



The Effects of Institutional Ownership, Managerial Ownership, Firm Size and Independent Directors on Tax Aggressiveness Case Study on Construction and Building Subsector Companies Listed on the Indonesia Stock Exchange for the 2009–2014 Period

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Abstract. The purpose of this study is to obtain empirical evidence about the effects of institutional ownership, managerial ownership, firm size and independent directors on tax aggressiveness of the building construction subsector companies listed on the Indonesian Stock Exchange from 2009–2014. Tax aggressiveness is a dependent variable, while institutional ownership, managerial ownership, firm size and independent directors are independent variables. The data used are secondary data and sample of 6 financial statements of listed companies on the Indonesian Stock Exchange from 2009–2014. The sampling used purposive sampling and method of analyze in this research in regression panel data. Data were analyzed using Eviews software 9 version. The result of the research showed that institutional ownership and managerial ownership have significant effects on tax aggressiveness, while firm size and independent directors has no significant effects on tax aggressiveness. To get better research results, further researches may add other variables that have major impact probabilities, use companies other than building construction subsector, and extend the period of study.

Keywords: Ownership Structure · Institutional Ownership · Managerial Ownership · Firm Size · Independent Directors · Tax Aggressiveness

1 Introduction

Indonesia is a developing country, which has income from various sources, one of which is tax collection. The role of taxes in the Indonesian state can be said to be the lifeblood for the state to run the government. So, taxes are used by the government to fund continuous and sustainable national development that aims to improve people's welfare (Sagala, 2015). For the state, taxes are an important source of revenue. But on the contrary for companies, taxes are a burden for companies that can reduce a company's net profit, almost no company is willing to volunteer to pay taxes (Situmorang & HADIPRAJITNO, 2015).

The government as a tax recipient certainly wants high tax revenues because it is income for the state. With the change in regulations, it is hoped that it will provide

benefits and encouragement for taxpayers to increase government revenue from the tax side. However, the government's efforts to optimize the tax sector are not without problems, because from the perception of tax payments, especially for companies, taxes are a burden that will reduce profits. Not only for the company but also a burden for shareholders for that the company will try to reduce corporate taxes to increase cash flow. Sabli and Noor (2012) explain that companies will engage in aggressive tax planning strategies to minimize, eliminate or delay tax obligations. Tax aggressiveness can be defined as all efforts made by the management to reduce the amount of tax that should be paid by management to reduce the amount of tax that should be paid by the company. Therefore, the possibility of companies being more aggressive towards taxation will be even greater (Sagala & Ratmono, 2015).

This is what causes the purpose of the company as a taxpayer to conflict with the government's goal to maximize revenue from the tax sector. (Lanis & Richardson, 2012) explain that taxes are a driving factor in many corporate decisions. Managerial actions specifically designed to minimize corporate taxes through tax aggressive activities are becoming increasingly common in corporate landscapes around the world. However, corporate tax aggressiveness can result in significant costs and benefits.

Factors that influence companies to pay taxes, for example, are the most widely used variables to examine the company's tax burden (Fernández-Rodríguez & Martínez-Arias, 2012). The size of the company can affect revenue, because it makes a profit, it also affects the company's assets and the company's debt level so that it affects tax payments.

The development of the taxation system and the increasingly stringent government regulations regarding the existing tax system in Indonesia, the authors are interested in researching the factors that influence tax aggressive actions on construction and building companies listed on the Indonesia Stock Exchange.

2 Literature Review

A. Tax Aggressiveness

Tax aggressiveness, which is a management aimed at reducing taxable profit through tax planning using methods including tax avoidance or tax evasion, is an effort made by taxpayers to reduce their tax burden in a way that does not comply with tax regulations.

B. Institutional Ownership

Institutional ownership is the proportion of share ownership by financial institutions or institutions such as insurance companies, banks, investment companies. Company owners who are certain institutions certainly have a greater influence when compared to individual investors (Putri, 2014).

C. Managerial Ownership

Managerial ownership is the proportion of share ownership owned by the management of a company. Managerial ownership shows the dual role of a manager, namely

the manager acts also as a shareholder which is one way to overcome the problems that exist in the company and to reduce the company's agency costs. The purpose of giving managers the opportunity to be involved in share ownership is to balance the interests of shareholders.

D. Company Size (Firm Size)

Company size is one of the important characteristics. Company size is a measurement that is grouped based on the size of the company, and can describe the company's operational activities and the income earned by the company. Company size is a value scale where companies can be classified based on the size of the company's total assets, logarithm of company size, stock market value, and others. Basically the size of the company is only divided into 3 (three) categories, namely large companies, medium size companies, and small companies.

