UNIVERSITY OF CAPE COAST

AUDITOR QUALITY, MARKET CONCENTRATION, AND TAX AVOIDANCE IN GHANA: THE MODERATING ROLE OF OWNERSHIP STRUCTURE

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BY

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature…………………………… Date……………………….

Name: Evansilla Konadu Fosu

Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast

Supervisor's Signature: …………………… Date: ……………………

Name: Prof. Samuel Kwaku Agyei

ABSTRACT

Tax avoidance has become a prominent strategy employed by large firms to enhance their competitiveness and market dominance (Sorbe & Johansson, 2017), prompting further investigation into the role of auditors in shaping tax avoidance behaviour. The study examined the relationship between auditor quality, market concentration and tax avoidance in Ghana as well as the moderating effect of ownership structure. With data from 15 non-financial firms listed on the Ghana Stock Exchange from 2012 to 2021, the system generalised method of moment estimation technique was employed. The study found that auditor quality has a significant positive effect on tax avoidance. Moreover, market concentration was found to have no significant effect on tax avoidance. Additionally, the study revealed that ownership structure moderates the relationship between auditor quality and tax avoidance. Also, ownership structure has a moderating impact on the relationship between market concentration and tax avoidance. Based on the findings, the study concludes that firms engage in tax avoidance practices, as evidenced by their effective tax rate being lower than the statutory rate. Policymakers and tax authorities should strengthen tax regulations and enforcement measures. This can include closing loopholes such as profit shifting and implementing stricter penalties for tax avoidance. Furthermore, policymakers should ensure a strong ownership structure and information sharing between investors and auditors to address tax avoidance issues. Investors with significant ownership stakes should use their influence to advocate for responsible tax practices among their investment companies, particularly in industries with high market concentration.

KEYWORDS

Auditor Quality

Market Concentration

Ownership Structure

Tax Avoidance

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DEDICATION

To my grandfather Mr. Thomas Osei Kwame, my uncle Rev. Fr. Dominic Assim Mensah and my mum Agnes Mensah

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LIST OF ACRONYMS

AQ	Auditor Quality
CashETR	Cash Effective Tax Rate
CS	Capital Structure
ETR	Effective Tax Rate
FA	Firm Age
Fown	Foreign Ownership
FS	Firm Size
GaapETR	Generally Accepted Accounting Principle Effective Tax Rate
InOwn	Institutional Ownership
MC	Market Concentration
NED	Non-executive Directors

CHAPTER ONE

INTRODUCTION

Tax avoidance is an important subject matter to every government since it reduces the tax revenue and the fairness of the tax system. Tax practices are not limited to developed countries; they are also prevalent in developing nations, leading to substantial financial losses (Boussaidi & Hamed, 2015). AL-Rashdan (2022) posits that tax avoidance is positively influenced by the quality of an audit and the ownership structure of the firm. In the context of emerging economies like Ghana, where market concentration and ownership structure can significantly influence business practices, the relationship between these factors and tax avoidance becomes even more relevant. The research adds to the body of knowledge on auditor quality, market concentration and tax avoidance in Ghana with an emphasis on the moderating role of ownership structure. This study will be of significant importance to policy decision-makers as it provides valuable insights to effectively address and mitigate tax avoidance.

Background to the Study

Tax is an obligatory levy that every person in a nation must pay to the government without receiving a direct benefit in return (Jemberie, 2020). Opoku (2020) contends that a nation's acquisition of revenue from foreign sources can lead to significant debt accumulation caused by the extended period of interest charges, which can impede the nation's capacity to progress and develop. Tax revenue which is internally generated helps the government to provide access to quality healthcare and education, maintain law and order, protect against external threats, provide employment opportunities, provide stable prices, equitable income distribution, help new industries, and support the advancement of both labour and capital (Chidoziemi & Ndubuisi, 2017; Okeke et al., 2018). Countries across the spectrum depend heavily on tax returns as their primary means of funding various expenses including infrastructure development (Forstater, 2018; Sritharan & Salawati, 2019). A better infrastructure system such as well-built roads, sufficient electricity supply and proper sanitation can improve economic development by enabling production, lowering operational costs, enhancing investment productivity, and creating job opportunities for individuals with low income (Okeke et al., 2018).

Socioeconomic development can help us reach sustainable development goals. Socioeconomic development seeks to address the social needs and economic welfare of the nation at large. As opposed to this, sustainable development places a strong emphasis on achieving this goal without jeopardizing the needs or interests of future generations (Tiwari, 2010). Despite countless domestic and international attempts to solve it, poverty remains a major problem on a worldwide scale (Abdulkareem, Jimoh & Shasi, 2023). The government by using tax revenue can improve socio-economic development by reducing poverty through access to education, healthcare, and economic opportunities, increasing income and improving the standard of living for individuals and communities (Agyapong, 2019; Tandoh-Offin, 2019). This is essential for achieving sustainable development goal one, which is eradicating poverty (Abdulkareem et al., 2023). More job opportunities and long-term economic growth can be attained through government support for education with the use of tax income and it can as well help promote innovation and entrepreneurship. This can then result in achieving sustainable development goals focusing on high-quality education (goal 4), respectable employment, and economic growth (goal 8). Tiwari (2010) contends that using natural resources in a way that satisfies both present and future needs is necessary for economic growth to be sustainable.

Most governments face a serious dilemma with tax avoidance and evasion, especially in emerging nations which needs to be handled (Okpeyo, Musah, & Gakpetor, 2019). According to Amidu, Coffie and Acquah (2019), the elimination of corporate territorial jurisdictional restrictions through globalization has made it simpler for multinational organizations to form subsidiaries, and other business entities in countries with favourable tax havens and this has paved the way for tax avoidance. In the quest to maximize profit and minimize tax payments, multinational enterprises employ various tax avoidance methods such as setting up offshore accounts, asset transfer to family members, profit shifting and the engagement in complex financial transactions to exploit the loopholes in the tax system which result in decreased revenues for both the tax haven countries and developing countries through the low tax rates.

Auditors are required to render a statement of their assessment concerning the overall financial statement of the company. Auditors engage in a thorough examination of the firm’s tax disclosures in the financial statement. In general, auditors are essential in making sure that companies follow the relevant tax laws and regulations and refrain from using dishonest or aggressive tax avoidance strategies. The reliability and assurance of the financial statement are significantly influenced by auditor quality. Lestari and

Nedya (2019) argue that offering suitable compensation for audit services increases the chances of the audit team allocating greater resources and expertise, which leads to better detection of tax avoidance, but the complexity of transactions can affect the quality of work performed during the audit. Monika and Noviari (2021) also suggest that auditor quality does not considerably influence the avoidance of tax by firms. This implies that the tax avoidance behaviour of a company remains unchanged regardless of its decision to engage either a Big Four audit firm. Regarding the ethical standards of accountants, auditors are expected to have in-depth knowledge of the financial reporting requirements, accounting principles, and business strategies of the organizations they are auditing. Additionally, auditors are expected to act objectively and justly in all aspects of their work. This includes not allowing a conflict of interest or coercion from others to influence their opinion or professional judgement. According to Lestari and Nedya (2019), the effectiveness of an audit is determined by how closely auditors follow professional guidelines when conducting their audits, how strictly they follow the guidelines for auditing standards, procedures, and techniques, and how competently, carefully, and ethically they carry out their duties.

According to Eksandy (2017), management's decision to engage in tax avoidance may create an agency issue, as the interests of the management and stockholders may not align and this may lead to information asymmetry. Information asymmetry is a common issue as managers possess more detailed and nuanced knowledge about the company's operations than shareholders. Managers may give precedence to their interests above that of the shareholders as a result of this knowledge gap, which can also cause a lack of transparency and accountability (Lemayian & Yi, 2018). This emphasizes the significance of auditors in offering an impartial viewpoint and assisting in ensuring the protection of shareholders' interests. The economic deterrence theory suggests that firms evaluate the potential costs and benefits of evading taxes and use this information to decide whether or not to engage in such behaviour (Ya'u, Saad, & Mas'ud, 2020). The presence of competition encourages firms to have stronger motivations to avoid corporate tax since it helps them to gain a competitive edge over other firms (Cai & Liu, 2009). Sorbe and Johansson (2017) also in their study indicated that industries that have a high number of multinational corporations engaging in tax avoidance tend to be more concentrated, as these corporations utilize their tax savings to outcompete other firms in the industry.

Market competition pressures drive firms to minimize their taxes to acquire more investment capital to gain a competitive advantage (Cai & Liu, 2009). Businesses avoid taxes to crowd the market through different means such as debt shifting, transfer pricing and profit shifting. Market concentration is when a small number of firms exert significant dominance over the market. When few businesses control a sizable portion of the market, they are said to have a great amount of market power (Martin et al., 2021a). Existing literature on market concentration has explored several factors that may contribute to an increase in concentration including technology, barriers to entry and ineffective antitrust laws (Covarrubias, Gutiérrez, & Philippon, 2020). High market concentration can result in low competition, monopolistic behaviour and barrier to entry for new firms. Multinational companies manipulate the prices of goods and services transferred from one division of a business to another which makes them reduce their overall tax liability (Sorbe & Johansson, 2017). Martin et al. (2021b) in their analysis presented evidence linking tax avoidance practices to the sales performance of firms, revealing how these practices confer competitive advantages that disproportionately benefit larger businesses and contribute to market concentration within particular industries. The growing prevalence of market concentration through tax avoidance has made smaller firms join together to form larger entities (Martin et al., 2021a). These smaller firms to gain a competitive edge tend to mimic the strategies and policies of the larger firms by avoiding taxes which increases the tax avoidance rate thereby depriving the country of adequate funds.

The ownership structure is an important tool for governance when there is a lack of a robust legal framework (Alkurdi & Mardini, 2020). According to Gaaya et al. (2017), firms that place a higher importance on safeguarding their reputation, such as family-owned businesses are more inclined to prioritize auditor quality whiles firms whose owners seek to maximize profit and retain control may resort to tax avoidance strategies. Ajzen (1991) stated that both firms and individuals assess the ease or difficulty of engaging in specific behaviour. As a result, larger companies with substantial resources are more likely to motivate their management to implement tax planning strategies to avoid high tax burdens and gain a competitive advantage over other firms. (Pratama & Padjadjaran, 2017). When a business only has a few significant investors, it may put short-term profits ahead of long-term sustainability, which may encourage tax avoidance to outperform rivals and increase market concentration. Shares held by members of the public represent the interests of the community. With this type of ownership structure, businesses are generally anticipated to contribute to development by fulfilling their tax obligations (Rustiarini & Sudiartana, 2021). A competing viewpoint, however, contends that increased public ownership may result in a rise in corporate tax avoidance (Alexander, 2019). According to this point of view, the public can accept businesses utilizing legitimate tax avoidance techniques in increasing their overall market share to dominate the market without harming their reputation.

Ownership structure plays a role in the relationship between auditor quality, market concentration and tax avoidance. Although it can facilitate tax avoidance, the ownership structure is an essential tool for balancing information between management and shareholders to stop opportunistic acts. Ownership structures such as family, institutional, managerial, and public ownership do not have an impact on tax avoidance except for foreign and government ownership (Rakayana et al., 2021). More specifically, prior studies have not analyzed the moderating effect of ownership structure in the relationship between auditor quality, market concentration and tax avoidance in Ghana.

In summary, tax avoidance, auditor quality, and market concentration are significant concerns that have far-reaching impacts on society. While taxes are an important revenue for the government, tax avoidance practices can undermine the fairness and sustainability of tax systems. Ensuring high-quality audits is vital in promoting compliance with tax laws and preventing fraudulent behaviour. However, intense market competition can incentivize businesses to resort to aggressive tax avoidance strategies, which can result in market concentration and barriers to entry for new firms. Therefore, it is imperative to understand the relationship between market competition and tax avoidance to ensure fair and equitable tax systems for all stakeholders. As such, this study aims to investigate the role of auditor quality, market concentration, and tax avoidance in Ghana, with a particular focus on the moderating effect of ownership structure.

Statement of the Problem

Multinational corporations frequently avoid paying taxes, which makes it difficult for governments to collect sufficient funds for developmental initiatives. Insufficient tax revenue for essential public services like education, healthcare and infrastructure impede development and further limit the capacity of developing countries to invest in long-term development initiatives (Okeke et al., 2018). In the 2023 budget statement, during the period of 2022, the actual domestic revenue totalled GH¢64,601 million, which accounted for 10.9% of the country's GDP. However, this amount fell short of the target of GH¢66,503 million, representing 11.2% of the GDP. This implies that the Ghana government has less money to spend on essential public services such as good education, infrastructure and the provision of job opportunities which are critical for reducing poverty due to poor tax performance. Additionally, the insufficiency of government funds results in budget deficits, increased borrowing, and higher levels of national debt, which can further exacerbate the economic challenges faced by poorer economies, hindering their ability to achieve sustainable growth and development.

Ghana's national debt has been rising over time, resulting in high debt servicing costs that hinder the government from funding social programs and infrastructural improvements. According to the Minister of Finance in 2020, the total gross public debt increased to GH¢467,371.32 million at the end of September 2022, up from GH¢352,086.98 million at the end of December 2021. The government is then compelled to devote a substantial amount of its budget to paying off debt, leaving little money for other major expenses. Government funds can be increased by strengthening domestic revenue generation and enhancing expenditure control. By increasing domestic revenue creation, the government can lessen its reliance on borrowing, which can result in unmanageable levels of debt. Also, better expenditure management can reduce wasteful spending and boost government spending effectiveness, enabling better resource allocation to important sectors like healthcare, education, and infrastructure development.

Globally, it is argued that tax avoidance is a significant way that hinders the government's capacity to generate enough proceeds to fund developmental activities (Agyapong, 2019). Ghana as a developing country with a rapidly growing economy has seen tax avoidance by major multinational corporations as a particular concern in recent times since it reduces government income and makes the country poorer (Ferdausy & Rahman, 2009). Large companies may use tax havens to reroute income and reduce their tax liabilities, providing them with an advantage over smaller companies that are unable to employ comparable strategies. This has led to a growing need for research that examines the impact of tax avoidance on firms' competitive advantage and the factors that influence this relationship.

Additionally, large companies may employ auditors to deliver an impartial opinion of their financial statements (Ardillah & Prasetyo, 2021), which can impact both internal management decisions positively to remain competitive and external user attitudes regarding the company's reliability and accuracy of disclosed information. Agyei-Mensah (2019) posit that in Ghana, auditors with higher quality tend to prioritize reporting errors, inaccuracies and irregularities and are less inclined to tolerate dubious financial practices. Lestari and Nedya (2019) argue that several factors can potentially impact auditor quality including the auditor size, fees and the duration of their engagement with the firm which can result in their inability to detect and report any tax avoidance practices. Prior studies provide a conflicting view on how the quality of an auditor may be impacted by tax avoidance. This study expands on the prior literature by evaluating the effect of auditor quality on firms’ tax avoidance practices.

Market concentration is a critical issue in Ghana's economy where a few large companies dominate the market. This situation can result in profit shifting, where businesses manipulate their internal business dealings to transfer profits to subsidiaries in different countries. According to Martin et al. (2021a), in US market concentration has led to smaller firms imitating the successful strategies of larger firms by engaging in tax avoidance practices which potentially leads to a decline in government revenue and distortions in competition. Thus, exploring the impact of market concentration and its effects on the Ghanaian economy is vital for this study.

