Analysis of Factors Affecting Effective Tax Rates of Companies Listed on the Indonesia Stock Exchange 2009-2018

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Abstract
Stock Exchange This study aims to determine whether company size, profitability, leverage, the proportion of independent commissioners and government ownership have an influence on the company's effective tax rates both jointly and partially. This was tested on companies listed on the Indonesia Stock Exchange by means of statistical testing through a panel data regression model that was processed using the STATA 12.0 application. Secondary data used in this research were collected using content analysis techniques. The research sample was determined by a purposive sampling technique on companies in the sectoral index consisting of 10 sectors listed on the Indonesia Stock Exchange with the study period 2009-2018. The independent variables used in this study are company size, profitability, leverage, the proportion of independent commissioners and government ownership, while the dependent variable is the company's effective tax rate. The results showed that the size of the company, the level of profitability of return on assets and corporate governance that are proxied by the proportion of independent directors have a significant effect on effective tax rates, although with different correlations. Where firm size is negatively correlated, while the level of profitability and corporate governance has a positive effect on effective tax rates. Meanwhile, leverage and government ownership variables tend not to have a significant effect on effective tax rates.

Keywords: Effective Tax Rates, Sectoral Indexes, Corporate Tax Rates

PRELIMINARY

The current era of globalization has resulted in increasingly fierce competition in the business world, because the company no longer competes at the national level but also on an international scale. Loss of barriers to mobility with trade liberalization, free movement of capital and currency exchange at the global level, regional integration schemes such as the European Union Single Market and NAFTA, and communication and transportation technologies that reduce transaction costs of moving goods, services and capital across national borders (Genschel and Schwarz, 2011). This also has an impact on the need for state policies that must be able to support and sustain the business climate in the domestic market so that it does not collapse and can compete with the global market. One of the important issues is related to the taxation policies that apply in the country.

According to Rosdiana & Irianto (2014) a good taxation system should be supported by two things, namely tax policy and comprehensive and holistic tax administration. The policy must be able to be a tool to maintain the stability and existence of the national economy, but it must also be able to stimulate and remain friendly to foreign investors. This is in line with the theory of economic growth proposed by Harrod Domar (1939) where investment is needed for each economy to create output growth. One indicator seen by both local and foreign investors is a friendly tax policy with a low tax rate.

Policy in terms of reducing tax rates in a country seems to be a trend as an economic policy in response to the era of globalization. For example, recently done by the United States as a form of tax policy where through the latest rules, a reduction in corporate tax rates, which was originally 35% down to 21% or down about 16%. Even though there is a risk of a decline in state income, this policy is expected to attract investment flows into the country. Surely this superpower policy was responded by other countries affected, such as China. In order to maintain the stability of its national economy, China will reduce its corporate tax costs by more than 112 million USD, in response to the US policy of imposing import tariffs on Chinese products. In the Asian region, let’s say Malaysia has eliminated the tax on goods and services, which has the potential to eliminate a potential income of 12 million USD. Indonesia did not lag behind other than planning to reduce corporate tax rates to 20% by 2021, previously it had issued a policy of reducing tariffs for MSMEs by 50% from the previous tariff of 1% to 0.5%. (www.cnbcindonesia.com).

