

The Effect of Tax Planning and Leverage on Firm Value with Firm Size as a Moderating Variable

Samuel Niko Putra, Mayangsari Edastami*

Program Studi Magister Akuntansi, Fakultas Ekonomi dan Bisnis, Universitas Esa Unggul

*Correspondence: mayang.sari@esaunggul.ac.id

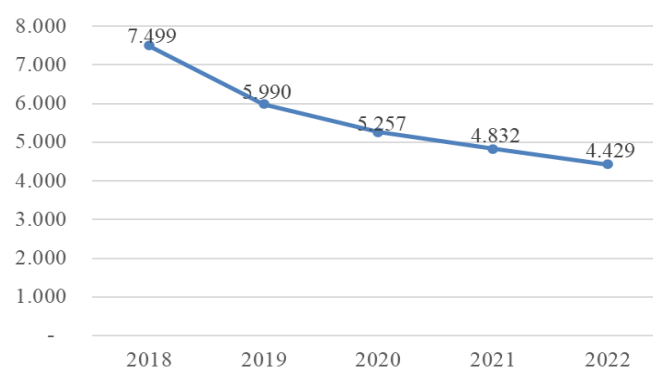
ABSTRACT

This study aims to examine the influence of tax planning and leverage on firm value using firm size as a moderating variable. The model employed in this study is a descriptive quantitative research design using secondary data. The population in this study includes consumer goods sector companies listed on the Indonesia Stock Exchange from 2018-2023. The sample selection process used a purposive sampling method, resulting in 156 observations from 26 companies selected as samples. Hypothesis testing is conducted using a moderation analysis model. The results of the study indicate that tax planning affects firm value and leverage affects firm value. Firm size as a moderating variable is capable of moderating the influence of tax planning and leverage on firm value.

Keywords : *tax planning, leverage, firm value, firm size.*

INTRODUCTION

Firm value is an assessment by investors regarding the success level of a company, often linked to its stock price. Firm value is a key concept in various fields of economics, finance, and management. It represents investors' perception of the company, which is generally associated with its stock price (Hendrani & Septyanto, 2021). Simply put, firm value reflects how valuable a business entity is in the market. This concept not only influences the company's financial health but also serves as an important benchmark for various stakeholders, including investors, creditors, and other stakeholders. Therefore, research on firm value becomes an intriguing subject for further exploration. One sector that is interesting to study is the Consumer Goods sector. Tax planning, as one of the factors that may affect firm value (Le et al., 2022), requires in-depth analysis. Ineffective tax planning strategies can result in financial losses for the company.



Source: www.idx.co.id (processed data)

Figure 1
Average Stock Prices in the Consumer Goods Sector

The decline in stock prices in Indonesia's consumer goods sector during the 2018-2022 period was caused by several key factors. One of these was changes in global and domestic economic dynamics, including the impact of the trade war between the United States and China, which affected global markets, as well as the slowdown in Indonesia's economic growth. In this sector, several issuers experienced significant declines. Major companies such as Unilever Indonesia (UNVR) and

Indofood Sukses Makmur (INDF) saw stock price drops due to increased production costs driven by rising commodity and raw material prices (Bisnis.com). Additionally, the tobacco sector, which is part of consumer goods, faced pressure from stricter regulations and higher cigarette excise taxes, affecting the stock prices of companies such as HM Sampoerna (HMSP) and Gudang Garam (GGRM).

Research on firm value lies in a better understanding of how firm value is created, maintained, and enhanced. Managers, with a deep understanding of the factors influencing firm value, can make better decisions to increase firm value and maximize shareholder returns. Agency theory posits that tax planning can harm firm value because managers may reduce reported profits or tax liabilities (Le et al., 2022).

One strategy companies use to minimize their tax burden is through tax planning. By optimizing their tax structure and utilizing various available tax incentives, companies can reduce their tax burden and increase net profit available to shareholders. Although tax reduction can lead to higher post-tax profits, the actual costs and possible hurdles may prevent companies from achieving maximum post-tax profits through tax planning (Khaoula & Moez, 2019). Meanwhile, the primary reason for using debt is the favorable tax effects. Interest paid on debt is typically deductible from taxable income, resulting in significant tax savings. This can increase net profit and overall firm value. Leverage can enhance potential returns for shareholders. By using borrowed funds to finance investments, companies can acquire more assets or expand their business without using their own capital. If investment returns exceed the cost of debt, overall firm value will increase. Leverage is calculated by dividing total debt by the market value of equity. The leverage ratio is positively related to the cost of debt because the risk of default increases with higher leverage (Gonçalves et al., 2022). If a company's economic performance declines, the risk is lower if its debt level is also low; however, the level of risk faced by the company increases as its debt level rises when economic conditions worsen, due to the larger amount of debt that must be repaid (Wahyudi & Sholahuddin, 2022). In other words, the higher the debt level, the higher the investment risk.

