The Moderating Role of Firm Size on the Association between Managerial Ability and Tax Avoidance

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Abstract. *Changes in taxation policies generate uncertainty for companies that can potentially encourage companies to perform more aggressive tax planning. Consequently, aggressive tax planning can lead to tax avoidance. This study investigates the effect of managerial ability, firm size, and the interaction of managerial ability with firm size on corporate tax avoidance practices. The study used a quantitative method, with panel data linear regression model, random effects method, with 2009-2019. This study indicates that managerial ability, firm size, and its interaction have a significant impact on corporate tax avoidance. This research is also expected to enrich the literature on the effect of managerial ability on tax avoidance, particularly in Indonesia.*
Keywords: *Tax avoidance; Managerial ability; Firm size*

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INTRODUCTION

The primary purpose of this study is to investigate the influence of managerial ability, firm size, and its interaction on tax avoidance practices, particularly by using State-Owned Enterprises (SOEs) listed on the Indonesia Stock Exchange in 2009-2019 as a study sample. There was a change in the corporate tax rate in Indonesia, switch from a progressive tax rate to a single tax rate of 28% in 2008. The purpose of reducing a single tariff is to conform to the principles of simplicity and international best practice (Desiari & Jati, 2012). Furthermore, in 2010, there was a reduction in the corporate tax rate again by 3% so that the corporate tax rate is 25%. In addition to the change to the single rate, there is a possibility of a 5% reduction in the standard rate for corporate taxpayers listed on the Indonesia Stock Exchange (ISE). By the condition that at least 300 shareholders own at least 40% of the shares. The government has a specific goal to achieve by lowering the corporate tax rate. One goal is to attract foreign investors (Álvarez-Martínez et al., 2018) and the domestic economy is also expected to grow from this investment (Wildan, 2020). In 2020, the government lowered the corporate tax rate from 25% to 22% for 2020-2021. Besides, it is also predicted that the rate then will be lowered to 20% in 2022.

The pattern of changes in the rate of corporate tax is not different from that has been done in 2008 and 2010. The change in corporate tax rate is one of the policy uncertainties as macro-level factors that affect tax avoidance (Chay & Suh, 2009) that makes the firms profit and tax benefits that will be obtained tend to be uncertain (McGuire et al., 2014). Other macro-level factors that also influence include political dynamics (Chen et al., 2015; Liu et al., 2016), institutional environment (Kim, 2008), and market competition (Cai & Liu, 2016).

The company can respond to the reduction in corporate tax rates by conducting earnings management (Darma et al., 2018). The study showed that in response to policy changes related to reducing the corporate tax rate, the company conducted earnings management to minimize reported earnings; thus, the tax burden would be lower. Nevertheless, there was also evidence by Joni (2015) that documented that the change in the

corporate tax rate is not associated with earnings management practices by firms. However, the management was motivated to conduct earnings management to save the corporate tax burden. In addition, other research had also shown that increasing tax planning behavior would affect the higher tax avoidance practices (Darma et al., 2018).

The definition of real tax avoidance has not reached consensus. Nevertheless, some researchers use some definitions to describe tax avoidance. For example, tax avoidance reduces tax liability made by companies explicitly (Annuar et al., 2014). Another definition of tax avoidance by Hanlon & Heitzman (2010) is a series of tax planning strategies and approaches such as non-compliance, avoidance, aggressiveness, and protection. Thus, the definition of tax avoidance is the activity carried out by the company in order to reduce tax liability that can indicate non-compliance even though it is entirely legal.

Reducing tax burden can be considered economically necessary, such as increasing profits and shareholders' wealth (Huseynov & Klamm, 2012). The company's strategy to reduce or avoid tax does benefit shareholders, but against the public interest (Sikka, 2010). Some studies show that tax avoidance practices become alternatives to save taxes that reduce costs and improve welfare for shareholders (Hanlon & Heitzman, 2010; Robinson et al., 2010). Based on these conditions, corporate tax decisions taken by the manager may indicate the characteristics of the company or the behavior of management (Huseynov & Klamm, 2012).

