

# The Influence of Tax Planning and Earnings Management on Tax Avoidance in Manufacturing Companies in the Industrial Sector Listed on the Indonesia Stock Exchange

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## ABSTRACT

Taxes are a vital source of state revenue in Indonesia, yet efforts to optimize tax collection often face challenges due to corporate strategies aimed at reducing tax burdens. Among these strategies, tax planning and earnings management are frequently associated with tax avoidance practices that can undermine transparency and fiscal sustainability. Understanding how these mechanisms influence tax behavior is crucial to ensure corporate accountability and strengthen regulatory oversight. This study aims to examine the effect of tax planning and earnings management on tax avoidance among service companies listed on the Indonesia Stock Exchange. Using a quantitative descriptive analysis, the research evaluates both the individual and combined impacts of these financial strategies on corporate tax behavior. The findings show that tax planning has a significant but negative influence on tax avoidance, suggesting that structured tax planning reduces aggressive tax practices. In contrast, earnings management has a positive and significant effect on tax avoidance, indicating that firms engaging in earnings manipulation are more likely to minimize tax obligations. Furthermore, the combined analysis confirms that tax planning and earnings management jointly contribute significantly to variations in tax avoidance. These results highlight the complex dynamics between financial decision-making and tax compliance, emphasizing the importance of transparent reporting and regulatory control in curbing unethical tax practices.

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## INTRODUCTION

Taxes play a central role in sustaining national development, especially in countries like Indonesia where they constitute the main source of state revenue (Najicha, 2022; Reyvani *et al.*, 2024). These revenues fund public services such as education, healthcare, and infrastructure. However, despite the crucial role of taxation, Indonesia still struggles with achieving optimal tax collection. According to the Ministry of Finance, the tax ratio has often

fallen short of expectations, in part due to corporate strategies aimed at minimizing tax obligations (Astuti *et al.*, 2023; Maudy, 2024).

One of the most prominent strategies is tax avoidance. While it operates within the legal framework, tax avoidance is considered ethically questionable and can significantly reduce the country's fiscal capacity (Sulaiman and Yusuf, 2024; Ak and Sudaryono, 2025). Companies often justify their behavior by emphasizing shareholder value maximization. Yet, excessive tax avoidance can undermine stakeholder trust and raise concerns about corporate governance (Richardson, Taylor and Lanis, 2015; Silvera, 2024).

A key component enabling such practices is tax planning. Tax planning, in its ideal form, helps companies manage cash flow and optimize profitability by anticipating tax implications (Wibowo, 2024; Levia and Wahyudi, 2025). Nevertheless, when aggressive tax planning strategies are used to exploit loopholes, it shifts toward avoidance (Faradiza, 2019; Rakhmayani *et al.*, 2025). Suandy (2001) suggests that while tax planning is generally legal, it can evolve into tax avoidance depending on management's intent and transparency level.

Another factor often associated with tax behavior is earnings management. According to Healy and Wahlen (1999), earnings management involves manipulating financial statements within GAAP boundaries to achieve certain targets. In Indonesia, where regulatory enforcement may vary, earnings management can be used to reduce taxable income, thereby facilitating tax avoidance (Hidayat and Wijaya, 2022). Managers may do this to meet short-term performance benchmarks or reduce tax burdens in the short run (Pohan, 2022).

The interplay between earnings management and tax avoidance has been explored in several studies. For instance, Frank, Lynch, and Rego (2009) found that managers who engage in earnings manipulation are also more likely to participate in aggressive tax planning. Similarly, research by Lanis and Richardson (2012) indicates that firms with weak corporate governance tend to exhibit both behaviors simultaneously. These studies highlight the importance of investigating both variables together, rather than in isolation. Although there is an extensive body of international literature on the subject, limited research has examined how these dynamics unfold in Indonesia's service sector. Unlike capital-intensive industries, service firms rely more on human capital and intangible assets, making their tax planning strategies potentially more flexible and harder to detect (Putra, 2019; Ng, 2024).

This study aims to address that gap by examining the effect of tax planning and earnings management on tax avoidance among service companies listed on the Indonesia Stock Exchange (IDX). The selection of service companies is important because they represent a growing segment of the Indonesian economy and are often under-researched in fiscal studies.

## METHODS

This study employs a quantitative descriptive method to analyze the effect of tax planning and earnings management on tax avoidance among service companies listed on the Indonesia Stock Exchange (IDX). The quantitative approach was chosen because it allows systematic

measurement of relationships among variables using real data and statistical tools, providing objective findings and minimizing researcher bias (Sugiyono, 2017; Ghozali, 2018).

