# Earnings Persistence in Regulated Industries: The Role of Book–Tax Differences and the Limited Effect of Firm Size

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**Abstract**

*This study examines earnings persistence in a highly regulated industry by focusing on the role of Book–Tax Differences (BTD) and the limited effect of firm size. Using panel data from Indonesian pharmaceutical firms over the 2014–2024 period, this research incorporates fiscal-accounting dynamics under the post-reform environment of the Harmonized Tax Law. Panel regression analysis with robustness checks is employed to test the proposed relationships. The results show that BTD has a positive and significant effect on earnings persistence, indicating that fiscal reconciliation primarily reflects structured timing differences rather than opportunistic reporting behavior. In contrast, firm size does not have a significant impact, suggesting that industry-specific constraints weaken the conventional relationship between firm scale and earnings stability. These findings highlight the dominant role of fiscal-institutional factors in shaping earnings sustainability, thereby challenging traditional earnings quality perspectives that emphasize firm-level characteristics, particularly in emerging market contexts*

**Keywords:** Earnings Persistence; Book Tax Differences; Firm Size; Pharmaceutical Companies

**JEL Classification:** G32; C23; M41; H25

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# Introduction

Global economic development is characterized by increasing industrial competition, regulatory complexity, and rapid changes in fiscal policy frameworks. In such an environment, corporate performance evaluation is no longer limited to short-term profitability but increasingly emphasizes earnings sustainability. Earnings persistence, defined as the extent to which current earnings are able to predict future earnings, has become a central indicator of earnings quality and long-term firm viability. Persistent earnings reflect stable operational performance and enhance the credibility of financial reporting, whereas highly volatile earnings reduce predictability and increase uncertainty in valuation assessments.

Within the Indonesian pharmaceutical sub-sector, earnings persistence demonstrates substantial heterogeneity. Empirical data for the 2014–2024 period reveal striking differences among firms. PT Kalbe Farma Tbk (KLBF) exhibits relatively stable persistence values ranging between –0.032 and 0.024, indicating consistent earnings sustainability. In contrast, PT Pyridam Farma Tbk (PYFA) recorded extreme fluctuations, rising to 0.167 in 2022 before declining sharply to –0.227 in 2023. Similarly, PT Phapros Tbk (PEHA) experienced a deterioration from 0.016 in 2022 to –0.256 in 2024. These variations suggest that pharmaceutical firms respond differently to economic pressures and regulatory adjustments.

The pharmaceutical industry presents a particularly compelling context for examining earnings persistence. Although product demand tends to be relatively stable due to healthcare necessity, profitability is influenced by rigid cost structures, high research and development (R&D) expenditures, dependence on imported raw materials, exchange rate volatility, and stringent regulatory oversight. Furthermore, the implementation of Indonesia's Harmonized Tax Law (UU HPP) introduced a 22% corporate income tax rate and an 11% value-added tax, significantly affecting deferred tax accounting and fiscal reconciliation processes. These fiscal reforms potentially intensified discrepancies between accounting income and taxable income, commonly referred to as Book–Tax Differences (BTD).

Book–Tax Differences arise from temporary and permanent differences between financial accounting standards and tax regulations. During the 2014–2024 period, BTD

values varied considerably across pharmaceutical firms. For example, PT Merck Tbk (MERK) reached –0.0087 in 2016 and 0.0113 in 2019, while PT Phapros Tbk (PEHA) recorded a sharp decline to –0.0368 in 2024. In contrast, KLBF maintained relatively stable BTD values within a narrow range of –0.0035 to 0.0015. These fluctuations reflect differences in deferred tax recognition and fiscal adjustments, which may influence earnings sustainability.

In addition to fiscal reconciliation dynamics, firm size may also play a structural role in earnings stability. Larger firms generally possess greater access to capital markets, diversified product portfolios, stronger governance mechanisms, and more robust internal control systems. However, empirical evidence from the pharmaceutical sub-sector shows that increases in firm size do not always correspond to improvements in earnings persistence, indicating a potential inconsistency between theoretical expectations and real-world conditions.

Prior empirical studies report inconsistent findings regarding the relationship between BTD, firm size, and earnings persistence. Some studies document that large BTD are associated with lower earnings quality due to managerial discretion in tax planning, whereas others argue that BTD may reflect legitimate fiscal timing differences. Similarly, while firm size is often linked to improved earnings stability, empirical results vary across sectors and jurisdictions. Moreover, limited research has specifically examined the pharmaceutical sub-sector in Indonesia over an extended observation period incorporating recent tax reforms.

These inconsistencies indicate both theoretical and empirical gaps. Theoretically, the relationship between fiscal reconciliation mechanisms and earnings sustainability remains inconclusive. Empirically, most prior studies focus on general manufacturing sectors or short observation periods, leaving the long-term dynamics of pharmaceutical firms underexplored. Given the sector's regulatory intensity and fiscal sensitivity, examining the joint effect of Book–Tax Differences and firm size on earnings persistence becomes highly relevant.