3 Research Method

This study aims to examine the effect of the independent variables of institutional ownership, managerial ownership, and firm size on the dependent variable of tax aggressiveness which is proxied by the effective tax rate (ETR) of manufacturing companies. The type of data used in this study is secondary data on manufacturing companies listed on the Indonesia Stock Exchange. Samples were selected using purposive sampling method. After the sample was determined, it was continued with data collection through non-participant observation, namely by reading, observing, taking notes, and studying book descriptions, accounting journals, and accessing relevant internet sites. The hypothesis in this study will be tested using multiple linear regression analysis. The results of the analysis are then interpreted and followed by concluding and providing suggestions.

Effective Tax Rates (ETR) describes the percentage of the total income tax burden paid by the company from the total pre-tax income. In addition, ETR is the most widely used proxy in previous research and to determine the existence of tax aggressiveness, it can be seen from the low ETR value (Lanis and Richardson, 2012). A low ETR indicates that the income tax burden is smaller than pre-tax income. The ETR proxy can be calculated from:

$$ETR = \frac{\text{TotalBebanPajakPenghasilan}}{\text{labasebelumajak}}$$

This research uses purposive sampling method. Purposive sampling is a sampling technique used by researchers if the researcher has certain considerations in taking the sample. For sampling, this study used a purposive sampling method, namely with predetermined criteria, namely:

1. Manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2011–2014
2. Manufacturing companies that present complete audited financial statements as of December 31 during the 2011 to 2014 observation period

3. Manufacturing companies that use financial statements presented in rupiah
4. Companies that did not suffer losses during the period 2011–2014

This study uses multiple linear regression analysis with the method of least squares or Ordinary Least Square (OLS). This method is believed to have ideal properties and can be superior, namely technically very strong, easy to calculate and draw interpretation (Gujarat, 1999). This study uses a tool in the form of Eviews 8 with the aim of seeing the effect of the independent variables on the dependent variable.

The dependent variable estimation technique that underlies the regression analysis is called the Ordinary Least Square (OLS). The essence of the OLS method is to estimate a regression line by minimizing the sum of the squares of errors from each observation on that line. The OLS method is a regression model parameter estimation method that minimizes the number of squared errors. The OLS regression model can be expressed by The regression equation is as follows:

$$AP = a + \beta_1 \text{KEPINS}_1 + \beta_2 \text{KEPMAN}_2 + \beta_3 \text{SIZE}_3 + \varepsilon$$

Note:

AP = Tax Aggressiveness proxied by ETR

a = Constant

$\beta_1, \beta_2, \beta_3$ = Regression Coefficient

KEPINS1 = Institutional Ownership

KEPMAN2 = Managerial Ownership

SIZE3 = Company Size

ε = Error Term

Each regression coefficient estimated using the OLS method is linear and unbiased on average, the estimated coefficient is exactly the same as the actual value. Among all such linear unbiased estimates, the OLS estimate has the smallest possible variance such that the actual parameters can be estimated more accurately than other linear unbiased estimates. OLS assessment is efficient.

4 Results of the Study

The sample selection procedure with the purpose sampling method resulted in a 6-year selection from 2009–2014 which resulted in 6 companies in the construction and building sub-sector, namely (Table 1):

E. Descriptive Statistical Analysis

Descriptive statistics is the method used to show the amount of data used to determine the maximum value, minimum value of the average value and the standard deviation of each variable in this study. The variables studied include tax aggressiveness as proxied by effective tax rates, institutional ownership, managerial ownership, company size, and independent commissioners. Below are descriptive results that have been processed and can be seen as follows (Table 2):

Based on Table 3, it states that there are 36 samples in total from 2009 to 2014 (6 years) with 6 construction and building sub-sector companies going public in Indonesia.

Table 1. Construction and Building Subsector Companies Included in Research

No	Kode	Nama Emiten
1	ADHI	Adhi Karya (Persero) Tbk
2	DGIK	Nusa Konstruksi Enjiniring Tbk
3	PTPP	Pembangunan Perumahan (Persero) Tbk
4	SSIA	Surya Semesta Internusa Tbk
5	TOTL	Total Bangun Persada Tbk
6	WIKA	Wijaya Karya (Persero) Tbk

Sumber: Bursa Efek Indonesia (www.idx.co.id).