A decrease in tax rates is indeed considered to be able to encourage investment so that it can accelerate the rate of economic growth in a massive way in the long run. Tax rates that are too high are considered as one of the causes of tax shifting and even money laundry to tax haven countries that almost do not impose taxes. In figure 1.1, a comparison of the country’s domestic tax burden in the Southeast Asian region is shown, where Indonesia’s tax cost is still quite high, reaching 30% which consists of profit tax 16.6%, labor 11.5%, and other taxes 1.9%.
Meanwhile, if seen specifically in the amount of corporate tax rates as shown in Figure 2, Indonesia’s tax rates are not the highest, but also not as the most competitive country when compared to other ASEAN countries. The 25% tariff, which is currently still in force in Indonesia, is still higher than Singapore at 17%, Malaysia at 24% and Thailand at 23%. If the Corporate Income Tax reduction policy can be realized to 20%, then at least Indonesia’s tax burden will be below Malaysia and Thailand. The policy of each country in setting its tax rates is not as easy as imagined, not only in the form of mathematical calculations but also influenced by various factors, including consideration of market behavior responses both domestically and globally which are sometimes difficult to guess. It is expected that a reduction in tax at a certain level will show a maximum response from the market to this rate reduction policy. Because this is in line with the opinion of Mankiw (2009) which states that an increase in tariffs results in market sluggishness. Therefore, the existence of a tariff war on the global market today is difficult to avoid, each country will respond to the policies of other countries on the policy of determining tax rates, both in the form of decreases and increases.
Based on KPMG data for 2012 in Setyowati (2014), the effective tax rate (ETR) of several ASEAN countries is classified as not low. Looking at the ASEAN Briefing data (2018) Singapore remains the country with the lowest effective tax rate in the ASEAN region, which is the same as the statutory tax rate of 17%. Effective tariffs on Malaysian and Vietnamese corporate income tax are also the same as the applicable tax rates in the country, each at 25%. While the effective tax rates of Indonesian, Philippine and Thai Corporate Income Tax are higher than the applicable tax rates because the three do not use a single tier like the previous three countries. Effective tax rates play a significant role in determining the selection of investment locations (Viard, 2008). Effective tax rates according to Larking (2005) are actual tax obligations borne by taxpayers, which reflect the percentage of income before tax, not from taxable income. Effective tax rates are not only derived from the calculation of statutory tax rates, but taxes that determine the amount of tax paid (IBFD, 2005).

The calculation of the effective tax rate is considered to reflect the performance of the tax management carried out by the company (Darmadi, 2013, Ardiyansyah, 2014, Imelia, 2015). Referring to the findings of KPMG above, it can be concluded that the tax burden borne by companies in Indonesia is relatively expensive with an indication that the ETR value is still high. At the theoretical level this is supported by the issue of agency problems inherent in corporate entities. Dualism of interests that tends to differ between management and company owners, if not accompanied by good control in the form of corporate governance (good corporate governance) will lead to inefficiencies in terms of company management, including those related to the implementation of cost management, especially taxes.

Effective tax rates are used in valuing company tax costs retrospectively (Cao and Cui, 2017). In addition, stakeholders, especially company management can use this ETR information to determine the company’s tax policy model and can assess the fairness of the system and tax administration applicable in the country. This effective tax rate is also useful for accountants in investigating various topics such as the relationship between ETR and the policy making of Research and Development (R&D) costs (Shelvin, 1987).
Other topics such as ETR are used to explain their effects on capital structure (Huang and Song, 2006), proof of political cost theory (Zimmerman, 1983), predict future earnings (Bauman and Shaw 2005), and measure the level of corporate tax avoidance in the long run (Dyreng and Hanlon, 2010).

Along with the many uses of ETR data for various parties, research on the factors that influence ETR is increasingly being carried out. Initially, research carried out generally was an univariate analysis limited to the relationship of corporate entities (companies), industry (industry) or size (size) (Siegfried, 1974). Over time, research related to factors that influence ETR is becoming more extensive with multivariate analysis and involves many factors, such as variable leverage (Richardson and Lanis, 2007), profitability (Rodríguez and Arias, 2014), capital intensity, inventory intensity (Derashid and Zhang (2003), R&D intensity (Belza, Hagen and Steffensa, 2016) as well as political connections (Adhikari, 2006).

Various empirical studies have been conducted, some studies show inconsistent output generated, several factors have been concluded to have significant effects on ETR, but the same thing did not happen when testing different research samples, for example the company size variable, where in the study (Richardson and Lanis, 2007) the results showed that the size of the company had a negative effect on ETR, while at the rest conducted by Noor, Fadzillah and Matsuki (2010) showed a positive influence between the two. Various other variables such as profitability have a negative influence on ETR in the research of Noor, Fadzillah and Matsuki (2010), while a positive effect on the research of Chiou and Lin (2012). Therefore, further research in order to reconcile this difference needs to be done, of course with the latest data and more contextual variables.

