



Determinant factors influencing corporate tax avoidance

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Abstract

This research was conducted because Indonesia's tax ratio is still low. The low tax ratio is due to the fact that many companies still practice tax avoidance. Given these problems, this study aims to analyze the effects of CEO narcissism, board size, female directors, financial difficulties, and company size on corporate tax avoidance. The sample used in this research is 140 data points from 28 banking sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2018 to 2022. This study employs a purposive sampling method, a quantitative approach, and the multiple linear regression method in SPSS. The results showed that CEO narcissism and board size positively affect corporate tax avoidance. Meanwhile, female directors and company size negatively affect corporate tax avoidance. The results of this study also show that financial distress does not affect corporate tax avoidance.

Keywords: Tax avoidance corporate, CEO narcissism, board size, female directors, financial distress, firm size

Introduction

Tax is a form of public obligation to the state to support national needs and development. The government will strive to optimize revenue from the taxation sector, which can be used to carry out national development. This role of taxation must be balanced with an ideal tax ratio. Based on data quoted from the website of the Ministry of Finance of the Republic of Indonesia, Indonesia's tax ratio in 2021 was around 9.21% and increased in 2022 to 10.39%. However, the tax ratio achievement in 2023 decreased compared to 2022, which was 10.21%.

Indonesia's still-low tax ratio may be caused by suboptimal tax payments. This can occur due to differences in perspectives and interests between taxpayers and tax authorities. Taxpayers try to minimize the amount of tax paid because they perceive tax as a burden that can reduce income (Kalbuana *et al.*, 2023)^[9]. From the tax authority's perspective, tax is a financial asset obtained by the state to support governmental functions. These differing interests lead to non-compliance with management and suboptimal tax payments, encouraging companies to minimize the tax payable.

Tax avoidance practices have become a widely debated issue in the business world. A study by Putra & Putri (2024)^[11] revealed that PT RNI engaged in tax avoidance through the use of affiliated debt, amounting to 20.4 billion rupiah in the company's 2014 financial statements. One significant and well-known banking company found to be involved in tax avoidance is PT Bank Central Asia Tbk (BCA), as revealed in research by Idziah & Bernawati (2020)^[7]. This tax avoidance case began with BCA's objection to the corrections made by the Directorate General of Taxes. BCA was suspected of transferring assets to the Indonesian Bank Restructuring Agency (BPPN) and misusing liquidity assistance from Bank Indonesia (BLBI).

Another phenomenon related to a banking company involved in a tax avoidance case surfaced in 2021, namely PT Bank PAN Indonesia (Panin Tbk). Puspitasari & Wulandari (2022)^[10] explained that the tax avoidance case

involving Bank Panin was a form of bribery scheme. These phenomena indicate the importance of conducting this research. The urgency of this study is to analyze whether factors such as CEO narcissism, firm size, female directors, financial distress, and company size can influence corporate tax avoidance using agency theory. Therefore, the researchers aim to conduct this study again using a different subject.

Theoretical Framework and Hypothesis Development

1. Agency Theory

Agency Theory, as described by Jensen & Meckling (1976)^[8], examines the relationship between one or more principals (owners) and the company's management (agents). In the implementation of corporate tax avoidance strategies, there is a divergence of interests between the government, acting as the principal, and corporate management, acting as the agent. The government, as the principal, aims to optimize tax revenues to improve the economy and finance national development. Meanwhile, corporate management believes that tax expenses reduce profits and may disadvantage the company, thereby motivating tax avoidance.

1.1 The Effect of CEO Narcissism on Corporate Tax Avoidance

Based on agency theory, CEO narcissism is related to decision-making within a company, thereby explaining the alignment between the principal and the agent in managing the firm. A more proactive CEO can influence the implementation of strategies aimed at reducing total tax payments and encouraging tax avoidance actions. Research findings by Kalbuana *et al.* (2023)^[9] and Araújo *et al.* (2020)^[1] support this explanation, showing that CEO narcissism is positively correlated with corporate tax avoidance.

H1: CEO narcissism has a positive effect on corporate tax avoidance.

