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The Effect of Liquidity, Firm Size, Executive Characteristics, Leverage, and Sales Growth on Tax Avoidance

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Abstract— **This research aims to investigate the influence of liquidity, firm size, executive characteristics, leverage, and sales growth on tax avoidance among companies in the industrial sector listed on the Indonesia Stock Exchange (IDX). The study utilized data from 2018 to 2020, comprising companies from the industrial sector listed on the IDX selected via purposive sampling. Out of 66 companies, 28 were included based on predefined criteria. Panel data regression analysis was employed to analyze the dataset. The findings indicate that Debt to Equity Ratio (DER) negatively affects tax avoidance, implying that an increase in DER by one percent leads to a decrease in tax avoidance. However, liquidity, firm size, executive characteristics, and sales growth were found to have no significant impact on tax avoidance. Therefore, it can be concluded that these variables do not exert the same level of influence as observed in previous studies.**

Keywords— Tax Avoidance, Liquidity, Firm Size, Leverage, Sales Growth.

I. INTRODUCTION

Tax avoidance is a key concern for companies since taxes are considered part of the company's expenses in financial statements. This study aims to identify the variables that influence tax avoidance. An example of a tax avoidance case in Indonesia is highlighted in [1]. The Directorate General of Taxes (DJP) took action against the case of fictitious tax invoices involving the suspect AY through PT EIB, which resulted in a loss of Rp110,723,045,700.00 to the state. The Directorate General of Taxes handed over the suspect and evidence to the South Jakarta District Attorney's Office through investigators from the South Jakarta DJP Office I.

Tax avoidance is a strategy to reduce tax payments, which is permissible under tax laws and regulations, provided it aligns with the company's performance and ability to maintain assets and liquidity. This perspective is supported by research [2], stating that there is a positive effect of company size (small, medium and large) on tax avoidance. In research [3], It is suggested that liquidity negatively influences tax avoidance, emphasizing the company's priority to maintain cash flows rather than bearing the tax burden to ensure financial security.

Leverage can aslo affect tax avoidance [4], In corporate finance, companies that rely on debt financing incur interest costs that contribute to their financial obligations. As debt levels rise, so too do the expenses shouldered by the company, primarily in the form of interest payments. These high interest costs can have a dual effect: they increase the financial burden on the company while also potentially offering tax savings through deductible interest expenses. This strategy, known as tax shield, allows corporations to reduce taxable income, thereby optimizing their tax liabilities and enhancing overall financial efficiency.

In the practice of tax avoidance, the character of company executives also affects, with the aim of getting profits according to company expectations. This is supported by [5], that executive

characteristics have a negative effect on tax avoidance. Executives with risk taker and riks averse characters will avoid any type of opportunity that has potential risk, and prefer to keep most of their assets in relatively safe investments to avoid debt financing and uncertainty of profit levels and vice versa.

Executive characteristics cannot be separated from the level of sales to avoid taxes, the level of sales must be considered, [5], It also suggests that there exists an inverse relationship between sales growth and tax avoidance. As a company's profits increase, its tax liabilities also grow, leading the company to lean towards adopting tax avoidance strategies.

Building upon previous research findings, the authors aim to comprehensively explore the impact of Liquidity, Firm Size, Executive Characteristics, Leverage, and Sales Growth on Cash Effective Tax Rates (CETR). This study focuses on a sample from the industrial sector listed on the Indonesia Stock Exchange (IDX) spanning from 2018 to 2022. The objective is to delve deeper into how these variables collectively influence tax avoidance strategies and overall financial performance within the sector.

II. RESEARCH METHODS

This research employs quantitative methods to examine the relationships between variables. The data used is secondary data sourced from IDX, Stockbit, and Yahoo Finance. From a population of 66 companies, the researchers selected a sample of 28 companies using purposive sampling, based on the criteria that the companies had their IPO before 2018, were not suspended, and had complete financial reports available for the study.

The author conducted descriptive tests to evaluate the minimum value, maximum value, standard deviation, and average value of each variable. Panel data regression, supported by Eviews 12 software, was utilized to analyze the influence of liquidity, firm size, executive characteristics, leverage, and sales growth on tax avoidance.

Supporting data used to measure the research of each variable as follows:
[6], [7], [8], on the dependent variable, tax avoidance, in this study CETR is used as a proxy for tax avoidance.

Tax Avoidance (CETR) $=\frac{payment\ of\ tax}{EBT}$

[9] , In the independen variable liquidity the current ratio (CR) proxy.

Firm size is classified into small, medium, and large based on sales, total assets, and total capital owned by the company itself.[10]
Firm Size = ln(Total Assets)

To measure the level of risk executives take in decision making if the value is> 19%, it indicates that he is a risk taker. Conversely, if <19%, managers are more likely to have a risk-averse attitude [5].

Executive Characteristics (risk) $= -\frac{Total\ Assets}{EBIT}$

The independent variable leverage uses the Dept to Equity Ratio proxy [9].