Kovermann and Velte (2019) suggest that the ownership structure of a company can influence the degree to which it avoids tax. Ownership structure influences the level of control and decision-making power within a company. Different owners of organizations may have distinct goals and timeframes in making a business decision, so it is expected that their opinions on tax avoidance strategies, the quality of an auditor and how firms can dominate a market will differ. Tax avoidance may be more likely to occur in companies that have a small group of individuals or entities owning a significant portion of the company's shares or voting power (Rakayana et al., 2021). Due to the owners' ability to exert greater control over the company's choices and their propensity to put their interests ahead of those of other shareholders, this form of structure might result in tax avoidance activities. Avoidance of tax by firms may lead to agency issues, therefore the type of ownership stake is key in balancing management and owner interests (Rustiarini & Sudiartana, 2021).

There is a lack of consensus on the extent to which these variables are related. It has been suggested that higher auditor quality can help mitigate tax avoidance through the reliability and completeness of financial reports (Gaaya et al., 2017; Lestari & Nedya, 2019). On the other hand, high auditor quality may increase tax avoidance as firms may be provided with information on aggressive tax avoidance strategies which can be illegal and attract penalties from the government but will be cautious in their avoidance planning, which can result in increased market concentration and lower competition (Martin et al., 2021b). Ghana's environment has a relatively smaller and less developed market compared to other countries, which may impact market concentration and the behaviour of auditors and firms. Additionally, Ghana has a different regulatory and legal framework that may influence ownership structures and tax avoidance incentives. Therefore, conducting the study in Ghana may provide insights into the relationship between the variables and provide more knowledge and understanding of the phenomenon. Because of this, there is a need to assess the precise nature, direction and relationship of the stated variables.

In an attempt to resolve and understand corporate tax avoidance, auditor quality, market concentration and the role of ownership structure, Amidu et al. (2019) examined how tax avoidance practices of companies in Ghana are influenced by transfer pricing and earnings management. Moreover, Agyei et al. (2020), investigated the factors that drive banks in Ghana to participate in tax avoidance practices. Drawing from the referenced studies, some gaps have been identified. In Ghana, there is limited existing research focused on the relationship between auditor quality, tax avoidance, and market concentration. Theoretically, prior literature fixated on the agency theory (Dakhli, 2022; Lestari & Nedya, 2019; Rustiarini & Sudiartana, 2021) but this study broadly expanded to other theories like Ajzen (1991) theory of planned behaviour which posit that firms that have a positive attitude are less prone to involve in tax avoidance. Additionally, previous studies in analyzing the data on ownership structure employed the panel data regression method (Dakhli, 2022; Rakayana et al., 2021) but this study employed the system generalized method of moments which provided more flexibility in handling endogeneity problems and instrument proliferation (Agyei et al., 2020). The generalized method of moments allows for a more accurate estimation of the relationships between the variables and reduces the risk of obtaining biased results due to endogeneity.

Therefore, this research aims to critically contribute to the body of literature on auditor quality, market concentration, ownership structure and tax avoidance within the context of listed firms in Ghana. The study offered a more detailed understanding of the variables that affect the relationship between auditor quality, tax avoidance, and market concentration. Policymakers, auditors, and other stakeholders who are interested in upgrading Ghana's tax system, the calibre of financial reporting, increasing transparency, and corporate governance standards would find the research's conclusions to be useful.

Purpose of the Study

This study seeks to evaluate the relationship between auditor quality, market concentration and tax avoidance in Ghana with an emphasis on the moderating role of ownership structure.

Research Objectives

The study specifically seeks to:

1. Ascertain the nature of auditor quality, market concentration, and tax avoidance of non-financial listed firms in Ghana.
2. Determine the effect of auditor quality on tax avoidance of non-financial listed firms in Ghana.
3. Determine the effect of market concentration on tax avoidance of non-financial listed firms in Ghana.
4. Evaluate the moderating role of ownership structure in the relationship between auditor quality and tax avoidance of non-financial listed firms in Ghana.
5. Assess the moderating role of ownership structure in the relationship between market concentration and tax avoidance of non-financial firms in Ghana.

Research Questions

Objective one has the following research question:

1. What is the nature of auditor quality, market concentration, and tax avoidance of non-financial listed firms in Ghana?

Research Hypotheses

Objectives two to five was answered by testing the hypotheses below:

1. H_0: There is no significant relationship between auditor quality and tax avoidance of non-financial listed firms in Ghana.
2. H_0: There is no significant relationship between market concentration and tax avoidance of non-financial listed firms in Ghana
3. H_0: Ownership structure does not moderate the relationship between auditor quality and tax avoidance of non-financial listed firms in Ghana.
4. H_0: Ownership structure does not moderate the relationship between market concentration and tax avoidance of non-financial listed firms in Ghana.

Significance of the Study

The results obtained will contribute to prior studies on auditor quality, market concentration, and tax avoidance. The present study will offer valuable perspectives on the factors or variables affecting auditor quality and the integrity of the auditing profession in Ghana and also help policymakers and regulatory authorities in Ghana who are responsible for shaping and implementing tax policies, auditing standards, and market regulations. Furthermore, policymakers and regulatory authorities will gain valuable information on how to strengthen the tax system, promote transparency in financial reporting, and enhance the quality of auditing practices in Ghana. Lastly, the study will be useful for investors, shareholders, and other stakeholders interested in understanding the impact of auditor quality, market concentration, and tax avoidance in Ghana.

Delimitations

The study focused specifically on Ghana, and the findings may not apply to other countries. The study’s scope was restricted to a specific time frame, and any changes that occur before or after this period may not be reflected in the findings. The study focused solely on the variable’s auditor quality, market concentration, tax avoidance, and ownership structure, and will not explore other factors that may have an impact on the relationships between these variables.

Limitations

The study consisted only of firms listed on the Ghana Stock Exchange, so it may be difficult to apply the findings to all firms in Ghana. Therefore, the results are most relevant to situations similar to the study area, and care should be taken when extending the results to other contexts. The limited availability of data, especially in a developing country like Ghana, posed a challenge to this study. Obtaining necessary data proved difficult as it required additional resources, which may have impacted the study's conclusions.

Organization of the Study

The first chapter contains the introduction of the study, which includes the background, statement of the problem, research objectives, and significance of the study. It also describes the scope and limitations of the study and how it is organized. The second chapter provides a comprehensive literature review of prior research and the relevant theories underlying the study. The third chapter describes the research methodology used in the study, including the data collection and analysis methods. The fourth chapter presents the data analysis and results of the study. Finally, the fifth chapter contains the summary, conclusion, and recommendations for future research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This review delves into prior research conducted by scholars and evaluates the extent to which these studies are connected, either directly or indirectly, to the research topic being investigated. The review was based on the theoretical, conceptual, and empirical issues. The theoretical review talks about the theories underlying the study. To illustrate the researchers' ideas regarding the research topic, a conceptual framework has been created. The empirical review gives the study an evidential lens and also enables a comparison of the current study's findings with those of previous research to either affirm or repudiate conclusions drawn by earlier researchers.

Theoretical Framework

A theory is a general framework that underpins a field of study. This section provides an overview of various theories that are relevant to the topic under study.

Agency Theory

The agency theory was formulated by Jensen and Meckling (1976). The separation of ownership and control in a firm often leads to conflicts of interest between the firm's owners and management (Bauer, Kourouxous, & Krenn, 2018). This creates a potential agency problem, as shareholders depend on managers to make decisions or act on their behalf (Jensen & Meckling, 1976). Hanlon and Heitzman (2010) assert that due to the division between ownership and control in a corporation, the tax-related choices made by a company may incorporate the viewpoints of both its managers and shareholders. Managers might be motivated to participate in tax avoidance practices to boost their remuneration and safeguard their positions, potentially to the detriment of shareholders (Yunyun et al., 2021). While shareholders aim to reduce tax litigation to maximize their wealth (Alkurdi & Mardini, 2020). Therefore, the principal needs to design mechanisms to align the interests of the agent with their own. This may include monitoring mechanisms such as appointing an external auditor.

Auditor quality can be significant in addressing agency issues, as auditors act as independent third parties to assess and verify the accuracy of financial reports. The conduct of managers in the quest of engaging in tax avoidance practices might manipulate financial statements for their selfish interest which accentuates the significance of openness and accountability in financial reporting (Lestari & Nedya, 2019). High-quality auditors have a greater probability of identifying and reporting tax avoidance and other financial irregularities, which can improve the transparency and credibility of financial reporting (Gaaya et al., 2017). However, a concentrated market can also exert an influence on auditor quality, as a highly concentrated market may result in reduced competition and lower-quality audits (Raza, Hussin, & Majid, 2019). When the market is highly concentrated, there are few players, which may lead to monopolistic behaviour. This can result in rent-seeking activities such as tax avoidance.

The ownership stake in a firm can impact the degree of agreement of incentives between shareholders and managers. Alkurdi and Mardini (2020) assert that mitigating the possibility of agency problems induced by tax minimization requires the involvement of an intermediary to oversee and supervise the decision-making of management, thereby increasing the financial gains of shareholders. The ownership of a company by insiders and outsiders can cause significant challenges as well as help mitigate agency issues within the firm (Rakayana et al., 2021). Kovermann and Velte (2019) assert that the composition of ownership in a firm may impact its tax avoidance practices. Institutional investors who hold a significant portion of interest and shares are more inclined and competent to avoid taxes and secure enough profits than other investors (Yunyun et al., 2021). In contrast, family-owned businesses may prioritize preserving wealth for future generations over maximizing current profits (Chen et al., 2010).

The agency theory offers a structured approach to comprehending the dynamic between shareholders and managers, aiming to optimize it and achieve alignment between their interests. However, the theory assumes that agents act solely in their self-interest, which may not always be the case. It also assumes that agents have complete information, which may not always be true, and that principals can perfectly monitor the actions of their agents, which may not always be possible. Boussaidi and Hamed (2015) posit that alternative theories, such as stakeholder theory take a broader view of corporate relationships beyond just managers and shareholders. Stakeholder theory recognizes the importance of other connections, such as those with tax authorities and the wider public, in addition to the manager-shareholder relationship.

Theory of Planned Behaviour (TPB)

Ajzen (1991) extended the theory of reasoned action and introduced the theory of planned behaviour. The theory consists of three elements. Subjective norms assess how much an individual perceives that the opinions of other relevant persons can affect his or her decision. The motivation to conform to others' opinions serves as the basis for the subjective norm, and it is based on how an individual perceives social pressure from others and behaves in a particular way. A necessary component of perceived behavioural control is the trust in the reality of the resources and opportunities available as well as the difficulties associated with the behaviour (Mintah, 2020). Taing and Chang (2021) contend that the availability of opportunities and resources such as cash, skill, knowledge, and time are limitations or constraints that regulate the behaviour to be engaged.

Attitude

Attitude is the extent to which a person views the activity of interest in a positive or negative manner. It comprises the outcomes obtained from engaging in the specific behaviour under consideration. Owusu, Mintah and Bekoe (2021) affirm that individuals and firms who exhibit a positive attitude towards their tax payment responsibilities may comply with their tax obligations. Conversely, individuals and firms with a negative attitude towards tax payments are less likely to comply. This implies that individuals and organizations who engage in tax avoidance may hold negative attitudes towards tax payment and may therefore be less compliant with tax obligations.

Subjective Norm

Subjective norm is the belief about whether most people find the behaviour acceptable or unacceptable. The perceived external influence to engage in the behaviour or refrain from doing so, according to Ajzen (1991), is what constitutes a subjective norm. It is about how people or stakeholders around the taxpayer think or believe he or she should engage in the behaviour or not. Peers and other stakeholders mostly influence taxpayers (Kassa, 2021). Different ownership structures can affect the alignment of incentives between owners or investors and managers. For instance, family-owned firms may partake or indulge in avoidance of tax because of the greater control of the family over the business activities. To minimize the possibility of being exposed for participating in tax avoidance practices, companies that are more conscious of the risks to their reputation may adopt higher-quality auditors, whereas companies that aim to maximize profits and maintain control over their business are prone to engage in tax avoidance practices. Stakeholders include peers, family, government, and various groups. According to Rakayana et al. (2021), whether a company is family-owned, institutionally owned, or publicly owned, does not appear to impact tax avoidance behaviour. When the tax rate is fair and reasonable, firms are likely to regret engaging in activities that result in tax avoidance, withholding information from the government, and underreporting their income (Kassa, 2021). Similarly, in a highly concentrated market, the social pressures from competitors and other stakeholders may be stronger, impeding a company's ability to avoid tax.

Perceived Behavioural Control

The ease or difficulty of engaging in a particular behaviour of interest is referred to as perceived behavioural control (Ajzen, 1991). The capability of firms to execute the behaviour of either paying or avoiding payment of the necessary tax is controlled by several specific criteria and barriers. Time, information, money, and other limited resources and opportunities affect the behaviour that can be carried out (Taing & Chang, 2021). Previous research has suggested that high-quality auditors can deter tax avoidance by increasing the perceived risk of detection (Alaa, Hany, & Craig, 2020). The inability to control taxpayers' behaviour may be hampered by factors like authority, complexity, and knowledge of tax. A complex tax system may generate higher avoidance costs, decreasing the avoidance behaviour level. Information is a key factor that allows a person to have a fair idea about a particular behaviour. If taxpayers are well informed about the consequences of avoiding tax it will reduce the level of avoidance (Kassa, 2021).

Economic Deterrence Theory

This theory was formulated by Allingham and Sandmo (1972). It assumes that certain elements, such as the rate of tax, the sanction for tax evasion, the tax system, the probability of paying taxes, inaccurate information, and the associated costs, have an impact on people's behaviour. This implies that when penalties are mild there will be a high level of tax avoidance. When there are severe sanctions for avoiding taxes there will be a lower tendency of firms to avoid tax payments. The theory opines that firms weigh the costs and benefits associated with avoiding taxes and decide whether to comply with or choose to avoid them (Agyapong, 2019). High-quality auditors can lower the likelihood of tax avoidance by raising the cost of noncompliance through rigorous monitoring and detection of noncompliant behaviour. When there is the possibility of being detected firms will declare higher income and minimize the rate of shifting profit from to other countries. If the merit of avoidance exceeds the value (punishment and cost), the model anticipates whether firms will avoid tax payments. When there is high market concentration, firms may face stronger competition and in other to have a competitive edge firms may resort to avoidance practices to expand their market share thereby crowding the market.

The theory assumes that individuals are rational and only motivated by financial gain and therefore disregard other factors that may influence behaviour to either avoid or not avoid tax (Agyapong, 2019). Additionally, the theory does not consider the impact of social norms, peer pressure, and reputation on decision-making, which may also influence an individual's decision to avoid tax payments.

Conceptual Review

This review adequately captures the concepts of auditor quality, market concentration, ownership structure, tax avoidance, and the study’s conceptual framework.

Tax Avoidance

Tax avoidance is the act of planning one's finances to reduce the amount of taxes payable. It is often achieved by taking advantage of tax law gaps or by lowering the amount of taxable income through the use of legal frameworks and strategies. Generally, avoidance of tax is defined as an intentional act to lower tax liabilities by utilizing loopholes or shortcomings of tax rules and laws (Lestari & Nedya, 2019). Even though it is not against the law, tax avoidance is frequently viewed as unethical or unjust, particularly when it is utilized by opulent people and corporations to lower their tax liabilities.

