

CEO Over-confidence and Tax Avoidance

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This research aims to examine the relationship between CEO over-confidence on tax avoidance in Indonesia. The CEO over-confidence variable is measured using overinvestment and proxied by the dummy variable. The value of overinvestment is obtained from the results of residual regression between asset growth and sales growth. Tax avoidance is proxied by current ETR. This study used 260 firm-year observations from 86 manufacturing listed firms on the Indonesia Stock Exchange (IDX) for the period 2013–17 by using a purposive sampling method. The analytical method used in this research is ordinary least square (OLS) multiple linear regression with SPSS 20.0 software. This study finds that CEO over-confidence has a positive relationship on tax avoidance.

Keywords: *CEO Over-confidence, Tax avoidance, Over-investment, Current ETR*

Introduction

Free trade in ASEAN countries began with the creation of the ASEAN Free Trade Area (AFTA) and the ASEAN Economic Community (AEC). The existence of AFTA and AEC also enables ASEAN countries to compete in the international trade market and to increase economic stability. Free trade provides advantages and disadvantages for firms in Indonesia. With the presence of free trade in Indonesia, the firm will get a source of funding derived from the investment of foreign investors in Indonesia. However, free trade also raises tight competition between local firms and overseas firms that operate in Indonesia so that the inability of local firms to compete will result in a decline in the country's economic growth. In this case, the firm's management strategy is required to develop the system so that it is well-organised and can improve the firm's performance and gain a competitive advantage to compete in the business world (Widiyanti et al., 2019).

In the current era of free trade, the licensing for foreign investors to make investments in Indonesia has become more accessible. This phenomenon is resulting in many firms

competing to improve performance. Sari et al. (2018) define performance as an achievement of work that has been following the rules and standards applicable to the work of each organisation. Many firms put serious efforts to improve their performance to attract investors to invest in their shares in Indonesia. For the firm to gain substantial awareness from foreign investors, a manager will tend to behave too confidently on their ability to engage in investment activities. A CEO plays an essential role in influencing corporate policies and strategies. In leading a firm, a CEO will be faced with some decisions about the policy to be chosen for the firm's financial and operational activities. Over-confident behaviour is one of the cognitive biases in a manager and can influence the decision making of the firm's funding and investments. Over-confidence is one's tendency to exaggerate the knowledge, ability, and accuracy of information (Craig, 2006).

Upper Echelons Theory explains that executive managers tend to use their perspective in viewing firm situations such as opportunities, threats, alternatives as well as various possibilities for outcomes that appear. The attitude of the executive manager is the result of a reflection of organisational behaviour (Hambrick & Mason, 1984). An over-confident CEO is considered to have a role in influencing strategic policy on the firm's investment decisions. It is given that the CEO plays a vital role in the management of the firm and is responsible for the operation and performance of the firm (Harymawan et al., 2019).

A CEO will demonstrate their ability to predict future returns on investment to attract interest and improve investor perception of the firm. According to Malmendier and Tate (2005), an over-confident CEO tends to exaggerate the firm's investment activities as they have ample internal funds. However, an over-confident CEO will restrict investment activities when the firm requires external financing. In line with the research of He et al. (2018), a reckless manager will tend to use internal funding for investment activities. This behaviour occurs because internal financing has a low capital cost and makes the firm avoid the fluctuation of the stock market. Firms that have adequate internal funding will tend to estimate excessively for the return of the stock.

An over-confident manager's behaviour provides different impacts for each firm. The research by Hirshleifer et al. (2012) argues that the over-confident CEO is a risk-taker who is beneficial for the firm because their existence can increase the value of the firm through undertaking innovative programs. The increase in the value of the firm will demonstrate the firm's excellent performance, and the investor will assess this condition as a positive thing (Muda et al., 2019). On the other side, the over-confident CEO also influences financial reporting. Such actions can be in the form of intentionally making a mistake in calculating income (Schrand & Zechman, 2012), delaying recognition of losses and implementing a low level of financial reporting conservatism (Ahmed & Duellman, 2013), and too high in

estimating the uncertain profit (Hribar & Yang, 2016). Those are negative impacts of employing an over-confident CEO.