Sales growth if the sales level increases, tax avoidance will increase [6].

In the panel data regression model, the data support used in this study is :
$Y = \alpha + \beta_1 Current\ Ratio + \beta_2 'Firm\ Size + \beta_3\ Risk + \beta_4 DER + \beta_5 Ssales\ Growth + \varepsilon.$
To determine the regression model used, 3 tests were carried out, namely Chow, Hausman, and Lagrange Multiplier. And then produce a Common Effect Model (CEM), Fixed Effect Model (FEM), or Random Effect Model (REM), which will be chosen as one of the three models to continue the research. After getting the regression model used, it can be continued with the F, R-squared, and T-tests. The classical assumption test is not used in the Gujarati view with the OLS linear regression approach, because what is used is panel data. [11].

III. RESULT AND DISCUSSION

The author utilized Eviews 12 software for data processing and analysis. The results obtained from panel data regression are as follows:

Descriptive Test

Table 1. Descriptive Statistics Test Results

	Liquidity (X_1)	Firm Size (X_2)	Executive Characteristics (X_3)	Leverage (X_4)	Sales Growth (X_5)	Tax Avoidance (Y)
Mean	1.985247	28.44694	15.62999	1.627649	0.157616	0.253575
Median	1.703150	28.14890	9.146100	0.681400	0.093400	0.209750
Maximum	11.76250	33.65520	1065.880	41.47950	6.727300	8.445000
Minimum	0.348300	26.33560	-427.7864	0.067300	-0.710200	-9.615900
Std. Dev.	1.508871	1.574981	138.3999	3.871343	0.649365	1.393061
Skewness	3.793678	1.584618	4.174409	8.197699	7.537486	-0.756599
Kurtosis	21.63965	5.726583	32.99459	82.05944	76.23282	31.71512
Jarque-Bera	2362.527	101.9568	5654.707	38028.69	32610.09	4823.279
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	277.9346	3982.571	2188.199	227.8709	22.06620	35.50050
Sum Sq. Dev.	316.4602	344.7984	2662481.	2083.234	58.61290	269.7458
Observations	140	140	140	140	140	140

The study's findings, presented in Table 1, reveal that tax avoidance, measured by Cash Effective Tax Rates (CETR) as the dependent variable, ranges from a minimum of -9.615900 to a maximum of 8.445000, with a standard deviation of 1.393061 and a mean value of 0.253575. For the independent variables: Liquidity, assessed by the Current Ratio (CR), shows a range from 0.348300 to 11.76250, with a standard deviation of 1.508871 and a mean of 1.985247. Firm Size, measured independently, ranges from 26.33560 to 33.65520, with a standard deviation of 1.574981 and a mean of 28.44694. Executive Characteristics, evaluated through risk, vary from -427.7864 to 1065.880, with a standard deviation of 138.3999 and a mean of 15.62999. Leverage, quantified by the Debt-to-Equity Ratio (DER), ranges from 0.067300 to 41.47950, with a standard deviation of 3.871343 and a mean of 1.627649. Sales Growth, an independent variable, spans from -0.710200 to 6.727300, with a standard deviation of 0.649365 and a mean of 0.157616..

Panel Data Regression Modeling

Table 2. Panel Data Regression Model Selection Results

No	Test Model	Testing	Results
1	Chow Test	CEM or FEM	CEM
2	Hausman Test	FEM or REM	REM
3	Lagrange Multiplier	CEM or REM	CEM

Based on the outcomes of the Chow Test, Hausman Test, and LM Test, the appropriate model selected for this study is the Common Effect Model (CEM). Consequently, the panel data regression analysis adopts the Common Effect Model.

F-Test

Tabel 3. F- Results of panel data regression

R-squared	0.116398
Adjusted R-squared	0.083428
S.E. of regression	1.333685
Sum squared resid	238.3479
Log likelihood	-235.8976

F-statistic	3.530404
Prob(F-statistic)	0.004967

In the panel data regression, the F-test results with a significance level of 5% and N = 140 show that the calculated F value is 3.5304, which exceeds the critical F-table value of 2.2818, with a significance value of 0.004967, indicating statistical significance (sig. < 0.05).

R-Squared

Table 4. R-Squared Results of panel data regression

R-squared	0.116398
Adjusted R-squared	0.083428
S.E. of regression	1.333685
Sum squared resid	238.3479
Log likelihood	-235.8976
F-statistic	3.530404
Prob(F-statistic)	0.004967

The adjusted R-squared score is 0.0834 or 8.34%.

