The Effects of the Corporate's Characteristics on Tax Avoidance Moderated by Earnings Management (Indonesian Evidence)

Sasiska Rani[a]   Didik Susetyo[b]   Luk Luk Fuadah[c]

[a] Corresponding Author, Faculty of Economics, Sriwijaya University, Palembang, Indonesia, sasiskarani2203@gmail.com
[b] Prof., Faculty of Economics, Sriwijaya University, Palembang, Indonesia
[c] Ph.D., Faculty of Economics, Sriwijaya University, Palembang, Indonesia

Abstract
The objective of this study is to analyze the effects of the corporate's characteristics on tax avoidance and to analyze the effects of moderation of earnings management on the relationship between the corporate's characteristics and tax avoidance. The corporate's characteristics in this study are proxied by the profitability, the leverage, and the size. This study selected 49 manufacturing companies listed on the Indonesia Stock Exchange of the period of 2012-2016 as samples that were selected by using the cluster random sampling technique. The result of the panel data regression with random effect model shows that the characteristics of a company, namely the profitability and the size have a significant negative effect on tax avoidance, whereas the leverage has a significant positive effect on tax avoidance. The action of the earnings management is able to moderate the effects of the profitability and the leverage on tax avoidance. However, the action of the earnings management is unable to moderate the effects of the size on tax avoidance.

1.   Introduction

The deed of tax avoidance is a threat that faced not only by Indonesia but also by all countries in the world. The case of *Panama paper* proves that many countries in the world are facing the problem of tax fraud. The realization of Indonesia's income from the tax sector has been continually declining, especially in the last 5 years (2012-2016). The Ministry of Finance of the Republic of Indonesia noted that in 2015 the realization of tax revenue only reached 82.97%. In 2016, tax revenues increased insignificantly compared to the previous year, which was 83.39%. The increase of tax revenues in 2016 was due to the provision of tax amnesty (Irianto et al. 2017).

In addition, the tax ratio in Indonesia is classified as the lowest among those of the ASEAN countries, which is only 10.7% (Kurniawati & Arifin, 2017). The lowness of the tax ratio in Indonesia is due to the fact that many taxpayers in Indonesia conduct tax avoidance. The tax avoidance is done because the tax rate in Indonesia is still relatively high compared to those of other countries in ASEAN. The tax rate in Indonesia was lowered to 25% in 2010, but this rate is still higher than Singapore's tax rate of 17%, Thailand's of 20%, and Malaysia's of 24%.

The low tax ratio indicates the low-level of taxpayer's compliance. The taxpayers assume that taxes are a burden that can hinder the development of their company (Anouar & Houria, 2017). This is what drives the company to try to minimize the tax burden that must be paid. There are several ways that the companies use to minimize the tax burden to be paid, both legally (tax avoidance) and illegally (tax fraud). According to Pratama (2017), tax avoidance can be used as a legal tool to reduce taxes that must be paid by the companies.

The previous researches examined the relationship of corporate's characteristics by using different proxies such as the profitability, the leverage, and the size against tax avoidance, e.g. Pratama (2017) used the profitability, the leverage, the age, and the size as proxies for the corporate's characteristics. Irianto et al. (2017) used the profitability, the leverage, the size, and the capital intensity as proxies for the corporate's characteristics. In addition, there are several studies that analyze the effects of the profitability, the leverage, and the size on tax avoidance (Kim & Im, 2017; Minnick & Noga, 2010; Salaudeen, 2017).

There are studies that use the effective tax rate (ETR) as a proxy for tax avoidance. One way to know how a company manages its tax is to see its ETR (Dyreng et al. 2008; Hanlon & Heitzman, 2010; Karayan & Swenson, 2007; Richardson & Lanis, 2007). The effective tax rate approach (ETR) is able to describe tax avoidance derived from temporary differences and provides a comprehensive overview of changes in tax expense as it represents current and deferred taxes (Hanlon & Heitzman, 2010). The companies that have the smaller value of ETR are those that conduct tax avoidance by reducing their taxable income but maintaining their financial accounting earnings. ETR is based on an income statement that generally measures the effectiveness of a tax reduction strategy and leads to high after-tax profits (Saifudin & Yunanda, 2016). The effective tax rate (ETR) is the ratio of total tax expense to profit before tax. The total tax expense may represent taxes that the company pays compared to the companies' earnings. The smaller the value of ETR the higher the tendency that the companies commit tax avoidance. In Indonesia, there are fiscal incentives offered by the government to particular sectors, but these fiscal incentives are not much used because of the strict regulations imposed on the companies that want to use them. ETR is one way of measuring tax avoidance in manufacturing companies in Indonesia (Saifudin & Yunanda, 2016).

Some researchers regard earnings management as another factor affecting tax avoidance proxied by the effective tax rate (ETR). One of the factors that drive the corporate's managers to conduct earnings management is tax motivation (Scott, 2009). Badertscher et al. (2013) found that the companies conducted earnings management to avoid taxes. Based on agency theory, the corporate's managers have the ability to transform information and manipulate the earning (Basri & Buchari, 2017). The company's managers can select the alternatives and accounting methods used to record every transaction that occurs. The company's managers have an incentive to increase earnings for financial reporting purposes and to lower profits for tax reporting purposes (Koh & Lee, 2015). The mismatch between accounting standards and tax laws allows the companies to conduct earnings management so that the profits on which tax is imposed will decline (Frank et al. 2009).