One way by which firms engage in tax avoidance practice is through profit shifting. Moving proceeds from areas with higher tax rates to jurisdictions with lower tax rates is a tax avoidance practice employed by businesses to lower their overall tax burden (Sorbe & Johansson, 2017). This is accomplished by artificially redistributing income to subsidiaries or affiliated businesses in countries with lower tax rates, even when there is little or no economic activity in those countries (Forstater, 2018).

Tax avoidance provides an opportunity for individuals, companies, or entities to generate funds from their resources, without being legally obligated to pay more taxes than necessary (Agyei et al., 2020). It is often seen as a legal method used by people, businesses, and other entities to reduce their tax obligations by utilizing tax incentives and legal loopholes (Amidu et al., 2019). Firms may avoid taxes through either legitimate tax planning or illegal evasion; tax planning involves lowering tax liability within the bounds of tax regulations, whereas evading tax involves violating tax laws and regulations to avoid paying taxes (Wang et al., 2020). Monika and Noviari (2021) also view avoidance of tax as a set of planning activities. Compared to tax avoidance, evasion of tax is a more extreme form of noncompliance and firms avoid tax with the sole aim of improving the value of the firm (Wang et al., 2020). Tax evasion, which is against the law and entails purposefully hiding or misrepresenting income or assets is different from tax avoidance. Although legal, tax avoidance is frequently seen as unjust and unfair because it transfers the responsibility of paying taxes to those taxpayers who cannot afford to engage in such actions (Bimo, Prasetyo, & Susilandari, 2019).

Even though tax avoidance is typically done to lower tax payments, boost revenues, and improve financial standings, businesses may engage in it for a variety of complex and varied reasons. Most entities engage in tax avoidance practices such as international debt shifting, tax deferring, and profit shifting (Beer et al., 2020). Corporations also set up offshore accounts to engage in tax avoidance practices (Lestari & Nedya, 2019). There is a continuing discussion regarding how tax avoidance affects the economy and society. According to Sorbe and Johansson (2017), avoidance of tax by companies may increase investment, thereby fostering economic development and growth, but it can also erode trust in the tax system and result in reduced revenue for governments, impeding their ability to fund public services and initiatives (Martin et al., 2021b).

Market Concentration

Market concentration is the degree to which a small number of extremely powerful companies influence the competitive environment and the power in a given market (Sorbe & Johansson, 2017). Previous studies have suggested that the increase in concentration can be associated with various factors such as advancements in technology, rising entrance barriers in the market, and ineffective tax enforcement (Autor et al., 2019; Gutiérrez & Philippon, 2017). Martin et al. (2021a) in their study indicated that tax avoidance affects a company's sales and promotes corporate concentration, with the biggest companies benefiting most from this competitive edge.

Companies operating in a highly concentrated market may adopt strategic practices which can raise prices and harm consumer welfare (Sorbe & Johansson, 2017). High levels of market concentration may, under some circumstances, inhibit innovation by weakening the incentives of multinational corporations to develop to obtain a competitive edge (Aghion et al., 2005). Sutton (2019) contends that concentrated markets could entice businesses to spend money on research and development, which could lead to innovations and advancements in technology. Bain (1951) posits that businesses through concentration profit from economies of scale can cut costs and lower consumer prices.

Auditor Quality

Monika and Noviari (2021) argue that the quality of an audit is the extent to which auditors adhere to the standards outlined in the public accountant's code of ethics and professional standards. In most research, auditor quality is the level of competence and ability an auditor possesses to render a precise and trustworthy audit opinion (Ardillah & Prasetyo, 2021). It is a vital step in the auditing process since it makes sure that there are no fraud or errors in the financial accounts of the firm. While many studies utilize this definition, it simplifies auditing to merely identify and report opinions. Although auditors are indeed responsible for verifying that financial statements are free of significant errors (DeFond & Zhang, 2014), this description doesn't fully capture auditors' quality. Such benefits go beyond merely identifying and disclosing deviations from generally accepted accounting principles and include the nature of the audit firm.

According to Amalia and Ferdiansyah (2019), firms are perceived to have good auditor quality when they are being audited by the big 4 firms since they typically present a superior financial report which makes it challenging for firms to engage in avoidance strategies. The Big 4 organizations are recognized for providing high-quality audit services and generally have more resources and technological capabilities than smaller firms (Lobo et al., 2017). Based on Amalia and Ferdiansyah (2019) and Lobo et al. (2017) definitions, auditor quality refers to the perception of gaining better quality audits resulting in more reliable and trustworthy financial statements. The statement also implies that the Big 4 firms have access to superior resources and technology, enabling them to conduct high-quality audits and prevent unethical practices, such as financial statement manipulation or avoidance strategies.

Auditor Quality and Tax avoidance

Tax avoidance is the utilization of inconsistencies in tax regulations to minimize tax liabilities (Lestari & Nedya, 2019). Due to the existence of critical information regarding tax transactions that businesses may conceal in their financial reports, auditors need to assess a firm's engagement in important tax transactions that could be exploited by the company (Ardillah & Prasetyo, 2021). By setting up complex multinational tax arrangements, many businesses use tax loopholes to move revenues to a jurisdiction with low tax rates. This includes underpricing or overpricing intra-firm trade, intentionally placing important intellectual property in low-tax subsidiaries and using borrowing strategies (Riedel, 2018).

Companies that involve in tax avoidance run the risk of being discovered by outside parties, but it is difficult for outsiders to find and track these transactions, as evidenced by prior studies proving the impact of obscurity and complexity of tax avoidance (Amidu et al., 2019; Mindzak & Zeng, 2020). Auditors are guided by the auditing standards, and the standard can be used as a performance indicator to assess an auditor's competence in their professional duties. Transparency is a crucial aspect of auditor quality, and the audit procedure calls for competency, accountability, and a high degree of honesty (Ardillah & Prasetyo, 2021). Companies find it more challenging to use tax avoidance strategies when their financial reports are audited by competent auditors like the Big Four (Amalia & Ferdiansyah, 2019). A high-quality auditor is required to be neutral and unbiased in their assessment of financial records and to possess the essential knowledge and abilities to spot instances of tax avoidance. Monika and Noviari (2021) assert that corporations' tax information is exposed in their financial account and as such the quality of auditors is crucial in terms of how they relate to tax avoidance.

To acquire excellent audits for financial reports, businesses frequently work with recognized public accounting companies, such as the big four audit firms (Hanny & Niandari, 2018). Ardillah and Prasetyo (2021) posit that relative to financial statements audited by smaller Public Accounting Firms, those by the big four major public accounting companies are thought to be of higher quality. A firm with high-quality auditors is usually demotivated to use deceptive strategies to avoid taxes (Monika & Noviari, 2021). Engaging a competent auditor can enable companies to promptly identify and deter tax avoidance activities (Yuniarwati et al., 2017).

Tax Avoidance and Market Concentration

Competition among firms has risen over the period (Covarrubias et al., 2020). Businesses become more competitive when that firm has a large market share and resources than others. Jacobson (1988) posit that in a competitive market, a large market share improves profitability implying that the company is selling more product and services than other firms giving them a competitive edge. Competitive advantage gained through barriers to entry helps to increase market value and industry concentration (Grullon et al., 2019). When firms avoid tax payments, the amount that could have been used to honour tax obligations can be invested. According to Sorbe and Johansson (2017), firms use tax savings to invest in their product to attain a competitive edge and to crowd the market. However, Wang et al. (2020) assert that firms avoid tax with a focus on improving shareholders’ value. Tax savings helps to improve firms’ revenue base. This can improve such firms’ profit, be resilient to shocks and gain a competitive edge over other firms. Thus, they can produce at lower cost, increase profit level and gain dominance through large market shares.

Martin et al. (2021b) posit that avoidance of tax by firms is associated with firms’ ability to dominate the market. Large international companies that avoid paying taxes may use their tax benefits to gain a competitive edge over other corporations by lowering prices, improving quality, or enhancing their brand image, which can lead to a more concentrated market structure and potentially impact economic efficiency (Sorbe & Johansson, 2017).

Meanwhile, Gutiérrez and Philippon (2017) argue that an increase in concentration harms the actual economy. Once a firm's competitive power increases it can gain access to the larger market. when firms gain this market power through tax avoidance they can now engage in unhealthy or healthy marketing strategies this can help them to produce a quality product at a lower per unit cost which will make the business expand to gain more market shares. This makes the smaller firms who are not gaining this advantage fade out, therefore, making the fewer firms dominate the market. Compared to smaller businesses, large enterprises are better positioned to use tax avoidance techniques (Martin et al., 2021a). This is because they have more resources and can afford to hire knowledgeable tax professionals to guide them through the complex tax system which helps in gaining a competitive edge.

As a result of enhanced bargaining power brought about by market concentration, large firms may be able to influence tax laws to their advantage. This could lead to tax rules and regulations that favour them while making it harder for smaller businesses to compete which will help them to dominate the market. A concentrated market can also lead to low competition in the market which allows the few firms that dominate the market to charge higher prices for their product. Sorbe and Johansson (2017) assert that market concentration is positively related to avoidance of tax. Large firms use their tax savings to obtain a competitive edge improve their shares in the market and increase investment in their product and outcompete their competitors to gain dominance. Martin et al. (2021a), analysis confirms that avoiding tax gives companies an edge over competitors that helps to increase their market thereby leading to a concentrated market. In general, companies with more market power enable them to take advantage of tax loopholes and bargain for preferential tax treatment which in turn improves dominancy in the market.

Ownership Structure

The way a company is owned and governed is referred to as its ownership structure (Alkurdi & Mardini, 2020). It is a critical part of corporate governance since it establishes who has the authority to make decisions on the firm's behalf and how those choices are made (Guizani & Abdalkrim, 2021). The frequent divergence of interests between shareholders and management may result in severe conflicts (Alexander, 2019). Ratnawati, Freddy, and Hardi (2018) assert that ownership structure can help limit the level of agency problem that exists between shareholders and management. Prior research has demonstrated that ownership structure consists of family, institutional, foreign, government and managerial ownership (Alkurdi & Mardini, 2020; Yunyun et al., 2021).

Family Ownership

In businesses throughout the world, family ownership is a typical form of ownership structure (Chen et al., 2010). Family investors who own the company also exert influence over it, directly or through a board of directors (Utama & Ancella, 2020). The division between ownership and control can present both special opportunities and difficulties because family dynamics and objectives may affect the organization's behaviour. La Porta et al. (1999) posit that the involvement of families in the management of a firm typically leads to reduced agency costs. Rakayana et al. (2021) contend that agency conflicts in family firms can affect both the advantages and disadvantages associated with corporate tax avoidance.

Avoidance of tax is a sensitive issue since it can lead to conflict with authorities, investors, and other stakeholders. There are different opposing views about family firms and their avoidance of tax. Family investors may employ tax avoidance strategies to enhance their firm value and increase profits, which could potentially mislead minority investors by obscuring the true financial picture of the company (Desai & Dharmapala, 2006). Khan et al. (2013) assert that family-owned businesses display less aggressive tax behaviour compared to those that are not family-owned. Family ownership can reduce the risk of managerial opportunism and result in a more conservative approach to tax positions (Jensen & Meckling, 1976).

Family-owned businesses frequently place a higher priority on generational sustainability than on short-term financial gains (Chen et al., 2010). They place more importance on long-term relations with suppliers, consumers, and other stakeholders which can result in a more diversified portfolio of goods and services (Bloom et al., 2021). As a result, family firms may be less likely to engage in monopolistic strategies that can lead to market concentration.

Niskanen et al. (2011) posit that family-owned companies may be hesitant to accept external oversight of their actions and therefore may not be as willing to engage a high-quality auditor. Conversely, Guizani and Abdalkrim (2021) propose that family firms may engage in opportunistic behaviour and use the services of low-quality auditors to produce financial reports that are less transparent and of inferior quality to conceal the behaviour of interest. Srinidhi, He and Firth (2014) indicated that family-owned businesses often prioritize higher-quality audits by selecting specialized auditors and offering them greater compensation. This could be because family enterprises are more attentive to their reputation (Chen et al., 2010), leading them to prefer reputable auditors to enhance their credibility.

Managerial Ownership

Managerial ownership is the extent to which the managers or executives of a company own shares of the company's stock. Managerial ownership gives managers the power to run the business and make decisions concerning organizational behaviour (Khan et al., 2013). When managers have a significant percentage of company shares, they have a vested interest in the success of the company and are more likely to make decisions that benefit shareholders. They may align their incentives with shareholders by offering higher bonuses and increasing dividend payouts (Alzoubi, 2016). Managers with substantial in the company may be driven to maximize profits and increase the price of stocks in the company by avoiding tax (Rakayana et al., 2021). Rustiarini and Sudiartana (2021) affirm that management in protecting their interest avoids paying taxes.

Previous studies portray different views on this ownership and how it influences tax avoidance. Multazam and Rahmawaty (2018) found that the degree of ownership by management can affect its involvement in aggressive tax avoidance. However, Chan, Mo, and Zhou (2013) assert that while it is true that ownership by management can influence tax avoidance practices, the relationship is not always straightforward since managerial owners are less inclined to avoid tax.

In highly concentrated markets where firms face less competition, managers may avoid tax without fear of losing customers or market share (Sorbe & Johansson, 2017). In this case, managerial ownership in the avoidance of tax may be weakened. Companies exhibiting increased levels of managerial ownership and employing auditors of low quality may demonstrate a higher tendency to participate in avoidance activities, as managers may feel comfortable taking risks knowing that their auditor is less capable to detect or report the use of aggressive tax strategies (Chen et al., 2010). Overall, the relationship between managerial ownership, tax avoidance, market concentration, and auditor quality is complex and requires further investigation. However, the evidence suggests that higher levels of managerial ownership may moderate tax avoidance, but this effect may be weakened in concentrated markets or with lower-quality auditors.

Institutional Ownership

In recent times, institutional investors have gained significant prominence as a type of investor in the markets (Yunyun et al., 2021). Comparatively to minority shareholders, institutional shareholders who own a significant percentage of a company are often more driven and have more power to influence corporate tax avoidance activity (Shleifer & Vishny, 1997). This is because institutional shareholders generally have greater financial holdings in the firm and are more inclined to engage actively in overseeing the financial practices. Institutional investors oversee and supervise the behaviour of managers within a company, and this can lead to positive outcomes (Alkurdi & Mardini, 2020). Through the monitoring process, institutional owners can well manage and minimize agency costs (Alzoubi, 2016).

Bird and Karolyi (2017) revealed that companies with institutional owners tend to exhibit a rise in their engagement with avoidance activities. Moreover, Khurana and Moser (2013) stated that there is a negative correlation between ownership by institutional investors and tax avoidance, particularly for firms that have weak governance structures. This is because institutional owners may have a responsibility or duty of care, and may view tax avoidance as contrary to this duty. Mappadang et al. (2018) state that institutional investors stand not to avoid tax because they want to comply with government rules and regulations.

Institutional ownership can impact market concentration by influencing the market's competitive dynamics. According to Aghion et al. (2013) institutional ownership influences concentration when there is high competition, affecting the firm's innovation. Due to their active involvement in corporate governance, institutional investors often advocate for the selection of reputable and skilled auditors (Velury et al., 2003). Chen et al. (2016) assert that, the inclusion of institutional investors in a business ownership structure can lead to a greater emphasis on transparency and accountability, which may translate into higher demand for quality auditing services. Institutional owners may require high-quality disclosure to ensure that the firm is being transparent and honest about its operations and financial performance so as not to engage in tax avoidance practices (Lestari & Nedya, 2019; Rustiarini & Sudiartana, 2021).

