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Research Article

Ownership Structure and Corporate Tax Avoidance: Does Audit Quality and Firm Size Matter?

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ABSTRACT

This study investigates the direct and indirect relationships between different dimensions of ownership structure (foreign ownership, managerial ownership, ownership concentration and cross-ownership) and corporate tax avoidance (CTA). It examines the mediating effect of audit quality (AQ) and the moderating influence of firm size (FS) on these relationships. The study employs a panel data analysis of non-financial firms listed on the Ghana Stock Exchange from 2010 to 2023. A structural equation modeling approach is used to test the mediation and moderation hypotheses. The analysis incorporates various econometric techniques to address potential endogeneity concerns and ensure the robustness of the findings. The results indicate that foreign ownership has a significant positive direct effect on CTA, while managerial ownership, ownership concentration, and cross-ownership do not directly influence CTA. The study finds that managerial ownership is positively associated with AQ, while the other ownership dimensions do not significantly impact AQ. Importantly, the study reveals that the relationship between ownership structures and CTA is fully mediated by AQ. Furthermore, firm size is found to significantly moderate the effects of foreign ownership, ownership concentration, and cross-ownership on CTA. The findings provide valuable insights for policymakers and corporate governance regulators. The results highlight the critical role of audit quality in translating ownership influence into tax compliance outcomes. They also emphasize the importance of considering firm-level contextual factors, such as size, when examining the ownership-tax avoidance nexus. These insights can inform the development of targeted policies and regulations to enhance corporate tax transparency and accountability. This study contributes to the existing literature by providing a comprehensive, nuanced understanding of the complex relationships between ownership structure, audit quality, firm size, and corporate tax avoidance in an emerging market context. The findings expand the current knowledge on the mechanisms through which ownership characteristics shape tax avoidance practices.

Keywords: Corporate tax avoidance, Ownership structure, Audit quality, Firm size, Structural equation modeling.

INTRODUCTION

Tax avoidance is a significant issue for financial institutions, particularly for those operating in developing economies. The burden of tax expenditure can constrain cash flow and incentivize aggressive tax planning to minimize obligations (Beer et al., 2020; Kovermann & Velte, 2021). This poses a challenge for governments seeking to balance their tax revenue needs with the erosion of the tax base from corporate tax avoidance (Castagne et al. 2023). Research suggests that financial institutions in developing markets often prioritize tax minimization strategies as part of their financial management (Gao et al., 2019; Lietz, 2022). While taxes are a major expense, some evidence indicates that these firms underutilize tax avoidance strategies (Blouin & Robinson, 2020). The complex interplay between corporate financial decisions, regulatory environments, and national economic objectives underscores the need for a nuanced understanding of tax-avoidance behaviours in financial institutions (Wilde & Wilson, 2018).

The ownership structure of financial firms in emerging markets may be an important factor in their tax avoidance practices. However, the relationship between ownership and tax planning remains unclear with conflicting findings in the literature (Fernandez-Rodríguez et al. 2019; Khan et al. 2017; Jiang et al. 2021). Further research is needed to reconcile these divergent perspectives and provide insights relevant to policymakers and financial institution leaders in developing economies (Dakhli 2022; Velte 2023). While other reasons account for the conflicting views in the literature, different measures of OS may be more critical. A recent review by Velte (2023) showed that institutional, state, and family ownership have been largely examined, whereas foreign, managerial, ownership concentration and cross-ownership have not received adequate attention. Additionally, Qawqzeh (2023) called for studies to consider under-explored ownership structures (such as foreign and concentrated ownership). Therefore, the present study responds to this call by examining how different ownership structures, such as foreign, managerial, ownership concentration, and cross-ownership, shape corporate tax avoidance behaviours among financial institutions in developing economies. Moreover, while previous studies have frequently measured tax avoidance using ETR (Cash; GAAP; long-term), BTD (unexplained, discretionary, permanent, total, temporary), tax payments, tax shelters, underreported revenue to evade taxes (BEPS survey), tax haven (subsidiaries use as dummy; number), thinly capitalized tax avoidance structure (safe harbor test), and CEO turnover after the use of tax shelters, book-tax differences that could also offer an insightful measure of tax avoidance have been neglected (Qawqzeh, 2023). This study attempts to bridge this gap by examining the different dimensions of OS on tax avoidance (measured by book-tax difference), which has rarely been explored. The use of book-tax difference (BTD) as a measure of tax avoidance offers notable advantages over other common metrics, such as the effective tax rate (ETR) and specific BTD components. BTD provides a more comprehensive assessment of a firm's tax planning strategies, capturing both legitimate and aggressive behaviors over the long term, which is particularly valuable in the complex regulatory environments of developing economies. BTD complements other tax avoidance indicators, enabling a multidimensional understanding of a firm's overall tax management approach that may not be fully reflected in narrower metrics.

Additionally, previous studies investigating the effect of ownership structures on tax avoidance activities have largely been limited to direct relationships and have paid limited attention to the mechanism and underlying conditions for the OS and CTA link to occur (Dakhli, 2022). To advance the earlier discourse on the OS and CTA phenomena, there have been calls to examine the moderators and mediators that can further illuminate the OS and CTA links that have not been adequately explored (Velte, 2023). Similarly, previous studies (Qawqzeh, 2023) have argued that firm characteristics and audit quality could play a crucial role in shaping this relationship. Therefore, this study proposes audit quality as a mediator. The study argues that firms with high-quality audits can constrain their ability to engage in aggressive tax planning by exposing potential tax-motivated earnings management and transactions designed to minimize tax liabilities. Conversely, weaker audit quality may create an environment in which the link between ownership structure and tax avoidance is more pronounced because there are fewer checks and balances in place. By examining the mediating effect of audit quality, this study offers insights into the governance mechanisms that shape tax planning behaviors, particularly in financial institutions operating in emerging market contexts.

Additionally, the study argues that firm size plays a crucial role in moderating the relationship between ownership structure and corporate tax avoidance, as it serves as a moderating mechanism that influences how ownership characteristics translate into tax-planning strategies. Firm size can either amplify or mitigate the propensity for tax avoidance behavior that may arise from various ownership configurations. Larger firms tend to have more resources, expertise, and sophisticated tax-planning capabilities, which can amplify the impact of ownership structures on tax-avoidance strategies. Dominant shareholders or insiders in large firms may have greater opportunities to engage in complex tax-minimization activities. Conversely, smaller firms may face greater constraints in their tax-planning efforts, reducing the influence of ownership structures on tax avoidance. The moderating effect of firm size is particularly relevant in the context of financial institutions operating in developing economies, where resource disparities and varying levels of tax planning sophistication may shape how ownership structures translate into tax behaviors. Thus, it is interesting to investigate what previous studies have relatively neglected, as well as gain new evidence and insights into the ownership structures–tax avoidance relationships and the effect of audit quality and firm size on these relationships. In this study, three questions were developed to address the objectives, and each question was associated with each objective. The questions and objectives of this study are associated with eight hypotheses. The first question is associated with the direct effects of ownership structure (foreign, managerial, ownership concentration, and cross-ownership) on tax avoidance (H1a, H1b, and H1c). The second question relates to the mediating effect of audit quality on ownership structures–tax avoidance relationships (H2a, H2b, and H2c). The third question is related to the moderating effect, which reflects the effect of firm size on ownership structure–tax avoidance relationships (H3a, H3b, and H3c). The research questions that this study seeks to address are:

RQ1. How does the ownership structure affect corporate tax avoidance?
RQ2. Does audit quality mediate ownership structure–tax avoidance relationships?
RQ3. Does firm size moderate ownership structure–tax-avoidance relationships?