Table 2. Descriptive Statistics Year 2009–2014

	AP	KEPIN	KEPMAN	SIZE	IND
Mean	0.388248	45.24250	0.961340	27.94582	0.344352
Maximum	0.807471	84.00000	10.65055	30.31285	0.400000
Minimum	0.158714	0.000000	0.000000	22.46384	0.166667
Observations	36	36	36	36	36
Cross sections	6	6	6	6	6

Source: processed data

Table 3. Redundant Fixed Effect Test Results

Redundant Fixed Effects Tests			
Pool: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.607629	(5,26)	0.6947
Cross-section Chi-square	3.978496	5	0.5525

Source: processed data

F. Model Selection

This study uses Panel Data Regression, the initial stage is to perform regression for the Common Effect model whose results are in the appendix, after that re-regress for the Fixed Effect model. The next step is to select the model using Common Effects or Fixed Effects by doing Chow Text, the results are as follows (Table 3):

Ho: Common Effect

Table 4. Correlated Random Effect-Hausman Test Results

Correlated Random Effects - Hausman Test			
Pool: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.953548	4	0.5656

Source: processed data

Ha: Fixed Effect

When Prob. Cross-Section Chi-Square < 0.05 then H_0 is rejected and H_a is accepted and vice versa if Prob. Cross-Section Chi-Square > 0.05 then H_0 is accepted and H_a is rejected. Based on the results of Table 3, it is known that Prob. The Chi-Square cross-section is $0.5525 > 0.05$ ($\alpha = 5\%$) then H_0 is rejected. H_a is accepted, meaning that the selected model is Common Effect.

After selecting the Common Effect model, then proceed with Random Effect regression, the results of which are shown in the attachment. The next stage is to test the Random Effect model using the Correlated Random Effect-Hausman Test with the results that can be seen as follows:

Ho: Random Effect

Ha: Fixed Effect

When Prob. Cross-Section Random < 0.05 then H_0 is rejected and H_a Accepted and vice versa if Prob. Cross-Section Random > 0.05 then H_0 is accepted and H_a is rejected. Based on Table 4 Correlated Random Effects – Hausman Test, Cross-Section Chi-Square $0.5656 > 0.05$ then H_0 is accepted and H_a is rejected so that Random Effect is selected.

In the final stage because the Chow test shows the model used is the Common Effect model, while the Hausman test shows the most appropriate model is the Random Effect. Then the Lagrange Multiplier (LM) test is needed as the final stage to determine the most appropriate Common Effect or Random Effect model with the following results (Table 5):

Ho: Common Effect

Ha: Random Effect

From the output above, it can be seen that the value of Prob. Breusch-Pagan (BP) of 0.0753. According to the hypothesis, if Prob BP (0.0753) > 0.05 then H_0 is accepted, H_a is rejected, in other words the suitable model is Common Effect.

G. Regression Model Equation

Table 5. Lagrange Multiplier (LM) Test Results

Lagrange multiplier (LM) test for panel data			
Sample: 2009 2014			
Total panel observations: 36			
Probability in ()			
Null (no rand. Effect)	Cross-section	Period	Both
Alternative	One-sided	One-sided	
Breusch-Pagan	3.163840 (0.0753)	0.395030 (0.5297)	3.558870 (0.0592)
Honda	-1.778719 (0.9624)	-0.628514 (0.7352)	-1.702170 (0.9556)
King-Wu	-1.778719 (0.9624)	-0.628514 (0.7352)	-1.702170 (0.9556)
GHM	- -	- -	0.000000 (0.7500)

Source: processed data

Regression equation model is used to explain the relationship between the dependent variable and the independent variable. In this study, the regression equation model was compiled to determine the effect of the variables of Institutional Ownership, Managerial Ownership, Company Size, and Size of Independent Commissioners on Tax Aggressiveness which has been described in the previous chapter, so that the regression model can be seen as follows:

$$AP = \alpha + \beta_1 KEPIN_{1it} + \beta_2 KEPMAN_{2it} + \beta_3 SIZE_{3it} + \beta_4 IND_{4it} + \varepsilon$$

Note:

AP = Agresivitas Pajak di proksikan dengan ETR

α = Konstanta

KEPIN = Kepemilikan Institusional

KEPMAN= Kepemilikan Manajerial

SIZE = Ukuran Perusahaan

IND = Komisaris Independen

β_1 - β_4 = Koefisien Regresi

ε = variabel gangguan (*error*)

By using Eviews 9 to process the data, the regression results can be obtained as follows:

Koefisien regresi panel data pada model sebelumnya dapat di susun menjadi rumus persamaan regresi panel data sebagai berikut:

$$AP_{it} = 0.128492 + 0.003054_{it} + 0.026600_{it} + 0.005540_{it} - 0.170716_{it}$$