Government Ownership

The extent of government ownership in firms varies across countries, with some having a high percentage of government ownership in their firms. Around the world, governments are very concerned about tax avoidance since it results in lower tax collection, which can make it more difficult for them to fund essential services. it is possible to anticipate that state-owned enterprises' likelihood of participating in tax avoidance is comparatively less than that of private companies (Evana, 2019). The government is keen on safeguarding its revenue by preventing aggressive tax avoidance, as it may result in profits after tax that may only benefit non-controlling shareholders while causing a loss to the government (Tang & Firth, 2011).

Managers may also have the motivation to minimize taxes to increase the firm's resources at their disposal and potentially exploit these resources for personal gain, which could negatively impact minority shareholders (Lo et al., 2010). Meanwhile, Rakayana et al. (2021) posit that government ownership within a company is associated with an increased tendency towards tax avoidance. Zeng (2011) indicated that companies whose largest shareholders are affiliated with the government generally face higher effective tax rates when compared to those without any government affiliation. This could be due to a variety of reasons, such as increased scrutiny from tax authorities or a desire to maintain positive relationships with government officials and maintain a good reputation.

It is anticipated that state officials would be inclined towards requesting audits of superior quality to safeguard the assets of their firms, uphold their reputation, and enhance their ability to raise capital (Alhababsah, 2019). In the study by Niemi (2005), the level of state ownership and the quality of the audits performed were not found to be significantly correlated. Chan, Lin, and Zhang et al. (2007) posit that as ownership shifts from the government to institutional investors, they tend to be greater demand for high-quality auditors. Firms that are largely owned by the government may have a vested interest in protecting their political agenda (Guizani & Abdalkrim, 2021). Therefore, these firms might choose to employ auditors who produce financial statements with lower levels of information quality.

Finally, government ownership can also moderate market concentration, particularly in industries where the government has a significant presence. Liu, Qu, and Haman (2018) assert that the correlation between market competition and poorer performance is less strong for companies that are under the control of the state. Greater competition in product markets is of greater significance (Kay & Thompson, 1986; Liu et al., 2018). Liu et al. (2018) posit that when government enterprises dominate the market other firms stand to benefit from the market when there is higher market competition. This implies that government ownership as a major player can help to ensure that the market remains competitive and that smaller players are not unfairly squeezed out.

Foreign Ownership

Foreign ownership can have both favourable and unfavourable effects on tax avoidance. A higher proportion of foreign ownership implies a more equitable participation of foreign investors in the company's policy formulation regarding tax activities (Rakayana et al., 2021). This ownership is associated with an increased likelihood of employing tax avoidance methods

(Alkurdi & Mardini, 2020). Foreign owners may be more focused on short-term financial gains, leading to a greater willingness to avoid tax. Hasan et al. (2017) also discovered that there is an adverse correlation between tax avoidance and institutional foreign investors. Some researchers perceived foreign investors to have a greater aversion to tax risk and are more concerned about their reputational risk, which leads to a decrease in tax avoidance activities (Alkurdi & Mardini, 2020; Huizinga & Nicodème, 2006).

A study by Jiang and Kim (2004) suggests that foreign investors holding significant shares in a company can influence management by requesting better audit quality to reduce information imbalance. And as such request the view of a high-quality auditor to provide an independent opinion on their financial statement. Alhababsah (2019) posit that foreign investors engage the service of quality auditors with the focus of upholding their integrity.

Finally, Klapper and Love (2004) found that foreign ownership can reduce market concentration. They argued that foreign investors bring new competition to local markets, resulting in reduced prices and improved product quality, Furthermore, foreign investors have the potential to introduce novel technologies to the market, business practices, and management techniques that can increase the efficiency of domestic firms and reduce market concentration. foreign owners increase the level of foreign competition by engaging in tax avoidance which makes them control some factors such as productivity and the industry (Sorbe & Johansson, 2017).

Control Variables

Firm Size

Firm size has been identified as an important variable that affects tax avoidance (Suranta, 2021). Tax avoidance activities are more prevalent among large corporations due to their greater resources and ability to engage in complex tax planning. Some enterprises often lack the resources and expertise to indulge in aggressive tax planning and, as a result, are less inclined to partake in avoidance of tax. According to Solihin et al. (2020), the size of a firm is proxied by its total asset. Companies with higher total assets indicate their strong prospects over a longer period (Suranta, 2021). Firms with larger total assets are likely to exhibit greater stability and financial viability which may be driven by their avoidance practice compared to those with smaller total assets, who may struggle to generate profits and meet their financial obligations. Yahaya and Yusuf (2020) revealed that the size of a firm has a positive impact on tax avoidance.

Firm Age

Some researchers use the political cost theory to explain the influence of a firm's age on its tax avoidance behaviour (Pratama & Padjadjaran, 2017; Yahaya & Yusuf, 2020). Yahaya and Yusuf (2020) posit that as a company grows older, its business operations become more diversified, which increases its exposure to reputational risk. Older firms may be more focused on maintaining their reputation and avoiding negative publicity, which may discourage them from engaging in aggressive tax avoidance practices. However, younger firms may be more focused on growth and expansion, which may lead them to prioritize minimizing tax liabilities to reinvest profits back into the business.

Non-executive Directors

As the size of a company's board increases, there may be more diverse perspectives and experiences represented, which could result in greater oversight and monitoring of activities (Minnick & Noga, 2010). This increased oversight may make it more difficult for the company to avoid tax. Additionally, a larger board can effectively identify and prevent tax avoidance because it can have a wider spectrum of skills and expertise, as well as a greater level of supervision (Suranta, 2021). On the other hand, a bigger board might result in more complex administrative procedures and delays in decision-making, which could open up opportunities for tax avoidance (Hoseini et al., 2019). Research has shown that a larger board size increases the likelihood of firms avoiding tax (Hoseini et al., 2019; Pratama & Padjadjaran, 2017).

Capital Structure

Capital structure is the combination of various sources of financing that firms utilize to finance their operations and investments. Wang et al. (2018) posit that a firm’s capital structure consists of its liabilities (debt) and equity (shares). Debt financing provides an interest tax shield, which means that interest payments on debt are tax-deductible expenses. According to Prabowo (2020), when firms increase their debt it minimises their taxable income therefore reducing their tax liability. As a result, tax avoidance is anticipated to exert a more pronounced influence on debt relative to the cost of equity (Lee et al., 2023). It, therefore, increases the incentive for firms taking advantage of debt financing to enjoy the overall benefit from the interest deductions. The results from Wang et al. (2018) showed that when corporations adopt tax avoidance measures to minimize their tax liabilities, they tend to have lower levels of debt. In contrast, Prabowo (2020) revealed that companies with higher levels of debt are nore likely to avoid tax. However, Lee et al. (2019) posit that companies that avoid tax tend to opt for raising funds through equity rather than taking on more debt.

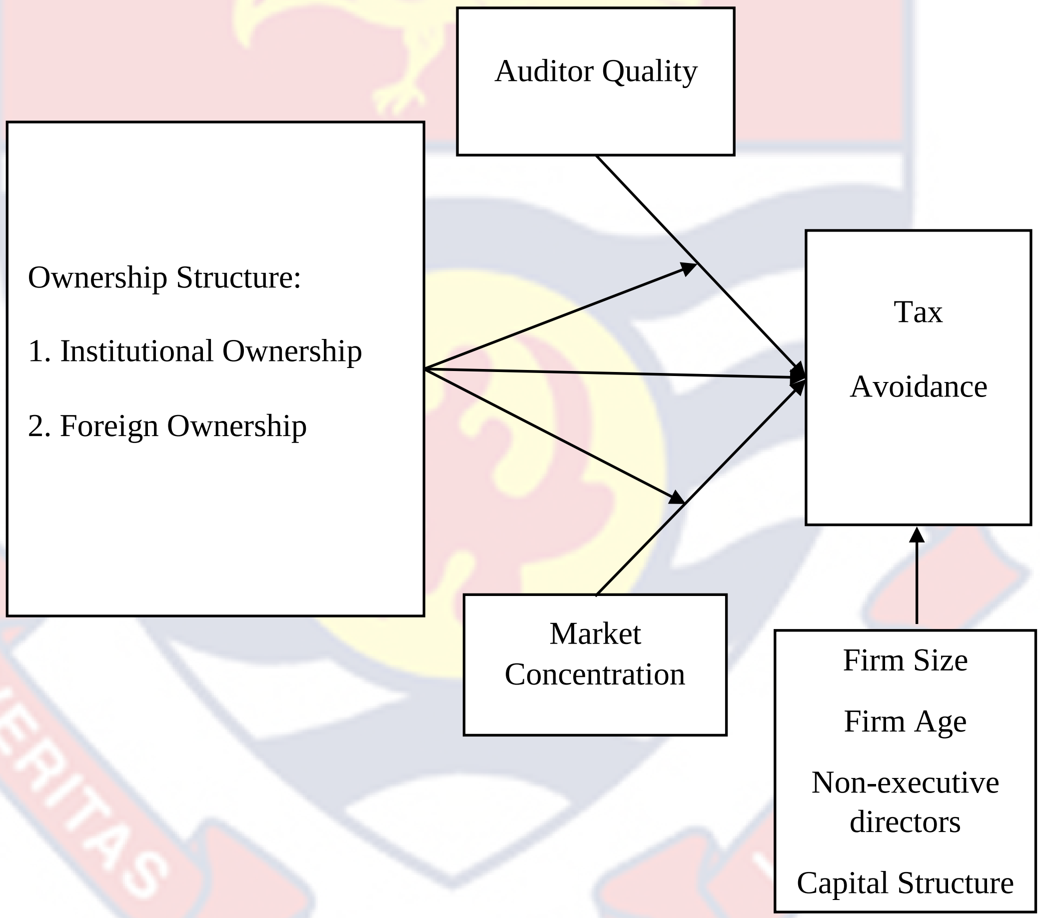

Figure 1: Conceptual Framework of the Study

Source: Author's Construct (2023)

From Figure 1, the conceptual framework of the study looks at the relationship between the variables, i.e., auditor quality, market concentration, ownership structure and tax avoidance. Hence, the study examined the relationship between auditor quality, market concentration and tax avoidance in Ghana with an emphasis on the moderating role of ownership structure.

Empirical Review

This review empirical studies in the context of their purpose, methodology, geographical regions, unit of analysis, analytical techniques, and most importantly their findings about the work.

Auditor Quality, Market Concentration, and Tax Avoidance

Auditor quality is a critical aspect of financial reporting and corporate governance**.** The quality of auditors can have significant implications for financial reporting, including the detection of fraudulent financial reporting and the prevention of tax avoidance. In Ghana, audited financial statements are commonly used as a tool for assessing credibility and financial health of firms. It is especially essential for firms seeking to attract potential investors or secure financing from financial institutions. However, concerns have been raised about the factors that influence auditor quality. In Ghana, Mawutor et al. (2019) posit that charging high audit fees can undermine the independence of auditors, resulting in a reduction in the quality of the audit. However, Mawutor et al. (2019) did not consider audit tenure as a factor of audit quality. In contrast, this study used audit tenure as a measure of auditor quality. Using the agency theory Ardillah and Prasetyo (2021) found that when auditors put more effort into their work, it leads to a higher likelihood of detecting and correcting errors in financial statements, which in turn reduces the ability of firms to manipulate their earnings. As a result, the overall quality of audited financial statements is improved.

Tax avoidance is a widespread phenomenon around the world, with companies using various strategies to reduce their tax liabilities. Wang et al. (2020) provided insights into the measurement and determinants of tax avoidance. They showed that firms with greater financial constraints, higher levels of debt, and weaker governance structures are likely to avoid tax. Effective tax rate, book difference and disclosure of tax were used as the measure of tax avoidance. Dyreng et al. (2008) measured tax avoidance using the long-run cash effective tax rate. The study included a sample of 2,077 firms.

Tackie et al. (2022) investigated the impact of tax planning on insurance companies' financial performance with a focus on the moderating role of corporate governance. The study employed a system generalized method of moments framework and uses a sample of 35 Ghanaian insurance firms over a six-year period. The findings suggested that there is a non-linear relationship between tax planning and performance, and corporate governance moderates this relationship. The study was limited to insurance companies' but the researchers could have widened its scope to cover non-financial firms in Ghana.

In Ghana, Adela et al. (2023) investigated the drivers of tax-aggressive behaviour among listed non-financial firms in Ghana. Using data from 19 firms over the 2010-2019 period and employing the system GMM approach, the study revealed that political connections and financial constraints are the main drivers of tax aggressiveness among listed non-financial firms in Ghana. Adela et al. (2023) effectively assessed tax aggressiveness using ETR and current ETR, while this study utilized Gaap ETR and cash ETR as measure of tax avoidance.

The study by Agyei et al. (2020) added to the existing research on tax avoidance by investigating the behaviour of financial institutions, specifically banks, in Ghana. By analyzing data from 18 commercial banks between 2010 and 2014 using the systems generalized method of moments estimation technique, the study found that non-executive directors on boards, old banks, and liquidity conditions encourage banks to participate in tax avoidance practices. Conversely, big banks and those in the later stages of their cycle are less likely to engage in such activities.

Additionally, Grullon et al. (2019) investigated the changes in concentration levels across U.S. industries over the last two decades and their impact on firm performance. The authors revealed that the profit margins and the profitability of merger and acquisition transactions were higher at companies in the industries with the highest increase in product market concentration. And further suggested that market dominance is becoming a significant source of value for firms. Concentration was measured using the Herfindahl-Hirschman index. Data was gathered from the Compustat dataset from 1972–2014.

The Relationship between Auditor Quality, Market Concentration, and Tax Avoidance

Studies have shown that there is a negative or no relationship between auditor quality and tax avoidance. A study by Lestari and Nedya (2019) found that companies with higher auditor quality are less likely to engage in tax avoidance. Panel data regression technique was used. The sample for the study consisted of 312 listed companies from the period 2012-2017. Similarly, Ardillah and Prasetyo (2021) found that companies with Big Four auditors or non-Big Four firms do not affect tax avoidance since they all provide equal results for their services. 41 companies made up the sample size from 2016 to 2018 by using a purposive sampling technique. The estimation technique employed was multiple linear regression.

Sorbe and Johansson (2017) examined how the tax planning activities of major multinational corporations affect competition, particularly whether these practices give them an advantage over their rivals and allow them to dominate the market. The research employed data at the level of individual firms obtained from the ORBIS database to investigate the markup rates of companies with different degrees of tax planning opportunities. The concentration indicator was used as a measure of industry concentration and data were analysed using the Ordinary Least Square regression method. The results of the study indicated that large multinational corporations that engage in tax planning may utilize their tax savings to achieve greater mark-ups, which in turn could lead to the displacement of other firms. The study focused on large multinational corporations, which might limit the generalizability of the findings to smaller businesses or firms in different contexts.

In the US Martin et al. (2021a) offered empirical proof to substantiate the assertion that market concentration is markedly affected by tax avoidance by large corporations. The HHI was used to measure market concentration. The authors collected financial data on companies from the Compustat database and were analysed using Ordinary Least Squares and Two-Stage Least Squares regression methods. The authors posit that tax avoidance by big corporations provides them with a competitive edge, resulting in greater market shares and a more segmented economy.

Cai and Liu (2009) investigated the link between market competition and corporate tax avoidance among firms. The study employed instrumental variables and exogenous policy shocks to mitigate potential measurement errors and endogeneity. The results demonstrated that firms operating in more competitive environments are more inclined to engage in tax avoidance practices. Additionally, the study revealed that firms in less favourable positions have stronger motives to avoid paying corporate tax.

