

COMPANY SIZE MODERATES: THE EFFECT OF PROFITABILITY, LEVERAGE, AND CAPITAL INTENSITY ON TAX AVOIDANCE

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Abstract

This study aims to determine the effect of profitability, leverage and capital intensity on tax avoidance moderated by company size. The sample of this study was 60 property & real estate sector companies listed on the Indonesia Stock Exchange (IDX) in 2021 - 2023. The results of the study stated that profitability had no effect on tax avoidance, leverage had no effect on tax avoidance while capital intensity had an effect on tax avoidance, and the company size variable was able to moderate the capital intensity, and the company size variable was unable to moderate profitability and leverage variables on tax avoidance in property & real estate sector companies listed on the Indonesia Stock Exchange (IDX) in 2021-2023.

Keywords: Tax Avoidance, Profitability, Leverage, Capital Intensity, Company Size

1. Introduction

Tax avoidance is defined as a legal effort made by taxpayers to reduce the amount of tax by taking advantage of existing opportunities based on applicable tax laws, in contrast to tax evasion which is an illegal effort because it involves tax evasion by violating the laws in force in a country (Julianty et al., 2023a).

This study analyzes the rate of corporate tax avoidance in the property and real estate sector listed on the Indonesia Stock Exchange (IDX) through the Effective Tax Rate (ETR) analysis, namely by comparing the tax burden paid with profit before tax. This study shows that during the 3 years in the 2021-2023 period, tax avoidance in property and real estate sector companies fluctuated. The largest tax avoidance was carried out in 2021 and the smallest in 2023. The company that carried out the largest tax avoidance was PT Metropolitan Land Tbk for 3 consecutive years from 2021 to 2023. The company that carried out the smallest tax avoidance was PT Ciputra Development Tbk for 3 years from 2021-2023.

Tax avoidance actions can be influenced by several factors including: profitability, leverage, and capital intensity. Profitability is the ability of a company to generate high profits. Profitability describes the company's ability to use its assets effectively in creating corporate profits from the use of assets which is termed Return On Asset (ROA). ROA is expressed in percentages, if the higher the ROA value, the better the company's performance. Companies that have high profits, the amount of income tax also increases (Prabowo A & Sahlan R, 2021). Along with the increase in company profits, the tendency of companies to carry out tax avoidance practices also increases. Research related to profitability, namely research conducted by (Prabowo A & Sahlan R, 2021) states that profitability has a positive effect on tax avoidance. This is different from research conducted by (Suyanto & Kurniawati T, 2022) stating that profitability has a negative

effect on tax avoidance, and research conducted by (Faizah, 2022) stating that profitability has no effect on tax avoidance.

In addition to profitability, the second factor that is also a determining factor in tax avoidance is leverage. Leverage is the level of debt used by a company in carrying out spending (Dongoran P et al., 2024). Because high leverage reduces the company's burden, companies prefer external debt as a form of effort to prevent high tax costs. If the company has a large source of loan funds, the company will also pay a large interest burden to the creditor. High interest will reduce profit before income tax burden, thereby reducing the tax burden that must be paid by the company in one current period (Prabowo A & Sahlan R, 2021). This is what triggers tax avoidance actions carried out by companies. The results of research conducted by (Suyanto & Kurniawati T, 2022), state that leverage has a positive effect on tax avoidance. In contrast to research conducted by (Prabowo A & Sahlan R, 2021), which states that leverage has a negative effect on tax avoidance, and research conducted by (Dongoran P et al., 2024), states that leverage has no effect on tax avoidance.

The next factor is capital intensity. Capital Intensity is one of the characteristics of a company that can be a factor in tax considerations. The use of Capital Intensity can lead to tax avoidance measures. The capital intensity ratio is often associated with how many fixed assets and shares a company owns. High fixed assets will attract the government's attention to apply tax payments to taxpayers. Large fixed assets will increase the amount of tax paid, so that companies will be encouraged to take tax avoidance measures (Nabila & Kartika, 2023). Research conducted by (Prabowo A & Sahlan R, 2021) supports capital intensity has a positive effect on tax avoidance. In contrast to the results of research conducted by (Nabila & Kartika, 2023) stating that capital intensity has a negative effect on tax avoidance, and the results of research conducted by (Julianty et al., 2023a) stating that capital intensity has no effect on avoidance.

