Leverage, Company Size, and Audit Quality Effect on Tax Avoidance in Manufacturing Companies Listed on the Indonesia Stock Exchange and Malaysia Exchange for the 2015-2019 Period

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Abstract: State revenue from the manufacturing sector had the largest share during the period 2015 - 2019 in Indonesia and Malaysia but has not been able to increase the tax ratio due to indications of tax avoidance practices. This research looks at the elements that affect tax avoidance, including leverage, company size, and audit quality. Using certain criteria, 70 samples from the stock markets of both countries were selected, representing the population. Data research has revealed tax avoidance significantly affected by leverage, and size company, but not by the quality of audit. Meanwhile, tax avoidance is significantly influenced by leverage results, company size, and audit quality simultaneously. This study proposes a model for calculating the avoidance potential with the ETR accounting formula.

Keywords: Leverage, Company Size, Audit Quality, Tax Avoidance

INTRODUCTION

Tax revenues, non-tax revenues/PNBP, and grants are components of state revenue. The largest revenue is obtained from taxes so efforts to increase revenue are carried out every year. The contribution of APBN tax revenue is Rp. 1,315.93 trillion in 2018 or 92.41%, grew by 14.33% compared to the realization in 2017. (Kemenkeu APBN Kita RI, 2019).

The International Center for Tax and Development (ICTD) based on research by the International Monetary Fund (IMF) disclosed in Estimating tax avoidance: New findings, the new question shows that the value of global state losses from tax avoidance reaches US$ 600 billion per year, and Indonesia US$ 6.5 billion per year. (Cobham Winder, 2017).

The low development of the tax ratio owned by a country like Indonesia, the index still reaches 11.6% and Malaysia 15.3% growth from Gross Domestic Product (GDP), meaning that, when compared to the Philippines index of 17% as a developing country in Asia, revenue Indonesian and Malaysian taxes are said to be relatively low. The Philippines index has a percentage parallel to Mexico's 17.2% as a comparison for countries outside Asia. (OECD, 2018).
The characteristics of the company's condition provide a clear image for management decisions, and in principle, the degree of leverage, the size of the company and the audit's quality may have an impact on tax avoidance practices. The highest income to the percentage of state tax revenue in 2017 came from manufacturing that are listed IDX. (Kemenperin, 2018).

**LITERATURE REVIEW**

**Tax Avoidance**

Although some research has been done in this field of study, there hasn't been a single definition that is widely acknowledged for tax avoidance, even though the idea of it is not new (Hanlon and Heitzman, 2010; Gebhart, 2017). Even though there are clear conceptual differences between them, there are several ideas to understand. The term “tax avoidance” has been used to describe tax planning, tax management, tax aggressiveness, tax protection, and even tax avoidance (Boussaidi and Hamed, 2015).

According to Maili and Apollo (2020), who were cited by Erly Suandy (2017:20), tax avoidance is an endeavor to minimize the usage of legal forms by making the most of tax laws. According to Hanlon and Heitzman (2010), this is a general definition as any action intended to reduce explicitly levied taxes from taxpayers. These actions can include legal ones that are approved by the tax authorities, like investing in local bonds and opening free trade zone businesses, as well as illegal ones like tax avoidance. Tax protection and other ambiguous tax situations are two examples of specific ways to use tax deductions and exemptions as well as targeted tax benefits through lobbying activity. The aforementioned reasoning leads to the conclusion that aggressive tax avoidance refers to any method of lowering tax liabilities by going beyond what is typically permissible but approved by the tax authorities.

According to Aronmwan and Chinwuba (2019), most previous research on corporate tax avoidance focuses on non-compliant tax avoidance features (decreasing taxable revenue without decreasing accounting income), which is emphasis placed on proper tax avoidance (company efforts to reduce taxable income and accounting income). The tax burden on accounting income before deduction is divided by taxes to determine accounting ETR (Hanlon and Heitzman, 2010).