This study claims originality insofar as it proposes the establishment of dynamic links between ownership structure and tax avoidance in board governance. Unlike prior studies that have examined the direct relationship between ownership structure Finally, Finally, and corporate tax avoidance, this study further investigates how audit quality potentially mediates, and firm size moderates, this relationship. The remainder of this paper is organized as follows. Section 2 presents our theoretical framework. Section 3 provides an overview of the relevant literature and derives our hypotheses. Section 4 describes our research methodology. The results, robustness checks, and additional analyses are presented and discussed in Section 5. Section 6 concludes the paper.

THEORETICAL REVIEW

To discuss the relationship between ownership structure, audit quality, firm size and corporate tax avoidance, we drew on stakeholder theory. According to stakeholder theory, a company should balance the interests of various stakeholders, including shareholders, employees, customers, suppliers, and the broader community, rather than focusing solely on shareholder wealth maximization (Freeman, 1984). This implies that corporate decision-making should consider the impact on all stakeholders, not just owners. In the context of corporate tax avoidance, stakeholder theory suggests that firms should consider the broader societal implications of their tax strategies, as aggressive tax avoidance may negatively impact government revenues and public services (Abid & Dammak, 2022). The stakeholder perspective has been used to explain corporate tax behavior, highlighting the tension between maximizing shareholder returns and fulfilling broader social responsibilities (Chouaibi et al. 2022). Ownership structure plays a crucial role in shaping a firm's approach to stakeholder management and, consequently, its tax avoidance behavior (Mindzak & Zeng, 2020). Different types of owners may have varying priorities and time horizons, influencing their attitudes towards tax planning (Bradshaw et al., 2019). For instance, institutional investors, with their significant shareholdings and long-term perspective, may be more inclined to consider the reputational risks and potential negative stakeholder reactions associated with aggressive tax avoidance (Abdelfattah & Aboud, 2020). Board governance serves as a critical mechanism for balancing diverse stakeholder interests and overseeing corporate tax strategies (Lanis et al., 2022). An effective board can ensure that tax decisions align with the company's overall stakeholder orientation and ethical standards (Lanis and Richardson, 2018). For example, boards with greater independence and diversity may be more likely to prioritize corporate social responsibility, including responsible tax practices (Rao & Tilt, 2016).

From a stakeholder theory perspective, corporate tax avoidance can be seen as a complex issue that requires balancing financial benefits against potential harm to the firm's relationships with various stakeholders (Goldman & Lewellen, 2020). While tax avoidance may increase short-term profits, it can also lead to reputational damage, regulatory scrutiny, and erosion of trust with key stakeholders (Ding et al., 2020). The interaction between ownership structure and audit quality, firm size in shaping tax avoidance behavior can be understood through the lens of stakeholder management. Different ownership structures may influence the board's composition and priorities, which in turn affects how the company balances its tax strategy with broader stakeholder considerations (García-Sánchez et al., 2019). For instance, firms with high institutional ownership and strong board governance may be more likely to adopt transparent and socially responsible tax practices to maintain legitimacy with diverse stakeholders (Nair et al., 2019). In conclusion, stakeholder theory provides a valuable framework for examining the complex relationships between ownership structure, board governance, and corporate tax avoidance. It highlights the need for companies to consider the broader implications of their tax strategies and the role of governance mechanisms in balancing diverse stakeholder interests.

HYPOTHESIS DEVELOPMENT

Foreign ownership on corporate tax avoidance

Foreign ownership has become a significant concern regarding corporate tax avoidance practices, as foreign investors may have different motivations and risk preferences compared to domestic shareholders. Foreign investors often face information asymmetry and higher monitoring costs, which can influence their stance on tax avoidance activities (Kovermann & Velte, 2019). These investors may be particularly sensitive to reputational risks and "tax-shaming" in their home countries, leading them to be cautious about aggressive tax planning strategies in their foreign investments (Lokanan, 2023). The relationship between foreign ownership and tax avoidance reflects a complex interplay of monitoring capabilities, information access, and cross-border regulatory considerations. From a theoretical perspective, while tax avoidance could enhance firm value through tax savings, foreign ownership might actually constrain such activities due to heightened scrutiny and compliance concerns across multiple jurisdictions (Medhioub & Boujelbene, 2024). As suggested by stakeholder theory, foreign owners face unique agency costs and information disadvantages that can affect their ability to monitor management's tax planning decisions effectively (Freeman, 1984). Empirical evidence on this relationship has been mixed. Studies by Qawqzeh (2023) and Mgammal (2019) documented a positive association between foreign ownership and tax avoidance, suggesting that foreign investors might encourage tax-saving strategies to enhance returns on their international investments. Conversely, research by Park et al. (2016) and Ahmad et al. (2020) found a negative relationship, indicating that foreign owners might prefer more conservative tax approaches to minimize regulatory risks and protect their reputational capital. Other studies, such as those by Lee and Park (2019), revealed no significant relationship between foreign ownership and tax avoidance practices. The monitoring role of foreign ownership in corporate governance becomes particularly complex in the context of tax avoidance, as these investors must navigate multiple tax regimes and regulatory environments while managing their exposure to both home and host country scrutiny (Sumantri et al., 2024). This complexity is further magnified by the fact that foreign owners often face additional layers of tax obligations in their home countries, potentially influencing their preferences regarding the tax planning strategies of their investment targets (Marano et al., 2017). Thus;

***H*$_{1a}$*.* *Foreign ownership has a significant impact on corporate tax avoidance*

Managerial ownership on corporate tax avoidance

The relationship between managerial ownership and corporate tax avoidance has garnered significant attention in recent research, yet the empirical evidence remains inconclusive. Some studies, such as those by Cabello et al. (2019) and Khurana and Moser (2013), found no significant association between managerial ownership and tax avoidance, suggesting that managerial owners may not leverage their ownership stakes to enhance the firm's commitment to effective tax planning. Conversely, Amri et al. (2023) reported that an increase in the percentage of shares held by managerial shareholders negatively influenced corporate tax avoidance levels. This contrasts with previous findings that suggested a positive correlation between managerial ownership and tax avoidance practices (Qawqzeh, 2023; Saragih & Ali, 2023). It is posited that managerial owners wield considerable influence over their firm's tax planning decisions (Tijjani & Peter, 2020), benefiting from substantial control and asymmetric information advantages (Seifert et al., 2021). Additionally, these owners are generally equipped with extensive experience and resources, which empower them to effectively manage the firm's tax strategies (Tanko et al., 2023). As a result, managerial owners often have heightened incentives to engage in tax avoidance activities (Minnick and Noga, 2010). Recently, Amani (2024) highlighted that managerial ownership positively affects long-term tax avoidance, suggesting that private tax benefits could serve as a motivating factor for managerial owners. Based on the above discussions, the following hypothesis can be formulated:

***H*$_{1b}$*.* *Managerial ownership concentration has a significant impact on corporate tax avoidance*

Ownership concentration on corporate tax avoidance

The relationship between ownership concentration and corporate tax avoidance remains a contentious issue, as concentrated shareholders may be reluctant to promote tax avoidance strategies due to potential reputational risks and regulatory scrutiny (Wang et al., 2022). Large blockholders, similar to institutional investors, may avoid explicitly advocating for tax avoidance practices due to concerns about "tax-shaming" and negative public perception (Barford and Holt, 2013). Instead, these concentrated owners might exercise their influence through private communications or implicit pressure for enhanced financial performance (Dakhli, 2021). While tax avoidance theoretically increases firm value through tax savings, concentrated ownership might actually discourage aggressive tax planning, particularly when such practices could compromise transparency or enable managerial opportunism (Chakroun & Ben Amar, 2024). According to Ozdemir & Kilincarslan (2021), large shareholders with concentrated ownership possess both the incentive and capability to monitor management more effectively than dispersed shareholders, as they stand to gain more from such oversight. Empirical evidence on the relationship between ownership concentration and tax avoidance has been mixed. Studies by Bradshaw et al. (2019) document a negative association between ownership concentration and tax avoidance behavior. Conversely, research by Gaaya et al. (2017) finds that concentrated ownership is positively associated with corporate tax avoidance practices. Some studies, such as Wahab and Holland (2012), report no significant relationship between ownership concentration and tax avoidance activities. These varied findings could be attributed to differences in institutional contexts, measurement approaches, and time periods studied. From an stakeholder theory perspective, ownership concentration can serve as a significant corporate governance mechanism that influences tax-related decision-making (Freeman, 1984). Large blockholders may exercise their substantial voting rights and monitoring capabilities to either constrain or encourage tax avoidance activities, depending on their risk preferences and investment horizons (Edmans & Holderness, 2017).

H1c. *Ownership concentration has a significant impact on corporate tax avoidance*

Cross-ownership on corporate tax avoidance

Although the relationship between cross-ownership and corporate tax avoidance has been increasingly examined, empirical results are mixed. In fact, Lee and Park (2021) and Kim et al. (2019) find no significant association between cross-ownership and tax avoidance. Cross-ownership structures do not necessarily lead to increased tax planning activities. Chen and Wang (2022), however, found that the percentage of cross-held shares had a significant negative impact on the level of corporate tax avoidance. Previous studies have supported a positive relationship between cross-ownership and tax avoidance practices (Zhang & Liu, 2023; Park & Lee, 2023). It is argued that cross-ownership arrangements have a significant influence on a firm's tax planning decisions (Fanti & Buccella, 2021) by creating complex ownership networks and information asymmetries (Anderson et al., 2021). Furthermore, firms with substantial cross-ownership are assumed to have superior access to resources and expertise that enable them to effectively manage their tax positions (Wilson, 2023). Therefore, they have additional incentives to engage in tax avoidance activities (Davis and Chen, 2020). More recently, Thompson et al. (2023) found that cross-ownership has a positive impact on aggressive tax planning strategies. The authors argued that cross-ownership structures could facilitate the coordination of tax avoidance activities across affiliated firms. Thus;

H1d. *Cross-ownership positively influences corporate tax avoidance*

Foreign ownership on audit quality

Prior research has examined the relationship between foreign ownership and audit quality, suggesting that ownership structures significantly influence firms' audit choices and resulting quality. Foreign owners often demand higher audit quality due to geographical and cultural distances that create information asymmetries and monitoring challenges (Kim et al., 2019). The complex nature of foreign ownership creates unique agency problems, making the role of external auditors particularly crucial for maintaining transparency and accountability. Foreign investors typically face higher information risks due to their physical distance from operations and potential language barriers, leading them to rely more heavily on high-quality auditing as a monitoring mechanism (Hoang, 2018). Foreign shareholders often demonstrate a stronger preference for Big 4 auditors and higher audit quality to protect their investments and maintain credibility in international markets. Al Ani et al. (2024) found that foreign-owned companies are more likely to choose higher-quality auditors compared to locally owned firms. Similarly, Alhababsah et al. (2019) documented a positive association between foreign ownership and audit quality, suggesting that foreign investors demand more rigorous auditing procedures. Lee et al. (2018) revealed that firms with significant foreign ownership exhibit higher audit fees, indicating greater audit effort and quality. However, Ilhan-Nas et al. (2018) presented contrasting evidence, showing that the relationship between foreign ownership and audit quality varies depending on the institutional environment of the host country. Additionally, Guizani & Abdalkrim (2021) discovered a positive relationship between foreign ownership and audit quality, suggesting that foreign owners' sophisticated monitoring demands lead to enhanced audit procedures. Conversely, Ackah et al. (2024) found mixed results, indicating that the impact of foreign ownership on audit quality may be contingent on the percentage of foreign ownership and the development level of the host country's capital market. The previous inconsistency in the findings led to the following hypothesis;

H2a. *Foreign ownership positively associated with audit quality*

Managerial ownership on audit quality

The relationship between managerial ownership concentration and audit quality has garnered significant attention in recent years, yet the empirical findings remain inconclusive. Some studies indicate no significant link between levels of managerial ownership and various audit quality metrics (Jensen & Meckling, 2019; Khan et al., 2021; Rodriguez, 2023), while other research suggests a positive correlation (Chen et al., 2020; Wang & Liu, 2018). According to stakeholder theory, managers with substantial ownership stakes are likely to have strong motivations to ensure high-quality audits, as their interests align closely with those of shareholders and are directly impacted by their personal wealth (Freeman, 1984; Lee & Park, 2020). Companies characterized by higher concentrations of managerial ownership are generally more inclined to hire reputable auditors and invest in rigorous audit processes (Hassan et al., 2022; Li et al., 2021), driven by the desire of manager-owners to safeguard their significant investments. Conversely, some scholars have identified a negative relationship, positing that concentrated managerial ownership can lead to entrenchment behaviors and diminished audit scrutiny aimed at concealing personal benefits derived from control (Martinez & Garcia, 2020; Zhang & Wong, 2022). These mixed findings underscore the necessity for further investigation to unravel the complex dynamics between managerial ownership concentration and audit quality. Thus;

H_{2b}. *Managerial ownership concentration is positively associated with audit quality*

Ownership concentration on audit quality

Ownership concentration has been extensively studied in relation to audit quality, with researchers examining how concentrated ownership structures may influence the selection and effectiveness of external auditors. The complexity of ownership concentration's impact on audit quality presents interconnected challenges that have garnered significant attention in corporate governance literature. This issue is particularly relevant among publicly listed companies where the stakes of audit failure are considerably high (Lennox & Li, 2020). The ownership concentration structure in firms creates unique dynamics in the relationship between majority shareholders and minority shareholders, leading to varying demands for audit quality. Therefore, further investigation into this relationship remains crucial. The selection of external auditors in firms with concentrated ownership is often influenced by controlling shareholders who maintain significant voting rights and control over corporate decisions (Al Lawati & Sanad, 2023). While the primary benefit of high-quality audits in concentrated ownership firms is increased credibility of financial reporting, the associated costs can be substantial, including higher audit fees and increased scrutiny of related-party transactions (Hazami-Ammar, 2024). In their study, de Carvalho Pereira et al. (2023) found that companies with higher ownership concentration are less likely to hire high-quality auditors, suggesting a preference for reduced external monitoring. They indicated that controlling shareholders may choose lower-quality auditors to maintain their private benefits of control. Similarly, Kim et al. (2019) documented a negative association between ownership concentration and the selection of Big 4 auditors in emerging markets. Also, Hall et al. (2020) revealed that firms with concentrated ownership structures are less likely to employ industry specialist auditors. Furthermore, Qawqzeh et al. (2021) found that the governance role of auditors becomes more important in firms with concentrated ownership structures, particularly in countries with weak legal institutions. However, Amrah & Obaid (2019) reported contrasting findings, showing a positive relationship between ownership concentration and audit quality, suggesting that concentrated owners may demand higher quality audits to signal their commitment to transparency. Guizani & Abdalkrim (2021) argued that ownership concentration has no significant impact on audit quality when other corporate governance mechanisms are robust. From the perspective of stakeholder theory (Freeman, 1984), ownership concentration can play a dual role. On one hand, it can align the interests of key stakeholders, such as managers and shareholders, by ensuring that those with significant ownership stakes are motivated to prioritize the long-term health of the company, thus driving a demand for high-quality audits. On the other hand, concentrated ownership can also lead to imbalances in stakeholder representation, where the interests of minority shareholders may be overlooked. This misalignment of stakeholder interests could reduce the overall effectiveness of external audits, as dominant shareholders may seek to safeguard their own interests at the expense of other stakeholders. Thus;

