Analysis of Profitability, Leverage, and Company Size on Tax-Avoidance

Pratika Intan Mandasari[1], Akhmad Yasir Mubarok[2], Sunita Dasman[3], Muhamad Syahwildan[4]
Universitas Pelita Bangsa

Corresponding author: Akhmad Yasir Mubarok
Email: yasirmubarok42@gmail.com

Abstract
This study aims to determine the effect of profitability, leverage, and company size on tax avoidance in property and real estate sector companies listed on the Indonesia Stock Exchange for the 2017-2021 period. Taxes in Indonesia from year to year never reach the target, although in terms of nominal it has increased from year to year. The applicable tax collection in Indonesia is a self-assessment system, a system that requires taxpayers to calculate the amount of tax owed themselves. The weakness of this tax system is that it can lead to tax fraud and violations in the form of efforts to avoid or fight taxes (tax avoidance). The factors that cause companies to avoid paying taxes include: profitability, leverage and company size. This study uses a quantitative research approach, the type of secondary data obtained from the official website of the Indonesia Stock Exchange and the company concerned. Data analysis using descriptive analysis, panel data regression selection, followed by classical assumption test including normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. The statistical method uses panel data regression analysis. The results show that profitability has a significant negative effect on tax avoidance, leverage has a significant effect on tax avoidance and company size has no effect on tax avoidance in property and real estate sector companies listed on the Indonesia Stock Exchange for the 2017-2021 period.

Keywords: Leverage, Profitability, Company Size and Tax Avoidance

Introduction

Taxes are one of the indicators contributing to the State Budget (APBN) that can influence economic growth. The tax authorities and the country's tax regulations serve as tools for the government to develop the national economy, regulate government policies, balance the economy, and generate income within the country. Taxes contribute almost 80% to state revenue. From 2016 to 2020, state revenue from taxes experienced positive growth, but it was not accompanied by a consistent and effective collection rate. This has motivated the government to make efforts to improve tax collection, aiming for the optimal utilization of tax revenue for development. However, contrary to expectations, government efforts are considered less effective and unsuccessful. The accumulation of tax revenues in Indonesia each year still shows a gap between the target and the actual realization of tax revenues annually.

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Figure 1. Realization of Tax Revenue

Figure 1 shows that tax revenue in Indonesia has never reached its target from year to year, even though it has increased nominally each year. If we look at the period from 2018 to 2020, the percentage of achievement has been decreasing: 92.35% in 2018, 84.44% in 2019, and a further decrease to 63.28% in 2020. Based on the 2021 State Budget report, in January 2021, the realization of tax revenue from the construction and real estate sectors contracted by 33.02% year on year (yoy). This figure is worse than the achievement in the same period last year, which was -15.7%. This phenomenon indicates factors affecting the decline in tax revenue over the past two years without improvement.

The Indonesian government is striving to optimize tax revenue to tap into the country's potential as a source of income. However, many companies or entities do not respond positively to these efforts. Companies aim to maximize profits, viewing taxes as a burden that can reduce their profits. The tax collection system in Indonesia operates under a self-assessment system, which requires taxpayers to calculate their own tax liabilities. The drawback of this self-assessment system in taxation is its potential for abuse and tax evasion, where entities try to avoid or resist taxes (Mulyani, Darminto, and Endang, 2014, as cited in Dewinta and Putu, 2016).

Several factors influence companies' responses to tax payment. Leverage represents the amount of debt a company uses for financing its operational activities. In debt financing, there is an interest cost component that reduces taxable income. This can reduce a company's tax liability and create opportunities for tax avoidance. Research by Oktamawati (2017) indicates that leverage has a significant positive effect on tax avoidance. Profitability, generating earnings using total assets, is another factor influencing tax avoidance. A study by Maria (2020) shows that return on assets (ROA) has a positive effect on tax avoidance. Additionally, as taxpayers, companies' size is considered to affect how they meet their tax obligations and can lead to tax avoidance. Research by Vidiyanna and Bella (2017) indicates that company size has a positive effect on tax avoidance. Previous studies have identified various factors influencing tax avoidance, including profitability, leverage, and company size, but the results have been inconsistent. This study aims to re-examine the variables influencing tax avoidance in property and real estate companies listed on the Indonesia Stock Exchange from 2017 to 2021.