The Moderating Role of Ownership Structure

The ownership structure of firms has emerged as a potentially important factor that could affect the relationship between various determinants of tax avoidance and the level of tax avoidance itself. In particular, research has explored how ownership structure may moderate the links between auditor quality, market concentration, and tax avoidance. The following discussion reviews some of the key findings in this area and highlights the implications for future research.

Yunyun et al. (2021) examined whether the increasing percentage of institutional ownership in China affects corporate tax avoidance activities. The researchers analyzed data from 1,108 listed Chinese companies between 2009-2017. Quantile regression was performed at the median level to account for the fat tail of financial data. According to the results, the degree of corporate tax avoidance tends to increase with a rise in the shareholdings of institutional owners, implying that institutional ownership could encourage tax avoidance.

Furthermore, Rakayana et al. (2021) investigated the impact of different ownership structures on tax avoidance. The research method used was quantitative, employing regression analysis with annual reports of 93 companies listed on the Indonesian stock exchange. The Cash Effective Tax Rate was used to measure tax avoidance. The results showed that government and foreign ownership structures positively affected tax avoidance. On the other hand, family, institutional, managerial, and public ownership structures had no significant effect on tax avoidance. These findings suggest that the ownership structure of a company may influence its tax avoidance policy. Rakayana et al. (2021) effectively employed the various forms of ownership structure, and provided a large sample size, contributing to the reliability of the findings.

Rustiarini and Sudiartana (2021) explored the moderating effect of ownership structure in the association between political connection and tax avoidance. Using purposive sampling, data were collected from 119 companies listed on the Indonesian Stock Exchange. Data were analysed using descriptive statistics and regression analysis. The study found a negative relationship between political connection and Effective Tax Rate (ETR). Managerial ownership strengthens the negative relationship between political connection and ETR, while institutional ownership weakens it. In contrast, public ownership does not moderate the relationship between political connection and ETR.

Alkurdi and Mardini (2020) examined the relationship between ownership structure, board composition, and tax avoidance. The study utilised a sample of all 348 market companies from Jordanian listed on the Amman Stock Exchange between 2012 and 2017. The study revealed that companies with higher levels of managerial and institutional ownership tend to exhibit reduced usage of tax avoidance practices. Conversely, foreign ownership shows a positive relationship, indicating that companies with foreign ownership are more likely to adopt tax avoidance strategies.

Literature Gaps

There is a lack of consensus on the definition and measurement of tax avoidance. The studies above found it difficult in distinguishing between legitimate tax planning and tax avoidance practices. Wang et al. (2020) refer to tax avoidance as any transactions that minimize a company's tax liabilities. While Dyreng et al. (2008) defined tax avoidance as the capability of paying minimal cash income taxes. The authors stated that the long-run effective tax rate is the best measure of tax avoidance. This study fills this gap by employing different measures of tax avoidance such as the Gaap effective tax rate and the cash effective tax rate. Also, tax avoidance is often achieved by taking advantage of tax law gaps or by lowering the amount of taxable income through legal frameworks and strategies.

It is worth noting that while these studies provided valuable insights into the relationship between auditor quality, tax avoidance, and market concentration, they are not without limitations. For instance, Ardillah and Prasetyo (2021); Lestari and Nedya (2019) provided data for a period which is less than ten years. Additionally, the Ordinary Least Square regression technique was predominantly employed for conducting inferential analysis. To address this gap, the study utilized data spanning a period of ten years, specifically from 2012-2022.

Finally, previous studies have mainly investigated the impact of ownership structure on tax avoidance. However, there is a lack of research on the moderating effect of ownership structure between auditor quality market concentration and tax avoidance. This study aims to bridge this gap by examining the moderating role of ownership structure in these relationships. Also, the systems generalized method of moments estimation technique was used to handle endogeneity issues.

Chapter Summary

This chapter provides a review of the existing literature related to the research topic. It then explores various theoretical, and conceptual issues and empirical studies related to auditor quality, market concentration and tax avoidance. The chapter also examines the moderating role of ownership structure between tax avoidance and auditor quality and the moderating effect of ownership structure between tax avoidance and market concentration. The literature review analyzes the findings of previous studies and identifies the research gaps and limitations that this study aims to address.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter focuses on the research methodology. It outlines the methods and techniques employed in gathering and analyzing data. The research methodology involves outlining the philosophical position, research approach and design and the data processing and analysis technique.

Research Paradigm

Based on the ideologies and presumptions people have concerning the world and the nature of knowledge, research paradigms provide a philosophical foundation for how scientific research should be carried out (Collis & Hussey, 2009). According to Hitchcock and Hughes (2002), various researchers may have varying assumptions regarding knowledge and truth and how they are acquired. The formation of research assumptions, knowledge, and nature is referred to as research philosophy. The foundation of research philosophy is the positivist and interpretivism approaches. Positivism holds that the phenomenon under study can be evaluated when associated with quantitative methods and design (Agyapong, 2019). It assumes that there is an objective reality that can be measured and observed through the use of quantitative methods and is often associated with the testing of hypotheses. Interpretive research philosophy asserts that the social world can be viewed subjectively and it is very hard to interpret the social world. The fundamental goal of an interpretivism study is to understand and explain occurring events and the belief people link to the phenomenon (Collis & Hussey, 2009).

Because the research takes a sole objective and uses a quantitative approach for analysis, a positivist research philosophy was employed for this study.

Research Approach

The research method includes quantitative, qualitative, and mixed-method. The qualitative approach is usually exploratory and involves using various data-gathering techniques. This study employed the quantitative approach. A quantitative method helps in analyzing numerical data to test hypotheses and support or refute research questions. Mbilla (2018) asserts that the employment of the quantitative method improves the statistical analysis of data, making it less difficult to generalise the study's outcome. In quantitative research, data collection is much more structured. The quantitative approach was a good method for identifying relationships between the study variables, establishing cause-and-effect and making predictions about future outcomes.

Research Design

The research design refers to the overall plan or strategy chosen to address a research question or hypothesis (Frimpong, 2018). The design determines the overall structure which is essential for producing meaningful conclusions and also guides future research. The explanatory research design was utilized for data collection and analysis. This design is used when the research goal is to determine why a particular event or phenomenon occurred. The explanatory research design is also used to determine the cause and effect between variables. This is achieved by manipulating independent variables and measuring their effect on dependent variables. The explanatory design was ideal because the study stands to look at the relationship between auditor quality, market concentration and tax avoidance.

Study Population

The entire group the researcher is interested in gathering data from to make conclusions is described as the population. The population of this study consist of all the listed companies on the Ghana Stock Exchange. There are 37 companies listed on the Ghana Stock Exchange, involving various sectors including banking, agriculture, telecommunications, and manufacturing.

Sampling Procedure

Sampling involves choosing a smaller portion of a larger group, usually because it is impractical for a researcher to study every individual in the group (Cooper & Schindler, 2014). According to Babbie (2007), a sample is a selected portion of the larger population being studied that possesses all the characteristics the researcher is interested in examining. The selected sample size ought to be in proportion to the total population to adhere to the principle of proportionality, as stated by (Kothari, 2004).

The sample was based on specific criteria or characteristics that were relevant to the research objectives. The criteria for inclusion in the sample were based on data availability within the timeframe. The sample excluded companies whose financial records for this time period were incomplete. Additionally, the company included in the study had the available data and variables needed for the study. The sample size consisted of 15 listed non-financial firms on the Ghana Stock Exchange and the study covered the period of 2012-2021. Non-financial firms were used due to the ability to apply the finding to a broad range of industries and sectors.

Source of Data Collection

The variables in the study consist of auditor quality, tax avoidance, market concentration and ownership structure. Data on the respective variables were obtained from the firm's financial statement. The financial statements of listed firms in this study were their respective annual reports. Annual reports contain detailed financial information on a firm's performance over the past years. The annual reports can be obtained from both the websites of the Ghana Stock Exchange and the relevant companies.

Model Specification and Estimation Techniques

Panel methodology also known as a longitudinal analysis is a technique used to analyse data collected over time from multiple individuals or firms. In this approach, a group of firms, often known as a cohort, are followed over time and data is collected at regular intervals. The intervals include monthly, quarterly or annually. Statistical models are used in panel methodology. The models give researchers the ability to account for variables that may affect the desired outcome both individually and over time. The utilization of panel data in this study increased the likelihood of identifying significant relationships between the variables because it offered more observations than cross-sectional analysis. Additionally, panel data helped to better identify the causal effects of variables on findings.

The study adopted the System General Method of Moments (GMM) estimation and the data was processed using Stata version 17.0. The system GMM was utilised to evaluate the moderating role of ownership structure in the relationship between auditor quality and tax avoidance as well as the moderating role of ownership structure in the relationship between market concentration and tax avoidance.

System General Method of Moments

The GMM is used to estimate statistical models which are based on moment conditions. There are two types of GMM, these are the difference GMM and the system GMM. The difference GMM is sometimes referred to as the first difference equation (Arellano & Bond 1991). The use of the difference GMM helps to transform the regressors through first differencing and to remove the fixed effect.

Arellano and Bover (1995) raised concerns about the potential drawbacks of using difference GMM, particularly in cases where the regressors exhibit consistency. They argued that relying solely on the first-difference equations in GMM estimation may result in incorrect or biased parameter estimates (Abeka et al., 2022). The system GMM estimator employs two sets of moment conditions: the first set involves the first-differenced equation, while the second set involves the level equation (Agyei et al., 2020). The system GMM estimator uses the two sets of moment conditions to generate efficient estimates of the coefficients and minimize the problems of endogeneity, measurement errors, and omitted variable biases typical in panel data models.

The study utilized the two-step system GMM because of its efficiency and robustness to autocorrelation (Roodman, 2009). However, one setback of the system GMM estimation is that it can lead to instrument proliferation. Instrument proliferation occurs when there are too many instruments in the model, which can produce estimates that are inefficient and biased (Roodman, 2009). To minimize the potential bias arising from excessive instrument proliferation the study applied the general rule of thumb which is to limit the number of instruments to be equal to or fewer than the number of groups (Mileva, 2007).

To verify the adequacy of the model, diagnostic tests were conducted. To check for the validity of the model Hansen test was conducted. The study further tested for autocorrelation. According to Mileva (2007), the test for an AR(1) process in first differences often results in rejecting the null hypothesis but the test for an autoregressive AR(2) process in second differences is of greater significance as it can identify autocorrelation in levels. The AR(2) test helps to examine the presence of a relationship between current and lagged values of a variable. The models were sourced from (Agyei et al., 2020; Tackie et al., 2022).

Level Equation

$$InTA_{it} = y_0 + y_1 InTA_{it-r} + \sum_{h=1}^{n} y_h W_{h,it-r} + \theta_i + \mathcal{E}_{it} \quad (1)$$

First Difference Equation

$$InTA_{it} - InTA_{it-r} = y_1(InTA_{it} - InTA_{it-2r}) + \sum_{h=1}^{n} y_h \left(W_{h,it-r} - W_{h,it-2r}\right) + (\mu_t - \mu_{t-r}) + \mathcal{E}_{it-r} \quad (2)$$

Where *InTA* is tax avoidance of firm *i* in time *t*; y_0 is a constant; *W* is a vector of the control variables (firm size, firm age, non-executive directors and capital structure); μ_t is time-specific constant, r is the coefficient of autoregression, θ_i is the firm-specific effect, $\mathcal{E}_{it}$ is the error term.

$$TA_{it} = \beta_0 + \beta_1 TA_{it-1} + \beta_2 InAQ_{it} + \beta_3 FS_{it} + \beta_4 FA_{it} + \beta_5 NED_{it} + \beta_6 CS_{it} + \beta_7 OWN_{it} + \beta_8 (AQ * OWN) + \mu_i + \varepsilon_{it} \quad (3)$$

$$TA_{it} = \beta_0 + \beta_1 TA_{it-1} + \beta_2 InMC_{it} + \beta_3 FS_{it} + \beta_4 FA_{it} + \beta_5 NED_{it} + \beta_6 CS_{it} + \beta_7 OWN_{it} + \beta_8 (MC * OWN) + \mu_i + \varepsilon_{it} \quad (4)$$

TA represents tax avoidance, AQ represents auditor quality, MC represents market concentration, FS represents firm size, FA represents firm age, NED represents non-executive directors, CS represents capital structure, whiles OWN represents foreign and institutional ownership.

Variables Measurement

The dependent variable in the study is tax avoidance and further uses auditor quality, and market concentration as the independent variable. The moderating variable consists of institutional and foreign ownership. The study controlled for other variables such as firm size, firm age, non-executive directors and capital structure.

Tax Avoidance

The measurement of tax avoidance in the study involves the use of several indicators, including the Generally Accepted Accounting Principles Effective Tax Rate (GaapETR) and Cash Effective Tax Rate (CashETR). The GaapETR is calculated by dividing the income tax expense recognized in a company's financial statements by the company's pre-tax income (Mindzak & Zeng, 2020; Wang et al., 2020). The CashETR is expressed as cash taxes paid by the company during a given period by its pre-tax income (Dyreng et al., 2008). The research utilised various methods to assess tax avoidance. Incorporating multiple measures enhance the accuracy and comprehensiveness of the study's findings on tax avoidance.

Auditor Quality

The quality of an audit is the extent to which auditors adhere to professional standards in conducting their audit and their adherence to the prescribed auditing standards, procedures, and techniques, as well as their proficiency, carefulness, and ethical conduct while carrying out their duties (Lestari & Nedya, 2019). The quality of an auditor was gauged using the metrics of audit tenure. Audit tenure was specified as the number of years that the auditor has audited the firm's financial statements.

Market Concentration

When a few businesses control a sizable portion of the market, they are said to have a great amount of market power (Martin et al., 2021b). When a percentage of the total market share in a given industry or sector is held by a small number of companies the market is said to be concentrated and it also measures the degree of competition within a market. Herfindahl-Hirschman Index (HHI) was used as a measure of concentration by summing the squares of the market shares of all the firms in the industry.

Ownership Structure

The way a company's ownership is distributed among its shareholders is referred to as its ownership structure**.** Alkurdi and Mardini (2020) assert that the way a company is owned and governed is referred to as its ownership structure. The ownership structure in a firm establishes who has the authority to make decisions on the firm's behalf and how those choices are made. The variable institutional ownership was measured as a dummy variable where 1 represents firms with institutional investors and 0 for those without institutional ownership. Foreign ownership was measured as a dummy variable where 1 represents foreign ownership and 0 represents domestic ownership (Adela et al., 2023).

Firm Size

According to Solihin et al. (2020), the size of a firm is proxied by its total asset. Companies with higher total assets indicate their strong prospects over a longer period (Suranta, 2021). The total resources that a company owns or controls are referred to as its total assets. It is made up of both tangible and intangible assets. The total asset value is typically shown on a company's balance sheet and serves as a crucial gauge of its size and financial standing. In this study, the size of the firm is measured by the natural logarithm of total assets.

Firm Age

Firm age is commonly defined as the length of time that a company has been operating since its establishment. Yahaya and Yusuf (2020) posit that as a company grows older, its business operations become more diversified, which increases its exposure to reputational risk. Older firms may be more focused on maintaining their reputation and avoid negative publicity. Firm age is measured as the length of years sampled firm i had been in operations as at period t.