H_{2c}. *Ownership concentration negatively influences audit quality*

Cross-ownership on audit quality

Based on the relationship between ownership structure and audit quality, several researchers have examined how different ownership arrangements, particularly cross-ownership, may influence audit quality and financial reporting outcomes. Cross-ownership, where companies hold shares in each other, presents unique challenges in ensuring audit independence and quality due to the complex web of relationships and potential conflicts of interest (Ciftci et al., 2019). This issue has become increasingly significant as corporate structures become more interconnected, particularly in developed markets where cross-ownership is more prevalent. The complexity of cross-ownership structures can affect auditor independence and professional judgment, potentially compromising audit quality (Frendy, 2022). The presence of cross-ownership in firms can create distinctive agency conflicts and information asymmetry problems that affect audit processes. Jadiyappa et al. (2021) found that cross-ownership structures significantly influence auditor choice and audit quality, with such firms often requiring more audit effort and commanding higher audit fees. Similarly, Zhang et al. (2024) documented that companies with substantial cross-ownership tend to experience lower audit quality due to the increased complexity of related party transactions and potential conflicts of interest. Furthermore, Causholli et al. (2019) revealed that cross-ownership arrangements can impair auditor independence, particularly when significant economic bonds exist between the cross-held companies. However, some studies have found contrasting results. For instance, Kim and Zhang (2016) discovered that cross-ownership can actually enhance audit quality by providing additional monitoring mechanisms through shared ownership interests. Zhou and Li (2019) similarly found that certain forms of cross-ownership lead to improved audit quality due to increased stakeholder scrutiny and shared reputational concerns. Park et al. (2020) documented that cross-ownership structures can serve as an effective corporate governance mechanism, potentially leading to higher audit quality through enhanced monitoring and transparency requirements. Conversely, Lee et al. (2018) found no significant relationship between cross-ownership and audit quality, suggesting that other factors may be more influential in determining audit outcomes. Thus;

H$_{2d}$. *Cross-ownership structures have a significant impact on audit quality*

The moderating role of firm size on ownership structure and corporate tax avoidance

The firm size has been widely recognized as a crucial determinant that influences corporate decision-making and tax planning strategies (Cooper & Nguyen, 2020). According to Ftouhi & Ghardallou (2020), larger firms possess more resources and opportunities to engage in sophisticated tax planning compared to smaller firms. The agency theory suggests that firm size can significantly affect the relationship between ownership structure and tax avoidance activities, as larger firms face greater agency conflicts and information asymmetry (Desai and Dharmapala, 2009). Boubakeret al. (2022) argued that the complexity and opacity of larger organizations could provide managers and different ownership entities with more opportunities to pursue tax avoidance strategies while potentially concealing their private benefits of control. In examining foreign ownership, prior studies have documented that the impact of foreign investors on tax avoidance may vary depending on firm size. Sebele-Mpofu et al. (2021) found that larger firms with foreign ownership tend to have more complex international operations and transfer pricing opportunities, potentially affecting their tax avoidance behavior. Similarly, for managerial ownership, the relationship with tax avoidance could be strengthened or weakened based on firm size. Elamer et al. (2024) suggested that managers in larger firms have more sophisticated resources and tax planning expertise at their disposal, potentially intensifying the relationship between managerial ownership and tax avoidance activities. Regarding ownership concentration, Ha & Feng (2021) documented that the effect of concentrated ownership on tax avoidance varies with firm size, as larger firms face different monitoring challenges and information environments. Ogbeide et al. (2020) argued that larger firms with concentrated ownership might have greater incentives and capabilities to engage in tax planning activities due to economies of scale in tax planning. In the context of cross-ownership, Xiao & Xi (2023) suggested that the complexity associated with larger firms could provide more opportunities for cross-owners to influence tax avoidance decisions while potentially extracting private benefits. The moderating role of firm size is particularly relevant as it can affect the resources, capabilities, and monitoring mechanisms available for different ownership structures to influence tax avoidance decisions (Dakhli, 2022). Large firms typically face greater public scrutiny and regulatory oversight, which could influence how different ownership structures approach tax planning (Thomas et al., 20210). Furthermore, firm size can affect the cost-benefit trade-offs of tax avoidance strategies for different ownership structures, potentially altering their tax planning behaviors (Krieg & Li, 2021). Consequently, based on the agency theory predictions and the varying impacts of firm size on the relationship between different ownership structures and tax avoidance, the current study proposes that firm size moderates the relationship between ownership structure (foreign ownership, managerial ownership, ownership concentration, and cross-ownership) and corporate tax avoidance.

H$_{3a}$. *Firm size moderates the relationship between foreign ownership and corporate tax avoidance.*

***H*_3b_.** *Firm size moderates the relationship between managerial ownership and corporate tax avoidance*

***H*_3c_.** *Firm size moderates the relationship between ownership concentration and corporate tax avoidance*

***H*_3d_.** *Firm size moderates the relationship between cross-ownership and corporate tax avoidance*

Audit quality on corporate tax avoidance

The relationship between audit quality and corporate tax avoidance has garnered significant attention in recent years, yet empirical findings remain inconsistent. Some studies indicate that higher audit quality is associated with lower levels of corporate tax avoidance, suggesting that firms subject to rigorous audits are less likely to engage in aggressive tax strategies (LRabbi & Almutairi, 2021; Chan & Song, 2021; Drake et al., 2023). These findings support the view that high-quality audits enhance financial reporting transparency and accountability, thus discouraging tax avoidance behaviors (Trimble & Song, 2024; Chen et al., 2024). Conversely, other research has shown no significant relationship between audit quality and tax avoidance, positing that firms may still find ways to exploit tax loopholes despite high-quality audits (Abid & Dammak, 2022; Jihene & Moez, 2019). Furthermore, some scholars suggest a positive association, arguing that firms with strong audit quality might be more willing to engage in tax planning activities as they seek to optimize their tax positions without crossing legal boundaries (Iazzi et al., 2023; Heri, 2023). These mixed findings underline the complexity of the relationship between audit quality and corporate tax avoidance, indicating a need for further investigation to elucidate the underlying dynamics. Thus;

***H*_4a_.** *Audit quality is negatively associated with corporate tax avoidance*

The mediating role of audit quality on ownership structure and corporate tax avoidance

