The Effect of Board of Gender Diversity and Institutional Ownership on Tax Aggressivity with Audit Quality as A Moderation Variable

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Abstract: The aims of this research are 1) to find out whether there is a negative effect between board gender diversity on tax aggression; 2) to find out whether there is a positive effect between institutional ownership on tax aggression; 3) to find out whether there is board gender diversity effect on tax aggression with audit quality as a moderating variable; and 4) to determine whether there is an effect of institutional ownership on tax aggression with audit quality as a moderating variable. The research approach used in this study is quantitative. The sample in this study was 17 mining companies. The method in this study is Moderated Regression Analysis (MRA). The results of this study show that gender diversity and institutional ownership have a significant positive influence on tax aggressiveness. audit quality is able to moderate the influence of gender diversity on tax aggressiveness. And the results of the audit quality are not able to moderate the influence between institutional ownership on tax aggressiveness.
Introduction

Tax aggression is an act or effort to avoid taxes that aims to minimize a company's profit so that the tax paid by the company to the government is lower. Tax aggression is defined as the reduction of explicit taxes, which includes a variety of tax strategies, from legal tax strategies to tax aggression (Hanlon & Heitzman, 2015).

The phenomenon in several companies, namely PT. Adaro Energy (2005) practices transfer pricing by selling coal annually at a low price, below the market price to affiliated companies (Coaltrade from Singapore) of US$26/ton, while the market price is US$48/ton. Then, Coaltrade resold it at market price. As a result of transfer pricing, it is estimated that Rp. 9 trillion of sales proceeds has been hidden. At PT. Kaltim Prima Coal (2007) practices transfer pricing by selling coal at low prices, below the prevailing market prices to affiliated companies (PT Indocoal Resource Limited). Coal sales are only priced at half of the price that KPC usually sells directly to buyers. Next, sales to other buyers are also made by Indocoal using the usual KPC selling price. As a result, KPC's coal sales turnover was much lower so the state suffered a loss of IDR 1.7 trillion.

According to Nengsih, Suryani, & Kurnia, (2018) one of the factors that trigger companies to carry out tax aggressiveness is the gender diversity board, according to Naomi Ellemers (2017), gender stereotypes not only describe the typical differences between men and women but also determine what behaviour and how men and women should do in different domains of life. Society at large is formed by the existence of a culture which states that men are far more capable of doing heavy jobs than women. This has led to the assumption that women are weaker than men.

Apart from gender diversity, institutional ownership is also an important factor. Institutional ownership has a very important role in minimizing agency conflicts that occur between managers and shareholders. With this high institutional share ownership, shareholders can replace or strengthen the monitoring function of the board within the company (Ahmed and Duellman, 2017).

In this study, audit quality is a moderating variable in encouraging the effect of board gender diversity and institutional ownership on tax aggression and audit quality. Audit quality plays an important role in reducing corporate conflicts of interest. Audit quality is a feature of corporate governance that controls the actions of managers and deters accounting manipulation and any fraudulent activity. External auditors are expected to be able to provide an independent assessment of the company's financial statements. Furthermore, the external auditor assesses whether the client is in an aggressive tax position which may fall into a grey area and can be detected by the tax authorities (Christa & Adi, 2020).

The research gap in this research is in the research of Kamul & Riswandari (2021) and Ganjar (2021), the results of their research state that gender diversity has no significant effect on tax aggressiveness. While this research is in Sandra's research (2022) the results of the study show that gender diversity has a significant positive effect on tax aggressiveness. This research is in the research of Fitriani et al (2021) the results of the study show that institutional ownership affects tax aggressiveness. Meanwhile, this research is in the research
of Sandra (2022) and Yolanda (2019) the results of the study show that institutional ownership has not proven to have a positive effect on tax aggressiveness. Krishna's research (2019) research results show that audit quality can moderate the relationship between institutional ownership and tax avoidance.

The aims of this research are 1) to find out whether there is a negative effect between board gender diversity on tax aggression; 2) to find out whether there is a positive effect between institutional ownership on tax aggression; 3) to find out whether there is board gender diversity effect on tax aggression with audit quality as a moderating variable; and 4) to determine whether there is an effect of institutional ownership on tax aggression with audit quality as a moderating variable.

**Agency Theory**

Agency theory is a theory that arises when two parties are mutually bound, where both parties agree to use services. An agency relationship is a contract, in which one or several people (principal) employ another person or party (agent) to carry out some services and delegate authority to make decisions (Andayani, 2018). From this, it can be seen that management is required to be responsible for all decisions to users of financial statements, including investors, stakeholders, shareholders and creditors (Sari, 2019).