This study focuses on analyzing the influence of the corporate's characteristics which are proxied by the profitability, the leverage, and the size on tax avoidance. In addition, the

study also focuses on analyzing the moderating effects of earnings management on the relationship among the company's characteristics and tax avoidance. The use of earnings management as a moderating variable distinguishes this study from the previous studies, so this study is expected to provide new and more clear insights about tax avoidance practices.

Section 2 of this study presents a literature review of the effects of the corporate's characteristics on tax avoidance moderated by earnings management. Section 3 presents the methodology used in the study. Section 4 presents the result and discussion. Section 5 of this study presents the conclusions, the limitations of this study, as well as the recommendations for further studies.

2.   Literature Review

2.1. Agency Theory

The agency theory was first introduced by Jensen and Meckling in 1976 that defines agency relations as a contract in which one or more people (principal) involve another person (agent) to perform some services on their behalf involving the delegation of decision-making authority to the agent (Jansen & Meckling, 1976). The agency theory explains that there is a conflict of interest between the government (principal) and the manager (agent) as each strives to achieve its own interests. The existence of differences in user interest of financial statements between the company's management (taxpayer) and the tax authorities (tax collectors) caused an agency conflict. This is supported by the fact that Indonesia applies self-assessment system in doing tax collection. Agency conflicts relate to tax avoidance activities (Desai & Dharmapala, 2009; James & Scott, 2014).

2.2. Positive Accounting Theory

The Positive accounting theory explores the factors that influence the management's attitude toward accounting standards that tend to influence the company's lobby against accounting standards. There are three hypotheses of positive accounting theory: bonus plan hypothesis, debt covenant hypothesis, and political cost hypothesis (Watts & Zimmerman, 1986).

2.3. Empirical Research

The previous study correlates the corporate's characteristics with tax avoidance both abroad and in Indonesia. Pratama (2017) conducted a study of the company in Indonesia found that the characteristics of the company with proxy of the profitability negatively affected tax avoidance. The results also revealed that the size has a positive effect on tax avoidance, while the leverage has a positive but not significant effect on tax avoidance. Still in Indonesia, these findings are consistent with the results of the study conducted by Irianto et al. (2017) which examined the effects of the profitability, the leverage, the size, and the capital intensity on tax avoidance. The result of the study showed that the profitability had a negative effect on tax avoidance, the size had a positive effect on tax avoidance, the leverage had a positive but not significant effect on tax avoidance, and the capital intensity had a negative but not significant effect on tax avoidance.

Salaudeen (2017) studied the effects of the size, the leverage, the capital intensity, the profitability, and the nature of business of fifty-five companies listed on the FSS on the Nigerian Stock Exchange (NSE). The results revealed that the size, the leverage, the capital intensity, the profitability, and the nature of business negatively affected tax avoidance. Kim & Im (2017) who conducted a study on the companies listed on the Korean Stock Exchange found that the size negatively affected tax avoidance. The profitability, the leverage, the operating cash flow, the capital intensity, the R & D intensity, and the growth rate had a positive effect on tax avoidance.

Dharma & Ardiana (2016) examined the effects of the leverage, the fixed asset intensity, the size, and the political connections in the manufacturing companies listed on the Indonesia Stock Exchange. The results showed that the leverage and the fixed asset intensity had a positive effect on tax avoidance. The size negatively affected tax avoidance, whereas the political connections negatively affected tax avoidance but were not significant. Fadli (2016) found that the leverage and earnings management had a positive effect on tax avoidance. The study conducted by Nugraha & Meiranto (2015) found that CSR and the leverage negatively affected tax avoidance. The size and the capital intensity have a negative but not significant effect on tax avoidance. The profitability has a positive but not significant effect on tax avoidance.

Taylor & Richardson (2013) found that the corporate governance could reduce tax avoidance. He also found that there is no significant effect of the profitability and the size on tax avoidance. In addition, he also found that the leverage has a positive effect on tax avoidance. Delgado et al. (2012) studied the ETR determinants of US companies listed in Compustat in the period from 1992 to 2009 and found that the leverage and the size negatively affected the ETR. The profitability affects ETR positively.

Noor et al. (2010) studied the factors affecting the company's ETR during the implementation of the official assessment system and the self-assessment system. The study revealed that ETR during the implementation of the self-assessment system was lower than the ETR when the official assessment system was applied. The study also found that the profitability, the leverage, and the capital intensity have a negative effect on effective tax rates (ETR). While the inventory intensity and the size has a positive effect on the effective tax rates (ETR). The size, the leverage, and the profitability are the proxies of the company's characteristics that can affect tax avoidance. The results show that the profitability and the size have a positive effect on tax avoidance, while the leverage has no effect on tax avoidance (Minnick & Noga, 2010).

Richardson & Lanis (2007) examined the key determinants affecting corporate's ETR in Australia. The results of this study revealed that the size, the leverage, the capital intensity, R & D intensity, and tax reform negatively affect the effective tax rates (ETR). Rego (2003) found that large companies have the ability to do tax planning so as to reduce taxes that must be paid by the company. The results of this study are consistent with the results of the study conducted by Dyreng et al. (2008) who found that small companies have higher tax rates.