The relationship between ownership structure and corporate tax avoidance has been extensively examined in prior literature, yet the mediating role of audit quality in this relationship remains relatively unexplored (Richardson et al., 2016; Kanagaretnam et al., 2016). According to agency theory, different ownership structures can significantly influence firms' tax planning strategies and avoidance activities (Jensen and Meckling, 1976). Foreign ownership, managerial ownership, ownership concentration, and cross-ownership each present unique agency conflicts that may affect tax avoidance decisions (Velte, 2024). Boussaidi & Hamed-Sidhom (2021) argue that ownership structure significantly influences corporate tax decisions through various channels of control and monitoring mechanisms. External audit quality serves as a crucial corporate governance mechanism that can potentially moderate or influence the relationship between ownership structure and tax avoidance activities (Qawqzeh, 2023; Indarti & Widiatmoko, 2023). High-quality auditors are less likely to approve aggressive tax avoidance strategies due to reputational concerns and litigation risks (Sari et al., 2023). Furthermore, audit quality can affect how different ownership structures approach tax planning decisions, as better audit quality typically results in more transparent financial reporting and reduced information asymmetry (Moallaet al., 2021). The presence of foreign ownership may create additional complexity in tax planning strategies due to cross-border transactions and different regulatory environments (Saksessia and Firmansyah, 2020). Similarly, managerial ownership can align or misalign management's interests with those of other shareholders regarding tax decisions (Madah Marzuki & Muhammad Al-Amin, 2021). Ownership concentration and cross-ownership structures might influence the aggressiveness of tax avoidance strategies based on the controlling shareholders' risk preferences and objectives (Xiao & Xi, 2023). Previous studies have shown that Therefore, this study proposed the following hypothesis external audit quality can significantly impact tax avoidance practices (Al-ahdal & Hashim, 2022). For instance, Kanagaretnam et al. (2024) found that higher audit quality is associated with lower levels of tax avoidance. Additionally, Dabari & Liuraman (2022) demonstrated that audit quality effectively moderates the relationship between ownership structure and tax avoidance behaviors. This suggests that high-quality auditors play a crucial role in monitoring and potentially limiting aggressive tax planning strategies, regardless of the ownership structure in place (Blaufus et al., 2023). The presence of high-quality external auditors might help mitigate the potential negative effects of various ownership structures on tax avoidance activities (Sun & Habib, 2021). This is particularly relevant given that different ownership structures may have varying incentives and opportunities for tax avoidance (Granda, 2021). Therefore, based on the theoretical framework of agency theory and previous empirical evidence, the current study proposes that audit quality mediates the relationship between ownership structure (foreign ownership, managerial ownership, ownership concentration, and cross-ownership) and corporate tax avoidance. Therefore, this study proposed the following hypothesis;

***H*_5a_.** *Audit quality mediates the relationship between foreign ownership and corporate tax avoidance*

***H*_5b_.** *Audit quality mediates the relationship between managerial ownership and corporate tax avoidance*

H*$_{5c}$*. *Audit quality mediates the relationship between ownership concentration and corporate tax avoidance*

H*$_{5d}$*. *Audit quality mediates the relationship between cross-ownership and corporate tax avoidance*

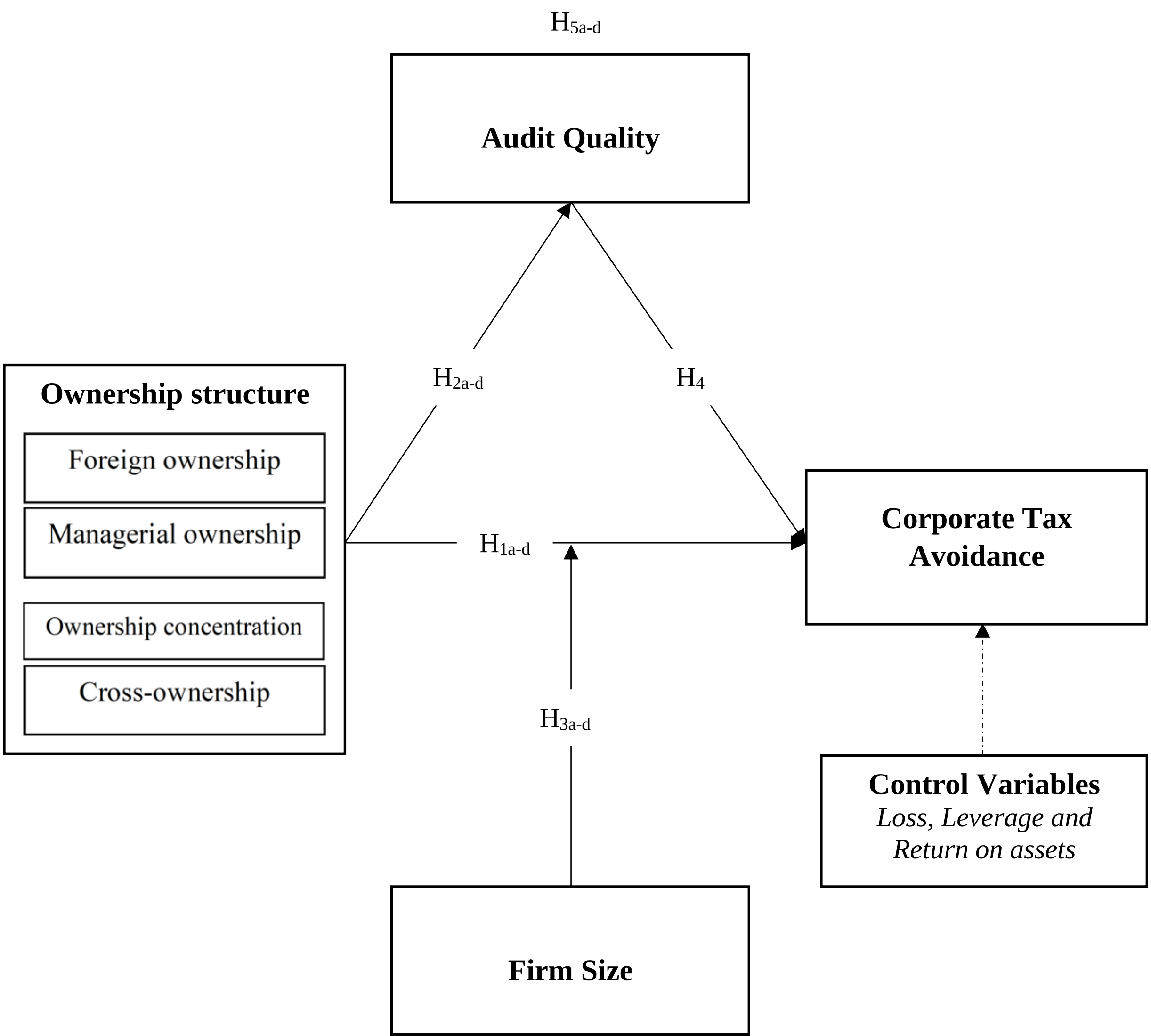

Figure 1; Conceptual Framework

RESEARCH DESIGN

Data Collection and Resources

To ensure accuracy and minimize bias, this study employs a combination of manual data collection from firms' annual reports and automated data retrieval from the Ghana Stock Exchange (GSE) financial information platform. The study population encompasses all nonfinancial companies listed on the GSE. The investigation covers the period 2010-2023, a timeframe that captures the implementation and effects of Ghana's enhanced corporate governance reforms and increased focus on tax compliance measures. Following established methodological approaches (e.g., Dakhli, 2022; Kalbuana et al., 2023), the study excludes financial companies due to their distinct regulatory framework, special characteristics, and varied trading mechanisms in the market. This exclusion is particularly important as financial and nonfinancial firms differ substantially in several aspects. While many corporate governance principles apply universally, key differences emerge from their business activities and regulatory environments. For instance, financial institutions, including banks, insurance companies, and investment firms, operate under more stringent regulatory requirements designed to ensure financial system stability and integrity, whereas nonfinancial firms generally face less rigorous regulatory oversight (Li, et al., 2016; Putri et al., 2023). The study also excluded companies with incomplete or missing data during the sample period remaining 22 firms for the study analysis. After applying these filtering criteria, the final sample comprises nonfinancial firms in the service and industrial sectors that consistently disclose the necessary information in their annual reports. Following seminal works by Malik and Munir (2024) and Wahba (2014), the study incorporates several control variables that potentially influence tax burden, namely firm size, return on assets (ROA), leverage, audit fees, and loss occurrence.

