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THE IMPACT OF THIN CAPITALIZATION RULES AS A TOOL OF TAX AVOIDANCE ON TAX REVENUE

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Abstract: This study aims to analyze the practice of thin capitalization in manufacture and retail companies registered in the Indonesia Stock Exchange from 2015 until 2018. The research is conducted by using quantitative methods. The sample selection uses a purposive sampling method. The research sample consists of 132 manufacturing and 18 retail companies. The research begins by examining the effect of thin capitalization on tax avoidance, then by looking for the effect of the practice of thin capitalization as a means of tax avoidance on state tax revenue. The result of research shows that thin capitalization has different effects on two business sectors, namely positive effect on manufacturing company tax avoidance and negative effect on retail company tax avoidance. Thin capitalization has no effect on the relation between tax avoidance and tax revenue.

Keywords: *Tax revenue, Tax avoidance, thin capitalization*

1. Introduction

Tax is the main source of Indonesian state income today. The Directorate General of Tax is responsible for collecting most of the tax revenues in the State Budget. But in fact, from 2009 until 2019, Indonesia has not only been unable to meet the proposed tax revenue target (katadata.co.id), but also, based on The World Development Indicators, World Bank, Indonesia's tax ratio seems to be left behind other countries in The Asia Pacific region and other Asean countries.

According to Organization for Economic Co-Operation and Development, tax avoidance practices have eroded corporate income tax revenues at the global level by USD 100-240 billion annually. The erosion of tax revenues is not only experienced by developing countries, but also occurs in developed countries (OECD, 2015). Tax avoidance schemes often carried out by multinational companies are numerous, for example transfer pricing, utilization of tax haven and controlled firm corporation, thin capitalization, and treaty shopping schemes (Rahayu, 2010).

Tax authorities know that international tax evasion plays a role in reducing tax revenues, known by the decrease in the company's effective tax rate and the increase in the number of companies that report zero tax payable (OECD, 2004). Janský & Palanský (2019) in their research estimate that the transfer of profits done by multinational companies as an effort to avoid tax, has eroded tax revenues globally by USD194 billion in 2016.

Taylor & Richardson (2012) reveal that thin capitalization and transfer pricing are the main drivers of tax avoidance practices in companies in Australia. In Indonesia, thin capitalization also shows an influence on tax evasion (Andawiyah, et al., 2019); Darma, 2019)). This

scheme is carried out by companies by increasing costly debt ownership so that the company's capital structure becomes lower (Taylor & Richardson, 2013).

One of the practices of tax avoidance through thin capitalization mostly talked about in Indonesia is the RNI Inc Ltd case. RNI is engaged in health service which is affiliated with companies in Singapore. In this case, RNI uses affiliated debt as a financing strategy. The owner does not invest, but provides debt. This results in dividends given to owners considered interest expense as deductible expense. In 2014, RNI's financial statements recorded debts of IDR 20.4 billion, company turnover of IDR 2.178 billion and there were retained losses of IDR 26.12 billion. (quoted from the kompas.com page, April 6, 2016).

Previous studies regarding the effect of thin capitalization on tax evasion still generate different conclusions. Taylor & Richardson (2012); Falbo & Firmansyah (2018) proved that thin capitalization has a positive effect on tax evasion. Darma (2019) and Andawiyah, et al. (2019) concluded that thin capitalization has an effect on tax avoidance. In contrast to previous studies, Nainggolan & Sari (2020) concluded that thin capitalization has no effect on tax aggressiveness.

The tax revenue performance is calculated by using the tax ratio by comparing tax revenue and the amount of Gross Domestic Product (GDP) in a certain period of time. According to the Central Bureau of Statistics (BPS, 2021), the manufacture, agriculture and trade sectors are in the top ranks of Indonesia's GDP contribution in 2015 until 2018. However, the tax potential generated by the agricultural sector is not large. Based on that, the author chooses the manufacture and retail sectors as research objects.

Based on that background, this study aims to determine how much influence thin capitalization has on tax avoidance and whether the use of thin capitalization as a means of tax avoidance has an effect on tax revenue in Indonesia. This research is expected to be able to explain the effect of thin capitalization schemes in the manufacturing and retail sectors on tax avoidance and tax revenue, so that it can be used as an evaluation and analysis of policy improvements to maximize tax revenue potential.