1.2 The Effect of Board Size on Corporate Tax Avoidance

In agency theory, board size is associated with corporate policy-making and with individuals' personal characteristics in risk avoidance. Companies with larger boards may be able to access more information and achieve better policy implementation outcomes, including in tax avoidance strategies. Several research findings Strengthen this explanation. Studies by Kalbuana *et al.* (2023) ^[9] and Idziah & Bernawati (2020) ^[7] found that board size positively influences corporate tax avoidance practices. Research by Hoseini *et al.* (2019) ^[5] supports this statement, showing that a larger number of board members is associated with greater tax avoidance.

H2: Board size has a positive effect on corporate tax avoidance.

1.3 The Effect of Female Directors on Corporate Tax Avoidance

According to agency theory, the presence of female directors is related to improved managerial performance within a company. A significant number of women in corporate structures can lead to more effective corporate governance. The presence of female directors in the decision-making process may influence corporate tax avoidance strategies, leading to less aggressive approaches. Studies by Hoseini *et al.* (2019) ^[5] and Hudha & Utomo (2021) ^[6] provide evidence that the presence of women on boards of directors negatively affects corporate tax avoidance.

H3: Female directors have a negative effect on corporate tax avoidance.

1.4 The Effect of Financial Distress on Corporate Tax Avoidance

Based on agency theory, financial distress is associated with increased tax avoidance activities used to address a company's financial problems. Companies experiencing financial difficulties may be encouraged to take various actions to restore financial stability, including tax avoidance. The purpose of this practice is to conceal the company's financial deficit and reduce tax burdens. Research by Dang & Tran (2021) ^[2] and Yantine & Rahayuningsih (2023) ^[12] supports this explanation, showing that financial distress has a positive effect on corporate tax avoidance practices.

H4: Financial distress has a positive effect on corporate tax avoidance.

1.5 The Effect of Firm Size on Corporate Tax Avoidance

In line with agency theory, firm size is associated with the tax avoidance strategies management undertakes. Larger companies tend to engage in more complex transactions because they possess sufficient resources to support tax planning. The larger the company, the more capable it is of managing tax matters effectively through tax avoidance. Studies conducted by Kalbuana *et al.* (2023) ^[9], Puspitasari & Wulandari (2022) ^[10], and Putra & Putri (2024) ^[11] also support this statement, providing evidence that firm size affects corporate tax avoidance practices.

H5: Firm size has a positive effect on corporate tax avoidance.

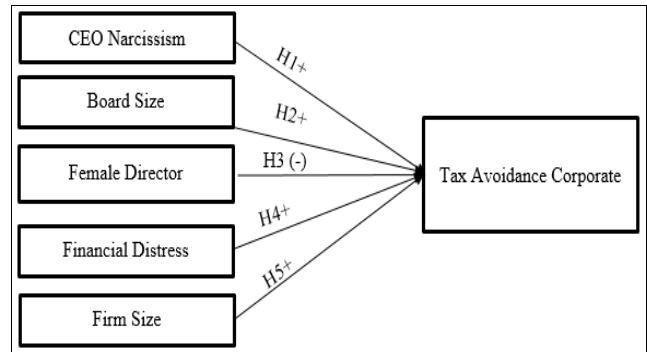


Fig 1: Research Model

Research Methodology

1. Population and Sample

The population used in this study consists of banking sector companies listed on the Indonesia Stock Exchange (IDX) during the 2018–2022 period. In this research, the sample was selected using the purposive sampling method. The criteria used as the basis for determining the sample are as follows: (1) Banking sector companies listed on the Indonesia Stock Exchange during the 2018–2022 period, (2) Banking sector companies that did not experience losses during 2018–2022, (3) Banking sector companies that have the required financial statement information or data for the research, (4) Banking sector companies that use the Indonesian rupiah as the currency in their financial statements.

