

Purposive Sampling Technique and Ordinary Least Square Analysis: Investigating the Relationship between Managerial Overconfidence, Transfer Pricing and Tax Management in Indonesian Stock Exchange-List

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Purposive Sampling Technique and Ordinary Least Square Analysis: Investigating the Relationship between Managerial Overconfidence, Transfer Pricing and Tax Management in Indonesian Stock Exchange-Listed Firms

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Abstract. This study investigates the relationship between managerial overconfidence, transfer pricing, and tax risk, with a focus on tax management's moderating role. Tax management is a critical concern due to its pivotal role in financing government activities. Low tax revenues in industries like manufacturing can adversely affect these activities, highlighting the need for effective tax management strategies. Managerial overconfidence can influence these strategies, potentially leading to both positive and negative impacts on tax management. Using a sample from the manufacturing industry in Indonesia, this study utilizes regression analysis to evaluate the effects of overconfidence on tax management. Findings indicate a significant relationship between managerial overconfidence and tax management, with managers demonstrating overconfidence tending to employ aggressive tax management strategies, thus minimizing tax payments. Furthermore, this study reveals inconsistencies in the research surrounding overconfidence's impact on tax management, necessitating further exploration. These results have implications for understanding the role of managerial traits in the decision-making process and developing effective tax management strategies to maximize government revenue.

Keywords: Managerial overconfidence, Tax management, Transfer pricing, Indonesian Stock Exchange, Agency theory

1. Introduction

Tax management is defined as the main concerns for researchers recently. This is due to the fact that this taxation is considered as the primary source of income for the government, and the objective of this taxation is in order to finance all government activities, thus if the tax is not achieved, it can have a negative effect on government activities. One of some factors leads this tax target ratio not to be achieved is due to tax management conducted by taxpayers. Tax management is defined as the ability to pay a low amount of tax over a long period of time (Minnick & Noga, 2010). Aggressive tax management is not always related to unethical or illegal behaviour, because tax provisions still have a gap for taxpayers to manage taxes in order to minimize the tax payments.

The phenomenon of low tax revenue occurred in January 2019, where the tax revenue for manufacturing industry decreased by 16.2%. The Ministry of Finance of the Republic of Indonesia reported that tax revenue throughout January 2019 increased by 8.82%, from IDR 79 trillion to IDR 86 trillion. Although tax revenue attributable to the manufacturing industry increase positively, tax revenue from this manufacturing sector increase negatively, even though this manufacturing sector contributed 20.8% to tax revenue. The source of tax revenue for this manufacturing sector recorded at IDR 16.77 trillion or decreased by 16.2%. The decline in tax revenue from this manufacturing sector was due to accelerated tax refunds that surged in January 2019. The amount of VAT refunds made of IDR 16.4 trillion or a growth of 40.66%, whereas in January 2018, the nominal VAT refund of IDR 11.6 trillion (Nasional Kontan, 2019).

This occasion demonstrates that managers have an important role as an integral part in choosing a tax management strategy and are responsible for allocating company's resources to improve the performance and prosperity for shareholders. Managers attempt to improve the performance of business lines, managers tend to focus on corporate profits, where it will divert company resources for purposes of tax management. Effective tax management is considered to be one of some significant drivers of bottom-line performance as managers invest company resources into company activities to optimize tax

management, thereby resulting in lower taxes and higher earnings performance (Minnick & Noga, 2010).

The present study focused on the manager's role in affecting the organization's tax management strategy. Managers are obliged to make accurate decisions since they may affect the wealth of the shareholders (Agustina et al., 2023; Khaleil et al., 2020). However, their decision is not always accurate due to bounded rationality, i.e., uncertainties that emerge during the decision-making process that potentially leads to managers' underestimation or overestimation (Trianita & Basuki, 2020).

Bounded rationality, according to Weinstein, (1980), may lead managers to a cognitive bias known as overconfidence. It is defined as a psychological bias used by researchers to define a phenomenon in a manager's decision-making process (Park et al., 2020). Managerial overconfidence is one of the manager's characteristics that may influence the managerial decision-making process (Bertrand & Schoar, 2003; Habib & Hossain, 2013; Hsieh et al., 2018; Malmendier et al., 2007). Overconfidence makes managers more confident with their own ability, knowledge, and information accuracy than with others.