According to Suastini, 2016), explained from a financial management point of view, one of the company's goals is to maximize the prosperity of shareholders or stakeholders. These goals can often only be achieved if the responsibility for managing the company is handed over to professionals, because the owners of capital have many limitations. Delikartika (2017) mentions that these professionals are called managers or agents. Managers are given power by the owners of the company, namely shareholders, to make decisions, in this case creating a potential conflict of interest which is called the agency theory.

**Tax Aggression**

Tax aggressiveness is now very common among large companies around the world. This action aims to minimize corporate taxes which are now a public concern because they are not in line with community expectations and are also detrimental to the government (Rohmansyah, 2017). This is the same as what is said (Romadhina, 2019) that companies engage in various forms of tax planning to reduce expected tax obligations. A company's tax can be associated with public concern if the tax payment made has implications for the wider community which is now being contested because it is only a company's operating costs.

Tax aggression is measured by the Effective Tax Rate (ETR), which is the ratio between the real taxes we pay and the commercial profit before taxes. The effective tax rate or ETR (Effective Tax Rate) is used to measure the tax paid as a proportion of economic income.

\[
ETR = \frac{\text{Income Tax Expense}}{\text{Profit before tax}}
\]
Board Gender Diversity

Thoomaszen (2020) states that gender diversity within a company will provide its advantages within the company. This is related to the benefits of increasing knowledge, finding ideas, innovation, and steps to solve problems, and planning new corporate strategies, knowledge and experiences that are more innovative from various angles.

The diversity that arises in the ranks of the company’s board can encourage work effectiveness. This can happen because the emergence of different opinions, deep problem solving and critical thinking from each different individual, can improve the quality of decision-making, and the supervisory function, and encourage the achievement of company goals (Pramesti, 2022). One type of diversity that can occur within a company’s board of directors is gender diversity. In feminism theory, it is explained that women have the same rights and obligations as men in all fields, including in terms of occupying positions or positions within the company (Muallimah, 2022). Meanwhile, agency theory reveals that if a company implements gender diversity, it can increase independence. The following is the formula for calculating gender diversity.

\[
\text{Gender Diversity} = \frac{\text{Number of women on board of directors}}{\text{Number of members of the Board of Directors}}
\]

Institutional Ownership

An institution is an institution that has a great interest in the investments made, including stock investments. So that usually institutions hand over responsibility to certain divisions to manage the company's investments (Fahmi, 2020). Because the institution professionally monitors the progress of its investment, the level of control over management's actions is very high so the potential for fraud is suppressed. Institutional investors can be divided into two, namely active investors and passive investors. Active investors want to be involved in managerial decision-making, while passive investors do not want to be involved in managerial decision-making. The existence of this institution can be an effective monitoring tool for companies (Rohmawati, 2020).

Institutional ownership is share ownership by other institutions, namely ownership by companies or other institutions. Share ownership by parties that form institutions such as insurance companies, banks, investment companies, and other institutional ownership (Dewi, 2019). Institutional ownership is a tool that can be used to reduce agency conflict. Institutional ownership can control management through an effective monitoring process. With a high level of institutional ownership, it will lead to greater monitoring efforts by institutional investors so that they can deter opportunistic behaviour carried out by managers and can minimize the level of abuses committed by management which will reduce company value (Yuniarsih, 2021). According to Ujiyantho and Pramuka, (2017), the model for calculating institutional interests is as follows;

\[
KI = \frac{\sum \text{Shares owned by institutional investors}}{\sum \text{Outstanding shares}}
\]
Audit Quality

Audit quality is a process to ensure that generally accepted auditing standards are followed in every audit, KAP follows specific quality-taking procedures that help meet these standards consistently in each assignment, (Palulu, 2018). Audit quality is a process to ensure that generally accepted auditing standards are followed in every audit, KAP follows special quality-taking procedures that help meet these standards consistently in each assignment, (Susanti, 2018).

Auditor quality is inseparable from the skills possessed by an auditor in the field of accounting and the ability to evaluate objectively following accounting principles in conducting an audit by giving his opinion and detecting misstatements in the financial position of financial statements that can be accounted for by a manager (Nurhayati, 2017).

Audit quality can be measured using a size proxy (KAP). This variable is measured by a dummy variable, the number one for companies audited by the big four KAPs and the number zero for companies audited by non-big four KAPs.