2.4. Hypotheses Development

2.4.1. The Effect of the Profitability on Tax Avoidance

The performance of a company's management can be measured with the level of profitability of the company. Based on the agency theory, the government as the principal seeks to maximize tax revenues, while the manager of the company as an agent will seek to minimize the tax burden to be paid (Irianto et al. 2017). Therefore, the companies with high levels of profitability will tend to commit tax avoidance (Irianto et al. 2017; Kraft,

2014; Pratama, 2017; Rego, 2003). Under the bonus hypothesis plan, the companies that earn higher earnings tend to increase their earnings by minimizing costs of income tax (Godfrey, 2010). The results of the studies by Pratama (2017), Irianto et al. (2017), Salaudeen (2017), and Noor et al. (2010) indicate that the profitability has a negative effect on tax avoidance. Based on the aforementioned description, a hypothesis is proposed as follows:

H_1: Profitability has a negative effect on tax avoidance

2.4.2. The Effect of Leverage on Tax Avoidance

Leverage is a ratio that describes the company's ability to meet all its debts. The companies with higher leverage ratios will use interest expense on debt to reduce the amount of income tax payable (Minnick & Noga, 2010). Debt financing offers tax advantages for companies because interest paid on loans, in general, can be tax deductible (Koh & Lee, 2015). Therefore, the company's management will tend to use the debt at the optimal level to minimize the tax burden that must be paid. This corresponds to the political cost hypothesis in positive accounting theory. The results of the studies conducted by Salaudeen (2017), Nugraha & Meiranto (2015), Delgado et al. (2012), Noor et al. (2010), and Richardson & Lanis (2007) show that leverage has a negative influence on tax avoidance. Based on the aforementioned description, the proposed hypothesis is as follows:

H_2: Leverage has a negative effect on tax avoidance

2.4.3. The Effect of Size on Tax Avoidance

Size is the scale of a company that is reflected by the total assets owned by the company. Generally, large companies do more commercial activities and financial transactions than small businesses (Rego, 2003). Dyreng et al. (2008) shows that the company's size plays a role in tax management and finds that small companies have higher tax rates. This is in line with the political cost hypothesis in positive accounting theory which reveals that the companies will tend to use accounting methods that can reduce their earnings in the current period to minimize political costs, namely the tax burden. The studies conducted by Salaudeen (2017), Kim & Im (2017), Dharma & Ardiana (2016), Dyreng et al. (2008), Richardson & Lanis (2007), and Rego (2003) show that the size has a negative significant

effect on tax avoidance. Based on the aforementioned description, the proposed hypothesis is as follows:

H_3: Size has a negative effect on tax avoidance

2.4.4. The Effect of Profitability on Tax Avoidance Moderated by Earnings Management

The level of income obtained by the company relates to the amount of tax payable by the company. The greater the income the company earns, the more taxes it has to pay. One of the techniques used to manipulate income is to conduct earnings management. The earnings management is used as a tool for companies to avoid taxes (Badertscher et al. 2009; Scott, 2009). Frank et al. (2009) found a positive relationship between aggressive financial reporting and aggressiveness of tax reporting. The aggressive financial reporting by the company in the form of profit-increasing measures so that the company managers get the maximum bonus. Therefore, the companies with high profitability will tend to commit tax avoidance practices to reduce their tax liabilities (Delgado et al. 2012; Kraft, 2014; Rego, 2003).

The political cost hypothesis states that the management will manipulate earnings by reducing earnings to minimize the tax paid. The earnings management practices undertaken by the company's management will affect the relationship between the profitability and the practice of tax avoidance by the company. Based on the aforementioned description, the hypothesis is proposed as follows:

H_4: Earnings Management moderates the relationship between the profitability and tax avoidance

2.4.5. The Effect of Leverage on Tax Avoidance Moderated by Earnings Management

Leverage has a relationship with the level of earnings management practices in a company. The greater the leverage ratio indicates that the greater the degree of dependence on external parties (creditors) and the greater the burden of interest costs to be paid by the company (Astuti et al. 2017). If the level of debt held by the company is high, then the company will tend to conduct earnings management to increase profits. The Company will conduct earnings management to increase its debt to utilize the cost of interest earned so

as to decrease earnings. It is aimed at minimizing the tax burden that must be paid. This corresponds to the political cost hypothesis in positive accounting theory. Based on the aforementioned description, then the hypothesis proposed is as follows:

H_5: Earnings Management moderates the relationship between leverage and tax avoidance

2.4.6. The Effect of the Company Size on Tax Avoidance Moderated by Earnings Management

Earnings management is also associated with the size of the companies. Generally, large companies conduct more commercial activities and financial transactions than small businesses (Rego, 2003). Large companies tend to generate greater earnings. Therefore, the bigger the company the more likely it is for a company to choose an accounting method that will decrease revenues (Amertha et al. 2014). It aims to minimize the tax burden that must be paid. This condition indicates that company size can cause management to implement earnings management aimed at minimizing the tax burden to be paid. Based on the aforementioned description, then the hypothesis proposed is as follows:

H_6: Earnings Management moderates the relationship between size and tax avoidance.
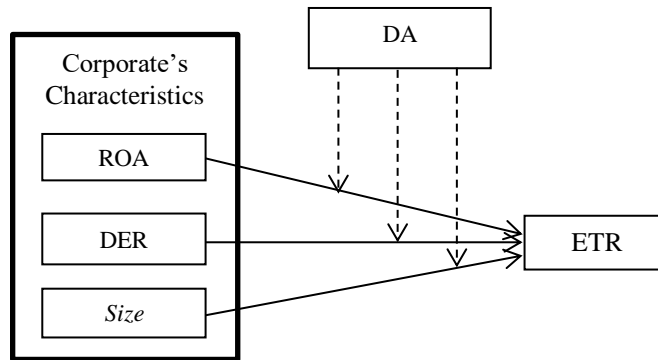

Figure1. Conceptual Framework

Explanation :

⟶ Influence of independent and dependent variables

- - - -> Effects of moderation on the relationship between independent variables and dependent variables

3. Research Methodology

This study uses the quantitative method. The subjects of this study are manufacturing companies listed on the Indonesia Stock Exchange in the period of 2012 - 2016. The type of data used in this study are the secondary data obtained from www.idx.co.id in the form of

financial statements of the manufacturing companies listed on the Indonesia Stock Exchange.

Indonesia Stock Exchange for the period 2012-2016 consist of 152 listed manufacturing companies use as the population in this study. Using the cluster random sampling technique with several considerations, 49 manufacturing companies were taken as representative samples of this study. The sample of this study consists of 18 companies from the basic and chemical industry sectors, 11 companies from various industry sectors, and 20 companies from the consumer goods industry sector.

The dependent variable used in this study is tax avoidance which is proxied by the effective tax rate (ETR). The effective tax rate is measured as the ratio of total tax expense to profit before taxation. The independent variables used in this study are the profitability, the leverage, and the company's size. The profitability is proxied by return on asset (ROA). The ROA is measured as the ratio of net income after taxation to total assets. The ROA is related to the company's net income and the tax imposition. The leverage is proxied by the debt-equity ratio (DER). The DER is measured as the ratio of total liabilities to the total equity. In Indonesia, the government specifically regulates the amount of DER as an anti-tax avoidance measure. This is because many taxpayers use debt to take advantage of interest costs. The company's size is measured as the natural logarithm of the total assets (SIZE). The companies that have large assets are classified as large-scale companies. The companies that have large assets are capable of generating large profits that tend to avoid taxes.

The moderation variable used in this study is earnings management. Earnings management is measured by using discretionary accruals (DA) which is the modified Jones model. The Jones modified model developed by Jones is the most powerful model for detecting earnings management (Dechow et al. 1995). Discretionary accrual (DA) is calculated on the basis of the difference of the total accrual (TA) and non-discretionary accrual (NDA).

The method of analysis used in this study is panel data regression using moderated regression analysis (MRA). The model in this study is as follows:

$$\text{ETR}_{it} = \alpha + \beta_1 \text{ROA}_{it} + \beta_2 \text{DER}_{it} + \beta_3 \text{SIZE}_{it} + e \qquad\qquad \dots \text{(Model 1)}$$

$$\text{ETR}_{it} = \alpha + \beta_1 \text{ROA}_{it} + \beta_2 \text{DER}_{it} + \beta_3 \text{SIZE}_{it} + \beta_4 \text{DA}_{it} + \beta_5 (\text{ROA} * \text{DA})_{it} + \beta_6 (\text{DER} * \text{DA})_{it}$$
$$+ \beta_7 (\text{SIZE} * \text{DA})_{it} + e \qquad\qquad \text{... (Model 2)}$$

In which ETR is tax avoidance, α is constants, $\beta_1 - \beta_6$ is a coefficient, ROA is the profitability, DER is the leverage, SIZE is the company's size, DA is earnings management, e is an error term, i is an entity-i, and is t-period.

Model 1 in this study examines the effect of the company's characteristics proxied by the profitability (ROA), the leverage (DER), and the company size (SIZE) on tax avoidance (ETR). The model 2 presented in this study differs from model 1. In model 2, this study does not only test the profitability (ROA), the leverage (DER), and the company size (SIZE) on tax avoidance (ETR). Model 2 in this study considers earnings management (DA) as a moderating variable. In model 2, it will be analyzed how earnings management (DA) can affect the relationship between the company's characteristics proxied by the profitability (ROA), the leverage (DER), and the company's size (SIZE) on tax avoidance (ETR). It gives conclusion what is the most appropriate model for best describe ETR, whether the model before there are moderation variables or models after using the moderation variables.

4.   Result and Discussion

4.1. Multicollinearity Test

Multicollinearity test aims to test whether the regression model found a correlation between independent variables (Ghozali & Ratmono, 2013). If the correlation values of all independent variables has a value <0.8 then there is no multicollinearity.