After several factors are indicated as tax avoidance factors, researchers are interested in adding company size as a moderating variable. Company size is used as a supporter to strengthen or weaken the existence of independent variables against dependents. Based on previous research, company size can be used as a moderating variable.

Company size in this study is a moderating variable. According to (Prabowo A & Sahlan R, 2021) company size, it is the ability, stability and expertise to carry out its economic activities. However, large companies tend to attract the attention of the government regarding the profits obtained and the tax authorities regarding tax payments, so that managers of a company are considered to want to act obediently and be more transparent in presenting financial reports. Large companies will think more about the effects of managing their taxes.

These results are reinforced by research by Dongoran, et al (2024), Silaen, et al (2024), and Nabila & Kartika (2023) which states that company size moderates' profitability, leverage, and capital intensity on tax avoidance.

2. Theoretical Background

2.1 Agency Theory

Agency theory is a theory that arises when business activities are no longer managed directly by the owner of the entity, but are handed over to another party (agent) (Hoesada, 2021). The emergence of agency theory is motivated by the conflict of interest that occurs between the principal and the agent. Jensen & Meckling (1976) defines an agency

relationship as a contract in which one or more people (principals) involve another person (agent) to perform a service by delegating some authority.

Agents as parties who directly handle business operational activities certainly have more control over the company's information as a whole compared to the principal, thus creating a condition of asymmetrical information owned by each of the two parties. Agency theory assumes that agents as humans have a selfish nature, therefore, the existence of a conflict of interest and the emergence of information asymmetry between agents and principals will provide agents with the opportunity to hide information that is not known to the principal in order to maximize their interests through tax avoidance.

2.2 Tax avoidance

There are several definitions put forward by several experts regarding tax avoidance that have the same purpose and core. According to Siti Kurnia Rahayu, (2020:206) Tax Avoidance is a legal action taken by Taxpayers to minimize Compliance Costs that must be borne by Taxpayers in fulfilling their tax obligations.

Meanwhile, according to Pebble et al. (2012) in Butje and Tjondro (2014), tax avoidance is an action that exploits weaknesses in existing laws and regulations, in order to gain benefits to minimize the amount of tax owed.

2.3 The Effect of Profitability on Tax Avoidance

Profitability describes the company's ability to obtain a profit that can improve the quality of the company. So that profitability is an indicator of management performance in managing company assets as indicated by the profit generated or obtained by the company (Prasatya et al., 2020). Profitability in clean form is allocated for shareholder welfare in the form of paying dividends and retained earnings. So, if the profitability ratio is high, it shows the efficiency carried out by management. With increasing profits, the company's profitability will also increase (Putri & Putra, 2017). The increasing profit of a company means efforts to take tax avoidance actions. This is supported by research conducted by Wardani & Khoiriyah, (2018), Dewinta & Setiawan, (2016) and Saputra & Asyik, (2017) which states that profitability with ROA proxy has a positive effect on tax avoidance. Based on the explanation above, it can be concluded that the research hypothesis is:

H1: Profitability has a positive effect on tax avoidance.

2.4 The Effect of Leverage on Tax Avoidance

Leverage is a ratio that can measure how far a company uses its debt to finance the company's operational activities and how much debt burden is borne to pay all short-term and long-term obligations that the company uses to finance its assets (Nugraha & Mulyani, 2019). The source of funding for the company's operational activities does not only come from its own capital or shareholders but also from the company's capital support from external parties and also debt (Dewi & Noviari, 2017). The debt owned by the company often gives rise to a fixed burden for the company, namely interest expense (Prasatya et al., 2020). The more debt the company has, the greater the interest expense borne by the company, the amount of interest expense can reduce the profit obtained by the company (Natalya, 2018). The high level of leverage means that there will be efforts to take tax avoidance actions, by maximizing the profit from interest expenses as a reduction in taxes that must be paid by the company. This is reinforced by research conducted by Nugraha & Mulyani, (2019), Irianto et al., (2017), and (Rahmadani et al.,

(2020) which stated that leverage has a positive effect on tax avoidance. Based on the description above, the research hypothesis is as follows:

H2: Leverage Has a Positive Effect on Tax Avoidance

2.6 The Influence of Capital Intensity on Tax Avoidance

The higher the capital intensity of a company, the more funds the company sacrifices for the procurement, operation and maintenance of its assets. Thus, referring to agency theory and positive accounting theory, managers as agents will be more motivated to carry out tax avoidance in order to reduce company expenses so that company performance will increase and managers will receive the desired performance compensation. In line with research by Suprianto & Aqida (2020), and Yustrianthe (2022) which showed that capital intensity has a positive effect on tax avoidance. The higher the capital intensity, the greater the depreciation burden, which will reduce profits and correlate with a decrease in the company's tax burden. Therefore, the second hypothesis that will be proposed in this study is:

H3: Capital Intensity has a positive effect on tax avoidance.

2.7 Company Size Moderates the Effect of Profitability on Tax Avoidance

Company Size is the size of a company measured through its financial statements. The size of a company's activities can be seen through the size of the company, which in a large company size can lead to tax avoidance loopholes. Profitability as a tool used to measure the company's performance ability to gain profits from various operational activities (Yuni & Setiawan, 2019). So, the higher the profitability of a company, the higher the maximum tax planning (Subagiastira et al., 2016). Research conducted by (Dongoran Parlindungan et al., 2024) states that company size is able to moderate profitability against tax avoidance. Based on the description above, the hypothesis of this study is:

H4: Company size moderates the effect of profitability on tax avoidance.

2.8 Company Size Moderates the Effect of Leverage on Tax Avoidance

Leverage is used by companies to assess how much a company's assets are obtained using debt (Kasmir, 2019). According to (Sunarsih et al., 2019), the Leverage ratio is a measure of how much a company uses debt financing. Company size has an indirect effect on the use of debt because a large company size means that the assets owned by the company are also large so that they can be a guarantor of debt to creditors and increase creditor confidence because a large company size describes a good company. Research conducted by (Silaen et al., 2024) states that company size is unable to moderate the effect of leverage on tax avoidance. Based on the description above, the hypothesis of this study is:

H5: Company size is able to moderate the influence of leverage on tax avoidance.

2.9 Company Size Moderates Capital Intensity on Tax Avoidance

Capital intensity is strongly related to corporate investment and fixed assets. So, if a company has relatively high fixed assets, it will pay less tax compared to companies that have small fixed assets. The larger the company size, the greater the capital and asset intensity, therefore the productivity of the company can be desired. The larger the company size, the higher the investor's attention. So, the larger the company size with high capital intensity, the higher the possibility of tax avoidance. Research conducted by

(Nabila & Kartika, 2023b) states that company size is able to moderate the effect of capital intensity on tax avoidance. Based on the description above, the hypothesis of this study is:

H6: Company size is able to moderate the influence of capital intensity on tax avoidance.

3. Methods

3.1 Dependent Variable

The dependent variable in this study is tax avoidance. Tax avoidance is a practice carried out in corporate tax planning with the aim of obtaining a minimum tax burden in accordance with applicable regulations where a legal way is sought to be valid according to the rules.

$$ETR = \frac{\text{Tax Payment}}{\text{Profit Before Tax}}$$

Source: Julianty et al., (2023)

3.2 Independent Variables

3.2.1 Profitability

Profitability is one of the indicators used to assess a company's performance in managing the company's wealth profits with the aim of generating maximum profit in a certain period.

$$ROA = \frac{\text{Profit Before Tax}}{\text{Total Assets}}$$

Source: Prabowo A & Sahlan R, (2021)

3.2.2 Leverage

Leverage is a measuring tool to compare the finances of companies that use debt to run company operations which is reflected in capital.

$$DAR = \frac{\text{Total Liability}}{\text{Total Assets}}$$

Source: Suyanto & Kurniawati T, (2022)

3.2.3 Capital Intensity

Capital intensity can be interpreted as a form of financial decision by investing in fixed assets.

$$\text{Fixed Asset Intensity Ratio} = \frac{\text{Fixed Asset Total}}{\text{Total Assets}}$$

Source: Prabowo A & Sahlan R, (2021)

3.3 Moderating Variables

3.3.1 Company Size

Company size is a metric that ranks the size of a company in several ways, including sales, number of employees, and total assets.

$$\text{Size} = \text{LN (Total Assets)}$$

Source: Julianty et al., (2023)

3.4 Data Analysis Methods

The panel data regression was performed to test the hypotheses. Three regression approaches were estimated, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). To determine the most appropriate model, a series of specification tests were conducted. The Chow Test was used to compare CEM and FEM, the Hausman Test was applied to compare FEM and REM, and the Lagrange Multiplier (LM) Test was employed to decide between REM and CEM.

