THE INFLUENCE OF TAX AVOIDANCE, FOREIGN DIRECT INVESTMENT, AND CAPITAL INTENSITY TOWARDS EARNING RESPONSE COEFFICIENT

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Abstract
Earnings quality can be determined from the market or investor reaction to information in the published financial statements. But there are some factors which can be considered to be biased for investors in determining their investment in a company. Market reaction can be proxy by earning response coefficient. This study aims to examine the effect of tax avoidance, foreign direct investment and capital intensity on earnings response coefficient. The population in this study is companies from manufacturing sector listed on the Indonesia Stock Exchange (IDX) for the period 2017-2019. Data obtained from the IDX website, Yahoo Finance and website of certain companies. The population of this study are 135 observation data. The hypothesis in this study were tested by multiple linear regression analysis. The result of this research are: 1) foreign direct investment and capital intensity have a positive effect on earnings response coefficient. 2) tax avoidance has no influence on earnings response coefficient.

Keywords
tax, tax avoidance, foreign direct investment, capital intensity, earning response coefficient.

JEL Classification
M41; M48

Introduction
The structure of the company in this modern era has a separation of authority between management and shareholders. Based on agency theory because of the separation of authority can lead to asymmetry information (Jensen and Meckling, 1976). This happens because management is considered to have more information than shareholders because management directly works in the field. To reduce the asymmetry information, financial statements are made as a form of accountability report from management to shareholders. Financial statements can influence decision making to determine which companies have the potential to provide them with capital gains. This can be seen from the quality of earnings reflected in the financial statements. Quality earnings must be able to provide adequate and reliable information for users of financial statements such as shareholders, potential investors, creditors, and other parties. Based on signaling theory, quality earnings on financial statements can be a signal from management to investors that the company has a good performance (Godfrey et al, 2010). Therefore ,investors will give a good response and will invest the money they have in the company. Informative earnings can be measured by earnings response coefficient (ERC). ERC can be defined as the level of earnings informativeness for investors. The result of an ERC is determined by the investor's response to the announcement of earnings from financial statements. A high ERC can
indicate the earnings provided are informative, which can increase firm value and stock returns. The amount of earning in a company can be used as a basis for determining taxes. This causes many companies to have a tendency to do tax avoidance, in order to minimize the taxes paid on the company's net income.

Tax avoidance is indicated to affect earnings response coefficient (ERC). Chen et al (2013) explained that there is a negative relationship between tax avoidance and firm value. Therefore, when companies do tax avoidance, then the firm value tends to decrease. So, fewer investors will invest their funds in the company. This contradicts, with research by Mukhlasin and Annisa (2018), which states that tax avoidance has a negative influence on earnings response coefficients. According to investors' perceptions, tax avoidance will reduce the quality of revenue information, reflect the lack of good corporate governance, lack of transparency and incur agency and legal costs, the costs incurred are greater than the tax savings made. Meanwhile, according to Desai and Dharmapala (2009), tax avoidance has no significant effect on increasing company value. The result will have a positive effect if the company if it has good governance but does not apply to companies with lack of good corporate governance.

Besides tax avoidance, several other factors can affect the earnings response coefficient, such as foreign direct investment and capital intensity. First, foreign direct investment is a foreign investment made by the company to other countries for a long period. Such investments are loans or purchases in management, joint ventures, expert transfers, and technology transfers. Foreign direct investment is generally carried out in countries with low-cost resources than the country of origin, then the expense can be minimized, sales continue to run and company profits will increase, therefore can affect the ERC.

A company that does foreign direct investment, have foreign ownership in the company, Rhee & Wang (2009) stated that foreign ownership can reduce stock liquidity, because it increases asymmetric information between foreign and local investors, thereby reducing stock returns. Meanwhile, research by Sekhri and Haque (2015) stated that foreign direct investment can improve the economy and provide opportunities for industries to improve technology, access to global managerial skills, utilize human and natural resources optimally, and global competitive advantages with greater efficiency. Hence there is a positive influence between foreign direct investment in the development of the stock market.