Table 1 Multicollinearity Test Results

	ROA	DER	SIZE	ROA*DA	DER*DA	SIZE*DA
ROA	1.000000					
DER	-0.325394	1.000000				
SIZE	0.237852	0.015137	1.000000			
ROA*DA	0.599934	-0.260270	0.149043	1.000000		
DER*DA	-0.318362	0.621565	-0.120686	0.083075	1.000000	
SIZE*DA	-0.156014	-0.031473	-0.076146	0.527008	0.626912	1.000000

Source: output Eviews 9.0 (2018)

The test results in Table 1 shows that all independent variables and moderating variables have correlation coefficient values < 0.8. It concludes that there is no multicollinearity among independent variables and moderating variables in the research model.

4.2. Best Model Selection Test

The models in this study were analyzed by panel data regression and moderated regression analysis (MRA) to investigate the moderating effects of moderating variables. The model estimation in panel data regression uses three approaches: common effect model, fixed effect model, and random effect model. To determine the best model, Chow-test, Hausman-test, and Lagrange multiplier-test are conducted.

Table 2 Best Model Selection Test Results

	Model 1	Model 2
Chow-test (p-value)	0.000	0.000
Hausman-test (p-value)	0.316	0.283
Lagrange Multiplier-test (p-value)	0.000	0.000

Source: output EViews 9.0 (2018)

At a significance level of 5%, the Chow-test for model 1 and model 2 show p-values of 0.000 <0.05 so the fixed effect model is better used than the common effect model. The Hausman-test for model 1 and model 2 show p-value for model 1 is 0.316 > 0.05 and p-value for model 2 is 0.283> 0.05 so the random effect model is better used than the fixed effect model. The Lagrange multiplier-test for model 1 and model 2 show the p-values of 0.000 < 0.05 so the random effect model is better used than the common effect model. Based on the result of Chow-test, Hausman-test, and Lagrange multiplier-test, it was concluded that the best model in the research using random effect model (shown in table 2).

4.3. Panel Data Regression Analysis

The result of the research shows that the value of adjusted R^2 in model 1 is 54.54%. This means that 54.54% of the variance of tax avoidance can be explained by independent variables. While the other 45.46% (100%-54.54% = 45.46%) explained by other variables not included in this research model. The result of the research shows that the value of adjusted R^2 in model 2 is 69.07%. This means that 69.07% of the variance of tax avoidance can be explained by independent variables and moderating variables. While the other 30.93% (100%-69.07% = 30.93%) explained by other variables not included in this research model (shown in table 3).

Table 3 Results of Panel Data Regression Analysis

	Model 1	Model 2
C	0.3993	0.3994
(p-value)	(0.0000)	(0.0000)
ROA	-0.2267	-0.2849
(p-value)	(0.0000)	(0.0000)
DER	0.0105	0.0167
(p-value)	(0.0000)	(0.0000)
SIZE	-0.0044	-0.0040
(p-value)	(0.0000)	(0.0005)
DA	-	0.2373
(p-value)		(0.1850)
ROA*DA	-	0.3429
(p-value)		(0.0046)
DER*DA	-	-0.0477
(p-value)		(0.0021)
SIZE*DA	-	-0.0114
(p-value)		(0.0777)
R^2	55.10%	69.07%
Adj. R^2	54.54%	68.16%
F-statistic	98.59	75.61
Prob. (F-statistic)	(0.0000)	(0.0000)

Source: output EViews 9.0 (2018)

The decision to determine a better model can be seen from Adjusted R^2 and F-Stat. The result of analysis shows that there is a difference between the adjusted value of R^2 in model 1 and model 2, in which there is an increase of the adjusted value of R^2 in model 2. The increase in the adjusted value of R^2 proves that model 2 is the most appropriate to use. The increase of value in adjusted R^2 will occur if the addition of the new pattern improves the regression model. However, the selection of model 2 as the better version makes the selection unclear. This is because Model 1 has a larger F-Stat value compared to model 2. The F-stat value in the study of 98.59 for model 1 and 75.61 for model 2 with Prob. (F-stat) = 0.000 proved the suitability of the model to explain the relationship between the variables that can be used in this study (shown in table 3).

The test result using random effect model shows the negative effect between the profitability (ROA) on tax avoidance (ETR) at 5% significance level (p = 0.0000). The effect of leverage (DER) on tax avoidance (ETR) shows a positive effect at the 5% significance level (p = 0.0000) and the existence of negative effect of size on tax avoidance (ETR) at the 5% significance level (p = 0.0005). In addition, the results of the test using the random

effect model show that earnings management moderates the relationship between the profitability and tax avoidance (ROA*DA) at the 5% significance level (p = 0.0046) and shows a positive direction (0.343). Earnings management moderates the relationship between leverage and tax avoidance (DER*DA) at a significance level of 5% (p = 0.0021) and indicates a negative direction (-0.048). The results also show that earnings management is unable to moderate the relationship between size and tax avoidance (SIZE*DA) at the 5% significance level (p = 0.0777).

The results of the analysis test show that the first hypothesis (H_1) is accepted and the direction of the relationship is in accordance with the expectations. The results of this study are consistent with the results of the study by Pratama (2017), Irianto et al. (2017), Salaudeen (2017), and Noor et al. (2010) indicating that the profitability has a negative effect on tax avoidance. The companies with high profitability will tend to conduct tax avoidance (Irianto et al., 2017; Kraft, 2014; Pratama, 2017; Rego, 2003). This evidenced by the value of the profitability coefficient that indicates the direction of a negative relationship. This means that if there is an increase in the profitability then there will be a decrease in ETR, which means that tax avoidance in the company increases.

