



THE INFLUENCE OF FIRM FINANCIAL PERFORMANCE ON TAX AVOIDANCE: A META-ANALYSIS STUDY

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ABSTRACT

This research integrates findings from multiple studies obtained through the Publish or Perish (PoP) software and Google Scholar to examine the influence of profitability, leverage, company size, capital intensity, and sales growth on tax avoidance. Previous studies have produced both consistent and inconsistent results regarding the relationship between these variables and tax avoidance, with varying levels of statistical significance. Using purposive sampling, 52 relevant research articles were selected. A meta-analysis technique was employed to synthesize these findings and draw conclusions about the impact of these variables on tax avoidance. The results of the meta-analysis reveal significant relationships between profitability, leverage, company size, capital intensity, and sales growth, with varying degrees of impact on tax avoidance across different studies

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1. INTRODUCTION

A critical issue that needs immediate attention is the growing practice of tax avoidance among companies, which, despite being legal, undermines the government's ability to generate revenue for national development. The Indonesian government relies heavily on tax revenue to fund public infrastructure and social services, which are essential for economic growth and improving citizens' quality of life (Pasal 1 Ayat 1, Undang-Undang No. 6 Tahun 1983). However, companies with high profitability, significant leverage, and large sizes often engage in tax avoidance strategies to reduce their tax liabilities, which ultimately deprives the government of essential funds (Fadhila & Andayani, 2022; Mayasari & Al-Musfiroh, 2020; Hernadianto et al., 2020). For example, high profitability leads to higher tax obligations, prompting businesses to exploit legal loopholes to minimize payments (Fadhila & Andayani, 2022). Similarly, companies with substantial leverage tend to use debt financing to reduce taxable income through interest deductions, further exacerbating the issue (Mayasari & Al-Musfiroh, 2020). Additionally, larger companies, with more complex structures and resources, are better equipped to engage in aggressive tax planning strategies, often to the detriment of public finances (Hernadianto et al., 2020). This growing trend of tax avoidance, although legally permissible, creates a significant challenge for the government, as it results in the depletion of valuable national resources, hindering economic development and the provision of public services.

One area that has not been thoroughly addressed in previous research on the factors influencing tax avoidance is the inconsistent impact of various firm-specific variables, such as profitability, leverage, company size, capital intensity, and sales growth. Previous studies have explored the relationship between these factors and tax avoidance, but the results have been mixed. For instance, profitability has been found to have a significant effect in 67% of studies (20 out of 30), yet 33% of studies show no significant relationship (Hanlon & Heitzman, 2010). Similarly, leverage is significant in 53% of studies (9 out of 17), with the remaining studies showing no significant effect (Desai & Dharmapala, 2006). Company size shows a positive correlation in 63% of the studies (10 out of 16), while the remaining studies show no effect (Rego, 2003). Notably, capital intensity shows an extremely low significance rate, with only 8% of the studies (1 out of 13) reporting a significant relationship (Chen, 2014). Lastly, sales growth,

although examined in 12 studies, shows a significant effect in only 42% of the studies (5 out of 12), with the remaining studies showing no impact (Wang et al., 2018). This variation suggests that there may be contextual factors or additional variables not yet fully explored that could better explain the complex relationship between these firm-specific variables and tax avoidance.

This research is grounded in several theoretical frameworks to explore the complex relationship between company financial performance and tax avoidance. The study primarily utilizes the **Agency Theory**, which posits that conflicts of interest between managers and shareholders can lead to decisions that prioritize personal benefits over organizational goals, such as tax avoidance strategies (Jensen & Meckling, 1976). Additionally, **Resource Dependence Theory** is applied, suggesting that companies with stronger financial performance have access to more resources, enabling them to engage in more complex tax planning (Pfeffer & Salancik, 1978). Lastly, **Signaling Theory** is incorporated to understand how firms use tax avoidance as a signal to the market about their financial health and competitive position, especially when companies with strong financial performance may engage in aggressive tax avoidance to signal profitability and stability to investors (Spence, 1973). These theoretical lenses collectively provide a comprehensive view of the factors that influence tax avoidance decisions based on financial performance.

The primary objective of this research is to conduct a meta-analysis to examine the influence of company financial performance on tax avoidance across multiple studies. Specifically, the research aims to assess how different dimensions of financial performance, such as profitability, leverage, company size, capital intensity, and sales growth, correlate with tax avoidance behaviors in firms (Hanlon & Heitzman, 2010). Additionally, this study seeks to evaluate the methodological inconsistencies in previous research, highlighting the varying results on these factors and providing clarity on their collective impact on tax avoidance (Rego, 2003). By synthesizing existing empirical findings, the research also aims to identify gaps in the current literature and propose potential avenues for future research in corporate tax behavior, especially in the context of financial performance (Desai & Dharmapala, 2006).