An over-confident manager can be identified from some decisions they apply to a firm, one of which is the decision to invest. An over-confident CEO tends to be more excessive in investing because they feel that they have better knowledge and experience than others, so the CEO can control all the risks of the investments. An over-confident CEO tends to estimate the return on future investment decisions excessively. Overinvestment will harm the firm's relationship with the investor because the firm is assessed as incapable of accurately predicting investment returns. This incapability may result in the emergence of agency fees and a conflict of interest between shareholders and managers. Besides, the rate of return of the investor will also be reduced, and the firm will be unable to meet investor expectations. Aware of this, a manager will be more likely to conduct tax avoidance to meet the initial expectations of investors and improve the firm's future performance while at the same time maintaining the reckless behaviour (Libby & Rennekamp, 2012).

Over-confident executive managers can influence the taxation policies applied in the firm. Dyreng et al. (2010) concluded that "tone at the top" conducted by an over-confident CEO can affect the tax aspects in the firms by replacing some of the firm's functional areas, allocating some resources, and establishing compensation for the director of taxes directly involved in the decision-making in the field of taxation. Over-confident CEOs will do everything to reduce the tax burden and provide financial resources for investment activities by implementing opportunistic actions that are often done by the firm, namely profit management practices. In applying profit management practices, the way it can be done is to implement a tax planning strategy. According to Suandy (2011), tax planning is the first step in conducting tax management and serves to minimise tax obligations by utilising the gaps in the prevailing regulations. One of the tax planning strategies often used by managers is to implement tax avoidance practices.

Tax avoidance is an act to reduce the firm's income tax by staying under the policy and taxation laws (Guenther et al., 2012). Tax avoidance is usually done through policies taken by the manager's leadership (Tandean & Winnie, 2016). This tax avoidance behaviour may harm the country because taxation revenue has become an essential source of income for the government, both in developed and developing countries (Panjaitan et al., 2019). From some tax planning strategies, tax avoidance is one of the most widely implemented strategies by taxpayers in Indonesia because tax avoidance is not prohibited, so management takes advantage of it to increase the firm's profit by lowering the tax burden. Tax avoidance practice is also explained further in research by Dyreng et al. (2010), as an activity of the firm to reduce their tax by applying a strategy, from relatively safe compared to the most aggressive or even illegal approach.

There have been several prior studies that have examined the relationship between over-confident CEOs on tax avoidance practices (Hsieh et al., 2018; Kubick & Lockhart, 2017; Olsen & Stekelberg, 2016). Companies with over-confident CEOs have a positive relationship with tax avoidance (Hsieh et al., 2018; Kubick & Lockhart, 2017; Olsen & Stekelberg, 2016). An over-confident CEO's behaviour substantially affects tax policies within the firm. The more confident the CEO then the higher the uncertainty over the tax benefits and lower Current ETR. Furthermore, the behaviour of over-confident CEOs, measured based on the number of awards earned by the CEO, resulted in more aggressive tax policy in the future. The more awards a CEO has gained in the past, the more likely they will be to display more considerable aggressiveness to avoid tax in the following years. Several other studies have also shown that firms with an over-confident CEO and CFO tend to interact with tax avoidance practices. This relationship exists as the over-confident CEO and CFO guide tax avoidance practices; it motivates the entire executive management to participate in these practices (Hsieh et al., 2018; Kubick & Lockhart, 2017; Olsen & Stekelberg, 2016). However, firms that appoint a CEO with a military background will more obedient to the taxation regulation, resulting in the possible lower tendency to undertake tax avoidance (Nasih et al., 2019).