Non-executive Directors

A bigger board might result in more complex administrative procedures and delays in decision-making, which could open up opportunities for tax avoidance (Hoseini et al., 2019). Suranta (2021) posit that a larger board can effectively identify and prevent tax avoidance because it can have the skills and expertise and a greater level of supervision. Non-executive directors was measured as the ratio of non-executive directors to the total number of directors serving on the firm's board.

Capital structure

Wang et al. (2018) posit that a firm's capital structure consists of its liabilities (debt) and equity (shares). Debt refers to borrowed funds or financial obligations that a company owes to external parties (Wardani et al., 2022). It symbolizes the money that a business has borrowed from lenders, like banks or bondholders, with the commitment to pay back the borrowed sum over time, often with interest. Equity on the other hand refers to the shareholders' interest in the firm. Capital structure was measured as the firm's total liabilities to its equity.

Table 1: Measurement of Variables

Variable	Measurement	Source
Auditor Quality	The number of years that the auditor has audited the firm's financial statements.	(Lestari & Nedya, 2019; Willekens et al., 2023)
Market Concentration	Herfindahl-Hirschman Index (HHI). By summing the squares of the market shares of all the firms in the industry.	(Martin et al., 2021a; Sorbe & Johansson, 2017)
Tax Avoidance	GAAP ETR = Total income tax expense/ Pre-tax income Cash ETR = Cash taxes paid/ Pre-tax income	(Mindzak & Zeng, 2020; F. Wang et al., 2020)
Ownership Structure	Institutional ownership, where 1 represents firms with institutional investors and 0 for those without institutional investors. Foreign ownership was measured as a dummy variable where 1 represents foreign ownership and 0 represents domestic ownership.	(Adela et al., 2023; Rakayana et al., 2021; Rustiarini & Sudiartana, 2021)

Firm Size	The natural logarithm of total assets.	(Amalia & Ferdiansyah, 2019)
Firm Age	Firm age is measured as the length of years sampled firm i had been in operations as at period t.	(Adela et al., 2023)
Non-executive directors	The ratio of non-executive directors to the total number of directors serving on the firm's board.	(Agyei et al., 2020)
Capital Structure	Total Liabilities/ Total Equity	(Prabowo, 2020)

Source: Field Data (2023)

Chapter Summary

Chapter Three of this study presented the research methodology used to achieve the objectives of the study. The study employed an explanatory research design and consisted of 15 non-financial firms listed on the Ghana Stock Exchange. The data was collected from the annual reports of the selected firms, and panel data analysis techniques, specifically the system generalized method of moments (GMM) model, was used to analyze the data. The specific variant employed was the two-step system GMM. The system GMM was appropriate because of its ability to solve issues regarding endogeneity.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The data processing results are presented along with an in-depth analysis of the findings. This section addresses each research question and hypothesis, unveiling the outcomes of the statistical analyses, regression models, or other relevant analytical techniques. The chapter presents the descriptive statistics of the variables under study. Subsequently, the chapter presents a correlation matrix that enables the identification of potential multicollinearity issues. Finally, the chapter presents an empirical analysis to establish the ownership structure's role between audit quality, market concentration and tax avoidance.

Descriptive Statistics

Descriptive statistics were used to analyse the study's first objective which is to assess the nature of auditor quality, market concentration and tax avoidance. Appendix A provides a list of the specific firms included in the sample from the Ghana Stock Exchange. The descriptive statistics presented include the mean, which represents the average value of each variable. The standard deviation was also used to measure the degree of variability or dispersion among the observations. Additionally, each variable's minimum and maximum values were provided, indicating the range of values observed within the sample. The number of observations also signified the total number of data points available for each variable in the data.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
GaapETR	149	.248	.364	0	2.762
CashETR	150	.208	.735	-2.119	7.209
MC	150	2591.849	614.364	2073.052	4224.764
AQ	150	2.542	.392	1.099	3.178
InOwn	150	.933	.25	0	1
Fown	150	.333	.473	0	1
FA	150	38.5	16.58	7	70
NED	148	.716	.127	.333	.889
FS	149	25339363	72780447	5540.6	4.267e+08
CS	150	5.364	12.727	0	130.61

Source: Field Data (2023)
Note: Estimated based on annual reports of non-financial firms listed on the Ghana stock exchange from 2012-2021.

GaapETR represents the generally accepted accounting principle effective tax rate; CashETR is cash effective tax rate; MC is market concentration; AQ represents auditor quality; In Own represents institutional ownership; Fown is a dummy variable that indicates whether a firm is foreign-owned or not foreign-owned; FA is a measure of firm age; NED represents non-executive directors; FS is firm size; CS represents capital structure.

From the descriptive statistics in Table 2, the measures of tax avoidance that is GaapETR had an average of 24.8% within the ranges of 0 and 2.762 whiles CashETR had an average of 20.8% ranging from the lowest to the highest value of -2.119 and 7.209 respectively. The table shows that non-financial firms are taking advantage of the tax law gaps to reduce their tax burden since the effective tax rate is below the statutory tax rate of 25%. However, the average value of 24.8% indicates that as the effective tax rate (ETR) increases, the likelihood of the company engaging in tax avoidance decreases. The results further depict that as the firms engage in tax avoidance practice there is the likelihood of them being aware of the potential opportunities to reduce tax costs by either actively learning about the tax system or using services designed to reduce the overall tax liability.

Market concentration with a recorded average of 2591.849 within the limit of 2073.052 and 4224.764 shows that firms are highly concentrated with few firms dominating the market. According to Azar et al. (2022), typically a Herfindahl-Hirschman Index (HHI) above 1,500 suggests a moderate level of market concentration, while a value above 2,500 indicates a high degree of concentration. The results further indicate that a majority of the analyzed firms, specifically over 93.3%, had institutional investors, while around 33.3% of the firms had foreign ownership. This likely depicts that most of the non-financial firms in Ghana are dominated by institutional investors. Institutional investors are seen to have a significant impact on business performance in Ghana since their presence in a business contributes to a strong corporate governance practice (Adela et al., 2023). The measure of auditor quality which is audit tenure with a mean value of 2.542, indicates that, on average, firms maintain a continuous relationship with a public accountant firm for approximately 3 years. According to Siregar et al. (2012), extended periods of audit tenure diminishes the levels of audit quality.

The firms displayed notable variations in both their asset sizes and ages. Specifically, firm size had an average of GH₵ 25,339,363 with a firm having the lowest total asset of GH₵ 5,540.6 indicating a wide range of financial magnitudes among the firms. Similarly, the age of the firms ranged from 7 to 70, further emphasizing the diversity in the ages of the firms with an average number of years of the firms included in the study being 39 years. These findings highlight the significant differences observed in the asset sizes and ages of the firms.

On average, 71.6% of the board is made up of non-executive directors. This means that these firms have the advantage of receiving impartial perspectives during board meetings. Non-executive directors are known for their indirect involvement in the daily operations of a firm this helps in providing a neutral viewpoint during board discussions. The capital structure which is measured as the ratio of debt to equity had an average of 5.364. The results signify that the debt portion of the total value of assets is 5.364 times more than the equity portion held by shareholders. This suggests that the industry has a moderate level of debt relative to equity.

Correlation Analysis

Table 3: Correlation Matrix

Variables	GaapETR	L.GaapETR	CashETR	L.CashETR	MC	AQ	InOwn	Fown	FA	NED	CS	FS
(1) GaapETR	1.000											
(2) L.GaapETR	0.315***	1.000										
(3) CashETR	0.729***	0.167*	1.000									
(4) L.CashETR	0.166*	0.725***	0.408***	1.000								
(5) MC	0.120*	-0.090	0.002	0.109	1.000							
(6) AQ	-0.129*	-0.183**	0.054	0.045	0.134*	1.000						
(7) InOwn	-0.070	-0.050	-0.130*	-0.095	0.000	0.095	1.000					
(8) Fown	0.264***	0.281***	0.281***	0.295***	0.000	-0.168***	0.189***	1.000				
(9) FA	0.017	0.003	-0.070	-0.086	0.036	0.211***	-0.259***	-0.454***	1.000			
(10) NED	-0.066	-0.072	-0.001	0.052	0.014	0.015	0.103	-0.073	0.199***	1.000		
(11) CS	-0.215***	-0.218**	0.149*	0.116	-0.072	0.017	0.068	-0.113*	-0.136*	-0.066	1.000	
(12) FS	0.046	0.048	0.003	0.020	0.052	-0.275***	0.051	-0.238***	0.003	0.192**	0.112*	1.000

* $p<0.10$, ** $p<0.05$, *** $p<0.010$

Source: Field Data (2023)

Note: Estimated based on annual reports of non-financial firms listed on the Ghana stock exchange from 2012-2021.GaapETR represents the generally accepted accounting principle effective tax rate; CashETR is cash effective tax rate; MC is market concentration; AQ represents auditor quality; InOwn represents institutional ownership; Fown is a dummy variable that indicates whether a firm is foreign-owned or not foreign-owned; FA is a measure of firm age; NED represents non-executive directors; FS is firm size; CS represents capital structure.

Table 3 displays the correlation matrix, which shows the relationships between the variables used in the empirical analysis. According to the results presented in Table 3, a firm's tax avoidance behaviour in one period is positively correlated with its tax avoidance behaviour in subsequent periods. The correlation coefficient between the GaapETR and CashETR and its lag from the previous year was (0.315 and 0.408) which is significantly lower than the commonly accepted threshold of 0.800 (Agyei et al., 2020), which is typically indicative of persistence. The table also depicts that there is no multicollinearity since the relationship between the independent variables (auditor quality and market concentration) is not above 0.9 as specified by Islam et al. (2022).

Multicollinearity analysis test was important because it could pose problems in regression analysis by inflating the standard errors, leading to unstable coefficient estimates making it difficult to interpret the individual effects of independent variables. Identifying and addressing multicollinearity was vital in ensuring the reliability and validity of regression results.

Regression Results on Auditor Quality, Market Concentration, Ownership Structure and Tax Avoidance.

This subsection provides an overview and analysis of the empirical findings related to the study's objectives. The regression outcomes are displayed in Tables 4, 5 and 6. Table 4 shows the relationship between auditor quality, market concentration, ownership structure and tax avoidance. Table 5 displays the moderating effect of ownership structure on the relationship between auditor quality and tax avoidance. Table 6 presents the results on the moderating impact of ownership structure on market concentration and tax avoidance.

The table below presents results on the separate effect of auditor quality, market concentration, and ownership structure on tax avoidance. The first two columns display the effect of auditor quality, market concentration and ownership structure on tax avoidance measured as GaapETR. Furthermore, the last two columns show the individual effect of auditor quality, market concentration and ownership structure on tax avoidance measured as CashETR.

Table 4: The individual effect of auditor quality, market concentration and ownership structure on tax avoidance

	Model (1)	**Model (2)**	**Model (3)**	**Model (4)**
L.GaapETR	-0.359***	-0.257**		
	(0.0688)	(0.0934)		
L.CashETR			-1.225***	-1.233***
			(0.0668)	(0.0762)
AQ	-0.0617*	-0.0365	-2.830**	-3.096*
	(0.0360)	(0.0321)	(0.981)	(1.524)
MC	-0.0000888*	-0.000107	-0.0000232	-0.0000233
	(0.0000482)	(0.0000865)	(0.000222)	(0.000222)
InOwn	1.152*	2.496**	87.59*	91.90*
	(2.335)	(1.124)	(48.53)	(52.08)
Fown	0.440*	0.0858	10.79***	11.97*
	(0.416)	(0.507)	(3.335)	(6.159)
FS	-0.124**	-0.117**	0.231	0.215
	(0.0554)	(0.0457)	(0.340)	(0.348)
FA	0.0466**	0.0256	0.330***	0.361**
	(0.0201)	(0.0153)	(0.0836)	(0.158)
NED	-1.621**	-3.314**	11.58*	11.31*
	(0.581)	(1.383)	(5.897)	(6.020)
CS	-0.0224***	-0.0220***	0.0109	0.0112
	(0.00532)	(0.00603)	(0.00638)	(0.00650)
Constant	1.071	6.423***	-102.7**	-107.5*
	(2.135)	(1.657)	(46.87)	(51.42)

Table 4: Cont'd

Observations	132	132	133	133
No. of instruments	18	18	15	14
AR1 (p-value)	0.0726	0.0594	0.0421	0.0591
AR2 (p-value)	0.113	0.105	0.288	0.285
Hansen-J (p-value)	0.745	0.649	0.625	0.489

Standard errors in parentheses
* $p<0.10$, ** $p<0.05$, *** $p<0.010$
Source: Field Data (2023)

Note: Estimated based on annual reports of non-financial firms listed on the Ghana stock exchange from 2012-2021.GaapETR represents the generally accepted accounting principle effective tax rate; CashETR is cash effective tax rate; MC is market concentration; AQ represents auditor quality; InOwn represents institutional ownership; Fown is a dummy variable that indicates whether a firm is foreign-owned or not foreign-owned; FA is a measure of firm age; NED represents non-executive directors; FS is firm size; CS represents capital structure.

Table 4 shows the results on the relationship between AQ, GaapETR and CashETR. At a 10% significant level auditor quality had a coefficient of -0.0617. The coefficient of -0.0617 indicates that as auditor quality increases, the GaapETR experiences a decrease of 0.0617%, resulting in a higher level of tax avoidance among firms. Even with the existence of high-quality auditors, the independent opinion of an auditor on a firm financial statement can make investors and other stakeholders have great trust and confidence in the accuracy and credibility of the information disclosed therefore reducing the level of uncertainty. The information advantage can be used internally by management to improve decision-making on their tax avoidance practices. Additionally, increase knowledge and familiarity with firm activities can make high-quality auditors gain deeper insight into a firm's method of avoiding taxes this can be used to provide advice and further facilitate tax avoidance.

This findings confirm that of Lestari and Nedya (2019) who argue that establishing long-standing relationships between auditors and companies can foster close proximity that may lead auditors to prioritize management interests and potentially influence the quality of their audits leading to increased tax avoidance behaviour. The results on the other hand do not conform with Pratama and Padjadjaran (2017) who posit that companies engaging audit firms tend to experience a higher effective tax rate. The results is also inconsistent with Boussaidi and Hamed (2015) who assert that when a company chooses to engage an external auditor it is more likely to adopt a less aggressive tax approach. The results do not corroborate with the findings of Rizqia and Lastiati (2021) who posit that auditor independence is not compromised on the duration of audit tenure and hence does not contribute to tax avoidance.

Although insignificant, MC attained a negative coefficient signifying that an increase in market concentration leads to a decrease in both GaapETR and CashETR. Firms gain market concentration through improved market share, quality products and reduce prices for their goods and service. High market concentration leads to great market power and low competition among firms. This gives firms the opportunity to avoid tax to reduce their overall tax liabilities. Furthermore, a concentrated market can lead to cooperative behaviour among firms in other to maintain a competitive advantage. This behaviour can drive firms to increase and improve their tax avoidance strategies through the sharing of sensitive information regarding the tax system and also improve profit. The findings align with Sorbe and Johansson (2017) research, which suggested that multinational companies utilizing international tax planning strategies may leverage their reduced tax burden as a competitive advantage to secure larger market shares and outcompete other firms.

At a 10% significance level, InOwn had a positive coefficient of 1.152 and 87.59 respectively. This show that an increase in InOwn leads to a 1.152% and 87.59% increase in both GaapETR and CashETR. Institutional investors are mostly viewed to have a key interest in their reputation and seek to preserve a positive image to their stakeholders and as such may have a decreased tendency to avoid paying taxes. Moreover, institutional owners are interested in the long-term sustainability of a firm and as such will not be motivated to avoid tax that will jeopardise their interest.