The second hypothesis (H_2) in this study is also accepted which states that the leverage has an effect on tax avoidance and the direction of the relationship is not in line with the expectations. The results of this study contradict the results of the studies conducted by Salaudeen (2017), Nugraha & Meiranto (2015), Delgado et al. (2012), Noor et al. (2010), and Richardson & Lanis (2007). The test results show that the leverage coefficient has a positive sign which means if the leverage of the company increases then there will be an increase in ETR value indicating that the company reduces tax avoidance measures. The test results are in accordance with the debt covenant hypothesis in the positive accounting theory that the companies with high leverage ratios will tend to use accounting methods that can increase reported earnings so that in the creditor's eye the companies are in healthy conditions (Dharma & Ardiana, 2016). This is what causes the tax burden of the companies will be greater. Therefore, managers will increase the revenues to delay breaches of debt agreements and tax avoidance measures. High leverage rates will lower tax avoidance rates because the higher the companies' leverage, the higher the earnings

will be (Watts & Zimmerman, 1986). The results of this study are consistent with the results of the studies by Kim & Im (2017), Dharma & Ardiana (2016), and Fadli (2016).

The test results show that the third hypothesis (H_3) is accepted and the direction of the relationship is in accordance with the expectations. The value of the coefficient of size has a negative sign, which means that if the size of the company (SIZE) is greater, then the effective tax rate (ETR) will be lower which means the action of tax avoidance in the company increases. The results of this study are consistent with those of the studies by Salaudeen (2017), Kim & Im (2017), Dharma & Ardiana (2016), Dyreng et al. (2008), Richardson & Lanis (2007), and Rego (2003). The size of the company plays a role in tax management and it is revealed that the smaller companies have higher tax rates (Dyreng et al. 2008). The companies with large assets and high sales generate bigger and more stable profits. The large and stable earnings will tend to encourage the companies to practice tax avoidance (Dewinta & Setiawan, 2016). The results of this study are in accordance with the hypothesis of political costs in positive accounting theory, which states that the companies will tend to use accounting methods that can reduce the income earned in the current period to minimize political costs, namely the tax burden.

Earnings management as a moderating variable (ROA*DA) has a significant positive effect on the relationship between the profitability and tax avoidance, which means that the fourth hypothesis (H_4) is accepted. It is interpreted that the higher the level of profitability resulting from earnings management, the higher the effective tax rate (ETR) will be which means that the company reduces tax avoidance measures. One of the company's motives to conduct earnings management action is the bonus motif purpose (Scott, 2009). The company will look for opportunities to be able to manage net income in an effort to maximize the bonuses it will receive. This is in line with the bonus plan hypothesis in positive accounting theory which states that the company's management will tend to maximize its financial performance by increasing earnings. The managers will tend to choose and use accounting methods that can increase earnings earned by the companies in the current period. This is because by increasing the earnings, then the performance of the manager in the eyes of the shareholders will be good, so the manager will get a maximum bonus in each period.

The test results show that the fifth hypothesis (H_5) is accepted which means that earnings management can moderate the effects of leverage on tax avoidance. The coefficient value of the interaction between earnings and leverage variable (DER*DA) is negatively related with tax avoidance. It is interpreted that the higher the level of leverage as the results of earnings management, the lower the value of effective tax rate (ETR) will be, which means that the higher tax avoidance measures undertaken by the company will be. One of the company's motives to take earnings management action is taxation motivation (Scott, 2009). In this case, the company will tend to conduct earnings management to reduce reported earnings. This is in line with the political cost hypothesis in the positive accounting theory which states that the company will tend to use accounting methods that can reduce the earnings earned in the current period. To avoid tax, many companies engineered their debts. Debt financing offers tax advantages to the companies because interest paid on loans, in general, can be tax deductible (Koh & Lee, 2015).

Earnings management as a moderating variable (SIZE * DA) in this study proves to have no significant effect on the relationship between size and tax avoidance, which means that the sixth hypothesis (H_6) is rejected. This is in line with the study conducted by Dewi et al. (2017) who found that company size had no effect on earnings management. This is due to the fact that the larger the scale of the company, the more attention the company will get from the government and the society. The more intense the attention and supervision by the government, the more careful the management will be in conducting earnings management, because big companies politically get more attention from government institutions (Astuti et al. 2017; Dewi et al. 2017). This is primarily aimed at minimizing the tax burden to be paid by the company. If the management takes an earnings management action to manipulate the earnings earned by the company, then it is more likely that the government will know it.

5. Conclusion

The results of model analysis show that the most appropriate model to be used is a model using moderation variable (model 2). However, the selection of model 2 as the better version makes the selection unclear. This is because Model 1 has a larger F-Stat value compared to model 2. The result of regression test of panel data using random effect model

proves that the characteristics of the company, namely the profitability and the size have a negative effect on tax avoidance. The negative relationship between the profitability and the size and tax avoidance indicates that the higher the level of profitability and the greater the size of the company the smaller the value of ETR will be which indicates that tax avoidance measures in the company increases. The results also prove that leverage has a positive effect on tax avoidance. A positive relationship between leverage and tax avoidance indicates that the higher the leverage level of the company, the higher the ETR value will be, which means that the company reduces tax avoidance.

