THE EFFECT OF MANAGERIAL OWNERSHIP, INSTITUTIONAL OWNERSHIP, LEVERAGE AND FIRM SIZE ON TAX AVOIDANCE IN THE GOOD MINING SECTOR LISTED IN INDONESIA STOCK EXCHANGE (IDX) FOR 2014-2018

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Abstract *- This study aims to determine the effect of managerial ownership, institutional ownership, leverage, and firm size on tax avoidance. In this study, the authors used quantitative data, namely company annual reports obtained through the official website of the Indonesia Stock Exchange (BEI) and the official website of the related companies.*

The population in this study were coal mining companies listed on the Indonesia Stock Exchange (IDX) for the 2014-2018 period. The sample selection technique in this study using purposive sampling and obtained as many as 6 companies that fit the criteria. This study uses multiple linear analysis with Eviews version 9.0 and the classical assumption test for data analysis.

The results of the study prove that managerial ownership, institutional ownership, leverage, and firm size have no effect on tax avoidance.

Keywords: Tax Avoidance, Managerial Ownership, Institutional Ownership, Leverage and Company Size.

I. INTRODUCTION

Tax avoidance is a management behavior that manipulates PKP (Taxable Income), this behavior is planned through tax planning which is still legal in nature, while excessive planning behavior that shows the impression of violating the law or illegal is called tax evasion. Although this does not violate the law or the parties using financial statements, the practice of tax avoidance includes the act of minimizing unacceptable tax payments. Tax avoidance has a direct impact on the erosion of the tax base, which results in a reduction in the amount of tax that should be received by the state.

According to (Fadhilah, 2014) tax avoidance or resistance to taxes are the obstacles that occur in tax collection, resulting in reduced state cash revenue. Tax avoidance behavior carried out by an entity is indeed beneficial for the company, but besides that it causes losses to the state because it causes state income to decrease (Jessica & Toly, 2014).

From the results of research conducted by (Baharudin, 2015), it is found that managerial ownership has a negative effect on tax avoidance, which means that management tends to be more active in the interests of shareholders who are none other than themselves. In contrast to research conducted by (Mella et al., 2014) states the results of their research simultaneously show that managerial ownership has an influence on tax avoidance.

Another ownership structure is institutional ownership. Institutional ownership is defined as the percentage of the company's outstanding shares owned by institutional investors in a particular year (Dang et al., 2017). The existence of institutional ownership in a company will encourage increased supervision to be more optimal on management performance, because share ownership represents a source of power that can be used to support or vice versa for management performance (Rejeki et al., 2019).

The funding policy that indicates the company is doing tax avoidance is the leverage policy. Leverage is a ratio that describes the amount of debt a company has to finance its operating activities. Leverage is measured by comparing the company's total liabilities with the total assets owned by the company (Surbakti, 2012) in (Dewi and Noviari, 2017).

The ability and stability of a company in carrying out its economic activities can be seen from the size of the company (firm size). Company size can be measured by looking at the value of assets owned by the company. Large-scale companies tend to be the center of attention for the government and encourage management to be obedient or aggressive (tax avoidance) in managing their taxes (Kurniasih and Sari, 2013) in (Noviyani & Muid, 2019). Large-scale companies certainly have more assets than small-scale companies. That way large-scale companies can avoid taxes by charging depreciation costs for assets.

Based on the description of the background and previous research above, the researcher wants to study further research with the title **"THE EFFECT OF MANAGERIAL OWNERSHIP, INSTITUTIONAL OWNERSHIP, LEVERAGE, AND FIRM SIZE TOWARD TAX AVOIDANCE IN THE COAL MINING SECTOR REGISTERED IN INDONESIA STOCK EXCHANGE (IDX) 2014-2018 ".**

Formulation of the problem

Based on the explanation of the research background above, the formulation of the problems posed in this study are:

1. Does managerial ownership affect tax avoidance in coal mining companies listed on the IDX for the 2014-2018 period?
2. Does institutional ownership affect tax avoidance in coal mining companies listed on the IDX for the 2014-2018 period?
3. Does leverage affect tax avoidance in coal mining companies listed on the IDX for the 2014-2018 period?

4. Does firm size affect tax avoidance in coal mining companies listed on the IDX for the 2014-2018 period?

II. LITERATURE REVIEW

2.1. Agency Theory

According to (Jensen & Meckling, 1976) in (Susanto & Ramadhani, 2016) agency theory is a theory that explains the relationship between a business owner (principal) and management of a business (agent). Where the principal will give authority to the agent to manage the company and also in making decisions. Agency relationship in agency theory, namely the company is a collection of contracts (nexus of contract) between the owner of economic resources (principal) and the manager (agent) who take care of the use and control of these resources. Agency theory can lead to information asymmetry between the manager (agent) and the business owner (principal) because managers know more about internal information and the prospects of the company in the future compared to business owners. With this information asymmetry, it will encourage the agent to hide some important information that is not known to the principal in order to maximize benefits for himself (agent). Differences in interest, such as pressure, opportunity, rationalization and capability, cause agents to take deviant actions and will result in agency costs.