Persamaan Regresi Data Panel di atas dapat diinterpretasikan sebagai berikut:

Table 6. T. Test Results

Variabel	Koefisien Regresi	Prob.	Kesimpulan
KEPIN	0.003054	0.0000	SIGNIFIKAN POSITIF
KEPMAN	0.026600	0,0050	SIGNIFIKAN POSITIF
SIZE	0.005540	0,4293	TIDAK SIGNIFIKAN
IND	-0.170716	0,4502	TIDAK SIGNIFIKAN

Source: processed data

1. C = Konstanta, yang berarti jika semua variabel independen dianggap tetap/konstanta atau juga = 0 maka nilai variabel dependennya yaitu = C. Menunjukkan bahwa AP sama dengan nilai C yaitu sebesar 0,12%.
2. Nilai koefisien Kepemilikan Institusional (KEPIN) = 0.003054 yang artinya bila KEPIN naik 1% maka AP akan meningkat sebesar 0.003% dengan asumsi ceteris paribus.
3. Nilai koefisien Kepemilikan Manjerial (KEPMAN) = 0.0266 yang artinya bila KEPMAN naik 1% maka AP akan meningkat sebesar 0.0266% dengan asumsi ceteris paribus.
4. Nilai koefisien Ukuran Perusahaan (*SIZE*) = 0.00554% yang artinya bila size naik 1% maka AP akan meningkat sebesar 0.00554% dengan asumsi ceteris paribus.
5. Nilai koefisien Proporsi Komisaris Independen (IND) = -0.1707% yang artinya bila IND naik 1% maka AP akan menurun sebesar 0.1707% dengan asumsi ceteris paribus.

D. Hypothesis Test Results

a) Partial Test (t Test)

Partial Test (t test) to find out from each independent variable to the dependent variable. The following are the results that can be seen from the t-test:

Based on what is in Table 6, the results of the t-test can be interpreted as follows:

- 1) Institutional Ownership (KEPIN) has a coefficient of 0.003054 with Prob. 0.0000 < 0.05 ($\alpha = 0.5\%$). This can indicate that KEPIN has a positive influence on ROA.
- 2) Managerial Ownership has a coefficient of 0.026600 with Prob. 0.0050 < 0.05 ($\alpha = 0.5\%$). This can indicate that KEPMAN has a positive influence on AP.
- 3) Company Size (Size) has a coefficient of 0.005540 with Prob. 0.4293 > 0.05 ($\alpha = 0.5\%$). This can show that Size has no effect on AP.
- 4) The proportion of Independent Commissioners (IND) has a coefficient of -0.170716 with Prob. 0.4502 > 0.05 ($\alpha = 0.5\%$). This can show that IND has no influence on AP.

b) Simultaneous Test (F Test)

Table 7. F. Test Results

R-squared	0.460431	Mean dependent var	0.388248
Adjusted R-squared	0.390810	S.D. dependent var	0.116646
S.E. of regression	0.091043	Akaike info criterion	-1.826726
Sum squared resid	0.256953	Schwarz criterion	-1.606793
Log likelihood	37.88107	Hannan-Quinn criter.	-1.749964
F-statistic	6.613324	Durbin-Watson stat	1.986696
Prob(F-statistic)	0.000572		

Source: processed data

Table 8. Model Fit Test Results

Adjusted R-squared
0.390810

Source: processed data

This Simultaneous Test (F test) aims to determine whether the independent variables together have an influence on the dependent variable. Here are the results of the F test:

Table 7 shows that the F-statistic is 6.613324 with a Prob F-statistic value of 0.000572 < 0.05 ($\alpha = 5\%$) which means that institutional ownership, managerial ownership, company size, and the size of independent commissioners together also affect aggressiveness. Tax.

c) Model Fit Test

The model fit test or the coefficient of determination is shown by the Adjusted R-Squared on the resulting regression results. Adjusted R-Squared has the aim of determining the proportion or percentage of the total variation in the dependent variable that has been explained by the independent variables together. Adjusted R-Squared can be known in a percentage that can be explained by the independent variables on the related variables. While the rest will be influenced by other variables that are not included in the research model. The following are the results that can be seen from the model fit test:

Based on Table 8, Adjusted Rsquared 0.390810 or 39.08% independent variables affect the equation of the studied model, while the remaining 60.92% is influenced by other variables that are not included in the equation of the studied model.