**Trade Off Theory**

Exchange theory explains the balance of tax protection as the benefits and sacrifices (interest) of the use of corporate debt. (Myers, 1984). This theory is further explained by Frank and Goyal, (2003).

**Positive Accounting Theory**

Accounting theory and business profit management have a good working relationship. The political cost hypothesis, the debt agreement hypothesis, and the bonus system hypothesis are three hypotheses can be used to predict profit management-related metrics or events in accounting, which support positive accounting theory of 1986, according to Watts and Zimmerman (1990).

**Agency Theory**

Theory that suggests a contact the party who gives right power to act (principal) and the party who receives the right (agent). Agency theory explains conflicts or issues that develop between the business's owner and management (Jensen and Meckling, 1976).
**Leverage**

Measurement of the value of assets financed by debt is done using a comparison called leverage. Kasmir (2016:151).

**Company Size**

A company's size may be calculated by subtracting its natural logarithm from its total assets. Hartono (2015:254).

**Audit Quality**

Auditor quality is calculated using the KAP metric. KAP identity is a reflection of audit quality that has an impact on a company's audit outcomes. Erieska (2019) asserts that comparing the audits carried out by the Big Four KAPs and Non-Big Four allows for evaluation audit quality.

**Framework**

Leverage is quantity of loan value owned firm increase business equity and be used for the company's operational activities. The higher the leverage greater the total funds originating from the debt, which results in high interest, thereby reducing the company's tax burden. Previous findings by Hariani (2019) and Kim (2017), leverage significantly influence tax avoidance.

Depending on how big the firm is, companies are categorized as small, medium, and large enterprises according to their company size. Positive accounting theory, which does not require that the accounting process be the same, explains how it influences tax avoidance. The political cost hypothesis is one alternative step that can be chosen because the high political costs the company faces will also cause the company to use accounting as another alternative step that can be chosen. The freedom to choose alternative steps available to maximize the value of the company. Researchers Putri et al. (2018) discovered firm size significantly affects tax avoidance.

According to agency theory, there is a connection between the owner and management. According to several references, the financial statements audited by the main four KAP are of greater quality and have fewer discrepancies than those audited by the other big four KAP. (Nugraheni dan Pratomo, 2018)

High tax payments issued will usually force companies to carry out tax avoidance or tax avoidance, with the audit quality of a company being a good reflection or tend not to manipulate profits for tax purposes. Previous study by Dewi (2015) found that audit quality influences tax avoidance.

The framework thought in form of a paradigm is presented in Figure 1, as follows:

![Figure 1. Research Framework](https://dinastires.org/JAFM)
Hypothesis
A temporary research hypothesis is developed as test material and will be evaluated for accuracy based on the description of the thinking structure given above, where:
H₁: Leverage significantly affects tax avoidance in Indonesia and Malaysia.
H₂: Company size, significantly affects tax avoidance in Indonesia and Malaysia.
H₃: Quality audit, significantly affects tax avoidance in Indonesia and Malaysia.

RESEARCH METHODS
The population and samples from the manufacturing companies listed IDX and Exchange Malaysia that have released annual reports in the 2015–2019 timeframe were gathered using a Purposive sampling technique.

Tax Avoidance
The value of ETR is projected to be used for tax avoidance. Accounting ETR considers the tax burden divided by accounting income before tax (Hanlon and Heitzman, 2010). ETR formula (Hapsari Ardianti, 2019).

\[
ETR = \frac{\text{Tax Expense}}{\text{Income Before Tax}}
\]

Leverage
Leverage is measured using the DER formula (debt ratio), (Kasmir, 2016:157).

\[
DER = \frac{\text{Total Debt}}{\text{Total Assets}}
\]

Company Size
An indicator of the quantity of assets possessed is utilized to calculate a company’s size (Hartono, 2015:282).

\[
\text{Size} = \ln(\text{Total Asset})
\]

Quality Audit
Audit quality is assessed, using the classification of audits performed by public accounting firms, which assigns a value of 1 when the audit is carried out by one of the big four accounting firms and a value of 0 when it is by a non big four firm. Erieska (2019) in Colbert, et al. (1999).

