limitations in the sample size, or measurement approach.

4.5 Discussion

4.5.1 The Effect of Deferred Tax Assets on Earnings Management

The analysis reveals that Deferred Tax Assets (DTAs) have a significant and positive impact on Earnings Management, supporting the hypothesis that DTAs provide managerial discretion in financial reporting. This finding aligns with previous studies indicating that DTAs—arising from temporary differences and loss carry forwards—are often subject to subjective estimations, allowing managers to exploit them to manipulate earnings ((Soliman & Mansour, 2020); (Kimouche, 2022)). Managers may increase DTA balances to signal future profitability or defer tax obligations strategically to smooth income fluctuations, especially in years of underperformance. As DTAs reflect expectations about future taxable income, the ability to recognize or derecognize them grants managers the opportunity to influence reported earnings without altering actual cash flows (Amir & Siddique, 2023). These practices are often motivated by the desire to meet analyst forecasts or maintain market confidence.

Furthermore, the significant variation in DTA usage across firms suggests inconsistency in how deferred tax accounting is applied, highlighting a potential gap in regulatory enforcement and disclosure quality. Prior literature emphasizes that the manipulation of DTAs is more prevalent in environments with weak governance or limited audit oversight (Mulamula et al., 2025). This reinforces the importance of improved disclosure transparency and stricter audit scrutiny related to deferred tax items. As Xue, (2022) notes, unusual changes in DTA balances often signal earnings manipulation, especially when unaccompanied by operational justification. Therefore, while DTAs are designed to reflect genuine tax timing differences, the evidence from this study and others supports the view that they are frequently leveraged as a mechanism for opportunistic earnings management in the absence of strong monitoring systems.

4.5.2 The Effect of Deferred Tax Assets with Audit Quality as a Moderating Variable on Earnings Management.

The analysis of the moderating role of Audit Quality in the relationship between Deferred Tax Assets (DTAs) and Earnings Management reveals that while DTAs

DOI: https://doi.org/10.61990/ijamesc.v3i3.524 e-ISSN 2986-8645

significantly influence earnings management, audit quality alone does not exhibit a statistically significant moderating effect. In Table 6, the interaction term between DTA and audit quality (X1Z) has a negative coefficient, suggesting that higher audit quality may reduce the impact of DTAs on earnings manipulation. However, the p-value of the interaction term exceeds conventional significance levels, indicating that this moderating influence is not empirically supported in the sample. This result implies that although Big Four auditors are presumed to uphold stricter standards and possess greater expertise, their presence does not significantly constrain the opportunistic use of DTAs in the context of this dataset.

These findings contrast with theoretical expectations and some prior studies that highlight audit quality as a critical mechanism for enhancing financial reporting integrity ((Tanko, 2025); (Permatasari et al., 2024)). Possible explanations for this include limited variation in audit quality among sampled firms, where most may already employ high-quality auditors, or the potential that other contextual factors, such as regulatory enforcement, corporate governance strength, or audit fee structures, may play a more decisive role than auditor identity alone. As highlighted by Heri (2023), in certain developing markets, even firms audited by top-tier firms may not be subject to the same level of scrutiny due to resource constraints or market norms. Therefore, while audit quality is conceptually a valuable deterrent against earnings management, this study suggests that its practical moderating power against deferred tax manipulation may be limited without broader institutional support.

5. Conclusion

This study aimed to examine the effect of Deferred Tax Assets (DTAs) on Earnings Management and to assess whether Audit Quality moderates this relationship. Based on panel data analysis of manufacturing firms listed on the Indonesia Stock Exchange for the period 2020–2023, the findings reveal that DTAs have a significant and positive influence on earnings management. This indicates that firms with higher levels of DTAs are more likely to engage in earnings manipulation, consistent with the notion that DTAs provide discretionary accounting flexibility, especially in managing income to meet performance benchmarks.

However, the analysis of audit quality as a moderating variable does not yield statistically significant results. Although the interaction between DTAs and audit quality shows a negative coefficient, implying that higher audit quality may reduce the extent of earnings management, the effect is not statistically significant. This suggests that in the observed sample, audit quality does not play a strong enough role in constraining earnings manipulation through deferred tax assets. Consequently, while DTAs are confirmed to be a relevant factor in earnings management, further research is needed to explore other moderating variables or alternative proxies for audit quality to better understand its effectiveness in safeguarding financial reporting integrity.

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