The findings confirm that of Alkurdi and Mardini (2020) who posit that institutional owners focus on improving the performance of a firm and therefore will not be driven to avoid tax. The results is further consistent with Dakhli (2022) who suggests that the rise in InOwn corresponds to a decrease in the extent of tax avoidance. Yunyun et al. (2021) had inconsistent results by suggesting that institutional investors encourage tax avoidance.

In model 1, the findings indicated that at a 10% significance level, Fown had a positive coefficient of 0.440. The coefficient indicates that for every percentage increase in foreign ownership, there will be a corresponding 0.440% rise in the GaapETR. Foreign owners often bring in best practices from their home country, especially regarding their international standards and tax compliance level. This may influence their decision in being compliant with the tax laws and regulations.

The findings is inconsistent with Alkurdi and Mardini (2020) who argue that foreign investors provide an environment that offers more potential for increased utilization of tax avoidance strategies, particularly in relation to the varying tax rates across different geographic locations. Rakayana et al. (2021) further posit that foreign investors exert additional pressure on managers to deliver higher profits by minimizing the tax burden.

Analysis of Control Variables Assessing the Individual Effect of Auditor Quality, Market Concentration and Ownership Structure on Tax Avoidance.

Four control variables were employed including firm size, firm age, non-executive directors and capital structure. Firm size affects GaapETR with a coefficient of -0.124. At 5% significant level a unit increase in firm size leads to a 0.124% reduction in GaapETR. Larger firms often have complex organizational structures and operations in different jurisdictions which enables them to avoid taxes through mediums such as profit shifting.

This is inconsistent with Pratama and Padjadjaran (2017) who revealed that larger firms prioritise their reputation and maintain higher ETR as compared to smaller firms. Boussaidi and Hamed (2015) also assert that the size of a company is associated with a reduction in tax avoidance. Dakhli (2022) also affirm this stand by suggesting that larger firms exhibit a reduced tendency to avoid tax.

Firm age had a statistically significant coefficient of 0.0466 at the 5% significance level. This indicates that a unit increase in firm age leads to a 0.0466% increase in ETR. The results corroborate the findings of Pratama and Padjadjaran (2017) who posit that the older the firm of a company the lesser its engagement in tax avoidance because of reputational risk which can tarnish its well-built image over the years. The results do not conform with the findings of Satria and Lunardi (2023) who suggest that tax avoidance is partially affected by firm age.

Non-executive directors of firms had a significant negative coefficient of -1.621 and-3.314 for GaapETR. This means that firms that have a significant number of NED on their board influence the increment of their tax avoidance practice, therefore, leading to a lower ETR. Shareholders in firms seek to maximize their wealth. Non-executive directors in the pursuit of ensuring this wealth maximization may engage in decisions that will reduce the overall cost of the firms and one factor to drive the cost minimization is through avoidance of tax. This conform to Adela et al. (2023) who found that non-executive directors in corporate entities lead to a rise in the use of tax aggressive strategies.

However, with respect to CashETR non-executive directors had a positive coefficient of 11.58 and 11.13 which is significant at 10%. Non-executive directors have the responsibility to ensure that the organization functions within a risk profile that is deemed acceptable to its shareholders and as such will not be driven to avoid tax. The results conform with the findings of Agyei et al. (2020) who revealed that non-executive directors put pressure on management to decrease the firm's effective tax rate.

Capital structure had a negative coefficient and was significant. From the results, for each percentage increase in capital structure, there is a corresponding 0.0224% fall in GaapETR. The interest expense from debt financing is deducted from a firm's taxable income, this reduces their tax liability. Firms, therefore, capitalize on debt financing to reduce their overall tax burden. Prabowo (2020) discovered a negative relationship between the debt-to-equity ratio and the tax burden, as indicated by a lower effective tax rate (ETR). Pratama and Padjadjaran (2017) opine that there is no significant impact of leverage on tax avoidance.

Diagnostics Tests on the Individual Effect of Auditor Quality, Market Concentration and Ownership Structure on Tax Avoidance.

The AR(1) showed a rejection of the null hypotheses (Mileva, 2007). The p-value of the AR(2) showed no rejection of the null hypothesis. This specifies that there is no presence of autocorrelation. And this is because the p-values of the second-order autocorrelation are not statistically significant in the results. When the p-value of the AR(2) becomes significant it means that the lag of the dependent variable which might be used as an instrument is endogenous. The probability values of he Hansen test were above a 5% significant level which shows that the instrument used in the models is valid and the overidentification restrictions are not defied therefore there is no presence of endogeneity.

The Moderating Role of Ownership Structure in the Relationship between Auditor Quality and Tax Avoidance.

Table 5 presents results on the moderating role of ownership structure in the relationship between auditor quality and tax avoidance (measured using GaapETR and Cash ETR) by introducing an interactive term of ownership structure and auditor quality. This interaction term allows to test whether the relationship between auditor quality and tax avoidance differs depending on the ownership structure. Specifically, if the interaction term is significant, it suggests that the effect of auditor quality on tax avoidance depends on each ownership structure indicator.

Table 5: The moderating role of ownership structure in the relationship between auditor quality and tax avoidance in Ghana

	Model (1)	Model (2)	Model (3)	Model (4)
L.GaapETR	-0.330***	-1.056***		
	(0.0632)	(0.302)		
L.CashETR			-0.118**	-0.873***
			(0.0478)	(0.119)
lnOwnAQ	-0.630**		-0.686**	
	(0.204)		(0.338)	
FownAQ		-0.0856***		-0.230***
		(0.0306)		(0.0767)
AQ	5.701**	0.704*	0.664*	0.194**
	(2.534)	(0.360)	(0.349)	(0.0694)
InOwn	12.54**	22.15	8.022	-0.493
	(4.875)	(13.08)	(4.562)	(1.322)
Fown	0.936	13.94*	1.485***	3.748***
	(0.797)	(7.630)	(0.227)	(1.127)
FS	-0.182	-0.146***	-0.00454	-0.448*
	(0.123)	(0.0401)	(0.0211)	(0.254)
FA	0.122***	0.700*	0.0137	-0.0487*
	(0.0259)	(0.368)	(0.0159)	(0.0254)
NED	-2.734**	6.624**	4.422***	2.635***
	(0.944)	(2.590)	(0.443)	(0.718)
CS	-0.0184*	-0.00999***	0.00493***	-0.0306**
	(0.00994)	(0.00267)	(0.000345)	(0.0133)
Constant	-18.70*	-3.401	-11.77**	-8.011*
	(9.912)	(2.100)	(4.667)	(4.512)

Table 5: Cont'd

Observations	132	132	133	133
No.of instruments	18	16	21	18
AR1 (p-value)	0.396	0.409	0.234	0.189
AR2 (p-value)	0.613	0.209	0.323	0.177
Hansen-J(p-value)	0.695	0.759	0.601	0.527

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.010
Source: Field Data (2023)

Note: Estimated based on annual reports of non-financial firms listed on the Ghana stock exchange from 2012-2021.GaapETR represents the generally accepted accounting principle effective tax rate; CashETR is cash effective tax rate; MC is market concentration; AQ represents auditor quality; InOwn represents institutional ownership; Fown is a dummy variable that indicates whether a firm is foreign-owned or not foreign-owned; FA is a measure of firm age; NED represents non-executive directors; FS is firm size; CS represents capital structure.

The outcomes obtained from Table 5 reveal a fascinating and noteworthy observation. The interaction term between AQ and InOwn had a negative coefficient of -0.630 and -0.686 which is significant at 5%. As the level of InOwn increases in conjunction with higher auditor quality, the GaapETR and CashETR tend to decrease. The negative coefficients suggest that as the level of InOwn increases, the effect of auditor quality on GaapETR and CashETR becomes more pronounced. This implies that InOwn acts as a governance mechanism that enhances the effectiveness of high-quality auditors in increasing tax avoidance practices. The involvement of institutional investors and high-quality auditors enhances the company's ability to identify and implement these tax-saving opportunities effectively.

The interaction effect between AQ and Fown yielded a negative coefficient of -0.0856 and -0.230 and was statistically significant at 1%. This signifies that jointly auditor quality and foreign ownership have a significant impact on the measures of tax avoidance. The negative coefficient suggests that as the level of Fown increases, the influence of AQ becomes more heightened. In simpler terms, the results indicate that both auditor quality and foreign ownership impact how companies avoid paying taxes, with higher foreign ownership exacerbating the impact of auditor quality on reducing tax burdens.

However, the addition of the interaction term results in a substantial change in the coefficient of the auditor quality variable, having a significant negative coefficient of -0.0617 and -2.830 in Table 4 to a significant positive coefficient of 5.701 and 0.664 in Table 5. This indicates that the inclusion of the interaction term provides a clearer understanding of the true effect of auditor quality on tax avoidance. This specifies that a percentage increase in auditor quality leads to a 5.701% and 0.664% increase in GaapETR and CashETR, thereby reducing tax avoidance. Firms with institutional and foreign ownership are likely to place greater emphasis on auditor quality to ensure accurate financial reporting and tax compliance to reduce tax avoidance practices. This shows that ownership structure moderates the relationship between auditor quality and tax avoidance. Thus, the hypothesis that states that ownership structure does not moderate the relationship between auditor quality and tax avoidance is rejected.

The results conform to the findings of Alkurdi and Mardini (2020), who observed that institutional investors perceive that the cost of avoiding tax can outweigh the benefit and therefore minimizing tax avoidance practice through effective attention and monitoring by auditors is required. Dakhli (2022) also explained that the presence of a high level of institutional owners reduces GaapETR and CashETR levels in firms. Afrilia (2021) posit that auditor quality plays no part in strengthening tax avoidance when there is the presence of institutional ownership. Waluyo (2019) argue that InOwn has no influence on tax avoidance even with high-quality auditors.

The results on the interactive term is consistent with Wulandari and Sudarma (2021) who found that Fown and auditor quality have a negative direction on ETR. Adela et al. (2023) also posit that tax avoidance schemes are commonly observed in the operations of multinational corporations, and thus it is expected that foreign-owned businesses exhibit a propensity for aggressive tax planning strategies and unclear if certain factors can influence this behaviour. Furthermore, the results contradict the findings of Suranta et al. (2020) who revealed that the level of Fown does not influence tax avoidance.

Institutional ownership had a coefficient of 12.54 in comparison to the coefficient of 1.152 in Table 4. This shows that a percentage increase in InOwn increases GaapETR by 12.54%. The results is consistent with Dakhli (2022) who revealed that the level of InOwn has a negative impact on GaapETR, meaning that higher percentages of InOwn are associated with a reduced likelihood of engaging in tax avoidance practices.

Foreign ownership had a positive significant coefficient of 13.94 at 10% level. This signifies that with a unit increase in foreign investors, the level of tax avoidance reduces by 13.94%. The results do not conform to Alkurdi and Mardini (2020) who posit that foreign investors take advantage of the opportunity to transfer profits among their different operating locations, leading to tax avoidance in the host country. Dakhli (2022) also assert that foreign investors place heightened demands on managers to generate higher profits by manipulating the tax burden. As a result, managers may feel compelled to employ tax strategies that can inflate reported profits, influencing the company's overall tax liabilities.

Analysis of Control Variables in the Models Exploring the Influence of Ownership Structure in the Relationship between Auditor Quality and Tax Avoidance.

Table 5 controlled for four variables consisting of firm size, firm Age, non-executive directors and capital structure. Concerning GaapETR and CashETR, firm size had a coefficient of -0.146 and -0.448 at a 5% significant level respectively. This means that a percentage increase in firm size leads to a 0.146% and 0.448% decrease in GaapETR and CashETR, therefore, increasing tax avoidance. This does not align with the observed results of Adela et al. (2023) who posit that larger firms have a vested interest in maintaining their reputation and are less inclined to engage in aggressive tax practices. Pratama and Padjadjaran (2017) also reveal that there is a positive relationship between FS and ETR, indicating that as the size of the company increases, the ETR also tends to increase tax avoidance.

At a 1% significance level, the coefficient of firm age was found to be 0.122 indicating that for every percentage increase in firm age, there is a corresponding 0.122% increase in the GaapETR. This supports the theory of planned behaviour. According to the theory, a company's decisions regarding tax planning and avoidance are influenced by their attitudes, subjective norms, and perceived behavioural control. In the case of older firms, their prolonged existence in the market and accumulated experience may shape their tax-related attitudes and norms, leading to a higher effective tax rate which further reduces their tax avoidance behaviour. This result also validates the outcome of Pratama and Padjadjaran (2017) who indicated that as a company gets older, its effective tax rate tends to increase.

Non-executive directors had a positive impact on ETR. At a 5% and 1% significant level, a percentage increase in non-executive directors leads to a 6.624% and 2.635% increase in ETR. This is not congruent with the results of Adela et al. (2023) who assert that non-executive directors have the responsibility to ensure that the organization functions within a risk profile that is deemed acceptable to its shareholders. It is therefore puzzling that their results revealed that non-executive directors contribute to a reduction in ETR among firms. Agyei et al. (2020) also revealed that non-executive directors play a significant role by exerting pressure on management to lower the organization's effective tax rate.

The capital structure had a negative coefficient of -0.0184 and -0.0306 which is significant at 10% and 5% respectively. This shows that a one-unit increase in capital structure results in a 0.0184% and 0.0306% decrease in ETR respectively therefore increasing tax avoidance. This contradicts the study by Darsani and Sukartha (2021) who posit leverage(debt to equity) does not affect tax avoidance. Prabowo (2020) also found that a higher debt-to-equity ratio is associated with a decreased tax burden, as evidenced by the corresponding lower effective tax rate (ETR) value.

Diagnostics Results on the Moderating Role of Ownership Structure in the Relationship between Auditor Quality and Tax Avoidance.

Mileva (2007) posit that in the test for an AR (1) process in first differences, it is common for the null hypothesis to be rejected. A rejection of the AR (1) test suggests that there is a pattern or relationship in the error terms that persists from one period to the next, indicating a violation of the assumption of no serial correlation. On the other hand, the AR (2) test in first differences plays a crucial role since it specifically focuses on detecting serial correlation in levels. Therefore, accepting the AR (2) test is important which implies that there is no significant autocorrelation in the levels of the variable. However, the second-order autocorrelation process AR (2) did not show the presence of autocorrelation therefore the acceptance of the null hypothesis. The Hansen test was used to evaluate whether the instrumental variables are unrelated to the error term or any other variables in the model. According to Roodman (2009), the Hansen tests must be reported to assess the validity of the instruments. In this case, the Hansen p-value was not statistically significant which means that the null hypothesis of instrument validity is not rejected. Therefore, the Hansen p-value suggests that the instruments used in the estimation are valid and satisfy the requirements for valid instrumental variables in the GMM framework.

The Moderating Role of Ownership Structure in the Relationship between Market Concentration and Tax Avoidance.

Table 6 presents results on the moderating role of ownership structure in the relationship between market concentration and tax avoidance (measured using GaapETR and Cash ETR) by introducing an interactive term of ownership structure and market concentration. The study assesses whether the impact of market concentration on GaapETR and CashETR is contingent on specific ownership structure indicators.