This research is divided into 5 (five) parts. The first part is about the introduction that describes the phenomenon, objectives, and expected benefits. The second one describes the literature used as a reference, previous studies and the formulation of hypotheses. The third one describes the research methods used. The fourth one provides a description of the data statistics, research results, and discussion. The fifth one contains the conclusions, limitations of the study and the implications of the research for tax authorities and future research.

2. Literature Review and Hypotheses Development

Theory of Planned Behavior

Theory of Planned Behavior (TPB) reveals that the main factor of individual behavior is that behavior is influenced by the individual's intention towards that behavior (Icek, 1991). The Theory of Planned Behavior (TPB) is based on the assumption that humans are rational beings and use information that is possible for them systematically (Achmat, 2019). This theory assumes that an individual will do anything to benefit him. Based on the theory of planned behavior by Icek (1991), a company will try to make cost efficiency so that it can produce maximum profits. Rationally, the company will try to be able to pay the smallest tax. This encourages management to do tax avoidance.

Tax Avoidance

Slemrod (2001) explains that efforts made to reduce payable taxes without violating

applicable provisions are called tax avoidance. The same thing was conveyed by Kirchler et al. (2003) who stated that tax avoidance aims to reduce tax payments by taking advantage of tax regulatory loopholes without breaking them, so that is considered legitimate. According to OECD (2004), international tax avoidance plays a role in reducing tax revenues. The amount of tax revenue losses caused by tax avoidance practices can be said to be quite significant (OECD, 2015; Cobham & Janský, 2018; Janský & Palanský, 2019).

Thin Capitalization

Thin capitalization is a situation in which a company has a much larger proportion of debt compared to the proportion of owned capital or is often called highly leveraged (OECD, 2012). Financing a company through debt is intended to reduce taxable income, because the nature of the interest expense on debt is deductible expenses. This is in line with the trade-off theory put forward by (Myers, 2001) and the capital structure theory by Modigliani & Miller (1963). Myers (2001) suggests that companies will owe up to a certain level of debt, where the tax shield from additional debt equals the cost of financial difficulties. Modigliani & Miller (1963) stated that debt financing is very profitable so that the optimal capital structure of the company is one hundred percent debt.

Hypotheses Formulation

Modigliani & Miller (1963) stated that interest expense can be a deduction from taxable income and a corporate tax incentive. The existence of regulatory loopholes in the Statement of Financial Accounting Standards that do not regulate debt restrictions, is used by the business sector to rationalize their behavior in reducing tax payments. Based on the research results of Taylor & Richardson (2012) and Prastiwi & Ratnasari (2019), thin capitalization has a positive effect on tax avoidance. A possible reason is that the use of a thin capitalization scheme will increase the interest expense on annual profit, which is a deductible expense, so that the tax that must be paid will be reduced. Based on this description, the authors formulate the first hypotheses as follows:

H1a: Thin capitalization has a positive effect on tax avoidance of manufacturing companies.
H1b: Thin capitalization has a positive effect on tax avoidance of retail companies.

Janský & Palanský (2019) stated that there are three main channels carried out by multinational companies in shifting profits from tax haven with the aim of avoiding the imposition of international taxes. The three channels are debt shifting, transfer pricing, and placement of intangible assets. Debt shifting is carried out by providing debt to affiliates who are in a higher tax jurisdiction, so that taxable income is lower. This is due to deductible expense from the transferred debt. Janský & Palanský (2019) estimate that tax avoidance by multinational companies causes a tax revenue loss of USD194 billion in 2016. Based on this description, the second hypotheses of this study can be formulated as follows:

Cont

H2a: The use of thin capitalization in manufacturing companies as a means of tax avoidance has a negative effect on tax revenue.
H2b: The use of thin capitalization in retail companies as a means of tax avoidance has a negative effect on tax revenue.

3. Research Methodology

Data and Sample of Research

The research was conducted using quantitative methods. The research population is limited to manufacturing and retail companies listed on the Indonesia Stock Exchange (BEI) in 2015

until 2018. This study uses secondary data in the form of corporate financial reports obtained from the official website of the Indonesia Stock Exchange (BEI) and the company's official website.

The research sample was taken using a purposive sampling method. Purposive sampling method is a sample selection based on predetermined criteria. The final sample studied were 132 manufacturing companies and 18 retail companies. The criteria used are as follows:

a. Manufacturing and retail companies listed on the Indonesia Stock Exchange (IDX) during 2015 until 2018.
b. The company has complete data related to research.

Research Variables

Tax Avoidance

Hanlon & Heitzman (2010) mentioned twelve proxies for measuring tax avoidance. The proxy for tax avoidance in this study is GAAP ETR. The calculation of GAAP ETR is done by comparing the tax expense with accounting profit before tax. The use of these proxies is in line with research conducted by Dyreng et al. (2010).