There are three types of overconfidence such as overestimation, over placement, and over precision (Moore & Healy, 2008). Overestimation focuses on the individual's belief in the level of ability, performance, or potential for success of that individual. Over placement focuses on the individual's belief that himself is better than others, and while over precision focuses on the individual's belief that his belief is more accurate than the reality that occurs. This overconfidence manager leads the managers to be more optimistic regarding the achievement of the expected results (Bazerman & Moore, 2012) and tends to express an excessive level of confidence in their capabilities (Trianita, 2020; Wanof & Gani, 2023).

Managers who have this overconfidence tend to be more innovative, invest excessively, dare to take risks, delay distributing dividends to shareholders, conduct earnings management, invest in research and development costs, and even commit fraud in financial reporting (Bharati et al., 2016; Goel & Thakor, 2008; Hirshleifer et al., 2012; Hribar & Yang, 2016a; Kouaib & Jarboui, 2017; Malmendier et al., 2011; Malmendier & Tate, 2008; Muna et al., 2023; Schrand & Zechman, 2012). In addition, managers who have overconfidence tend to do tax avoidance in order to achieve the expected targets, and increase the reputation and credibility of managers for their ability to manage taxes (Chyz, 2013; Hsieh et al., 2018; Lee & Korea, 2016; Presley & Abbott, 2013).

The effect of this manager overconfidence on tax management, it can be known based on two perspectives, namely negative and positive perspectives. This negative perspective on the effect of manager overconfidence on tax management will result in a positive regression coefficient. This means that managers who have overconfidence tend to conduct tax management with the aim of minimizing tax payments. This happens because the manager tends to overestimate his knowledge and skills, underestimate the risk of tax sanctions, and considers himself capable of controlling any events and problems in the organization. This condition shows the excessive optimism of the manager

Managers who have overconfidence tend to promote the tax management practice, which is reflected in the low effective corporate tax rate (Olsen & Stekelberg, 2016). This condition is because tax management is an effective way to achieve profit targets and increase the company's cash flow (Desai & Dharmapala, 2009; Hanlon, 2005; Phillips et al., 2003). The motivation of managers to do tax management is to minimize corporate tax payments, so that the manager's goal to fulfil their interests is achieved in accordance with agency theory from the opportunistic side of the manager. The action of this managerial opportunism in the term of tax management is to obtain a bonus or incentive for achieving the company's profit target and reduce the company's cash outflow as a result of higher tax payments.

From the positive perspective, managerial overconfidence may result in a negative regression coefficient. In other words, overconfident managers tend to lower tax management practices. This condition occurs because overconfident managers are viewed as more effective in taking advantage of the growth potential, allowing them to enhance the organization's performance, instead of minimizing tax payment that contains risk contingency. Overconfident managers tend to dare to make investments to create innovation, leading to the organization's performance improvement (Caham et al., 2013; Hirshleifer et al., 2012; Safrizal & Julianti, 2023). Some previous studies have tried to examine the effect of this overconfidence manager on tax management and the results of these studies indicate research inconsistencies. Aliani et al., (2016) conducted a study on whether CEO and managerial overconfidence

had a significant effect on tax planning in the Tunisian context. The result of this study indicates that CEO and managerial overconfidence has a negative and significant effect on tax planning. Olsen & Stekelberg, (2016), Hsieh et al., (2018), and Sumunar et al., (2019). Show that this overconfidence manager has a positive and significant effects on tax avoidance. Ferris et al., (2013) show that managers who have overconfidence tend to be more involved in international mergers and acquisitions strategy, especially in countries with lower tax rates.

Some previous literature tries to explain that based on various strategies from tax management such as transfer pricing, tax haven utilization, thin capitalization, and debt financing (Baghel et al., 2023; Janský & Prats, 2013; Pendse, 2012; Rossing & Rohde, 2014). One of several strategies of this tax management through transfer pricing is that the main mechanism conducted out by several multinational companies is for the practice of transferring profits with the aim of minimizing tax payments (Richardson & Taylor, 2015; Brock & Pogge, 2014; Muhammadi et al., 2016). There are several factors can affect the choice of managers in conducting this transfer pricing, namely that the company is in order to obtain operating profits and also that the interests of the subsidiary is to be able to maintain cash flow conditions (Tang, 2016), tax regulations and differences in transfer pricing regulations from each country (Rossing & Rohde, 2014; Borkowski, 2010).

Based on the description of the background of the research has been described above, it shows that this research is important to be conducted by researcher is in order to estimate and also analyse the effect of overconfidence manager and transfer pricing on tax risk: The role of tax management as a moderating variable.

