Research Article

Managerial Ownership and Managerial Ability on Tax Avoidance: Moderating Role of Firm Size

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Abstract.

This research aims to empirically investigate the impact of managerial ownership and managerial competence on tax avoidance, along with examining how firm size moderates these relationships. The study utilized panel data linear regression with a fixed effects approach, employing purposive sampling from 87 manufacturing firms in Indonesia spanning the years 2019 to 2021, totaling 261 firm years. The analysis reveals that managerial ownership does not influence tax avoidance, while managerial competence demonstrates a positive association with tax avoidance. Additionally, the findings suggest that neither firm size nor its interaction with managerial ownership and ability significantly affects the practice of tax avoidance.

Keywords: firm size, managerial ability, managerial ownership, tax avoidance

1. Introduction

Within the realm of taxation, the primary source of state revenue hinges significantly upon taxation, a trend that has seen a notable surge from 79% in 2019 to 82.84% in 2021. However, despite this apparent fiscal dependence, Indonesia grapples with the stark reality of ranking fourth in Asia for tax avoidance, as evidenced by an annual loss totaling Rp. 69.1 trillion. This substantial loss underscores a pervasive issue: a shortfall in taxpayers' comprehension of their fiscal responsibilities, a notion further underscored by the decline in corporate taxpayer compliance from 65.47% to 60.16% in 2020.

The government's introduction of a self-assessment system offers a flexible approach to tax management, shifting the onus of compliance onto taxpayers themselves. Yet, amidst this backdrop, the pivotal role of management in shaping tax avoidance practices within firms emerges as a critical focal point of analysis. While managerial ownership is often touted as instrumental in aligning agent-principal interests, its direct impact on tax avoidance remains a subject of contention. Similarly, the significance of managerial...
ability in orchestrating strategic tax planning is underscored, albeit with findings on its
direct influence on tax avoidance revealing a diverse array of perspectives.

Given these complexities, it becomes imperative to further explore the moderating
influence of the size of the firm in navigating the intricate interactions among managerial
ownership, managerial ability, and tax avoidance practices. Serving as a barometer of
company stability and management efficacy, firm size holds the promise of unravel-
ing nuanced insights into the multifaceted landscape of tax avoidance. This research
endeavor aims to fill gaps in existing scholarships and provide new insights into how
organizational attributes interact with avoidance of tax dynamics.

Moreover, this research endeavors in expanding the breadth of academic inves-
tigation by exploring supplementary control variables like profitability and leverage,
elucidating their nuanced impacts on tax minimization strategies. This thorough analysis
aspires to gain a deeper comprehension of the dynamics in composing strategies in tax
minimization and their ramifications for organizational governance and fiscal policy.
This, in turn, is anticipated to facilitate more informed decision-making and policy
development within the taxation domain.

2. Material and Methods

Smulowitz et al (2018) depict agency theory as a contractual agreement essential for
defining the relationship between agents and principals [1]. This theory emphasizes
the existence of conflicting interests between these parties, leading to what is known
as the agency problem, which holds significant implications for decision-making pro-
cesses within companies, especially concerning taxation. The asymmetry in information
between agents and principals emerges because management, acting as the agent,
typically possesses more comprehensive insights into the company’s condition and
prospects compared to the principal. As a result, management might engage in oppor-
tunistic behavior, placing their own interests above those of shareholders.