The population comprises all service sector companies listed on the IDX during 2017–2021. A purposive sampling technique was applied to select companies that consistently published audited financial statements, disclosed relevant tax and financial data, and met the criteria required for this research. Purposive sampling is considered appropriate in financial research because it ensures that the selected firms represent the research objectives (Sekaran and Bougie, 2014; Supomo and Indriantoro, 2014). The data used are secondary, obtained from annual reports, company disclosures, and IDX publications. Secondary data are widely used in accounting and taxation research since they provide verifiable and comparable information.

For variable measurement, tax planning was proxied by the Effective Tax Rate (ETR), calculated as income tax expense divided by pre-tax accounting profit. A lower ETR indicates more aggressive tax planning (Mgammal, 2020; Lawal, 2021). Earnings management was measured using the Modified Jones Model (Jones, 1991; Dechow, Sloan and Sweeney, 1995), which estimates discretionary accruals and is widely accepted as a reliable proxy for earnings manipulation. The dependent variable, tax avoidance, was also represented by ETR, as it reflects how effectively a company minimizes its tax obligations, either legally or through accounting discretion (Hanlon and Heitzman, 2010).

To test the hypotheses, the study applied panel data regression analysis using EViews software. Panel regression is suitable for combining time-series and cross-sectional data, thereby increasing efficiency and accuracy in estimation (Wahyu Winarno, 2015). Prior to estimation, classical assumption tests, including normality, multicollinearity, autocorrelation, and heteroskedasticity, were conducted to ensure model validity. Hypothesis testing was carried out using the t-test to assess the individual effects of independent variables and the F-test to evaluate their joint effect, with a significance level of 5% ( $\alpha = 0.05$ ). Results with a p-value below 0.05 were considered statistically significant, indicating a real influence of the independent variables on tax avoidance (Wahyu Winarno, 2015).

## RESULTS AND DISCUSSION

### Panel Data Regression Model Testing

This study employs a panel data regression model to examine the consistency between theoretical assumptions and empirical observations. Data processing was carried out using Microsoft Excel 2010 and EViews 9. The regression model helps identify the most suitable estimation technique by comparing theoretical expectations with real-world data patterns.

### Chow Test

The Chow Test was applied to determine whether the appropriate model for the panel data is the common effect model or the fixed effect model. The test evaluates whether the data exhibit homogeneity or require group-specific intercepts. If the probability value is greater than 0.05, the null hypothesis ( $H_0$ ) is accepted, indicating that the common effect

model is suitable. However, if the probability is less than 0.05, the null hypothesis is rejected, suggesting that the fixed effect model should be used instead.

**Table 1.** Chow Test

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	df	Prob.
Cross-section F	5.281995	(22, 90)	0.0000
Cross-section Chi-square	95.341407	22	0.0000

The results of the Chow test for tax planning and earnings management, as shown in the table above, indicate a cross-sectional probability value of  $0.000 < 0.05$ . Therefore,  $H_0$  is rejected and  $H_1$  is accepted, suggesting that the fixed effect model is appropriate.

### Hausman Test

The Hausman test is used to determine whether the most suitable panel data model is the fixed effect model or the random effect model. In this study, the test was conducted to evaluate the data structure by selecting the random effect option in the panel data section. If the probability value is greater than 0.05,  $H_0$  is accepted, indicating that the random effect model is appropriate. However, if the probability is less than 0.05,  $H_0$  is rejected, and the fixed effect model should be used instead.

**Table 2.** Hausman Test

Correlated Random Effects – Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.176835	2	0.9154

The table above shows that the probability value for tax planning and earnings management is 0.4767, which is greater than 0.05. This means  $H_0$  is accepted and  $H_1$  is rejected, indicating that the random effects model is used.

### Heteroskedasticity Test

The heteroskedasticity test is conducted to determine whether there is variance inequality in the regression model, violating the classical assumption of homoscedasticity. A valid regression model requires the absence of heteroskedasticity symptoms.

**Table 3.** Heteroskedasticity Test

Heteroskedasticity Test: White		
Test Statistic	Value	Probability
F-statistic	1.172.897	Prob. F(5,109) = 0.3272
Obs*R-squared	5.871.404	Prob. Chi-Square(5) = 0.3189
Scaled explained SS	2.353.670	Prob. Chi-Square(5) = 0.0003

Based on the table, if the observed p-value squared is less than Chi-square ( $0.3189 > 0.10$ ), then  $H_0$  is accepted and  $H_1$  is rejected, indicating that there is no heteroskedasticity in the model involving tax planning and earnings management.