The phenomenon of CEO over-confidence in conducting tax avoidance is more common in developed countries such as the United States. This phenomenon is still rare to be found in developing countries, especially in Indonesia, because if an Indonesian listed firm does not report taxable income appropriately, the firm is also indicative of conducting tax avoidance practices. This phenomenon is in line with the Republic of Indonesia Law No. 16, the Year 2009 section 39 paragraph concerning general provisions and procedures of taxation that states a firm will be fined if it does not report their taxable earnings appropriately. Prior studies have discussed the characteristics of an over-confident executive manager who has a relationship with tax avoidance practices. The difference that distinguishes this study from earlier studies is a measurement for over-confident managers. This study uses the residual over-regression between asset growth with sales growth or commonly known as overinvestment (Ahmed & Duellman, 2013; Kubick & Lockhart, 2017).

This research aims to analyse the relationship between CEO over-confidence on tax avoidance practices in manufacturing firms listed on the Indonesia Stock Exchange (IDX) for the period 2013 to 2017. This study documents a positive relationship between CEO over-confidence and tax avoidance. It can be concluded that a more over-confident CEO in a firm will tend to relate to tax avoidance that is reflected from the low Current ETR value.

The selection of manufacturing firms as a research sample out of all industries is because the manufacturing industry has the largest size and is most complex in the context of financial reporting information, so it is regarded as a representation of all listed firms in IDX.

Indonesia is one of the developing countries that has a large manufacturing industry (Fernandes & Taba, 2019). Manufacturing firms have unique characteristics and complexities ranging from the production process to finished goods that are ready for sale (Hariyati et al., 2019). The manufacturing industry also contributes to the largest country's revenue among other sectors. Based on the state budget of revenues and expenditure in 2017, 32% of firms from the manufacturing industry became the most significant contributor to state tax revenues. If firms in the manufacturing industry conduct tax avoidance practices, it will reduce the tax revenue of the country. In 2013, Indonesia felt the impact caused by policy issues tapering off in America. The world economy, especially Indonesia, suffered a sharp decline when the tapered off policy was applied, marked by a decrease in the IDX composite caused by many foreign investors who withdrew their investment funds from Indonesia.

The study contributes to the literature by clarifying the relationship between over-confident CEOs and tax avoidance. This research can also be a consideration for firms in the process of decision-making on company-related aspects of taxation that can benefit both from the firm's side and investor's side. Also, this research is expected to provide additional knowledge in the field of taxation related to tax avoidance in Indonesia. Therefore, with this research, government agencies, especially the Directorate General of Taxation, can minimise the strategy of tax avoidance applied by the firm by implementing a more strict taxation policy.

The remainder of this article is structured as follows. Section 2 reviews literature and develops the research hypotheses. Section 3 describes the sample, variables, and research design. Section 4 specifies the empirical result. Section 5 summarises the paper and presents concluding remarks.

Literature Review and Hypothesis Development

The Upper Echelons theory is a theory that explains that executive managers tend to use their perspective in viewing corporate situations such as opportunities, threats, alternatives as well as a variety of possibilities for results that arise (Hambrick & Mason, 1984). An executive manager plays a vital role in strategic decision making and resource allocation, and the strategy chosen by the executive manager is the result of the reflection of the organisation's behaviour. The theory also considers that a CEO is a strategic decision-maker in the organisation because a manager has responsibility for the firm as a whole so that everything a manager has done in the company will influence the decision to be taken.

The Upper Echelons theory suggests that age, experience, education, social background, economic condition, and specialisation of a CEO are essential when analysing a complicated problem within the firm. It also determines the ability of managers to interpret complex

situations and learn how to manage the situation. In line with Nielsen (2010), the Upper Echelons theory explains that top management characteristics such as age, experience, and employment can influence a manager's decisions on the firm's strategic policy choices and organisational performance.