FINDINGS AND DISCUSSION
The following is a combined descriptive analysis of Indonesia and Malaysia, as follows:

<table>
<thead>
<tr>
<th>Table 1. Descriptive Statistics of Indonesia – Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive Statistics</td>
</tr>
<tr>
<td>Sample: 2015 – 2019</td>
</tr>
<tr>
<td>ETR</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Median</td>
</tr>
<tr>
<td>Maximum</td>
</tr>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>Std. Dev.</td>
</tr>
<tr>
<td>Skewness</td>
</tr>
<tr>
<td>Kurtosis</td>
</tr>
</tbody>
</table>
**Jarque-Bera**

<table>
<thead>
<tr>
<th></th>
<th>15.12863</th>
<th>10.37029</th>
<th>19.99709</th>
<th>14.92383</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Probability</strong></td>
<td>0.000519</td>
<td>0.005599</td>
<td>0.000045</td>
<td>0.000575</td>
</tr>
<tr>
<td><strong>Sum</strong></td>
<td>16.86550</td>
<td>29.40024</td>
<td>1984.330</td>
<td>51.00000</td>
</tr>
<tr>
<td><strong>Sum Sq. Dev</strong></td>
<td>0.203189</td>
<td>6.993111</td>
<td>140.6695</td>
<td>13.84286</td>
</tr>
<tr>
<td><strong>Observations</strong></td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
</tbody>
</table>

*Source: Processed data with Eviews v.9.0*

**Table 2. Statistics of Frequency of Indonesian-Malaysian Audit Quality**

<table>
<thead>
<tr>
<th>Variabel</th>
<th>N</th>
<th>Kategori</th>
<th>Frekuensi</th>
<th>Persentase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Quality</td>
<td>70</td>
<td>0 = <em>Non big four</em></td>
<td>19</td>
<td>27.14%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = <em>Big Four</em></td>
<td>51</td>
<td>72.85%</td>
</tr>
</tbody>
</table>

*Source: Processed data 2019*

**Table 3. Indonesian-Malaysian ChowTest**

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

<table>
<thead>
<tr>
<th>Effects Test</th>
<th>Statistic</th>
<th>d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section F</td>
<td>6.019427</td>
<td>(13,53)</td>
<td>0.0000</td>
</tr>
<tr>
<td>Cross-section Chi-square</td>
<td>53.478199</td>
<td>13</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

*Source: Processed data with Eviews v.9.0*

A probability value of 0.0000 is displayed in Table 3. The fixed effect model is chosen when the p-value, or probability value, in the Chow test is less than 0.05, meaning $H_0$ is denied and $H_1$ is approved. Furthermore, using Hausman test the combined sample of processed data from Malaysia and Indonesia, the following holds:

**Table 4. Hausman Test Indonesia – Malaysia**

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>13.415172</td>
<td>3</td>
<td>0.0038</td>
</tr>
</tbody>
</table>

*Source: Processed data with Eviews v.9.0*

Table 4 shows 0.0038 which means the probability value is significant level < 0.05 where $H_0$ is refused and $H_1$ is approved, indicating fixed effect model is the best choice.

A fixed effect that may also be interpreted based on the regression findings for the combined panel data processing of the samples from Malaysia and Indonesia is as follows:
Table 5. Regression Model Fixed Effects Indonesia – Malaysia Method

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.997863</td>
<td>0.690931</td>
<td>2.691550</td>
<td>0.0055</td>
</tr>
<tr>
<td>DER</td>
<td>-0.106395</td>
<td>0.043964</td>
<td>-2.416942</td>
<td>0.0190</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.061533</td>
<td>0.024354</td>
<td>-2.526585</td>
<td>0.0148</td>
</tr>
<tr>
<td>AQU</td>
<td>0.044035</td>
<td>0.024940</td>
<td>1.763546</td>
<td>0.0832</td>
</tr>
</tbody>
</table>