Research on tax planning and its effect on firm value has shown varying results. The study by Le et al. (2022) demonstrates that tax planning can significantly decrease firm value. However, the study by Khaoula & Moez (2019) indicates that tax planning, represented by the effective tax rate (ETR), can significantly increase firm value. Additionally, the study by Ispriyahadi et al. (2021) shows that the relationship between leverage and firm value is negative but not substantially significant. Larger companies are capable of efficient tax planning while managing optimal leverage levels. These companies possess more resources for in-depth analysis and the development of complex strategies compared to smaller companies. Therefore, a research gap exists, prompting the inclusion of firm size as a moderating variable.

Large companies tend to have more operations, subsidiaries, and cross-border transactions, creating more opportunities for complex tax planning, such as transfer pricing management, utilization of subsidies or foreign entities, and intricate financial structures. Firm size can significantly contribute to firm value (Le et al., 2022). Large companies often have access to larger internal tax teams or can hire sophisticated and credible tax consultants, allowing them to implement advanced and complex tax planning strategies, thereby enhancing firm value. In this context, firm size can amplify the impact of tax planning on firm value by enabling the implementation of more complex strategies, greater political influence, and increased access to resources and financial markets.

Large companies have greater access to capital markets and financial institutions, allowing them to borrow at lower costs and obtain larger loan amounts. This enables large companies to use leverage more efficiently to increase firm value. Research by Agustina & Malau (2023) has positioned firm size as a moderator between leverage and firm value. In some cases, large companies can achieve higher operational efficiency through economies of scale and long-term effects, helping them to bear the interest burden of additional debt without sacrificing profitability, thereby increasing firm value. The objective to be achieved is to examine how tax planning and leverage affect firm value, with firm size as a moderating factor. The research is limited to companies in the Consumer Goods sector during the period 2018-2023.

METODE

In this study, the population consists of manufacturing companies in the consumer goods sector listed on the Indonesia Stock Exchange during the period 2018-2023. This research employs a non-random sampling technique, specifically purposive sampling. According to Slamet and Aglis (2020), non-random sampling is a method of sample qualification from the population, where not all members of the population have an equal chance of being included in the sample. Purposive sampling involves selecting samples based on certain characteristics that are deemed to have a close relationship with the known characteristics of the population. The criteria used in this study are as follows:

Table 1
Sample Criteria

No.	Information	Amount
1	Number of consumer goods manufacturing companies listed on the Indonesian Stock Exchange.	52
2	Number of companies experiencing losses during 2018-2023.	(21)
3	Number of companies that do not have complete data suitable for research needs.	(5)
Number of Sample Companies		26
Research Period (years)		6
Number of Samples		156

Source: Processed data

The data is then processed according to each variable and statistically analyzed using panel data regression methods. Panel data analysis is performed using model parameter estimation with panel data, including the common effect model (CEM), fixed effect model (FEM), and random effect model (REM). The best model is selected using the Chow test, Hausman test, and Lagrange multiplier test. To determine the effect between variables, moderation regression analysis is used. Before conducting moderation regression analysis, classical assumption tests are performed. The classical assumption tests for panel data regression include multicollinearity and heteroscedasticity tests. The selection of this method is based on the use of panel data and the inclusion of a moderating variable, such as firm size. Therefore, the moderation regression analysis equations are as follows:

Equation 1: $CV = a + \beta_1.TP + \beta_2.LEV + e$

Equation 2: $CV = a + \beta_1.TP + \beta_2.LEV + \beta_3(TP * FS) + \beta_4(LEV * FS) + e$

CV (Firm Value): Represents a company's ability to provide returns to its stakeholders, managed under legal regulations focused on value enhancement (Liu & Zhang, 2017). Firm value can be measured using the Price to Book Value indicator (Brigham & Houston, 2015). TP (Tax Planning): Refers to carefully planned strategies and steps to manage and optimize a person's or business entity's tax obligations. Tax planning can be measured by the effective tax rate (Khaoula & Moez, 2019; Le et al., 2022). LEV (Leverage): The use of borrowed funds to increase the potential return on investment. In a financial context, leverage can be used to amplify investment returns by increasing the amount of available funds, achieved by using borrowed money. Leverage can be measured using the debt-to-assets ratio (Le et al., 2022). FS (Firm Size): Calculated based on the total asset value per period within the sample period, measured by the natural logarithm (Ln) of total assets.