In the testing of moderation effect, it was found that earnings management moderated the profitability and leverage relationship against tax avoidance. The higher the earning management action resulting in an increase in profitability, in turn, will increase the effective tax rate (ETR) indicating that the tax avoidance in the company reduced. While the higher the level of earnings management resulting in increased leverage, makes the value of effective tax rate (ETR) decreases, which indicates the higher level of tax avoidance by the company. The results of the study also prove that earnings management is unable to moderate the relationships between size and tax avoidance. This shows that earnings management practices do not affect the firm size relationship to take tax avoidance measures due to the attention and supervision of an external party such as the government.

This study has some limitations, among others, is that the proxy of the characteristics of the companies used in this study is still limited to the financial factors of profitability, leverage, and size. Further studies are expected to examine other variables as the proxy of the corporate's characteristics, such as liquidity, capital intensity, and inventory intensity to further enrich the discussion of tax avoidance. Future researchers can then add non-financial factors, such as corporate governance that can influence tax avoidance. In addition, for further studies the writers suggest that the book-tax difference (BTD) be used as a proxy for tax avoidance because it can illustrate better tax avoidance. This study recommends that governments be more strict in overseeing tax avoidance practices by companies by exploiting the loopholes contained in the taxation rules, one of which is by applying earnings management practices.

References

Amertha, I. S. P., Ulupui, I. G. K. A., & Putri, I. G. A. M. A. (2014). Analysis of firm size, leverage, corporate governance on earnings management practices (Indonesian evidence). *Journal Of Economics, Business and Accountancy Ventura*, *17*(2), 259–268. https://doi.org/10.14414/jebav.14.1702009

Anouar, D., & Houria, Z. (2017). The Determinants of Tax Avoidance within Corporate Groups: Evidence from Moroccan Groups. *International Journal of Economics, Finance and Management Sciences*, *5*(1), 57–65. https://doi.org/10.11648/j.ijefm.20170501.15

Astuti, A. Y., Nuraina, E., & Wijaya, A. L. (2017). Pengaruh Ukuran Perusahaan dan Leverage Terhadap Manajemen Laba. *Forum Ilmiah Pendidikan Akuntansi*, *5*(1), 501–514.

Badertscher, B. A., Katz, S. P., & Rego, S. O. (2013). The separation of ownership and control and corporate tax avoidance. *Journal of Accounting and Economics*, *56*(2–3), 228–250. https://doi.org/10.1016/j.jacceco.2013.08.005

Badertscher, B. A., Phillips, J. D., & Rego, S. O. (2009). Earnings Management Strategies and the Trade-Off between Tax Benefits and Detection Risk : To Conform or Not to Conform ? *The Accounting Review*, *84*(1), 63–97.

Basri, H., & Buchari, D. (2017). The Effect of Industrial and Geographic Diversifications on the Earnings Management of the Manufacturing Companies in Indonesia. *Journal of Accounting, Finance and Auditing Studies*, *3*(I), 52–63.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting Earning Management. *The Accounting Review*, *70*(2), 193–225.

Delgado, F. J., Rodriguez, E. F., & Arias, A. M. (2012). Size and other Determinants of Corporate Effective Tax Rates in US Listed Companies. *International Research Journal of Finance and Economics*, (98), 160–165.

Desai, M. A., & Dharmapala, D. (2009). Corporate Tax Avoidance and Firm Value. *Review of Economics and Statistics*, *91*(3), 537–546. https://doi.org/10.1162/rest.91.3.537

Dewi, E. R., Nuraina, E., & Amah, N. (2017). Pengaruh Tax Planning dan Ukuran Perusahaan Terhadap Manajemen Laba (Studi Empiris pada Perusahaan Property yang Terdaftar di Bursa Efek Indonesia). *Forum Ilmiah Pendidikan Akuntansi*, *5*(1), 854–881.

Dewinta, I. A. R., & Setiawan, P. E. (2016). Pengaruh Ukuran Perusahaan, Umur Perusahaan, Profitabilitas, Leverage, dan Pertumbuhan Penjualan Terhadap Tax Avoidance. *E-*

Jurnal Akuntansi Universitas Udayana, *14*(3), 1584–1613.

Dharma, I. M. S., & Ardiana, P. A. (2016). Pengaruh Leverage, Intensitas Aset Tetap, Ukuran Perusahaan, dan Koneksi Politik Terhadap Tax Avoidance. *E-Jurnal Akuntansi Universitas Udayana*, *15*, 584–613.

Dyreng, S. D., Hanlon, M., & Maydew, E. L. (2008). Long-Run Corporate Tax Avoidance. *The Accounting Review*, *83*(1), 61–82. https://doi.org/10.2308/accr.2008.83.1.61

Fadli, I. (2016). Pengaruh Likuiditas, Leverage, Komisaris Independen, Manajemen Laba, dan Kepemilikian Institusional Terhadap Agresivitas Pajak Perusahaan. *JOM Fekon*, *3*(1), 1205–1219.