The optimal level of efficiency in tax costs is the main goal for most companies in carrying out tax management (Susanto & Rahayu (2019)), which is sometimes almost classified as aggressive tax planning, so that in the end with a small tax expense will be able to optimize corporate profits. In fact many of the company’s management specifically hire or hire tax agents either as employees or only as tax consultants with the aim of minimizing the tax they have to pay (Murphy, 2004) Factors in the company such as company size, company profitability (profitability), the level of corporate debt, and tax incentives for companies listed on an empirically basis have been proven to have a significant relationship to the level of effective corporate tax rates, although there are still inconsistencies in their output, so the authors feel the need to conduct further research to analyze how h relationship of these variables to the level of ETR of the company, especially those that occur in Indonesia.

In addition, this research also examined variables related to the influence of the proportion of independent commissioners and the status of government ownership (government ownership) related to the relationship to the company’s effective tax rate. These two factors are still not widely discussed, so the writer feels interested to include them in the study material. Refers to various factors that can optimize company performance with tax management efforts which can ultimately affect the level of effective tax rates (ETR) of the company.

**RESEARCH METHODS**

The approach taken in this research is a quantitative approach. According to Bryman (2012), quantitative research is described as research involving quantification in data collection and requires a deductive approach in
examine the relationship between variables to test a theory. Creswell (2014) states that quantitative research emphasizes the measurement of several variables and testing hypotheses that are measured precisely and linked to explanations of cause in general.

The data needed in this study is secondary data. Secondary data used for the dependent and independent variables are obtained from annual report data and financial statements of companies obtained through the Indonesia Stock Exchange website. Based on data collection techniques, this study uses content analysis techniques, where data collection is obtained indirectly or obtained from existing sources which then the context of the data can be analyzed (Neuman, 2014). In this study, the companies that will be used as samples are selected from a total population of 10 (ten) types of classifications listed on the Indonesia Stock Exchange. In the 2009-2018 Sectoral Index. Of the population that has fulfilled the criteria determined, the researcher will choose 5 (five) companies from each classification category specified in the Jakarta Stock Industrial Classification (JASICA). The selection is based on the performance of companies that have high liquidity and large market capitalization and is supported by good corporate fundamentals in order to represent each industry. Indicators that serve as a reference for the performance appraisal are the LQ45 index, the IDX30 Index and the IDX80 Index. The withdrawal of the number of samples was carried out using a purposive sampling technique. Neuman (2014) states that purposive sampling is the determination of samples based on considerations that are tailored to the needs and objectives of researchers.

In this study the dependent variable is the effective tax rate (ETR) while the independent variables are company size, level of company profitability, debt level, corporate governance and government ownership. Mathematical equation that can be formulated based on the developed hypothesis is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

Information:

- $Y =$ Effective Tax Rate (ETR)
- $\alpha =$ Constanta
- $\beta_1 =$ Firm size regression coefficient (SIZE)
- $\beta_2 =$ Profitability regression coefficient (ROA)
- $\beta_3 =$ Leverage regression coefficient (LEV)
- $\beta_4 =$ Regression coefficient of proportion of independent directors (KOMIND)
- $\beta_5 =$ Regression coefficient of government ownership (government ownership) (GOV)
- $X_1 =$ Company size variable
theories, not yet based on empirical facts obtained through data collection. The hypothesis in this study consists of 6 (six) hypotheses that will be tested as follows:

HI: SIZE, ROA, LEV, KOMIND and GOV together have a significant effect on ETR
H2: SIZE has a significant effect on ETR partially
H3: ROA has a significant effect on ETR partially
H4: LEV has a significant effect on ETR partially
H5: KOMIND has a significant effect on ETR partially
H6: GOV has a significant effect on ETR partially