Executive management will interpret the opportunities and threats that arise as well as make decisions about firm policies through their personal "glasses" and set "tone at the top" within a firm. Conceptually, "tone at the top" is based on the upper echelon theory, where some of the firm's options are a reflection of the firm's executive management personality characteristics. This theory supports that over-confidence CEO will influence the firm's policies, including policies in the aspects of taxation with their perspectives.

Relationship Between CEO Over-confidence and Tax Avoidance

The Upper Echelons theory provides an overview of how the over-confident CEO determines the return on investment that will be obtained in the future. In theory, it is explained that a manager's over-confident behaviour is a reflection of the organisation's response. Over-confident managers tend to use their perspectives given the firm's situation, including determining return on investment (Hambrick & Mason, 1984). The theory also tells us that managers who are too confident will see from their perspective on their ability to overestimate the return of investment to look profitable for investors (Hambrick, 2016).

The different interest between the shareholder (principal) and the manager (agent) arises from asymmetric information and causes agency conflict, resulting in agency cost (Jensen & Meckling, 1979). Agency fees results in the reduction of profits that the firm will obtain; this impact can affect the firm's investment activities. To minimise this, an over-confident manager will undertake opportunistic actions to mitigate these costs by implementing tax avoidance practices (Desai & Dharmapala, 2006).

This research provides a temporary assumption that the CEO who has over-confident behaviour will tend to overestimate the return on investment of the firm's future activities to attract investor interest. When the next return on investment is not per the return of the investment that has been estimated by the manager, the manager can be said to be too optimistic in determining the return on investment so that it becomes inefficient. This attitude of optimism can harm investors who have been investing in the firm and will influence the relationship between the firm's managers and investors so that an over-confident CEO will conduct tax avoidance so that the costs that arose to be diminished (Chyz et al., 2018; Hsieh et al., 2018; Olsen & Stekelberg, 2016). The implementation of tax avoidance can help to restore investor trust by reducing the tax expense so that the firm's profit is improved and the return on investment is also maximised. This result will improve shareholders' satisfaction by

increasing firm profitability. Based on the explanation above, the hypotheses that can be constructed in this study are:

H: Over-confident CEO behaviour has a positive relationship to tax avoidance

Research Methodology

Sample and Data Sources

The study used several data collection procedures, such as preliminary surveys, literature studies, and documentation studies. The population used in the study was a listed manufacturing firm on the Indonesia Stock Exchange (IDX) in the period 2013-2017. Research samples are determined using the purposive sampling method. The total number of firms that become research samples is as much as 260 firm-year observations from 86 firms. The data in this study was obtained from the annual report of the manufacturing listed firm on the Indonesia Stock Exchange (IDX) in the period 2013-2017. The annual report was downloaded through the official website of the IDX as well as from the respective firm websites.

Operational Definition and Variable Measurement

Dependent Variable

The dependent variable used in this study is tax avoidance (TAXAVOID). Tax avoidance is one of practices that lower the tax paid by the firm while following the guidelines from related tax regulations (Guenther et al., 2012). Tax avoidance is measured by the Current Effective Tax Rate (CETR), which is calculated by deflating the current tax expense with pre-tax income. The negative CETR is the representation of tax avoidance practices as it depicts the tax ratio of the firm.

Independent Variable

The variables used in this study are CEO over-confidence (OVERCON). CEO over-confidence in this study is defined as a cognitive bias by a manager who is overly optimistic about his ability to predict something that has not happened in the future to achieve better performance (Hsieh et al., 2018). OVERCON is measured using an overinvestment proxy (Ahmed & Duellman, 2013; Kubick & Lockhart, 2017). Overinvestment is set with dummy variables, where if the total investment of residual results over the regression between the growth of assets with sales growth is positive or greater than zero, then the manager in the firm is categorised as over-confident and is worth equal to 1, and vice versa.

Control Variable

The research also uses several control variables such as sales growth (SALESGR), leverage (LEV), firm size (SIZE), and market-to-book ratio (MTB). Sales growth is measured by deflating the differences between current and previous sales with previous sales. Sales growth is the percentage of change in sales rate from year to year (Kesuma, 2009). Sales growth reflects the success of investments in the past period and can be used as a prediction of future growth (Barton & Gordon, 1988).

