

Analysis of the Effect of Capital Intensity Ratio, Debt to Equity Ratio (DER) and Return on Assets Ratio (ROA) on Effective Tax Rate

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Abstract:- The purpose of this study was to analyze of the effect of Capital Intensity Ratio, Debt to Equity Ratio (DER), Return on Asset(ROA)on Effective Tax Rate. This research uses quantitative methods. The population of this study is companies included in the LQ 45 index for the 2018 - 2019 period. The sample in this study were 78 companies. Data processing using Microsoft Excel and E-Views 8. The analytical tool used is panel data regression estimation analysis. The results of this study indicate that: (1) Capital Intensity Ratio has no significant effect on the Effective Tax Rate, (2) Leverage has a positive effect on Tax Aggressiveness, (3) Profitability has a negative effect on the Effective Tax Rate.

Keywords:- Capital Intensity Ratio, Debt to Equity Ratio, Return on Asset Ratio, Effective Tax Ratio.

I. INTRODUCTION

Companies that stand and develop their business in Indonesia have an obligation to pay taxes. For the government, the tax is one source of funding in financing the country's development. For companies, taxes are things to be avoided because they are detrimental to the company. Tax for companies is an expense that can reduce the net profit of a company. To encourage companies not to feel that tax is a burden that must be avoided and to encourage them to work harder, the government provides corporate tax reduction incentives to companies in Law No. 36 of 2008 article 17 paragraph 2 (b) and Government Regulation Number 46 of 2013 concerning tax simplification. The tax system adopted in Indonesia is a self-assessment system, which means that the government gives taxable entrepreneurs the authority to calculate and report their own taxes. The use of a self-assessment system can provide an opportunity for companies to calculate the lowest possible taxable income, so that the tax burden borne by the company decreases (Ardyansyah, 2014).

Currently, the implementation of corporate income tax rates in Indonesia has changed Law no. 36 of 2008, concerning the Fourth Amendment to Law no. 7 of 1983 concerning income tax applies a single rate, where the rate used previously was a progressive rate. Some companies should pay taxes at an effective tax rate that is higher/lower than that rate. This can happen because of the difference in treatment between the accounting side and the tax side as well as the existence of various types of company business.

This research is expected to be able to contribute to the government in anticipating potential losses for the state, by identifying the factors that can affect the effective tax rate of companies in Indonesia that still have the potential to pay more taxes, especially companies that are already listed on the Stock Exchange. Indonesian Securities (IDX). The effective tax rate or ETR (Effective Tax Rate) is used to measure the tax paid as a proportion of economic income (Ardyansah, 2014). The tax rates that are in the tax law are statutory (fixed) tax rates. While ETR is the amount of tax paid by a company relative to gross profit (Noor, 2012). By identifying the factors that influence the ETR, the Director General of Taxes can see certain characteristics of what model companies still have high (low) effective tax rates, so that the government can consider providing appropriate tax incentives (disincentives).

There are several factors that can affect a company in influencing ETR, including Capital Intensity Ratio, Leverage and Profitability. The company can take its own actions in reducing taxes paid according to tax regulations based on the opportunities provided by the owner. Reducing corporate tax burden can be done in various ways, including in the proportion of fixed assets in the company. The proportion of fixed assets is measured using the Capital Intensity Ratio. Companies with large assets will have a lower tax burden compared to companies that have smaller assets because they benefit from the depreciation expense borne by the company (Noor, 2012).

Leverage will also affect the amount of tax paid by the company. Rahmawati (2017) states leverage is a ratio that indicates the amount of external capital used by a company. Leverage is calculated by indicating how much assets the company has that come from the company's loan capital, or it can also be called how much debt the company has. Noviri (2015) states that if the company has a high loan fund, it will also be a big obligation for the company to pay to the creditor and the interest expense of the loan will reduce profits, with the reduction in income, the tax burden will also be reduced.

The last factor that affects the amount of tax that must be paid by a company is profitability. Profitability will also affect ETR. Companies that make big profits tend to have high tax rates. So companies with high profits have the opportunity and higher incentives to reduce taxes that must be paid (Mahenthiran, 2012). One ratio to measure the level of company profitability is ROA (Return On Assets). ROA

measures the company's overall ability to generate profits by using assets owned by the company (Noor, 2012).

This study differs from previous studies because the sample used was the LQ45 company registered on the Indonesia Stock Exchange in the 2015-2017 period.