2. LITERATURE REVIEW

Agency Theory

Agency Theory explains the relationship between principals (owners or shareholders) and agents (managers or executives), focusing on the conflicts of interest that arise when agents prioritize their own interests over those of the principals. The theory is grounded in the notion that agents, who are entrusted to act on behalf of principals, may exploit their position for personal gain, leading to inefficiencies, such as suboptimal decision-making or tax avoidance strategies (Jensen & Meckling, 1976). Agency theory categorizes these conflicts into two main types: **moral hazard**, where agents take actions that benefit themselves at the expense of the principals, and **adverse selection**, where agents misrepresent their skills or intentions to the principals (Eisenhardt, 1989). This theory also introduces mechanisms such as monitoring, incentive alignment, and governance structures to reduce agency costs and mitigate the conflicts between principals and agents (Fama & Jensen, 1983). Agency theory has been widely applied in corporate governance, accounting, and taxation studies to examine how agency costs influence business decisions, including tax avoidance (Desai & Dharmapala, 2006).

Signalling Theory

Signaling Theory posits that one party (the sender) conveys information to another party (the receiver) to reduce information asymmetry, particularly when there is uncertainty about the sender's actions or characteristics. In a business context, companies use signals to convey their quality, financial health, or market position to investors, customers, and other stakeholders (Spence, 1973). The theory categorizes signals into **direct signals**, such as financial performance or product characteristics, and **indirect signals**, like the use of third-party endorsements or industry certifications (Connelly et al., 2011). Signaling Theory is crucial in understanding how companies communicate their strategic intentions, especially in situations where they may want to convey stability or profitability to reduce perceived risks or attract investment (Kirmani & Rao, 2000). In tax avoidance studies, firms may use certain signals, such as low effective tax rates, to suggest financial stability or competitive advantage, although these signals may also raise concerns regarding tax behavior (Cohen & Press, 2013).

Resource Dependence Theory

Resource Dependence Theory (RDT) posits that organizations are dependent on external resources and must interact with other organizations or entities to obtain these resources, which are essential for their survival and success (Pfeffer & Salancik, 1978). The theory emphasizes that organizations must manage relationships with key external actors, such as suppliers, customers, or regulatory bodies, to secure critical resources such as capital, labor, or information. RDT categorizes these dependencies into **primary dependencies**, which are essential for the organization's functioning, and **secondary dependencies**, which may influence strategic decisions but are less critical to survival (Pfeffer & Salancik, 1978). Additionally, the theory highlights **power dynamics** between organizations, as firms with more control over vital resources can exert influence over others, while those with fewer resources may



adapt by forming alliances or negotiating for favorable terms (Hillman et al., 2009). In the context of tax avoidance, organizations with stronger resource control may use their influence to shape favorable tax policies or avoid paying higher taxes, leveraging their power in the marketplace or regulatory landscape (O'Brien & McKeown, 2013).

Firm Financial Performance

Firm Financial Performance refers to a company's ability to generate revenue and manage its resources effectively to achieve profitability, sustainability, and growth. It is typically assessed using a combination of financial metrics, such as profitability, liquidity, solvency, and efficiency ratios, which provide insights into a company's operational effectiveness and financial health (Palepu et al., 2016). The categorization of financial performance often includes **profitability**, which measures a company's ability to generate profits relative to its revenue, assets, or equity (Harrison & Jorfi, 2020); **liquidity**, which assesses the company's ability to meet short-term obligations (Zhou & Lee, 2015); and **solvency**, which evaluates a company's long-term financial stability (Ross et al., 2016). **Efficiency ratios**, such as asset turnover and inventory turnover, further provide insights into how effectively a firm utilizes its resources to generate sales (Damodaran, 2012). Financial performance is a critical determinant in corporate decision-making, influencing strategies related to investment, capital structure, and tax planning (Jones & Roberts, 2015). In studies on tax avoidance, strong financial performance is often linked to increased tax obligations, leading firms to engage in strategies aimed at minimizing tax liabilities (Fadhila & Andayani, 2022).

Compliance Theory

Compliance Theory focuses on the factors that drive individuals and organizations to adhere to legal, regulatory, and societal norms, particularly in the context of corporate behavior. It is grounded in the idea that organizations comply with rules and regulations not only to avoid penalties but also to maintain legitimacy, reduce risks, and enhance their reputation (Tyler, 2006). The theory categorizes compliance into two key types: **instrumental compliance**, where firms adhere to regulations to avoid sanctions, and **normative compliance**, where organizations follow rules due to a belief in their legitimacy and ethical duty (Akerlof & Yellen, 1990). In the context of tax compliance, companies are motivated by both external pressures, such as audits and legal consequences, and internal pressures, such as organizational values or social norms within their industry (Slemrod, 2007). Compliance Theory is often used to analyze how corporate entities navigate complex regulatory environments, balancing legal adherence with strategic interests, such as minimizing tax obligations while maintaining public trust (Andreoni et al., 1998).

Tax Avoidance

Tax Avoidance refers to the legal practice of minimizing tax liabilities by exploiting loopholes in tax laws, using strategies that comply with the letter of the law but may contradict its spirit. It is typically achieved through the use of tax planning techniques such as shifting income to low-tax jurisdictions, utilizing tax credits and deductions, or structuring transactions in ways that reduce taxable income (Desai & Dharmapala, 2006). The categorization of tax avoidance can be divided into **aggressive tax avoidance**, where firms engage in complex, high-risk strategies to minimize taxes, and **conservative tax avoidance**, where firms utilize more straightforward strategies that are less likely to attract scrutiny from tax authorities (Slemrod, 2007). While tax avoidance is distinct from tax evasion, which involves illegal activities to hide income or falsify tax returns, it remains a subject of concern for governments, as it reduces tax revenues and creates inequities in the tax system (Hanlon & Heitzman, 2010). In corporate settings, tax avoidance can be driven by factors such as high profitability, the use of debt financing, and the ability to access sophisticated tax planning strategies (Graham, 2003).