The agency problem in the form of information asymmetry will also occur when the government as a tax collector wants a high amount of revenue for the state from tax collection. Meanwhile, the manager (agent) focuses more on fulfilling their personal interests by committing frauds to get optimal benefits by streamlining the expenses incurred by the company including tax burdens or in other words the company will strive to make good tax planning by means of tax. evasion or tax avoidance which aims to minimize the tax paid and can generate high after-tax profits.

Managerial Ownership

Managerial ownership is the proportion of shares owned by management who actively participate in making company decisions (Pujiati and Widanar, 2009) in (Zahirah, 2017). Management tends to be more careful in making decisions because it will have a direct impact on him as a shareholder. So that with the increase in the number of share ownership by managerial can reduce the tendency of companies to do tax avoidance, and vice versa. The reason is that the manager's share ownership will tend to make the manager consider the continuity of his company so that the manager will not want his business to be examined regarding tax issues (Pramudito and Sari, 2015).

Institutional Ownership

Institutional ownership is ownership of company shares by the government, financial institutions, legal entities, foreign institutions and other institutions. The existence of institutional ownership in a company should play an important role in monitoring, disciplining and influencing managers. So that the greater the institutional ownership owned by the institution, the greater the pressure on the company management to avoid tax in order to maximize company profits.

Institutional ownership is the proportion of share ownership held by an institution at the end of the year which is measured in the percentage of shares owned by institutional investors in companies such as insurance companies, banks, pension funds, and investment banking (Thesarani, 2017).

Leverage

According to (Ariawan et al., 2017), leverage is the level of debt held by a company to finance its operating activities. Leverage is measured by the percentage of total debt to the company's equity in a period which is also called the Debt to Equity Ratio (DER). DER reflects the company's ability to meet all of its obligations, which is shown by some of the shares of its own capital used to pay debts. The financial leverage ratio is used to measure the level of company assets that have been financed by the use of debt.

Firm Size

According to (Ngadiman & Puspitasari, 2014), company size is a scale that determines the size of the company which can be seen from the value of equity, sales value, number of employees and total asset value, and others. The determination of company size is based on the company's total assets. The greater the total assets, it shows that the company has good prospects in a relatively long period of time. This also illustrates that companies are more stable and more capable of generating profits than companies with small total assets.

Tax Avoidance

Tax avoidance is a tax avoidance activity by complying with existing rules. This means that tax avoidance is an effort to avoid taxes but still in accordance with tax laws and regulations. Tax avoidance is one of the obstacles that occurs in tax collection, causing reduced state cash receipts (Bactiar, 2015). Tax avoidance is a company effort to reduce the amount of tax that must be paid by trying to reduce company profits (Rahmawati et al., 2016).

2.2. Hypothesis Development

Managerial Ownership on Tax Avoidance

Managerial ownership is a situation where the manager owns the company's shares or in other words the manager is also the shareholder of the company (Christiawan and Tarigan, 2017). With share ownership by managers, management will make managers very careful in carrying out company activities. In agency theory, it is stated that, the higher the share ownership by the manager, it can reduce the conflict of interest between the principal and the agent. In addition, the increase in managerial ownership is to equalize the position of managers with shareholders so that they act according to the wishes of shareholders. The increase in the percentage of ownership can motivate managers to improve performance and be responsible for increasing the welfare of shareholders and increasing supervision of the course of economic activities in the company.

Another study conducted by (Pramudito and Sari, 2015) shows that managerial ownership negatively affects tax avoidance. The amount of share ownership by managerial can reduce the company's tendency to do tax avoidance. If the percentage of share ownership in the company is getting bigger, the company's involvement in tax avoidance will be smaller. ETR is a measuring tool for tax avoidance, where ETR and tax avoidance actions have an inverse relationship, where the lower the ETR value the more aggressive the tax avoidance actions taken by the company.

H1: Managerial Ownership has an effect on Tax Avoidance.

Institutional Ownership of Tax Avoidance

Institutional ownership is share ownership by the government, financial institutions, legal entities, foreign institutions, and trust funds and other institutions. These institutions have the authority to supervise management performance (Ngadiman and Puspitasari, 2014). Institutions as

shareholders are considered to be more capable of detecting errors that occur. This is because institutional investors are more experienced than individual investors (Zahirah, 2017).

Previous research conducted by (Maharani and Suardana, 2014) shows that institutional ownership has a negative effect on tax avoidance. ETR is a measuring tool for tax avoidance, where ETR and tax avoidance actions have an inverse relationship, where the lower the ETR value the more aggressive the tax avoidance actions taken by the company.

H2: Institutional Ownership has an effect on Tax Avoidance.