Despite the growing body of literature, prior studies remain fragmented in explaining how fiscal-accounting discrepancies interact with firm structural characteristics within highly regulated industries. Most existing research overlooks long-term dynamics and

industry-specific constraints such as regulatory pricing, R&D intensity, and tax policy transitions. Furthermore, empirical evidence in emerging markets, particularly Indonesia, remains limited in capturing post-tax reform effects under the Harmonized Tax Law (UU HPP).

Therefore, this study addresses this gap by integrating Book–Tax Differences and firm size within a long-term panel framework (2014–2024) in the pharmaceutical sector. This approach provides a more context-specific and policy-relevant explanation of earnings persistence, particularly in emerging markets characterized by high regulatory intervention.

Based on the foregoing discussion, this study addresses the following research questions:

1. Does Book–Tax Differences significantly affect earnings persistence?
2. Does firm size significantly influence earnings persistence?
3. Do Book–Tax Differences and firm size simultaneously affect earnings persistence?

Accordingly, the objectives of this research are to provide empirical evidence regarding:

1. The partial effect of Book–Tax Differences on earnings persistence;
2. The partial effect of firm size on earnings persistence; and
3. The simultaneous effect of both variables.

This study contributes to the literature in several ways. First, it extends earnings persistence research by incorporating long-term pharmaceutical sector data following major fiscal reforms. Second, it integrates Agency Theory with fiscal reconciliation dynamics. Third, it provides practical implications for managers, investors, and regulators in understanding the role of fiscal-accounting differences in shaping earnings sustainability.

By focusing on the interaction between Book–Tax Differences, firm size, and earnings persistence within a highly regulated industry, this research offers a comprehensive and context-specific explanation of earnings sustainability in emerging markets.

**Research Novelty**

This study offers several important novelties that contribute to the development of earnings persistence literature, particularly within the context of emerging markets and highly regulated industries.

First, this study provides contextual novelty by focusing on the pharmaceutical industry, which is characterized by a high level of regulatory intervention, strict pricing policies, and substantial research and development (R&D) intensity. Unlike general manufacturing sectors that are commonly examined in prior studies, the pharmaceutical sector presents unique structural and institutional constraints that may significantly influence financial reporting behavior and earnings sustainability. Despite its importance, empirical research on earnings persistence within this industry remains relatively limited, especially in the Indonesian context.

Second, this study introduces temporal novelty by employing a long-term panel dataset covering the period from 2014 to 2024. This extended observation period allows for a more comprehensive analysis of earnings persistence dynamics over time, including the impact of recent fiscal reforms under the Harmonized Tax Law (*Undang-Undang Harmonisasi Peraturan Perpajakan / UU HPP*). The inclusion of post-reform periods provides a more policy-relevant perspective, enabling this study to capture structural changes in fiscal-accounting relationships that are often overlooked in short-term analyses.

Third, and most importantly, this study offers theoretical novelty by proposing a new conceptual perspective referred to as the *Fiscal–Institutional Earnings Persistence Hypothesis*. This concept extends traditional earnings quality frameworks by emphasizing the role of fiscal and regulatory environments in shaping earnings sustainability. While prior studies largely focus on firm-specific characteristics such as size, leverage, or managerial discretion, this study argues that institutional factors, particularly tax policies and regulatory structures, play a dominant role in determining earnings persistence within highly regulated industries.

Accordingly, this study proposes that in highly regulated industries, earnings persistence is primarily shaped by fiscal-institutional mechanisms rather than firm-specific characteristics. This perspective challenges conventional assumptions derived from Agency Theory and Positive Accounting Theory, and highlights the need to incorporate institutional dimensions into the analysis of earnings quality, particularly in emerging market contexts.

# Literature Review

## Grand Theory: Agency Theory

Agency Theory, developed by Jensen and Meckling (1976), explains the contractual relationship between company owners (principals) and management (agents), which may give rise to conflicts of interest due to information asymmetry. Managers possess more comprehensive and detailed information about the firm compared to shareholders, creating opportunities for opportunistic behavior, including in financial reporting and tax planning activities.

In the context of this study, differences between accounting income and taxable income, known as Book Tax Differences (BTD), may arise as a consequence of managerial discretion. Such discretion can ultimately affect the sustainability and persistence of corporate earnings.

## Signaling Theory

In addition to Agency Theory, this study is also grounded in Signaling Theory, which explains how information asymmetry between managers and external stakeholders can be reduced through credible financial disclosures (Spence, 1973). In the context of financial reporting, earnings persistence serves as a strong signal of firm stability and future performance prospects. Firms with higher earnings persistence tend to convey positive signals to investors regarding the sustainability of their operations.