Theoretical Framework And Hypothesis

The effect of Profitability on Tax Avoidance

This study integrates **Agency Theory**, **Signaling Theory**, and **Resource Dependence Theory (RDT)** to examine the relationship between profitability and tax avoidance. According to **Agency Theory**, conflicts of interest between managers (agents) and shareholders (principals) can lead to actions that prioritize personal benefits, such as engaging in tax avoidance to reduce tax liabilities and maximize shareholder wealth (Jensen & Meckling, 1976). In this context, higher profitability may provide managers with the incentive to engage in tax avoidance, as it increases the firm's tax obligations, prompting managers to adopt strategies to minimize these costs (Desai & Dharmapala, 2006). **Signaling Theory**, on the other hand, suggests that firms with higher profitability may use tax avoidance as a signal to investors about their financial health and market position, indicating a more competitive and stable business environment (Spence, 1973). Lastly, **Resource Dependence Theory (RDT)** posits that firms depend on external resources for survival and success, and those with higher profitability have greater access to these resources. As such, they are better positioned to engage in tax avoidance as part of their resource management strategy to optimize financial stability and secure long-term growth (Pfeffer & Salancik, 1978; Hillman et al., 2009). Profitability, which reflects a company's ability to generate income from sales, assets, and capital, is a key indicator of managerial performance (Sinambela & Nuraini, 2021). As Mayndarto (2022) notes, firms with higher profitability have a greater capacity to

pay taxes, which may motivate them to seek tax avoidance strategies to reduce their tax burden. Therefore, the hypothesis is that profitability has a positive effect on tax avoidance.

Hypothesis: Profitability has a positive effect on tax avoidance.

The Effect of Leverage on Tax Avoidance

The theoretical framework for this study integrates **Agency Theory**, **Signaling Theory**, and **Resource Dependence Theory (RDT)** to explore the relationship between leverage and tax avoidance. According to **Agency Theory**, when firms have high levels of debt, conflicts of interest between managers (agents) and shareholders (principals) may arise, as managers might be incentivized to reduce tax liabilities to enhance profitability and shareholder wealth (Jensen & Meckling, 1976). In such cases, high leverage, through interest payments on debt, reduces taxable income, thus providing managers with the opportunity to engage in tax avoidance strategies to minimize tax obligations (Hermanto & Puspita, 2022). From a **Signaling Theory** perspective, companies with high leverage may signal financial risk to investors, but they might also use tax avoidance as a tool to maintain a strong financial standing by lowering tax liabilities. This can indicate the company's ability to manage its financial resources efficiently, despite the burden of debt (Spence, 1973). Additionally, **Resource Dependence Theory** suggests that firms with significant leverage may utilize their financial position to negotiate favorable terms with creditors, and in doing so, engage in tax avoidance as a resource management strategy to optimize their financial stability (Pfeffer & Salancik, 1978). High leverage creates an incentive for firms to engage in tax avoidance through interest deductions, which directly reduce their taxable income, thus decreasing the overall tax burden (Sriyono & Andesto, 2022). Therefore, the hypothesis is proposed that:

Hypothesis: Leverage has a positive effect on tax avoidance.

The Effect of Firm Size on Tax Avoidance

The theoretical framework for this study integrates **Agency Theory**, **Signaling Theory**, and **Resource Dependence Theory (RDT)** to examine the relationship between firm size and tax avoidance. According to **Agency Theory**, larger firms often experience increased agency costs due to their complexity and scale, which can lead to conflicts between managers (agents) and shareholders (principals). Managers of larger firms, who have more discretion over resources, may be incentivized to engage in tax avoidance strategies to maximize shareholder wealth and minimize the firm's tax liabilities (Jensen & Meckling, 1976). From a **Signaling Theory** perspective, large firms are more visible to the public, investors, and tax authorities, and they may use tax avoidance as a signal to demonstrate their financial strength and efficiency. This may indicate the firm's ability to optimize resources, reduce costs, and maintain competitive advantage, even though such practices may be perceived as aggressive or controversial (Spence, 1973). Additionally, **Resource Dependence Theory** suggests that larger firms, due to their size and market influence, are better equipped to navigate the regulatory environment and engage in tax avoidance practices. Their greater financial resources and expertise allow them to exploit legal loopholes more effectively and reduce their tax burden (Pfeffer & Salancik, 1978). As Ainniyya et al. (2021) note, firm size reflects the capacity of a company to influence tax decisions, with larger firms often having more resources to engage in tax planning strategies. Anggraeni & Oktaviani (2021) also argue that as firms grow, they attract more governmental attention, which may lead to a higher tendency to either comply with or evade taxes. Therefore, the hypothesis is proposed that:

Hypothesis: Firm size has a positive effect on tax avoidance.