Institutional Ownership

Institutional ownership is company shares owned by an institution or institution such as insurance companies, banks, investment companies and other institutional ownership (Lestari, 2017). Institutional ownership represents a source of power that can be used to support or otherwise support the existence of company management. From the definition above, it can be concluded that institutional ownership is the ownership of voting rights owned by institutions consisting of institutional owners and block holders (Rohmawati & Sutapa, 2020). Institutional ownership can provide greater benefits, therefore institutional ownership is better than individual (individual) ownership, so institutions can carry out inefficient corporate takeovers.

\[
INST = \frac{\sum Saham Institusi}{\sum Saham yang beredar} \times 100
\]

Research Method

The research approach used in this study is a quantitative approach and this type of research is Explanatory Research. The population in this study are mining companies listed on the Indonesia Stock Exchange (IDX) in the 2018-2022 period as many as 49 companies. Selection of the sample used by using a purposive sampling method. The sample in this study was 85 companies obtained from 17 companies multiplied by 5 years of research. The data collection technique in this study is documentation from the financial reports of mining companies contained in IDX Statistics for 2018-2022. The method in this study is Moderated Regression Analysis (MRA)
Effect of board gender diversity on tax aggressiveness

Jensen and Meckling’s (1976) agency theory in Rahayu, Ramadhanti, & Widodo (2018) has the assumption that an entity is separated from its owner. An agency relationship is a relationship between one or more principals (in this case shareholders) and agents (company management) in taking actions following their interests, including giving authority in decision-making by agents. Agency conflict will arise when the agent prioritizes personal interests and does not follow the wishes of the principal.

Women tend to ensure tax savings that do not violate regulations in legal ways or are referred to as tax aggressiveness. The high proportion of female commissioners increases or encourages tax aggressiveness according to results published by Bana et al (2021). This could be because women apply a more conservative cash policy and the existence of women can increase cash holdings which are carried out through tax avoidance strategies to save cash outlays. Research by Kamul and Riswandari (2021) found that executive gender diversity hurts tax aggressiveness.

H1: It is suspected that there is a significant negative effect of board gender diversity on tax aggressiveness.

Effect of institutional ownership on tax aggressiveness

Institutional ownership is share ownership owned by the government, banks, insurance companies, companies and foreign investors, except for individual investor ownership. The existence of institutional ownership has a very important role in companies and managerial decision-making. This is because, with the existence of institutional ownership, there is more managerial oversight in running the company. The oversight mechanism by institutions that become investors in the company makes every decision-making can be done carefully and hard to believe by manipulating profits.

The existence of institutional ownership is in line with the agency theory expressed by Meckling, W. H., & Jensen, (1976) in Dachi et al (2020) wherein a company there are several categories of parties involved. Each of these parties has its objectives and interests. Of course, this is very prone to conflict, so there is a need for monitoring from outside parties who oversee parties with different interests.

Fitriansi et al (2021) stated that institutional ownership hurts tax avoidance in companies. This means that the higher the percentage of institutional ownership, the lower the level of tax evasion. The existence of a level of control and supervision of institutional ownership will provide positive aspects in tax avoidance which will encourage more optimal improvement and supervision of management performance.

H2: It is suspected that there is a significant negative effect between the effect of institutional ownership on tax aggressiveness.

Audit quality as a moderating variable on board gender diversity on tax aggressiveness

The existence of diversity in members of the board of commissioners and directors is also a measure of board diversity that often appears in research. Their presence is considered
to bring diverse opinions, perspectives, languages, beliefs, family backgrounds, and professional experiences, thereby enriching business knowledge and alternative solutions to complex problems. Thus the existence of boards of commissioners and directors with a female gender also provides a diversity of perspectives and background experience regarding tax-aggressive transaction schemes to reduce the company's tax burden.

Board diversity can also be measured by the level of independence of the members of the Board of Commissioners. Boards with fairly strong composition of independent commissioners will have stricter managerial oversight behavior thereby increasing shareholder value (Santoso, 2018). Nainggolan (2020) suggests that company boards that are dominated by outsiders will result in stronger corporate governance because they are more independent in overseeing management behaviour. In addition to increasing the independence of the company's board as a whole, the existence of an independent commissioner (outside director) on the company's board will shape the relationship between the company and the external environment due to their expertise, prestige (reputation), and contacts. According to the results of research by Ganjar (2021), which states that corporate governance cannot moderate the relationship between gender diversity and tax aggressiveness.

H3: It is suspected that audit quality can moderate the effect of board gender diversity on tax aggressiveness.