Some studies have also shown that state ownership influences tax decisions (Bradshaw et al., 2019; Jian et al., 2012; Tang et al., 2017). Based on research conducted by Chen et al. (2011), there are two types of SOEs, namely SOEs controlled by the central government and SOEs controlled by local governments. Li et al .(2020) documented that the role of local governments towards tax avoidance behavior by SOEs is diverse. Some studies have suggested that the tax burdens of SOEs are lighter due to political connections that ensure SOEs get tax treatment preferences and law enforcement (Chen et al., 2008; Faccio, 2006; Wu et al., 2012). Furthermore, Tang et al (2017) found that local SOEs are more involved in tax avoidance because there is a conflict between the central government and the local government. This research is incompatible with research conducted by Hijriani et al. (2017) that political connections do not affect SOEs' practice of tax avoidance. In contrast, some studies stated that local SOEs have heavy tax burdens and are less involved in tax avoidance to meet government political targets (Bradshaw et al., 2019; Chan et al., 2013).

Tax planning is a managerial decision-making activity in a typical business environment thus the analysis of differences in planning based on managerial ability is an important subject to analyze (Lee & Yoon, 2020). Managers have a critical role in determining the level of corporate tax avoidance. The managerial ability is one of the factors that determines the corporate tax avoidance strategy (Park et al., 2016). Managers are key actors in making important strategic decisions throughout the company's management for the sustainability of the company using limited resources (Lee & Yoon, 2020). Managerial ability are expected can improve firm performance and capital flows (Silva, 2010). Furthermore, Lee & Yoon (2020) documented that high able managers will be less involved with tax avoidance despite the general assumption that managers want to minimize taxes and maximize profits.

Furthermore, regarding the interconnectedness of firm size and tax avoidance practices, the bigger company positively relates to the effective tax rate for privately controlled companies and negative for state-controlled companies (Wu et al., 2012). Susanti (2017) documented that the size of the company affects firm tax avoidance. Moreover, the size of the company can also be a factor that plays a significant role in strengthening or weakening the relationship between the influence of managerial ability and firm tax avoidance practices. Based on previous studies, this research aims to explain

the effect of managerial ability, firm size, and its joint effect on tax avoidance practices of SOEs listed on the ISE. Studies that explain the moderating role of firm size on the relationship between managerial ability and tax avoidance in Indonesia are still very limited and understudied. This is a research gap to be filled in this study. This research is also expected can offer new information on tax avoidance practices in SOE companies in Indonesia. In addition, SOEs companies are used as research sample because previous studies documented that SOEs tend to have lower tax burdens (engaged in more tax avoidance) than non-SOE companies (Bradshaw et al., 2019; Chan et al., 2013; Chen et al., 2008; Faccio, 2006; Li et al., 2020; Tang et al., 2017; Wu et al., 2012).

This study is expected to have several contributions in terms of theory, literature, and practices. The contribution to the theory is to support the agency theory in terms of conflicts between government and firms represented by managers. In this study, it is found that the higher managerial abilities as well as the bigger the size of the firms are associated with the higher level of tax avoidance. These findings add to the literature discussing the relationship between managerial ability, firm size, and tax avoidance. The practical contribution, this study may inform the tax authority that there are potential tax avoidance practices in SOEs. The government can overcome the weakness of current tax regulations. Furthermore, the results of this research can be useful as input to regulators to be able to monitor tax avoidance practices carried out by the managers of SOE companies.

This article has the following order: part one describes the introduction and background of the research; part two outlines the literature review and hypothetical development; part three describes the research method; section four discusses the results and discussions; and the last section contains conclusions, implications/recommendations, and further research suggestions.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Managerial Ability and Tax Avoidance

Managerial ability plays an important role (Andreou et al., 2017; Bamber et al., 2010; Chemmanur et al., 2010; Choi et al., 2015; Demerjian et al., 2013) because it can be reflected through the company's performance. The managers play a significant role in tax planning and are strongly related to tax avoidance practices (Lee & Yoon, 2020; Park et al., 2016). There are several studies stating that the relationship of tax avoidance and managerial ability is negatively correlated (Huang & Sun, 2017; Lee & Yoon, 2020; Park et al., 2016). More able managers are found to be associated to greater tax avoidance because they have a deep understanding of the business, environment, and opportunities that their company has. Such conditions enable managers to conduct tax avoidance strategies more effective (Koester et al., 2017).