II. THEORETICAL REVIEW

A. Tax

The definition or definition of taxation is very diverse but in principle has the same core or purpose. Some of the definitions of taxation according to tax experts include:

According to Mardiasmo (2011: 1) taxes are people's contributions to the state treasury based on the law (which can be forced) by not getting lead services (contra) which can be directly shown and used to pay public expenses. According to H. RochmatSoemitro (1990 : 5) A tax is a contribution of the people to the State Treasury under the Act (which can be imposed) with no merit (counter-achievement) which can be directly demonstrated and which is used to pay for general expenses. The definition was then corrected which reads as follows: Tax is the transfer of wealth from the people's side to the State Treasury.

The Government Institution that manages state taxation in Indonesia is the Directorate General of Taxes (DGT) which is one of the directorates general under the auspices of the Ministry of Finance of the Republic of Indonesia.

Taxes have a very important role in the life of the state, especially to carry out development or urban planning, because taxes are a source of state income to finance all expenditures. Based on the above, the tax has several functions, namely the Budget function and the Regulating function according to the Resmi (2011:1).

B. Effective Tax Rate

Suparmono (2012) states that the tax rate is used to calculate the amount of tax owed. In other words, the tax rate is the rate used to determine the amount of tax that the company must pay to the state. The percentage of imposition of tax rates is twofold, some are fixed and some change according to the type of tax.

ETR (Effective Tax Rate) is the amount of tax burden calculated from the basis of tax imposition multiplied by the applicable tax rate. The applicable tax rate is the tax rate that is not set by the government in the tax rules. According to Noor (2012) ETR is a measure of the company's tax burden because it reveals the level of tax paid to the company's profits. ETR can be used as an indicator of effective tax planning.

The effective tax rate or ETR (Effective Tax Rate) is used to measure the tax paid as a proportion of economic income (Ardyansah, 2014). The tax rates that are in the tax law are statuori (fixed) tax rates. While ETR is the amount of tax paid by a company relative to gross profit (Noor, 2012). By identifying the factors that influence the ETR, the Director General of Taxes can see certain characteristics of what model companies still have high (low) effective tax

rates, so that the government can consider providing appropriate tax incentives (disincentives).

C. Capital Intensity Ratio

According to Ardiana (2016) Capital Intensity Ratio is the amount of company capital invested in a company's fixed assets which is usually measured using the ratio of fixed assets divided by sales (DeFond and Hung, 2001). According to Citra (2016) Capital Intensity Ratio is the ratio between fixed assets, such as plant equipment, machinery and various properties, to sales.

The company can take its own actions in reducing taxes paid according to tax regulations based on the opportunities provided by the owner. Reducing corporate tax burden can be done in various ways, including in the proportion of fixed assets in the company. The proportion of fixed assets is measured using the Capital Intensity Ratio. Companies with large assets will have a lower tax burden compared to companies that have smaller assets because they benefit from the depreciation expense borne by the company (Noor, 2012).

D. Leverage

Rahmawati (2017) states that leverage is a ratio that indicates the amount of external capital used by a company. Leverage is calculated by indicating how much assets the company has that come from the company's loan capital, or it can also be called how much debt the company has. Adisamartha (2015) states that if the company has a high loan fund, it will also be a great obligation for the company to pay to creditors and the interest expense from the loan will reduce profits, with reduced income, the tax burden will also be reduced.

Provisions in tax regulations in Indonesia limit the ratio between debt and equity for the purpose of calculating corporate income tax, which is a maximum of 3 compared to 1. The restriction is intended to set the maximum loan allowed so that not all interest costs can be deducted so that taxable income becomes small. In addition to preventing hidden capital, it also aims to encourage companies to invest through equity because it prevents the company from experiencing financial distress.

E. Profitability

Profitability is used to measure how much profit the company's performance generates. The higher the profitability, the better the management's performance in managing a company, while companies with a low level of profitability will calculate to flatten profits compared to companies with high profitability.

Return on Asset (ROA) is the ratio between the balance of net profit after tax and the amount of assets of the company as a whole.