RESULT

Table 2
Model Selection Test Results

Pemilihan Model Estimasi Data Panel			Nilai Probability	
Uji Chow	H0: CEM; Ha: FEM	Ha: diterima nilai prob. < 0,05	0,0000	FEM
Uji Hausman	H0: CEM; Ha: FEM	H0: diterima nilai prob. > 0,05	0,1022	REM
Uji Lagrange Multiplier	H0: CEM; Ha: FEM	Ha: diterima nilai prob. < 0,05	0,0000	REM

Source: Processed data

Based on the model selection test results in Table 2, the appropriate model for this study is the Random Effect Model (REM).

Table 3
Autocorrelation Test

Variable	Coefficients	t-statistic	Prob.
C	22.40401	2.126076	0.0351
TP	-90.44615	-2.190581	0.0300
Lev	4.892154	5.378372	0.0000
FS	-0.006858	-1.849533	0.0663
TP_FS	3.208009	2.204739	0.0290
Lev_FS	1.351508	56.06269	0.0000
Adjusted R-square			0.955167
F-statistic			661.4583
Prob(F-statistic)			0.000000
Durbin Watson			2.024754

Source: Processed data

Based on the autocorrelation test results in Table 3, the Durbin-Watson statistic is 2.92. This value is compared to the DW table values, where kkk refers to the number of variables 4 variables in this study and N refers to the sample size used in this study 156 samples with a confidence level of 0.05 or 5%. The lower bound for the DW test is $dl=1.68$ and the upper bound is $du=1.79$. Since the calculated DW value of 2.02 falls between the upper bound $du=1.79$ and $4-du=2.21$. Or, as stated in the autocorrelation formula, the values are as follows $du (1,79) < d (2,02) < 4-du (2,21)$, it can be concluded that there is no autocorrelation.

Table 4
Multicollinearity Test Results

TP	1.0000000	0.083829
Lev	0.083829	1.0000000

Source: Processed data

Based on the multicollinearity test results in Table 4, it can be observed that the correlation value is $0.08 < 0.8$, indicating that there is no multicollinearity problem with the research variables. This result shows that one classical assumption test has been met. In this study, the selected model is the REM, so the estimation technique used is Generalized Least Squares (GLS). According to Napitupulu (2021), heteroscedasticity will not occur in the REM model because GLS has been used as one of the techniques to address heteroscedasticity. Therefore, this study only uses the multicollinearity test for the classical assumption tests.

Table 5
Results of Moderation Regression Analysis for Equation 1

Variable	Coefficients	t-statistic	Prob.
C	1.581884	0.714802	0.9938
TP	-1.862762	-0.359466	0.0351
Lev	8.283311	2.074123	0.0000
Adjusted R-square			0.845841

Source: Processed data

Based on the results of the regression analysis for Equation 1, it is found that the TP variable has a t-statistic value of -0.3594 with a probability value of $0.0351 < 0.05$, indicating that the TP variable has an effect on the CV variable. The Lev variable has a t-statistic value of 2.0741 with a probability value of $0.0000 < 0.05$, suggesting that the Lev variable has an effect on the CV variable. The adjusted R-squared value is 0.8458, which means that the contribution of the TP and Lev variables to the CV is 84.58%. The regression analysis model for Equation 1 is as follows:
 $CV = 1.5818 + 1.8627TP + 8.2833LEV + e$

Table 6
Results of Moderation Regression Analysis for Equation 2

Variable	Coefficients	t-statistic	Prob.
C	22.40401	2.126076	0.0351
TP	-90.44615	-2.190581	0.0300
Lev	4.892154	5.378372	0.0000
FS	-0.006858	-1.849533	0.0663
TP_FS	3.208009	2.204739	0.0290
Lev_FS	1.351508	56.06269	0.0000
Adjusted R-square			0.955167
F-statistic			661.4583
Prob(F-statistic)			0.000000
Durbin Watson			2.024754