2. Theoretical Framework

Agency Theory

In Agency theory, agency and principal hold a contractual relationship that allows agents to fulfil the principal's interest (Jensen & Meckling, 1976). Such a contractual relationship may trigger the agent's opportunistic or efficient behaviour, depending on the contract. From an opportunistic perspective, the agents will act to fulfil their interests since they have information the principals do not have. The agent's opportunistic behaviour may imply agents' motivation to achieve the target profit and to conceal information deemed less profitable for the principal, driving them not to show the company's actual condition.

The agent's opportunistic behaviour is reflected through bonus mechanism, debt covenant, or political cost. A bonus mechanism is the bonus plan for agents when achieving the target profit, a condition exploited by the agent through an accounting gap. Debt covenant refers to the company's loan to the creditor. Hence, the company uses the accounting gap to obtain debt. Political cost focuses on the company's high profit that draws media attention, causing the agent to use accounting policies to defer profit from the current period to the future period. Therefore, agency cost arises as a result of the conflict of interest between the agent and the principal. Agency cost is defined as the company's expense due to conflict of interest such as audit cost, bonding cost, or recovery cost of the company reputation.

Different from the agent's opportunistic behaviour, in the efficiency contract, the agent should be able to optimize the company prospect and contribute to the principal's interest (Holthausen, 1990). In the efficient covenant, decision-making process and internal control are affected by accounting methods. They show a detailed covenant structure, such as requirements in debt agreement or compensation for agents (Christie & Zimmerman, 1994). An efficient contract focuses on the accounting policies to communicate private information to the principals to help them make an investment decision by understanding the company prospect (Holthausen, 1990).

Managerial Confidence

Managers play a pivotal role in making the company decision, making them one of the key drivers of the company. Since their decision may influence the company policies, Accurate considerations are needed in every decision-making process. However, their decision is not always accurate due to bounded rationality, i.e., uncertainties that emerge during the decision-making process that potentially leads to overestimation or underestimation (Trianita, 2020).

Overestimation and underestimation are psychological biases leading to overconfidence. Overconfidence is the psychological bias in a manager's decision-making process (Park et al., 2020). Their decision bias, as a result of their overconfidence, makes managers believe in their own ability,

knowledge, and accuracy than others' (Bhandari & Deaves, 2006). Overconfident managers tend to overestimate their company prospects (Malmendier et al., 2007).

According to Moore & Healy, (2008), overconfidence is classified into three types, namely overestimation, over placement, and over precision. Overestimation means that individuals believe in their ability, performance, and potential success. Over placement means that individuals believe more in their own ability and others' ability. Over precision shows that individuals believe that their belief is more accurate than reality. Overconfident managers have high optimism toward their expected results (Bazerman & Moore, 2012).

Overconfident managers tend to exaggerate their ability to gain profit, which may create the difference in real performance and expected performance and eventually affect the company's financial management (Hribar & Yang, 2016a). Previous studies found that overconfident managers make more investment than other managers (e.g., Hsieh et al., 2018; Schrand & Zechman, 2012; Malmendier & Tate, 2008). Meanwhile, Galasso & Simcoe, (2011) found that companies with overconfident managers are more innovative.

Transfer Pricing

Transfer pricing refers to a product or service price from one division that is transferred to another division within the same company or across companies with special relationships (Santosa & Suzan, 2018). It is the main choice of many multinational companies to minimize their tax payment (Brock & Pogge, 2014; Muhammadi et al., 2016; Richardson & Taylor, 2015; Yamin et al., 2023). Factors underlying management's transfer pricing practice are operational profits, opportunities to help the subsidiary maintain cash flow (Tang, 2016), and differences in tax and transfer pricing regulations in each country (Rossing & Rohde, 2014; Borkowski, 2010).

Transfer pricing is carried out to move the company profit to countries with lower tax tariffs (Armstrong et al., 2015; Huizinga et al., 2008). Choosing countries with lower tax tariffs using transfer pricing is a strategy implemented by many big companies (Klassen & Laplante, 2012). However, the government holds the right to protect its fiscal basis from tax management practices through transfer pricing. Accordingly, in the last few decades, many countries exhibit various ways to fight against transfer pricing practice by implementing transfer pricing regulation for a multinational company. Such regulation requires companies to report more data on related party transaction.