Tax Revenue

Based on the Performance Report of the Directorate General of Taxes (Direktorat Jenderal Pajak, 2020), the realization of tax revenue received by the Directorate General of Taxes each year is calculated from the total gross revenue minus tax returns. Therefore, in this study, the author tries to measure tax revenue using the natural logarithm (ln) of the rupiah value of the company's tax contributions. That tax contribution calculates the tax payments made and the tax returns (restitution) received by the company. The use of this proxy is expected to be able to show the effect of the independent variable on the taxes received by the state in the year concerned.

Thin Capitalization

Thin capitalization is measured on the basis of the Maximum Allowance Debt (MAD) ratio. This method is also used by Taylor & Richardson (2012) and Andawiyah et al. (2019). This proxy measurement begins with calculating the Safe Harbor Debt Amount (SHDA) followed by calculating the MAD ratio.

SHDA is the average total assets minus the non-interest-bearing liability (non-IBL) times the maximum debt-to-equity ratio. In connection with the thin capitalization arrangement in Indonesia through Minister of Finance Regulation (PMK) number 169 / PMK.010 / 2015 which limits the debt to equity ratio to a maximum of 4: 1, the SHDA is calculated by using the formula:

SHDA = (average total assets - non-IBL) x 80% …… (1)

Furthermore, the Maximum Allowance Debt (MAD) ratio is calculated by comparing the average debt owned by the company with the SHDA value.

MAD ratio = (average debt) / SHDA ……..…… (2)

The greater the MAD ratio value shows the company is much more dependent on debt in its financing element. The MAD ratio value is more than one, indicating that the company has implemented a thin capitalization scheme. The author uses the MAD ratio as a basis for measuring thin capitalization. The thin capitalization variable in this study is denoted by a dummy variable, which is 1 if the company's MAD ratio is more than 1 (using a thin capitalization scheme) and 0 if the MAD ratio is less than 1.

Multinationality (MULTI)
Multinationality in this study is known by the existence of company affiliates abroad. Multinationality is denoted by a dummy variable, namely the number 1 if the company has overseas affiliates and the number 0 if it does not. This measurement is not in line with research conducted by Taylor & Richardson (2012) which only considers the availability of overseas subsidiaries. The author includes the influence of affiliates other than subsidiaries, because according to the author, it is not only a subsidiary that can be used by the company to do tax avoidance. However, affiliates in the form of groups and parent entities can also be used by the company to avoid tax.

Company Size (SIZE)
Company size in this study is measured using the natural logarithm (ln) of the company's total assets. This measurement is also used by Taylor & Richardson (2012). The greater the size of the company, it gives the company the opportunity to do tax avoidance (Taylor & Richardson, 2013).

Profitability (ROS)
Sukpanich & Rugman (2007) states that company performance can be measured by using several variables, including return on equity (ROE), return on assets (ROA), and return on sales (ROS). In this study, profitability is measured by using the proxy of Return on Sales (ROS). ROS is obtained from the comparison between operating profit and the company's total sales. Return on sales measures profitability by considering the cost of goods sold and operating expenses incurred by the company (Titman, et.al., 2015). Based on the opinion of Titman, et.al. (2015), the author uses return on sales to measure profitability, because it can better describe the company's profitability originating from the company's operations/core business, not only based on assets owned. In addition, retail companies generally do not have many fixed assets because in the business process they only sell finished goods without changing the shape of the goods. The author assesses that return on sales is more appropriate because it can better illustrate how well the company's operations generate revenue and profit.

Research Model
The research model is developed from the research of Janský & Palanský (2019) who states that tax avoidance causes tax revenue losses and Taylor & Richardson (2012) who state that thin capitalization is the main driver of tax avoidance. The researcher expands the research model by adding the influence of thin capitalization moderating variables on tax revenue.
The study is conducted by using two dependent variables. The research begins by examining the effect of thin capitalization on tax avoidance. Afterwards, the author tries to develop research by examining the impact of thin capitalization on tax revenue by using it as a moderating variable on the relation between tax avoidance and tax revenue. The following is the model used in this study:

$$GAAPETR_{it} = \alpha_{it} + \beta_1 THIN_{it} + \beta_2 MULTI_{it} + \beta_3 SIZE_{it} + \beta_4 ROS_{it} + \varepsilon_{it}$$

$$TREV_{it} = \alpha_{it} + \beta_1 THIN_{it} + \beta_2 GAAPETR_{it} + \beta_3 THIN_{it} * GAAPETR_{it} + \beta_4 MULTI_{it} + \beta_5 SIZE_{it} + \beta_6 ROS_{it} + \varepsilon_{it}$$