According to agency theory, conflicts of interest between agents and principals
can potentially be mitigated if management, acting as agents, also assume the role
of principals. The incorporation of managerial ownership within a company tends to
align the objectives of management with those of shareholders [2]. Given their various
responsibilities within the company, management is likely to understand the risks linked
to participating in tax avoidance activities. Based on the findings of previous study, which
suggest a negative correlation between managerial ownership and tax avoidance [3–5],
we propose the following hypothesis:
H1: Managerial ownership has a negative effect on tax avoidance

Agency theory posits the existence of information asymmetry between agents and principals, where management, acting as agents, may exploit opportunities to advance their interests. In cases where management generates substantial income for the company, they often receive incentives for their endeavors. Management with a high level of expertise tends to capitalize on relevant tax regulations to minimize tax liabilities [6]. Additionally, Syarli (2022) suggests that the perceived benefits of tax avoidance outweigh the associated risks [7]. Drawing on previous research [6,8], which have highlighted a positive relationship between the ability of the manager and their strategies to minimize tax, we formulate the hypothesis as follows:

H2: Managerial ability has a positive effect on tax avoidance

In larger corporations, the utilization of available resources to bolster operational activities is a common practice by management. According to findings by Kurniasih & Sari (2013), government scrutiny often heightens with the size of a company, prompting firms to prioritize tax compliance [9]. The decisions concerning tax accounting methods are influenced by the roles of directors and commissioners [10], thereby shaping management’s strategies concerning tax avoidance. Management tends to explore alternative avenues to maximize profits without resorting to tax avoidance practices, as engaging in such activities could tarnish the company’s reputation and deter investors [11]. Conversely, larger companies possess enhanced capabilities in managing their assets, including the ability to drive sales or income growth. Hence, with the company’s size growing and ownership by manager becoming a factor, it is probable that management’s resolve to reduce corporate tax avoidance will strengthen. Consequently, the hypothesis is framed as follows:

H3: The effect of managerial ownership on tax avoidance is enhanced by firm size

The stability and operational efficiency of a company are manifested in its size. They observed that larger companies typically have more complex structures, hierarchies, and a wider management workforce. The complexity inherent in the activities of large firms necessitates management with extensive knowledge and skills. Larger companies often engage in sophisticated transactions and may exploit regulatory loopholes to optimize profits. Moreover, due to their ample resources and high management capabilities, larger firms typically bear a smaller tax burden, allowing them to engage in tax planning to achieve tax savings while still maintaining substantial profits [12].

Based on the research conducted by Saragih et al (2021), which illustrates that the size of the firm is able to magnify the impact of management competence on avoiding tax, the size of the company enables management to gauge the level of
corporate tax avoidance [8]. Therefore, effective management skills offer opportunities to pursue diverse strategies aimed at maximizing profits while minimizing tax payments. In consideration of these findings, the fourth hypothesis in this study is formulated as follows:

H4: The relationship between managerial ability and tax avoidance is strengthened by firm size

To test the hypotheses, we conducted an analysis on manufacturing firms listed on the Indonesia Stock Exchange (IDX) from 2019 to 2021, resulting in a final sample of 261 firm-year observations. The findings of this research are outlined as follows. Firstly, we observed that managerial ownership does not exert any significant effect on tax avoidance. Secondly, our study indicates that managerial ability positively influences tax avoidance. Thirdly, we found that firm size does not play a role in strengthening or weakening the interaction between managerial ownership and tax avoidance, nor does it affect the interaction between managerial ability and tax avoidance. This study contributes to the existing literature by providing consistent results regarding the relationship between managerial ability and tax avoidance. Additionally, it contributes by presenting mixed findings concerning the association between managerial ownership and tax avoidance, as well as the impact of firm size and its interaction with managerial ownership and managerial ability on tax avoidance.

2.1. Operational Definition and Variable Measurement

Tax avoidance refers to a lawful strategy utilized to reduce tax obligations by leveraging loopholes within the laws and regulations governing state tax revenues. This strategy is often employed by management, as taxes are perceived as a burden capable of diminishing the income of publicly traded companies [13].

$$BTD = \frac{\text{Pretax Book Income} - \text{Taxable Income}}{\text{Total Assets}}$$

Aristyatama & Bandiyono (2021) elucidate that managerial ownership refers to the ownership of company shares held by the management [2]. It serves as a mechanism for firms to mitigate agency costs by enabling increased oversight of agents to align with the preferences of principals.