H. Discussion

Based on the analysis and testing in panel data regression that was carried out in this study. It can be seen that:

1) Institutional Ownership

Institutional Ownership (KEPIN) according to the results of the hypothesis that has been researched states that KEPIN has a significant positive effect on Tax Aggressiveness (AP) in Construction and Building Sub-Sector Companies from 2009 to 2014 which have been listed on the Indonesia Stock Exchange, with a coefficient of 0,003054 with Prob. $0.0000 < 0.05$ ($\alpha = 0.5\%$).

2) Managerial Ownership

Managerial Ownership (KEPMAN) has a coefficient of 0.026600 with Prob. $0.0050 < 0.05$ ($\alpha = 0.5\%$). This can indicate that KEPMAN has a positive influence on AP in the Construction and Building Subsector Companies from 2009 to 2014 which have been listed on the Indonesia Stock Exchange.

Managerial ownership is the proportion of share ownership owned by the management of a company. Managerial ownership shows the dual role of a manager, namely the manager also acts as a shareholder. The results of this study indicate that managerial ownership in the Construction and Building Subsector Company positively influences the policy of making tax planning to reduce the amount of tax paid by the company.

3) Company Size

Company Size (Size) according to the results of the hypothesis that has been researched states that Size has no significant effect on Tax Aggressiveness (AP) in Construction and Building Sub-Sector Companies from 2009 to 2014 which have been listed on the Indonesia Stock Exchange, namely by having a coefficient of 0.005540 with Prob. $0.4293 > 0.05$ ($\alpha = 0.5\%$).

The results of this study indicate that company size has no effect on tax aggressiveness in Indonesia, which means that the behavior of companies in Indonesia to carry out tax aggressiveness is not influenced by the size of the company. That the size of the company does not have a significant effect on tax aggressiveness because paying taxes is the company's obligation, so that both large and small companies will always be chased by the tax authorities if they violate tax provisions.

4) Proportion of Independent Commissioners

The proportion of Independent Commissioners (IND) according to the results studied shows that IND has no significant effect on Tax Aggressiveness in Construction and Building Subsector Companies in 2009 to 2014 which have been listed on the Indonesia Stock Exchange, IND has a coefficient of -0.170716 with Prob. $0.4502 > 0.05$ ($\alpha = 0.5\%$).

Based on the results of research, independent commissioners have a negative but not significant effect because the more the number of independent commissioners, the more stringent supervision of agents will be. Because there is more supervision from an independent commissioner, it is predicted that the effective tax rate will be in accordance with what it should be, so keep an eye on it so that there is no excessive tax aggressiveness.

Independent commissioners always monitor that the company complies with applicable laws and regulations.

5 Conclusion and Reference

The research that has been done from the results of the analysis and discussion in the previous chapter, it is concluded that as follows:

Institutional Ownership (KEPIN) partially has a positive significant effect on Tax Aggressiveness in Construction and Building Subsector Companies from 2009 to 2014 which are listed on the Indonesia Stock Exchange. The results of this study indicate that institutional investors have a high level of control and the presence of institutional ownership in determining effective tax policy.

1. Managerial Ownership (KEPMAN) partially shows that KEPMAN has a significant positive influence on Tax Aggressiveness in Construction and Building Subsector Companies from 2009 to 2014 which are listed on the Indonesia Stock Exchange. Managerial ownership in the Construction and Building Sub-sector Company influences the policy making of tax planning to reduce the amount of tax paid by the company.
2. Company Size partially has no effect on Tax Aggressiveness in Construction and Building Subsector Companies for the period 2009–2014 which are listed on the Indonesia Stock Exchange. The behavior of companies in Indonesia to carry out tax aggressiveness is not influenced by the size of the company. It is stated that the size of the company does not have a significant effect on tax aggressiveness because paying taxes is the company's obligation, so that both large and small companies will always be chased by the tax authorities if they violate tax provisions.
3. The proportion of Independent Commissioners (IND) partially shows that IND has no influence on Tax Aggressiveness in Construction and Building Subsector Companies for the 2009–2014 period listed on the Indonesia Stock Exchange. Because there is more supervision from independent commissioners so that the company complies with applicable laws and regulations, it is predicted that the effective tax rate will be in accordance with what it should be, so watch out for unreasonable tax aggressiveness.

B. Suggestions

The suggestions that can be submitted for further research in the field of taxation, especially to see the level of tax aggressiveness in a company, For the Directorate General of Taxes, it is necessary to increase further development in the taxation system, especially regarding tax regulations and a clean tax audit system so that state revenues can be optimized, because currently companies are increasingly observant in looking for loopholes to make savings to reduce tax rates. And for the tax authorities, it is better to increase monitoring and supervision of the implementation of tax obligations for companies, where there is no corporate tax aggressiveness action.

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