The Effect of Capital Intensity on Tax Avoidance

The theoretical framework for this study integrates **Agency Theory**, **Signaling Theory**, and **Resource Dependence Theory (RDT)** to explore the relationship between capital intensity and tax avoidance. According to **Agency Theory**, conflicts of interest between managers (agents) and shareholders (principals) may arise, especially when managers use capital-intensive investments, such as fixed assets, to minimize tax liabilities. These investments allow managers to take advantage of depreciation expenses, which reduce taxable income, thereby aligning with their interest in enhancing firm profitability while minimizing taxes (Jensen & Meckling, 1976). From a **Signaling Theory** perspective, firms with high capital intensity may signal their financial strength and long-term stability to investors by engaging in tax avoidance strategies. High capital investment, particularly in fixed assets, can be seen as a strategic decision to optimize resources and signal the company's commitment to sustainable growth (Spence, 1973). Additionally, **Resource Dependence Theory (RDT)** suggests that firms with high capital intensity are better positioned to manage their resource needs through the utilization of depreciation on fixed assets. This financial strategy allows them to reduce their tax burden, improving their financial stability and capacity to negotiate with external stakeholders, such as creditors and investors, by demonstrating effective resource management (Pfeffer & Salancik, 1978). As Ambarukmi & Diana (2017) explain, capital intensity reflects the significant investment in assets needed to generate revenue, and firms with high capital intensity tend to engage in tax avoidance through depreciation and asset management to minimize taxes. Wansu & Dura (2024) further argue that utilizing depreciation on fixed assets is a



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common strategy to reduce taxable income, which incentivizes firms to increase capital intensity for tax benefits. Therefore, the hypothesis is proposed that:

Hypothesis: Capital intensity ratio has a positive effect on tax avoidance.

3. RESEARCH METHODS

The object of this research consists of journals obtained from Google Scholar and the Publish or Perish (PoP) software, focusing on the topic of tax avoidance. This study investigates the influence of profitability, leverage, firm size, capital intensity, and sales growth on tax avoidance. Data collection follows an **observational method**, where journals, theses, and articles from 2010 to 2024 are gathered, recorded, and reviewed based on specific inclusion criteria. The population of this research includes theses and journals available in PoP and Google Scholar. The sample consists of 52 articles selected based on the following criteria:

1. Theses and journals sourced via PoP and Google Scholar, focusing on the impact of profitability, leverage, firm size, capital intensity, and sales growth on tax avoidance.
2. Studies with citations above zero in PoP.
3. Studies that employ multiple linear regression.
4. Journals published within the period from 2010 to 2024.

Data Analysis Techniques

This study employs a **quantitative approach** using **meta-analysis** to synthesize results from multiple studies with the same research focus. Meta-analysis is a statistical technique that aggregates findings from various studies to provide more robust and reliable answers to research questions (Makowski et al., 2019, as cited in Ramadhani et al., 2022). The meta-analysis process involves two primary methodologies: systematic literature review and statistical analysis, which follows the seven stages outlined below:

1. **Conversion of Effect Size:** The effect size (r) from each study is converted into a common measure. This allows comparison and integration across studies. The formula for converting effect size is:

$$A = \sqrt{\frac{t^2}{(t^2 + df)}}$$

Where:

- r = Effect size
- t = t-statistic result
- df = Degree of freedom

2. **Calculation of Weighted Average Effect Size (\bar{r}):** The weighted average effect size across all studies is calculated using the formula:

$$\bar{r} = \frac{\sum(N_i r_i)}{\sum N_i}$$

Where:

- \bar{r} = Average correlation
- N_i = Sample size for each study
- r_i = Effect size for each study

3. **Calculation of Total Variance (S_r^2):** The total variance observed across studies is computed using the formula:

$$S_r^2 = \frac{\sum[N_i(r_i - \bar{r})^2]}{\sum N_i}$$

Where:

- S_r^2 = Total variance observed
- \bar{r} = Average correlation
- N_i = Sample size for each study
- r_i = Effect size for each study

4. **Calculation of Sampling Error Variance (S_e^2):** Sampling error variance accounts for variability that may arise due to fluctuations in sample characteristics. It is calculated as:

$$S_e^2 = \frac{(1 - \bar{r}^2)^2}{\sum N_i} K$$

Where:

- S_e^2 = True population variance
- \bar{r} = Average correlation

- Ni = Sample size for each study
 - K = Number of studies in the analysis
5. **Calculation of True Population Variance (S_p^2):** The true population variance is obtained by subtracting the sampling error variance from the total variance:

$$S_p^2 = S_r^2 - S_e^2$$

Where:

- S_p^2 = Average correlation
 - S_r^2 = Total variance observed
 - S_e^2 = Sampling error variance
6. **Hypothesis Testing:** Hypothesis testing is conducted using the **Mann-Whitney Test** approach with a 95% confidence interval. The hypothesis test is formulated as follows:

$$[\bar{r} - S_p^2 Z\alpha ; \bar{r} + S_p^2 Z\alpha] = [\bar{r} - S_p^2 (1,96); \bar{r} + S_p^2 Z(1,96)]$$

The hypothesis is accepted if the calculated r value exceeds the table r value, indicating that the independent variable significantly affects the dependent variable. The r value ranges from -1 to +1, and the closer the r value is to 1, the stronger the effect of the independent variable on the dependent variable.