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Method

The research conducted by the researcher utilizes a quantitative approach employing both deductive and inductive reasoning. The main objective is to test theories, reinforce facts, demonstrate relationships between variables, provide statistical descriptions, estimate, and forecast the results of a study. The population of this research includes all property and real estate sector companies listed on the Indonesia Stock Exchange during the period from 2017 to 2021, totaling 80 companies. The sampling technique employed is purposive sampling, resulting in a sample size of 10 companies. This study adopts a hypothesis testing method and falls under the cause-and-effect (influence) relationship type. The primary aim is to investigate the influence of profitability, leverage, and company size on Tax Avoidance in the property and real estate sector from 2017 to 2021. Tax avoidance is measured by Cash Effective Tax Rate (CETR), leverage is measured by Debt-to-Equity Ratio (DER), profitability is measured by Return On Assets (ROA), and company size is measured by the natural logarithm of total assets (Ln total Aset). The dependent variable is Tax Avoidance, representing the variable influenced by the influencing variables. Data analysis involves descriptive analysis, panel data regression selection, and classic assumption tests, including tests for normality, multicollinearity, heteroskedasticity, and autocorrelation. Statistical methods include panel data regression analysis, and data interpretation is performed using Eviews 9 software. Descriptive statistical analysis will reveal mean values, minimum and maximum values. Subsequently, the research aims to find a suitable model among the Common Effect Model, Fixed Effect Model, and Random Effect Model in selecting the appropriate model for panel data research. Several tests, including the Chow Test, Hausman Test, and LM Test, are conducted to determine the suitable model.

Results And Discussion

Descriptive statistical analysis aims to determine the mean values, minimum and maximum values, and standard deviation. Descriptive analysis of variables such as profitability, leverage, company size, and tax avoidance for 10 companies listed on the Indonesia Stock Exchange from 2017 to 2021, using Eviews 9 application, yielded the data presented in Table 2 as follows:

Table 1. Descriptive Analysis

Date: 07/26/22 Time: 16:39 Sample: 2017 2021				
	TAX_AVOIDANCE	PROFITABILITY	LEVERAGE	SIZE_PERUSAHAAN
Mean	0.150176	0.070156	0.540104	26.56000
Median	0.056400	0.052000	0.437000	28.00000
Maximum	0.808300	0.243800	3.605500	32.00000
Minimum	0.003200	0.000700	0.041500	22.00000
Std. Dev.	0.197899	0.059051	0.583864	3.124361
Skewness	1.576219	0.791138	3.824036	0.155224
Kurtosis	4.666029	3.027776	19.15308	1.588941
Jarque-Bera	26.48650	5.217431	665.4476	4.348883
Probability	0.000002	0.073629	0.000000	0.113672

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Sum	7.508800	3.507800	27.00520	1328.000
Sum Sq. Dev.	1.919028	0.170862	16.70394	478.3200
Observations	50	50	50	50

Sumber: olah data eviews 9, 2022

The results of the Descriptive Statistical Analysis of the Tax Avoidance variable (Y) show a minimum value of 0.003200, a maximum value of 0.808300, a mean of 0.150176, and a standard deviation of 0.197899. From the data, it can be observed that the average tax avoidance value is smaller than the standard deviation (0.150176 < 0.197899), indicating a significant variation in tax avoidance among the sampled companies. The mean tax avoidance value is closer to the minimum value, suggesting a relatively low average tax avoidance within this sample.

The Descriptive Statistical Analysis of the Profitability variable (X1) yields a minimum value of 0.000700, a maximum value of 0.243800, a mean of 0.070156, and a standard deviation of 0.059051. The data indicates that the mean value is greater than the standard deviation (0.070156 > 0.059051), suggesting little variability in profitability among the companies sampled. The mean profitability value is closer to the minimum, indicating a relatively low average profitability within this sample.