Based on previous studies, managerial ability has a critical role in directing corporate tax avoidance because it determines whether the company is involved less or more in tax avoidance (Armstrong et al., 2015; Dyreng et al., 2010; Koester et al., 2017). Several studies documented tax avoidance behavior that occured in SOEs and Non-SOEs. The results of the study mentioned that with political connections, SOEs paid lower taxes than they should (Chen et al., 2008; Faccio, 2006; Tang et al., 2017; Wu et al., 2012). However, other research found that SOEs were less involved in tax avoidance practices than non-SOEs (Bradshaw et al., 2019). Accordingly, the first hypothesis is as follow.

H1: There is a significant effect of managerial ability on corporate tax avoidance

Managerial Ability, Firm Size, and Tax Avoidance

Gabaix & Landier (2008) documented the relationship between CEO salaries and company size was consistent with the talent possessed by CEOs. The larger the size of the company is associated with the higher the managerial ability. According to research conducted by Brockman et al. (2016), referring to Agarwal's opinion (1981), larger companies would pay more to their executives because large companies are more complex,

including structures and hierarchies, as well as an increased manager workforce along with an increase in the size of the company. This research proves that there is an association of the size of the company with the managerial ability. Managers have the ability to control increasingly complex business activities as the company grows thus it tends to have higher earnings. This shows that large companies have better capabilities when in managing their company's assets including having the extra ability to maintain the growth of firms' revenues and reduce tax burdens as well as to commit tax avoidance.

Duan et al (2018) documented that the larger the size of a company was associated with the more aggressive tax avoidance practices. This can be occurred because large companies have the resources and opportunities to conduct better tax planning. In addition, Park et al. (2016) also mentioned that large companies tended to be driven by political factors thus lead to commit tax avoidance. The agency theory explains that there is a conflict between firms represented by managers and tax regulator in terms of firm tax burden. The smaller the tax burden paid to the state, the greater the company's earnings will be saved thus increasing shareholders' wealth. Moreover, the size of the company has an impact to tax avoidance which can be reflected by the effective tax rate owned by the company (Susanti, 2017; Wu et al., 2012). Accordingly, the next two hypotheses are as follow.

H2: There is a significant effect of firm size on corporate tax avoidance

H3: Firm size moderates the association of managerial ability and corporate tax avoidance

RESEARCH METHOD

Data

This research used a sample of SOE companies listed on the Indonesia Stock Exchange in 2009-2019. SOEs firms were selected as a sample because previous research had shown that SOEs paid lower taxes to the state or engage more in tax avoidance than non-SOE companies (Bradshaw et al., 2019; Chan et al., 2013; Chen et al., 2008; Faccio, 2006; Li et al., 2020; Tang et al., 2017; Wu et al., 2012). The research period, which began in 2009 and ended in 2019, was chosen on the assumption that in 2009 it had recovered from the economic crisis in 2008. It ends in 2019 due to the 2020 financial report data will be released in 2021 thus it is not possible yet to use the 2020 financial report data.

There are several criteria for determining the samples. First, companies that have complete financial data. Second, companies that have complete financial data to measure managerial ability. The sample selection process begins by eliminating for those not included in the research sample criteria. Incompleteness of financial data will impede the calculation of all variables used in this study. At this stage, there are twenty companies that have a complete financial data to measure managerial ability.

Dependent Variable: Tax Avoidance

There are several methods of measuring tax avoidance that commonly used to measure corporate tax avoidance, including book-tax difference (BTD), Desai and Dharmapala book-tax difference (DD_BTD), Manzon and Plesko book-tax difference (MP_BTD), and effective tax rate (ETR) which is divided into generally accepted accounting principle effective tax rate (GAAP ETR) and cash effective tax rate (Cash ETR). This research used book-tax difference (BTD) to measure the tax avoidance. The difference in principle between accounting and tax is a factor that makes a temporary and permanent difference between the two. Permanent differences may indicate the presence of tax avoidance (Hong et al., 2019). The higher the value of BTD indicates that more companies are involved in tax avoidance. We estimated the BTD as net income minus taxable income divided by statutory tax rate then scaled by total assets.

Independent Variable: Managerial Ability

This study used measurement of managerial ability by Demerjian et al (2012). This measure represents that high able managers can generate revenue by using limited resources or by using limited resources can generate the same revenue, increase the

value of the company, and gain high economic performance. Measurement of managerial ability is done in two steps, namely using the DEA method and using Tobit regression. The DEA is the first to produce a measure of managerial capability by measuring the relative efficiency of the intended industrial company or so-called with decision making unit (DMU). Enterprise efficiency or DMU can be used as an assessment for managerial ability. The DEA is employed to calculate each resource in the same industry thus, in measuring the efficiency of the company is carried out per industry. Given a score of one refer to the efficient firms.