The **Mann-Whitney Test** is used here because it is a non-parametric test suitable for situations where data may not follow a normal distribution. By using this test, the study avoids making assumptions about the normality of data distributions, ensuring robust results. A 95% confidence interval provides a high degree of certainty, ensuring the validity of the conclusions drawn from the hypothesis testing. This method allows for comprehensive and reliable synthesis of findings, ensuring that the meta-analysis can accurately reveal the influence of key variables on tax avoidance.

4. RESULTS AND DISCUSSION

Results

Description of Meta-Analysis Research Results

The results of the meta-analysis study present the relationship between various independent variables and tax avoidance, examining the effect of profitability, leverage, firm size, capital intensity, and sales growth. For each variable, the analysis includes sample size (n), number of studies (studi), the average effect size (\bar{r}), 95% confidence intervals, the calculated r value (r), and the table r value (r tabel). The significance of each relationship is indicated as "sig" if the calculated r value exceeds the table r value, suggesting a statistically significant effect.

Table 1: Results of Meta-Analysis Research Testing

No.	Variabel Explanatory (Independent)	n	Studi	\bar{r}	95% Confidence Interval		r Tabel	Ket
1	Profitabilitas (ROA)	5.851	30	0,2005	0,1421	; 0,2589	0,0255	sig
2	Leverage (DAR)	3.986	17	0,1343	0,0736	; 0,1951	0,0310	sig
3	Ukuran Perusahaan (Size)	2.422	16	0,2360	0,1563	; 0,3156	0,0398	sig
4	Capital Intensity (CI)	3.330	13	0,0608	0,0430	; 0,0786	0,0340	sig
5	Sales Growth (SG)	2.389	12	0,1005	0,0965	; 0,1045	0,0401	sig

Source: Data Processed by Researchers

1. **Profitability (ROA):** The first variable examined is **profitability**, represented by Return on Assets (ROA). The analysis includes 30 studies with a sample size of 5,851. The average effect size (\bar{r}) for profitability is 0.2005, with a 95% confidence interval ranging from 0.1421 to 0.2589. The calculated r value of 0.0255 is significantly greater than the table r value, indicating that the effect of profitability on tax avoidance is statistically significant. This suggests that higher profitability leads to a greater tendency for firms to engage in tax avoidance strategies, likely to minimize tax liabilities as their profit increases.



2. **Leverage (DAR):** The second variable is **leverage**, measured by the Debt-to-Assets Ratio (DAR). With 17 studies and a sample size of 3,986, the average effect size (\bar{r}) for leverage is 0.1343, with a 95% confidence interval from 0.0736 to 0.1951. The calculated r value of 0.0310 exceeds the table r value, confirming a significant relationship between leverage and tax avoidance. This indicates that firms with higher leverage, which incur higher interest expenses, are more likely to use tax avoidance strategies to reduce their taxable income and, consequently, their tax liabilities.
3. **Firm Size (Size):** The **firm size** variable, based on 16 studies with a sample size of 2,422, shows an average effect size (\bar{r}) of 0.2360. The 95% confidence interval ranges from 0.1563 to 0.3156. The calculated r value of 0.0398 is greater than the table r value, indicating a statistically significant effect. Larger firms are often more visible to tax authorities, and as a result, they may engage in tax avoidance to manage their tax obligations more effectively. The significant effect of firm size suggests that as firms grow, they may increasingly engage in strategies to minimize their tax burden.
4. **Capital Intensity (CI):** The variable **capital intensity** is based on 13 studies with a sample size of 3,330. The average effect size (\bar{r}) for capital intensity is 0.0608, with a 95% confidence interval from 0.0430 to 0.0786. The calculated r value of 0.0340 exceeds the table r value, suggesting a significant effect on tax avoidance. Firms with higher capital intensity often make substantial investments in fixed assets, which allows them to use depreciation as a tax shield. The significant effect observed indicates that capital-intensive firms are more likely to engage in tax avoidance by exploiting depreciation deductions.
5. **Sales Growth (SG):** Lastly, **sales growth** was examined, based on 12 studies and a sample size of 2,389. The average effect size (\bar{r}) for sales growth is 0.1005, with a 95% confidence interval between 0.0965 and 0.1045. The calculated r value of 0.0401 is higher than the table r value, indicating a significant relationship between sales growth and tax avoidance. As companies experience higher sales growth, their profitability increases, leading to higher tax obligations. This motivates firms to engage in tax avoidance strategies to minimize their tax liabilities, as seen from the positive effect of sales growth.

In conclusion, the meta-analysis results confirm significant relationships between all five explanatory variables—profitability, leverage, firm size, capital intensity, and sales growth—and tax avoidance. The findings suggest that as firms grow in profitability, leverage, size, capital intensity, and sales, they tend to engage more in tax avoidance strategies to reduce their tax liabilities.

Discussion

The Effect of Profitability on Tax Avoidance

A meta-analysis of 30 studies involving 5,851 effect sizes across industries such as manufacturing, property, and mining found that 20 studies showed a significant relationship between profitability and tax avoidance, while 10 did not. Overall, the trend indicates a negative relationship, suggesting that as profitability (measured by ROA) increases, companies tend to lower their CETR through strategic tax planning, reflecting higher levels of tax avoidance.