The Descriptive Statistical Analysis of the Leverage variable (X2) produces a minimum value of 0.041500, a maximum value of 3.605500, a mean of 0.540104, and a standard deviation of 0.583864. The data shows that the mean value is smaller than the standard deviation (0.540104 < 0.583864), indicating a considerable variation in leverage among the sampled companies. The mean leverage value is closer to the minimum, suggesting a relatively low average leverage within this sample.

The Descriptive Statistical Analysis of the Company Size variable (X3) results in a minimum value of 22.00000, a maximum value of 32.00000, a mean of 26.56000, and a standard deviation of 3.124361. The data reveals that the mean value is greater than the standard deviation (26.56000 > 3.124361), indicating limited variability in company size among the sampled companies. The mean company size value is closer to the minimum, indicating a relatively low average company size within this sample.

Estimation of Panel Data Regression Models

In this study, the researcher sought a suitable model among the Common Effect Model, Fixed Effect Model, and Random Effect Model. In selecting the appropriate model for the panel data study, several tests were conducted, including the Chow Test, Hausman Test, and LM Test. The following are the results of the regression tests:

Table 3. Chow Test Results

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Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects
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Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.833186	(9,37)	0.0947
Cross-section Chi-square	18.436948	9	0.0304

Source: data processing eviews 9, 2022

It can be concluded that H0 is accepted, as the result of the Cross-section Chi-square is greater than alpha (0.0304 < 0.05), indicating that the model used in this research test is the Fixed Effect Model.

Table 4 Hausman Test Results

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	2.438760	3	0.4865

Source: data processing eviews 9, 2022

The results of the Hausman Test show that the probability F value for Cross Section Random is greater than alpha (0.4865 > 0.05), thus H0 is accepted. Therefore, based on the Hausman test, the selected model is the Random Effect Model.

Conclusions from Test Results.

Table 5 Testing Results

No.	Metode	Pengujian	Hasil uji	Model Terpilih
1.	Chow Test	Common effect Model Vs Fixed Effect Model	Cross-section Chi-square (0.0304 < 0,05)	Fixed Effect Model
2.	Uji Hausman	Fixed effect Model Vs Random Effect Model	Cross-section random (0.4865 > 0.05)	Random Effect Model

Source: processed by the author, 2022

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Table 5 comparison indicates that the model selected in the study is the Random Effect Model.

Research Panel Data Model

Here are the results of selecting the panel data regression model, which is the Random Effect Model.

Table 6 Random Effect Model Results

Dependent Variable: TAX_AVOIDANCE
Method: Panel EGLS (Cross-section random effects)
Date: 07/26/22   Time: 16:29
Sample: 2017 2021
Periods included: 5
Cross-sections included: 10
Total panel (balanced) observations: 50
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.517295	0.255303	2.026201	0.0486
PROFITABILITY	-1.368160	0.424590	-3.222308	0.0023
LEVERAGE	0.071359	0.044843	1.591287	0.1184
SIZE_PERUSAHAAN	-0.011659	0.009053	-1.287970	0.2042

Effects Specification

			S.D.	Rho
Cross-section random			0.071462	0.1836
Idiosyncratic random			0.150691	0.8164

Weighted Statistics

R-squared	0.291561	Mean dependent var		0.103033
Adjusted R-squared	0.245359	S.D. dependent var		0.172405
S.E. of regression	0.149769	Sum squared resid		1.031811
F-statistic	6.310510	Durbin-Watson stat		1.898899
Prob(F-statistic)	0.001122			

Unweighted Statistics

R-squared	0.361833	Mean dependent var		0.150176
Sum squared resid	1.224661	Durbin-Watson stat		1.599875

Source: data processing eviews 9, 2022

Classic Assumption Test

The tests conducted include normality test, multicollinearity test, heteroskedasticity test, and autocorrelation test. The testing tools used statistical software Eviews 9.