Company efficiency results or DMU measured using DEA have limitations that are influenced by the company's characteristics and management characteristics. Simply put, the company's efficiency results are not only influenced by the data analyzed, but also influenced by the company's characteristics and management. Therefore, the influence of both should be removed from measurements using Tobit regression. Tobit regression measurement is a second phase of the measurement performed after calculating the efficiency of the company or DMU using the DEA. After that will be obtained the results of managerial capabilities that have been cleaned from other factors.

In accordance with Demerjian et al (2012), there are output and input to measure the efficiency. Sales as output variable. The input variables consist of cost of goods sold (COGS), net property, plant, and equipment (NPPE), research and development (R&D), goodwill, other intangible assets (INTAN), and selling, general, and administrative expense (SGA). All of these input variables contribute to earnings and are influenced by managerial ability because each input is subject to managerial decision. It is rated one for efficient firm and zero for inefficient firm. The value of the company's efficiency is affected by the company's specific factors and managerial ability. Therefore, after measuring the efficiency of the company with the DEA, the second phase of measurements are required to eliminate the specific factors of the company that will hinder the outcome of the manager's ability. It is employed by using Tobit regression to restore DEA efficiency value on the company's size, market share, free cash flow, firm age, number of segments, and foreign currency indicators (see e.g., Demerjian et al. 2012).

Moderation Variable: Firm Size

In this study, the size of the company (SIZE) is defined as the natural logarithm of the company's total assets. The size of the company can represent economies of scale, the larger the size of a company then the greater firms can enjoy access to ease and more profitable financing. Firm size also implies a certain amount of stability and has implications on the firm's growth (Graham et al., 2013).

Control Variables

This study used control variables based on previous research (see e.g., Bradshaw et al., 2019; Gallemore & Labro, 2015; Hope et al., 2013; Li et al., 2020; Wu et al., 2012; Zhang et al., 2016) include return on assets (ROA), leverage (LEV), capital expenditure (CAPEX), and Operating Cash Flow (OCF). Profitability is the most common measure of performance, especially return on assets (ROA). Wu et al. (2012) also explained that ROA could reflect the company's ability to operate property efficiently. High ROA indicates an increase in the company's total assets. Return on asset is defined by income divided by total assets. To determine the amount of debt financing, it is calculated by using leverage (LEV). Leverage (LEV) is defined as total liabilities divided by total assets. Higher leverage generates more interest which in turn lead to lower tax burdens.

Besides, in this study, the capital expenditure (CAPEX) is defined as capital expenditures divided by net PPE. CAPEX may reflect the company's plan regarding the allocation to purchase, repair, or replace the company's fixed assets. The greater the expenditure made on assets, the more savings the company made because of this expenditure could be a reduction in taxable income and affect the difference in income according to tax and accounting. Finally, the last variable

control is operating cash flow (OCF). In this study, it is defined as the cash flows from the company's operating activities divided by the total assets.

Research Model

Empirical Model: Regression Model

$$BTD_{it} = \beta_0 + \beta_1 MA_{it} + \beta_2 SIZE_{it} + \beta_3 MASIZE_{it} + \beta_4 ROA_{it} + \beta_5 LEV_{it} + \beta_6 CAPEX_{it} + \beta_7 OCF_{it} + \varepsilon_{it}$$

In the equation, MA is managerial ability, SIZE is firm size, MASIZE is the interaction of managerial ability and firm size, as well as ROA, LEV, CAPEX, OCF refer to control variables.

To test and support the H1 hypothesis (managerial ability has an effect on corporate tax practices), the coefficient of MA (β_1) is expected to be significant, ceteris paribus. To support the H2 hypothesis (there is a significant effect of firm size on corporate tax avoidance), the coefficient of SIZE (β_2) is expected to be significant, ceteris paribus. Finally, to test the H3 hypothesis (firm size moderates the association of managerial ability and corporate tax avoidance), the coefficient of MASIZE (β_3) is expected to be significant, ceteris paribus.