Leverage of Tax Avoidance

Leverage is a ratio that measures the long-term and short-term debt ability to finance company assets. The higher the amount of funding from third party debt used by the company and the higher the interest costs arising from the debt. The higher interest costs will have the effect of reducing the company's tax burden. So that the higher the leverage value, the higher the tax avoidance actions taken by the company (Zahirah, 2017).

H3: Leverage has an effect on Tax Avoidance.

Firm Size of Tax Avoidance

Firm size can be seen from the total assets owned by a company. The greater the total assets, the bigger the firm size, so that the company is able to generate large profits. Thus, the company will pay a large amount of tax. Companies can avoid tax by charging depreciation costs on assets owned by the company. The bigger the company, the more assets it owns, so that the depreciation expense becomes large and the company pays a small amount of tax.

H4: Firm Size affects Tax Avoidance.

III. RESEARCH METHOD

3.1. Research Strategy

This study uses quantitative methods to determine the relationship between variables in the population by using statistical calculation techniques as calculations. According to (Siyoto & Sodik, 2015: 17) quantitative research methods are one type of research whose specifications are systematic, planned, and clearly structured from the start to the making of the research design. Quantitative methods require a lot of use of numbers, starting from data collection, interpretation of the data, and the appearance of the results. In this study, researchers will examine the effect of managerial ownership, institutional ownership, leverage, and firm size as independent variables on tax avoidance as the dependent variable..

3.2. Population and Sample

The documentation method is carried out by recording data related to the problem to be examined from documents held by relevant agencies, generally regarding the financial statements of mining sector companies listed on the Indonesia Stock Exchange companies for the period 2014-2018. The data in this study were obtained through the Indonesia Stock Exchange website, namely, www.idx.co.id. The data analysis method used in this study was purpove sampling. In this research, the data were processed using the computer program E-Views (Econometric Views).

3.3. Data and Data Collection Methods

In this study, data was collected using documentary collection techniques, namely the use of data derived from existing documents. This is done by tracing and recording the required information on secondary data in the form of company financial reports. This documentary method is done by collecting annual reports, financial reports and other required data. Supporting data in

this study is the literature study method from scientific journals and literature that contains discussions related to this research. Data obtained from www.idx.co.id in the form of annual reports, financial reports and other required data.

3.4. Operationalization of Variables

3.4.1. Definition of Research Variables

According to (Sugiyono, 2015: 38) operationalization of a variable is an attribute or nature or value of an object or activity that has certain variations that have been determined by researchers to be studied and then conclusions drawn. In accordance with the research title chosen by the author, namely "The Effect of Managerial Ownership, Institutional Ownership, Leverage, and Firm Size Against Tax Avoidance", the authors classify the variables in the title into 2 (two) variables, namely the independent variable (independent variable) and the variable. bound (dependent variable).

Operationalization of Variables

1. Tax Avoidance (Y)
   According to (Sandy and Lukviarman, 2015) tax avoidance is one of the legal tax avoidance efforts by reducing the amount of tax owed by looking for regulatory weaknesses that are usually done by companies. The measurement of tax avoidance in this study is calculated using the Effective Tax Rate (ETR) formula. ETR is used as a measurement because it is considered to reflect a fixed difference between the difference in book income and taxable profit. Referring to research conducted by (Sandy and Lukviarman, 2015), tax avoidance can be calculated using the formula:

$$ETR = \frac{\text{Tax Expense}}{\text{Profit Before Tax}}$$

2. Managerial Ownership (X1)
   According to (Pujiati and Widanar, 2009) in (Zahirah, 2017) managerial ownership is the proportion of shares owned by management who actively participate in making company decisions. Managerial ownership is the ownership of company shares owned by management, whether directors, commissioners, or employees with certain requirements to own these shares. Referring to research conducted by (Zahirah, 2017), the calculation of managerial ownership (MNJR) is calculated using a formula:

$$\text{ManOwn} = \frac{\text{Number of Managerial Shares}}{\text{Number of shares outstanding}}$$

3. Institutional Ownership (X2)
   According to (Thesarani, 2016) institutional ownership is the proportion of share ownership that is institutionally owned at the end of the year which is measured in the percentage of shares held by institutional investors in companies such as insurance companies, banks, pension funds, and investment banking. Institutional ownership is part of the company's shares owned by institutional investors. Referring to research conducted by (Fadhilah, 2014), institutional ownership (INST) can be calculated using the formula:

$$\text{InsOwn} = \frac{\text{Number of Institutional Shares}}{\text{Number of shares outstanding}}$$

4. Leverage (X3)
   According to (Ariawan et al., 2017), leverage is the level of debt held by a company to finance its operating activities. Leverage is measured by the percentage of total debt to the company's equity in a period which is also called the Debt to Equity Ratio (DER). DER reflects the company's ability to meet all of its obligations, which is shown by some of the

shares of its own capital used to pay debts. The financial leverage ratio is used to measure the level of company assets that have been financed by the use of debt. Referring to research conducted by (Budiasih & Amani, 2019), leverage can be calculated using a formula

$$\text{DER} = \frac{\text{Total Liabilities}}{\text{Total Equity}} \times 100\%$$