$$MO = \frac{\text{Total Share Owned By Directors & Commissioners}}{\text{Total Share Outstanding}} \times 100\%$$

Managerial ability, as described by Demerjian et al. (2011), pertains to the capacity of management to generate efficient income, thereby maximizing profits for the company.
Managerial ability is often associated with how a company is able to manage its resources (input) so that it can maximize its income (output).

\[
\text{Max } \theta = \frac{\text{SALES}}{v_1 \text{COGS} + v_2 \text{SG&A} + v_3 \text{PPE} + v_4 \text{INTAN}}
\]

Where \( \text{SALES} = \) sales; \( \text{COGS} = \) cost of goods sold; \( \text{SG&A} = \) sales, administration & general expenses; \( \text{PPE} = \) tangible assets (property, plant & equipment); \( \text{INTAN} = \) intangible assets.

Furthermore, tobit regression is performed using the formula, as follows:

\[
\text{FE} = \beta_0 + \beta_1 \text{SIZE} + \beta_2 \text{MS} + \beta_3 \text{FCF} + \beta_4 \text{AGE} + \beta_5 \text{FCI} + \beta
\]

Where \( \text{FE} = \) efficiency score; \( \text{SIZE} = \) natural logarithm of total assets; \( \text{MS} = \) firm revenue divided by revenue per industry; \( \text{FCF} = \) dummy variable, where score 1 if free cash flow > 0, and score 0 if free cash flow < 0; \( \text{AGE} = \) natural logarithm of the age of the company; \( \text{FCI} = \) foreign currency value divided by total income.

Wardani & Khoiriyah (2018) define the size of the firm as a categorization based on various metrics including total assets, logarithm of size, and the value of shares owned by the company [15].

\[
\text{SIZE} = \ln(\text{Total Assets})
\]

Profitability describes how efficient a company is in managing its funds so as to obtain optimal profits. Profitability can be measured using Return on Assets (ROA), which is a proxy comparing the profits achieved by a company to the value of its assets owned [16].

\[
\text{Profitability (ROA)} = \frac{\text{Net Income}}{\text{Total Assets}}
\]

Leverage can be represented using the Debt to Asset Ratio (DAR). This ratio compares the level of debt a company holds to the total value of its assets. A high DAR value means that company funding sourced from third party debt has a high value so that the interest costs on this debt will also increase [17].

\[
\text{Leverage (DAR)} = \frac{\text{Total Debts}}{\text{Total Assets}}
\]

### 2.2 Population and Sample

The population of this research comprises the financial statements of manufacturing firms for the years 2019–2021. The manufacturing sector was selected due to its significant contribution to taxation in Indonesia, encompassing three industrial sectors: consumer industry, basic chemical industry, and various industries. The research sample for this study was selected using a purposive sampling approach. The criteria for
inclusion were as follows: Firstly, the sample comprised manufacturing firms listed on the Indonesia Stock Exchange (IDX) that had undergone continuous audits between 2019 and 2021. Secondly, the selection included manufacturing firms with comprehensive data available for the study period. Finally, the sample consisted of manufacturing firms that had not experienced financial losses during the specified period.

2.2. Research Methodology

This study employs secondary data collection techniques, gathering data from financial and annual reports of manufacturing companies covering the period from 2019 to 2021. The required data is sourced from the official website of the Indonesia Stock Exchange (IDX) at www.idx.co.id, as well as the companies’ official websites. Data collection methods involve library research and documentation techniques.

Statistical quantitative data analysis serves as the primary data analysis technique. This analysis comprises several stages, including descriptive statistical analysis, normality tests, panel data regression analysis (such as the Chow test, Lagrange Multiplier test, and Hausman test), classic assumption tests, and hypothesis testing. Data processing is carried out using STATA Version 16 software and Microsoft Excel.