RESULTS AND DISCUSSION

Empirical Results

Descriptie Statistics

Table 1 presents the descriptive statistics of research variables in a sample of SOE companies in the period of 2009-2019. The average of managerial ability over all sample companies is 0.693. The result shows that the average sample companies in this study have the managerial ability that tends to be high. The ROA with an average of 6.017 indicates that the average sample companies in this study had a good profitability. LEV with an average of 0.628 shows that the average sample companies, the comparison of using debt relative to assets is about 62.8%. In other words, firms are using more debt component than its equity component in terms of operational financing. CAPEX with an average value of 1.257 shows that the average sample company conducts a positive and certain amount of capital expenditure. Then, OCF with an average value of 0.072 indicates that the average sample companies have a positive cash flow.

Table 1. Descriptive Statistics

Variable	Mean	Std.	Min	Max
BTD	0.027	0.086	-0.053	0.287
MA	0.693	0.355	0	1
SIZE	29.660	3.687	21.819	34.382
MASIZE	19.256	11.324	0	31.235
ROA	6.017	6.796	-3.389	22.457
LEV	0.628	0.213	0.270	0.911
CAPEX	1.257	2.455	-0.215	9.374
OCF	0.072	0.098	-0.061	0.297

Source: Processed by Author using Stata (2021)

Regression Results Analysis

The regression model uses a data panel test consisting of: Common Effect Model (CEM), Fixed Effected Model (FEM), and Random Effect Model (REM). Selection of models with statistical tests consisting of Chow tests, Hausman tests, and Breusch & Pagan Lagrange Multiplier tests. The data is processed by using Stata. The results of the Chow Test analysis (untabulated) show H0 is rejected and H1 is received with $p<0.05$ then the fixed effect model is appropriate. Furthermore, the Hausman Test (untabulated) shows H0 is accepted and H1 is rejected with $p>0.05$ then the random effect model is appropriate. Finally, based on the results of the model selection (untabulated), the random effect regression model shows significant results with $p<0.005$ which means in general this model is valid so that it can be used and analyzed.

Table 2. Research Model Regression Results

Variable	Coef.	Prob.
C	-0.434	0.011*
MA	0.371	0.011*
SIZE	0.017	0.006**
MASIZE	-0.013	0.008**
ROA	0.002	0.125
LEV	-0.101	0.249
CAPEX	-0.001	0.041*

OCF	-0.025	0.750

N = 185; R^2 = 0.229
Prob (F-statistic) = 0.000**
Level of significance: *p<0.05; **p<0.01
Source: Processed by Author using Stata (2021)

Test F-Statistics shows p<0.05 which means the model is valid and can be used for further analysis. The R-square indicates a value of 0.229 which means the dependent variable can be explained by all independent variables of 22.9% and the rest is affected by variables outside the model.

Discussion

Managerial Ability and Tax Avoidance

Based on the results on Table 2, H1 was supported. MA has a value of p<0.05. Thus, managerial ability influences tax avoidance practices. In this regard, the sign is positive. It implies that managerial ability has an important role in determining tax avoidance practices. The higher the ability, the higher tax avoidance will be. Research conducted by Lee & Yoon (2020) provides evidence that managers play a crucial strategies that affects tax planning and is strongly related to tax avoidance practices. This result of the study is also in accordance with several studies that state that managerial ability is positively associated with tax avoidance because it determines whether the company engages less or more in tax avoidance (Armstrong et al., 2015; Dyreng et al., 2010; Koester et al., 2017). However, this results of this study is not in line with research conducted by Lee & Yoon (2020), Huang et al. (2017), and Park et al. (2016) that found the negative association between managerial ability and tax avoidance.

In accordance with the agency theory that shareholders desire more profit thus willing to pay more to managers in order to act according to their goals. The intended profit can be obtained by avoiding tax, the less tax charges are paid, then the more share of profits will be earned by shareholders. Furthermore, this study is in accordance with studies that have been conducted by several previous researchers stating that SOEs pay lower taxes (engage in higher tax avoidance) than they should (Tang et al., 2017; Wu et al., 2012). The agency theory has predicted a relationship between tax authority and managers (representing firm interest) that managers are intended to pay less tax burden in order to maximize shareholders' value.