5. Firm Size (X4)
   According to (Ngadiman & Puspitasari, 2014), company size is a scale that determines the size of the company which can be seen from the value of equity, sales value, number of employees, total asset value, and others. The determination of company size is based on the company's total assets. The greater the total assets, it shows that the company has good prospects in a relatively long period of time. This also illustrates that companies are more stable and more capable of generating profits than companies with small total assets. Company size (firm size) is the scale or value that can classify a company into large or small categories based on total assets, log size, and so on. Referring to research conducted by (Budiasih & Amani, 2019), firm size can be calculated using the formula:

$$SIZE = Ln\,(Total\ Assets)$$

IV. RESEARCH RESULT

Descriptive Statistical Analysis Results

According to (Muchson, 2017: 6) descriptive statistics discuss methods, collection, summarization, presentation of data so that information is easier to understand. Information that can be obtained with descriptive statistics includes data centering (mean, median, mode), data distribution (range, deviation, mean, variance and standard deviation), trend of a data set, size of location (quartile, decile and percentile). This study uses independent variables, namely managerial ownership (X1), institutional ownership (X2), leverage (X3), and firm size (X4), while the dependent variable is tax avoidance (Y). In this study, descriptive statistics were performed to determine the mean, standard deviation, maximum and minimum values of the variables.

Tabel 4.6
Hasil Statistik Deskriptif

	Y	X1	X2	X3
Mean	0.195832	0.785664	16.45766	36.22198
Median	0.238964	0.838790	4.483057	24.65404
Maximum	0.348719	1.872234	81.00000	81.00000
Minimum	-0.512646	0.074316	0.000157	0.368048
Std. Dev.	0.162214	0.489171	25.96109	33.04610
Skewness	-2.910544	0.209535	1.889780	0.224242
Kurtosis	11.95993	2.311440	5.089992	1.355236

Jarque-Bera	190.2757	1.082890	31.08857	4.843976
Probability	0.000000	0.581907	0.000000	0.088745
Sum	7.833282	31.42657	658.3065	1448.879
Sum Sq. Dev.	1.026226	9.332257	26285.14	42589.75
Observations	40	40	40	40

Source: Data processed using Eviews 9, 2020

In the results of the descriptive statistical analysis above, it shows that the amount of data in this study is 30 consisting of 6 coal mining companies listed on the Indonesia Stock Exchange for the period 2014-2018. Based on the results of descriptive statistical analysis in table 4.5, the following results are obtained:

1. The tax avoidance variable (Y) has a maximum value of 0.887964 and a minimum value of -0.434962. In this company the company that has the maximum value is PT Petrosea Tbk in 2014 and the company with the minimum value is PT Delta Dunia Properindo Tbk in 2015. From the results of this analysis it is known that the average value (mean) of tax avoidance owned by all sample companies is 0.284870 with a standard deviation of 0.258655. This shows that the tax avoidance carried out by companies in this research data varies because the average value (mean) is greater than the standard deviation value. The median value in this analysis is 0.300498 and the sum value is 8.546088. The value of Jarque-Bera is 7.459519 and a probability value of 0.023999.
2. The managerial ownership variable (X1) has a maximum value of 0.151247 and a minimum value of 0.000012. In this company the company that has the maximum value is PT Adaro Energy in 2014 and the company with the minimum value is PT Bukit Asam Tbk in 2018. From the results of this analysis it is known that the average (mean) value of managerial ownership owned by all sample companies is 0.050377 with a standard deviation of 0.060006. This shows that the managerial ownership carried out by the company in the data is relatively uniform, where the value of the level of managerial ownership carried out by the company is relatively the same or does not vary because the average value (mean) is smaller than the standard deviation value. The median value in this analysis is 0.000871 and the sum value is 1.511312. The value of Jarque-Bera is 4.381826 and the probability value is 0.111815.
3. The institutional ownership variable (X2) has a maximum value of 0.741448 and a minimum value of 0.379020. In this company the company that has the maximum value is PT Harum Energy Tbk in 2017 and 2018, and the company with the minimum value is PT Delta Dunia Properindo Tbk in 2018. From the results of this analysis it is known that the average (mean) value of institutional ownership is owned by all sample companies of 0.607709 with a standard deviation of 0.136840. This shows that the institutional ownership exercised by companies in the data of this study varies because the mean value is greater than the standard deviation value. The median value in this analysis is 0.693529 and the sum value is 18.23128. The value of Jarque-Bera is 4.742568 and a probability value of 0.093361.
4. The leverage variable (X3) has a maximum value of 968.9870 and a minimum value of 10.83900. In this company the company that has the maximum value is PT Delta Dunia

Properindo Tbk in 2014 and the company with the minimum value is PT Harum Energy in 2015. From the results of this analysis it is known that the average (mean) leverage of all sample companies is 166.4445 with a standard deviation of 243,9955. This shows that the leverage applied by the company in the research data is relatively uniform, where the value of the level of leverage carried out by the company is relatively the same or does not vary because the average value (mean) is smaller than the standard deviation value. The median value in this analysis is 72.18073 and the sum value is4993.336. The value of Jarque-Bera is 48.49843 and a probability value of 0.000000.