T-Test

Table 5. Panel data regression t-results table

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.085769	2.073786	0.041359	0.9671
X_1	-0.044041	0.077146	-0.570871	0.5690
X_2	0.015536	0.072230	0.215087	0.8300
X_3	0.001192	0.000821	1.451935	0.1489
X_4	-0.115450	0.029796	-3.874710	0.0002
X_5	-0.110558	0.175643	-0.629446	0.5301

Then the results of the panel data regression equation obtained are :
$Y = 0.0858 - 0.0440X1 + 0.0155X2 + 0.0012X3 - 0.1155X4 - 0.1106X5 + \varepsilon$.
The t-test results obtained are as follows:

1. Liquidity (X1) has a t-value of 0.0571, which is below the critical t-table value of 1.9773, with a significance level of 0.5690, indicating no significant impact as $p > 0.05$.
2. Firm size (X2) has a t-value of 0.2151, also below the critical t-table value of 1.9773, and a significance level of 0.83, indicating no significant impact as $p > 0.05$.
3. Executive characteristics (X3) have a t-value of 1.4519, below the critical t-table value of 1.9773, with a significance level of 0.1489, indicating no significant impact as $p > 0.05$.
4. Leverage (X4) has a t-value of 3.8747, exceeding the critical t-table value of 1.9773, with a significance level of 0.0002, indicating a significant impact as $p < 0.05$.
5. Sales growth (X5) has a t-value of 0.6294, below the critical t-table value of 1.9773, with a significance level of 0.5301, indicating no significant impact as $p > 0.05$..

Based on the findings from the data analysis, several conclusions emerge: The adjusted R-squared value of 0.0834 indicates that 8.34% of the variability in the dependent variable can be attributed to the independent variables examined. This suggests that while Liquidity, Firm Size, Executive Characteristics, Leverage, and Sales Growth do influence the dependent variable (CETR), a substantial 91.66% of the variability is influenced by other unaccounted factors in this study.

The effect of the independent variable (X) on the dependent variable (Y) with t table with a value of 1.9773 is as follows :

1. The t-test for liquidity (X1) yields a t-value of 0.0571, which is less than the critical t-table value of 1.9773, with a significance level of 0.5690 (> 0.05). Therefore, the null hypothesis (Ho) is accepted, indicating that liquidity (X1) does not significantly affect Tax Avoidance (Y).
2. The t-test for firm size (X2) results in a t-value of 0.2151, also below the critical t-table value of 1.9773, with a significance level of 0.83 (> 0.05). Hence, Ho is accepted, suggesting that firm size (X2) has no significant impact on Tax Avoidance (Y).
3. The t-test for executive characteristics (X3) shows a t-value of 1.4519, below the critical t-table value of 1.9773, and a significance level of 0.1489 (> 0.05). Therefore, Ho is accepted, indicating that executive characteristics (X3) do not significantly affect Tax Avoidance (Y).
4. The t-test for leverage (X4) yields a t-value of 3.8747, exceeding the critical t-table value of 1.9773, with a significance level of 0.0002 (< 0.05). Thus, the null hypothesis (Ho) is rejected, suggesting that leverage (X4) has a significant effect on Tax Avoidance (Y).
5. The t-test for sales growth (X5) results in a t-value of 0.6294, below the critical t-table value of 1.9773, with a significance level of 0.5301 (> 0.05). Therefore, Ho is accepted, indicating that sales growth (X5) does not significantly affect Tax Avoidance (Y).

In this panel data regression model, the F test results indicate a significance level of 5% with N = 140. The calculated F value of 3.5304 exceeds the critical F table value of 2.2818, with a significance value of 0.004967, which is less than 0.05. In this manner, the invalid speculation (Ho) is rejected, and the elective theory (Ha) is acknowledged. This suggests that the variables of liquidity, firm size, executive characteristics, leverage, and sales growth have a statistically significant impact on tax avoidance within the industrial sector in Indonesia.

IV. CONCLUSION

The analysis indicates that leverage (DER) has a significant impact on tax avoidance. This finding aligns with previous research, which suggests that the use of debt can lower tax liabilities. Conversely, the variables of liquidity, firm size, executive characteristics, and sales growth do not have a significant effect on tax avoidance. The study concludes that the influence of these variables on tax avoidance, as examined in earlier research, may not always hold true. The results can vary depending on factors such as the industry sector and the timeframe of the study.

This research has important implications for government agencies, investors, and company managers:

1. **Government Agencies**: The findings can help encourage policies that promote liquidity and sales growth, potentially reducing tax avoidance practices and increasing state revenues.
2. **Investors:** The study provides insights into the importance of considering liquidity, leverage, and revenue growth, along with other financial factors, when making investment decisions.
3. **Company Managers:** The research suggests the need for maintaining adequate liquidity levels, managing leverage, and ensuring sustainable sales levels to comply with tax laws and avoid aggressive tax avoidance practices, thereby supporting company sustainability.

This study contributes to the literature on tax avoidance factors in Indonesia, particularly in the industrial sector. The findings have significant implications for creating a fairer and more efficient tax system in Indonesia. Future researchers can build on this study to explore tax avoidance factors under varying conditions, thereby enhancing the understanding of what influences tax avoidance.

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