**Audit quality as a moderating variable on institutional ownership of tax aggressiveness**

One of the principles of corporate governance (CG) is responsibility, managers are responsible for managing the company and complying with applicable regulations and reporting standards. The application of CG principles applied by the company will be able to reduce actions that are ineffective or violate applicable regulations. With the existence of CG principles such as independence, transparency, accountability, responsibility and fairness, the function of corporate governance and supervision becomes more structured and transparent to avoid inappropriate practices.

According to the results of research conducted by Krisna (2019) states that audit quality can moderate the relationship between institutional ownership and tax evasion.

H4: It is suspected that audit quality can moderate the effect of institutional ownership on tax aggressiveness

**Result and Discussion**

Based on the results of the tests carried out, the results of descriptive variable analysis research were obtained as follows:

<table>
<thead>
<tr>
<th>Table 1. Descriptive Statistics Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive Statistics</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>DIVERSITY</td>
</tr>
</tbody>
</table>

Based on the table above, 85 data were obtained. The minimum value of the variable Diversity is 0, the maximum value is 50, the mean value is 24.9854 and the standard value of deviation is 14.54027. The variable value of institutional ownership is 0.83, Makasimum value of 99.31, mean value of 24.59.8076 and standard value of deviation of 28.21877. The variable aggressiveness of the tax is minimum value of -7.72, the maximum value is 14.71, the mean value is 3.9262 and the standard value of deviation is 4.64387. For descriptive audit quality variables as follows:

### Table 2. Deskriptive Statistics Audit

<table>
<thead>
<tr>
<th>Year</th>
<th>Non Big Four</th>
<th>Big Four</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>3</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>2019</td>
<td>2</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>2020</td>
<td>2</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>2021</td>
<td>5</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>2022</td>
<td>5</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>68</td>
<td>85</td>
</tr>
</tbody>
</table>

According to the data above, it is known that in 2018 non-Big Four companies amounted to 3 companies and companies with Big Four members amounted to 14 and a total of 17 companies. In 2019, non-Big Four companies amounted to 2 companies and companies with Big Four members amounted to 15 and a total of 17 companies. In 2020, non-Big four companies amounted to 2 companies and companies with big four members amounted to 15 and a total of 17 companies. In 2021, non-Big four companies amounted to 2 companies and companies with big four members amounted to 15 and a total of 17 companies. In 2021, non-Big four companies amounted to 2 companies and companies with big four members amounted to 15 and a total of 17 companies. So that the total number of non-big four companies is 17 companies are members of the Big Four as many as 68 and a total of 85 companies.

**Classic Assumption**

Based on the results of the above research, classical assumption research was conducted with stages of normality, multicolliction, heteroscedasticsity, autocorrelation. After passing the autocorrelation, MRA hypothesis testing was carried out. Here are the normality results:
This normality test aims to determine whether the resulting error has a normal distribution in a regression model (Santoso, 2012: 230). The Kolmogorov-Smirnov test is used to check normality. If the significance value of the Kolmogorov-Smirnov test result > 0.05, then the normality assumption is satisfied. The normality results as follows:

<table>
<thead>
<tr>
<th>Model</th>
<th>Test Statistic</th>
<th>Asymp. Sig. (2-tailed)</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.062</td>
<td>.200^c,d</td>
<td>Normal</td>
</tr>
<tr>
<td>2</td>
<td>0.091</td>
<td>.078^c</td>
<td>Normal</td>
</tr>
</tbody>
</table>

Based on the table above, it shows that models 1 and 2 data have statistical test values of 0.062 and 0.091 where the significance values above 0.05 are 0.200 and 0.078. So it can be stated that all data has been distributed normally. So it can be illustrated in the graph below.

![Normal P-P Plot of Regression Standardized Residuals](image1)

Diversity & INST --> AGRS

![Normal P-P Plot of Regression Standardized Residuals](image2)

Diversity, INST, Audit_Qual, Diver*Audit, INST*Audit --> AGRS

Figure 1. Normalitas p-plot

Furthermore, testing this multicollinearity test is to check whether there is a correlation between independent variables in the regression model (free). In a good regression model, there should be no correlation between explanatory variables. If there is a correlation, it is called a multicollinearity (multico) problem. The results of this test obtained the following results:

<table>
<thead>
<tr>
<th>Model</th>
<th>Tolerance</th>
<th>VIF</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DIVERSITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.999</td>
<td>1.001</td>
<td>No Multicollinearity Occurs</td>
</tr>
<tr>
<td>INST</td>
<td>.999</td>
<td>1.001</td>
<td>No Multicollinearity Occurs</td>
</tr>
</tbody>
</table>