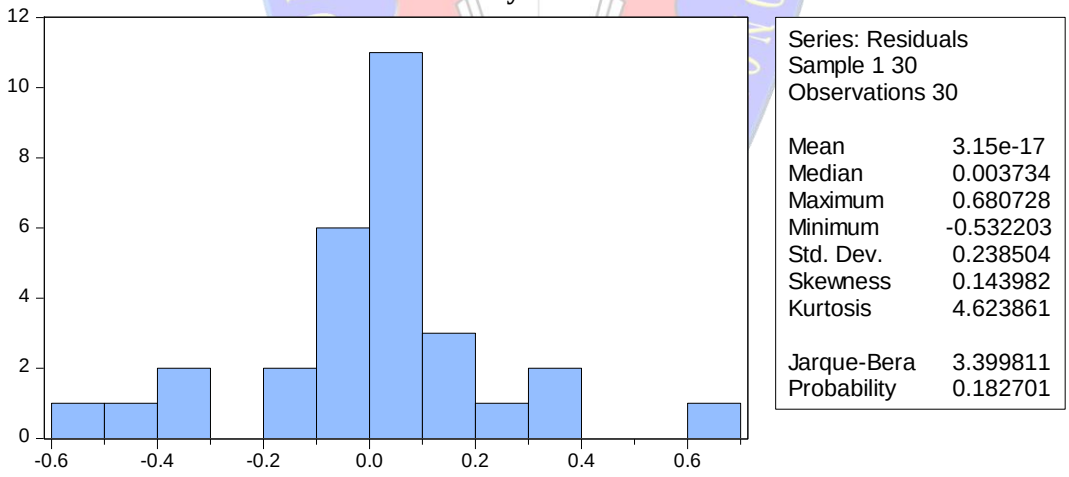
5. The firm size variable (X4) has a maximum value of 18.46106 and a minimum value of 15.48096. In this company the company that has the maximum value is PT Adaro Energy Tbk in 2018 and the company with the minimum value is PT Harum Energy in 2015. From the results of this analysis it is known that the average (mean) firm size owned by all sample companies is 16.56447 with a standard deviation of 0.931380. This shows that the firm size carried out by the company in this research data varies because the mean value is greater than the standard deviation value. The median value in this analysis is 16.55804 and the sum value is 496.9340. The value of Jarque-Bera is 3.275469 and the probability value is 0.194420.

Classic Assumption Test

a) Normality Test

The normality test of a data can be determined by comparing the Jarque-Bera (JB) value and the Chi-Square table value. If the probability value is more than 0.05 then H0 is accepted, which means that the data is normally distributed, whereas if the probability value is less than 0.05 then H0 is rejected, which means the data is not normally distributed.

Table 4.7
Normality Test Results



Source: data processed using eviews9, 2020

Based on the normality test above using the histogram normality test, the results show that the Jarque-Bera (JB) value is 3.399811 and a probability of 0.182701. The data presented in the table can be concluded that they are normally distributed because the probability exceeds 0.05.

b) Multicollinearity Test

The commonly used multicollinearity test method is to look at the Tolerance and Variance Inflation Factor (VIF) values in the regression model where the VIF value is less than 10 and has a Tolerance value of more than 0.1. If the VIF value is <10, it means that there is no multicollinearity, whereas if the VIF value> 10, it means that there is multicollinearity.

Table 4.8
Multicollinearity Test Results with Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	4.299590	1954.783	NA
X_1	1.114810	3.050449	1.764162
X_2	0.842186	148.3380	6.930749
X_3	1.54E-07	5.957451	4.021523
X_4	0.008506	1064.393	3.243045

Source: data processed using eviews9, 2020

Based on the results of the multicollinearity test with Variance Inflation Factors, it shows that the value of the Centered VIF (Variance Inflation Factors) on the managerial ownership variable is 1.764162, the institutional ownership variable is 6.930749, the leverage variable is 4.021523, and the firm size variable is 3.243045. From all the results of the centered VIF for each variable in the table, it shows that nothing exceeds the value of 10, it can be concluded that there is no multicollinearity in the independent variables in this test.

c) Heteroscedasticity Test

Heteroscedasticity testing used White's test which was performed by regressing the squared residual as the dependent variable plus the square of the independent variable, then added again by multiplying the two variables. If the value for Prob. Obs * R-Squared> 0.05 means that there is no heteroscedasticity. Conversely, if the value is Prob. Obs * R-Squared <0.05 means heteroscedasticity occurs.