F. Thinking Framework

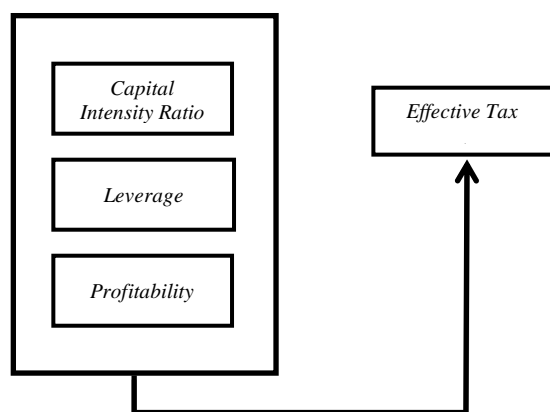


Fig. 1: Thinking Framework

Source; Research Theory

III. RESEARCH METHODS

A. Research Design

This type of research conducted in this research is descriptive research with a quantitative approach. According to Sugiyono (2013: 21) descriptive research is research that seeks to describe the results of an existing problem based on existing data, so that in this study also displays the data used, analyze data, and interpret. Descriptive research is conducted by focusing attention on certain aspects and showing the relationship between various variables.

The variables used consist of the dependent variable and the independent variable. The dependent variable is a variable whose value is influenced by the independent variable. While the independent variable is a variable that affects the dependent variable. In this study, the Effective Tax Rate is the dependent variable. While Capital Intensity Ratio, Leverage, Profitability are independent variables.

a) Effective Tax Rate

According to Noor (2012) ETR is a measure of corporate tax burden because it reveals the level of tax paid on corporate profits. ETR can be used as an indicator of effective tax planning. The applicable tax rate is the tax rate that is not determined by the government in taxation rules. ETR can be calculated with the following formula:

$$\text{ETR} = (\text{Total Income Tax Expense}) / (\text{Profit Before Tax})$$

b) Capital Intensity Ratio

Capital Intensity Ratio or fixed asset intensity ratio is a comparison between fixed assets and total assets in a company. The fixed asset intensity ratio shows the size of the company's fixed assets on the overall assets owned by a company. Capital Intensity Ratio is the ratio between fixed assets, such as factory equipment, machinery and various properties, to sales (Sartono, 2001:120). Capital Intensity Ratio can be calculated by comparing Total Fixed Assets with Sales.

$$\text{CIR} = (\text{Total Fixed Assets Clean}) / (\text{Total Assets})$$

c) Leverage (DER)

DER or debt to equity ratio is one type of leverage ratio, which is used to measure how much the company's capital is financed by debt. DER can be used as a reflection of the company's capital structure. The higher the value of the debt to equity ratio (DER) of a company, it indicates the greater the company uses debt for capital in running a business. Vice versa, the smaller the DER value, the smaller the use of debt by the company. The following is the DER (debt to equity ratio) formula.

$$\text{Debt to Equity Ratio} = (\text{Total debt}) / \text{Capital}$$

d) Profitability (ROA)

Profitability of a company shows the ratio between earnings with assets or capital that generates profits. Profitability is measured by dividing profit before tax by total assets.

$$\text{ROA} = (\text{Total Revenue}) / (\text{Total Assets}) \times 100\%$$

B. Population

According to Sugiyono (2013: 115) population is a generalization area that consists of objects or subjects that have certain qualities and characteristics that are applied to be studied and then conclusions drawn. The population used in this study are companies that are included in the LQ 45 Index listed on the Indonesia Stock Exchange (IDX) in the period of 2015-2017, amounting to 64 companies.

C. Sample

Sugiyono (2013: 116) said the sample is part of the population consisting of elements that are expected to have the same characteristics as the population. Sampling in this study was conducted by purposive sampling, with the following criteria:

- Companies listed on the LQ45 index on the Indonesia Stock Exchange during the period 2017 - 2019.
- Non-consecutive companies enter the LQ45 index on the Indonesia Stock Exchange for the period 2017 - 2019.
- Companies that do not complete the LQ45 index report on the Indonesia Stock Exchange for the period 2017 - 2019.
- Companies listed in the LQ45 index are banks.
- Companies that do not use the rupiah in the financial statements.

No	Criteria	Number of Companies
1	Companies listed on the LQ45 index on the Indonesia Stock Exchange during the period 2018 - 2019	45
2	Non-consecutive companies enter the LQ45 index on the Indonesia Stock Exchange for the period of 2018 - 2019	(5)
3	Companies which do not complete the LQ45 index report on the Indonesia Stock Exchange for the period 2018 - 2019	(19)

No	Criteria	Number of Companies
4	Companies listed in the LQ45 index are banks	(5)
5	Companies that do not use the rupiah in the financial statements	(2)
The number of samples that meet the criteria		28
Total Observations (28 Companies x 2years)		56

Table 1: Sample Selection Calculation

Source: Author's Processed Data, 2019

IV. RESULT AND DISCUSSION

A. Description of Research Objects

This sub-chapter will explain the general description of the object of research, namely companies listed in the LQ45 index for the 2018 – 2019 period, companies that are consecutively included in the LQ45 index, and have complete financial data with publications on December 31, which are listed on the Stock Exchange. Indonesian Securities for the period 2018 – 2019, companies listed in the LQ45 index are not banks and use the rupiah currency. The population in this study amounted to 56 companies. From the results of sampling by purposive sampling, the samples obtained were 28 companies.