Normality Test

The normality test is to check whether the regression model of the independent variables is normally distributed or not. The following is a table of normality test results:

Table 7 Normality Test Results
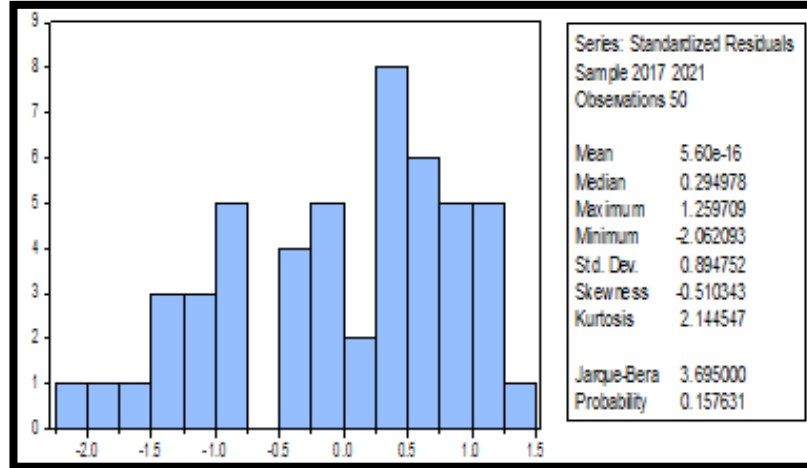
Source: data processing eviews 9, 2022

It can be seen that this data is normal data. Because the results of the normality test above show a probability value greater than 0.05 (0.157631 > 0.05), then H0 is accepted or the data has a normal distribution.

Multicollinearity Test

In this study, a multicollinearity test is required to determine whether there is a relationship between the correlations of independent variables or not.

Table 8 Multicolonierity Test Results

	PROFITABILITY	LEVERAGE	SIZE_PERUSAHAAN
PROFITABILITY	1.000000	-0.279030	-0.070857
LEVERAGE	-0.279030	1.000000	-0.270762
SIZE_PERUSAHAAN	-0.070857	-0.270762	1.000000

Source: data processing eviews 9, 2022

The test results indicate that all variables have values < 0.80, suggesting that there is no multicollinearity issue in this study. Thus, the regression model is deemed suitable for use.

Heteroscedasticity Test

The heteroskedasticity test can be conducted using the White test. Heteroskedasticity is considered not to occur in this study if the significance value is > 0.05. The results of the heteroskedasticity test are as follows:

Table 9 Heteroscedasticity Test

Heteroskedasticity Test: White			
F-statistic	1.044688	Prob. F(9,40)	0.4231
Obs*R-squared	9.515966	Prob. Chi-Square(9)	0.3911
Scaled explained SS	21.40417	Prob. Chi-Square(9)	0.0110

Source: data processing eviews 9, 2022

The test results indicate Prob. Chi-Square $> \alpha$ (0.05), which is $0.3911 > 0.05$, then H1 is rejected, and H0 is accepted. Thus, it indicates that heteroskedasticity does not occur.

Autocorrelation Test

Autocorrelation test is an analysis conducted to determine the presence of correlation in the predictive model over time changes.

Table 10 Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.922934	Prob. F(2,44)	0.4049
Obs*R-squared	2.013124	Prob. Chi-Square(2)	0.3655

Source: data processing eviews 9, 2022

The results of the Autocorrelation Test show that the Prob. Chi-Square value is greater than 0.05 ($0.3655 > 0.05$), thus not rejecting H0 or indicating the absence of autocorrelation.

Hypothesis Test

The hypothesis testing conducted by the researcher involves using the calculated figures based on the chosen or specified proxies and examining their influence. Hypothesis testing includes statistical t-tests and determinant coefficient tests.

Statistic Test

The t-test is used to partially examine whether the independent variables, profitability (X1), leverage (X2), and company size (X3), have a significant effect on the dependent variable, tax avoidance (Y). The analysis uses a significance level (alpha, α) of 5% (0.05) and degrees of freedom (df) equal to n-k-1. Here are the results of the t-test using the selected model, which is the Random Effect Model.