Table 1: Industry Distribution of Sample Firms

Industry	**No. of firms**	**Inclusion/Exclusion**
Finance	13	Excluded
Distribution	3	Included
Food And Beverage	5	Included
ICT	2	Included
Insurance	2	Excluded
Manufacturing	5	Included
Mining	4	Included
Agriculture	1	Included
Exchange Traded Funds(ETF)	1	Excluded
Education	1	Included
Advertisement & Production	1	Included
Total	**38**	

Source: Created by author

Measurement of Variables

The study employs multiple variables to capture the complex relationships between ownership structure, corporate tax avoidance, audit quality, and firm size. The dependent variable, Corporate Tax Avoidance (CTA), is measured using the book-tax difference (BTD) following established literature (Gaaya et al., 2017; Kovermann & Velte, 2019). This measure effectively captures the disparity between accounting income and taxable income, providing insights into firms' tax avoidance practices.

Ownership structure, the primary independent variable, is measured through four distinct dimensions. First, foreign ownership (FOWN) is measured as the percentage of shares held by foreign investors (Putri et al., 2023). Second, managerial ownership (MOWN) is calculated as the ratio between shares held by management and the total number of outstanding shares (Wahba, 2014). Third, ownership concentration (OCON) is measured as the percentage of shares held by major shareholders (Malik & Munir, 2024). Finally, cross-ownership (CROSS) is captured through a dummy variable that takes the value of 1 if shareholders own more than 5% of shares in multiple sample firms, and 0 otherwise (Fu et al., 2022; He et al., 2019).

The mediating variable, audit quality (AQ), is measured using a dummy variable that equals 1 if the company is audited by one of the Big Four audit firms, and 0 otherwise. This measurement aligns with previous studies that have established the significance of Big Four auditors in enhancing financial reporting quality (Kovermann & Velte, 2019; Alkurdi & Mardini, 2020).

The moderating variable, firm size (FSIZE), is measured as the natural logarithm of total assets, consistent with recent literature (Kalbuana et al., 2023). This transformation helps normalize the distribution of firm size and reduces the impact of extreme values in the analysis.

Table 2: Variable Type and Measurement

Variable	**Type**	**Measurement**
Corporate Tax avoidance (CTA)	Dependent variable	book-tax difference (BTD)
Audit quality (AQ)	Mediating variable	Dummy variable equals 1 if the company is audited by one of the Big audit firms, 0 otherwise
Firm Size	Moderating variable	$In(Total\ Assets)$ Kalbuana et al. (2023)
Ownership Structure	Independent variable	Foreign ownership; Managerial ownership; Ownership concentration; Cross-ownership
Foreign ownership		% of foreign shareholders Putri et al. (2023)
Managerial ownership		the ratio between shares held by management and total number of shares Wahba (2014)
Ownership concentration		% of shares held by major shareholders Malik and Munir (2024)
Cross-ownership		a dummy variable that takes the value of 1 if shareholders own more than 5% of shares in multiple sample firms, and 0 otherwise (Fu et al., 2022; He et al., 2019).
Return on assets (ROA)	Control variable	Net income to total assets
LOSS		Dummy variable equals 1 if the company reported loss, 0 otherwise
Leverage (LEV)		total debt divided by total assets Dakhli (2022)

Econometric Specification and Analytical Approach

The study employs a panel data regression methodology using Stata version 16, following recent empirical studies in corporate governance and tax avoidance (e.g., Agyemang & Modisane, 2023a, 2023b; Kalbuana et al., 2023; Malik & Munir, 2024). This methodological choice is particularly appropriate as panel data analysis effectively captures both time-series and cross-sectional dimensions of firm behaviour (Dakhli, 2022; Ertur & Musolesi, 2017; Rehan et al., 2023). The analysis follows a systematic approach developed through established econometric practices to address each research question while controlling for potential endogeneity and other econometric issues that commonly plague corporate governance research (Dong et al., 2021; Lane, 2020; Putri et al., 2023). Following methodological rigor demonstrated in recent literature (e.g., Wahba, 2014; Fu et al., 2022), the analysis begins with preliminary tests including descriptive statistics, correlation analysis, and variance inflation factor (VIF) tests to check for multicollinearity. The Hausman specification test is employed to determine the appropriate estimation method between fixed and random effects models, as recommended by Gaaya et al. (2017) and Kovermann and Velte (2019). To ensure robust results, several diagnostic tests are performed, including the modified Wald test for groupwise heteroscedasticity, Wooldridge test for autocorrelation, and Pesaran's test for cross-sectional dependence, following best practices in corporate governance research (Alkurdi & Mardini, 2020). Additional robustness checks include industry-adjusted variables following Zolotoy et al. (2021), and year-fixed effects to control for time-specific factors. The study addresses potential endogeneity concerns through instrumental variable estimation using lagged values of ownership variables as instruments, an approach validated in recent literature (Fernandez-Rodríguez et al., 2019). Furthermore, sensitivity analyses using different subsamples and periods are conducted to ensure the stability and generalizability of results, as recommended by Kamiński et al. (2018). This comprehensive methodological approach ensures robust and reliable findings while addressing potential econometric issues common in corporate governance research, thereby enhancing the validity and reliability of our findings.

To examine the direct relationship between ownership structure and corporate tax avoidance (RQ1), the following base model is specified:

$$CTAit = \beta 0 + \beta 1FOWNit + \beta 2MOWNit + \beta 3OCONit + \beta 4CROSSit + \beta 5ROAit + \beta 6LEVit + \beta 7LOSSit + \beta 8AFEEit + \varepsilon it$$

Where CTAit represents corporate tax avoidance for firm i in year t, and the ownership variables (FOWN, MOWN, OCON, CROSS) capture different aspects of ownership structure. Control variables include ROA, leverage (LEV), loss occurrence (LOSS), and audit fees (AFEE).

For the mediation analysis (RQ2), following Baron and Kenny's (1986) approach, the study estimate the following equations:

$$AQit = \alpha 0 + \alpha 1FOWNit + \alpha 2MOWNit + \alpha 3OCONit + \alpha 4CROSSit + Controls + \varepsilon it$$
$$CTAit = \gamma 0 + \gamma 1FOWNit + \gamma 2MOWNit + \gamma 3OCONit + \gamma 4CROSSit + \gamma 5AQit + Controls + \varepsilon it$$

The moderation effect of firm size (RQ3) is tested using interaction terms:

$$CTAit = \delta 0 + \delta 1FOWNit + \delta 2MOWNit + \delta 3OCONit + \delta 4CROSSit + \delta 5FSIZEit + \delta 6(OWN\times FSIZE)it + Controls + \varepsilon it$$

EMPIRICAL RESULTS

Descriptive statistics

Table 3 provides a summary of descriptive statistics for the primary variables used in this study's regression models. It is evident that CTA varies widely across firms, with a minimum of -0.564 and a maximum of 1.376. This substantial spread in CTA levels aligns with findings in studies such as Wang et al. (2019), where CTA values ranged broadly, highlighting significant differences in tax strategies among firms. AQ shows a high mean of 0.802 with a standard deviation of 0.399, indicating a predominantly high audit quality level across the sampled firms, which echoes similar results in prior research by DeFond and Zhang (2014). The average FS is 8.275, with a standard deviation of 2.313, reflecting considerable size variability, comparable to findings by Kim et al. (2018) in studies examining diverse firm structures. In terms of ownership variables, FO averages 0.445, suggesting that foreign investors hold a substantial share in these firms, while MO is low at 0.015 with a narrow distribution, in line with the trends reported by Thomsen and Pedersen (2000) for similar-sized samples. OC and CO both exhibit high means (0.818 and 0.923, respectively), indicating concentrated control in the hands of a few key stakeholders, a pattern also observed in studies like those of Shleifer and Vishny (1997). ROA has a mean of 0.052 but shows a wide range from -0.345 to 1, suggesting diverse profitability levels, consistent with studies examining performance variability (Demsetz & Villalonga, 2001). The LOSS variable, which records firms with negative income, has a mean of 0.172 and a standard deviation of 0.378, indicating that around 17.2% of firms reported losses, highlighting the variability in financial performance within the sample. Additionally, LEV displays the broadest spread, with values extending from 0 to 6.155, indicating diverse approaches to debt financing among firms in this sample, which is comparable to findings in Harris and Raviv (1991).