B. Discussion of Research Results

- a) Effect of Capital Intensity Ratio on Effective Tax Rate
Based on the tests conducted in this study, the results of the random effect test showed a capital intensity ratio probability of 0.7813 which is greater than 0.05 and has a coefficient value of 0.002384. This shows that the Capital Intensity Ratio variable has no influence on the Effective Tax Rate.

The Capital Intensity Ratio variable has no effect on the Effective Tax Rate because the level of the Capital Intensity Ratio of companies listed in the LQ45 index is relatively the same. This study proves the results of descriptive statistical analysis which show the average value of the sample Capital Intensity Ratio is 2.0874 and the standard deviation value is lower than the average value of 1.6181723. The results of this study prove that there are similarities or in line with research conducted by DanisArdyansah (2014) and Chiou et al. (2012) who found that the Capital Intensity Ratio variable had no effect on the Effective Tax Rate. The results of this study differ from the results of research by I Made Surya & Putu Agus Ardiana (2016), in which the study stated that the intensity of fixed assets had a positive effect on the Effective Tax Rate (ETR). The greater the intensity of fixed assets, the company's Effective Tax Rate is also higher or the company's tax avoidance level is low.

- b) Effect of Debt to Equity Ratio (DER) on Effective Tax Rate

Based on the test results in this study, evidence was obtained that Leverage affects the company's Effective Tax Rate. This can be seen from the results of the random effect test which shows that the probability value of Leverage of 0.0418 is smaller than 0.05 and has a coefficient value of -0.430489. This provides evidence that during the research period, the higher the Leverage, the higher the Effective Tax Rate (ETR) or it can be said that the tax avoidance rate is low.

The results of this study are comparable to research conducted by Mulyani (2014) and Sukartha (2014) which stated that Leverage has a positive effect on ETR or the higher leverage will reduce the level of tax avoidance. But this research is incompatible with the research of Richardson and Lanis (2007) in Irvan Tiaras and Henryanto Wijaya (2015) which found that Leverage had no significant effect on the aggressiveness of corporate taxes.

- c) Effect of Return on Assets (ROA) on Effective Tax Rate

Based on this research, evidence was obtained that profitability (return on assets) has a positive effect on the Effective Tax Rate. This can be seen from the results of the random effect test which shows that the probability value of return on assets of 0.0089 is smaller than 0.05 and has a coefficient value of 0.039227. This result indicates that the higher the profitability of the company, the higher the Effective Tax Rate.

The results of this study are the same as the research of Citra Lestari & Maya Febriyanti (2016), which states that profitability has a positive effect on the Effective Tax Rate. The high level of profit received by the company will make the company's Effective Tax Rate level will also increase, so that the company will strive to minimize the profits generated in order to get a low Effective Tax Rate.

But the results of this study are not in line with the results of the research of Adyansyah and Zulaikha (2014), and Rohaya (2010) and Mahenthiran (2011), which state that profitability has no effect on ETR because this could be influenced by income that should not be included as a tax object but included as a tax object for example dividend income and other operating income.

V. CONCLUSIONS AND SUGGESTIONS

A. Conclusion

This study discusses the effect of Capital Intensity Ratio, Leverage and Return on Assets on the Effective Tax Rate on companies included in Indeks LQ 45 in the period 2018 - 2019. The samples used were 28 companies with the test equipment used to regress panel data, using eviews 8 software. Based on the previous hypothesis, the following are the results of the study that can be concluded, that:

- Capital Intensity Ratio has no effect on the Effective Tax Rate because the probability value of 0.7813 is greater than alpha (0.05).
- Leverage has an influence on the Effective Tax Rate because the probability value of 0.0418 is less than alpha (0.05).
- Profitability (ROA) has an influence on the Effective Tax Rate because the probability value of 0.0098 is smaller than alpha (0.05).