The meta-analysis of 30 studies, including 5,851 effect sizes across industries like manufacturing, property, and mining, reveals a significant negative relationship between profitability (measured by ROA) and tax avoidance in 20 studies, while 10 studies showed no significant relationship. This finding suggests that as profitability increases, firms tend to engage in tax avoidance strategies to reduce their Corporate Effective Tax Rate (CETR), which aligns with **Agency Theory**, where managers seek to maximize shareholder wealth by minimizing tax liabilities (Jensen & Meckling, 1976). Additionally, **Signaling Theory** supports this by indicating that firms use tax avoidance as a signal of financial efficiency and stability, signaling their ability to manage resources effectively (Spence, 1973), while **Resource Dependence Theory** suggests that firms with higher profitability have more resources at their disposal, allowing them to engage in complex tax planning to optimize their financial position (Pfeffer & Salancik, 1978).

The findings of this study, which show a significant negative relationship between profitability (measured by ROA) and tax avoidance in 20 out of 30 studies, offer a novel perspective compared to previous research, where the relationship between these variables has often been inconclusive or mixed. While many prior studies have shown a positive correlation between profitability and tax avoidance, reflecting that higher profits often lead to more tax avoidance strategies (Desai & Dharmapala, 2006), this study's findings suggest that firms may engage in strategic tax planning to lower their Corporate Effective Tax Rate (CETR) as profitability increases, indicating a more nuanced relationship. This novelty lies in the emphasis on strategic tax planning as a signal of financial efficiency, aligning with **Agency Theory**, which posits that managers act to maximize shareholder wealth through tax avoidance (Jensen & Meckling, 1976), and providing new insights into how firms navigate profitability and tax obligations across diverse industries.

In response to the research findings, it is essential to formulate policies that encourage transparency in tax planning practices, particularly in high-profit industries like manufacturing, property, and mining, where firms are more likely to engage in strategic tax avoidance to minimize their CETR. Given the significant negative relationship between profitability and tax avoidance, regulators and policymakers should focus on creating tax regulations that discourage aggressive tax avoidance while maintaining incentives for legitimate tax planning (Hanlon & Heitzman, 2010). Additionally, businesses should be encouraged to adopt ethical tax strategies that align with **Agency Theory**, ensuring that managers act in the best interests of shareholders by reducing tax avoidance strategies that could damage the company's public image and long-term financial stability (Jensen & Meckling, 1976).

The Effect of Leverage on Tax Avoidance

Of the 17 studies with 3,986 effect sizes from industries like manufacturing, property, and mining, 9 studies found a significant relationship between leverage and tax avoidance, while 8 studies found no significant effect. The trend suggests that leverage generally has a positive influence on tax avoidance, as companies that use debt to finance assets can reduce their tax liabilities through interest deductions, with higher leverage leading to increased tax avoidance.

The findings of this study indicate that leverage generally has a positive influence on tax avoidance, with companies using debt to finance assets benefiting from interest deductions that reduce their tax liabilities. According to **Agency Theory**, managers may use leverage as a strategy to minimize tax obligations and maximize shareholder wealth by lowering the firm's effective tax rate (Jensen & Meckling, 1976). From a **Signaling Theory** perspective, firms with higher leverage may signal financial strength and stability to investors, while also strategically engaging in tax avoidance to enhance profitability, a signal of efficient financial management (Spence, 1973). Furthermore, **Resource Dependence Theory** suggests that firms with more access to external resources, such as debt financing, are better positioned to engage in tax planning strategies, leveraging their resources to reduce tax burdens and improve financial stability (Pfeffer & Salancik, 1978).

The findings of this study, which indicate that leverage generally has a positive influence on tax avoidance through the use of debt for asset financing and subsequent interest deductions, offer a novel perspective compared to previous research, which has often presented mixed or inconclusive results regarding the relationship between leverage and tax avoidance (Graham, 2003). While earlier studies have acknowledged that leverage can reduce tax liabilities, they have not consistently emphasized the strategic use of interest deductions as a primary driver of tax avoidance (Desai & Dharmapala, 2006). This study's novel contribution lies in demonstrating that higher leverage directly correlates with increased tax avoidance, aligning with **Agency Theory**, where managers actively seek to reduce tax burdens to enhance shareholder wealth (Jensen & Meckling, 1976), and highlighting a more definitive role of leverage in corporate tax planning.

In response to the finding that leverage generally has a positive influence on tax avoidance, policymakers and regulators should consider creating more stringent guidelines and regulations to ensure that the use of leverage for tax avoidance purposes does not undermine the fairness of the tax system. Companies should be encouraged to adopt transparent tax strategies that comply with legal standards while minimizing aggressive tax avoidance practices, ensuring that interest deductions do not disproportionately benefit large firms at the expense of smaller businesses (Hanlon & Heitzman, 2010). Additionally, firms could be incentivized to use debt financing for productive investments rather than tax avoidance, aligning with **Agency Theory**, which suggests that while managers may seek to minimize tax liabilities, they should also act in ways that contribute to long-term corporate value and shareholder wealth (Jensen & Meckling, 1976).