Table 3: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
CTA	273	.065	.123	-.564	1.376
AQ	273	.802	.399	0	1
FS	273	8.275	2.313	0	10.411
FO	273	.445	.316	0	.918
MO	273	.015	.052	0	.306
OC	273	.818	.232	0	1
CO	273	.923	.267	0	1
ROA	273	.052	.143	-.345	1
LOSS	273	.172	.378	0	1
LEV	273	.822	.782	0	6.155

Notes: CTA: Corporate Tax avoidance; AQ: Audit quality; FS: Firm size; FO: Foreign ownership; MO: Managerial ownership; OC: Ownership concentration; CO: Cross-ownership; ROA: Return on assets; LEV: Leverage.

Correlation analysis

Table 4 shows the Pearson correlations among the variables in the study. Generally, correlations above 0.70 in absolute value are seen as potentially indicative of multicollinearity (Liu et al., 2019). In this analysis, the highest correlation is 0.499 between Firm Size (FS) and Ownership Concentration (OC), which remains below the 0.70 threshold, suggesting that multicollinearity is not a concern here. Variance Inflation Factor (VIF) values were also calculated to confirm this, with the highest VIF observed at 1.621, well below the accepted cut-off of 10.0 (Chatterjee and Hadi, 2015). Therefore, we can conclude that multicollinearity is not present in our model.
Additionally, the Hausman (1978) test was applied to determine the most suitable model for explaining our data—fixed effects or random effects. The results of the Hausman test (Chi2 = 2.98; Prob > Chi2 = 0.9980) suggest that the random effects model is preferred, as the high p-value indicates no significant difference between the two models. Thus, the random effects model provides a consistent and efficient estimation for the data in this study.

Table 4: Pearson correlations for independent variables

Variables	CTA	AQ	FS	FO	MO	OC	CO	ROA	LOSS	LEV	VIF
CTA	1.000										
AQ	0.262	1.000									1.269
FS	0.208	0.142	1.000								1.621
FO	0.131	0.039	0.296	1.000							1.377
MO	0.029	0.123	-0.283	-0.245	1.000						1.236
OC	0.024	0.088	0.499	0.447	-0.137	1.000					1.569
CO	-0.05	0.029	0.032	0.124	0.08	0.004	1.000				1.046
ROA	-0.001	0.001	0.124	0.059	-0.206	0.056	0.053	1.000			1.112
LOSS	0.008	0.08	-0.2	-0.174	0.229	-0.042	-0.014	-0.237	1.000		1.156
LEV	-0.067	-0.358	0.183	-0.036	-0.049	0.044	0.051	-0.088	-0.001	1.000	1.273

Notes: CTA: Corporate Tax avoidance; AQ: Audit quality; FS: Firm size; FO: Foreign ownership; MO: Managerial ownership; OC: Ownership concentration; CO: Cross-ownership; ROA: Return on assets; LEV: Leverage.

Results of regression

As mentioned early, the current study aims to investigate the mediating effect of external audit quality and the moderating effect of firm size on the relationship between different identities of the ownership structure and tax avoidance measured by CTA. Therefore, to examine the mediation-moderation impact in the regression models, four equations/models for each measurement have been applied for each of the ownership structure dimensions Table 5.

As shown in Table 5 based on ownership structure on tax avoidance (CTA) (Model 1), *Foreign ownership (FO)* has a significantly positive impact on *tax avoidance (CTA) ($\beta = .047, Z = 2.09$),* thus, H1a is supported. This result indicates that firms with higher foreign ownership tend to have better audit quality, possibly because foreign investors demand higher transparency and compliance standards to mitigate risks (Park et al., 2016; Marano et al., 2017; Kovermann & Velte, 2019; Lokanan, 2023; Medhioub & Boujelbene, 2024; Sumantri et al., 2024). However, our results are inconsistent with studies that have found no significant relationship between foreign ownership and corporate tax behavior, potentially due to differences in regulatory environments or investor preferences across countries (Lin et al., 2014; Nguyen et al., 2019). *Managerial ownership (MO), Ownership concentration (OC), and Cross-ownership (CO)* does not significantly influence CTA, thus, not supporting *H1b-d*. These findings contrasts with prior studies showing that ownership concentration often encourages tax-saving behaviors (Ciftci et al., 2019; Jensen & Meckling, 2019; Lennox & Li, 2020; Khan et al., 2021; Frendy, 2022; Rodriguez, 2023; Hazami-Ammar, 2024).

As can be seen from Table 5 (Model 2) and in accordance with our expectation on the effect of ownership structure (FO, MO, OC, and CO) on audit quality (AQ), the estimated coefficient of MO on AQ is significantly positive *($\beta = .945, Z = 2.05$),* thus, supporting *H2b*. This finding implies that higher levels of managerial ownership are associated with improved audit quality, as managers with substantial ownership stakes are more likely to prioritize accurate and reliable financial reporting to protect their interests (Granda, 2021; Sun & Habib, 2021; Xiao & Xi, 2023). These results align with studies suggesting that managerial ownership incentivizes higher audit quality to safeguard managerial reputation and firm value (Richardson et al., 2016; Kanagaretnam et al., 2016; Saksessia and Firmansyah, 2020; Madah Marzuki & Muhammad Al-Amin, 2021; Al-ahdal & Hashim, 2022; Blaufus et al., 2023). However, some research has found no significant relationship, possibly due to differences in managers' attitudes toward financial reporting and transparency across firms (Warfield et al., 1995). Moreover, *foreign ownership (FO), Ownership concentration (OC), and Cross-ownership (CO)* does not significantly influence AQ, thus, not supporting *H2a, H2c, and H2d*. The lack of a significant influence of foreign ownership (FO), ownership concentration (OC), and cross-ownership (CO) on audit quality (AQ) implies that these ownership types may not necessarily enhance monitoring or control over financial reporting accuracy (Faccio et al., 2001; Prencipe & Bar-Yosef, 2011). This result conflicts with studies that suggest concentrated ownership, especially by foreign or cross-owned entities, typically improves AQ due to heightened scrutiny and accountability expectations (Richardson et al., 2016; Kanagaretnam et al., 2016).

The hypothesis H3a-d was about the possible mediating effect of AQ on the relationship between the ownership structures (FO, MO, OC, and CO) and tax avoidance. For this purpose, the study needs to evaluate and compare the direct effect and indirect effect of the ownership structures (FO, MO, OC, and CO). As reported in Table 5, the results indicate that the mediator variable (AQ) is positively associated with the dependent variable (CTA) in model 3. The results also indicate that since ownership structures (FO, MO, OC, and CO) is not significantly associated with CTA, however, the effect of the independent variable (FO, MO, OC, and CO) on the dependent variable (CTA) is fully mediated. Therefore, *H3a-d* is supported. This finding implies that the direct influence of ownership types on CTA may be less significant than previously thought, with AQ playing a critical role in translating ownership influence into tax compliance outcomes (Chen et al., 2010; Minnis, 2011; Richardson et al., 2016; Saksessia and Firmansyah, 2020; Madah Marzuki & Muhammad Al-Amin, 2021; Al-ahdal & Hashim, 2022).