### RESEARCH RESULT

Based on the results of statistical calculations namely the regression testing used in this study can be seen in detail in table 1 as follows:

#### Table 1 Model Regression Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constanta (C)</td>
<td>4,53055</td>
<td>0,095*</td>
</tr>
<tr>
<td>Company Size (SIZE)</td>
<td>-0,05752</td>
<td>0,001</td>
</tr>
<tr>
<td>ROA</td>
<td>0,05925</td>
<td>0,001</td>
</tr>
<tr>
<td>Leverage (LEV)</td>
<td>-0,03252</td>
<td>0,487</td>
</tr>
<tr>
<td>Corporate governance (KOMIND)</td>
<td>0,01240</td>
<td>0,013</td>
</tr>
<tr>
<td>Government Ownership (GOV)</td>
<td>0,20074</td>
<td>0,170</td>
</tr>
</tbody>
</table>

N = 500; R² = 0,1417; Prob. = 0,0000*

*significant at 10% level, **significant at 5% level, ***significant at 1% level

Source: Processed Data for STATA (2019)

According to the information provided in table 1 above, the regression coefficient value C is 4,53055 or 453% with a significance level of p-value 0.090> 0.05 (α = 5%) but it can be said to be significant at the 10% significance level. From the regression results in the above table it can also be seen that the model used as a whole can be used to see the effect of all variables on ETR. Regression models are accepted if the Prob (F-Statistic) is less than the significance value (0,05). In this research model, the F-Statistic value shows the number 0,0000 or 0.0%, which means it is less than the significance level (α = 5%). Prob (F-Statistic) value obtained by this research model shows that all variables used, namely SIZE, ROA, LEV, KOMIND and GOV have been proven together to have an influence on the effective tax rate (ETR).

Table 1, which presents the regression results, also shows that all variables, including SIZE, ROA, LEV, KOMIND and GOV, together have a significance level (R-Squared) of 0,1417 or 14,17% of the effective tax rate (ETR). Based on this, it can be interpreted that in this research model the dependent variable can only be explained by the independent variable and the control variable by 10,42%, while the remaining 89,58% is explained by other factors that can affect the effective tax rate outside the research model.

Based on the empirical results of the regression test of the research model, of all the variables used, three variables in the research model, namely SIZE, ROA, and KOMIND, have probability values that indicate a significant influence on ETR at the same level or significance level. It can be seen that namely SIZE, ROA, and KOMIND have a significant influence on ETR at the 5% significance level (p-value <0,05), where SIZE has a p-value of 0,001 or 0,1%, ROA has a p- value of 0,001 or 0,1% and KOMIND has a p-value of 0,013 or 1,3%. That is, each SIZE, ROA, and KOMIND variable has a significant partial effect on ETR, both in increasing or decreasing the company's effective tax rate. If you look at the relationships between variables from the results of the regression tests summarized in table 3 above, it can be seen that the ROA and KOMIND variables show a positive relationship with ETR. This is indicated
through the regression coefficient which is positive. In contrast, SIZE and LEV produce a negative relationship with ETR, which is marked by a coefficient value that is negative.

Based on the results of the regression, the corporate governance variable (KOMIND) as seen from the effectiveness score of the board of commissioners, was proven to have a positive relationship with the effective tax rate (ETR). This means that the higher the proportion of effectiveness of the board of commissioners that reflects good corporate governance, it will increase the value of ETR. The coefficient value of KOMIND is 0.01240, so if KOMIND has increased by 1 percent, it will increase ETR by 1.2 percent. From these results it can be said that the application of good corporate governance with the effective role of the board of commissioners in the research sample company, is proven to be able to prevent tax planning that tends to be done only to avoid taxation not to make it efficient. These results are also in line with previous research conducted by Wahab et al. (2017), which found that the size of the board as a mechanism of corporate governance proved to have a relationship in preventing tax management actions that tend to be aggressive in the company.