2. Measurement of Research Variables and Analysis Method

The dependent variable used in this study is corporate tax avoidance. Corporate tax avoidance is a strategy applied by taxpayers to reduce or even eliminate their tax obligations (Kalbuana *et al.*, 2023) ^[9]. This strategy is carried out while still complying with tax laws and implementing policies that align with tax norms by utilizing various applicable provisions. The general formula for tax avoidance, as used in this study and based on the work of Kalbuana *et al.* (2023) ^[9], is as follows:

$$CTA = \frac{\text{Tax Expense}}{\text{Income Before Tax}}$$

CEO narcissism can manifest in traits such as an inflated sense of self-importance, an insatiable desire for power, and a need to be admired by others. A dummy variable can be used to measure CEO narcissism by measuring the size of each company's CEO photograph in its annual financial report. According to the study by Araújo *et al.* (2020) ^[1], the measurement of CEO narcissism uses a scale from 1 to 5 with the following criteria: a value of one is given if the CEO's photo is not displayed; a value of two if the CEO's photo is displayed together with one or more executive colleagues; a value of three if the CEO's photo is shown with a size less than half a page; a value of four if the CEO's photo is displayed with a size more than half a page; and a value of five if the CEO's photo is shown at full-page size. Board size is an essential mechanism in corporate governance for addressing agency problems between

principals (owners) and agents (management) and ensuring the alignment of interests between the two. In this study, the size of the board of directors is measured by the number of commissioners serving on the company. According to the study by Kalbuana *et al.* (2023)^[9], the formula used to measure the board size variable is as follows:

$$BoZ = \Sigma \text{ Board of Commissioner}$$

Female directors refer to women who hold director positions within a company. Along with increasing awareness of the importance of gender diversity in an organization, more companies are paying attention to this aspect in their leadership structures, including the representation of women at the executive level and on boards of directors. The following is the formula for measuring the female director variable according to the study conducted by Kalbuana *et al.* (2023)^[9]:

$$FD = \frac{\text{Number of Female Director}}{\text{Total Number of Board Directors}}$$

Financial distress refers to the challenges a company faces due to a decline in its financial condition and the broader economic environment. This situation can increase the risk of bankruptcy and the potential for corporate tax avoidance practices. Companies experiencing financial distress tend to take greater risks and implement strategies to improve cash flow (by limiting tax-related cash outflows) while potentially harming the company's reputation. According to the study by Kalbuana *et al.* (2023)^[9], the formula used to measure the financial distress variable is as follows:

$$FCD = \frac{\text{Total Liability}}{\text{Total Equity}}$$

Firm size is the scale of a company and can be assessed using various methods, depending on the parameters used and the intended purpose. Several standard measures of firm size include equity value, firm value, and total assets. The formula used to measure the firm size variable according to the study by Putra & Putri (2024)^[11] is as follows:

$$CZ = \ln(\text{Total Asset})$$

The hypothesis testing in this research uses descriptive and multiple linear regression analyses. Based on the dependent and independent variables used in the study, the following equation model is used:

$$CTA_{it} = \beta_0 + \beta_1 CN_{it} + \beta_2 BoZ_{it} + \beta_3 FD_{it} + \beta_4 FcD_{it} + \beta_5 CZ_{it} + \varepsilon$$

- CN = CEO Narssicism
- BoZ = Board Size
- FD = Female Director
- FcD = Financial Distress
- CZ = Firm Size
- CTA = Corporate Tax Avoidance
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Regression coefficient CN, BoZ, FD, FcD, CZ
- ε = Error

Result

1. Total Sample

The secondary data used in this research are the annual financial reports of companies listed on the Indonesia Stock Exchange (IDX) from 2018 to 2022. The sample selection method used was purposive sampling based on several criteria, and the research data were obtained from 28 companies over 5 years, resulting in a total of 140 data points analyzed. Table 1 shows the total research sample.

Table 1: Total Research Sample

| Description | Total |
|--|-------|
| Banking Companies listed on the Indonesia Stock Exchange (IDX) during the observation period of 2018-2022. | 44 |
| Banking Companies that experienced losses during the observation years 2018-2022. | (15) |
| Banking companies whose data are not comprehensive for this research. | (1) |
| Companies that do not use the Rupiah currency | (0) |
| Number of companies selected as a sample | 28 |
| Total research sample (28 x 5 years) | 140 |

2. Descriptive Statistics

Descriptive statistical tests are conducted to provide an overview of the variables used in the research. The data breakdown includes the minimum, maximum, average (mean), and standard deviation. Table 2 presents the descriptive statistics.