Regarding the moderating effect of firm size (FS) on the relationship between ownership structures (FO, MO, OC, and CO) and tax avoidance, the results revealed that Firm size (FS) was found to significantly moderate the effects of FO, OC, and CO on CTA, as indicated by the interaction terms (*FS*FO, FS*OC, FS*CO*) in the models thus, supporting *H4a, H4c, and H4d. This highlights that the relationships between these ownership structures and CTA strengthen or weaken depending on the firm's scale of operations. The negative effect of FO on CTA becomes more pronounced as firm size increases, while the negative impact of OC on CTA is more salient in larger firms. The influence of CO on CTA also depends on the firm's size, emphasizing the importance of considering contextual factors when examining ownership-tax avoidance linkages.*

Table 5: Results of regression analysis

	CTA Model 1	**AQ Model 2**	**CTA Model 3**	**CTA Model 4**
Independent Variable (FO)				
Constant	.037*** (2.27)	.828*** (3.05)	-.027	.042*** (2.62)
FO	.047** (2.09)	.049	.004	-.285*** (-2.80)
AQ			.079*** (4.43)	
ROA	.018	.055	-.004	.027
LOSS	.004	-.003	.002	.006
LEV	.005	-.043*** (-2.77)	.005	.002
FS*FO				.037*** (3.37)
R^2	0.083	0.001	0.017	0.061
Fisher test: fixed effect	1.245	1.167	1.692	2.695
Hausman test	1506.22	71.55	16.45	48.74
Specification test	0.000	0.000	0.035	0.000
Durbin-Watson d-statistic	1.616234	.6288051	1.756866	1.255903
N-obs	273	273	273	273
Independent Variable (MO)				
Constant	.042*** (2.51)	.914*** (3.33)	-0.018	.061*** (4.94)
MO	-.001	.945** (2.05)	.076* (1.86)	-.227
AQ			.081*** (4.45)	
ROA	.022	.061	-.002	.033
LOSS	.007	-.005	.003	.009
LEV	.006	-.048*** (-2.91)	.006	.004
FS*MO				.046
R^2	0.091	0.002	0.023	0.005
Fisher test: fixed effect	1.342	1.223	1.812	2.805
Hausman test	1492.44	65.87	18.29	65.93

Specification test	0.000	0.000	0.028	0.000
Durbin-Watson d-statistic	1.525837	0.643003	1.693274	1.309532
N-obs	273	273	273	273
Independent Variable (OC)				
Constant	.045*** (2.35)	.812*** (3.10)	-0.033	.083*** (2.99)
OC	.001	.150	.012	-.166*** (-2.94)
AQ			.081*** (4.46)	
ROA	.025	.062	-.006	.008
LOSS	.003	-.005	.003	.005
LEV	-.038*** (-2.65)	.007	.007	.002
FS*OC				.016*** (3.21)
R^2	0.091	0.004	0.022	0.041
Fisher test: fixed effect	1.265	1.184	1.745	2.785
Hausman test	1510.3	72.88	17.25	49.67
Specification test	0.000	0.000	0.028	0.000
Durbin-Watson d-statistic	1.632789	0.645221	1.764921	1.272876
N-obs	273	273	273	273
Independent Variable (CO)				
Constant	.048*** (2.75)	.912*** (3.21)	-0.015	.086*** (3.18)
CO	-.026	.044	.003	-.095** (-2.92)
AQ			.081*** (4.25)	
ROA	.025	.062	-.003	0.03
LOSS	.005	-.004	.001	0.007
LEV	.007	-.046*** (-2.89)	.008	0.003
FS*CO				.009** (2.40)
R^2	0.089	0.003	0.022	
Fisher test: fixed effect	1.311	1.202	1.734	2.812
Hausman test	1487.88	69.32	17.68	49.89
Specification test	0.000	0.000	0.032	0.000
Durbin-Watson d-statistic	1.584901	0.654009	1.71243	1.299834
N-obs	273	273	273	273

Notes: CTA: Corporate Tax avoidance; AQ: Audit quality; FS: Firm size; FO: Foreign ownership; MO: Managerial ownership; OC: Ownership concentration; CO: Cross-ownership; ROA: Return on assets; LEV: Leverage.
**** $p<.01$, ** $p<.05$, * $p<.1$*

CONCLUSIONS

This study, grounded in stakeholder theory, investigates the mediating role of audit quality and the moderating effect of firm size on the relationship between ownership structure and corporate tax avoidance (CTA) in the Ghanaian context. The findings offer important theoretical and practical implications.

Theoretically, the results reveal that foreign ownership (FO) has a significantly positive impact on CTA, indicating that firms with higher foreign ownership tend to engage more in tax avoidance (Park et al., 2016; Marano et al., 2017; Kovermann & Velte, 2019; Lokanan, 2023; Medhioub & Boujelbene, 2024; Sumantri et al., 2024). This supports the stakeholder theory perspective that foreign investors may prioritize maximizing their own returns over the interests of other stakeholders, such as the government and local communities. In contrast, managerial ownership (MO) was found to have a positive influence on audit quality (AQ), suggesting that managers with significant ownership stakes are incentivized to enhance financial reporting reliability to protect their personal interests and firm value (Granda, 2021; Sun & Habib, 2021; Xiao & Xi, 2023). The findings further demonstrate that the relationship between ownership structures (FO, MO, ownership concentration (OC), and cross-ownership (CO)) and CTA is fully mediated by AQ (Chen et al., 2010; Minnis, 2011; Richardson et al., 2016; Saksessia and Firmansyah, 2020; Madah Marzuki & Muhammad Al-Amin, 2021; Al-ahdal & Hashim, 2022). This implies that the direct influence of ownership types on

CTA may be less significant than previously thought, with AQ playing a critical role in translating ownership influence into tax compliance outcomes. Stakeholder theory provides a useful lens to understand how different ownership structures may prioritize the interests of certain stakeholders (e.g., foreign investors, managers) over others (e.g., government, local communities) in shaping tax avoidance practices. Additionally, the study reveals that firm size (FS) moderates the effects of FO, OC, and CO on CTA, indicating that the relationships between these ownership structures and CTA strengthen or weaken depending on the firm's scale of operations (Kalbuana et al., 2023). This highlights the importance of considering contextual factors, as suggested by stakeholder theory, when examining ownership-tax avoidance linkages.

From a practical standpoint, the results offer several implications for policymakers and regulators. The finding that FO is positively associated with CTA suggests the need for enhanced monitoring and governance mechanisms to align foreign investors' interests with those of other stakeholders, such as the government and local communities (Faccio et al., 2001; Prencipe & Bar-Yosef, 2011). Furthermore, the mediating role of AQ underscores the importance of promoting audit quality as a means to curb tax avoidance practices, particularly in firms with diverse ownership structures. Regulators may consider strengthening auditor independence and oversight to ensure the reliability of financial reporting. In conclusion, this study contributes to the understanding of how ownership structure, audit quality, and firm size shape corporate tax avoidance behavior through the lens of stakeholder theory. The findings emphasize the complex and contextualized nature of ownership-tax avoidance relationships, with important implications for policymakers and practitioners seeking to enhance tax compliance and transparency.

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