Leverage is a comparison between total debt and total assets owned by the firm (Ahmed & Duellman, 2012). This variable is used to measure the firm's ability to fulfil all obligations of both short- and long-term obligations. According to Frank et al. (2009), the higher the level of leverage results in the firm's higher tendency to undertake tax planning by exploiting debt. The size of the firm is a measure that shows how much the firm's assets are managed to generate profit and are expressed in the natural logarithmic of the firm's total assets (Bujaki & Richardson, 1997; Arifuddin & Usman, 2017). The company's size reflects the low operational activities of a company and can affect the income tax to be paid (Hartadinata & Tjaraka, 2013). The market-to-book ratio is an indicator that compares the equity market value and the value of the equity book. This ratio illustrates the opportunity for a firm's growth and business complexity on an economic scale (Hsieh et al., 2018). The higher the rate, the higher the growth prospects of a firm will be, it also makes investors interested in buying shares in a firm.

Table 1: Operational definitions

Variables	Symbol	Proxy
Dependent variable		
Tax Avoidance	Taxavoid	$CETR = - \frac{\text{current tax expense}}{\text{pretax income}}$
Independent variable		
CEO over-confidence	Overcon	Dummy variable, valued 1 if total investment from regression result of asset growth and sales growth is positive (> 0) and vice versa
Control Variable		
Sales growth	Salesgr	Current sales minus prior sales divided by prior sales
Leverage	Lev	Total liabilities divided by total asset
Firm size	Size	Natural logarithm of total asset
Market-to-book ratio	Mtb	Equity market value divided by equity book value

Research Design

The data analysis technique to be used in this study is the ordinary least square regression analysis using the help of SPSS 20.0 software and classic assumption tests. Other data analysis techniques to be used in this study are descriptive statistical analyses and hypothesis testing consisting of determinant coefficient and test of t-statistic value. The following are the equations of regression used in the study:

$$TAXAVOID = \alpha + \beta_1 OVERCON + \beta_2 SALESGR + \beta_3 LEV + \beta_4 SIZE + \beta_5 MTB + e \quad (1)$$

Result and Discussion

Descriptive Statistic

Table 2: Descriptive Statistic

	N	Minimum	Maximum	Rata-Rata	Std. Deviation
Cetr	260	0.118	0.390	0.263	0.041
Overcon	260	0	1	0.50	0.501
Salesgr	260	-0.911	1.254	0.085	0.167
Lev	260	0.069	0.881	0.396	0.172
Size	260	25.620	33.320	28.553	1.569
Mtb	260	0.204	22.541	2.378	2.653

Table 2 shows a descriptive statistical analysis of 260 observations for each variable used in the study. The current effective tax rate (CETR) has a range of values between 0.118 and 0.390. The research also demonstrates the average value of CETR is 26.28%, which more than the effective tax rate (25%). That is, the firm that is used as a sample does not commit tax evasion because the average tax expense paid has been the prevailing effective tax rate. The CEO's over-confidence variable (OVERCON) has a range of values between 0 and 1 as it is a dummy variable, while the average value shows the number 0.50. For independent control variables in this study, each had an average value of sales growth (SALESGR) of 0.085, leverage (LEV) of 0.396, firm size (SIZE) of 28.553, and market-to-book ratio (MTB) of 2.378.

Determinant Coefficient

Table 3: Test Result of Determinant Coefficient

Model Summary^b					
Model	R	R Square	Adj. R Square	Std. Error of the Estimate	Durbin-Watson
1	0,345 ^a	0,119	0,102	0,039	1,857

a. Predictors: (Constant), MTB, SALESGR, LEV, SIZE, OVERCON

b. Dependent Variable: TAXAVOID

The value of the determinant coefficient (R²) amounted to 0.119 or 11.9%. The R² value of 11.9% defined that CEO over-confidence (OVERCON), firm size (SIZE), leverage (LEV), sales growth (SALESGR), and the market to book ratio (MTB) were able to explain tax avoidance by 11.9%, while the rest (88.1%) is defined by other variables not used in this study.