B. Research Limitations

In this study, there are several limitations, the following are the limitations in this study:

- The companies that are sampled are only companies that are included in the LQ 45 index, so researchers experience data limitations because only companies that enter LQ45 are studied. This study used purposive sampling method, so that the sample obtained was only 28 companies. Of course, the number of samples will be different if the next study uses BI 50 data or manufacturing companies listed on the IDX.
- This study uses independent variables studied, namely Capital Intensity Ratio, Debt to Equity Ratio, and Return on Asset. Because only a few independent variables were used in this study, it is certainly a limitation in this study. It would be better if the next study added the independent variables studied.
- This study only used a period of 2 years, namely 2018 – 2019. The period used certainly affects the results of the study. The more periods used, of course, this research will be more interesting. It would be better if the next researcher increased the time period used in his research, so that it is expected to obtain better results.

C. Recommendations

Based on the limitations that have been described above, there are several recommendations that can be given for the development of further research, namely:

- The next researcher is expected to select a sample of different companies, such as companies included in the BI 50 or manufacturing companies listed on the IDX. So that the number of samples obtained will be different and is expected to obtain better results.
- The next research is expected to add independent variables in the research, such as Good Corporate Governance, Company size, and others. This will certainly make the research results more representative, so as to add a reference to the next research.
- Increase the time period used for subsequent research, such as using a time period of 4 or 5 years. Because it is expected that with the increase in the period used in the

research, it will obtain more representative results and can provide information to companies and tax institutions.

REFERENCES

- [1.] Adelina, Theresa. 2012. “Pengaruh Karakteristik Perusahaan dan Reformasi Perpajakan terhadap Penghindaran Pajak di Industri Manufaktur yang Terdaftar di Bursa Efek Indonesia Tahun 2008-2010”. Dokumentasi. Fakultas Ekonomi Universitas Indonesia Depok.
- [2.] Adisamartha, I. B. P. F., (2015). Pengaruh likuiditas, leverage, intensitas persediaan dan intensitas aset tetap pada tingkat agresivitas wajib pajak badan. E-Jurnal Akuntansi, 973-1000.
- [3.] Ardyansah, D., (2014). Pengaruh Size, Leverage, Profitability, Capital Intensity Ratio Dan Komisaris Independen Terhadap Effective Tax Rate (Etr). Diponegoro Journal of Accounting, 3(2), 371-379.
- [4.] Ghozali, Imam (2013). Aplikasi Analisis Multivariate Dengan Program SPSS, Edisi ketujuh. Universitas Diponogoro, Semarang
- [5.] Iqbal, M. (2015). Regresi Data Panel: Tahap Analisis. Edisi 2 Institue Perbanas, Jakarta
- [6.] Mardiasmo. (2009). Perpajakan Edisi Revisi. Yogyakarta: Penerbit Andi Yogyakarta
- [7.] Mulyani, S., Darminto., dan Endang, M.W. 2014. Pengaruh Karakteristik Perusahaan, Koneksi Politik dan Reformasi Perpajakan Terhadap Penghindaran Pajak (Studi pada perusahaan manufaktur yang terdaftar di BEI tahun 2008-2012). JurnalMahasiswa Perpajakan Universitas Brawijaya, Vol. 1, No. 2, 2014, hal 1-9.
- [8.] Resmi, S. (2011). Perpajakan Teori dan Kasus. buku 6 edisi 1. Salemba Empat. Jakarta.
- [9.] Resmi, S. (2013). Perpajakan Teori dan Kasus. (Salemba Empat, Ed.) (7th ed.). Jakarta
- [10.] Sugiyono. (2010). Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta.
- [11.] Sundari, N., & Aprilina, V. (2017). Pengaruh Konservatisme Akuntansi, Intensitas Aset Tetap, Kompensasi Rugi Fiskal dan Corporate Governanace Terhadap Tax Avoidance. JRAK: Jurnal Riset Akuntansi dan Komputerisasi Akuntansi, 8(1), 85-109.
- [12.] Suyanto, K. D., & Supramono, S. (2012). Pengaruh Likuiditas, Leverage, Komisaris Independen, Dan Manajemen Laba Terhadap Agresivitas Pajak Perusahaan. Jurnal Keuangan dan Perbankan, Vol 16, No 2.
- [13.] Undang – Undang Republik Indonesia Nomor 28 tahun 2007 pasal 1 (1) tentang Ketentuan Umum dan Tata Cara Perpajakan
- [14.] Undang – Undang Republik Indonesia Nomor 36 tahun 2008 pasal 6 (1) tentang Perubahan Keempat Atas Undang – Undang Nomer 7 tahun 1983 tentang Pajak Penghasilan
- [15.] Widarjono, Agus. (2013). Ekonometrika Pengantar dan Aplikasinya. Yogyakarta: UPP STIM YK