From the table above, it is known that all variables have no data that occurs multicollinearity. This is because the VIF value is smaller than 10, and the tolerance value is above 0.10. Furthermore, heteroscedasticity testing is carried out to see the value of variance...
between Y, equal or different values. A regression model is said to be good if heteroscedasticity does not occur. The test results are as illustrated in the following figure:

![Figures showing regression models and scatter plots]

From the graph, he showed that the variables tested did not contain all heteroscedasticity. The next test is an autocorrelation test to find out whether in a linear regression model there is a correlation between confounding errors in period t with errors in period t-1 (previous). Autocorrelation test using Durbin-Watson Test (DW) test. The test results are as follows

<table>
<thead>
<tr>
<th>Model</th>
<th>Durbin-Watson DU</th>
<th>4-DU</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.983</td>
<td>1.6957</td>
<td>2,3043</td>
</tr>
<tr>
<td>2</td>
<td>1.784</td>
<td>1.7736</td>
<td>2,2264</td>
</tr>
</tbody>
</table>

From the results of the tests carried out, the results of model 1 obtained a Dw value of 1.983 which value is greater than the DU value and smaller than 4-DU so that it can be concluded that the results of the autocorrelation test of gender diversity and institutional ownership of tax aggressiveness do not occur autocorrelation. The results of model 2 also obtained the results of the Dw value of 1.784 which value is greater than the DU value and smaller than 4-DU so that it can be concluded that the results of the autocorrelation test Diversity gender, institutional ownership, audit quality, Diversity gender multiplied by audit quality, institutional ownership multiplied by audit quality against Tax Aggressiveness does not occur autocorrelation. Thus, a simple regression analysis to test the above research
hypothesis can be carried out or continued. The results of the hypothesis test can be described in the following table results:

<table>
<thead>
<tr>
<th>Table 6. Regression test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

R – square 0.184

Based on the results of the calculation above, it is known that gender diversity against tax aggressiveness has a beta value of 0.270 with t calculated at 2.707 which is more difficult than 1.663 and has a sig value of 0.008 which is smaller than 0.05 which shows that gender diversity has a significant positive influence on tax aggressiveness. The results of this study are in line with research conducted by Boussaidi and Mounira (2020) which shows the presence of women on company boards significantly the level and behavior of management involvement in taxation aggressiveness practices. In contrast to the results of research conducted by Kamul and Riswandari (2021) found that executive gender diversity negatively affects tax aggressiveness.

Based on the results of the calculation above, it is known that institutional ownership of Tax Aggressiveness has a beta value of 0.270 with a calculated t of 3.229 which is greater than 1.663 and has a sig value of 0.002 which is smaller than 0.05 which shows that institutional ownership has a significant positive influence on Tax Aggressiveness. The results of this study are in line with research conducted by Fitriani et al (2021) stating that institutional ownership has a positive influence on tax avoidance in companies.

The results of the study Coefficient of Determination on gender diversity and institutional ownership of Tax Aggressiveness have an R-square of 0.184 or 18.4%, of which the remaining 21.6% is influenced by the variability of the variability in the study. Furthermore, MRA tests were carried out, here are the results of the study:

<table>
<thead>
<tr>
<th>Table 7. MRA test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

R – square 0.184

Based on the results of this study, the results of the audit quality moderated the influence of gender diversity on tax aggressiveness. The results of this study obtained a sig value of 0.022 which is smaller than 0.05 so that it can be seen that audit quality is able to moderate the influence of gender diversity on tax aggressiveness. The results of the study are
powered by the results of Ganjar’s research (2021) which states that corporate governance cannot moderate the relationship between gender diversity and tax aggressiveness.

The results of this study are also known as the results of the quality audit moderating the influence between institutional ownership on tax aggressiveness. The results of this study obtained a sig value of 0.068 which is smaller than 0.05 so that it can be seen that audit quality is not able to moderate the influence of gender diversity on tax aggressiveness. The results of this study are in line with Yolanda's (2019) research which states that corporate governance cannot moderate the relationship of institutional ownership with tax aggressiveness.

Conclusion

Based on the results of this study, it is known that gender diversity and institutional ownership have a significant positive influence on tax aggressiveness. Audit quality is able to moderate the influence of gender diversity on tax aggressiveness. And the results of the audit quality are not able to moderate the influence between institutional ownership on tax aggressiveness.

References


https://equatorscience.com/index.php/jabter