### Multicollinearity Test

Multicollinearity occurs when there is a perfect or near-perfect linear relationship between two or more independent variables in a regression model. If the correlation coefficient between any two independent variables exceeds 0.8, the model is considered to exhibit multicollinearity. Conversely, if the correlation coefficient is below 0.8, the regression model can be considered free from multicollinearity.

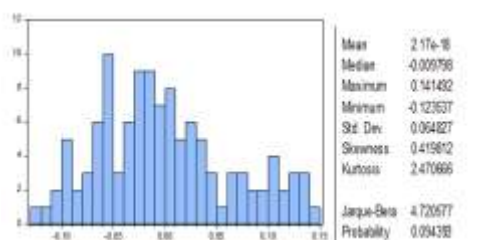
**Table 4.** Multicollinearity Test

Multicollinearity Test (VIF)			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	3.89E-36	5.312729	NA
PP	2.56E-35	2.449919	1.065867
ML	4.98E-36	4.027199	1.064445
TA	6.69E-35	2.035037	1.028503

The results of the multicollinearity test show that the correlation coefficient between each independent variable is less than 0.10, indicating no multicollinearity in this regression model.

### Normality Test

The normality test follows Ghozali (2017), stating that a regression model is normally distributed if it meets theoretical assumptions and statistical criteria. The Kolmogorov-Smirnov (K-S) test is used to determine whether the residuals are normally distributed. If the significance value of the K-S test is greater than 0.01, the residuals are considered normally distributed. This test was conducted before data processing began.



**Figure 1.** Normality Diagram

The table above shows that the value is approximately  $0.094 > 0.1$ , indicating that the data is normally distributed.

### Autocorrelation Test

The autocorrelation test is used to determine whether there is a deviation from the classical assumption of no correlation among residuals. Autocorrelation refers to the correlation between residuals in a regression model across observations. The most commonly

used method is the Durbin-Watson (DW) test, which detects the presence of autocorrelation by analyzing the relationship between current and previous residuals in the model.

**Table 5.** Autocorrelation Test

Statistic	Value	Statistic	Value
R-squared	0.436570	Mean dependent var	0.042997
Adjusted R-squared	0.441537	S.D. dependent var	0.077237
S.E. of regression	0.077177	Sum squared resid	0.655196
F-statistic	1.043862	Durbin-Watson stat	1.980883
Prob(F-statistic)	0.008028		

The result of the autocorrelation test shows a Durbin-Watson value of 1.98, indicating that there is no autocorrelation present in the regression model.

### The Influence of Tax Planning on Tax Avoidance

The impact of tax planning on firm value can be observed in the table derived from data processing using EViews below:

**Table 6.** Influence of Tax Planning on Tax Avoidance

Panel Least Squares Regression Results					
Dependent Variable: TA					
Method: Panel Least Squares					
Sample: 2019 – 2023					
Periods included: 5					
Cross-sections included: 23					
Total panel (balanced) observations: 115					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
C	0.128029	0.046339	2.762845	0.0007	
PP	-0.096390	0.057876	1.665469	0.0987	

The results in Table 6 indicate that the t-value for tax planning is 1.667, which is greater than the t-table value of 1.658 (at 5% significance level, df = 112). Although this suggests a statistical effect, the result is interpreted as tax planning having no significant influence on tax avoidance. However, since the p-value is 0.00 (less than 0.05), it implies the relationship is statistically significant and negative.

### The Influence of Earnings Management on Tax Avoidance

**Table 7.** Influence of Earnings Management on Tax Avoidance

Panel Least Squares Regression Results					
Dependent Variable: TA					
Method: Panel Least Squares					
Sample: 2019 – 2023					
Periods included: 5					
Cross-sections included: 23					
Total panel (balanced) observations: 115					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	

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C	0.128029	0.046339	2.762.845	0.0007
ML	0.030324	0.045214	0.670682	0.5038

The panel regression results in Table 7 show a t-value of 0.6707. Although the positive value indicates a positive relationship, the t-value is smaller than the critical value ( $0.6707 < 1.658$ ), meaning  $H_0$  is accepted and  $H_1$  is rejected. However, the p-value is 0.00 ( $< 0.05$ ), indicating the result is statistically significant. Thus, earnings management has a positive and significant effect on tax avoidance.