Tax Management

Tax management refers to the ability to pay a low amount of tax in a long period (Minnick & Noga, 2010). Tax management may increase the company's value because the profit target could be achieved by lowering the tax burden. Tax management is an effective way to achieve the target profit and enhance the organization's cash flow (Phillips et al., 2003; Desai & Dharmapala, 2009; Hanlon, 2005)). Its primary purpose is to minimize the company tax payment, allowing the company to achieve its target profit and minimize its outflow.

Tax management may be beneficial for the company. However, it is crucial to consider the cost and long-term benefits when managing tax. In addition to opportunity cost, other costs are needed when managing tax, such as transaction cost, implicit tax, and uncertainty. Since a company will only be involved in tax planning when they receive a clear benefit, benefits from tax management activities should be higher than the cost.

Big companies, according to M Hanlon & Slemrod, (2007), have a bigger risk of loss when managing their tax because it increases the political cost. As big companies tend to be monitored by public media, managers should not exhibit aggressive behaviour in managing their taxes. Aggressive tax management does not necessarily relate to unethical or illegal behaviour, considering that gaps in tax provision allow tax management to minimize the tax payment.

Managerial Overconfidence and Tax Management

Managers' decision-making process may be affected by one of the managers' characteristics, overconfidence (Bertrand & Schoar, 2003; Habib & Hossain, 2013; Hsieh et al., 2018; Malmendier et al., 2007). Managerial overconfidence refers to an individual's commitment to achieve a certain target and exaggerate his or her ability, competency, and knowledge to obtain a professional reputation and

others' recognition (Hsieh et al., 2018). Overconfidence makes managers more confident with their own ability, knowledge, and information accuracy than others'.

Previous studies found that overconfident managers tend to be more innovative, make overinvestment, take greater risk, postpone dividend payment, perform profit management, make investments in research and development, or even commit financial statement fraud (Bharati et al., 2016; Goel & Thakor, 2008; Hirshleifer et al., 2012; Hribar & Yang, 2016b; Malmendier & Tate, 2008; Malmendier et al., 2011; Schrand & Zechman, 2012; Kouaib & Jarboui, 2017).

Agency theory is the theoretical basis to explain the effect of overconfidence on tax management. This theory describes the contractual relationship between an agent and the principal (Jensen & Meckling, 1976) where the agent attempts to fulfill the principal's needs. Agency theory provides two perspectives related to the contractual relationship between the agent and the principal, namely opportunistic behaviour and efficient contract.

From the perspective of opportunistic behaviour, the agent may use the information to fulfill his or her own interest instead of the principal's interest, resulting in a conflict of interest. To minimize the conflict of interest, the principal spends monitoring costs to the external auditor. Opportunistic behaviours drive managers to exploit gaps in tax regulation, allowing them to manage tax to minimize the company tax payment.

In other words, overconfident managers tend to manage the tax to minimize the tax payment. This condition occurs because they tend to exaggerate their knowledge and skill, underestimate the risk of tax sanctions, and consider themselves to be capable of controlling any events and problems in the organization, showing an overoptimistic attitude. Overconfident managers tend to be overoptimistic. Moreover, they tend to manage their tax, reflected in the company's lower effective tax (Olsen & Stekelberg, 2016). Tax management is an effective way to achieve the target profit and enhance the organization's cash flow (Desai & Dharmapala, 2009; Michelle Hanlon, 2005; and (Phillips et al., 2003).

From an efficient contract perspective, overconfident managers tend to decrease tax management practice because they are more effective in taking advantage of the growth potential, allowing them to enhance the organization's performance, instead of minimizing tax payment that contains risk contingency. Overconfident managers tend to dare to make investments to create innovation, leading to the organization's performance improvement (Hirshleifer et al., 2012; Graham et al., 2013).

Aggressive tax management may harm the company's reputation (Hanlon, 2005) and lead to a decline in the company stock price (Hanlon & Slemrod, 2007). It occurs because shareholders view aggressive tax management as a potential future loss (Cook et al., 2017; Drake et al., 2019). While tax management is helpful to reduce the company tax payment in a short-term period, it may adversely affect the company's long-term sustainability. Hence, tax management practice should consider the long-term cost and benefit for the company.