Regression Result Analysis

This analysis model aims to examine whether there is a relationship between CEO over-confidence on tax avoidance practices in manufacturing listed firms on IDX in the period 2013 to 2017.

Table 4: Regression Test Result

Variable	Unstandardised Coefficients (B)	t	p-value	Conclusion
(Constant)	0,336	7,369	0,000	Significant
OVERCON	-0,012	-1,993	0,047 ^{**}	Significant
SALESGR	-0,044	-2,508	0,013 ^{**}	Significant
LEV	0,053	3,671	0,000 ^{***}	Significant
SIZE	-0,003	-1,788	0,075 [*]	Significant
MTB	-0,001	-0,892	0,373	Not significant

* $p < 0,10$, ** $p < 0,05$, *** $p < 0,01$

The value of constant (α) in this study was 0.336. This value indicates if the OVERCON and other control variables do not experience changes or equal zero, then CETR will have a value of 0.336, and it reflects the decreases in tax avoidance practices caused by other variables that are not used in this study. The value of the OVERCON coefficient is 0.012. This value indicates if the CEO is categorised as over-confident, the CETR value will decrease by 0.012 and reflects the increases of tax avoidance. The value of the SALESGR coefficient is 0.044. This value indicates if the SALESGR has increased one percent, then the CETR value will decrease by 0.012 and reflects the increase in tax avoidances, if other predictor variables are

constant. The leverage coefficient is 0.053. This value indicates if the leverage level has increased one, then the CETR value will increase by 0.053 times. The value of the SIZE coefficient is -0.003. This value indicates that if the SIZE has risen by one assuming that other variables are constant, the CETR value will decrease by 0.003 and cause an increase in tax avoidance. The value of the MTB coefficient is -0.001. This value indicates if the MTB variable has increased by one, then the CETR value will decrease by 0.001 times and cause an increase in tax avoidance. The current value of the study's error was 0.039, and the standard value of the CETR variable deviation is based on table 2 is 0.041. That is, the default value of CETR deviation is more than the error value so the regression model can be concluded in this research is already appropriate and unbiased.

Relationship between CEO Over-confidence and Tax Avoidance

The t-test can be used to see how significant the relationship of predictor variables in explaining the dependent variable by comparing the calculated significance value of the regression model on the error status value (α). If the significance level of the independent variable t-test is < 0.05 (p-value of $< 5\%$), it can be concluded that H1 is accepted. There is a significant relationship between the independent variable on dependent variables. According to table 4, it is known that the OVERCON variable t-test value on the CETR variable amounted to 0.047. The value of $0.047 < 0.05$ so it can be concluded that the independent variable has a negative relationship on CETR and a statistically significant positive relationship on tax avoidance.

The hypothesis that has been developed in the study states that the behaviour of CEO over-confidence has a positive relationship on tax avoidance practices. The results of this study successfully supported the hypothesis that CEO over-confidence has a positive relationship on tax avoidance practice based on statistical test results obtained from ordinary least square regression tests so that the hypothesis was accepted. This result was indicated from a negative relationship between CEO over-confidence to CETR, therefore leading to an increase in tax avoidance practices.

Over-confident CEOs will dominate in the decision-making process to determine firm policies, including financial policy. Thus, over-confident CEOs will do anything to portray a positive image over their firm on the market. One way to do this is to invest and estimate the return of the investment excessively because the over-confident CEO is optimistic about the internal funding source of the firm. In investing, the CEO will use the internal funding source derived from the earnings after tax of the firm. To have sufficient earnings after tax to invest, the over-confident CEO tends to reduce the tax expense by implementing tax planning strategies. One of the strategies is tax avoidance. When the CEO is conducting excessive investment activities, the CEO will undertake tax avoidance. This action will make the firm's

tax expenses lower so that the earnings after tax are more considerable and can be used to invest and provide benefits for investors in both the short- and long-term.