Furthermore, Book–Tax Differences (BTD) may also function as a signal with dual interpretations. On one hand, large BTD may indicate transparent fiscal timing differences arising from legitimate accounting–tax regulations. On the other hand, they may signal opportunistic behavior, such as earnings management or aggressive tax planning. Therefore, the interpretation of BTD depends on the institutional context and regulatory environment in which firms operate. In highly regulated industries such as pharmaceuticals, BTD may be more reflective of structured fiscal adjustments rather than opportunistic reporting behavior.

## Positive Accounting Theory

This study is also supported by Positive Accounting Theory (PAT), developed by Watts and Zimmerman (1986), which explains that firms select accounting methods based on economic incentives and contractual considerations. PAT suggests that managerial

decisions in financial reporting are influenced by factors such as political costs, debt covenants, and compensation structures.

In relation to firm size, larger firms are more exposed to political scrutiny, regulatory pressure, and public attention. As a result, they tend to adopt more conservative and transparent accounting practices to minimize potential political costs and maintain legitimacy. This condition is expected to enhance earnings stability and persistence. However, in industries characterized by high regulatory intervention and structural constraints, such as pharmaceuticals, the influence of firm size on earnings persistence may not be as strong as predicted by theory. This provides a theoretical basis for examining the inconsistent empirical relationship between firm size and earnings persistence.

**Earnings Persistence**

Earnings persistence refers to the ability of current earnings to reflect and predict future earnings (Penman & Zhang, 2002; Dichev et al., 2013). Persistent earnings indicate that a firm's performance is sustainable and not merely driven by temporary or transitory components. The higher the level of earnings persistence, the higher the earnings quality, as such earnings are considered stable, recurring, and representative of the firm's underlying economic condition.

**Book Tax Differences (BTD)**

Book Tax Differences (BTD) represent the difference between accounting income (book income) and taxable income. Hanlon (2005) suggests that large BTD may indicate earnings management practices or aggressive tax planning strategies. Significant discrepancies between commercial financial reporting and fiscal reporting may reduce transparency and weaken the predictability of earnings. Therefore, BTD potentially affects the stability and persistence of corporate earnings.

**Firm Size**

Firm size reflects the scale of a company, commonly measured by total assets. According to Watts and Zimmerman (1986), large firms face greater external monitoring, stronger reputational pressures, and more sophisticated internal control systems. These conditions may constrain managerial opportunistic behavior and encourage higher-quality financial reporting. Consequently, larger firms tend to exhibit more stable and more persistent earnings compared to smaller firms.

**Contemporary Developments in Earnings Quality and Institutional Influence**

Recent studies emphasize that earnings persistence is increasingly influenced by institutional and regulatory environments rather than purely firm-level determinants. Contemporary research shows that financial reporting outcomes are shaped by tax policy frameworks, enforcement intensity, and external governance mechanisms, particularly in emerging markets where institutional structures are still evolving (Wahab et al., 2022).

Recent evidence also suggests that earnings persistence is closely linked to earnings quality and institutional constraints. Firms operating under stronger regulatory oversight tend to exhibit more stable earnings, as institutional pressure reduces managerial opportunism and enhances reporting discipline (Floropoulos et al., 2024).

Furthermore, research on Book–Tax Differences (BTD) provides a more nuanced understanding of fiscal-accounting discrepancies. While earlier literature associates large BTD with earnings management, recent studies show that BTD may reflect both opportunistic behavior and structural fiscal adjustments depending on the economic context (Anderson & Rahiminejad, 2025).

In addition, empirical evidence indicates that tax planning strategies and aggressive tax behavior tend to reduce earnings persistence, particularly when firms engage in simultaneous earnings management practices (Chen, 2024).

Overall, these findings suggest that earnings persistence should be analyzed within a broader institutional framework that incorporates both firm-level characteristics and fiscal-regulatory dynamics. This perspective is especially relevant in emerging markets, where regulatory changes and tax policy reforms significantly influence the relationship between accounting income and taxable income, thereby shaping earnings quality.

**Previous Research**

Previous empirical studies have produced mixed findings regarding the relationship between Book Tax Differences (BTD), firm size, and earnings persistence. Hanlon (2005) finds that firms with large BTD tend to exhibit lower earnings persistence, suggesting that substantial differences between accounting income and taxable income may reflect earnings management or aggressive tax planning that reduces the sustainability and predictability of reported earnings. This study highlights the potential negative implications of large fiscal–accounting discrepancies on earnings quality.

In contrast, Shefira et al. (2018) report that both BTD and firm size significantly influence earnings persistence. Their findings indicate that fiscal reconciliation differences and corporate scale are important determinants of earnings sustainability, implying that internal firm characteristics play a crucial role in shaping earnings quality.

However, Hidayat and Fauziyah (2020) provide different evidence by showing that BTD and firm size do not significantly affect earnings persistence in certain manufacturing subsectors. This inconsistency suggests that the relationship between fiscal differences, firm characteristics, and earnings sustainability may depend heavily on industry context and structural conditions.