Frank, M. M., Lynch, L. J., & Rego, S. O. (2009). Tax Reporting Aggressiveness to Aggressive and Its Relation Financial Reporting. *The Accounting Review*, *84*(2), 467–496. https://doi.org/10.2308/accr.2009.84.2.467

Ghozali, I., & Ratmono, D. (2013). *Analisis Multivariat dan Ekonometrika Teori, Konsep, dan Aplikasi dengan Eviews 8* (8th ed.). Semarang: Badan Penerbit Universitas Diponegoro.

Godfrey, et al. (2010). *Accounting Theory* (7th ed.). New York, United States of America: John Wiley & Sons.

Hanlon, M., & Heitzman, S. (2010). A Review of Tax Research. *Journal of Accounting and Economics*, *50*(8), 127–178. https://doi.org/10.1088/1751-8113/44/8/085201

Irianto, B. S., Sudibyo, Y. A., & Wafirli, A. (2017). The Influence of Profitability , Leverage , Firm Size and Capital Intensity Towards Tax Avoidance. *International Journal of Accounting and Taxation*, *5*(2), 33–41. https://doi.org/10.15640/ijat.v5n2a3

James, A. C., & Scott, D. W. (2014). Advances in Taxation The Association between Agency Conflict and Tax Avoidance: A Direct Approach. *Advances in Taxation*, 107–138. https://doi.org/http://dx.doi.org/10.1108/S1058-749720140000021007

Jansen, M. C., & Meckling, W. H. (1976). Theory of The Firm : Managerial Behavior, Agency Cost and Ownership Structure. *Journal of Financial Economics*, *3*, 305–360. https://doi.org/https://doi.org/10.1016/0304-405X(76)90026-X

Karayan, J. E., & Swenson, C. W. (2007). *Strategic Business Tax Planning* (2nd Ed.). Canada: John Wiley & Sons, Inc., Hoboken, New Jersey.

Kim, J. H., & Im, C. C. (2017). The study on the effect and determinants of small-and medium-sized entities conducting tax avoidance. *Journal of Applied Business Research*,

33(2), 375–390.

Koh, Y., & Lee, H.-A. (2015). The effect of financial factors on firms' financial and tax reporting decisions. *Asian Review of Accounting*, *23*(2), 110–138. https://doi.org/10.1108/ARA-01-2014-0016

Kraft, A. (2014). What really affects German firms' effective tax rate? *International Journal of Financial Research*, *5*(3), 1–19. https://doi.org/10.5430/ijfr.v5n3p1

Kurniawati, L., & Arifin, H. (2017). Agresivitas Pajak Dan Maturitas Utang. *Jurnal Pajak Indonesia*, *1*, 1–15.

Minnick, K., & Noga, T. (2010). Do corporate governance characteristics influence tax management? *Journal of Corporate Finance*, *16*(5), 703–718. https://doi.org/10.1016/j.jcorpfin.2010.08.005

Noor, R. M., Fadzillah, N. S. M., & Mastuki, N. A. (2010). Corporate Tax Planning : A Study On Corporate Effective Tax Rates of Malaysian Listed Companies. *International Journal of Trade, Economics and Finance*, *1*(2), 189–193. https://doi.org/10.7763/IJTEF.2010.V1.34

Nugraha, N. B., & Meiranto, W. (2015). Pengaruh Corporate Social Responsibility, Ukuran Perusahaan, Profitabilitas, Leverage dan Capital Intensity Terhadap Agresivitas Pajak (Studi Empiris pada Perusahaan Non Keuangan yang Terdaftar di Bursa Efek Indonesia 2012-2013). *Diponegoro Journal Of Accounting*, *4*, 1–14.

Pratama, A. (2017). Company Characteristics, Corporate Governance and Aggressive Tax Avoidance Practice : A Study of Indonesian Companies. *Review of Integrative Business and Economics Research*, *6*(4), 70–81.

Rego, S. O. (2003). Tax-Avoidance Activities of U.S. Multinational Corporations. *Contemporary Accounting Research*, *20*(4), 805–833.

Richardson, G., & Lanis, R. (2007). Determinants of the variability in corporate effective tax rates and tax reform : Evidence from Australia. *Journal of Accounting and Public Policy*, *26*, 689–704. https://doi.org/10.1016/j.jaccpubpol.2007.10.003

Saifudin, & Yunanda, D. (2016). Kompensasi Rugi Fiskal dan Kepemilikan Institusi Terhadap Penghindaran Pajak (Studi Empiris Pada Perusahaan Manufaktur yang Terdaftar di BEI. *Jurnal Penelitian Ilmu Ekonomi WIGA*, *6*(2), 131–143.

Salaudeen, Y. M. (2017). Corporate Effective Tax Rates in the Financial Services Sector :

Evidence from Nigeria. *International Journal of Accounting and Taxation*, *5*(1), 68–88. https://doi.org/10.15640/ijat.v5n1a6

Scott, W. R. (2009). *Financial Accounting Theory* (Fifth). Canada: Prentice Hall.

Taylor, G., & Richardson, G. (2013). The determinants of thinly capitalized tax avoidance structures: Evidence from Australian firm. *Journal of International Accounting, Auditing and Taxation*, *22*, 12–14.

Watts, R. L., & Zimmerman, J. L. (1986). *Positive accounting theory*. Englewood Cliffs, N.J: Prentice-Hall.