The regression test results of this research model also showed a relationship between the ROA variable and a positive ETR, it can be interpreted that the greater the ratio of profitability or Return on Assets (ROA), the ETR will be even greater or increased. The coefficient value of 0.05925 shows that every time there is an increase in ROA of 1 percent, it will increase the ETR by 5.9 percent. The results of this study are in line with research conducted by Liu; et al. (2007), Chiou et al. (2014), Stamatopoulos, et al. (2019) who found that the higher the level of corporate profitability, the higher the effective tax rate. This is different from research conducted by Noor; et al. (2010), Derashid and Zhang (2003) and Adhikari (2006) where ROA does not have a significant relationship to ETR.

Contrary to ROA and KOMIND, the regression test results revealed that the SIZE and LEV variables had a negative relationship with ETR, even though only the SIZE variable had a significant relationship. This negative relationship can be interpreted that the greater the value of SIZE, the smaller the value of ETR. The coefficient value of -0.05752 shows that each increase in SIZE by 1 percent, will reduce the amount of ETR by 5.7 percent. The results of this study are also in accordance with previous research conducted by Darmadi and Zulaikha (2013) who found that there is a negative relationship between company size and effective tax rates that are in line with political power theory states that there are resources the larger owned by large companies will make it more optimal in managing costs, including tax costs through effective tax management, while these results contradict the results of research conducted by Septi Imelia (2015) and Ardyansyah (2014) where in his research found that there is no significant effect between company size on the projected effective tax rate and ETR.

Looking at the regression results in table 2, the large solvency or leverage ratio (LEV) is known to have a negative relationship with ETR. The LEV coefficient value is -0.03252, meaning that increasing leverage by one percent will reduce ETR by 3.2%. However, based on the results of the regression test, the LEV variable is one of the variables that does not have a significant effect on the ETR. The absence of significant influence between LEV and ETR is indicated through the level of significance of SIZE on ETR of p-value of 0.487> 0.05. This insignificant result shows that in the sample companies, both companies that have large or small loan
levels are not enough to show changes in the fluctuation of ETR values.

From the regression test results shown in table 2, the government ownership variable (GOV) is used as a variable to distinguish whether or not government ownership in the sample company is given a value of 1 if there is and 0 if it is the opposite, having a relationship that shows a negative value to the ETR with coefficient of 0.20074 or of 20.074%. This means that more government ownership in the sample companies will reduce the company's effective tax rate by 20.074%. The negative relationship between GOV and ETR in this study, is in line with the research of Jifeng Cao & Yiwen Cui (2017) which examines the factors that affect effective tax rates in China. In their research, Jifeng Cao & Yiwen Cui (2017) explained that companies that have connections to the government, both central and local governments, are proven to be able to lobby the government, especially taxation agencies, to avoid tax audits, reduce fines and other actions that show aggressive company actions in avoiding tax. However, based on the results of the regression test, it is known that the GOV variable is also one of the variables that does not have a significant effect on the ETR. The absence of significant influence between GOV and ETR is indicated through the significance level of GOV on ETR is equal to p-value 0.170>0.05. There is a difference in the relationship and significance of the results of research on the factors that affect the effective tax rate, it may occur due to differences in the number of samples, different sectors studied, different research sites and also different research times from previous studies.

**CONCLUSION**

Based on the results of statistical tests found that the variables SIZE, ROA, LEV, KOMIND and GOV together have a significant effect on ETR. This shows that company characteristics which include company size, profitability level, size of financing and the proportion of independent directors as well as the factor of government ownership together have a significant influence on the effective tax rate paid by the company.

Meanwhile, partially the results of statistical tests found that the variables SIZE, ROA and KOMIND significantly influence the ETR. However, LEV and GOV variables partially did not have a significant effect. Thus, if seen partially or separately from each variable tested, differences in testing results are obtained. Where the factor of company size, profitability level and the proportion of independent directors have a significant influence on the effective tax rate. This result is different from other factors, namely the level of financing (leverage) and the presence of government ownership which apparently does not have a significant effect on the company's effective tax rate.

**BIBLIOGRAPHY**