Despite these prior studies, limited research has specifically examined the pharmaceutical subsector over an extended observation period, particularly in the context of recent fiscal reforms. Therefore, a research gap remains in understanding how BTD and firm size influence earnings persistence within the pharmaceutical industry across long-term dynamics.

**Theoretical Thinking Framework and Research Hypothesis**

Based on theory and prior empirical findings, the relationships among the variables can be explained as follows:

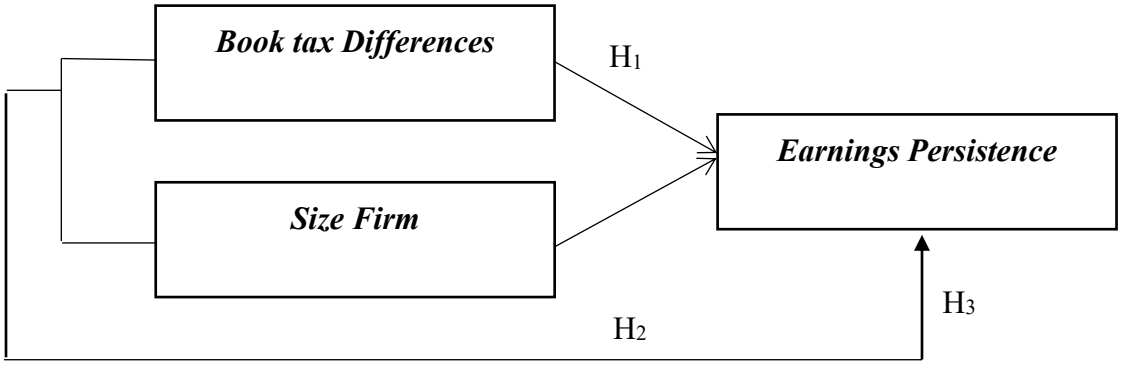

**Figure 1 Source Thinking**

Framework: Processed by Researchers (2025)

Thus, the research hypothesis can be formulated as follows;

H1: BTD significantly affects earnings persistence.

H2: Firm size significantly affects earnings persistence.

H3: BTD and firm size simultaneously affect earnings persistence.

# Research Methodology

### Types and Approaches to Research

This study employs a quantitative research design with an explanatory approach. Quantitative research is used because the objective of the study is to test hypotheses and examine causal relationships between independent and dependent variables using statistical analysis. The explanatory approach aims to explain the influence of Book Tax Differences (BTD) and firm size on earnings persistence through empirical evidence.

The analytical technique applied in this research is panel data regression. Panel data combines cross-sectional data (several firms) and time-series data (multiple years), allowing the study to capture both inter-company differences and intra-company variations over time. By using panel regression, the model is able to provide more efficient estimations, increase the number of observations, reduce multicollinearity issues, and control for unobserved heterogeneity across firms.

### Population and Research Sample

The population of this study consists of all pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange (IDX). The pharmaceutical industry was selected due to its unique regulatory environment, high fiscal sensitivity, and structural cost characteristics that may influence earnings sustainability.

The sampling technique used is purposive sampling, meaning companies were selected based on specific criteria to ensure data completeness and research consistency.

The criteria include :

a. Manufacturing companies in the pharmaceutical sub-sector listed on the Indonesia Stock Exchange (IDX) and classified under the pharmaceutical/manufacturing sub-sector.

b. Companies that consistently published annual financial statements for each year during the research period (2014–2024).

c. Pharmaceutical sub-sector companies that did not experience negative equity during the observation period..

Based on these criteria, five firms were selected as the research sample: PT Merck Tbk (MERK), PT Kalbe Farma Tbk (KLBF), PT Darya-Varia Laboratoria Tbk (DVLA), PT Pyridam Farma Tbk (PYFA), and PT Phapros Tbk (PEHA).

The observation period covers eleven years (2014–2024), resulting in a total of 55 firm-year observations (5 firms × 11 years).

**Data Types and Sources**

This study uses secondary data, meaning data that have already been published and documented by authorized institutions. The primary source of data is the audited annual financial statements of the sampled companies obtained from the official website of the Indonesia Stock Exchange (IDX) and respective company reports.

The data collected include:

- Pre-tax income
- Total assets
- Deferred tax expense
- Other supporting financial information required for variable calculation

Audited financial statements were selected to ensure reliability, credibility, and compliance with financial reporting standards. The use of secondary data enhances objectivity and allows the study to analyze historical financial performance across multiple periods systematically.