Table 11. T Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.517295	0.255303	2.026201	0.0486
PROFITABILITY	-1.368160	0.424590	-3.222308	0.0023
LEVERAGE	0.071359	0.044843	1.591287	0.1184
SIZE_PERUSAHAAN	-0.011659	0.009053	-1.287970	0.2042

Source: data processing eviews 9, 2022

Based on table 11. The results of the t test show the results of partial hypothesis testing, namely: The profitability variable for Tax Avoidance has a t-count value greater than the t-table (3.333405 > 2.01174) with a significant value of 0.0023 < 0.05 and has a negative regression coefficient value of (-1.368160), it can be concluded that H0 is rejected and H1 is accepted or partially profitability has a negative effect on tax avoidance.

The leverage variable on Tax Avoidance has a t-count value smaller than the t-table (1.591287 < 2.01174) with a significant value of 0.1184 > 0.05, so it can be concluded that H0 is accepted and H1 is rejected or partially leverage has no effect on tax avoidance.

The company size variable on Tax Avoidance has a t-count value smaller than the t-table (1.287970 < 2.01174) with a significant value of 0.2042 > 0.05, so it can be concluded that H0 is accepted and H1 is rejected or partially company size has no effect on tax avoidance.

Determinant Coefficient Test (R2)

The coefficient of determination measured by Adjusted R Square in table 12 shows the ability of the multiple regression equation to indicate the level of model explanation of the dependent variable.

Table 12 Determinant Coefficient (R2)

Weighted Statistics			
R-squared	0.291561	Mean dependent var	0.103033
Adjusted R-squared	0.245359	S.D. dependent var	0.172405
S.E. of regression	0.149769	Sum squared resid	1.031811
F-statistic	6.310510	Durbin-Watson stat	1.898899
Prob(F-statistic)	0.001122		

Source: data processing eviews 9, 2022

Based on table 12 above, the coefficient of determination (R2) is 0.245359, which means that the dependent variable, namely tax avoidance, can be explained by the independent variables, namely profitability, leverage and company size, which is 24.53%, while the remaining 75.47% is

explained by other variables outside research model, the independent variable in terms of explaining the dependent variable.

Results

The results of the tests conducted on the profitability variable against Tax Avoidance show that the calculated t-value is greater than the t-table (3.333405 > 2.01174) with a significant value of 0.0023 < 0.05 and a negative regression coefficient of -1.368160. Therefore, H0 is rejected, and H1 is accepted, indicating that profitability has a negative partial effect on tax avoidance. This finding aligns with the studies conducted by Winoto and Indarti (2015) and Sari and Kurniasih (2013), revealing that profitability, approximated by Return on Assets, has a negative impact on Cash Effective Tax Rate (CETR).

The test results for the leverage variable against Tax Avoidance show that the calculated t-value is smaller than the t-table (1.591287 < 2.01174) with a significant value of 0.1184 > 0.05. Therefore, H0 is accepted, and H1 is rejected, indicating that leverage does not have a significant partial effect on tax avoidance. This result is consistent with prior research conducted by Hidayah, Masitoh, Dewi (2020), demonstrating that leverage, proxied using Debt to Equity Ratio (DER), does not influence tax avoidance.

The test results for the company size variable against Tax Avoidance show that the calculated t-value is smaller than the t-table (1.287970 < 2.01174) with a significant value of 0.2042 > 0.05. Consequently, H0 is accepted, and H1 is rejected, indicating that company size does not have a significant partial effect. This finding is in line with previous research conducted by Permata, Nurlaela, & Masitoh (2012), indicating that company size, in a partial sense, does not influence tax avoidance.

Conclusions

Based on the research findings on the influence of profitability, leverage, and company size on tax avoidance in the property and real estate sector for the period 2017-2022, it can be concluded that the partial test results indicate a negative effect of profitability on tax avoidance in property and real estate companies listed on the Indonesia Stock Exchange (BEI) from 2017 to 2021. The higher the profitability level, the smaller the tax avoidance conducted by the company. The partial test results also indicate that leverage does not affect tax avoidance in property and real estate companies listed on the BEI from 2017 to 2021. Companies are more cautious about the amount of debt they hold, which includes their obligation to pay taxes. The partial test results further show that the size of the company does not influence tax avoidance in property and real estate companies listed on the BEI from 2017 to 2021. Company management tends to prioritize internal conditions and is less likely to engage in tax avoidance.

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