Information:
TA = measured using values of GAAP ETR
THIN = dummy, measured using MAD ratio

MULTI = dummy, availability of overseas affiliates
SIZE = natural logarithm of total assets
ROS = operating profit divided by total sales
TREV = natural logarithm of tax revenue
i = number of companies
t = 2015 until 2018
α = constant
β = regression coefficient
ε = error

4. Empirical Results and Discussion

Descriptive statistics

Based on the sample selection by using purposive sampling, a sample of 132 manufacturing companies and 18 retail companies or 528 company-year data for manufacturing and 72 company-year data for retail is obtained. The research was conducted separately between manufacturing and retail companies. Descriptive statistics is statistics used to analyze data through describing the collected data without intending to make general conclusions or generalizations). The summary of descriptive statistics for manufacturing companies is presented in Table 1.

The core variable of this research is thin capitalization. Data in Table 1 shows that as many as 10.98% of the sample manufacturing companies carry out a thin capitalization scheme. The effective tax burden of manufacturing companies has an average value of 37.44%, which means that the average tax burden of manufacturing companies is higher than the corporate tax rate of 25%.

Table 1 Descriptive Statistics of Manufacturing Company

Variable	*Mean*	Median	Minimum	Maximum	Std Dev
GAAPETR	0,3744	0,2474	-7,6769	39,8729	2,3819
THIN	0,1098	0	0	1	0,3130
MULTI	0,5473	1	0	1	0,4982
ROS	-0,1110	0,0651	-60,2105	1,8269	2,7617
SIZE	28,5196	28,3648	25,2156	33,4737	1,5651
TREV	16,4340	23,5008	-27,1262	29,5832	17,3193
GAAPETR*THIN	0,0232	0	-3,4810	8,8161	0,4678

Source: Processed by authors (2020)

Data in Table 2 shows that as many as 20.83% of the sample retail companies implement a thin capitalization scheme. This figure is bigger when compared to manufacturing companies that implement a thin capitalization scheme. Meanwhile, the effective tax expense of retail companies has an average value of 13.59%, which means that the average tax expense of retail companies is lower than the corporate tax rate of 25%.

Table 2 Descriptive Statistics of Retail Companies

Variable	*Mean*	Median	Minimum	Maximum	Std Dev
GAAPETR	0,1359	0,1944	-1,6494	1,0513	0,3372
THIN	0,2083	0	0	1	0,4090
MULTI	0,6111	1	0	1	0,4909
ROS	-0,5087	0,0238	-35,5349	0,2595	4,1962
SIZE	28,6190	29,2000	24,0130	30,7296	1,4923
TREV	20,0578	24,6091	-26,2107	27.1226	13,4187
GAAPETR*THIN	-0,0104	0	-1,0150	1,0513	0,1987

Source: Processed by authors (2020)

Discussion

Thin capitalization has a positive effect on corporate tax avoidance

Regression results for testing the first hypotheses of manufacturing companies are presented in Table 3. The results indicate that the practice of thin capitalization in manufacturing companies has a significant negative effect on GAAPETR. GAAPETR has an inverse relation with tax avoidance, so it can be concluded that the practice of thin capitalization in manufacturing companies has a significant positive effect on tax avoidance. The practice of thin capitalization by manufacturing companies significantly increases tax avoidance by 6.243161.

Table 3 Regression Results of Hypotheses 1 CEM-GLS Weight Manufacturing

Variable	Coefficient	Std. Error	Prob
THIN	-6,243161	3,328264	0,063
MULTI	19,57281	2,678647	0,000
ROS	-0,1214523	0,4297284	0,778
SIZE	3,920875	0,9389717	0,000
Cons	-105,8611	26,64583	0,000
R-Squared			0,4672
Prob>F			0,0000

Source: Processed from Stata 15, 2020

The result of this study is in line with research by Taylor & Richardson (2012), where thin capitalization has a strong relation with tax avoidance. Taylor and Richardson mention that thin capitalization is one of the main drivers of tax avoidance and is used by public companies in Australia as a means of international tax avoidance. According to Taylor & Richardson (2012), a possible reason is that the use of a thin capitalization scheme will increase the interest expense on annual profits so that taxes that must be paid will be reduced. Similar results were also expressed in the research of Prastiwi & Ratnasari (2019). They stated that thin capitalization has a positive effect on tax avoidance.