Table 4.9
Heteroscedasticity Test Results with White Heterodasticity

Heteroskedasticity Test: White

F-statistic	3.089531	Prob. F(4,25)	0.0339
Obs*R-squared	9.924045	Prob. Chi-Square(4)	0.0417
Scaled explained SS	12.48728	Prob. Chi-Square(4)	0.0141

Source: data processed using eviews9, 2020

Based on the results of the heteroscedasticity test with the white heteroscedasticity test above, it can be seen from the prob value. Obs * R-Squared in the table is 0.0417, so it can be concluded that in this test heteroscedasticity occurs because the Obs * R-Squared value is smaller than 0.05.

d) Autocorrelation Test

A good regression model should not have autocorrelation. The test method uses the Durbin-Watson test (DW test). The decision making on the Durbin Watson test is that if DU <DW <4-DU, then H0 is accepted, meaning that there is no autocorrelation. If DW

<DL or DW> 4-DL then H0 is rejected, it means that autocorrelation occurs. And if DL <DW <DU or 4-DU <DW <4-DL, it means that there is no certainty or definite conclusion. The DL and DU values can be obtained from the Durbin Watson statistical table, with n = 30 and k = 4, the DL values are 1.21380 and DU = 1.64981. So 4-DU = 2.35019 and 4-DL = 2.78620.

Table 4.10
Autocorrelation Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.724466	2.073545	0.831651	0.4135
X_1	-0.447058	1.055846	-0.423412	0.6756
X_2	-1.163718	0.917707	-1.268071	0.2165
X_3	-0.000609	0.000392	-1.553608	0.1328
X_4	-0.036735	0.092231	-0.398293	0.6938

R-squared	0.149741	Mean dependent var	0.284870
Adjusted R-squared	0.013700	S.D. dependent var	0.258655
S.E. of regression	0.256877	Akaike info criterion	0.270571
Sum squared resid	1.649642	Schwarz criterion	0.504104
Log likelihood	0.941431	Hannan-Quinn criter.	0.345280
F-statistic	1.100706	Durbin-Watson stat	2.760012
Prob(F-statistic)	0.378039		

Source: data processed using eviews9, 2020

Based on the results of the autocorrelation test using the Durbin-Watson (DW) test, it can be seen that the Durbin-Watson stat value in the table is 2.760012, the DW value is between 4-DU <DW <4-DL (2.35019 <2.760012 <2.78620) so that the result is not there is a certainty or a definite conclusion.

Panel Data Regression Techniques

1) Chow test

Chow test is performed as a statistical test with the following procedure:

a. Arrange the equation with Pooled Least Square (Common Effect Model)
b. Arrange equations with the Fixed Effect Model
c. Choosing between Pooled Least Square and Fixed Effect Model by means of

Chow Test based on the following hypothesis:

H0: Pooled Least Square (same intercept)
H1: Fixed Effect (different intercept)

The decision is made based on the fulfillment of one of the statements below:

a. Receive H0 if the F-Test probability value is> 5%
b. Accept H1 if the F-Test probability value <5%

Table 4.11 Chow Test Results

Effects Test	Statistic	d.f.	Prob.

Cross-section F	0.411793	(5,20)	0.8349
Cross-section Chi-square	2.939604	5	0.7093

Source: Data processed using eviews9, 2020

Based on the results of the chow test, it can be seen that the F-statistic value is 0.411793 and the probability value is 0.8349. From these results indicate that 0.8349> 0.05, it can be concluded that the most appropriate model is the common effect model.

2) Lagrange Multiplier Test

The Lagrange multiplier (LM) test is performed as a statistical test with the following procedure:

a. Arrange the equation with Pooled Least Square (Common Effect Model)
b. Arrange equations with the Random Effect Model
c. Choosing between Pooled Least Square and Random Effect Model with LM

Test with the following statements:

a. If the value of LMcount> chi-squared table, the selected model is random effect
b. If the LMcount <chi-squared table, the model chosen is a common effect.

Table 4.12
Lagrange Multiplier Test Results

	Cross-section	Test Hypothesis Time	Both
Breusch-Pagan	3.487101 (0.0618)	1.373631 (0.2412)	4.860732 (0.0275)
Honda	-1.867378 --	1.172020 (0.1206)	-0.491692 --
King-Wu	-1.867378 --	1.172020 (0.1206)	-0.371347 --
Standardized Honda	-1.011239 --	1.254971 (0.1047)	-2.669656 --
Standardized King-Wu	-1.011239 --	1.254971 (0.1047)	-2.490348 --
Gourierioux, et al.*	--	--	1.373631 (>= 0.10)

*Mixed chi-square asymptotic critical values:

1%	7.289
5%	4.321
10%	2.952

Source: Data processed using eviews9, 2020

Based on the results of the lagrange multiplier test, the prob value is obtained. BreuschPagan is 0.0618 with a significant value of 0.05, it can be concluded that 0.0618> 0.05. Therefore, the model chosen is a random effect model.