The second factor is capital intensity, which describes the number of fixed assets owned by a company. Elmasr (2007) found there are long-term constraints on the ability of companies with high capital intensity to produce consistent growth in shareholder value. Different results found by Praet (2010), high capital intensity can be invested when companies experience financial constraints. Besides, large investments reflect confidence in the prospects for future growth.

Malik and Shaheen (2012) found companies with high capital intensity can improve product quality and reduce production time. Saji and Harikumar (2014) stated that capital intensity has a positive effect on stock returns. Companies with high capital intensity, especially in the industrial sub-sector that requires special equipment or technology such as the pharmaceutical and automotive subsectors, have fewer competitors because new companies will have difficulty committing or buying equipment for production or factory because not able to be used anymore for other uses or will be difficult to sell.

Based on the explanation above, there is still a research gap found in each research variable. Therefore, this study was conducted to re-examine the effect of tax avoidance, foreign direct investment and capital intensity on earnings response coefficient.
Literature Review and Hypotheses Development

Agency Theory
Agency theory explains the relationship between principals (shareholders) and agents (management). Jensen and Meckling (1976) defines an agency relationship as a contract between the principal and the agent, to provide services on behalf of the principal by giving authority to make decisions to the agent. The separation of authority will cause agency problems such as differences in interests and information asymmetries that lead to agency costs.

Agency costs are divided into monitoring costs, bonding costs, and residual loss. Monitoring costs are the costs incurred by principals to supervise and control agent behavior. Bonding costs are the costs borne by the agent to show that the agent has behaved following the interests of the principal. Residual loss is the cost of decreasing the welfare of the principal because of the difference in decisions between the agent and the principal. This happens because management gets more information about the company compared to shareholders. Accordingly, asymmetry information can be reduced the company makes financial reports then investors acknowledge the performance of management.

Signalling Theory
According to Godfrey et al (2010), signalling theory is done when managers provide information voluntarily to investors to help in decision making. If the manager has high expectations of the company's growth rate in the future, then the manager will give a signal to investors through company information that is publicly disclosed in this case through financial statements.

Signaling theory is focused on communication to investors about positive and negative information that occurs in the company. Besides, there are 4 elements in signaling theory such as signaling, signal, receiver, and feedback. Signaller is management that has information about the company. Signal is a form of communication that contains positive or negative information from a signaller. Receiver is a signal receiver like an investor. Receiver will observe and interpret the signal given. Feedback is sent from the receiver to the signaler in response to the signal given (Connelly et al, 2010).

Hypothesis Development
Tax avoidance is an act of utilizing a tax gap (gray area) through transactions that can reduce the tax burden and are legal. However, tax avoidance can reflect the flow of information between management and shareholders is not good and can cause not transparent information in the company. Management can act opportunistically and not according to what shareholders want. This represents the existence of poor governance in the company. Also, based on the signaling theory with the existence of tax avoidance can be biased towards signals on financial statements, especially reports on company profits and management performance, which can influence investor decisions. Investors can assume is the result of taxation and does not reflect the actual profit on the company. The statement above is in line with research by Hanlon and Slemrod (2009) and Mukhlasin and Annisa (2018), there is a negative market reaction to companies that avoid tax, then tax avoidance will reduce the quality of income information according to investors' perceptions. According to investors, tax avoidance will reduce the quality of revenue information, reflect poor corporate governance, lack of transparency, and incur agency and legal costs. Then the costs incurred are greater than the tax savings made. Based on the results of previous studies, the first hypothesis in this study is as follows:

Hypothesis 1: Tax avoidance has a negative effect on earning response coefficient.
Companies with foreign direct investment are financially established companies because able to invest in foreign countries with large capital costs. In general, foreign direct investment is carried out in countries with a lot of resources but are cheaper than the country of origin so that the burden will be reduced but sales will continue and company profits will increase, so this can affect the ERC. This statement is proven by the research of Sekhri and Haque (2015) found a positive influence between foreign direct investment in the development of the stock market. With foreign direct investment, it is considered to be able to improve the economy, provide opportunities for industries to improve technology, access to global managerial skills, optimal utilization of human resources and natural resources, and global competitive advantage with greater efficiency. Therefore, a company with foreign direct investment will improve the quality of the company's profit because it reflects the company's actual profit. Then companies with foreign direct investment can be a signal to investors that the company has good performance. Based on the description above, the hypothesis proposed is:

Hypothesis 2: Foreign direct investment has a positive effect on earning response coefficient

Capital intensity reflects the efficiency of a company using assets to generate sales. With the high level of capital intensity, the costs incurred by the company will be even higher. But on the other hand companies with high capital intensity show an increase in product quality and save production time. Then company earnings can increase. Praet (2010) found that companies with high capital intensity can divest their assets when experiencing financial constraints and reflect management's confidence in future growth prospects. Malik and Shaheen (2012) stated that companies with high capital intensity can improve production quality and save production time. Saji and Harikumar (2014) stated that capital intensity had a positive effect on stock returns. Besides, capital intensity can become an obstacle for a new company, especially the industrial sub-sector that requires special equipment or technology such as pharmaceuticals and automotive. Companies will find it difficult to use production equipment for other uses as well as it is difficult to recast, so the company will consider committing or buying the equipment. So that competitors will be less and stock returns will be higher. Based on the signaling theory, investors will see companies with a high capital intensity that can increase company profits, so investors will invest in these companies. From the description above, the hypothesis proposed is:

Hypothesis 3: Capital intensity has a positive effect on earning response coefficient

Research Methods

Data, Population and Sample
The samples in this study are companies in the manufacturing sector listed on the Indonesia Stock Exchange (IDX) in 2017 - 2019. The exempted samples in this study were companies that lost, use foreign currencies (other than Rupiah) in financial statements, and do not report financial statements from 2017 - 2019. Referring to these three criteria then the sample is reduced by outliers, then the final sample obtained is 135 data. The study was conducted with tax avoidance, foreign direct investment, and capital intensity as the independent variable, while earnings response coefficient as the dependent variable.
Definition and Measurement of Research Variables

ERC is used as a proxy for earnings quality in financial statements. Scott (2015) stated ERC is the influence of unexpected earnings on cumulative abnormal return (CAR) which is shown through the slope coefficient in the regression of abnormal returns of stocks with unexpected earnings. ERC calculates stock prices and accounting profits, which are reflected in cumulative abnormal returns and unexpected earnings. A low ERC value reflects information on earnings that is less informative for investors in making decisions, whereas a high ERC value shows information on quality earnings reflected in financial statements then can be used for decision making.

In this study, ERC calculated monthly. Based on Scott (2015), ERC will be calculated in the following steps:

i. Calculate Cumulative Abnormal Return (CAR)

\[ CAR_{it} = \sum AR_{it} \]

Where,
- \( CAR_{it} \): Cumulative Abnormal Return of stock i on period t
- \( AR_{it} \): Abnormal Return of stock i on period t

a. Calculate Abnormal Return (AR)

\[ AR_{it} = R_{it} - CAPM \]

Where,
- \( AR_{it} \): Abnormal Return of stock i on period t
- \( R_{it} \): Actual Return of stock i on period t
- \( CAPM \): Expected return

b. Calculating the expected return (CAPM)

\[ CAPM = R_f + \beta (R_m - R_f) \]

Where,
- \( CAPM \): Expected return of stock i on period t
- \( R_f \): Returns obtained from securities with free risk
- \( \beta \): Systematic risk of stock i relative to the index
- \( R_m \): Return on the market

c. Calculate \( \beta \) (beta)

\[ \beta = \frac{\text{Covar}(R_i, R_m)}{\sigma^2(R_m)} \]