The Effect of Firm Size on Tax Avoidance

Of the 16 studies with 2,422 effect sizes across industries like manufacturing, property, and mining, 10 studies found a significant relationship between company size and tax avoidance, while 6 studies found no significant effect. The trend suggests that larger firms are less likely to engage in tax avoidance due to increased scrutiny from tax authorities and a desire to maintain their reputation, whereas smaller firms may prioritize profit growth and are more likely to use tax avoidance strategies. The findings indicate a negative relationship, implying that as company size increases, the likelihood of engaging in tax avoidance decreases.

The findings of this study suggest that larger firms are less likely to engage in tax avoidance due to increased scrutiny from tax authorities and a strong desire to maintain their reputation, which aligns with **Agency Theory**, where managers in larger firms are more likely to act conservatively to avoid risks that could harm shareholder value and the firm's long-term reputation (Jensen & Meckling, 1976). **Signaling Theory** supports this view by indicating that large firms may use their tax compliance as a signal of financial stability and legitimacy to investors and stakeholders, thereby avoiding the negative perceptions associated with aggressive tax avoidance (Spence, 1973). Moreover, **Resource Dependence Theory** suggests that larger firms, with greater access to resources, are more capable of



managing relationships with tax authorities and external stakeholders, reducing their need for tax avoidance strategies as a means of financial optimization (Pfeffer & Salancik, 1978).

The findings of this study, which indicate a negative relationship between company size and tax avoidance, offer a novel perspective compared to previous research, where the relationship has often been either positive or inconclusive (Desai & Dharmapala, 2006). While prior studies have suggested that larger firms might engage more in tax avoidance due to their greater financial capacity and resources (Graham, 2003), this study highlights that the increased scrutiny and reputational concerns faced by larger firms reduce their likelihood of engaging in tax avoidance. The novelty of this study lies in the emphasis on the reputational and regulatory pressures faced by large firms, which aligns with **Agency Theory** and **Signaling Theory**, offering a more nuanced understanding of how company size influences tax avoidance behavior (Jensen & Meckling, 1976; Spence, 1973).

In response to the finding that larger firms are less likely to engage in tax avoidance due to increased scrutiny and reputational concerns, regulatory bodies should formulate policies that ensure smaller firms are also held accountable for their tax practices, encouraging compliance without relying on aggressive tax avoidance strategies. Given the negative relationship between company size and tax avoidance, governments can focus on strengthening tax regulations that discourage tax avoidance while offering incentives for companies, both large and small, to engage in ethical tax practices that promote long-term financial stability (Hanlon & Heitzman, 2010). Furthermore, companies, especially smaller ones, should be encouraged to focus on sustainable growth strategies that align with **Agency Theory** and **Signaling Theory**, ensuring that their tax strategies are transparent and contribute positively to their reputation and shareholder value (Jensen & Meckling, 1976; Spence, 1973).

The Effect of Capital Intensity on Tax Avoidance

Out of 12 studies with an effect size of 3,330, one study found that capital intensity has an impact on tax avoidance, while 11 studies indicated no significant effect. The trend suggests that higher capital intensity, due to increased fixed assets, can lead to tax avoidance as firms can use depreciation deductions to reduce their taxable income.

The finding that capital intensity has a limited impact on tax avoidance, with most studies showing no significant effect, highlights the complex nature of the relationship between fixed asset investments and tax behavior. According to **Agency Theory**, managers may utilize depreciation on fixed assets as a tool to minimize tax liabilities and maximize shareholder wealth, suggesting that while capital intensity could play a role in tax avoidance, it is not always a decisive factor (Jensen & Meckling, 1976). From a **Signaling Theory** perspective, firms with high capital intensity may signal their financial health and stability, using tax avoidance as a strategy to enhance their profitability, yet this signal may not be as strong as other financial signals, such as profitability (Spence, 1973). Additionally, **Resource Dependence Theory** suggests that companies with greater capital intensity might leverage their assets to manage financial resources more effectively, yet this does not always translate into a consistent tax avoidance strategy, especially in the face of regulatory scrutiny (Pfeffer & Salancik, 1978).

The finding of this study, where only one out of 12 studies showed a significant effect of capital intensity on tax avoidance, contrasts with previous research that often suggested a stronger relationship between capital intensity and tax avoidance, particularly highlighting how firms with high fixed assets use depreciation as a tax shield (Graham, 2003). While earlier studies emphasized the potential of capital intensity to significantly reduce tax liabilities through depreciation, this study's results point to a more nuanced effect, where the influence of capital intensity on tax avoidance is not as pronounced (Desai & Dharmapala, 2006). The novelty of this study lies in its indication that, despite the potential for tax avoidance through depreciation, other factors, such as regulatory constraints or corporate governance, may reduce the overall effectiveness of capital intensity as a tax planning strategy.

In response to the finding that capital intensity has a limited impact on tax avoidance, regulators should consider reviewing and tightening tax policies regarding depreciation deductions to ensure that companies are not overly relying on such deductions for tax avoidance. Given that higher capital intensity has only a modest effect on tax avoidance, it is important for tax authorities to implement more comprehensive measures that focus on overall corporate transparency and long-term tax compliance, beyond just fixed asset investments (Hanlon & Heitzman, 2010). Additionally, firms should be encouraged to focus on ethical tax strategies that align with **Agency Theory**, ensuring that managers use capital assets to create long-term value for shareholders rather than solely seeking to minimize tax liabilities (Jensen & Meckling, 1976).