Source: Processed data

Based on the results of the regression analysis for Equation 2, it is found that the TP_FS variable has a t-statistic value of 2.2047 with a probability value of $0.0290 < 0.05$, indicating that the moderating variable effectively moderates the relationship with the CV variable. The Lev_FS variable has a t-statistic value of 56.0626 with a probability value of $0.0000 < 0.05$, suggesting that the moderating variable significantly moderates the effect on the CV variable. The adjusted R-squared value is 0.9551, which means that the contribution of the TP, Lev, TP_FS, and Lev_FS variables to the CV is 95.51%. The regression analysis model for Equation 2 is as follows:

$$CV = 22.4040 - 90.4461TP + 4.8921Lev + 3.2080(TP_FS) + 1.3515(Lev_FS) + e$$

This study examines the relationship between the dependent variable, firm value (CV), and the independent variables, namely tax planning (TP), leverage (Lev), and firm size (FS). From Table 7, the critical t-value is 1.66. The results show that the t-value for tax planning is -2.19, which is greater than 1.65, and the probability value is $0.03 < 0.05$, indicating that tax planning has a negative effect on firm value. For leverage, the t-value is 5.37, which is greater than 1.65, and the probability value is $0.00 < 0.05$, indicating that leverage has a positive effect on firm value.

Based on the model testing using the Random Effect model in Table 6, the F-statistic is 661.45, which is greater than the critical F-value of 3.05, and the probability value for the F-statistic is $0.00 < 0.05$. This indicates that TP, Lev, TP_FS, and Lev_FS have a simultaneous effect on firm value. According to Table 6, the adjusted R-squared value is 0.9551. This means that the contribution of the variables TP, Lev, TP_FS, and Lev_FS to firm value (CV) is 95.51%. The remaining 4.49% is determined by other factors not examined in this study.

Tax planning has a negative effect on firm value

Based on the test results, the p-value for the tax planning variable is $0.03 < 0.05$, which supports Hypothesis 1 and aligns with Le et al. (2022). Effective tax planning enables a company to manage its tax obligations more efficiently and appear compliant with tax regulations (Habibah, 2021). However, aggressive tax planning can increase the risk of penalties or litigation from tax authorities, create uncertainty among stakeholders, and require significant resources (Yani & Stiawan, 2022). This is because investors respond to tax rates paid by companies as reasonable according to government regulations. Higher tax payments reduce the company's net profit, which affects the amount of dividends and ultimately has a negative impact on firm value.

Leverage affects firm value

The test results indicate that leverage significantly impacts firm value, with a p-value for leverage of $0.00 < 0.05$, thus confirming Hypothesis 2. This finding is consistent with Wahyudi & Sholahuddin (2022). This implies that as leverage increases, the risk of investment also rises, affecting firm value (Le et al., 2022). Firm value can be positively influenced depending on how leverage is managed and the overall financial condition of the company. Effective leverage management can be crucial in enhancing firm value. Financial managers need to consider optimal leverage strategies to maximize firm value while balancing associated risks and benefits.

Firm size strengthens the impact of tax planning on firm value

The statistical test results show that firm size significantly moderates the relationship between tax planning and firm value, with a p-value for firm size of $0.02 < 0.05$. Thus, Hypothesis 3 is accepted. Larger companies are expected to generate substantial profits, which can enhance their capital structure. Larger firms likely have more opportunities to engage in complex tax planning and optimize their tax structure. They may also have more resources to employ tax experts who can help identify potential tax benefits and risks. Firm size contributes to increased firm value (Le et al., 2022). Companies with large total assets often have more complex organizational structures, with numerous subsidiaries and different business units. This can create more opportunities for tax planning, such as business restructuring or asset transfers between subsidiaries, which contributes to firm value.

Firm size strengthens the impact of leverage on firm value

The statistical test results show that firm size significantly moderates the relationship between leverage and firm value, with a p-value for firm size of $0.00 < 0.05$. Thus, Hypothesis 4 is accepted. According to Le et al. (2022), firm size contributes to increased firm value. Companies with large total assets can more easily obtain loans at lower interest rates, leading to a better capital structure and reduced overall financial costs. Conversely, smaller firms may face difficulties in accessing loans with competitive interest rates.

CONCLUSION

This study aimed to examine the impact of tax planning and leverage on firm value, with firm size as a moderating variable. The research data were sourced from 26 consumer goods companies listed on the Indonesia Stock Exchange from 2018 to 2023. It can be concluded and discussed that tax planning affects firm value, and leverage also influences firm value. Additionally, firm size can strengthen the impact of both tax planning and leverage on firm value.

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