Managerial ability plays a crucial role (Andreou et al., 2017; Bamber et al., 2010; Chemmanur et al., 2010; Choi et al., 2015; Demerjian et al., 2013). It also could be reflected through the firm' performance. From previous studies, it was also found that the managers had a strategic role in tax planning and were strongly related to tax avoidance practices (Lee & Yoon, 2020; Park et al., 2016). However, there are several studies stating that the relationship of tax avoidance and managerial ability is negatively correlated (Huang & Sun, 2017; Lee & Yoon, 2020; Park et al., 2016). Our result is consistent and in line with the results stated that more able managers are found to be associated to greater tax avoidance because they have better understanding of the business, environment, and opportunities that the firm has. Such conditions enable managers to conduct tax avoidance strategies more effective (Koester et al., 2017).

Managerial ability has critical role in directing corporate tax avoidance because it determines whether the company will be involved less or more in tax avoidance (Armstrong et al., 2015; Dyreng et al., 2010; Koester et al., 2017). Regarding to SOEs cases that have some political connections, SOEs are found to pay lower taxes than they should (Chen et al., 2008; Faccio, 2006; Tang et al., 2017; Wu et al., 2012). However, other research found that SOEs are less involved in tax avoidance practices than non-SOEs (Bradshaw et al., 2019).

Managerial Ability, Firm Size, and Tax Avoidance

Based on the results of processed data, H2 and H3 were also supported. SIZE and MASIZE have a value of p<0.05. Thus, firm size has a significant impact on tax avoidance behavior. In addition, it implies that the firm

size moderates the association between managerial ability and tax avoidance. The results indicate that the higher the size of the firms, the higher the possibility of the firms involved in tax avoidance activities. The result of this study is in accordance with previous studies. The larger the size of the company will be consistent with the managerial ability possessed by the manager as well as the compensation given to them (Gabaix & Landier, 2008).

The larger companies have more complex elements including structures and hierarchies, as well as an increased manager workforce as the size of the company increases (Brockman et al., 2016). Besides, from the previous study, it is found that the better the company's performance, the more likely it is involved in more incentives in tax planning. Based on research conducted by Duan et al (2018), the larger the size of the company, the more resources are available thus enabling the firms to commit a better tax management. Our result supports the research conducted by Gabaix & Landier (2008), Brockman et al. (2016), and Agarwal (1981) the larger companies are associated with the more able managerial team and potentially involved in higher tax avoidance practices.

Large firms have a better capacity in managing their company's assets including having the extra ability to increase the growth of sales or revenue and reduce tax burdens as well as to commit tax avoidance. The bigger the size of a firm, the more aggressive tax avoidance practices are (Duan et al (2018). This is because large firms have the resources and opportunities to conduct better tax planning including higher managerial abilities. In this regard, based on the results, the firm size has an influence on the relationship between managerial ability and tax avoidance. Company size has a role in facilitating managerial ability in determining the level of corporate tax avoidance.

CONCLUSIONS

Based on the results of this study, it is found that managerial ability, firm size, and its interaction have significant impact on corporate tax avoidance. First, managerial ability has a positive effect on tax avoidance. The more able manager is associated with the higher level of tax avoidance committed by the firms. In addition, based on some previous research, it is documented that managers have important and strategic role in making decision that very closely related to tax avoidance behavior. Second, firm size has a positive effect on tax avoidance. The larger the size of the company then the larger the company engages in tax avoidance. The size of the company will be consistent with the managerial ability possessed by the firm. Finally, third, the size of the company moderates the association between managerial ability and tax avoidance.

The results of this study may have implications for tax authority. This study may inform that in SOEs companies, there are still indications of tax avoidance practices even though the practice of tax avoidance is still in the legal corridor, but if it is carried out in the long-term, it potentially becomes an aggressive tax avoidance. The tax avoidance is encouraged by the managerial ability, firm size, and the interaction effect of both. Therefore, this research is an input for tax authority in terms of implementing better tax regulations and enforcements in order to secure state revenue.

This study has some limitations. First, the data used for this research is limited to the financial data of SOE companies only that listed on the Indonesia Stock Exchange from 2009 to 2019. Second, the measurement proxy used for tax avoidance is only one book-tax differences due to data limitations. Further research may compare the pattern of tax avoidance conducted by SOEs and non-SOEs to get more nuanced results, by also using another measure of tax avoidance such as GAAP ETR, cash ETR, and cash flows ETR.

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