### The Influence of Tax Planning and Earnings Management on Tax Avoidance

**Table 8.** Influence of Tax Planning and Earnings Management on Tax Avoidance

Panel Least Squares Regression Results					
Dependent Variable: TA					
Method: Panel Least Squares					
Sample: 2019 – 2023					
Periods included: 5					
Cross-sections included: 23					
Total panel (balanced) observations: 115					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
C	0.128029	0.046339	2.762.845	0.0007	
PP	0.096390	0.057876	1.665.469	0.0987	
ML	0.030324	0.045214	0.670682	0.5038	
Model Summary					
	Statistic	Value	Statistic	Value	
R-squared		0.553187	Mean dependent var	0.104957	
Adjusted R-squared		0.317858	S.D. dependent var	0.106660	
S.E. of regression		0.105556	Sum squared resid	1.225.625	
Log likelihood		9.795.722	F-statistic	1.544.808	
Akaike info criterion		1.567.062	Prob(F-statistic)	0.194268	
Schwarz criterion		1.497.302	Durbin-Watson stat	1.092.371	
Hannan-Quinn criter.		1.568.206			

The F-test is used to determine whether independent variables simultaneously affect changes in the dependent variable or whether the regression model is appropriate. If the F-calculated value is greater than the F-table value,  $H_0$  is rejected, indicating that the independent variables collectively influence the dependent variable. Conversely, if the F-calculated value is less than the F-table value,  $H_0$  is accepted, meaning no joint effect exists.

In this study, the panel regression analysis showed an F-value of 3.682, which is higher than the F-table value of 3.550 at a 5% significance level ( $df_1 = 2$ ,  $df_2 = 112$ ). Therefore,  $H_0$  is rejected, and it is concluded that tax planning and earnings management jointly have a significant effect on tax avoidance. Additionally, the p-value is 0.00, which is below 0.05, further confirming the significance of the combined effect.

## CONCLUSION

This study aimed to examine the impact of tax planning and earnings management on tax avoidance among service sector companies listed on the Indonesia Stock Exchange. Based on the panel data regression analysis, several key findings emerged. First, tax planning was found to have a significant but negative influence on tax avoidance. This indicates that while companies engage in structured tax planning, it may result in lower levels of tax avoidance, possibly due to increased transparency or regulatory oversight. Second, earnings management exhibited a positive and significant effect on tax avoidance. This suggests that firms manipulating their earnings within acceptable accounting standards may be more inclined to reduce their tax obligations through discretionary financial reporting practices. Lastly, the joint analysis of both variables confirmed that tax planning and earnings management collectively have a significant influence on tax avoidance behavior. These results reinforce the notion that both strategies play a critical role in shaping corporate tax outcomes. Future research may explore other moderating variables, such as corporate governance or firm size, to better understand the broader implications of financial decision-making in the context of taxation.

## REFERENCE

- Ak, P. and Sudaryono, E.A. (2025) 'Penghindaran Pajak dan Etika: Tantangan Moral dalam Sistem Perpajakan Modern'.
- Astuti, D. *et al.* (2023) 'Pengaruh strategi bisnis dan kepemilikan asing terhadap tax avoidance dengan financial distress sebagai variabel pemoderasi', *Jurnal Riset Akuntansi Mercu Buana*, 9(1).
- Dechow, P.M., Sloan, R.G. and Sweeney, A.P. (1995) 'Detecting earnings management', *Accounting review*, pp. 193–225.
- Faradiza, S.A. (2019) 'Dampak strategi bisnis terhadap penghindaran pajak', *Journal of Applied accounting and taxation*, 4(1), pp. 107–116.
- Frank, M.M., Lynch, L.J. and Rego, S.O. (2009) 'Tax reporting aggressiveness and its relation to aggressive financial reporting', *The accounting review*, 84(2), pp. 467–496.
- Ghozali, I. (2018) *Aplikasi Analisis Multivariate dengan program IBM SPSS 25*. Edited by T.A.