Where,
- \( \beta \): Systematic risk of stock i relative to the index
- \( R_i \): Returns obtained from stock i
- \( R_m \): Returns on the market (associated with CSPI)
- \( \sigma^2 \): Variants of returns on the market (CSPI)

d. Calculate Actual Return (\( R_{it} \))

\[ R_{it} = \frac{P_t - P_{t-1}}{P_{t-1}} \]

Where,
- \( R_{it} \): Actual Return of stock i on period t
- \( P_t \): The company's stock price in the period t
- \( P_{t-1} \): The company's share price in the period t-1

ii. Calculate earning response coefficient from simple linear regression between CAR and EU

\[ CAR_{it} = \alpha_0 + \alpha_1 UE_{it} + \epsilon_{it} \]

Where,
- \( CAR_{it} \): Cumulative Abnormal Return of stock i on period t
- \( \alpha \): A constant
- \( UE_{it} \): Unexpected earnings of the company i in the period t
- \( \epsilon_{it} \): Component error
The Influence of Tax Avoidance, Foreign Direct Investment, and Capital Intensity Towards Earning Response Coefficient

a. Calculate Unexpected Earnings (UE)

\[ UE_{it} = \frac{(E_{it} - E_{i,t-1})}{E_{i,t-1}} \]

Where,
- \( UE_{it} \): Unexpected earnings of the company i in the period t
- \( E_{it} \): Earnings of the company i in the period t
- \( E_{i,t-1} \): Earnings of the company i in the period t-1

Tax avoidance is generally defined as an explicit tax reduction. Tax avoidance can be considered as a form of legal tax planning strategy. Besides tax avoidance, tax evasion is also another form of tax planning but illegal (Hanlon and Heitzman, 2010). Tax avoidance is accomplished by utilizing the tax gap (gray area) through transactions that can reduce the tax burden. In this study, tax avoidance will be calculated in 2 steps:

i. Researcher will use an effective tax rate that is with the formula:

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

ii. After getting the effective tax rate, the researcher will do the following calculation:

\[ Tax \, Avoidance = \frac{1}{ETR} \]

Foreign direct investment (FDI) is an investment made by a home country company to a host country with a long-term goal. The existence of FDI provides benefits such as economic growth, expanding employment, and increasing investment. According to Park et al (2016), companies with foreign direct investment have overseas subsidiaries. For this research, foreign direct investment is a dummy variable, where if a company has foreign direct investment, it will be given a point of 1 and if otherwise it will be given a point of 0.

Capital Intensity describes the efficiency of a company's performance by looking at the use of assets (in the form of fixed assets and inventories) in generating revenue. Noor et al (2010) state that capital intensity is defined as the ratio between fixed assets such as tools, machines, and various properties against total assets. This ratio reflects how the size of the company's assets is invested in fixed assets. According to Lanis and Richardson (2013), capital intensity can be calculated by:

\[ CAPINT = \frac{Total \, Fixed \, Asset}{Total \, Asset} \]

This research used 3 control variables so independent variable research on the dependent variable is not affected by other factors outside this research which, total assets, return on assets (ROA) and debt to equity (DER).

Total assets are the first control variable used in this study. Total assets are proxied as the size of a company. The total assets are obtained from the annual financial statements reported by the company.

Return on Assets (ROA) reflects the effectiveness of management in generating profits with existing assets. ROA is obtained by the formula:

\[ ROA = \frac{Net \, Income \, After \, Tax}{Total \, Assets} \]
Debt to Equity (DER) shows the company's ability to pay long-term debt. DER is obtained by the formula:

\[
DER = \frac{Total \ Debt}{Total \ Equity}
\]

**Result and Discussion**

Analysis of the data used in this study consisted of descriptive statistical analysis and multiple linear regression analysis and processed with SPSS 22.0.