Regression Model Fixed Effects

Source: Processed data with Eviews v.9.0

Multiple panel data regression equation fixed effects for the combined sample Indonesian data processing and Malaysia is ETR = 1.997863 - 0.106395 (DER) - 0.061533 (SIZE) + 0.044035 (AQU). Following is an interpretation of the equation’s value:

a. The constant ($\alpha$) 1.997863, suggesting that the variables $X$ and $Y$ have a positive relationship. This means that if $X_1$ (debt-equity ratio), $X_2$ (company size) and $X_3$ (audit quality) have a fixed value or equal to zero then the value of $Y$ (effective tax rate) decreased by 1.997863.

b. The debt-to-equity ratio and the effective tax rate have a negative correlation, according to the regression coefficient $X_1$ variable (DER), -0.106395. Assuming other independent variables are constant, every 1% increase in $X_1$ increases the $Y$ value (ETR) by 0.106395.

c. Regression coefficient for the variable $X_2$ (SIZE), which is negative and equal to -0.061533, demonstrates that the effective tax rate and company size are negatively correlated. Assuming that all other independent variables are constant, every 1% increase in $X_2$ increases the $Y$ value (ETR) by 0.061533.

d. The variable $X_3$ (AQU) regression coefficient of 0.044035, a positive indication relationship audit quality and tax rate effective. Assuming all other independent variables remain constant, for every 1% rise in $X_3$, the $Y$ value (ETR) decreases by 0.044035.

Results of the Assumptions of the Classical

[Figure 1. Test of Normality Test Indonesia – Malaysia]

Source: Processed Data with Eviews v.9.0
The residual data is determined to be normally distributed by the classical assumption test, or the normality test, with a probability level of 0.058019 indicates value is higher than the standard significant 0.05. The multicollinearity test thus demonstrates that there is no collinearity between both the independent variables since each variable correlation is equal value is less than 0.8, while for the heteroscedasticity test the probability value of 0.05 means that this value gives the conclusion that the regression model has no heteroscedasticity problem, and the autocorrelation test for the processed regression model of the combined sample data of Indonesia and Malaysia shows the Durbin-Watson of 2.174909 and as a comparison uses a substantial value of 5%, of observation much as k 70, and the number of variables there are 3 (k = 3), so that the Durbin-Watson shows value of dL 1.5245 and dU 1.7028, because DW 2.174909 DU 1.7028 and less than 4-DU 2.2972, the results conclude that the regression model is free from autocorrelation.

**Coefficient of Determination (R-Square/R²)**

The R-square test will be employed in this research to see if independent factors influence dependent variables.
Table 9. Coefficient of Determination Results Indonesia – Malaysia

<table>
<thead>
<tr>
<th></th>
<th>Indonesia</th>
<th>Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
<td>0.630984</td>
<td>0.519584</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.519584</td>
<td></td>
</tr>
</tbody>
</table>

Source: Processed Data with Eviews v.9.0

The Adjusted R-squared value of 0.519584, derived from the coefficient of determination findings, indicates that the simultaneous effect of independent variables is 51.95%, while the remaining 48.05% influence is gained from other factors outside of this study.

**t-Test/ Partial**

The partial test's objective is to ascertain if independent variables influence dependent variables.