**Variable Operational Definition**

To ensure measurement clarity and empirical consistency, each research variable is operationalized based on established accounting and financial literature. The operational definitions are presented as follows:

**Dependent Variable**

**Earnings Persistence (EP)**

Earnings persistence reflects the sustainability of earnings across periods. It is measured as the change in pre-tax income scaled by total assets, following prior earnings quality studies.

$$EP_{it} = \frac{PreTaxIncome_{it} - PreTaxIncome_{it-1}}{TotalAssets_{it}}$$

Where:

$EP_{it}$ = Earnings persistence of firm i in year t

$PreTaxIncome_{it}$ = pre-tax income in year t

$PreTaxIncome_{t-1}$ = pre-tax income in year t-1

$TotalAssets_{it}$ = Total assets in year t

Higher stability in this ratio indicates stronger earnings persistence.

**Independent Variables**

**Book Tax Differences (BTD)**

Book Tax Differences represent discrepancies between accounting income and taxable income. In this study, BTD is proxied by deferred tax expense scaled by total assets.

$$BTD_{it} = \frac{DeferredTaxExpense_{it}}{TotalAssets_{it}}$$

Where:

$DeferredTaxExpense_{it}$ = Deferred tax expense of firm i in year t

$TotalAssets_{it}$ = Total assets in year t

A larger absolute BTD indicates greater fiscal–accounting differences.

**Firm Size (SIZE)**

Firm size is measured using the natural logarithm of total assets.

$$SIZE_{it} = \ln(TotalAssets_{it})$$

The logarithmic transformation is used to reduce scale bias and improve normality distribution.

**Operational Variable Table**

| Variable | Symbol | Measurement | Scale |
|---|---|---|---|
| Earnings Persistence | EP | (Pre-tax Income_t – Pre-tax Income_t-1) / Total Assets | Ratio |
| Book Tax Differences | BTD | Deferred Tax Expense / Total Assets | Ratio |
| Firm Size | SIZE | Ln (Total Assets) | Ratio |

**Data Analysis Techniques**

The data analysis in this study is conducted using panel data regression with the assistance of EViews software. The analysis consists of several systematic stages:

**Descriptive Statistics**

Descriptive statistics are used to summarize the characteristics of each variable, including:

- Mean
- Median
- Maximum
- Minimum
- Standard deviation

This analysis provides an overview of the distribution and variability of earnings persistence, BTD, and firm size.

**Panel Data Model Selection**

To determine the most appropriate panel regression model, three tests are conducted:

**Chow Test**

The Chow test compares the Common Effect Model (CEM) and the Fixed Effect Model (FEM).

Decision rule:

If Prob < 0.05 → Fixed Effect Model is preferred.

If Prob > 0.05 → Common Effect Model is selected.

**Hausman Test**

The Hausman test determines whether Fixed Effect or Random Effect is more appropriate.

Decision rule:

If Prob < 0.05 → Fixed Effect Model is selected.

If Prob > 0.05 → Random Effect Model is selected.

**Lagrange Multiplier (LM) Test**

The LM test compares Common Effect and Random Effect models.

Decision rule:

If Prob < 0.05 → Random Effect Model preferred.

If Prob > 0.05 → Common Effect Model sufficient.

**Classical Assumption Tests**

To ensure regression validity, classical assumption tests are performed:

**Normality Test**

Using Jarque-Bera test.

Prob > 0.05 indicates normal distribution.

**Multicollinearity Test**

Using Variance Inflation Factor (VIF).

VIF < 10 indicates no multicollinearity.

**Heteroskedasticity Test**

Using Breusch-Pagan test.

Prob > 0.05 indicates homoskedastic residuals.

**Autocorrelation Test**

Using Durbin-Watson statistic.

DW ≈ 2 indicates no autocorrelation.

**Multiple Linear Regression Model**

The panel regression model is formulated as:

$$EP_{it} = \alpha + \beta_1 BTD_{it} + \beta_2 SIZE_{it} + \varepsilon_{it}$$

Where:

$\alpha$ = Constant

$\beta_1$,$\beta_2$ = Regression coefficients

$\varepsilon_{it}$ = Error term

**Hypothesis Testing**

**Partial Test (t-test)**

Used to test individual effects of independent variables.

Decision rule:

Prob < 0.05 → Significant effect

Prob > 0.05 → Not significant

**Simultaneous Test (F-test)**

Used to test joint effect of independent variables.

Decision rule:

Prob(F) < 0.05 → Variables simultaneously significant

**Coefficient of Determination ($R^2$)**

Measures the proportion of variance in earnings persistence explained by BTD and firm size.

# Results and Discussion

## Descriptive Statistics

Descriptive statistics are employed to provide an overview of the distribution and variability of the research variables, namely Earnings Persistence (EP), Book Tax Differences (BTD), and Firm Size (SIZE), across 55 firm-year observations during 2014–2024.