To offer direct evidence on the test of the four hypotheses, the following two multiple linear regression models are utilized:

\[ BTD_{it} = \alpha + \beta_1 MO_{it} + \beta_2 MA_{it} + \beta_3 ROA_{it} + \beta_4 DAR_{it} + \epsilon \]  
(1)

\[ BTD_{it} = \alpha + \beta_1 MO_{it} + \beta_2 MA_{it} + \beta_3 SIZE_{it} + \beta_4 KM \times SIZE_{it} + \beta_5 ROA_{it} + \beta_6 ROA_{it} + \beta_7 DAR_{it} + \epsilon \]  
(2)

Where $BTD_{it} =$ book tax differences; $\alpha =$ constant; $\beta =$ regression coefficient; $MO_{it} =$ managerial ownership; $MA_{it} =$ managerial ability; $SIZE_{it} =$ firm size (moderation variable); $ROA_{it} =$ profitability (control variable); $DAR_{it} =$ leverage (control variable); $\epsilon =$ error.

In the multiple linear regression for equation (1), under H1, we anticipate a negative coefficient for $\beta_1$. Conversely, under H2, we anticipate a positive coefficient for $\beta_2$.

In the multiple linear regression for equation (2), used to test the third and fourth hypotheses, the interaction term ($KM \times SIZE$) is incorporated to examine hypothesis 3 (H3). If $\beta_4$ is statistically and significantly negative, it suggests that larger firm size intensifies the negative relationship between ownership and tax avoidance. Subsequently, the interaction term ($MA \times SIZE$) is included to test hypothesis 4 (H4). If $\beta_5$ is statistically and significantly positive, it implies that larger firm size enhances the positive relationship between ownership and tax avoidance.
3. Results and Discussion

The purposive sampling technique was utilized to select the sample for this study. Initially, Table 1 shows that there were 193 manufacturing firms listed on the IDX and audited during the 2019-2021 period. However, some firms were either listed or delisted, experienced financial losses, or lacked complete data, resulting in their exclusion from the research sample. Consequently, the final sample comprised 87 manufacturing firms listed on the Indonesia Stock Exchange (IDX) during the 2019-2021 period. Among these, 35 firms belonged to the consumer goods industry, 43 firms to the basic and chemical industries, and the remaining 9 firms represented various industries. Over a 3-year observation period, a total of 261 firm-years of data were processed for analysis in this study.

<table>
<thead>
<tr>
<th>No</th>
<th>Information</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manufacturing firms audited on the IDX from 2019 to 2021</td>
<td>193</td>
</tr>
<tr>
<td>2</td>
<td>Listing/delisting firms during the research period</td>
<td>(24)</td>
</tr>
<tr>
<td>3</td>
<td>Firms that suffered losses during the study period</td>
<td>(77)</td>
</tr>
<tr>
<td>4</td>
<td>Firms does not present complete data</td>
<td>(5)</td>
</tr>
<tr>
<td></td>
<td>Total firms</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>Observation period</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total sample during the observation period (87 x 3)</td>
<td>261</td>
</tr>
</tbody>
</table>

Source: Data processed by researchers (2022)

Table 2 presents the descriptive statistics of research variables for a sample of manufacturing companies during the 2019-2021 period. The average difference between Tax and Book Income (BTD) for all sample companies is 0.006, indicating a small disparity between accounting profit and fiscal profit on average. Furthermore, the average managerial ownership across all sample companies is 0.077, suggesting that managerial ownership in these firms typically exceeds 5%. Additionally, the average managerial ability for all sample companies is 0.908, reflecting a tendency towards high managerial capabilities within the sample. The average company size (SIZE) is 29,016, with minimal variance ranging from a minimum value of 25,974 to a maximum value of 33,537, suggesting consistent company sizes across the sample. On average, the Return on Assets (ROA) for the sample companies is 0.077, indicating low profitability. Moreover, the average leverage (LEV) stands at 0.414, suggesting that, on average, companies
rely more on asset components than debt components for operational financing, with
debt accounting for approximately 41.4% of asset financing.