Table 6: The moderating role of ownership structure in the relationship between market concentration and tax avoidance in Ghana

	Model (1)	Model (2)	Model (3)	Model (4)
L.GaapETR	0.716* (0.370)	0.116*** (0.0279)		
L.CashETR			0.332*** (0.0957)	0.235*** (0.0721)
lnOwnMC	-0.000400*** (0.0000493)		-0.000993** (0.000402)	
FownMC		-0.000215*** (0.0000611)		-0.000279*** (0.0000697)
MC	0.000444*** (0.0000363)	0.0000602* (0.0000357)	0.000948** (0.000395)	0.0000287* (0.0000716)
InOwn	5.623*** (1.771)	0.484 (0.483)	9.101*** (2.284)	-0.115 (0.771)
Fown	-1.454 (1.043)	0.248 (0.144)	1.564* (0.871)	0.731*** (0.243)
FS	-0.0623* (0.0352)	-0.0399** (0.0146)	-0.0199 (0.0413)	-0.0229 (0.0260)
FA	-0.0144* (0.00708)	-0.0152*** (0.00460)	-0.0164 (0.0133)	-0.000168 (0.0126)
NED	-0.111 (0.431)	-0.257 (0.402)	2.057** (0.911)	2.408*** (0.796)
CS	-0.00609 (0.00888)	-0.00201** (0.000879)	0.00219* (0.00114)	0.000986 (0.000806)
Constant	-3.492** (1.485)	1.009* (0.546)	-9.660*** (1.953)	-1.249** (0.575)

Table 6: Cont'd

Observations	132	132	133	133
No. of instruments	16	18	16	19
AR1 (p-value)	0.107	0.0370	0.162	0.192
AR2 (p-value)	0.518	0.123	0.127	0.250
Hansen-J (p-value)	0.327	0.747	0.579	0.890

Standard errors in parentheses
* p<0.10, ** p<0.05, *** p<0.010
Source: Field Data (2023)

Note: Estimated based on annual reports of non-financial firms listed on the Ghana stock exchange from 2012-2021.GaapETR represents the generally accepted accounting principle effective tax rate; CashETR is cash effective tax rate; MC is market concentration; AQ represents auditor quality; InOwn represents institutional ownership; Fown is a dummy variable that indicates whether a firm is foreign-owned or not foreign-owned; FA is a measure of firm age; NED represents non-executive directors; FS is firm size; CS represents capital structure.

Table 6 displays the results of the moderating role of ownership structure in the relationship between market concentration and tax avoidance. Using GaapETR, the interactive term (lnOwnMC) had a coefficient of -0.000400 and was significant at 1%. This means that an increase in the interactive term leads to a decrease in GaapETR, therefore, increasing tax avoidance. Companies with a higher degree of institutional ownership combined with greater market concentration tend to engage in more tax avoidance practices, resulting in a lower GaapETR. Additionally, greater market concentration can drive smaller firms to increase competition among firms. In such a competitive environment, companies may resort to aggressive tax planning strategies to gain a competitive advantage and reduce their tax burden. Furthermore, the interaction term in relation to CashETR yielded a notable negative coefficient of -0.000993 at a significance level of 5%. This suggests that an upward shift in the interactive term is associated with a corresponding decrease in CashETR.

Moreover, the interacting term between foreign ownership and market concentration had a coefficient of -0.000215 and -0.000279 significant at 1%. The significant level signifies that foreign ownership moderates between market concentration and tax avoidance. With regard to the negative coefficient, it implies that an increase in the interactive term leads to a decrease in GaapETR and CashETR, therefore, resulting in a rise in tax avoidance practices.

The results align with Sorbe and Johansson (2017) who found that market concentration is positively related to tax avoidance and suggested that multinational corporations that utilize international tax planning might leverage their lower tax burden to gain a competitive edge, leading to increased market shares and potentially displacing other firms. The results is also consistent with Martin et al. (2021a) whose findings indicated that tax avoidance provides large firms with a competitive advantage, allowing them to achieve higher sales growth compared to smaller firms, ultimately contributing to market concentration.

It can however be observed from Table 6 that with the introduction of the interaction term, MC attained a positive coefficient of 0.000444 and 0.000948 with GaapETR and CashETR implying that an increase in MC results in a decrease in tax avoidance. The results show that with the introduction of the moderators (Fown and InOwn), MC reduces tax avoidance levels among firms. Therefore, ownership structure significantly moderates the relationship between market concentration and tax avoidance.

This does not corroborates with Martin et al. (2021b) who opine that multinational enterprises exploit variations in corporate tax systems across countries to increase their market share therefore resulting in a concentrated market through the minimization of their tax liabilities, such as profit shifting. The practice of international tax planning was found to significantly decrease the average ETR of large foreign firms by approximately 4-8.5 percentage points compared to domestic firms that have similar attributes. Cristea and Nguyen (2016) explained that foreign firms have a responsibility to maximize profits on a global scale. To achieve this objective, companies strategically navigate differences in policies and tax rates across countries to minimize their overall tax liabilities worldwide.

Findings of the Control Variables of Ownership Structure in the Relationship between Market Concentration and Tax Avoidance

The control variables employed in Table 5 were also taken into account in Table 6 to control for their potential impact on tax avoidance. Firm size had a negative coefficient of -0.0623 and -0.0399 and was significant at 10% and 5% respectively depicting that a percentage increase in firm size is associated with a decrease in GaapETR by 0.0623% and 0.0399%. This conforms with the results obtained in Table 3.

The results contradict the findings of Agyei et al. (2020) who suggest that larger firms tend to refrain from avoiding taxes due to concerns about their reputation. Sonia and Suparmun (2019) also assert that a firm's ETR is not influenced by the FS, as it can be practised by firms of any size.

Firm age is significant at 10% with a negative coefficient of -0.0144. This suggests that as a firm becomes older, there is a tendency for its ETR to decrease. In other words, older firms may be more experienced in implementing tax planning strategies or have established structures that enable them to minimize their tax liabilities. This finding highlights the importance of considering firm age as a factor influencing tax outcomes and suggests that older firms may have certain advantages or characteristics that contribute to a lower ETR.

The results is not consistent with the findings of Pratama and Padjadjaran (2017), who assert that the age of the company exhibits a positive relationship, indicating that older companies tend to have higher effective tax rates. Satria and Lunardi (2023) also explained that firms prioritize maintaining the trust and confidence of investors over avoiding taxes. This indicates that companies are cautious about jeopardizing their integrity and credibility by attempting to avoid taxes.

At a significant level of 1% and 10% respectively, non-executive directors had a positive coefficient to CashETR. This signifies that a percentage increase in non-executive directors leads to a 2.057% and 2.408% increase in ETR. This observation can be attributed to the oversight and governance roles performed by non-executive directors, who play a crucial part in ensuring compliance with tax regulations and promoting ethical tax practices.

The results contradict Adela et al. (2023) who found that corporate entities with a higher number of NED tend to engage in more aggressive tax strategies, suggesting that their presence may contribute to a willingness to take greater tax-related risks. Also Agyei et al. (2020) revealed that non-executive directors have a significant influence on management to minimize the effective tax rate of the company.

Capital structure had a negative relationship with GaapETR with a coefficient of -0.00201. It depicts that changes in the capital structure of a company have a statistically significant impact on the company's GaapETR. This affirms the study by Prabowo (2020) who posit that a percentage increase in the capital structure of a firm lead to an increase in their tax avoidance practice.

The diagnostics test conducted in Table 6 such as the autocorrelation and Hansen test shows that the instrument used is free from instrument proliferation. The p-values of the Hansen test show that the results are valid. Furthermore, the test for autocorrelation depicts the AR (2) did not show rejection of the null hypothesis.

The Effect of the Lagged Dependent Variable

In all the models, the tax avoidance variable in its lagged form was incorporated. The lagged dependent variable was used as a predictor in the model to determine how tax avoidance levels in the past affect current levels. The negative lag coefficient suggests that higher tax avoidance in the previous period is associated with lower tax avoidance in the current period. Changes in tax laws and rates from past periods may influence firms' tax avoidance behaviour in the current period. The positive coefficient of the lag values of tax avoidance in the models also signifies that tax avoidance in the previous period contributes positively to current periods. The significant coefficient suggests that the estimation approach (system GMM model) is suitable and gives support to the statistical inferences that can be made from the empirical findings.

Chapter Summary

The chapter presented the empirical results of the objectives of the study. The descriptive results revealed that on average firms engage in tax avoidance since the effective tax rate was below the statutory tax rate. It further showed that non-financial firms are predominantly owned by institutional investors as compared to foreign investors.

The study further presented results on the role of ownership structure in the relationship between auditor quality and tax avoidance as well as the moderating role of ownership structure in the relationship between market concentration and tax avoidance. The results revealed that ownership structure (institutional and foreign ownership) influences the relationship between the independent variables (auditor quality and market concentration) and the dependent variable (tax avoidance).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Introduction

In this chapter, a comprehensive overview of the study is provided, including a summary of the study. The chapter also presents the significant findings derived from the results. Furthermore, the conclusions drawn from these findings are discussed in detail. Finally, the recommendations and suggestions for further research are clearly stated.

Summary of the Research

The study evaluated the relationship between auditor quality, market concentration and tax avoidance in Ghana with an emphasis on the moderating role of ownership structure and controlling for firm size, firm age, non-executive directors and capital structure. Multinational companies frequently avoid paying taxes due to the elimination of corporate territorial jurisdictional restrictions, making it difficult for governments to collect sufficient funds for developmental initiatives. The literature highlights a wide range of factors that have been identified as potential drivers of tax avoidance. In the first chapter, the channel of effect was established to understand the factors that cause a relationship between the variables of the study.

The literature review offered relevant theories and concepts that support the study. The theories specifically included the agency theory, the theory of planned behaviour and the economic deterrence theory. The theory of planned behaviour consisted of attitude, subjective norm and perceived behavioural control. The economic deterrence theory also states that firms weigh the cost and benefits associated with avoiding taxes and decide whether to avoid taxes. The concept of auditor quality, market concentration, ownership structure and tax avoidance were well explored and discussed. A conceptual framework was presented to show a pictorial view of the study variables and how they are interconnected. The empirical review indicated that existing research findings on the relationship between the variables had different results and lack consensus.

The study employed the positivist research paradigm and further adopted the quantitative research approach. The study utilized the explanatory research design to establish the cause and effect between the variables. Additionally, the study included 15 non-financial firms listed on the Ghana Stock Exchange with available data from 2012-2021. The system generalised method of moments estimation technique was employed. Furthermore, models were developed which sought to establish the moderating role of ownership structure in the relationship between auditor quality and tax avoidance as well as the moderating role of ownership structure in the relationship between market concentration and tax avoidance.

Summary of the Findings

The findings of this study revealed meaningful and unveiled significant results that carry important implications. The first objective of the study focused on ascertaining the nature of auditor quality, market concentration, and tax avoidance in Ghana. Another objective evaluated the moderating role of ownership structure in the relationship between auditor quality and tax avoidance in Ghana. The last objective assessed the moderating role of ownership structure in the relationship between market concentration and tax avoidance in Ghana. The summary of the results of the hypotheses is presented in Table 7:

Table 7: Summary of Results on Hypothesis

Hypotheses	Confirmation
H_0: There is no significant relationship between auditor quality and tax avoidance	Rejected
H_0: There is no significant relationship between market concentration and tax avoidance	Accepted
H_0: Ownership structure does not moderate the relationship between auditor quality and tax avoidance	Rejected
H_0: Ownership structure does not moderate the relationship between market concentration and tax avoidance.	Rejected

Source: Author's construct (2023)

The results from the first objective provided evidence that firms maintain a continuous relationship with a public accountant firm for approximately 3 years. Firms were also found to be highly concentrated with few firms dominating the market. Additionally, the results revealed that firms are engaging in tax avoidance practices because their effective tax rate was below the statutory rate.

Results from objective two showed that ownership structure influences the effect of auditor quality on tax avoidance. The introduction of the interaction term resulted in a substantial change in the coefficient of the auditor quality variable, having a negative coefficient of -0.0617 in Table 4 to a positive coefficient of 5.701 in Table 5. The results indicate that, ownership structure moderate between auditor quality and tax avoidance. However, the introduction of the interactive term weakens the relationship between auditor quality and tax avoidance. The interaction between ownership structure and auditor quality on the other hand had a negative coefficient which increases tax avoidance.

The empirical results showed that with the third objective, ownership structure moderates the relationship between market concentration and tax avoidance. It was observed from Table 6 that with the introduction of the interactive term, market concentration attained a significant positive coefficient of 0.000444 as compared to an insignificant negative coefficient in Table 4. This empirical evidence substantiates the notion that ownership structure weakens the relationship between market concentration and tax avoidance.

Conclusion

Based on the findings presented in the first objective, the study concludes that firms tend to maintain a continuous relationship with a public accounting firm for an average duration of approximately 3 years. Furthermore, the market is highly concentrated, with a few dominant firms holding significant market shares. The study concludes that firms engage in tax avoidance practices. This suggests that tax avoidance is prevalent among the sampled firms.

Moreover, conclusion on the third hypothesis is that a strong ownership structure will be needed to enhance the effect of auditor quality in reducing tax avoidance. Lastly, regarding the fourth hypothesis, the results provide valuable insights into the role of ownership structure in the relationship between market concentration and tax avoidance. The study concludes that firms should have a mix of different types of owners as ownership structure (institutional and foreign ownership) moderates between market concentration and tax avoidance. This diversity in ownership will create a more balanced and competitive environment that reduces the impact of a small number of firms gaining market dominance.

Recommendations

Based on the first objective, it is recommended that regulatory bodies should consider evaluating the impact of extended auditor tenure on audit quality. This may involve reassessing the maximum duration allowed for auditors to serve their clients and implementing additional measures to enhance audit quality and ensure auditor independence. Additionally, firms should engage in regular reviews of tax practices and seek advice from tax professionals this can help companies navigate complex tax environments while avoiding unethical tax avoidance. Firms should consider the long-term consequences of tax avoidance decisions, including potential changes in tax laws, regulatory attitudes, and public perception. Policymakers can engage in closing loopholes such as profit shifting and implementing stricter penalties for tax avoidance. Through the implementation of policies like antitrust laws and the encouragement of new market entrants, regulatory authorities can help promote competition in the market thereby reducing market concentration.

Furthermore, policymakers should ensure a strong ownership structure and information sharing. This can entail creating forums for discussion, promoting knowledge sharing between investors and auditors and addressing tax avoidance issues. Finally, the government should encourage diversity in ownership structures by implementing policies that support the entry of new players and prevent excessive concentration. Investors with significant ownership stakes should use their influence to advocate for responsible tax practices among their investment companies, particularly in industries with high market concentration.

Suggestions for Future Research

Further studies should consider alternate measures of tax avoidance such as the book-tax gap (BTG) and the current effective tax rate (CETR). Future works should examine whether different ownership structures such as managerial ownership, family ownership and government ownership influence the relationship between auditor quality and tax avoidance. Moreover, other researchers should take into account additional factors that may influence tax avoidance such as financial limitations and political connections. Lastly, future research could explore alternative estimation techniques that differ from those utilized in this study.

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APPENDIX

List of 15 non-financial firms listed on the Ghana Stock Exchange selected for the study

No.	Companies
1	AngloGold Ashanti Limited
2	Aluworks Ltd
3	Benso Oil Palm Plantation Ltd
4	Camelot Ghana Ltd
5	ClydeStone Ghana Ltd
6	Cocoa Processing Company
7	Fan Milk Limited
8	GOIL PLC
9	Guinness Ghana Breweries Ltd
10	MTN Ghana
11	Produce Buying Company Ltd
12	Sam Wood Ltd.
13	Tullow Oil Plc
14	Total Energies Ghana PLC
15	Unilever Ghana PLC