3) Hausman Test

The Hausman test is carried out if the test results on the chow test accept H1, which is the fixed effect model which will then be compared with the random effect model through the following procedure:

a. Arrange equations with the Random Effect Model
b. Choosing between the Fixed Effect Model and the Random Effect Model via the Hausman

Test is based on the following hypotheses:

a. H0: Random Effect Model
b. H1: Fixed Effect Model

The decision is made based on the fulfillment of one of the statements below:

a. Receive H0 if the Hausman Test probability value is> 5%
b. Accept H1 if the Hausman Test has a probability value <5%

Table 4.13
Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.939709	4	0.7468

Source: Data processed using eviews9, 2020

Based on the results of the Hausman test, it can be seen that the probability value obtained is 0.7468. This shows that 0.7468> 0.05, so the model used in this test is the random effect model..

Panel Data Regression Equations

This analysis was conducted to examine the effect of the independent variables (managerial ownership, institutional ownership, leverage, and firm size) and the dependent variable (tax avoidance). Referring to research (Mulyono, 2018: 112), the multiple linear regression model in this statement is stated as follows:

Tax Avoidance (Y) = 1.724466 – 0.447058X1 – 1.163718X2 – 0.000609X3 – 0.036735X4

From the data regression equation model above, it can be interpreted as follows:

1. The constant value (C) is 1.724466 which shows the amount of the tax avoidance coefficient in coal mining companies listed on the Indonesia Stock Exchange (IDX) for the 2014-2018 period, assuming the variables of managerial ownership, institutional ownership, leverage, and firm size are the same as zero (0).
2. The coefficient of managerial ownership (X1) is -0.447058, so for every increase in managerial ownership of 1 unit, managerial ownership will decrease by 0.447058 or 44.71 percent, assuming other variables are fixed.

3. The institutional ownership coefficient (X2) is -1.163718, so for every increase in institutional ownership of 1 unit, institutional ownership will decrease by 1.163718 or 116.37 percent with the assumption of other fixed variables.
4. The leverage coefficient (X3) is -0.000609, so every 1 unit increase in leverage, the leverage will decrease by 0.000609 or 0.06 percent, assuming other variables are fixed.
5. The firm size coefficient (X4) is -0.036735, so every 1 unit increase in firm size, the firm size will decrease by 0.036735 or 3.67 percent, assuming other variables are fixed.

Determinant Coefficient (R2)

According to (Mulyono, 2018: 112) the coefficient of determination basically measures how much the ability of the independent variable to explain the dependent variable. The coefficient of determination is between zero and one. The higher the R2 value means the higher the ability of the independent variable to explain the variation of changes to the dependent variable.

Table 4:13 shows that the adjusted R-Squared is 0.013700 or 1.37 percent, this shows that the independent variable can explain the dependent variable by 1.37 percent and the rest is influenced by other variables not used in this test..

Statistical Test F

If the Fcount value is greater than 0.05, it is stated that all independent variables simultaneously have a significant effect on the dependent variable. Meanwhile, if the value of Fcount is less than 0.05, it is stated that all independent variables have no effect on the dependent variable.

H0 is accepted, if Fcount ≤ Ftable or sig value> 0.05 H0 is rejected, if Fcount> Ftable or sig value <0.05 In table 4.13 shows that the probability value (F-statistic) is 0.378039, which is 0.378039> 0.05 then it can be It is concluded that managerial ownership, institutional ownership, leverage, and firm size together (simultaneously) have a significant effect on tax avoidance.

Statistical Test t

Based on table 4:12, the results of the t test can be interpreted as follows:

1. Managerial Ownership Variable The results of the test show that the probability t count of the managerial ownership variable is 0.6942. When compared with the significance value, the probability tcount value is 0.6942> 0.05. This shows that H0 is accepted and Ha is rejected. So it can be concluded that managerial ownership has no effect on tax avoidance.

2. Institutional Ownership Variables The results of the test show that the probability t count of the institutional ownership variable is 0.2448. When compared with the significance value, the probability tcount value is 0.2448> 0.05. This shows that H0 is accepted and Ha is rejected. So it can be concluded 47 that institutional ownership has no effect on tax avoidance.

3. Variable Leverage The results of the test show that the probability value of the leverage variable is 0.1569. When compared with the significance value, the probability tcount value is 0.1569> 0.05. This shows that H0 is accepted and Ha is rejected. So it can be concluded that the leverage variable has no effect on tax avoidance.

4. Firm Size Variable The results of the test show that the probability value of the firm size variable is 0.7115. When compared with the significance value, the probability tcount value is 0.7115> 0.05. This shows that H0 is accepted and Ha is rejected. So it can be concluded that the firm size variable has no effect on tax avoidance.

Analysis and Discussion of Research Results

1. The Effect of Managerial Ownership on Tax Avoidance

Based on the results of tests that have been carried out, the regression coefficient value is -0.447058 with a probability tcount of 0.6942. From these results obtained results that are greater than the significance level of 0.05. So it can be concluded from these results that H0 is accepted and Ha is rejected.