Table 2: Descriptive Statistics

| | N | Min | Max | Average | Std Dev |
|--------------------|-----|---------|---------|-----------|-----------|
| CEO Narcissism | 140 | 2 | 5 | 4.26 | 0.851 |
| Board Size | 140 | 2 | 10 | 5.16 | 2.265 |
| Female Director | 140 | 0.0000 | 1.0000 | 0.231566 | 0.2021820 |
| Financial Distress | 140 | 0.1394 | 95.1733 | 6.060683 | 8.1219929 |
| Firm Size | 140 | 28.9802 | 35.2282 | 31.947121 | 1.6617221 |
| Corp tax avoidance | 140 | -0.0300 | 0.9176 | 0.255191 | 0.1288303 |

3. Hypothesis Testing

3.1 Coefficient Determination (R²)

Based on the Adjusted R Square value in Table 3, it indicates that CEO narcissism, board size, female directors, financial distress, and firm size explain 24.3% of the corporate tax avoidance variable. In comparison, variables outside the study explain the remaining 75.7%.

Table 3: Coefficient Determination (R²)

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1 | 0.522 | 0.273 | 0.243 | 0.0593064 |

3.2 F-statistic Test

The significance value produced is less than 0.05 (specifically, 0.000), which indicates that simultaneously (or collectively), the variables of CEO narcissism, board size, female directors, financial distress, and firm size affect the dependent variable of corporate tax avoidance. Table 4 shows the result of the F-statistic test.

Table 4: The Result of the F-statistic Test

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|-------|-------|
| Regression | 0.162 | 5 | 0.032 | 9.227 | 0.000 |
| Residual | 0.433 | 123 | 0.004 | | |
| Total | 0.595 | 128 | | | |

3.3 T-statistic Test

Based on Table 5, the t-test results indicate that the regression coefficient for the CEO narcissism variable is 0.022 (t-value = 3.478) and is positive, with a significance value of $0.001 < 0.05$. These results show that H1 is accepted, meaning that CEO narcissism has a positive and significant effect on corporate tax avoidance. The regression coefficient for the board size variable is 0.010, with a t-value of 2.391 and a significance value of $0.018 < 0.05$, indicating a positive relationship. From these results, it can be concluded that H2 is accepted, meaning that board size has a positive and significant effect on corporate tax avoidance. The regression coefficient for the female director variable is -0.103 , with a t-value of -4.021 and a significance value of $0.000 < 0.05$. From these results, it can be concluded that H3 is supported, indicating that the presence of female directors negatively and significantly affects corporate tax avoidance.

The regression coefficient for the financial distress variable is 0.001, indicating that, holding the other independent variables constant, a one-unit increase in financial distress is associated with a 0.001 increase in tax avoidance. The financial distress variable has a t-value of 1.628 and a p-value of 0.106 (> 0.05). These results show that H4 is rejected, meaning that financial distress does not have a significant effect on corporate tax avoidance. The regression coefficient for the firm size variable is -0.020 , indicating that, holding the other independent variables constant, a one-unit increase in firm size is associated with a 0.020 decrease in tax avoidance. The firm size variable has a t-value of -3.655 with a negative direction and a significance value of $0.000 < 0.05$. These results show that H5 is rejected, meaning that firm size has a negative and significant effect on corporate tax avoidance.

Table 5: The Result of the T-statistic Test

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|--------------------|-----------------------------|------------|---------------------------|--------|-------|
| | B | Std. Error | Beta | | |
| (Constant) | 0.754 | 0.156 | | 4.837 | 0.000 |
| CEO Narcissism | 0.022 | 0.006 | 0.278 | 3.478 | 0.001 |
| Board Size | 0.010 | 0.004 | 0.325 | 2.391 | 0.018 |
| Female Director | -0.103 | 0.026 | -0.311 | -4.021 | 0.000 |
| Financial Distress | 0.001 | 0.001 | 0.127 | 1.628 | 0.106 |
| Firm Size | -0.020 | 0.005 | -0.503 | -3.655 | 0.000 |