**Table 1 Descriptive Statistics**

| | X1 | X2 | Y |
|---|---|---|---|
| Mean | -0.000538 | 28.20569 | -0.002982 |
| Median | -0.000100 | 28.05500 | 0.007000 |
| Maximum | 0.011300 | 31.01300 | 0.167000 |
| Minimum | -0.036800 | 25.79600 | -0.256000 |
| Std. Dev. | 0.006275 | 1.445117 | 0.065868 |

The mean value of earnings persistence (Y) is –0.002982, indicating that, on average, pharmaceutical firms experienced slight earnings instability across the observed periods.

The maximum value of 0.167000 suggests that certain firms demonstrated strong earnings persistence, whereas the minimum value of –0.256000 reflects substantial earnings volatility in some observations. The relatively high standard deviation (0.065868) further confirms considerable variability in earnings sustainability among firms.

For Book–Tax Differences (X1), the mean of –0.000538 indicates relatively small discrepancies between accounting income and taxable income on average. Nevertheless, the range from –0.036800 to 0.011300 suggests that some firms experienced notable temporary differences, potentially due to deferred tax adjustments or fiscal policy changes. The standard deviation of 0.006275 shows that variation exists, although it remains moderate.

Firm Size (X2), measured using the natural logarithm of total assets, shows a mean value of 28.20569, indicating a relatively large scale of operations among the sampled firms. The standard deviation of 1.445117 reflects moderate dispersion in firm size. The maximum value of 31.01300 corresponds to the largest firm in the sample (KLBF), while the minimum value of 25.79600 represents smaller firms such as PYFA during the earlier years of observation. Overall, the descriptive statistics demonstrate adequate variation across all variables, supporting the suitability of the dataset for further panel regression analysis.

**Panel Data Model Selection**

To determine the most appropriate panel regression model, three diagnostic tests were conducted: Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test.

**Chow Test**

The Chow test is used to compare the Common Effect Model (CEM) and the Fixed Effect Model (FEM).

Results:

Cross-section F probability = 0.2870 (> 0.05)

Cross-section Chi-Square probability = 0.2296 (> 0.05)

Since both probability values are greater than 0.05, the Common Effect Model (CEM) is preferred over the Fixed Effect Model (FEM). This indicates that individual firm effects do not significantly influence earnings persistence; therefore, controlling for fixed cross-sectional effects is not necessary in this model.

**Hausman Test**

The Hausman test is used to determine whether the Fixed Effect Model (FEM) or the Random Effect Model (REM) is more appropriate.

Result:

Chi-Square probability = 0.0812 (> 0.05)

Since the probability value is greater than 0.05, the Random Effect Model (REM) is selected. This indicates that there is no significant correlation between the individual effects and the independent variables; therefore, the REM is statistically consistent and more efficient than the FEM.

**Lagrange Multiplier (LM) Test**

The Lagrange Multiplier (LM) test is used to compare the Common Effect Model (CEM) and the Random Effect Model (REM).

The Breusch–Pagan probability value is 0.0782 (> 0.05).

Since the probability value exceeds the 5% significance level, the null hypothesis cannot be rejected. This indicates that the Common Effect Model (pooled OLS) is more appropriate than the Random Effect Model. Furthermore, based on the Hausman test results, the Common Effect Model remains the final selected specification.

**Table 2 Recapitulation of Panel Regression Model Selection Results**

| Pengujian | Hasil | Kesimpulan |
|---|---|---|
| Uji Chow | Prob > 0,05 | CEM |
| Uji Hausman | Prob > 0,05 | REM |
| Uji Lagrange Multiplier (LM Test) | Prob > 0,05 | CEM |

**Classical Assumption Tests**

To ensure model reliability, classical assumption tests were performed.

**Normality Test**

The Jarque-Bera test produced a probability value of 0.319361 (> 0.05), indicating that residuals are normally distributed.

**Multicollinearity Test**

**Table 2 Variance Inflation Factor (VIF) results:**

Variance Inflation Factors

Date: 12/12/25 Time: 10:05

Sample: 1 55

Included observations: 55

| Variable | Coefficient Variance | Uncentered VIF | Centered VIF |
|---|---|---|---|
| C | 0.006501 | 409.7430 | NA |
| X1 | 1.473644 | 3.617374 | 3.590472 |
| X2 | 8.12E-06 | 408.2984 | 1.049599 |
| @ISPERIOD("4") | 0.000896 | 1.026564 | 1.007900 |
| @ISPERIOD("23") | 0.000980 | 1.123274 | 1.102851 |
| @ISPERIOD("42") | 0.001065 | 1.219908 | 1.197728 |
| @ISPERIOD("43") | 0.000890 | 1.020308 | 1.001757 |
| @ISPERIOD("55") | 0.002854 | 3.270231 | 3.210772 |

Since all VIF values are below 10, no multicollinearity problem exists.

**Heteroskedasticity Test**

The Glejser test shows an Obs*R-squared probability value of 0.2101 (> 0.05). Since the probability exceeds the 5% significance level, the null hypothesis of homoskedasticity cannot be rejected. Therefore, the residuals are homoskedastic.