The results of these tests guided the selection of the most suitable estimation model for hypothesis testing. Once the best model was identified, regression analysis was carried out to assess the influence of the independent variables on the dependent variable. To ensure the validity of the regression results, several classical assumption tests were also conducted, including autocorrelation and heteroscedasticity tests. The absence of autocorrelation was confirmed by a p-value greater than 0.05, while the presence of heteroscedasticity ($p < 0.05$) was acknowledged as a common issue in panel data analysis due to cross-sectional variations, and the model was estimated accordingly.

4. Research and Discussion

4.1 Panel Data Model Conclusion

Based on the results obtained from the model selection test in the research that has been conducted, it can be concluded that the panel data regression model used in hypothesis testing is the Common Effect Model (CEM).

Table 1. Conclusion of Estimation Model

Method	Testing	Result
Chow Test	CEM vs FEM	CEM
Hausman Test	FEM vs REM	REM
LM Test	CEM vs REM	CEM

Source: EViews 12 Output (2024)

4.2 Classical Assumption Test

Table 2. Classical Assumption Test Results

Test	Indicator / Prob. Value	Threshold ($\alpha = 0.05$)	Conclusion
Multicollinearity Test	Correlation < 0.80	< 0.80	No multicollinearity detected
Heteroskedasticity Test	Prob. Chi-Square = 0.1047	> 0.05	No heteroskedasticity problem

Source: EViews 12 Output (2024)

The multicollinearity test shows that the correlation among independent variables is below 0.80, indicating the absence of multicollinearity. This ensures that the independent variables can be used together in the regression model without creating bias.

The heteroskedasticity test presents a Chi-Square probability value of 0.1047, which is higher than the significance threshold of 0.05. This result confirms that the regression model does not suffer from heteroskedasticity, meaning the variance of residuals is consistent and the model estimates are reliable.

4.3 Panel Data Analysis

Table 3. Panel Data Analysis Results

Test / Variable	Value	Threshold ($\alpha = 0.05$)	Conclusion
F-Test	Prob = 0.000024	< 0.05	Profitability, leverage, and capital intensity jointly affect tax avoidance with firm size as moderation
R ² Test	R ² = 0.433217	0.4 – 0.599	Moderate correlation between independent and dependent variables
	Adj. R ² = 0.369053	—	36.9% of tax avoidance variation explained by profitability, leverage, and capital intensity; 63.1% by other variables
Profitability → Tax Avoidance	Prob = 0.1926	> 0.05	No effect
Leverage → Tax Avoidance	Prob = 0.5099	> 0.05	No effect
Capital Intensity → Tax Avoidance	Prob = 0.0037	< 0.05	Positive effect
Firm Size × Profitability → Tax Avoidance	Prob = 0.2125	> 0.05	No moderation effect
Firm Size × Leverage → Tax Avoidance	Prob = 0.6155	> 0.05	No moderation effect
Firm Size × Capital Intensity → Tax Avoidance	Prob = 0.0027	< 0.05	Significant moderation effect

Table 3 presents the regression analysis results, which consist of the F-test, R² test, and T-test. The F-test shows a probability value of 0.000024, which is lower than the significance level of 0.05. This indicates that profitability, leverage, and capital intensity simultaneously influence tax avoidance, with firm size acting as a moderating variable.

The R² value is 0.433217, which falls within the moderate correlation range (0.4–0.599). The adjusted R² value of 0.369053 indicates that approximately 36.9% of the variation in tax avoidance can be explained by profitability, leverage, and capital intensity, while the remaining 63.1% is influenced by other factors not included in this model.