Discussion

The results of hypothesis 1 testing indicate that CEO narcissism has a positive and significant effect on corporate tax avoidance. This result is consistent with the study conducted by Araújo *et al.* (2020) [1], which states that CEO narcissism positively influences tax avoidance. The presence of this positive and significant effect indicates that the higher the level of CEO narcissism, the higher the level of corporate tax avoidance. Conversely, if the CEO's level of narcissism is low, the company's tax avoidance will also be lower. The influence of CEO narcissism on tax avoidance is supported by agency theory, which discusses the agreement between the principal and the agent in decision-making and organizational management. The CEO acts as the company's agent and is expected to act in the

interests of shareholders. However, a highly narcissistic CEO may be highly confident in taking risks and focus on personal interests, including avoiding taxes at the expense of shareholders' interests. This can create agency behavior that harms shareholders and causes conflicts of interest between management and shareholders. Thus, it can be said that the higher the level of CEO narcissism, the greater the initiative to find loopholes to reduce the company's tax payments. The results of hypothesis 2 testing also show that board size has a positive and significant effect on corporate tax avoidance. This finding is consistent with research conducted by Idzniah & Bernawati (2020) [7] and Kalbuana *et al.* (2023) [9], which also states that board size positively affects tax avoidance. This positive and significant effect indicates that the larger the board size, the stronger the company's tendency to engage in tax avoidance. Conversely, a smaller board size reduces the company's tax avoidance practices. These findings are supported by agency theory related to corporate decision-making and individuals' tendencies to avoid risk. A larger number of board members enables the company to obtain more information regarding the implementation of tax policies, including tax avoidance. In other words, the larger the board, the greater the initiative to reduce corporate tax payments.

The results of hypothesis 3 testing also show that female directors have a negative and significant effect on corporate tax avoidance. This finding is consistent with the studies conducted by Hoseini *et al.* (2019) [5] and Hudha & Utomo (2021) [6], which also state that female directors negatively influence tax avoidance. This negative effect indicates that the more female directors a company has, the less likely it is to engage in tax avoidance. The significant negative influence of female directors on corporate tax avoidance is supported by agency theory related to improving managerial performance. Women are considered more likely to prioritize ethics and evaluate tax compliance. In other words, the presence of women as directors can help prevent corporate tax avoidance. Based on the hypothesis 4 testing, it can be concluded that financial distress does not have a significant effect on corporate tax avoidance. This result is supported by the study of Kalbuana *et al.* (2023) [9], which states that financial distress does not influence corporate tax avoidance. Companies experiencing financial distress try to minimize their burdens to avoid bankruptcy. They may not rely on tax avoidance to address this issue but instead consider alternative solutions. Most companies facing financial distress do not seek to increase profits by reducing tax expenses, as this may negatively affect investor confidence. The results of hypothesis 5 testing also show that firm size has a negative and significant effect on corporate tax avoidance. This finding is consistent with the study by Kalbuana *et al.* (2023) [9], which found that firm size negatively affects corporate tax avoidance. This negative influence indicates that larger companies are less likely to engage in tax avoidance. Conversely, the smaller the company, the more likely it is to engage in tax avoidance. In this case, smaller companies tend to adopt strategies to reduce the tax they must pay.

Conclusion

Based on the analysis, it can be concluded that CEO narcissism and board size positively affect corporate tax avoidance. Meanwhile, variables for female directors and firm size negatively affect corporate tax avoidance. In

addition, financial distress is proven not to affect corporate tax avoidance. This study has several limitations, namely a low adjusted R-square of 0.243, indicating that the independent variables explain only 24.3% of the variation in corporate tax avoidance, with the remaining variation influenced by other variables outside the study. Furthermore, several outlier data points, a non-normal data distribution, and a limited sample size are due to a 5-year observation period. Given the limitations encountered during the research, the author offers several suggestions for future studies, including considering additional factors and selecting variables with more suitable measurement scales. It is also recommended to extend and update the research period to obtain better results and capture more recent phenomena.

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