The regression results for testing the first hypotheses of a retail company are presented in Table 4.

Table 4 Regrssion Results of Hypotheses 1 Retail CEM-GLS

Variable	Coefficient	Std. Error	Prob
THIN	0,6105302	0,1324327	0,000
MULTI	0,241654	0,1294845	0,070
ROS	0,0031995	0,0245654	0,897
SIZE	0,1493376	0,0499963	0,005
Cons	-4,137759	1,372977	0,005
R-Squared			0,5660
Prob>F			0,0000

Source: Processed by authors (2020)

The regression results for retail companies show different results from manufacturing companies. The regression results for retail companies show that thin capitalization has a significant positive effect on GAAPETR, meaning that thin capitalization by retail companies has a negative effect on tax avoidance. The practice of thin capitalization in retail companies is not indicated to be used for tax avoidance, but instead is able to increase the effective tax burden (ETR).

In this study, the influence of the practice of thin capitalization on tax avoidance in

manufacturing and retail companies produces different values. This is due to the different nature of manufacturing and retail companies. Manufacturing is a series of interconnected operations that involve the design, maintenance of materials, planning, production, quality assurance, management and marketing of different consumer and durable goods (Schey, 2009). In their business processes, manufacturing companies tend to have many machines and other fixed assets used for operations. Meanwhile, retail companies are a business activity of selling goods or services to individuals for their own, family or household needs (Ma'ruf, 2011). The business process in a retail company is simpler than in a manufacturing company. In a retail company, income can be generated without processing the goods to be sold, so there is no need for many fixed assets other than warehouses and storage places.

Fernandes & Gonenc (2016) states that companies with more collateral have greater access to debt. Manufacturing companies tend to have a large fixed asset ownership, while retail companies do not. Based on the sample data, it was found that the average fixed assets owned by manufacturing companies was 41.78% of the total assets owned, while retail companies only amounted to 20.66%. Most of the assets owned by retail companies are inventories with an average of 73.60% of total assets owned.

When juxtaposed with Fernandes' statement, a common ground can be found that manufacturing companies have greater access to debt than retail companies. Large fixed asset ownership in manufacturing companies can be used as debt collateral. This gives manufacturing companies the opportunity to use debt financing to avoid taxes. Meanwhile, retail companies, which basically do not need a long process to generate income and do not have many fixed assets for collateral, will tend to use debt for operations that generate income directly and not for tax evasion.

Based on the above discussion, it can be said that manufacturing companies practice thin capitalization to take advantage of the interest expense reduction facility for tax avoidance. Whereas in retail companies, the practice of thin capitalization is carried out to undertake profit-generating operations and does not intend to evade taxes.

The use of thin capitalization as a tax avoidance tool has a negative effect on tax revenue

The regression results for testing the hypotheses of the two manufacturing companies are presented in Table 5. Based on the regression results in manufacturing companies with THIN moderating variables, there is no significant change in the GAAPETR variable. In Table 5, the value of P> | z | tax avoidance variable before moderation is 0.333, while after moderation it is 0.192. The use of thin capitalization practices by manufacturing companies does not moderate the relationship between tax avoidance and tax revenue. The thin capitalization variable also does not have a significant effect on tax revenue. From these results, it can be concluded that the use of thin capitalization in manufacturing companies as tax avoidance has no effect on tax revenue.

Table 5 Regression Results of Hypotheses 2 for Manufacturing Companies

Variables	Before Moderation			After Moderation		
	Coef	z	P>|z|	Coef	z	P>|z|
GAAPETR	-0,1221283	-0,43	0,333	-0,121703	-0,87	0,192
MULTI	-0,3493588	-0,16	0,4355	1,295929	0,24	0,404
ROS	0,5192525	2,10	0,018	0,4539553	9,51	0,000
SIZE	1,404965	1,99	0,0235	4,230071	1,56	0,061
THIN				9,080361	1,17	0,242
GAAPETR*THIN				-0,2068478	-0,39	0,700

Source: Processed by authors (2020)

Based on the regression results for retail companies with the THIN as moderating variable, there is no significant change in the GAAPETR variable. In Table 6, the value of P> | t | tax avoidance variable before moderation is 0.233, while after moderation it is 0.269. The use of thin capitalization practices by retail companies does not moderate the relation between tax avoidance and tax revenue. In contrast to manufacturing companies, in retail companies, the thin capitalization variable shows a positive effect on tax revenue. These results indicate that the thin capitalization scheme carried out by retail companies is able to increase the taxes received by the state in the year concerned. The results of this study are in line with Darma (2019) who states that the higher the level of debt the company has, the higher the tax burden that is paid. This could be because the debt owned by retail companies is reused for company operations and investments so as to increase the company's profit and tax burden.