The T-test provides further insights into the individual effects of each variable. Profitability ($p = 0.1926$) and leverage ($p = 0.5099$) show no significant effect on tax avoidance since their values exceed the 0.05 threshold. In contrast, capital intensity demonstrates a significant and positive influence on tax avoidance ($p = 0.0037$), suggesting that higher capital intensity is associated with higher tax avoidance practices.

The moderation tests reveal that firm size does not moderate the relationship between profitability and tax avoidance ($p = 0.2125$) or between leverage and tax avoidance ($p = 0.6155$). However, firm size significantly moderates the relationship between capital

intensity and tax avoidance ($p = 0.0027$). This finding highlights the role of firm size in strengthening the effect of capital intensity on tax avoidance behavior.

Overall, these results emphasize that among the examined predictors, capital intensity plays the most crucial role in influencing tax avoidance, particularly when considered together with firm size as a moderating factor.

4.4 Discussion of Research Result

1) Result of the Hypothesis Test (H1)

The profitability (X1) variable result is $0.1926 > 0.05$, indicating that H1 is rejected, meaning that profitability variable has no effect on tax avoidance. This is contrary to previous research conducted by Prabowo A & Sahlan R, (2021), profitability is positive affected by tax avoidance. The result of this study is not accordance with grand theory which profitability ratio is high, it shows the efficiency carried out by management. With increasing profits, the company's profitability will also increase.

2) Result of the 2nd Hypothesis Test (H2)

Leverage (X2) variable result is $0.5099 > 0.05$, indicating that H2 is rejected, meaning that leverage variable has no effect on tax avoidance. This is contrary to previous research conducted by Suyanto & Kurniawati T, (2022), leverage is positive affected by tax avoidance. The result of this study is not accordance with grand theory which the high level of leverage means that there will be efforts to take tax avoidance actions, by maximizing the profit from interest expenses as a reduction in taxes that must be paid by the company.

3) Result of 3rd Hypothesis Test (H3)

Capital intensity (X3) variable result is $0.0037 < 0.05$, indicating that H3 is accepted, meaning that capital intensity has a positive effect on tax avoidance. This is in line with previous research conducted by Prabowo A & Sahlan R, (2021), which showed that capital intensity has a positive effect on tax avoidance. This is accordance with agency theory which managers as agents will be more motivated to carry out tax avoidance in order to reduce company expenses so that company performance will increase and managers will receive the desired performance compensation.

4) Result of 4rd Hypothesis Test (H4)

The prob value of company size moderating the relationship between profitability and tax avoidance is $0.2125 > 0.05$, indicating H4 is rejected, which means that company size is not able to moderate the relationship between profitability and tax avoidance. This is contrary to previous research conducted by Dongoran P et al., (2024), company size can moderate the relationship between profitability and tax avoidance. The result of this study is not accordance with grand theory which the size of a company's activities can be seen through the size of the company, which in a large company size can lead to tax avoidance loopholes.

5) Result of 5th Hypothesis Test (H5)

The prob value of company size moderating the relationship between leverage and tax avoidance is $0.6155 > 0.05$, indicating H5 is rejected, which means that company size is not able to moderate the relationship between leverage and tax avoidance. This contrary to previous research conducted by Silaen et al., (2024), company size can moderate the relationship between leverage and tax avoidance. The result of this study is not accordance with grand theory which company size has an indirect effect on the use of debt because a large company size means that the assets owned by the company

are also large so that they can be a guarantor of debt to creditors and increase creditor confidence because a large company size describes a good company.

6) Result of 6th Hypothesis Test (H6)

The prob value of company size moderating the relationship between capital intensity and tax avoidance is $0.0027 < 0.05$, indicating H6 is accepted, which means that company size is able to moderate the relationship between capital intensity and tax avoidance. This is in line with previous research conducted Nabila & Kartika, (2023), company size can moderate the relationship between leverage and tax avoidance. This is accordance with agency theory which the larger the company size, the higher the investor's attention. So, the larger the company size with high capital intensity, the higher the possibility of tax avoidance.