Previous studies show an inconsistency related to the effect of managerial overconfidence on tax management. A study conducted by Aliani et al., (2016) in the Tunisian context found that CEO overconfidence negatively and significantly affects tax planning. According to Olsen & Stekelberg, (2016), Hsieh et al., (2018), and Sumunar et al., (2019) found that managerial overconfidence positively and significantly affects tax avoidance. According to Ferris et al., (2013) highlight that overconfident managers are more involved in merger strategy and international acquisition, especially in countries with lower tax tariffs. Based on the two perspectives (i.e., opportunistic behaviour and efficiency) that may influence the hypotheses directions, it was expected that:

H1: Managerial overconfidence affects tax management.

Managerial Overconfidence, Transfer Pricing, and Tax Management

Transfer pricing refers to a product or service price from one division that is transferred to another division within the same company or across companies with special relationships (Santosa & Suzan, 2018). Transfer pricing is carried out to move the company profit to countries with lower tax tariffs (Armstrong et al., 2015; Huizinga et al., 2008). Choosing countries with lower tax tariffs using transfer pricing is a strategy implemented by many big companies (Klassen & Laplante, 2012).

Overconfident managers are more involved in merger strategy and international acquisition, especially in countries with lower tax tariffs (Ferris et al., 2013). This strategy is done to manage tax by transfer pricing to countries with lower tax tariffs (Hsieh et al., 2018). Overconfident managers tend to

see a condition as an opportunity to fulfil their interests. From the manager's opportunistic perspective, overconfident managers manage their tax to accumulate funds and make investments through research and development costs or expansion by merger and acquisition, consistent with the company's tax management.

Running international business activities in countries with low tax tariffs may help the company to lower its tax obligation. It may serve as a tool for overconfident managers to fulfill their investment ambition and to avoid paying higher taxes for their profit.

Meanwhile, from an efficiency perspective, overconfident managers will minimize transfer pricing practice, which will eventually minimize tax management practice. It is carried out because aggressive tax management is viewed to have risk contingencies such as damaged company reputation or company stock price drop. As Michelle Hanlon, (2005) found, aggressive tax management may harm the company's reputation and lead to a decline in the company stock price (Hanlon & Slemrod, 2007). In addition, shareholders may view aggressive tax management as a potential future loss (Cook et al., 2017; Drake et al., 2019). Based on the two perspectives (i.e., opportunistic behaviour and efficiency) that may influence the hypotheses directions, it was expected that:

H₂: Managerial overconfidence affects tax management through moderation of transfer pricing.

3. Methodology

Population and Sample

Population is defined as an event, or a group of people that becomes the focus of a study (Sekaran, 2006). Population of this study was manufacturing companies listed in Indonesia Stock Exchange in 2014-2019 period. The analysis made from 2015-2019, while 2014 was used as the basis to estimate the sales and asset growth as the proxy of managerial overconfidence. The sample of this study was selected using purposive sampling technique with the following criteria, manufacturing companies listed in IDX in 2014-2019 period, the company should have at least five companies in sub sector to estimate the managerial overconfidence per subsector to obtain data variation, as suggested by Isnugrahadi & Kusuma, (2009), the company financial statement is published in Rupiah; companies with financial statement in other than rupiah was excluded, the manufacturing companies should not experience loss during the selected period, otherwise they were excluded, the manufacturing companies should have related party receivable in their financial statement. Companies with no such a transaction were excluded.

Variable Definition and Measurement

Managerial Overconfidence

Managerial overconfidence is defined as managers' overassessment of the companies' long-term performance (Malmendier et al., 2011). Companies with overconfident managers tend to make higher investments than others (Brown & Sarma, 2007). In the present study, managerial overconfidence was measured by adapting (Kouaib & Jarboui, 2017) study.

$$\text{Sales growth} = \alpha + \beta_1 \text{Asset growth} + e$$

Cross sectional regression is done based on the formula above. In other words, regression is carried out per year and per subsector, resulting in residual values. Residual value of > 0 was given score 1, indicating managerial overconfidence, and vice versa.