### Table 2: Descriptive Statistics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTD</td>
<td>261</td>
<td>0.006</td>
<td>0.059</td>
<td>-0.087</td>
<td>0.719</td>
</tr>
<tr>
<td>KM</td>
<td>261</td>
<td>0.077</td>
<td>0.181</td>
<td>0</td>
<td>0.956</td>
</tr>
<tr>
<td>MA</td>
<td>261</td>
<td>0.908</td>
<td>0.050</td>
<td>0.662</td>
<td>1</td>
</tr>
<tr>
<td>SIZE</td>
<td>261</td>
<td>29.016</td>
<td>1.615</td>
<td>25.974</td>
<td>33.537</td>
</tr>
<tr>
<td>ROA</td>
<td>261</td>
<td>0.077</td>
<td>0.084</td>
<td>0.000</td>
<td>0.607</td>
</tr>
<tr>
<td>DAR</td>
<td>261</td>
<td>0.414</td>
<td>0.204</td>
<td>0.0630</td>
<td>1.887</td>
</tr>
</tbody>
</table>

Source: Data processed by researchers (2022)

### 3.1. Managerial Ownership on Tax Avoidance

Based on the results of partial regression testing, it is revealed that managerial ownership exhibits a probability value of 0.983, surpassing the significance level of 0.05. Consequently, it can be inferred that managerial ownership does not exert any discernible effect on tax avoidance among manufacturing firms listed on the IDX, leading to the rejection of the first hypothesis. In line with agency theory’s proposition, which posits that managerial ownership serves to mitigate agency problems by aligning the interests of agents and principals toward common objectives, the findings of this study diverge. Contrary to the expectations outlined in agency theory, the extent of share ownership by management within a company does not seem to influence their inclination to adopt tax avoidance strategies. Additionally, agency theory suggests that the proportion of managerial ownership can help to minimize agency costs by prompting management to exercise caution in decision-making processes to safeguard their shareholdings. However, the empirical results contradict this notion, revealing that the percentage of share ownership held by managerial parties does not affect tax avoidance practices. This study echoes the conclusions drawn from prior research conducted by Kalbuana et al. (2017) [18] and Krisna (2019) [19], both of which found that managerial ownership does not have a significant impact on tax avoidance. Additionally, an examination of the proportion of managerial ownership indicates that, despite the average sample company having ownership exceeding 5%, the average BTD value remains insignificant, below 1%. This indicates that irrespective of whether managers possess substantial or negligible company share ownership, the resulting BTD value remains consistently insignificant. Therefore, it can be inferred that the proportion of managerial ownership
does not influence the practices of avoiding tax within manufacturing industry, as suggested by the regression results.

### 3.2. Managerial Ability on Tax Avoidance

According to the results of partial regression testing, the ability of managers demonstrated a t probability value of 0.017, which falls below the conventional threshold of 0.05, coupled with a coefficient value of 0.0880683. This indicates a statistically significant positive influence of managerial ability to avoid tax among manufacturing entities listed on the IDX, leading to the acceptance of the second hypothesis proposed in this study. According to agency theory, which delineates a relationship based on the delegation of authority from principals to agents or managers for the control of company resources [1], there exists an information asymmetry between the agent and the principal, with the former possessing a more comprehensive understanding of the company’s conditions and outlook than the latter. This inherent imbalance resonates with the principles of agency theory, where management, acting as agents, leverage their extensive knowledge to commit in the activities of strategic tax minimization. This assertion is supported by prior research [6,20], which consistently indicated that capable management possesses superior comprehension of operational intricacies within the company, facilitating their ability to align the decisions in the organization with tax schemes and effectively recognize favorable opportunities for implementing the initiatives in tax planning. Therefore, it can be inferred that proficient management is strategically positioned to develop and implement comprehensive strategies aimed at executing tax avoidance measures to optimize the firm’s fiscal position.