Table 6 Regression Results of Hypotheses 2 Retail Companies

Variable	Before Moderation			After Moderation		
	Coef	t	P>|t|	Coef	t	P>|t|
GAAPETR	0,2386738	0,73	0,2335	-0,1950917	-0,62	0,269
MULTI	-0,6901504	-2,29	0,0125	-0,9432696	-3,11	0,0015
ROS	0,6212072	10,06	0,000	0,6122235	10,51	0,000
SIZE	0,6414396	6,71	0,000	0,9940318	6,53	0,000
THIN				1,209768	2,51	0,015
GAAPETR*THIN				-0,582045	-0,90	0,371

Source: Processed from Stata 15, 2020

Overall, the research results for the second hypotheses are not in line with Janský & Palanský (2019) research which states that state tax revenue is affected by tax avoidance activities. In this study, Janský & Palanský (2019) used the transfer of profits as a method used by companies to do tax avoidance. The research was conducted on 614 observational data from 112 countries from 2009 to 2016.

In this study, the author uses thin capitalization as a method which companies use to avoid tax. In addition, tax revenue is calculated from the tax revenue contribution provided by each company to the state. This figure is obtained from the cash spent for tax payments less the value of tax refunds received by the company. In the Law on General Provisions and Tax Procedures (UU KUP), the completion of requests for restitution is carried out through an audit process no later than 12 months after the application is received. The existence of a delay on this tax return causes the possibility of tax avoidance by the company not directly affecting the tax revenue for the year concerned. Meanwhile, this study did not consider the time lag effect.

5. Conclusion

The difference in the policy for charging interest on debt in the Statement of Financial Accounting Standards (PSAK) and taxation rules creates a gap for taxpayers to rationalize their behavior for personal gain. It can be known from the 11-year-old Indonesian tax revenue target that has not been able to reach the target and the number of cases of tax avoidance committed by taxpayers. On that basis, this study was conducted with the aim of examining tax avoidance behavior through thin capitalization schemes in manufacturing and retail companies. Followed by the influence of the use of the thin capitalization scheme on taxes received by the state.

The data samples collected are 528 company-years data for the manufacturing sector and

72 company-years data for the retail sector. The data sample was tested by using multiple regression models. Research shows that there are differences in the effect of thin capitalization on tax avoidance as measured by the amount of corporate tax burden. In manufacturing companies, the thin capitalization scheme is able to reduce the company's tax burden. Meanwhile, in retail companies, the thin capitalization scheme actually increases the company's tax burden.

This is due to differences in business processes in the two sectors. In a manufacturing company, the business process is quite long, so that it can generate income. This gives manufacturing companies the opportunity to use excessive debt to avoid taxes. In contrast to retail companies that do not need to process goods to generate income. The use of debt that is carried out tends to be used for operations that can generate income.

The interaction between tax avoidance and thin capitalization does not show an effect on the taxes received by the state. This result is not in accordance with the research of Janský & Palanský (2019). The author suspects this is due to differences in the tax revenue proxies used and the effect of the time lag.

Limitations

This study has several limitations. This study only uses secondary data from the Indonesia Stock Exchange which has not been audited by the Directorate General of Taxes due to limited data access so that the measurement of tax avoidance cannot be calculated accurately. In addition, the sample used is only public companies that are directly monitored by the society, in contrast to private companies that actually have more spaces for tax avoidance. The research was only conducted on the manufacturing and retail sectors in 2015 until 2018. And there is no time lag element used in the study.

For further research, it is recommended to include samples from private companies, to expand research to other business sectors, and to add time lag elements so that they are able to show the causal effect of company operations in the previous year. For tax authorities, it is recommended that they focus on monitoring tax avoidance on business sectors that tend to finance their businesses using debt. Based on this research, it is also known that the practice of thin capitalization as measured by limits based on PMK-169 / PMK.010 / 2015 has a different effect between the manufacturing and retail sectors. It is possible that other business sectors also have different effects. The policy recommendation that the author can suggest is the existence of thin capitalization arrangements in accordance with the nature of the business sector.

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