Tax avoidance practices have a negative impact when reviewed by the government. Manufacturing firms are one of the most significant contributors to the country when compared to other sectors. In this study, manufacturing firms with CEOs who behaved over-confidently were detected applying tax avoidance to increase investment activities. If the application of tax avoidance on a manufacturing firm occurs continuously, it will have an impact on state revenue, especially due to the decreased tax income.

The test result of this study can be attributed to the Upper Echelons theory explaining that an over-confident manager can see financial conditions from their point of view and believes that its ability is "better-than-average." Indirectly, an over-confident CEO will influence the decision-making process in determining the strategic policy of the firm, so that sometimes a manager is too optimistic to make a decision (Hsieh et al., 2018). The high optimism of a CEO can lead to asymmetric information and incurring the agency cost to be the expense of the firm. An over-confident CEO will undertake tax avoidance measures to reduce the agency's fees so that the firm's earnings become increased, and investor interest in the firm becomes substantial (Desai & Dharmapala, 2006).

The study showed results aligned with prior studies that documented empirical evidence that CEO over-confidence had a positive relationship on tax evasion practices (Chyz et al., 2018; Hsieh et al., 2018; Kubick & Lockhart, 2017). Managers with a high level of confidence will be optimistic in estimating the return on investment in the future. Following this, the over-confident CEO will invest excessively when the source of internal funding is sufficient for the investment activity. An over-confident CEO can influence taxation policy so that firms with over-confident managers will undertake tax avoidance practices to increase internal funding sources by reducing the tax expense. Thus, the manager will be very optimistic about providing a high return on investment while conducting investment activities.

Conclusion

This research aims to analyse the relationship of CEO over-confidence on tax avoidance practices in manufacturing listed firms on the IDX in the period 2013 to 2017. Based on the results of the analysis using several tests and discussions that have been explained, it can be concluded that CEO over-confidence has a positive relationship on tax evasion. That is, the more confident a manager in a firm, the more they will conduct tax avoidance, reflected by the low current ETR value. This relationship exists because the over-confident CEO engages in overinvestment and overestimates the return of the investment proceeds. However, return on investment results do not meet expectations so the over-confident CEO reduces tax



expenses through tax avoidance to increase the firm's earnings so that the earnings of the firm can be used to invest.

This research has limitations whereby CEO over-confidence is only measured using overinvestment. The scope of this proxy is limited to measuring the growth of the firm's assets and sales. Despite being a limitation, overinvestment remains used as the over-confident CEO's measurement proxy. The justification is that the required data has been more readily available compared to other measurement proxies. Thus, the proxy overinvestment becomes one of the best proxies that can be used to gauge CEO over-confidence. Future studies can use dummy variables, comparing future net profit projections with a thoroughly reported net profit in the financial statements, where these measurements have been made to measure CEO over-confidence in the study of He et al. (2018). This measurement proxy reference is expected to be a more reliable measurement in describing CEO over-confidence. The future researcher is expected to expand the sample of the firms that will be researched for tax avoidance cases in Indonesia, which can be detected evenly in other sectors. Investors are advised to pay more attention to the firm's financial ratios and the tax aspects undertaken by the firm. It aims to find out if the firm can provide benefits in both the short and long term. If the firm conducts tax avoidance practices, it is vital to consider whether tax avoidance has negatively affected future image and performance.

Acknowledgement

This article is derived from Dika Fausia Dayuningtyas's undergraduate thesis in the Faculty of Economics and Business, Universitas Airlangga, Surabaya, Indonesia. We are also grateful for the comments and insights of Fajar Kristanto Putra Gautama and Yulianti Raharjo.



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