**Autocorrelation Test**

The Durbin–Watson statistic is 1.9281, which is approximately equal to 2. This indicates that there is no evidence of autocorrelation in the regression model. Overall, all classical assumptions are satisfied, confirming that the regression model is statistically reliable and robust.

**Multiple Linear Regression Analysis**

The panel regression model using the Fixed Effect specification produced the following results:

**Table 3 Multiple Linear Regression Results**

Dependent Variable: Y

Method: Panel Least Squares

Date: 12/12/25 Time: 09:49

Sample: 2014 2024

Periods included: 11

Cross-sections included: 5

Total panel (balanced) observations: 55

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.079004 | 0.156429 | 0.505044 | 0.6157 |
| X1 | 5.213641 | 1.275001 | 4.089128 | 0.0002 |
| X2 | -0.002807 | 0.005536 | -0.507076 | 0.6142 |

| | | | |
|---|---|---|---|
| Root MSE | 0.056773 | R-squared | 0.243327 |
| Mean dependent var | -0.002982 | Adjusted R-squared | 0.214224 |
| S.D. dependent var | 0.065868 | S.E. of regression | 0.058388 |
| Akaike info criterion | -2.790423 | Sum squared resid | 0.177274 |
| Schwarz criterion | -2.680932 | Log likelihood | 79.73663 |
| Hannan-Quinn criter. | -2.748082 | F-statistic | 8.360925 |
| Durbin-Watson stat | 2.345402 | Prob(F-statistic) | 0.000711 |

Model Summary:

- R-squared = 0.243327
- Adjusted R-squared = 0.214224
- F-statistic = 8.360925
- Prob(F-statistic) = 0.000711
- Durbin-Watson = 2.345402

**Hypothesis Testing**

**Partial Test (t-test)**

Book–Tax Differences (BTD) has a coefficient of 5.213641 with a probability value of 0.0002 (< 0.05), indicating a positive and statistically significant effect on earnings persistence. Therefore, H1 is supported. This finding suggests that fiscal reconciliation dynamics contribute to the sustainability of earnings in pharmaceutical firms. Firm size has

a coefficient of −0.002807 with a probability value of 0.6142 (> 0.05), indicating no statistically significant effect on earnings persistence. Thus, H2 is not supported. This implies that firm size alone does not necessarily ensure stable earnings performance

**Simultaneous Test (F-test)**

The F-statistic value is 8.360925 with a probability value of 0.000711 (< 0.05), indicating that Book–Tax Differences and firm size simultaneously have a statistically significant effect on earnings persistence. Therefore, H3 is supported.

**Coefficient of Determination ($R^2$)**

The R-squared value is 0.243327 and the Adjusted R-squared value is 0.214224, indicating that 21.42% of the variation in earnings persistence is explained by Book–Tax Differences and firm size. The remaining 78.58% is influenced by other factors not included in the model, such as leverage, operational efficiency, macroeconomic conditions, or corporate governance.

**Discussion**

The positive and significant effect of Book–Tax Differences (BTD) on earnings persistence indicates that fiscal-accounting discrepancies in the pharmaceutical sector are largely driven by systematic and regulatory-based timing differences rather than opportunistic earnings management. From an Agency Theory perspective, this finding suggests that managerial discretion in tax reporting is effectively constrained by strict industry regulation and audit oversight, thereby limiting the potential for opportunistic behavior (Jensen & Meckling, 1976). This aligns with the broader concept of earnings quality, where persistent earnings reflect underlying economic performance rather than transitory or manipulated components (Dechow et al., 2010; Dichev et al., 2013).

Furthermore, this result aligns with Signaling Theory, where consistent deferred tax adjustments may serve as a credible signal of earnings sustainability rather than manipulation (Spence, 1973). Stable patterns in BTD reflect structured fiscal processes that enhance the predictability of future earnings. This finding contradicts the conventional perspective proposed by Hanlon (2005), which associates large BTD with lower earnings quality due to earnings management practices. Instead, the evidence from this study demonstrates that within highly regulated industries, BTD may represent institutional compliance and systematic fiscal reconciliation rather than distortions in financial

reporting. This interpretation is supported by more recent studies suggesting that BTD can reflect both opportunistic and non-opportunistic components depending on regulatory and institutional contexts (Anderson & Rahiminejad, 2025; Floropoulos et al., 2024; Hanlon & Heitzman, 2010).

In addition, empirical evidence indicates that tax planning and earnings management may interact in complex ways in shaping earnings persistence. While aggressive tax behavior is often associated with lower earnings quality, it does not necessarily reduce persistence when embedded within regulated compliance frameworks (Chen, 2024; Wahab et al., 2022). This reinforces the argument that fiscal-accounting differences should be interpreted within their institutional setting rather than viewed solely as indicators of opportunistic behavior.