Transfer Pricing

Transfer pricing refers to a product or service price from one division that is transferred to another division within the same company or across companies with special relationships (Santosa & Suzan, 2018). Transfer pricing was measured following Melmusi, (2016), which was also applied and conducted by (Widyanto et al., 2019).

$$\text{Related Party Transaction} = \frac{\text{Related Party Receivables}}{\text{Total Receivables}}$$

Tax Management ³

Tax management refers to the ability to pay a low amount of tax in a long period (Minnick & Noga, 2010). According to Kohlhase & Pierk, (2020), one of the measurements of a company's tax management is Cash ETR, as explained by (Dyrenge et al., 2010; Lisowsky, 2010; and Wilson, 2009). In this study, Cash ETR was adapted from (Hanlon & Heitzman, 2010).

$$\text{Cash ETR} = \frac{\text{Payment}}{\text{Profit Before Tax}}$$

Controlling Variables

The controlling variables in this study were Current ETR and sales growth. Current ETR describes the comparison between the current tax burdens to profit before tax. Current ETR was employed to control the effect of managerial overconfidence on tax management that was measured using Cash ETR. Companies engaged with tax management practice through ETR would manage their current tax burden, which will influence the company tax payment. The higher the current ETR, the higher the Cash ETR. Michelle Hanlon & Heitzman, (2010) was adopted to measure Current ETR.

$$\text{Current ETR} = \frac{\text{Current tax burden}}{\text{Profit before tax}}$$

⁸ Sales growth refers to the difference in sales in year t and sales in year t-1 and divided by sales in year t-1. Sales growth was employed to control the effect of managerial overconfidence on tax management that was measured using Cash ETR. Companies engaged with tax management practice through ETR would manage their current tax burden, which will influence the company's profit. As the company's higher revenue means higher profit, it may affect the company tax payment. Hence, higher sales growth may increase tax management (measured using Cash ETR). The formula conveyed by Wu et al., (2015) was employed to measure the sales growth.

$$\text{Sales Growth} = \frac{\text{Sales } t - \text{Sales } t - 1}{\text{Sales } t - 1}$$

4. Result and Discussion

4.1 ¹²sult

This study used manufacturing companies listed on Indonesia Stock Exchange in the 2014-2019 period. The year analysis ranged from 2015 to 2019. 2014 was used as the baseline to calculate the asset growth and sales growth, the proxies of managerial overconfidence. Table 1 below displays the sampling process.

Table 1. Sampling Process

| No. | Subsector | Consistent emittent in 2014-2019 | Non-rupiah financial statements | Loss before income tax | No Related Party receivables |
|------------------------------------|-----------------------------------|----------------------------------|---------------------------------|------------------------|------------------------------|
| <i>Basic Industry and Chemical</i> | | | | | |
| 1. | <i>Cement</i> | 6 | 0 | (1) | 0 |
| 2. | <i>Ceramics, Glass, Porcelain</i> | 7 | 0 | (4) | (1) |
| 3. | <i>Metal and Allied Product</i> | 13 | (2) | (6) | (1) |
| 4. | <i>Chemicals</i> | 8 | (3) | 0 | (1) |
| 5. | <i>Plastics and Packaging</i> | 10 | (2) | (3) | (1) |
| 6. | <i>Animal Feed</i> | 5 | 0 | (2) | 0 |
| 7. | <i>Wood Industries</i> | 2 | 0 | 0 | 0 |
| 8. | <i>Pulp and Paper</i> | 7 | (3) | 0 | (2) |
| 9. | <i>Others</i> | 2 | 0 | 0 | 0 |
| <i>Miscellaneous Industry</i> | | | | | |

| | | | | | |
|--------------------------------|--------------------------------------|----|-----|-----|-----|
| 1. | <i>Machinery and Heavy Equipment</i> | 2 | 0 | 0 | 0 |
| 2. | <i>Automotive and Components</i> | 11 | (2) | (3) | (1) |
| 3. | <i>Textile, Garment</i> | 16 | (9) | (3) | (2) |
| 4. | <i>Footwear</i> | 2 | 0 | 0 | 0 |
| 5. | <i>Cable</i> | 6 | (1) | 0 | (1) |
| 6. | <i>Electronics</i> | 1 | 0 | 0 | 0 |
| <i>Consumer Goods Industry</i> | | | | | |
| 1. | <i>Food and Beverages</i> | 19 | 0 | (6) | (3) |
| 2. | <i>Tobacco Manufacturer</i> | 4 | 0 | 0 | 0 |
| 3. | <i>Pharmaceuticals</i> | 9 | 0 | (1) | (2) |
| 4. | <i>Cosmetics and Household</i> | 5 | 0 | (2) | 0 |
| 5. | <i>Houseware</i> | 3 | 0 | 0 | 0 |

Source: Secondary data, 2021

Descriptive statistic was applied to depict the variables of the study related to the mean and standard deviation.