Table 10. Partial Test Results (t-Test) Indonesia–Malaysia

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.907883</td>
<td>0.600031</td>
<td>2.891550</td>
<td>0.0055</td>
</tr>
<tr>
<td>DER</td>
<td>-0.100395</td>
<td>0.043984</td>
<td>-2.418942</td>
<td>0.0190</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.061533</td>
<td>0.024354</td>
<td>-2.526585</td>
<td>0.0145</td>
</tr>
<tr>
<td>AQU</td>
<td>0.044035</td>
<td>0.024940</td>
<td>1.765645</td>
<td>0.0832</td>
</tr>
</tbody>
</table>

Source: Processed Data with Eviews v.9.0

The following may be inferred from the t-test results for each independent variable:

a) Leverage

The variable leverage test yielded a t-count value of -2.418942 > 1.99656 from the t-table and 0.0190 < 0.05, showing leverage variable affects tax avoidance in Indonesia and Malaysia.

b) Company Size

The company size variable revealed t-count value -2.526585 > 1.99656 from the t-table and 0.0145 < 0.05, Ha was therefore approved, showing that tax avoidance in Indonesia and Malaysia is influenced by the variable of company size.

c) Audit Quality

The audit quality variable had a t-count value from the t-table of 1.765646 < 1.99656 and a value of 0.0832 > 0.05, therefore Ho was discarded, indicating that it had a limited impact on tax avoidance in Indonesia and Malaysia.

**F-Statistics Test/Simultaneous**

The simultaneous test calculates the influence of independent variables (X₁, X₂, and X₃) together with dependent variables (Y).

For the results of the F-statistics Test on the combined sample process of Indonesia and Malaysia, then before that, it is also necessary to know the value: df1 = number of variables - 1 so 4 - 1 = 3, and the value of df2 = nk-1 = 70-3-1 = 66 with a significant value 0.05
obtained an F-table of 2.74. The following table displays the results of the F-test Statistics for Malaysia and Indonesia:

<table>
<thead>
<tr>
<th>Table 11. F-Test Statistics for Indonesia - Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
</tr>
<tr>
<td>Prob. (F-statistic)</td>
</tr>
</tbody>
</table>

Source: Processed Data with Eviews v.9.0

In table 8 the F-count value is 5.664087 > 2.74 of the F-table and 0.000001 < 0.05 so Ha is received, meaning simultaneously and significantly tax avoidance is affected by leverage, company size, and audit quality.

Discussion

The t-Test findings for the leverage variable derived from the computation of the debt to equity ratio show that it significantly affects tax avoidance, supporting the H1 hypothesis. Findings from these research are in agreement those from Yahaya et.al (2020), and Hariani et.al (2019). In this case, the company is operating in a debt-ridden state and paying interest on the loan, which can be subtracted from net income to lower tax obligations.

The H2 hypothesis was accepted since the firm size variable's effect on tax avoidance in Combined t-Test was significant. The findings corroborated Putri et al (2018) and Kim et al (2017) studies, which both found firm size had big affect on tax avoidance. This is determined by how many resources are possessed and how they are used for tax planning. It also determines whether or not tax avoidance activities are taken with the intention of paying the least amount of taxes possible.

A dummy variable method is used to project audit quality factors with KAP size. The combined t-test test produced audit-quality not significantly affect tax avoidance, hence the H3 hypothesis was disproved. The outcomes of this presentation are consistent with other studies by Amalia, et al. (2019), and Ubaidillah (2021). There is still a chance that audited financial statements from respectable corporations performed by big four and non-big four public accountants will not be used properly to deter tax avoidance.

When tested using the F-statistic, the variables for leverage, company size, and audit quality all provide the same results. Tax avoidance is highly influenced by leverage, company size, and audit quality, proving a significant positive.

CONCLUSIONS

In conclusion, manufacturing companies listed on the IDX and Bursa Malaysia, leverage, and company size all significantly affect tax avoidance from 2015 to 2019. However, since there is a chance that companies will use audit results to their advantage in order to avoid paying taxes, the audit quality has no bearing. Other data show that simultaneously tax avoidance is significantly influenced by leverage, firm size, and audit quality.

As a consideration for this research in the future. For subsequent researchers in researching the influence of tax avoidance, researchers can use formulas other than ETR accounting, for example, those used in this study to calculate the ratio value. As in theory, there are several ways to calculate the value of ETR including accounting ETR, current ETR, cash ETR, long-run ETR, and ETR differentials.

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