The insignificant effect of firm size further strengthens this argument by highlighting the limited role of firm-specific characteristics in determining earnings persistence. **This finding challenges the predictions of Positive Accounting Theory**, which traditionally posits that larger firms exhibit more stable earnings due to stronger governance mechanisms, greater monitoring, and higher transparency (Watts & Zimmerman, 1986). However, prior empirical findings have also shown inconsistent relationships between firm size and earnings persistence across different contexts (Hidayat & Fauziyah, 2020; Shefira et al., 2018).

In the pharmaceutical context, firm performance is heavily influenced by industry-specific constraints such as high research and development (R&D) intensity, regulatory pricing controls, and dependence on imported raw materials. These structural constraints reduce managerial flexibility and limit the ability of firms, regardless of size, to stabilize earnings. As a result, the expected positive relationship between firm size and earnings persistence becomes weakened or insignificant. This finding highlights the critical role of industry context in moderating the relationship between firm characteristics and earnings quality, as also suggested in prior accounting literature (Penman & Zhang, 2002).

More importantly, the results of this study support the proposed Fiscal–Institutional Earnings Persistence Hypothesis, which posits that earnings persistence in highly regulated industries is primarily shaped by fiscal and institutional mechanisms rather than firm-specific attributes. This perspective extends traditional earnings quality

literature by shifting the focus from internal firm characteristics toward external regulatory environments and tax policy frameworks.

Overall, the findings indicate that fiscal variables, particularly Book–Tax Differences, play a more dominant role than structural firm characteristics in explaining earnings persistence within highly regulated industries. This suggests that external institutional factors—such as tax policy, regulatory enforcement, and fiscal compliance systems—may outweigh internal firm attributes in shaping earnings sustainability, especially in emerging market contexts.

## Conclusion

This study not only confirms the relevance of fiscal-accounting differences in explaining earnings sustainability but also challenges the conventional assumption that firm size is a primary determinant of earnings quality. The findings emphasize that industry-specific and regulatory factors play a crucial moderating role, particularly in emerging markets.

This study analyzes the effect of Book Tax Differences (BTD) and firm size on earnings persistence in pharmaceutical sub-sector companies listed on the Indonesia Stock Exchange during the 2014–2024 period. Based on the panel data model selection tests, the Common Effect Model (Pooled OLS) was determined to be the most appropriate specification. This indicates that there are no statistically significant individual firm effects that require separate intercept estimation, and variations in earnings persistence are sufficiently explained by the independent variables within a pooled framework.

The regression results reveal that Book Tax Differences have a positive and statistically significant effect on earnings persistence. This finding suggests that fiscal reconciliation reflected in deferred tax expense contributes meaningfully to earnings sustainability in the pharmaceutical sector. The results imply that BTD in this industry context may represent structured fiscal adjustments rather than purely opportunistic earnings management behavior.

On the other hand, firm size does not have a statistically significant partial effect on earnings persistence. This indicates that the scale of total assets alone does not determine

earnings sustainability. In a highly regulated and research-intensive industry such as pharmaceuticals, structural factors such as regulatory compliance, cost rigidity, and operational efficiency may play a more dominant role than asset magnitude.

Simultaneously, Book Tax Differences and firm size significantly affect earnings persistence, confirming that fiscal and structural firm characteristics jointly contribute to explaining earnings sustainability. However, the coefficient of determination suggests that a substantial proportion of earnings persistence variation is influenced by other factors beyond the scope of this model. Overall, this study provides empirical evidence that fiscal-accounting differences are a significant determinant of earnings sustainability in Indonesian pharmaceutical firms, while firm size is not a decisive factor in explaining persistence patterns.

**Implications**

**Managerial Implications**

Management should pay closer attention to the treatment of deferred tax expenses and fiscal reconciliation policies. Since Book Tax Differences significantly influence earnings persistence, transparent and consistent tax accounting practices are essential to maintain earnings sustainability and reduce financial volatility. Companies should ensure that tax planning strategies are aligned with long-term performance stability rather than short-term earnings adjustments.

**Investor Implications**

Investors are encouraged to incorporate Book Tax Differences analysis into their assessment of earnings quality. Evaluating the stability and pattern of deferred tax components may provide deeper insights into earnings sustainability beyond simple profitability measures or firm size indicators.

**Regulatory Implications**

Regulators may strengthen disclosure requirements related to deferred tax accounting to enhance transparency and reduce information asymmetry. Clear reporting standards regarding fiscal-accounting differences can improve financial statement reliability and investor confidence.

**Academic Implications**

This study contributes to earnings persistence literature by providing long-term panel evidence from a regulated pharmaceutical industry using a Common Effect modeling approach. Future research may include additional explanatory variables such as leverage, operating cash flow, macroeconomic indicators, or corporate governance mechanisms. The application of dynamic panel models may also provide further robustness testing.

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