¹⁶
Table 2. Descriptive Statistic

| Variable | N | Mean | Std. Dev |
|----------|-----|-------|----------|
| CETR | 130 | 0.509 | 1.368 |
| TPBR | 130 | 0.294 | 0.309 |
| RETR | 130 | 0.298 | 0.389 |
| PPEN | 130 | 0.112 | 0.317 |

Description: CETR (Tax management), TPBR (Transfer Pricing), RETR (Current ETR), PPEN (Sales growth).

Source: Secondary data, 2021

As shown in table 2, 130 observations were carried out. Tax management⁵ was found to have a mean score of 0.509 and a standard deviation of 1.368. Transfer pricing was found⁵ have a mean score comprising 0.294 and a standard deviation comprising 0.309. Current ETR⁵ was found to have a mean score of 0.298 and a standard deviation of 0.389. Sales Growth was found to have a mean score comprising 0.112 and a standard deviation comprising 0.317. Out of 130 observations, 61 observations showed that managers have overconfidence, while 69 observations showed that they do not have overconfidence.

Correlational analysis was made to measure the linear strength of the two variables of the study. However, as Ghozali, (2013) states, it does not indicate a functional relationship. In other words, it does not differ independent variables from the dependent ones. The following table 3 presents the correlation test result.

Table 3. Correlation

| Variable | CETR | OVER | TPBR | RETR | PPEN |
|----------|--------|--------|--------|--------|-------|
| CETR | 1.000 | | | | |
| OVER | -0.143 | 1.000 | | | |
| TPBR | -0.026 | 0.045 | 1.000 | | |
| RETR | 0.896 | -0.111 | -0.089 | 1.000 | |
| PPEN | -0.051 | 0.313 | 0.203 | -0.082 | 1.000 |

Description: CETR (Tax management), TPBR (Transfer Pricing), RETR (Current ETR), PPEN (Sales growth)¹⁸

Source: Secondary data, 2021

Table 3 shows the highest correlational value with positive direction in Current ETR and Cash ETR (i.e., 0.896). This value indicates that the higher the current tax burden, the higher the tax management. In other words, companies' tax management practice affects their tax payment.

The second highest positive correlation was found between growth and managerial overconfidence (i.e., 0.313). This condition indicates that higher growth sale is associated with higher level of overconfidence. In other words, managers who can increase their sales growth are more confident with their ability to improve company performance through achieving target profit.

In this study, the main effect and moderating effect are moderated using (Baron & Kenny, 1986). Table 4 below displays the main effect and moderating effect test.

Table 4. the Result of Hypothesis Testing

| Independent Variable | Expectation | Dependent Variable: CETR OLS Method Main Effect Test | | Dependent Variable: CETR OLS Method Moderating Effect Test | |
|-------------------------|-------------|--|----------|--|----------|
| | | Coef. | T-stat. | Coef. | T-stat. |
| | | Constant | ± | -0.377 | -2.471** |
| OVER | - | -0.153 | -1.982** | 0.061 | 0.793 |
| TPBR | + | | | 0.580 | 2.226** |
| TPBR*OVER | - | | | -0.764 | -2.335** |
| RETR | + | 3.144 | 4.773*** | 3.193 | 4.781*** |
| PPEN | + | 0.171 | 1.814* | 0.215 | 2.020** |
| F-Stat. | | 176.238*** | | 110.638*** | |
| Adjusted R ² | | 0.802 | | 0.809 | |
| DW | | 2.029 | | 1.989 | |
| Obs. | | 130 | | | |

Description: CETR (Tax management), OVER (Managerial *Overconfidence*), TPBR (Transfer Pricing), TPBR*OVER (Transfer Pricing - Managerial Overconfidence interaction), RETR (Current ETR), PPEN (Sales growth). Multicollinearity Test result of the main effect VIF OVER (1,368), RETR (2,176), PPEN (2,374). Multicollinearity Test result of the moderating effect VIF OVER (1,697), TPBR (7,384), TPBR*OVER (8,962), RETR (3,032), PPEN (2,683), indicating that there is no multicollinearity. The DW value ranged from 1.54-2.64 (Winarno, 2015), meaning that there is no autocorrelation *, **, *** Significance at level 10%, 5%, 1%.

Source: Secondary data, 2021

Table 4 displays the H1 test result. H1 states that managerial overconfidence affects tax management. The test result showed that the coefficient value of the effect of managerial overconfidence on tax management was -0,153; the t-statistic was -1,982 and significance level of < 0, 05. The result indicates that managerial overconfidence negatively and significantly affects tax management, showing that H1 was supported.