**Descriptive Statistics Analysis**

Descriptive statistical analysis provides an overview of the data in research that can be seen with the average value (mean), standard deviation, maximum value (maximum), minimum value (minimum) and variance. The test results in this study can be seen in table 1 below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERC</td>
<td>135</td>
<td>-0.576</td>
<td>0.515</td>
<td>0.00882</td>
<td>0.215352</td>
</tr>
<tr>
<td>TaxAvd</td>
<td>135</td>
<td>-6.800</td>
<td>6.800</td>
<td>3.60888</td>
<td>1.1073687</td>
</tr>
<tr>
<td>FDI</td>
<td>135</td>
<td>0</td>
<td>1.0</td>
<td>0.383</td>
<td>0.4901</td>
</tr>
<tr>
<td>CI</td>
<td>135</td>
<td>0.087</td>
<td>0.983</td>
<td>0.37820</td>
<td>0.1798490</td>
</tr>
<tr>
<td>ROA</td>
<td>135</td>
<td>-0.003</td>
<td>0.921</td>
<td>0.08578</td>
<td>0.1149444</td>
</tr>
<tr>
<td>DER</td>
<td>135</td>
<td>-0.0944</td>
<td>3.3760</td>
<td>1.069261</td>
<td>0.818592</td>
</tr>
<tr>
<td>TA</td>
<td>135</td>
<td>14942000984</td>
<td>34471000000000</td>
<td>10849212976543.37</td>
<td>40352494355401.45</td>
</tr>
</tbody>
</table>

ERC : Earning Response Coefficient; TaxAvd : Tax Avoidance; CI : Capital Intensity; ROA : Return on Asset; DER : Debt to Equity; TA : Total Asset

Source : Computed by the author

**Multiple Linear Analysis**

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Sig.</th>
<th>VIF</th>
<th>Tolerance</th>
<th>Glesjer</th>
</tr>
</thead>
<tbody>
<tr>
<td>TaxAvd</td>
<td>0.00</td>
<td>0.945</td>
<td>1.030</td>
<td>0.970</td>
<td>0.138</td>
</tr>
<tr>
<td>FDI</td>
<td>0.009</td>
<td>0.027</td>
<td>1.130</td>
<td>0.885</td>
<td>0.904</td>
</tr>
<tr>
<td>CI</td>
<td>0.033</td>
<td>0.002</td>
<td>1.079</td>
<td>0.927</td>
<td>0.862</td>
</tr>
</tbody>
</table>

K-S Test 0.200

F Value 2.295

Sig. (Anova) 0.039

Adjusted R Square 0.055

Durbin Watson 2.024

Source : Computed by the author
Based on data from table 2, the results of the Kolmogorov-Smirnov One-Sample show a significance value of 0.200. The significance value is greater than the predetermined significance value of $\alpha = 0.05$ (5%). This shows the research is normally distributed. It can be seen the tolerance value of TaxAvd, FDI, CI, ROA, DER and TA is greater than 0.10 and the VIF value is smaller than 10. From these results it can be concluded, there are no symptoms of multicollinearity on the independent variables. The Durbin-Watson value is 2.024, with a sample of 135 ($n = 135$) and independent and control variables totaling 6 ($k = 6$). With a significance value set of 0.05. Then obtained $d_L$ value of 1.6272 and $d_U$ value of 1.8125. Therefore there is no autocorrelation in this study ($1.8125 < 2.024 < 2.1875$).

In table 2, the significance value of the Glesjer test, namely tax avoidance, foreign direct investment and capital intensity is greater than the significance value set at 0.05. Then the independent variable does not experience symptoms of heteroscedasticity. Then there is no heteroscedasticity on the independent variables. Adjusted R square of 0.055 which means the independent variable can explain or influence 5.5% of the dependent variable. While the remaining 94.5% (100% - 5.5%) is explained by other variables outside this research model.

In the ANOVA test indicated by an F value of 2.295 with a significant value of 0.039 < predetermined significance value of 0.05. Therefore, the independent variables together have an influence on the dependent variable. The effect of tax avoidance on earnings response coefficient can be seen with a significance value of 0.945 and a regression coefficient of 0.000. When compared with the predetermined significance value, the significance value of tax avoidance is greater than 0.05 ($\alpha = 0.05$). This shows that tax avoidance does not affect earnings response coefficient. Therefore, first hypothesis that states tax avoidance has a negative effect on the earnings response coefficient is rejected.