From the test results, it can be concluded that managerial ownership has no effect on tax avoidance. This means that in a coal mining company for the 2014-2018 period, it can be said that the managerial party does not have a significant role and authority in making company decisions. This shows that with an increase in the number of share ownership by managerial parties in coal companies, the company will not do tax avoidance.

The results of this study indicate that managerial ownership has no effect on tax avoidance. The results of this study are in line with research conducted by (Rejeki et al., 2019), namely that managerial ownership has no effect on tax avoidance. In contrast to the results of research conducted by (Fadhila et al., 2017) which states that managerial ownership has a significant negative effect on tax avoidance.The Effect of Managerial Ownership on Tax Aggressiveness

2. The Effect of Institutional Ownership on Tax Avoidance

Based on the results of tests that have been done, the regression coefficient value is -1.163718 with a probability tcount of 0.2448. From these results obtained results that are greater than the significance level of 0.05. So it can be concluded from these results that H0 is accepted and Ha is rejected.

From the results of these tests, it can be concluded that institutional ownership has no effect on tax avoidance. This indicates that the size of ownership by institutions will not affect tax avoidance in coal mining companies for the 2014-2018 period. The important role of the principal should be to avoid opportunistic efforts by management, but company owners must also ensure that done by the management can provide benefits and prosperity to them.

3. The Effect of Leverage on Tax Avoidance

Based on the results of tests that have been carried out, the regression coefficient value is -0.000609 with a probability tcount of 0.1569. From these results obtained results that are greater than the significance level of 0.05. So it can be concluded from these results that H0 is accepted and Ha is rejected.

From the test results, it can be concluded that leverage has no effect on tax avoidance. This means that the size of the debt owned by coal mining companies for the 2014-2018 period does not affect their tendency to apply tax avoidance. The agent does not use and utilize its debt efficiently and effectively in financing the company's assets, so that the company's operational activities cannot be maximized and cause opportunities to generate large profits are getting smaller. And if the company has a small profit, then the tax burden it bears is also small, so the company does not need to take tax avoidance actions

4. The Effect of Firm Size on Tax Avoidance

Based on the results of the tests that have been done, the regression coefficient value is -0.036735 with a probability tcount of 0.7115. From these results obtained results that are greater than the significance level of 0.05. So it can be concluded from these results that H0 is accepted and Ha is rejected.

From the test results, it can be concluded that the firm size has no effect on tax avoidance. This means that the size of the coal mining companies in the 2014-2018 period does not affect their tendency to apply tax avoidance. Large companies certainly attract great attention from the government regarding profits, so that they can attract the attention of the tax authorities to check or be taxed in accordance with applicable regulations. Therefore, the company does not want to take the risk of being bothered by the inspection process or being subject to other sanctions which can cause bad impacts on the company's image in the long run. Therefore, large or small companies are equally compliant with tax regulations.

V. CONCLUSIONS AND SUGGESTIONS

This study examines the effect of managerial ownership, institutional ownership, leverage, and firm size on tax avoidance in coal mining companies listed on the Indonesia Stock Exchange for the 2014-2018 period. Based on the results of the analysis, testing and discussion that have been carried out in the previous chapter, it can be concluded as follows:

1) Managerial ownership variable has no effect on tax avoidance. From these results it can be explained that the coal mining company for the 2014-2018 period can be said that the managerial party does not have a significant role and authority in making company decisions. This shows that with an increase in the number of share ownership by managerial parties in coal companies, the company will not do tax avoidance.
2) Institutional ownership variable has no effect on tax avoidance. From these results it can be explained that the size of ownership by the institution will not affect tax avoidance in coal mining companies for the 2014-2018 period.
3) The leverage variable has no effect on tax avoidance. From these results it can be explained that the size of the debt owned by coal mining companies for the 2014-2018 period does not affect their tendency to apply tax avoidance. The agent does not use and utilize its debt efficiently and effectively in financing the company's assets, so that the company's operational activities cannot be maximized and cause opportunities to generate large profits are getting smaller. And if the company has a small profit, then the tax burden it bears is also small, so the company does not need to take tax avoidance actions.
4) The firm size variable has no effect on tax avoidance. From these results it can be explained that the size of the coal mining companies in the 2014-2018 period does not affect their tendency to apply tax avoidance. The results of this study indicate that the size of the company is not able to avoid politicians' fees and does not encourage companies to take tax avoidance actions

Limitations and Further Research Development

This research was conducted with some rigor that can affect the results of the study. The research limitations are as follows:

1) The period used in this study is only 5 years, namely 2014-2018.
2) The study only uses 4 independent variables, namely: managerial ownership, institutional ownership, leverage and firm size. From the results of this study, other variables that have more influence on tax aggressiveness are needed to be able to explain more deeply about tax aggressiveness.
3) The object in this study only uses 6 samples of mining sector companies listed on the Indonesian Stock Exchange (IDX) for the 2014-2018 period.

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