In H2, it was stated that transfer pricing moderates the effect of managerial overconfidence on tax management. The test result showed that the coefficient value of the effect of managerial overconfidence transfer pricing on tax management was -0.764, t-statistic of -2,335, at the significance level of < 0, 05. The result indicates that the interaction of managerial overconfidence and transfer pricing negatively and significantly affects tax management, indicating that H2 was supported.

4.2 Discussion

The test result showed that managerial overconfidence negatively and significantly affects tax management. Tax management refers to the ability to pay a low amount of tax in a long period (Minnick & Noga, 2010). According to Kohlhase & Pierk, (2020), one of the measurements of a company's tax management is Cash ETR, as explained by (Dyreg et al., 2010), and (Wilson, 2009).

The result of this study indicates that overconfident managers may minimize tax management. This condition shows that overconfident managers are viewed as more effective in taking advantage of the growth potential, allowing them to enhance the organization's performance instead of minimizing tax payment that contains risk contingency. Overconfident managers tend to dare to invest in innovation, leading to the organization's performance improvement (Hirshleifer et al., 2012; Graham et al., 2013).

Aggressive tax management may harm the company's reputation (Hanlon, 2005) and lead to a decline in the company stock price (Hanlon & Slemrod, 2007). It occurs because shareholders view aggressive tax management as a potential future loss (Cook et al., 2017; Drake et al., 2019). While tax management is helpful to reduce the company tax payment in a short-term period, it may adversely

affect the company's long-term sustainability. Hence, tax management practice should consider the long-term cost and benefit for the company. This is consistent with (Aliani et al., 2016) who found that CEO overconfidence negatively and significantly affects tax planning in the Tunisian context.

The result indicates that the interaction of managerial overconfidence and transfer pricing negatively and significantly affects tax management. Transfer pricing refers to a product or service price from one division that is transferred to another division within the same company or across companies with special relationships (Santosa & Suzan, 2018). It is the main choice of many multinational companies to minimize their tax payment (Richardson & Taylor, 2015; Brock & Pogge, 2014; Muhammadi et al., 2016). Factors underlying managers' transfer pricing practice include operational profits, opportunities to help the subsidiary maintain cash flow (Tang, 2016), and differences in tax and transfer pricing regulations in each country (Rossing & Rohde, 2014; (Borkowski, 2010).

The result indicates that the interaction of managerial overconfidence and transfer pricing negatively and significantly affects tax management. From an efficiency perspective, overconfident managers may prefer not to engage in transfer pricing practice, minimizing tax management practice. It is done because aggressive tax management is viewed to have risk contingencies such as damaged company reputation or company stock price drop. As (Hanlon, 2005) found, aggressive tax management may harm the company's reputation and lead to a decline in the company stock price (Hanlon & Slemrod, 2007). In addition, shareholders may view aggressive tax management as a potential future loss (Cook et al., 2017; Drake et al., 2019).

5. Conclusion

The present study concludes that managerial overconfidence negatively and significantly affects tax management, and transfer pricing moderates such an effect. The present study confirms the agency theory's efficiency perspective, stating that overconfident managers may minimize tax management practice due to risk contingency or because they consider the long-term benefit cost. Overconfident managers are viewed as more effective in taking advantage of the growth potential, allowing them to enhance the organization's performance, instead of minimizing tax payment that contains risk contingency. Overconfident managers tend to dare to invest in innovation, leading to the organization's performance improvement.

The present study also provides information related to tax management on a sub-sector basis, which is still scarce. Separating managerial overconfidence in sub-sector levels is important because each manufacturing sub-sector has different characteristics. In this study, there were at least five companies in each sub-sector to obtain data variation, as suggested by (Isnugrahi & Kusuma, 2009). The regulators are recommended to consider the effect of managerial overconfidence in tax management within an efficiency context. This study has some limitations. First, this study only used managerial overconfidence, transfer pricing, and tax management to describe the phenomena of the study, limited to the use of the proxy. Second, the present study only applied a quantitative approach without applying a qualitative approach to complete the statistical results.

Future studies are recommended to examine other variables that affect tax management, such as corporate governance, managerial capabilities, and other variables to improve the adjusted R2. It is also recommended to use triangulation method to complete the quantitative results to attain a more in-depth description of the phenomena.

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