The results of this study are not in line with research by Hanlon and Slemrod (2009) and research by Mukhlasin and Annisa (2018), which revealed a negative influence between tax avoidance on firm value. This happens because, tax avoidance is considered to reduce the quality of income information, or cause asymmetry information based on investor perceptions. But the results of this study are in line with research by Desai and Dharmapala (2009), tax avoidance has no effect in increasing company value. This happens because of the tendency of investors to consider investing in companies whose profits are stable or high, and not based on the amount of tax paid by the company. Also other factors are more considered such as the size of the company, the level of managerial ownership, and institutional ownership of the company. And the practice of tax avoidance is considered in accordance with tax regulations (legal). Therefore, whether or not tax avoidance is carried out by a company does not affect an investor's decision to invest. Then, investors will not withdraw their investment or not invest even if the company is avoiding taxes or not. Thus, there is no effect between tax avoidance on the earning response coefficient.

The significance value of foreign direct investment obtained is 0.027 with a coefficient of 0.009. This significance value significantly influences the level of 0.10 ($\alpha = 0.10$). Then, companies with foreign direct investment give a positive signal to investors, in other words the second hypothesis is accepted.

This research is in line with Sekhri and Haque (2015) which proves that foreign direct investment improves economy, technology, global managerial skills, optimal utilization of human resources and natural resources, and global competitive advantage with greater efficiency. Also, companies with foreign direct investment are financially well-established because they are able to invest in foreign countries with high capital costs. Foreign direct investment is also usually done in countries that have cheaper...
resources. Therefore this is expected to increase company profits. Then investors can think of this as a signal that the company has a good performance to generate profits in the long run.

Test on capital intensity shows a significance value of 0.002 smaller than the predetermined significance value of 0.05 (\(\alpha = 0.05\)), and has a coefficient of 0.33. Then the third hypothesis in this study which states that there is a positive influence between capital intensity on earnings response coefficient is accepted.

This research is in line with research by Praet (2010), companies with high capital intensity can divest their assets when financial constraints occur. Also, large investments in capital intensity reflect management's confidence in investment opportunities and growth prospects for the company in the future. Malik and Shaheen (2012) mention companies with high capital intensity can improve production quality and save production time. Saji and Harikumar (2014) which stated capital intensity could be an obstacle for new companies for an industrial sector, especially sectors that require special equipment or technology such as pharmaceuticals and automotive. New companies will find it difficult to commit or buy equipment for production or factories because they cannot be used for other uses and are difficult to sell. Then, competitors will be less and stock returns will be higher. Accordance with previous studies, companies with high capital intensity can be considered as a signal to investors that the company is optimistic about the prospects in the future, in addition to increasing production productivity by saving time and improving product quality.

Conclusion and Recommendations
This study aims to determine the effect of tax avoidance, foreign direct investment and capital intensity on earnings response coefficient. Based on statistical testing, multiple linear regression analysis and the discussion described above it can be concluded that foreign direct investment and capital intensity have a positive effect on earnings response coefficient. Therefore, if a company makes a foreign direct investment and has a high capital intensity, the profit quality of the company is good. This can make investors interested in investing in companies so that the value of shares and stock returns will increase. While tax avoidance has no effect on earnings response coefficient, because investors are more concerned with corporate profits than the amount of tax paid by companies and there are other factors that investors consider more to invest such as company size, managerial and institutional ownership.

The recommendation for further research is to add good corporate governance variables.

Recommendations for further research are adding variables such as good corporate governance and company size. In the study of Desai and Dharmapala (2009), stated tax avoidance can affect earnings response coefficient if it has good corporate governance. Besides, the size of the company can also be added as a research variable because large companies are considered to better maintain the image in the eyes of the public so that they would consider doing tax avoidance more.

References
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