5. Conclusion

This study aims to determine and analyze the effect of profitability, leverage and capital intensity on tax avoidance and the role of company size in moderating the effect of profitability, leverage and capital intensity on tax avoidance in property and real estate sector companies listed on the Indonesia Stock Exchange in 2021 - 2023. Based on the results of panel data testing using E-Views 12 software, the following conclusions can be drawn:

- 1) Profitability has no effect on tax avoidance.
- 2) Leverage has no effect on tax avoidance,
- 3) Capital intensity has an effect on tax avoidance.
- 4) Company size is unable to moderate profitability against tax avoidance.
- 5) Company size is unable to moderate leverage on tax avoidance.
- 6) Company size is able to moderate capital capital intensity towards tax avoidance

References

- Dongoran P, Widayati N, Priandini E, Safitriawati T, & Hawa S. (2024). Pengaruh Profitabilitas, Leverage Dan Umur Perusahaan Terhadap Penghindaran Pajak Dengan Ukuran Perusahaan Sebagai Variabel Moderasi (Studi Kasus Pada Perusahaan Pertambangan Sub Sektor Batu Bara Yang Terdaftar Di Bei Periode 2017 – 2021). VOL 4, NO 1.
- Faizah, K. (2022). Corporate Governance, Profitabilitas, Laverage Dan Penghindaran Pajak: Ukuran Perusahaan Sebagai Variabel Moderasi. *Jurnal Sosial Ekonomi Bisnis*, 2(1), 15–26. <https://doi.org/10.55587/jseb.v2i1.31>
- Indonesia Stock Exchange. (2024). Financial Statements & Annual Report. <https://www.idx.co.id/id>
- Julianty, I., Agung Ulupui, I. G. K., & Nasution, H. (2023a). Pengaruh Financial Distress Dan Capital Intensity Terhadap Tax Avoidance Dengan Ukuran Perusahaan Sebagai Pemoderasi. *Jurnal Informasi, Perpajakan, Akuntansi, Dan Keuangan Publik*, 18(2), 257–280. <https://doi.org/10.25105/jipak.v18i2.17171>
- Julianty, I., Agung Ulupui, I. G. K., & Nasution, H. (2023b). Pengaruh Financial Distress Dan Capital Intensity Terhadap Tax Avoidance Dengan Ukuran Perusahaan Sebagai Pemoderasi. *Jurnal Informasi, Perpajakan, Akuntansi, Dan Keuangan Publik*, 18(2), 257–280. <https://doi.org/10.25105/jipak.v18i2.17171>
- Nabila, K., & Kartika, A. (2023a). Pengaruh Capital Intensity dan Komisaris Independen terhadap Penghindaran Pajak dengan Ukuran Perusahaan sebagai Variabel

- Moderasi. *Ekonomis: Journal of Economics and Business*, 7(1), 591.
<https://doi.org/10.33087/ekonomis.v7i1.746>
- Nabila, K., & Kartika, A. (2023b). Pengaruh Capital Intensity dan Komisaris Independen terhadap Penghindaran Pajak dengan Ukuran Perusahaan sebagai Variabel Moderasi. *Ekonomis: Journal of Economics and Business*, 7(1), 591.
<https://doi.org/10.33087/ekonomis.v7i1.746>
- Prabowo A, & Sahlan R. (2021). Pengaruh Profitabilitas, Leverage, Dan Capital Intensity Terhadap Penghindaran Pajak Dengan Ukuran Perusahaan Sebagai Variabel (Moderating) (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di BEI Tahun 2015-2019). Vol. 6(Akuntansi Perpajakan).
<http://journal.uta45jakarta.ac.id/index.php/MAP>
- Silaen, M. S., Safrianti, S., & Waliamin, J. (2024). Pengaruh Profitabilitas dan Leverage terhadap Penghindaran Pajak dengan Ukuran Perusahaan sebagai Variabel Moderasi: Studi Kasus Tahun 2020-2022 pada Perusahaan Sektor Property and Real Estate yang Terdaftar di Bursa Efek Indonesia. *VISA: Journal of Visions and Ideas*, 4(3), 2024.
- Suyanto, & Kurniawati T. (2022). Profitabilitas, Pertumbuhan Penjualan, Leverage, Penghindaran Pajak: Ukuran Perusahaan Sebagai Variable Moderasi. *Jurnal Manajemen Terapan Dan Keuangan (Mankeu)*, Vol. 11 No. 04.