The Effect of Sales Growth on Tax Avoidance

Out of 12 studies with an effect size of 2,389, including industries like manufacturing and basic chemicals, 5 studies found a significant relationship between sales growth and tax avoidance, while 7 studies found no significant effect. The trend suggests that as sales growth increases, companies face higher tax liabilities, which may influence their likelihood of engaging in tax avoidance. However, the overall findings indicate a negative relationship, implying

that firms with growing sales and higher profits are better able to pay their taxes, reducing the need for tax avoidance strategies.

The findings of this study suggest that, despite the increased tax liabilities associated with sales growth, firms with growing sales and higher profits are less likely to engage in tax avoidance, which aligns with **Agency Theory**, as managers may prioritize long-term stability and shareholder wealth by avoiding aggressive tax strategies when profits allow for easier tax payments (Jensen & Meckling, 1976). According to **Signaling Theory**, companies with higher sales growth may signal financial strength and stability to investors, which could decrease the incentive to engage in tax avoidance, as tax compliance becomes a sign of operational efficiency (Spence, 1973). Moreover, **Resource Dependence Theory** suggests that firms with higher sales and profits have more resources to manage their tax obligations, reducing the need for tax avoidance strategies while maintaining good relationships with tax authorities and external stakeholders (Pfeffer & Salancik, 1978).

The findings of this study, which show that sales growth generally leads to higher tax liabilities and thus reduces the need for tax avoidance, offer a novel perspective compared to previous studies, which often found a positive relationship between sales growth and tax avoidance, suggesting that growing sales lead firms to use tax avoidance strategies to manage increased tax burdens (Graham, 2003). While prior research has primarily focused on how increasing sales and profits motivate firms to minimize taxes through aggressive strategies (Desai & Dharmapala, 2006), this study highlights that higher profitability from sales growth can instead enable firms to pay their taxes more easily, reducing the reliance on tax avoidance. The novelty of this study lies in emphasizing that sales growth may not always lead to tax avoidance, as larger profits from growing sales can enhance firms' ability to fulfill tax obligations, suggesting a more complex relationship than previously understood.

In response to the finding that sales growth generally leads to higher tax liabilities, policymakers should focus on designing tax policies that ensure tax avoidance is not used as a strategy to offset these liabilities, especially as firms with higher sales growth may be less reliant on such tactics. Regulators could consider providing incentives for companies to invest in legitimate tax planning and compliance strategies, rather than seeking to reduce taxes through avoidance, thus promoting sustainable growth and long-term financial stability (Hanlon & Heitzman, 2010). Moreover, firms should be encouraged to adopt transparent and ethical tax strategies, aligned with **Agency Theory**, ensuring that managers act in the best interests of shareholders by fostering compliance with tax regulations without undermining the company's reputation (Jensen & Meckling, 1976).

5. CONCLUSIONS

One important and shocking finding of this research is that, despite the common assumption that highly profitable companies are more likely to engage in tax avoidance, the meta-analysis reveals a significant negative relationship between profitability and tax avoidance. This suggests that, as profitability increases, companies may actually reduce their reliance on tax avoidance strategies, possibly due to the ability to pay taxes more comfortably, a desire to maintain reputational standing, and the scrutiny that larger, more profitable firms face from regulators. This finding challenges the traditional view that tax avoidance is primarily a response to high profits and calls for a reevaluation of the factors that drive tax planning behaviors, particularly in the context of firm growth and profitability.

The concepts, theories, and methods used in this study are highly effective in addressing the research problems. **Agency Theory** provides a solid foundation for understanding how managers' incentives to maximize shareholder wealth can lead to tax avoidance, especially in firms with higher profitability (Jensen & Meckling, 1976). **Signaling Theory** helps explain how firms use tax avoidance as a signal of financial strength and stability to investors, particularly in the context of increasing profitability (Spence, 1973). Additionally, **Resource Dependence Theory** highlights the role of external resources, such as access to debt financing or tax planning resources, which can influence a firm's tax behavior (Pfeffer & Salancik, 1978). The meta-analysis method is well-suited to synthesize findings from multiple studies and provide a comprehensive understanding of the relationship between financial performance and tax avoidance, allowing for a more nuanced answer to the research questions. This combination of theoretical lenses and method effectively addresses the research problems by uncovering complex relationships and providing insights into corporate tax behavior across various industries.

One limitation of this research is that it relies heavily on published studies from sources like Google Scholar and Publish or Perish, which may introduce publication bias, as studies with significant findings are more likely to be published (Rosenthal, 1979). Additionally, the meta-analysis method, while powerful, can be limited by the heterogeneity of the studies included, as differences in study design, sample size, and methodology may influence the results (Borenstein et al., 2009). Furthermore, this study only considers a limited range of variables—profitability, leverage, firm size, capital intensity, and sales growth—while other factors, such as corporate governance or regulatory environments, may also play a significant role in shaping tax avoidance behavior but were not included in the analysis



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(Desai & Dharmapala, 2006). Lastly, the generalizability of the findings might be restricted due to the focus on specific industries like manufacturing, property, and mining, which may not represent the broader spectrum of business sectors.

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