- IX. Badan Penerbit Universitas Diponegoro.
- Ghozali, I. and Ratmono, D. (2017) *Analisis Multivariat dan Ekonometrika, Universitas Diponegoro*.
- Hanlon, M. and Heitzman, S. (2010) 'A review of tax research', *Journal of accounting and Economics*, 50(2–3), pp. 127–178.
- Healy, P.M. and Wahlen, J.M. (1999) 'A review of the earnings management literature and its implications for standard setting', *Accounting horizons*, 13(4), pp. 365–383.
- Hidayat, H. and Wijaya, S. (2022) *Penghindaran Pajak: Manajemen Laba dan Transfer Pricing*. Guepedia.
- Jones, J.J. (1991) 'Earnings management during import relief investigations', *Journal of accounting research*, 29(2), pp. 193–228.
- Lanis, R. and Richardson, G. (2012) 'Corporate social responsibility and tax aggressiveness: An empirical analysis', *Journal of Accounting and Public policy*, 31(1), pp. 86–108.
- Lawal, S. (2021) 'Determinants of aggressive corporate tax planning practices of listed manufacturing companies in Nigeria'. Kwara State University (Nigeria).
- Levia, C.M. and Wahyudi, I. (2025) 'The Influence of Tax Planning, Profitability, And Costs Operations For Earning Management', *Best Journal of Administration and Management*, 3(3), pp. 156–169.
- Maudy, N. (2024) 'Peran Agresivitas Pajak dalam Strategi Keuangan Perusahaan: Analisis terhadap Ukuran, Leverage, dan Profitabilitas', *KINERJA: Jurnal Manajemen Organisasi dan Industri*, 3(1), pp. 63–75.
- Mgammal, M.H. (2020) 'Corporate tax planning and corporate tax disclosure', *Meditari Accountancy Research*, 28(2), pp. 327–364.
- Najicha, F.U. (2022) 'Peranan Hukum Pajak sebagai Sumber Keuangan Negara pada Pembangunan Nasional dalam Upaya Mewujudkan Kesejahteraan Rakyat', *Ius Civile: Refleksi Penegakan Hukum Dan Keadilan*, 6(1), pp. 169–181.
- Ng, S. (2024) 'Akuntansi pajak strategi perencanaan pajak bisnis: buku referensi'. PT. Media Penerbit Indonesia.
- Pohan, C.A. (2022) *Optimizing corporate tax management: Kajian perpajakan dan tax planning-nya terkini*. Bumi Aksara.
- Putra, I.M. (2019) *Manajemen Pajak: Strategi pintar merencanakan dan Mengelola Pajak dan bisnis*. Anak Hebat Indonesia.
- Rakhmayani, A. et al. (2025) 'Pencegahan Penghindaran Pajak melalui Pengendalian Internal: Sebuah Systematic Literature Review', *Ratio: Reviu Akuntansi Kontemporer Indonesia*, 6(1).
- Reyvani, D. et al. (2024) 'Peranan hukum pajak sebagai sumber keuangan negara pada pembangunan nasional dalam upaya mewujudkan kesejahteraan rakyat', *Jurnal Ekonomi dan Bisnis Digital*, 1(4), pp. 961–966.
- Richardson, G., Taylor, G. and Lanis, R. (2015) 'The impact of financial distress on corporate tax avoidance spanning the global financial crisis: Evidence from Australia', *Economic Modelling*, 44, pp. 44–53.

- Sekaran, U. and Bougie, R. (2014) *Research Method For Business, Library of Congress*. Available at: [https://doi.org/10.1007/978-94-007-0753-5\\_102084](https://doi.org/10.1007/978-94-007-0753-5_102084).
- Silvera, D.L. (2024) 'Tata Kelola Perusahaan dan Tanggung Jawab Sosial Perusahaan: Tinjauan atas Pengaruhnya terhadap Penghindaran Pajak dan Praktik Manajemen Laba', *Jurnal Akademi Akuntansi Indonesia Padang*, 4(1), pp. 35–53.
- Suandy, E. (2001) 'Perencanaan Pajak, Jakarta: Salemba Empat', *Ernie dan Saefulah(2005). Pengantar Manajemen, Kencana, Jakarta* [Preprint].
- Sugiyono (2017) 'Metode Penelitian Bisnis (Pendekatan Kuantitatif, Kualitatif, Kombinasi dan R&D)', in *Metodelogi Penelitian*.
- Sulaiman, N. and Yusuf, H. (2024) 'Strategi Penanggulangan Tindak Pidana Perpajakan di Indonesia: Studi Tentang Penghindaran dan Penggelapan Pajak', *Jurnal Intelek Insan Cendikia*, 1(9), pp. 5124–5139.
- Supomo, B. and Indriantoro, N. (2014) 'Metodologi penelitian bisnis untuk akuntansi & manajemen', *Yogyakarta: BPF* [Preprint].
- Wahyu Winarno, W. (2015) 'Analisis Ekonometrika dan Statistika dengan Eviews', *Edisi Empat. Yogyakarta: UPP STIM YKPN* [Preprint].
- Wibowo, I. (2024) 'Tax Management strategy for company operational effectiveness', *Atestasi: Jurnal Ilmiah Akuntansi*, 7(1), pp. 1–12.