### 3.3. Managerial Ownership on Tax Avoidance With Firm Size as Moderation

According to the results of the partial regression test, the obtained value is 0.254, which exceeds the threshold of 0.05. This demonstrates that the presence of firm size neither strengthens nor weakens the impact of managerial ownership on tax avoidance, leading to the rejection of the third hypothesis proposed in this study. Contrary to expectations, the size of the company does not ensure that existing managerial ownership can mitigate corporate tax avoidance practices. According to agency theory, larger firms tend to incur greater agency costs compared to smaller ones due to heightened conflicts of interest in the middle of managers and shareholders [1]. These costs arise...
from divergent interests and may result in excessive expenditure. The presence of managerial ownership in large firms is anticipated to align the interests of both parties, thereby minimizing agency costs. In spite of that, this study has findings which contradict certain aspects of agency theory, as the interaction between firm size and managerial ownership fails to influence tax avoidance. Notably, the size of a company does not necessarily correlate with high managerial ownership, as company size merely reflects the total assets’ natural logarithm. Consequently, irrespective of the magnitude of interaction between firm size and managerial ownership, it does not sway management decisions to minimize tax avoidance practices within manufacturing companies.

3.4. Managerial Ability on Tax Avoidance With Firm Size as Moderation

The probability value obtained from the partial regression test, 0.191, exceeds the significance threshold of 0.05. This indicates that the interaction between firm size and managerial ability does not have a significant impact on tax avoidance, resulting in the rejection of the fourth hypothesis in this study. According to agency theory, there exists an information asymmetry between agents and principals, with management possessing superior knowledge regarding the company’s condition and future prospects. Moreover, large firms engage in complex transactions requiring advanced managerial abilities for effective management. Management typically leverages its capabilities to exploit tax regulations and minimize tax liabilities. However, contrary to expectations, company size cannot serve as a reliable indicator for assessing managerial ability in executing tax avoidance strategies. These findings diverge from previous research [8]. Their research demonstrated firm size strengthens the influence of managerial ability on tax avoidance. In this study, however, the observed interaction between firm size and managerial ability fails to significantly influence corporate tax avoidance. This suggests that regardless of the managerial acumen present in both large and small firms, management may not always capitalize on opportunities to enact policies aimed at reducing tax payments.

4. Conclusion

This study seeks to empirically establish that ownership by managerial does not exert a discernible influence on the practices of tax avoidance. This assertion arises from observations indicating that management’s ownership stake in the firm does not necessarily translate into significant voting rights, thereby constraining their ability to shape
tax avoidance policies. Additionally, findings suggest that firms led by managers with high expertise tend to deviate more from predicted levels of tax avoidance compared to those with lower managerial ability. This inclination stems from the adeptness of knowledgeable management in exploiting regulatory loopholes to effectively mitigate tax liabilities.

Furthermore, the study explores the conditional effects of firm size on the association of managerial ownership and tax avoidance. Interestingly, the results indicate that the size of the firm neither enhances nor reduces the engagement between ownership by managers and tax avoidance. This implies that the presence of ownership by managers, which is not universally prevalent in large firms, does not consistently contribute to minimizing tax avoidance. Similarly, it is discovered that firm size does not notably moderate the interplay between the ability of the manager and the strategies of tax avoidance. Essentially, both large and small firms appear to offer limited opportunities for management to implement policies aimed at reducing tax avoidance.

In summary, the study constitutes a significant contribution to the ongoing discourse surrounding the significance of ownership by manager and proficiency on avoiding tax. Furthermore, it contributes to enriching the existing literature on the effect of the size of the firm in shaping these dynamics. The implications of the research extend to future investigations, suggesting avenues for exploring additional variables such as management compensation, independent board composition, or audit quality, which may influence tax avoidance tendencies. Moreover, future studies could utilize alternative proxies for measuring tax avoidance, such as the Abnormal Book Tax Difference proxy, to enhance the robustness of findings. Finally, expanding the scope of research beyond manufacturing firms and extending the observation period would render the results more pertinent and insightful.

References


